AMERICAN FORK CITY COUNCIL
SEPTEMBER 24, 2024
REGULAR SESSION AGENDA

Notice of Electronic Meeting
One or more City Council members may be physically absent from this meeting but may participate electronically.

The American Fork City Council will hold a public hearing in conjunction with the regular session on Tuesday, September 24, 2024, in the American Fork City Hall, 31 North Church Street, commencing at 7:00 p.m. The agenda shall be as follows:

PUBLIC HEARING

- Receive public comment on the Jes and Claire Scott Annexation consisting of 1.504 acres and located at approximately 350 East 620 South.

REGULAR SESSION

1. Pledge of Allegiance; Invocation by Council Member Hunter; roll call.
2. Presentation of the HERO Award to Sean Durfey.
3. Twenty-minute public comment period - limited to two minutes per person.
4. City Administrator's Report
5. Council Reports
6. Mayor's Report

COMMON CONSENT AGENDA

(*Common Consent* is that class of Council action that requires no further discussion or which is routine in nature. All items on the Common Consent Agenda are adopted by a single motion unless removed from the Common Consent Agenda.)

1. Approval of the September 3, 2024, work session minutes.
2. Approval of the September 10, 2024, city council minutes.
3. Acceptance of the dedication of a 30' Pressurized Irrigation easement, a 20' Storm Drain Easement, and a 20' Culinary Waterline Easement located at 540 East 1700 South for the Shoreline Industrial Park.
4. Ratification of city payments (September 4, 2024, to September 17, 2024) and approval of purchase requests over $50,000.

ACTION ITEMS

1. Review and action on appointments to the following boards and commissions:
   a. Roger Farris, Senior Center Board with term ending 2027
2. Review and action on a Development Agreement for Bridges at Fox Hollow located at approximately 350 East 1080 North.

3. Review and action on a proposed use for a Specialty School, known as Rad Lab Studios, located at 1349 South 500 East #243, in the Planned Industrial (PI-1) zone.
4. Review and action on an ordinance approving a code text amendment, known as General Provisions, of the American Fork City Municipal Code. Amending Section 17.1, the Code Text Amendment plans to update the designation of land use authority and appeal authority.
5. Review and action on an ordinance approving a code text amendment, known as Municipal Planning Organization, of the American Fork City Municipal Code. Amending Section 17.2, the Code Text Amendment plans to update the procedures for municipal planning organization.
6. Review and action on an ordinance approving a code text amendment, known as Large Scale Development Overlay Zones, of the American Fork City Municipal Code. Amending Section 17.7, the Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone.
7. Review and action on an ordinance approving a Code Text Amendment, known as Subdivisions, of the American Fork City Municipal Code. Amending Section 17.8, the Code Text Amendment plans to amend the approval procedure for subdivisions.
8. Review and action on an agreement with Condie Construction Company for the reconstruction project at the American Fork Boat Harbor.
9. Review and action on a resolution approving an interlocal cooperation agreement between Utah County, American Fork City, Alpine City, Cedar Hills City, Highland City, and Lehi City, for the administration of the 2024 New School District Election.
10. Review and action on a resolution authorizing the mayor to execute an agreement with Harbor Village HOA, et. al. regarding parcel number 14:791:0336.
11. Adjournment.

Dated this 19th day of September 2024.

/s/Terilyn Lurker
City Recorder

- In accordance with the Americans with Disabilities Act, the City of American Fork will make reasonable accommodations to participate in the meeting. Requests for assistance can be made by contacting the City Recorder at 801-763-3000 at least 48 hours in advance of the meeting.
- The order of agenda items may be changed to accommodate the needs of the City Council, staff, and the public.

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Planning **Director Approval** *Patrick O'Brien*

AGENDA ITEM Acceptance of the dedication of a 30' Pressurized Irrigation easement, a 20' Storm Drain Easement, and a 20' Culinary Waterline Easement located at 540 E 1700 S for the Shoreline Industrial Park.

SUMMARY RECOMMENDATION
Staff recommends approval of the 30' Pressurized Irrigation easement, a 20' Storm Drain easement, and a 20' Culinary Waterline easement located at 540 E 1700 S for the Shoreline Industrial Park

BACKGROUND
As a condition of the approval of the Shoreline Industrial Park commercial site plan, the city staff is requiring the necessary 30’ Pressurized Irrigation easement and 20’ Storm Drain Easement as shown on the plan set shall be conveyed as well as a 20’ Culinary Waterline Easement for the looped culinary water line as shown on the plans.

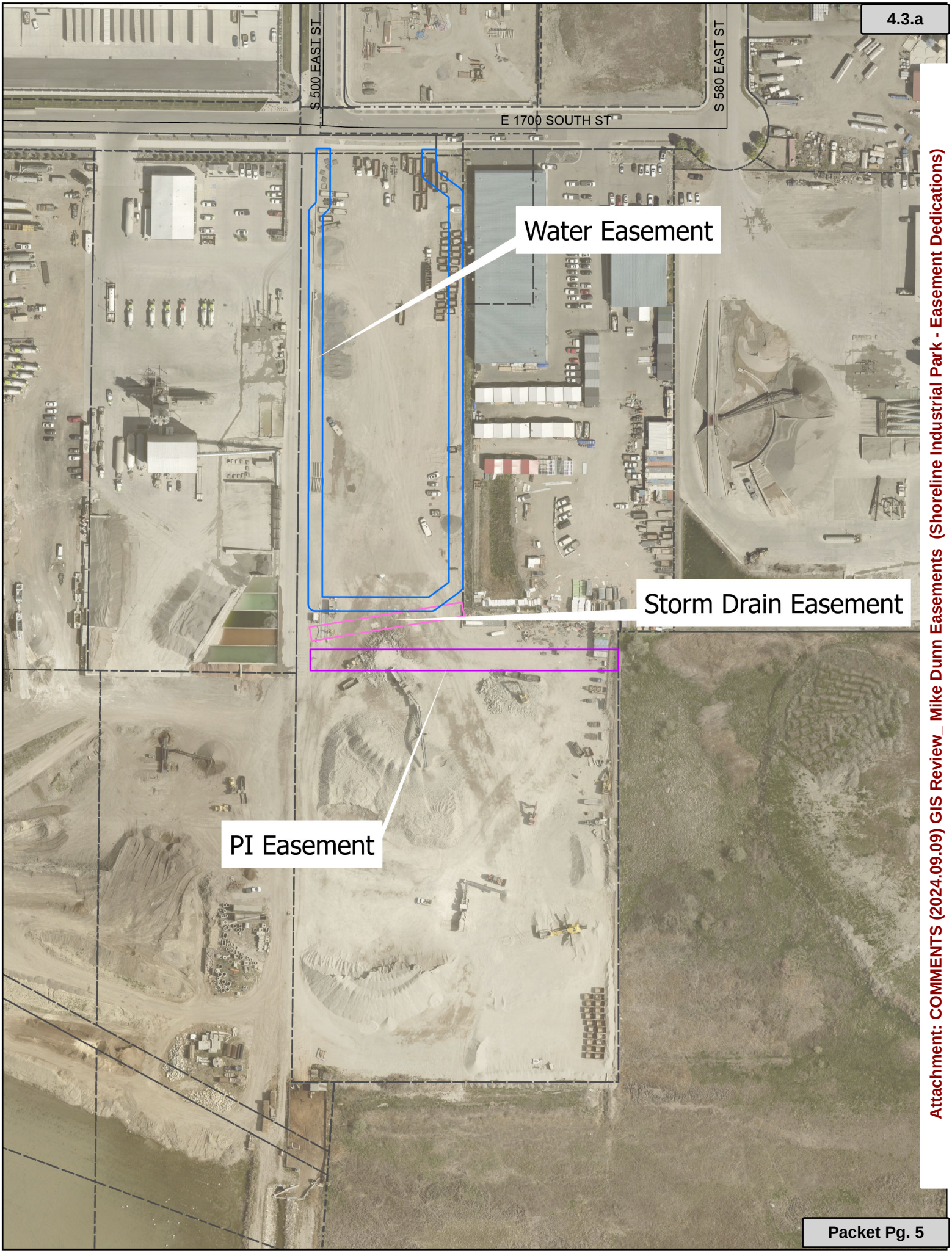
BUDGET IMPACT
N/A

SUGGESTED MOTION
Move to adopt the dedication of the 30' Pressurized Irrigation easement, a 20' Storm Drain Easement, and a 20' Culinary Waterline Easement located at 540 E 1700 S for the Shoreline Industrial Park.

SUPPORTING DOCUMENTS

COMMENTS (2024.09.09) GIS Review_ Mike Dunn Easements (PDF)
COMMENTS (2024.09.09) SD Easement Total (PDF)
COMMENTS (2024.09.09) Shoreline Industrial Park - 20' Culinary Waterline Easement - Description (PDF)
COMMENTS (2024.09.09) Shoreline Industrial Park - 20' Culinary Waterline Easement - Exhibit(PDF)

COOMMENTS (2024.09.09) PI Easement Total (PDF)



Attachment: COMMENTS (2024.09.09) GIS Review_ Mike Dunn Easements (Shoreline Industrial Park - Easement Dedications)

After recording return to:
American Fork City
Attn: City Recorder
51 East Main Street
American Fork, Utah 84003

STORM DRAIN EASEMENT

For the sum of Forty Dollars ($40.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, that **Michael Steven Dunn, Trustee of The NO Trust, dated September 10, 2019 Grantor**, of American Fork, County of Utah, State of Utah , hereby grants, conveys, and sets over unto **M-Con Real Estate Holding, LLC**, as Grantee, its successors and assigns, a perpetual easement to install, maintain, operate, repair, remove, replace, or relocate public utility facilities and the rights of ingress and egress within the public utility easement for public utility employees, contractors, and agents. Said easement being situated in Utah County, State of Utah, through a parcel of Grantor's land, which easement is more particularly described as follows:

An easement located in the Northwest quarter of Section 36, Township 5 South, Range 1 East, Salt Lake Base and Meridian, more particularly described as follows:

A 20.00-FOOT-WIDE STORM DRAIN EASEMENT, 10.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

Commencing at a point located North 89°29'06" West along the Section line 921.41 feet and South 2173.22 feet from the North quarter corner of Section 36, Township 5 South, Range 1 East, Salt Lake Base and Meridian; thence North 80°43'17" East 219.83 feet to a point of terminus, said point being located North 89°29'06" West 704.44 feet and South 2135.83 feet from the North quarter corner of said Section 36.

Contains: ± 4,397 s.f.

To have and hold the same unto said Grantee, its successors and assigns, with right of ingress and egress in said Grantee, its contractors and assigns to enter upon the above-described property with such equipment as is necessary to install, maintain, operate, repair, inspect, protect, remove and replace said facilities. As a non-exclusive easement, Grantor shall have the right to use the easement area for purposes that do not interfere or limit the propose the easement granted herein. However, at no time shall Grantor, its successors, licensees, lessees, contractors or assigns or their agents or employees erect or permit to be erected any building or structure of any kind within the boundaries of said perpetual easement.

Approved as to form: American Fork City Attorney

Attachment: COMMENTS (2024.09.09) SD Easement Total (Shoreline Industrial Park - Easement Dedications)

In witness whereof, the Grantor has executed this easement this ___ day of_____, 2024

[GRANTOR]

_____

By: Michael Steven Dunn, Trustee
The NO Trust, dated September 10, 2019

State of Utah

:ss

County of Utah

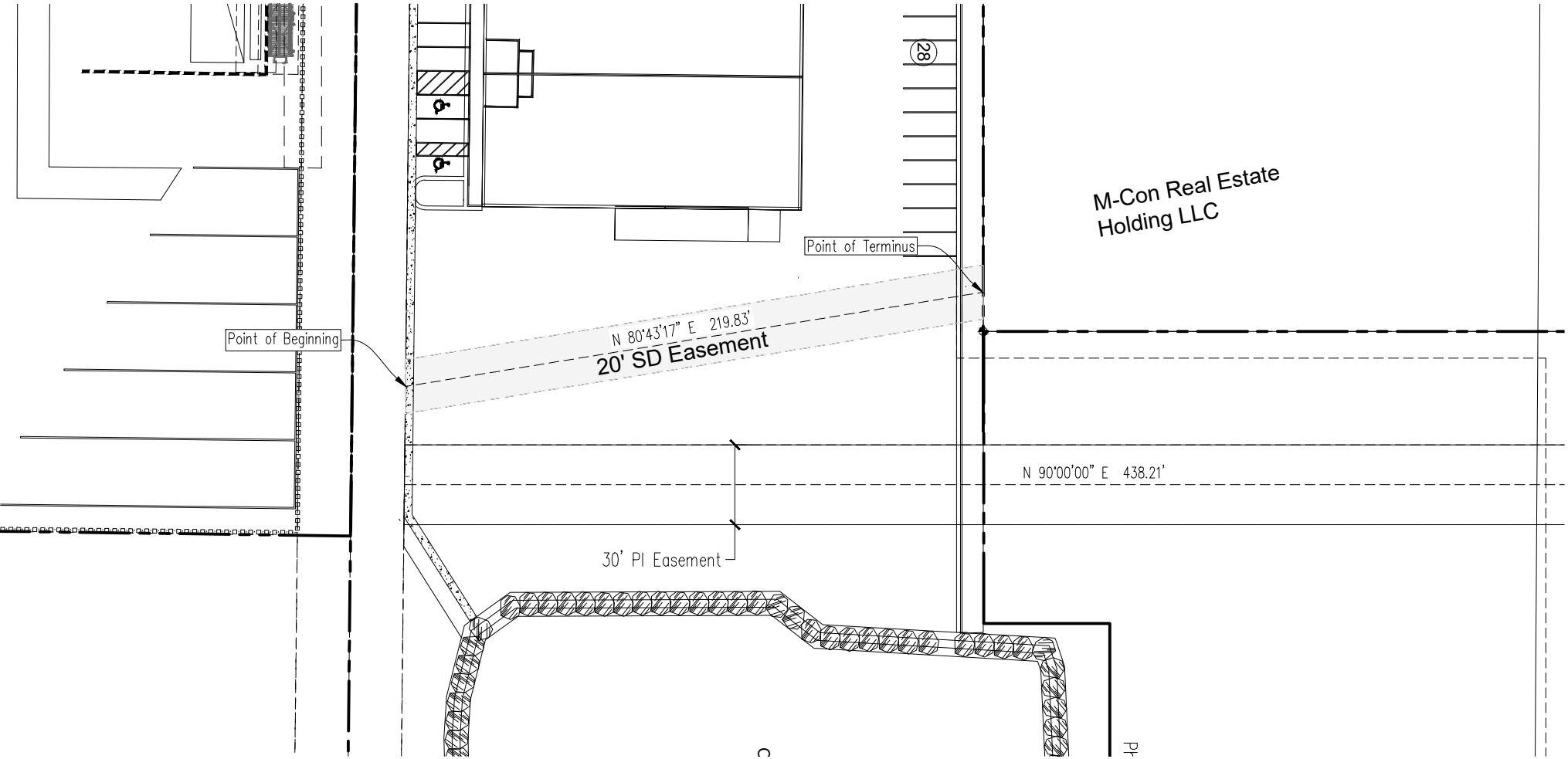
On the_____day of_____, 2024, personally appeared before me Michael Steven Dunn, who acknowledged to be the trustee of The NO Trust, dated September 10, 2019, [GRANTOR], and that he, as such trustee, being authorized so to do, executed the foregoing instrument for the purposes therein contained.

_____

Notary Public

Attachment: COMMENTS (2024.09.09) SD Easement Total (Shoreline Industrial Park - Easement Dedications)

Approved as to form: American Fork City Attorney



Attachment: COMMENTS (2024.09.09) SD Easement Total (Shoreline Industrial Park - Easement

After recording return to:
American Fork City
Attn: City Recorder
51 East Main Street
American Fork, Utah 84003

CULINARY WATERLINE EASEMENT

For the sum of Forty Dollars ($40.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, that Michael Steven Dunn, as Trustee of The NO Trust **Grantor**, of 426 E 1750 N Suite F Orem, County of Utah, State of Utah, hereby grants, conveys, and sets over unto **AMERICAN FORK CITY, a Utah municipal corporation**, as Grantee, its successors and assigns, a perpetual easement to install, maintain, operate, repair, remove, replace, or relocate public utility facilities and the rights of ingress and egress within the public utility easement for public utility employees, contractors, and agents. Said easement being situated in Utah County, State of Utah, through a parcel of Grantor's land, which easement is more particularly described as follows:

An easement located in the North quarter corner of Section 36, Township 5 South, Range 1 East, Salt Lake Base and Meridian Township, Range, Base and Meridian, more particularly described as follows:

A 20.00-foot-wide easement, 10.00 feet on each side of the following described centerline: Commencing at a point on the South boundary of 1700 South Street, American Fork, Utah, said point being located South 1475.97 feet and West 752.45 feet from the North quarter corner of Section 36, Township 5 South, Range 1 East, Salt Lake Base and Meridian; thence South 00°00'37" East 34.78 feet; thence South 53°21'28" East 47.40 feet; thence South 557.29 feet; thence South 53°34'22" West 43.78 feet; thence North 89°54'11" West 165.04 feet; thence North 00°04'51" East 556.19 feet; thence North 43°34'19" East 14.96 feet; thence North 00°09'45" East 80.59 feet to a point located South 1474.44 feet and West 903.35 feet from the North quarter corner of said Section 36.

Contains: ± 29,961.650497 s.f.

To have and hold the same unto said Grantee, its successors and assigns, with right of ingress and egress in said Grantee, its contractors and assigns to enter upon the above described property with such equipment as is necessary to install, maintain, operate, repair, inspect, protect, remove and replace said facilities. As a non-exclusive easement, Grantor shall have the right to use the easement area for purposes that do not interfere or limit the propose the easement granted herein. However, at no time shall Grantor, its successors, licensees, lessees, contractors or assigns or their agents or employees erect or permit to be erected any building or structure of any kind within the boundaries of said perpetual easement.

Approved as to form: American Fork City Attorney

Attachment: COMMENTS (2024.09.09) Shoreline Industrial Park - 20' Culinary Waterline Easement - Description (Shoreline Industrial Park -

In witness whereof, the Grantor has executed this easement this ___ day of_____, 20__

[GRANTOR]

_____
By: Michael Steven Dunn, Trustee

State of Utah

:ss

County of _____

On the_____day of_____, 20____, personally appeared before me _____, who acknowledged to be the Trustee of The NO Trust, and that he, as such Trustee, being authorized so to do, executed the foregoing instrument for the purposes therein contained.

_____
Notary Public

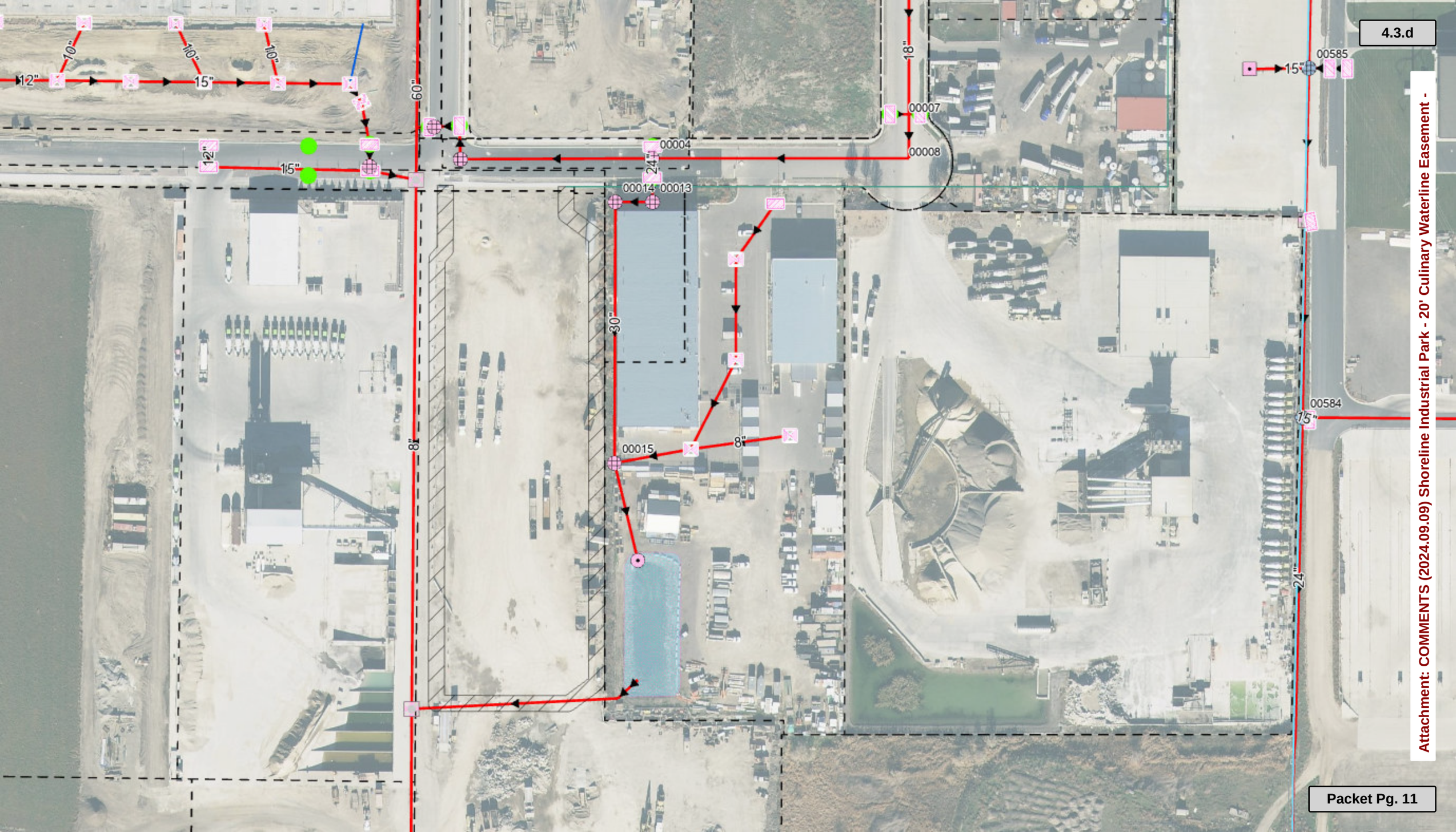
ACCEPTED BY:

AMERICAN FORK CITY

_____
Bradley J. Frost, Mayor

Approved as to form: American Fork City Attorney

Attachment: COMMENTS (2024.09.09) Shoreline Industrial Park - 20' Culinary Waterline Easement - Description (Shoreline Industrial Park -



Attachment: COMMENTS (2024.09.09) Shoreline Industrial Park - 20' Culinary Waterline Easement -

Engineering Division
Reviewed
rburkhill 09/10/2024

After recording return to:
American Fork City
Attn: City Recorder
51 East Main Street
American Fork, Utah 84003

PRESSURIZED IRRIGATION EASEMENT

For the sum of Forty Dollars ($40.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, that **Michael Steven Dunn, Trustee of The NO Trust, dated September 10, 2019 Grantor**, of American Fork, County of Utah, State of Utah , hereby grants, conveys, and sets over unto **AMERICAN FORK CITY, a Utah municipal corporation**, as Grantee, its successors and assigns, a perpetual easement to install, maintain, operate, repair, remove, replace, or relocate public utility facilities and the rights of ingress and egress within the public utility easement for public utility employees, contractors, and agents. Said easement being situated in Utah County, State of Utah, through a parcel of Grantor's land, which easement is more particularly described as follows:

An easement located in the Northwest quarter of Section 36, Township 5 South, Range 1 East, Salt Lake Base and Meridian, more particularly described as follows:

A 30.00-FOOT-WIDE PRESSURIZED IRRIGATION EASEMENT, 15.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

Commencing at a point located North 89°29'06" West along the Section line 921.80 feet and South 2210.12 feet from the North quarter corner of Section 36, Township 5 South, Range 1 East, Salt Lake Base and Meridian; thence East 438.21 feet to a point of terminus, said point being located North 89°29'06" West 483.58 feet and South 2206.18 feet from the North quarter corner of said Section 36.

Contains: ± 13,146 s.f.

To have and hold the same unto said Grantee, its successors and assigns, with right of ingress and egress in said Grantee, its contractors and assigns to enter upon the above-described property with such equipment as is necessary to install, maintain, operate, repair, inspect, protect, remove and replace said facilities. As a non-exclusive easement, Grantor shall have the right to use the easement area for purposes that do not interfere or limit the propose the easement granted herein. However, at no time shall Grantor, its successors, licensees, lessees, contractors or assigns or their agents or employees erect or permit to be erected any building or structure of any kind within the boundaries of said perpetual easement.

Approved as to form: American Fork City Attorney

Attachment: COMMENTS (2024.09.09) PI Easement Total (Shoreline Industrial Park - Easement Dedications)

In witness whereof, the Grantor has executed this easement this ___ day of_____, 2024

[GRANTOR]

_____
By: Michael Steven Dunn, Trustee
The NO Trust, dated September 10, 2019

State of Utah

:ss

County of Utah

On the_____day of_____, 2024, personally appeared before me Michael Steven Dunn, who acknowledged to be the trustee of The NO Trust, dated September 10, 2019, [GRANTOR], and that he, as such trustee, being authorized so to do, executed the foregoing instrument for the purposes therein contained.

_____
Notary Public

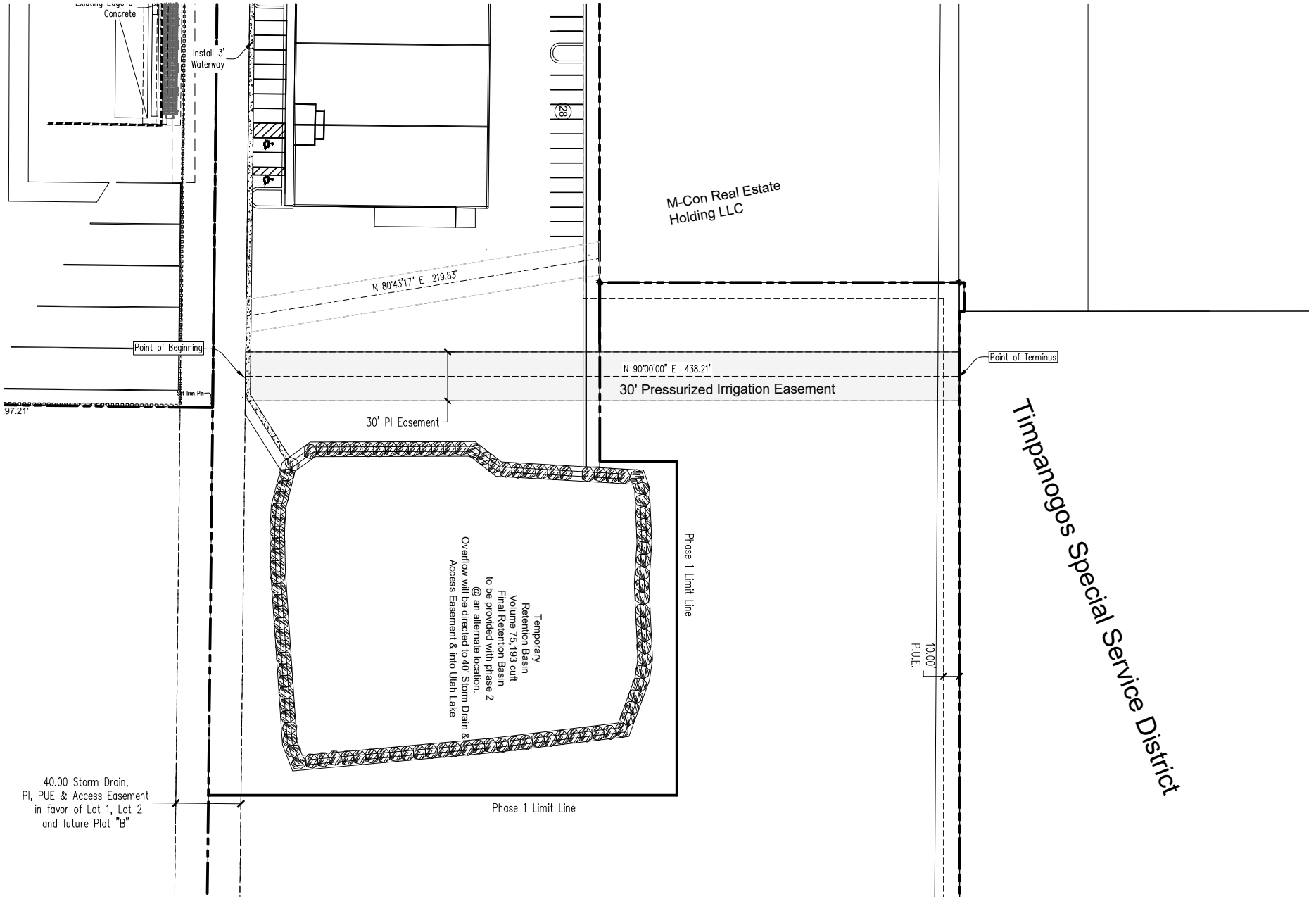
ACCEPTED BY:

AMERICAN FORK CITY

_____
Bradley J. Frost, Mayor

Approved as to form: American Fork City Attorney

Attachment: COOMMENTS (2024.09.09) PI Easement Total (Shoreline Industrial Park - Easement Dedications)



Attachment: COOMMENTS (2024.09.09) PI Easement Total (Shoreline Industrial Park - Easement

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Recorder **Director Approval** *Terilyn Lurker*

AGENDA ITEM Review and action on appointments to the following boards and commissions: Roger Farris, Senior Center Board, with term ending 2027.

SUMMARY RECOMMENDATION
Staff would recommend approval.

BACKGROUND
Roger Faris was born and raised in Spanish Fork. He has lived in American Fork for the last 35 years. He and Melissa are the parents of 4 children. They were all raised here in American Fork. Roger worked 35 years for the State of Utah as a financial manager. He retired in January of 2023 from the State.

We are excited to have Roger join us as a board member for the American Fork Senior Center.

BUDGET IMPACT
NA

SUGGESTED MOTION
Move to approve the appointment of Roger Farris to the Senior Center Board, with a term ending 2027.

SUPPORTING DOCUMENTS

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Planning **Director Approval** *Patrick O'Brien*

AGENDA ITEM Review and action on a Development Agreement for Bridges at Fox Hollow located at approximately 350 E 1080 N, American Fork City.

SUMMARY RECOMMENDATION
Planning Commission recommended approval

BACKGROUND
The Bridges at Fox Hollow has previously been through the Planning Commission over a year ago for two particular plats, plat A and B. Since their approvals, their final plats have expired from when the City Council had approved them. As the plats are now expired, they will have to go through the entitlement process again, which is why you are seeing this development agreement. The development agreement will go into details about who is responsible for maintaining certain aspects of the area and a phasing plan for the property to be developed.

BUDGET IMPACT
N/A

SUGGESTED MOTION
I move to approve the Development Agreement for Bridges at Fox Hollow, relating to maintenance and phasing plans, and authorize the city to sign the documents.

I move to deny the Development Agreement for Bridges at Fox Hollow, relating to maintenance and phasing plans.

I move to table action for the Development Agreement for Bridges at Fox Hollow, relating to maintenance and phasing plans, and instruct staff/developer to……..

SUPPORTING DOCUMENTS

Minutes - Devlopment Agreement - Bridges at Fox Hollow (PDF)
3. Bridges at Fox Hollow (Development Agreement) - Staff Report (PDF)

BoFH_00-PHASE1-Layout1 (PDF)
Development agreement Bridges at Fox Hollow 9.17 (PDF)

b. Review and recommendation on a Development Agreement for Bridges at Fox Hollow located at approximately 350 E 1080 N, American Fork City.

Cody Opperman reviewed the background information for action item letter a: The Bridges at Fox Hollow has previously been through the Planning Commission over a year ago for two particular plats, plat A and B. Since their approvals, their final plats have expired from when the City Council had approved them. As the plats are now expired, they will have to go through the entitlement process again, which is why you are seeing this development agreement. The development agreement will go into details about who is responsible for maintaining certain aspects of the area and a phasing plan for the property to be developed. Christine Anderson added that she loves this kind of development because there is such a wide range of housing options with different lot sizes ranging from nearly half-acre lots down to .14 acre. She added that she believes having different options in the same neighborhood with grandparents being able to be close to their children with larger families, is a very healthy way to have a city, and she hopes to see more developments like this.

Rodney Martin moved to recommend approval for the proposed Development Agreement for Bridges at Fox Hollow, relating to maintenance and phasing plans, and providing an effective date for the ordinance.

David Bird seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Rodney Martin	**AYE**
David Bird	**AYE**
Bruce Frandsen	**AYE**
Claire Oldham	**AYE**

The motion passed

Other Business

Attachment: Minutes - Devlopment Agreement - Bridges at Fox Hollow (Bridges at Fox Hollow - Development Agreement)

Planning Commission Staff Report
Meeting Date: September 18, 2024

Agenda Topic

Review and recommendation on a Development Agreement for Bridges at Fox Hollow located at approximately 350 E 1080 N, American Fork City.

Background

The Bridges at Fox Hollow has previously been through the Planning Commission over a year ago for two particular plats, plat A and B. Since their approvals, their final plats have expired from when the City Council had approved them. As the plats are now expired, they will have to go through the entitlement process again, which is why you are seeing this development agreement. The development agreement will go into details about who is responsible for maintaining certain aspects of the area and a phasing plan for the property to be developed.

Potential Motions – Development Agreement

Approval

I move to recommend approval for the proposed Development Agreement for Bridges at Fox Hollow, relating to maintenance and phasing plans, and providing an effective date for the ordinance.

Denial

I move to recommend denial for the proposed Development Agreement for Bridges at Fox Hollow, relating to maintenance and phasing plans.

Table

I move to table action for the proposed Development Agreement for Bridges at Fox Hollow, relating to maintenance and phasing plans, and instruct staff/developer to……..

Attachment: 3. Bridges at Fox Hollow (Development Agreement) - Staff Report (Bridges at Fox Hollow - Development Agreement)

PHASING PLAN

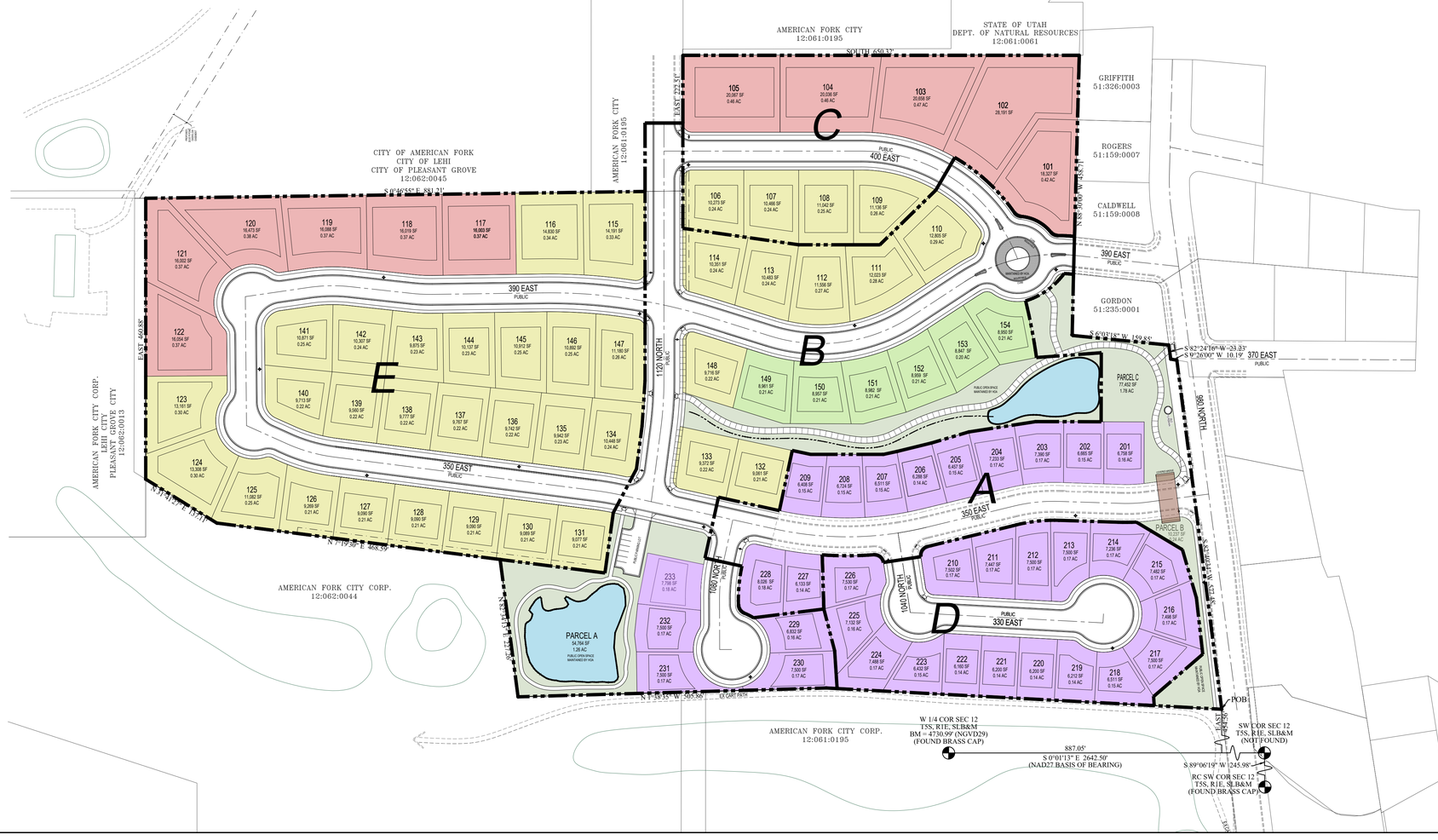
CONSERVATION SUBDIVISION

Plat	Area	Open Space	% Open per Plat	Total Open Space
A	3.82	0.91	24%	24%
B (portion)	3.73	2.36	63%	43%
D	3.54	0.00	0%	29%

	Area (ac)	Area (%)
REQ'D OPEN SPACE	2.77	25%
PROVIDED OPEN SPACE	3.26	29%

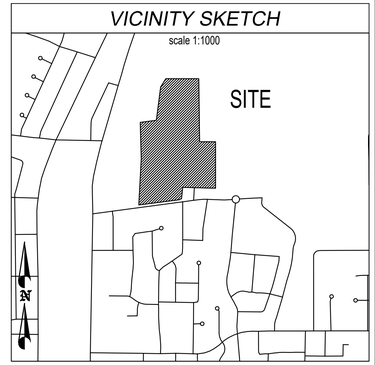
FLEXIBLE LOT SUBDIVISION

Plat	Area	Open Space	% Open per Plat	Total Open Space
B (portion)	5.29	0.00	0%	0%
C	4.07	0.00	0%	0%
E	10.54	0.00	0%	0%



LOT LEGEND

LOT SIZE	TYPICAL DIMENSIONS
16,000+ SF	100' x 160'
9,000 SF	90' x 100'
7,500 SF	75' x 100'
6,000 SF	60' x 100'



THE
BRIDGES
AT FOX HOLLOW

DEVELOPMENT

BROOKSTONE INVESTMENTS
372 S MAIN STREET
ALPINE, UT 84004
(801) 756-3581

0 50 100 200 300
SCALE: 1"= 100'

berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

REVISIONS			SEAL
NO.	DATE	DESCRIPTION	
1			
2			
3			
4			
5			
6			

STATE OF UTAH
TAYLOR R. FOX
343602
REGISTERED
PROFESSIONAL ENGINEER
8/12/2024

ACTION	DATE
PRELIM	8/12/2024

PROJECT

THE
BRIDGES
AT FOX HOLLOW

350 EAST 1080 NORTH

DESCRIPTION

PRELIMINARY PLANS

SHEET NAME	SHEET NUMBER
PHASING	*PHASE*

c:\users\kenlroneshne - berg civil engineering\berg civil\22\04\bridges at fox hollow\both_05\phase1.dwg

Attachment: BoFH_00-PHASE1-Layout1 (Bridges at Fox Hollow - Development Agreement)

WHEN RECORDED, RETURN TO:

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

MASTER DEVELOPMENT AGREEMENT
FOR
BRIDGES AT FOX HOLLOW

THIS MASTER DEVELOPMENT AGREEMENT (MDA) FOR BRIDGES AT FOX HOLLOW is made and entered as of the ____ day of _____, 2024, by and between the AMERICAN FORK CITY, a Utah municipal corporation, and STONEBROOK ENTERPRISES, LLC, a Utah limited liability company ("Developer").

RECITALS

WHEREAS Developer owns approximately 31.18 acres or real preopty located at 361 East 980 North, American Fork, Utah 84003 and 1082 North 370 East, American Fork, Utah 84003 (collectively referred to as the "Property") and intends to develop the Property. Legal descriptions of the Property are attached hereto as Exhibit "A."

WHEREAS Developer and the City desire that the Property be developed in a unified and consistent fashion consistent with the "Phasing Plan", attached hereto as Exhibit "B," except as modified herein.

WHEREAS Development of the Property consistent with this MDA will result in benefits to the City and its residents providing necessary connectivity of the road infrastructure.

WHEREAS Development of the Property pursuant to this MDA will result in benefits to Developer by allowing phased development and by providing assurances to Developer that it will have the ability to develop the Property in accordance with this MDA.

WHEREAS Developer is willing to restrict the Property in a manner that is in harmony with the objectives of the City's General Plan and long-range development objectives, and which addresses the more specific development issues set forth in this Agreement, and is willing to abide by the terms of this Agreement;

WHEREAS Developer and the City have cooperated in the preparation of this MDA; and

WHEREAS the City, acting pursuant to its authority under the Utah Municipal Land Use, Development, and Management Act, Utah Code Ann. §10-9a-101, et seq., and its ordinances, resolutions, and regulations, and in furtherance of its land-use policies, has made certain determinations with respect to the proposed Project, and, in the exercise of its legislative discretion, has elected to approve this Agreement;

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and Developer hereby agree to the following:

TERMS

1. **Affected Property.** The legal description of the Property contained within the Project boundaries is attached as Exhibit "A." No additional property may be added to or removed from this description for the purposes of this Agreement except by written amendment to this Agreement executed and approved by Developer and the City.

2. **Reserved Legislative Powers.** Nothing in this Agreement shall limit the future exercise of police power by the City in enacting zoning, subdivision, development, transportation, environmental, open space, and related land-use plans, policies, ordinances and regulations after the date of this Agreement, provided that the adoption and exercise of such power shall not restrict Developer's vested rights to develop the Project as provided herein. This Agreement is not intended to and does not bind the American Fork City Council in the independent exercise of its legislative discretion with respect to such zoning regulations.

3. **Compliance with City Ordinances and Standards.** All provisions of the City Code and the City's Land Development Policies shall govern the Project unless otherwise specifically modified in this MDA. Developer acknowledges and agrees that nothing in this Agreement shall be deemed to relieve it from the obligation to comply with all applicable ordinances and requirements of the City necessary for development of the Project, including the payment of fees, and compliance with applicable City standards.

4. **Development of the Property.** Development of the Property shall be in accordance with this MDA and its Exhibits. Developer may file separate applications for final plat approval in Phases to be developed in accordance with Development Applications and the Phasing Plan attached hereto as Exhibit "B." Development Applications will be processed according to City's established land development policies, as may be amended from time to time, but shall be subject to Developer's Vested Rights as set forth herein.

5. **Vested Rights Granted by Approval of this MDA.** To the maximum extent permissible under the laws of Utah and the United States and at equity, the City and Developer intend that this MDA grants Developer all rights to develop the Project in accordance with the terms and conditions of this MDA. The parties intend that the rights granted to Developer under this MDA are contractual in nature, unless specifically described as rights that exist under statute, common law and at equity. The parties specifically intend that this MDA grants to Developer "vested rights" as that term is construed in Utah's common law and pursuant to Utah Code Ann. §10-9a-509.

5.1. **Exceptions to Developer's Vested Rights**. The Developer's Vested Rights shall not apply to any updates or amendments to existing building, plumbing, mechanical, electrical, dangerous buildings, drainage, storm water management, or pressurized irrigation

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

requirements found in the American Fork City Code, Standard Specifications and Drawings manual, or similar construction or fire or safety related codes, such as the International Building Code, the APWA Specifications, AAHSTO Standards, the Manual of Uniform Traffic Control Devices or similar standards that are generated by a nationally or statewide recognized construction/safety organization, or by the State or Federal governments and are required to meet legitimate concerns related to public health, safety or welfare and not arbitrarily imposed. Furthermore, the Parties understand and agree that due to the nature of this MDA and the period of time anticipated to fully develop the Project, the Parties agree to work together in good faith to address engineering and design issues, including traffic flows, that relate to inadequate or unsafe service of the project and to make applicable and reasonable modifications to the exhibits attached to this MDA as may be necessary to address such inadequate or unsafe service of the Project.

6. **Term of Agreement.** The term of this MDA shall expire upon Buildout or twenty (20) years from the date that the first plat for the first Phase of the Project is given recorded with the County Recorder, whichever occurs first. The term of this MDA may be modified upon mutual agreement in writing by the parties. The vested rights granted under this MDA shall expire upon the termination of this Agreement for any portion of the Property which has not been included in a plat which has been given preliminary approval prior to the termination of the Agreement.

7. **Approval Processes for Development Applications.**

7.1. **Preliminary Plan.** Developer shall submit to the City for review and approval a Preliminary Plan consistent with this MDA.

7.2. **Final Plats.** Subsequent to the approval of a Preliminary Plan, Developer shall submit final plats to the City for review and approval. Said Final Plats shall be consistent with this MDA.

7.3. **Phasing.** The City acknowledges that Developer desires to develop the Property in multiple Phases. Developer may develop the Property in phases, consistent with the Phasing Plan attached hereto as Exhibit B.

7.4. **City's Cooperation in Processing Development Applications.** The City shall cooperate reasonably in promptly and fairly processing Development Applications and subject to the Developer's Vested Rights.

8. **Improvements.**

8.1. **On-Site Infrastructure.** Developer shall design and construct or cause to be constructed and installed all portions of the on-site infrastructure pursuant to any Development Application approvals and in accordance with the American Fork City Code, except as otherwise set forth in this MDA.

8.2. **Phasing of Infrastructure.** Developer shall install the infrastructure required by the American City Code, Standard Specifications and Drawings, and relevant Exhibits within this MDA, for each Phase. Each Development Application shall include

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

sufficient infrastructure improvements in order for the subdivision or site to not be dependent upon a later phase and/or plat. It is anticipated that phasing will be as set forth in the Phasing Plan attached hereto as Exhibit "B". Notwithstanding, each phase shall provide an adequate turn around for fire apparatus and other vehicles.

8.2.1. ***Phase A***

(a) Development of Phase A shall constitute the first phase of the development. It shall include a temporary cul-de-sac constructed in accordance with American Fork City Code and the standards and specifications.

(b) It is anticipated that Phase A will include a bridge at the entry of 350 East. Said bridge is not required and shall not be required prior to vertical construction or the development of other phases of the development.

a. At this time, the specifications for the bridge are not known. It is understood and agreed that 350 East is a public road to be dedicated to the City and the bridge, due to spanning the right-of-way, would require an easement for the airspace above 350 East, if the bridge is to be installed. Design criteria such as sight distance, setbacks, etc. shall be in compliance with City codes. The City agrees to grant to Developer an easement for the bridge under terms to be agreed upon by the Parties at a later time.

8.2.2. ***Phase B***

(a) Development of Phase B shall constitute the second phase of the development. Phase B includes a dead end road adjacent to Phase C. No lots shall be developed utilizing the dead end road for access. As such, the City will not require a temporary cul-de-sac on the dead end road.

(b) Phase B includes a roundabout. Developer desires to maintain the center of the roundabout. The City agrees to allow Developer to maintain the center of the roundabout consistent with the terms of this MDA.

8.2.3. ***Phase C***

(a) Development of Phase C shall constitute the third phase of the development.

8.2.4. ***Phase D***

(a) Development of Phase D shall constitute the fourth phase of the development.

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

8.2.5 ***Phase E***

(a) Development of Phase E shall constitute the fifth, and final, phase of the development.

9. **Public Right-Of-Way.** All streets/roadways within the development shall be dedicated to American Fork City for the use as public right-of-way. Said streets shall be developed consistent with the applicable cross-section as provided in American Fork City Code.

10. **CC&Rs and Association Declarations.** Portions of the Property shall be subject to certain conditions, covenants and restrictions. In addition to such conditions, covenants and restrictions, each residential community may be governed by different Association Declarations. If Association Declarations are filed against any community within the Project, the Homeowners Association(s), if any, associated with each set of Association Declarations will be responsible for the implementation and enforcement of the applicable Association Declarations. The Association Declarations may be amended by the processes specified in the Association Declarations without any requirement of approval of such amendments by the City.

11. **Ponds and Retention/Detention Facilities.** As applicable, all ponds, including water detention facilities, and appurtenant infrastructure located within the development ("Facilities") shall be owned and maintained by the Homeowners Association created by the Developer. The Developer and subsequent HOA shall indemnify and holds harmless the City and its authorized agents and employees for any and all damages, accidents, casualties, occurrences or claims which might arise or be asserted against the City from the construction, presence, existence or maintenance of the facilities by the Developer or HOA. In the event a claim is asserted against the City, its authorized agents or employees, the City shall promptly notify the Developer and HOA and the Developer and HOA shall defend at its own expense any suit based on such claim. If any judgment or claims against the City, its authorized agents or employees shall be allowed, the Developer and HOA shall pay for all costs and expenses in connection herewith.

12. **Roundabout Landscaping.** The development plans for 390 East provide for a roundabout to be installed. Said roundabout will be dedicated to the City as public right-of-way. Developer desires to, through the HOA, maintain the landscaping within said roundabout. To facilitate such landscaping, the City agrees to enter into a lease agreement with the HOA for the maintenance of the landscaped portion of the roundabout under terms and conditions consistent with the template attached hereto as Exhibit "D" and incorporated by reference into this Agreement.

13. **Fencing.** The Property is located adjacent to the Tri-City Golf Course, d/b/a Fox Hollow Golf Course (the "Golf Course"). Developer desires to minimize the risk of property damage to the development as a result of stray golf balls. The City desires to minimize the risk of trespassing on the Golf Course by way of the development. There is currently an existing chain link fence along the property line of the Golf Course and the Property. Developer may remove said fence with written approval of Golf Course. However, the fence shall be replaced with an equivalent barrier or fence which restricts access to the Golf Course as agreed upon by Golf

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Course. Separate and above the fencing along the Property boundary adjacent to the Golf Course, Developer shall install netting or other barrier which shall be a protection from Golf Course activities, including stray golf balls, to any properties within said Development.

14. **Default.**

14.1. **Notice.** If Developer or the City fails to perform their respective obligations hereunder or to comply with the terms hereof, the party believing that a Default has occurred shall provide Notice to the other party.

14.2. **Contents of the Notice of Default.** The Notice of Default shall:

(a) Claim of Default. Specify the claimed event of Default;

(b) Identification of Provisions. Identify with particularity the provisions of any applicable law, rule, regulation or provision of this MDA that is claimed to be in Default;

(c) Specify Materiality. Identify why the Default is claimed to be material; and

(d) Optional Proposed Cure. If the City or Developer chooses, in its discretion, propose a method and time for curing the Default which shall be of no less than sixty (60) days in duration.

14.3. **Meet and Confer, Mediation.** Upon the issuance of a Notice of Default, the parties shall engage in the "Meet and Confer". If the issue is not resolved during the "Meet and Confer" process, the parties shall engage in a mediation process as set forth above in Section 5.3.

14.4. **Remedies.** If the parties are not able to resolve the Default by "Meet and Confer" or by mediation then the parties may have the following remedies:

14.4.1. Legal Remedies. All rights and remedies available at law and in equity, including, but not limited to, injunctive relief, specific performance and/or damages; provided, however, Developer shall not pursue an action for monetary damages, except under the following circumstances: (i) any default by the City for non-payment of funds by the City, (ii) any default arising from fraud, bad faith, or gross negligence by the City, and/or (iii) any default arising from the City where specific performance is unavailable as a remedy.

14.4.2. Enforcement of Security. The right to draw on any security posted or provided in connection with the Project and relating to remedying of the particular Default.

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14.4.3. Withholding Further Development Approvals. The right to withhold all further reviews, approvals, licenses, Building Permits and/or other permits for development of the Project in the case of a default by Developer until the Default has been cured.

14.5. **Public Meeting.** Before any remedy in this Section 14 may be imposed by the City the party against which the Default is alleged shall be afforded the right to attend a public meeting before the Council and address the Council regarding the claimed Default.

14.6. **Emergency Defaults.** Anything in this MDA notwithstanding, if the Council finds on the record that a default materially impairing and creating a compelling, countervailing interest of the City and that any delays in imposing such a default would also impair a compelling, countervailing interest of the City, then the City may impose the remedies of this Section 14 without the requirements set forth above in this Section 14. The City shall give Notice to Developer of any public meeting at which an emergency default is to be considered and Developer shall be allowed to address the Council at that meeting regarding the claimed emergency Default.

14.7. **Cumulative Rights.** The rights and remedies set forth herein shall be cumulative.

15. **Notices.** All notices required or permitted under this MDA shall, in addition to any other means of transmission, be given in writing by certified mail and regular mail to the following address:

To Developer:

Attn:

To the City:

American Fork City
Attn: David Bunker
51 East Main Street
American Fory, Utah 84003

Except as otherwise provided in this MDA, each Notice shall be effective and shall be deemed delivered on the earlier of: (i) its actual receipt, if delivered personally, by courier service, or by facsimile provided that a copy of the facsimile Notice is mailed or personally delivered as set forth herein on the same day and the sending party has confirmation of transmission receipt of the Notice, (ii) its actual receipt if delivered electronically by email provided that a copy of the email is printed out in physical form and mailed or personally delivered as set forth herein on the same day and the sending party has an electronic receipt of the delivery of the Notice, or (iii) on the day the Notice is postmarked for mailing, postage prepaid, by First Class or Certified United States Mail and actually deposited in or delivered to the United States Mail. Any party may

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

change its address for Notice under this MDA by giving written Notice to the other party in accordance with the provisions of this Section.

16. **Attorneys' Fees.** In addition to any other relief, the prevailing party in any action, whether at law, in equity or by arbitration, to enforce any provision of this MDA shall be entitled to its costs of action including a reasonable attorneys' fee.

17. **Agreement to Run With the Land.** This Agreement shall be recorded in the Office of the Utah County Recorder, shall be deemed to run with the Property, and shall encumber the same; and shall be binding on and inure to the benefit of all successors and assigns of Developer in the ownership or development of any portion of the Property. This Agreement supersedes any and all development agreements that have been executed concerning the Property.

18. **Assignment.** Neither this Agreement nor any of the provisions, terms or conditions hereof can be assigned to any other party, individual or entity without the consent of the other party. This Agreement shall be binding upon any successors and assigns. This restriction on assignment is not intended to prohibit or impede the sale by Developer. Any assignee shall consent in writing to be bound by the assigned terms and conditions of this MDA as a condition precedent to the effectiveness of the assignment.

19. **Entire Agreement.** This MDA (including all Exhibits attached hereto) is the entire agreement between the parties and may not be amended or modified except either as provided herein or by a subsequent written amendment signed by all parties.

20. **Headings.** The captions used in this MDA are for convenience only and are not intended to be substantive provisions or evidences of intent.

21. **No Third Party Rights/No Joint Venture.** This MDA does not create a joint venture relationship, partnership or agency relationship between the City and Developer. Further, the parties do not intend this MDA to create any third-party beneficiary rights. The parties acknowledge that this MDA refers to a private development and that the City has no interest in, responsibility for or duty to any third parties concerning any improvements to the Property unless the City has accepted the dedication of such improvements at which time all rights and responsibilities for the dedicated public improvement shall be the City's.

22. **Binding Effect.** If Developer sells or conveys portions of the Property as permitted in Section 20, the lands so sold and conveyed shall bear the same rights, privileges, intended uses, configurations, and Density as applicable to such Parcel and be subject to the same limitations and rights of the City when owned by Developer and as set forth in this MDA without any required approval, review, or consent by the City except as otherwise provided herein. The City agrees that this MDA is a contract and contains contractual obligations of the City, and is fully enforceable and binding upon the City.

23. **No Waiver.** Failure of any party hereto to exercise any right hereunder shall not be deemed a waiver of any such right and shall not affect the right of such party to exercise at some future date any such right or any other right it may have.

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

24. **Severability.** If any provision of this MDA is held by a court of competent jurisdiction to be invalid for any reason, the parties consider and intend that this MDA shall be deemed amended to the extent necessary to make it consistent with such decision and the balance of this MDA shall remain in full force and affect; provided, however, if any of the City's representations, covenants, agreements, or obligations are invalidated, Developer shall have the right, in its sole and absolute discretion, to terminate this MDA and/or pursue any remedies available under this MDA.

25. **Force Majeure.** Any prevention, delay or stoppage of the performance of any obligation under this MDA which is due to strikes, labor disputes, inability to obtain labor, materials, equipment or reasonable substitutes therefor; acts of nature, governmental restrictions, regulations or controls, judicial orders, enemy or hostile government actions, wars, civil commotions, fires or other casualties or other causes beyond the reasonable control of the party obligated to perform hereunder shall excuse performance of the obligation by that party for a period equal to the duration of that prevention, delay or stoppage.

26. **Time is of the Essence.** Time is of the essence to this MDA and every right or responsibility shall be performed within the times specified.

27. **Appointment of Representatives.** To further the commitment of the parties to cooperate in the implementation of this MDA, the City and Developer each shall designate and appoint a representative to act as a liaison between the City and its various departments and Developer. The initial representative for the City shall be Adam Cowie and the initial representative for Developer shall be Ken Watson. The parties may change their designated representatives by Notice. The representatives shall be available at all reasonable times to discuss and review the performance of the parties to this MDA and the development of the Project.

28. **Mutual Drafting.** Each party has participated in negotiating and drafting this MDA and therefore no provision of this MDA shall be construed for or against either party based on which party drafted any particular portion of this MDA.

29. **Applicable Law and Venue.** This MDA is entered into in the City of American Fork, Utah County, State of Utah, and shall be construed in accordance with the laws of the State of Utah irrespective of Utah's choice of law rules. Any action to enforce this MDA shall be brought only in the Fourth District Court for the State of Utah, Utah County.

30. **Recordation and Running with the Land.** This MDA shall be recorded in the chain of title for the Project. This MDA shall be deemed to run with the land.

31. **Authority/Approval.** The parties to this MDA each warrant that they have all of the necessary authority to execute this MDA.

32. **Effectiveness of MDA.** This MDA shall be effective as of the Effective Date.

[Signatures and Acknowledgements to Follow]

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

IN WITNESS WHEREOF, the parties hereto have executed this MDA by and through their respective, duly authorized representatives as of the day and year first herein above written.

DEVELOPER:

_____

By: _____

Its: _____

CITY:

City of American Fork,
a Utah municipal corporation

_____
By: BRADLEY J. FROST
AMERICAN FORK CITY MAYOR

ATTEST:

_____
TERILYN LURKER
AMERICAN FORK CITY RECORDER

DEVELOPER ACKNOWLEDGMENT

STATE OF UTAH)
:ss.
COUNTY OF SALT LAKE)

On the _____ day of _____, 2024, personally appeared before me _____, who, being by me duly sworn, did say that he is the _____ of _____, a Utah limited liability company, and that the foregoing instrument was duly authorized by the company at a lawful meeting held by authority of its operating agreement and signed in behalf of said company.

_____
NOTARY PUBLIC

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

OWNER'S CONSENT

_____, _____, as the owner of record of a portion of the real property described in Exhibit A, consents to the recording of this MDA against the Property, understanding that this MDA will run with the land according to the terms and provisions set forth in this MDA.

_____
_____

_____

By: _____

Its: _____

STATE OF UTAH)
:ss.
COUNTY OF SALT LAKE)

On the _____ day of _____, 2024, personally appeared before me _____, who, being by me duly sworn, did say that he is the _____ of _____, a Utah limited liability company, and that the foregoing instrument was duly authorized by the company at a lawful meeting held by authority of its operating agreement and signed in behalf of said company.

_____
NOTARY PUBLIC

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

EXHIBIT A
PROPERTY DESCRIPTIONS

Parcel 12:061:0273

Parcel 12:061:0079

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EXHIBIT B
PHASING PLAN

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PHASING PLAN

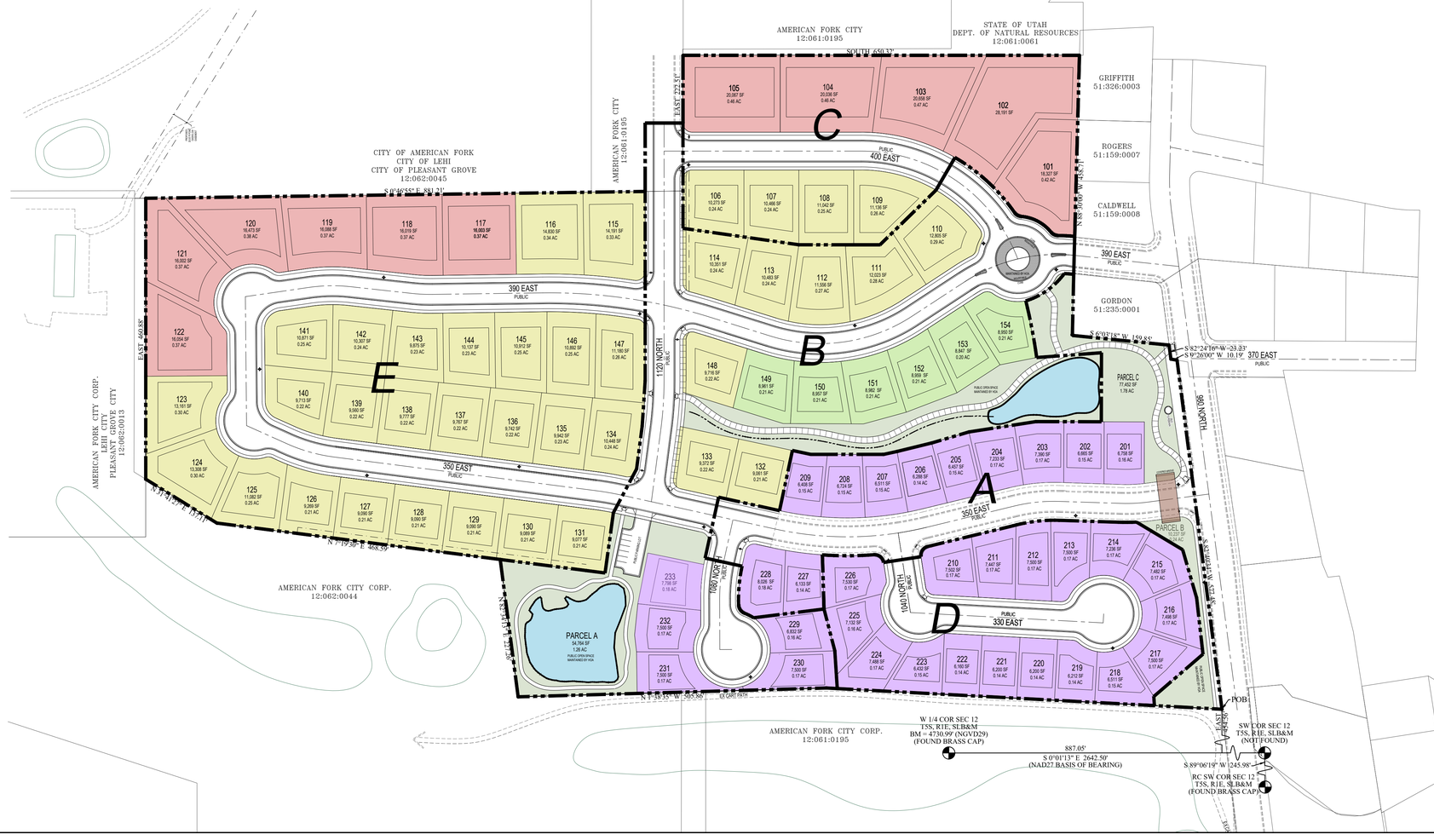
CONSERVATION SUBDIVISION

Plat	Area	Open Space	% Open per Plat	Total Open Space
A	3.82	0.91	24%	24%
B (portion)	3.73	2.36	63%	43%
D	3.54	0.00	0%	29%

	Area (ac)	Area (%)
REQ'D OPEN SPACE	2.77	25%
PROVIDED OPEN SPACE	3.26	29%

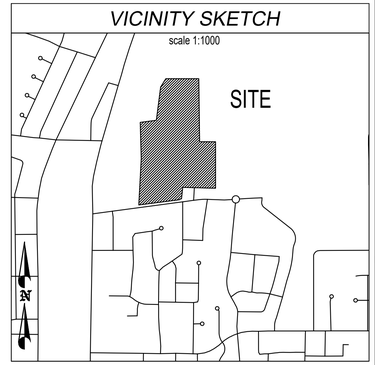
FLEXIBLE LOT SUBDIVISION

Plat	Area	Open Space	% Open per Plat	Total Open Space
B (portion)	5.29	0.00	0%	0%
C	4.07	0.00	0%	0%
E	10.54	0.00	0%	0%



LOT LEGEND

LOT SIZE	TYPICAL DIMENSIONS
16,000+ SF	100' x 160'
9,000 SF	90' x 100'
7,500 SF	75' x 100'
6,000 SF	60' x 100'



THE
BRIDGES
AT FOX HOLLOW

DEVELOPMENT

BROOKSTONE INVESTMENTS
372 S MAIN STREET
ALPINE, UT 84004
(801) 756-3581

0 50 100 200 300
SCALE: 1"= 100'

berg
CIVIL ENGINEERING
11038 N Highland Blvd Suite 400
Highland Ut, 84003
office (801) 492-1277
cell (801) 616-1677

REVISIONS			SEAL
NO.	DATE	DESCRIPTION	
1			
2			
3			
4			
5			
6			

STATE OF UTAH
ZACHARY R. FOX
343602
REGISTERED
PROFESSIONAL ENGINEER
8/12/2024

ACTION	DATE
PRELIM	8/12/2024

PROJECT

THE
BRIDGES
AT FOX HOLLOW
350 EAST 1080 NORTH

DESCRIPTION

PRELIMINARY PLANS

SHEET NAME	SHEET NUMBER
PHASING	*PHASE*

c:\users\kenlroneshne - berg civil engineering\berg civil\2024\bridges at fox hollow\both_05\phase1.dwg

Attachment: Development agreement Bridges at Fox Hollow 9.17 (Bridges at Fox Hollow - Development Agreement)

EXHIBIT C
ROUNDABOUT LEASE

ROUNDABOUT PROPERTY LEASE AGREEMENT

This Lease Agreement is entered into this ____ day of _____, 20_____, by and between American Fork City (hereinafter referred to as the "City") and _____ (hereinafter referred to as the "HOA"). This Agreement shall be binding and effective as of the date the last of the two parties signs the Agreement (hereinafter "Effective Date").

RECITALS

WHEREAS the City owns public right-of-way within the Bridges at Fox Hollow subdivision (the "Subdivbision") located at approximately _____, American Fork City, Utah 84043;

WHEREAS HOA is the Homeowner Association for the Bridges at Fox Hollow subdivision;

WHEREAS the right-of-way within the Subdivision contains a roundabout at the convergence point of 390 East and 400 East ("Roundabout");

WHEREAS the HOA desires to landscape the center of the Roundabout ("Landscape Area") to maintain the desired aesthetic of the community; and

WHEREAS City agrees to lease to the HOA the Landscape Area pursuant to the terms of this Agreement.

NOW THEREFORE, in consideration of the promises, covenants, and conditions herein contained, and in further consideration of the execution of this Agreement and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City, and the HOA agree as follows:

AGREEMENT

Therefore, the parties agree as follows:

1. Recitals. The above-stated Recitals are incorporated herein by this reference.

2. Compensation. Compensation to the City shall be in the form of the service provided, specifically, maintenance of the Landscape Area. Copensation to the HOA shall be in the form of permission to maintain the Landscape Area consistent with the desired aesthetic of

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the community and consistent with this Agreement.

3. Term. The term of this Agreement shall be for a period of twenty (20) years beginning on the Effective Date (hereinafter, "Lease Term").

    a. The Lease Term will terminate if or when:

        i. The Lease Term expires;

        ii. The HOA gives written notice to the City of its intent to terminate this Agreement by mailing a written notice to the last provided address of the City;

        iii. Either party defaults in the performance of its respective obligations described in this Agreement and the default is not cured; or

        iv. The HOA fails to maintain the Landsccape Area in a manner satisfactory to the City.

4. Landscape and Maintenance. The HOA shall be responsible for all maintenance of the Landscape Area, including, but not limited to, watering, mowing and pruning of the Landscape Area, as applicable. Use and maintenance of the Landscape Area shall not interfere with the the use of the public right-of-way within the Subdivision, including interference with sight lines and other safety concerns.

5. Modification – Waiver. No change or modification of this Agreement shall be valid unless made in writing and signed by each of the parties hereto. No waiver of any provision of this Agreement shall be valid unless such a waiver is in writing and signed by each of the parties hereto.

6. Indemnification. The HOA agrees to indemnify and hold the City, its officers, agents, officials, volunteers, and employees harmless against any and all loss, liability, damage, costs and expenses which the HOA or any person participating in activities within the Landscape Area may suffer, incur, be put to, pay or expend by reason of, or arising out of or as a result of the use of the Landscape Area. This indemnification shall extend to any and all claims, suits, causes of action, judgments or damages sustained by the City or any other person or persons for bodily injury, or for injury to or loss of property resulting from, caused by, or arising out of the conduct of the HOA, its agents, affiliates, or employees.

7. Severability. If any provision of this Agreement is held invalid by operation of law or by a Court of competent jurisdiction, such provision shall be inoperative, but all other provisions shall not be affected thereby and shall continue in full force and effect.

8. Binding Effect. This Agreement is binding upon and inures to the benefit of the parties and their respective heirs, legatees, representatives, successors, allowable transferees and allowable assigns.

9. Assignment; Sublease. The HOA shall not assign or transfer this Agreement, or any

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interest therein, and the HOA shall not sublet the Landscape Area or any portion thereof, without the prior written consent of the City.

10. Amendments. This Agreement may not be modified, amended or terminated except by an instrument in writing, signed by each party hereto. Agreements to reasonable requests for modifications will not be unreasonably withheld, conditioned, or delayed.

11. Duplicate Originals. This Agreement may be executed in duplicate originals, each of which shall be deemed to be an original, and all of which shall be deemed to constitute one and the same instrument.

12. Governing Law. This Agreement shall be construed in accordance with the laws of the State of Utah, regardless of any choice or conflict of law rules. Each party agrees that any legal action or proceeding with respect to this Agreement may only be brought in the courts of Utah County, in the State of Utah. Consequently, each party hereby submits itself unconditionally to the jurisdiction and venue of the aforementioned courts.

13. Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the remaining provisions of this Agreement shall nevertheless be construed, performed, and enforced as if the invalidated or unenforceable provision had not been included in this Agreement.

14. Entire Agreement. All agreements, covenants, representations and warranties, express or implied, oral or written, of the parties concerning the subject matter hereof are contained solely in this Agreement. No other agreements, covenants, representations, or warranties, express or implied, oral or written, have been made by any party to any other party concerning the subject matter hereof. All prior and contemporaneous conversations, negotiations, possible and alleged agreements, representations, covenants, and warranties concerning the subject matter hereof are merged herein. This is an integrated agreement.

WHEREFORE, the parties have executed the foregoing Agreement to be effective the date first appearing above.

HOA	AMERICAN FORK CITY
By: _____	_____
Name: _____	Bradley J. Frost
Its: _____	Mayor
	ATTEST:
	_____
	Terilyn Lurker, City Recorder

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REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Planning **Director Approval** *Patrick O'Brien*

AGENDA ITEM Review and action on a proposed use for a Specialty School, known as Rad Lab Studios, located at 1349 S 500 E #243, in the Planned Industrial (PI-1) zone.

SUMMARY RECOMMENDATION N/A

BACKGROUND The applicant is proposing a specialty school for teaching kids and the youth STEM classes and engineering principals, located at 1349 S 500 E #243. Rad Lab Studios teaches children as early as grade 1 to as late as grade 12. Currently, the business is operating without a business license and has been denied as their use is not specifically mentioned within the permitted uses found in Section 17.7.701 Planned Industrial Parks of the City's Municipal Code. Rab Lab Studios has submitted two business license applications that have different language for their business descriptions. Both have been denied as the business model is still a specialty school teaching kids and the youth. They were denied on August 8th, 2024, and August 19th, 2024 from the zoning department.

This proposal is being brought before the City Council for a decision on whether or not they would like to have a specialty school located in the Planned Industrial (PI-1) zone. In Section 17.7.701 Planned Industrial Parks, it shows the allowed uses that are permitted within the zone. Located within the allowed uses there is a provision which states, "other uses determined by the city council to be similar to uses specifically permitted in the zone and which will harmonize with the intent of the PI-1 industrial zone." All allowed uses found within the PI-1 zone are:

- Office buildings.
- Research and light manufacturing buildings, provided that all research and manufacturing activity shall be conducted within the buildings. The outside storage of materials or equipment used in the conduct of the business activity shall not be permitted, except that on-site storage of fleet vehicles shall be permitted, provided that said vehicles are limited to automobiles and light trucks and the number of vehicles shall be used in the conduct of the business and limited to the number of on-site employees.
- The incidental sale to the public of products manufactured on site, but not including sexually oriented businesses or products.
- Office/warehouse establishments.

- Other uses determined by the city council to be similar to uses specifically permitted in the zone and which will harmonize with the intent of the PI-1 industrial zone.
- Free-standing project identification signs, in accordance with the applicable provisions of Section 17.5.128.
- Low power radio service antenna facilities, subject to the provisions of Section 17.6.112 of this code

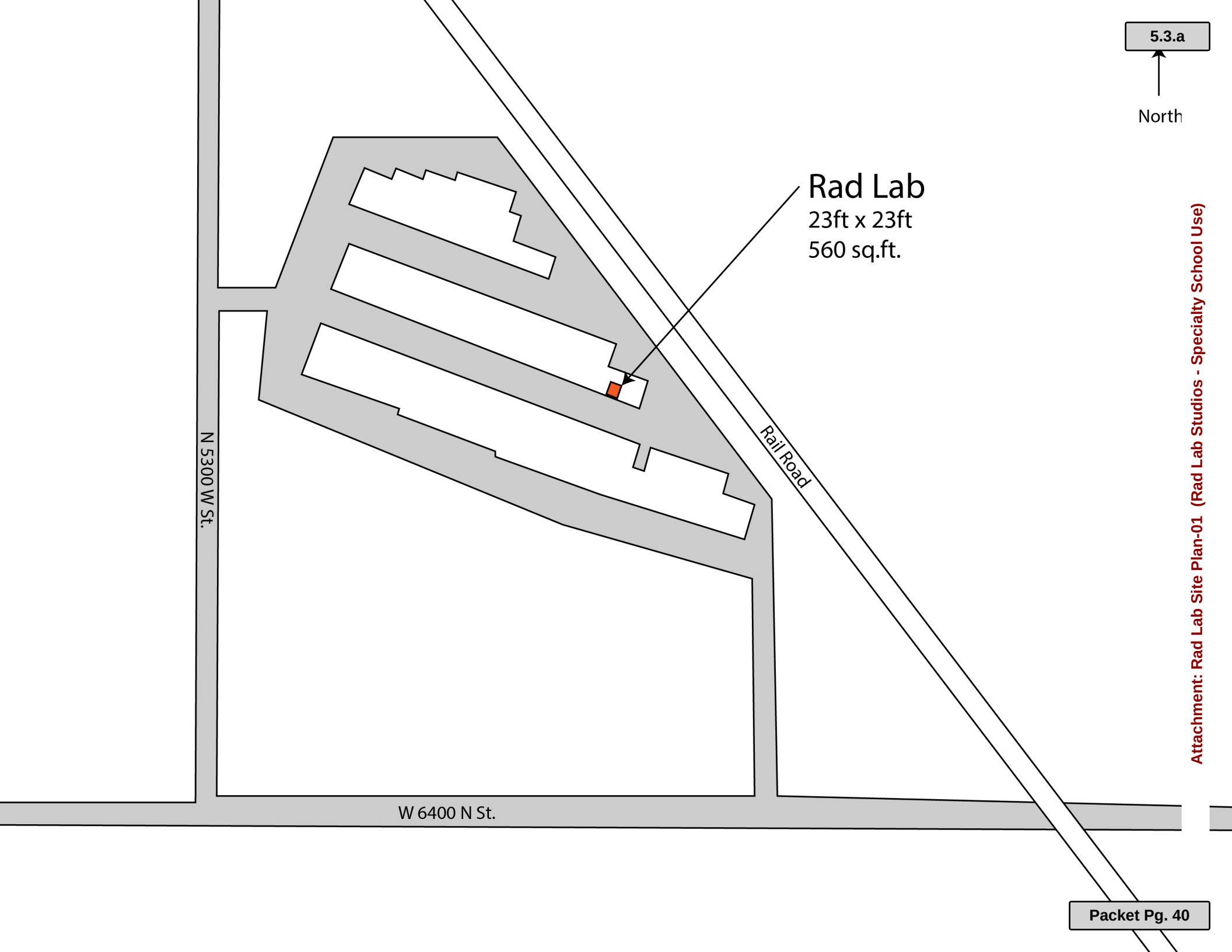
The applicant is submitting a concept plan to seek approval of the use under the above mentioned section. Should the concept be approved, the applicant will need to submit a new site plan application due to the change of use, prior to being able to legally operate in the space.

BUDGET IMPACT N/A

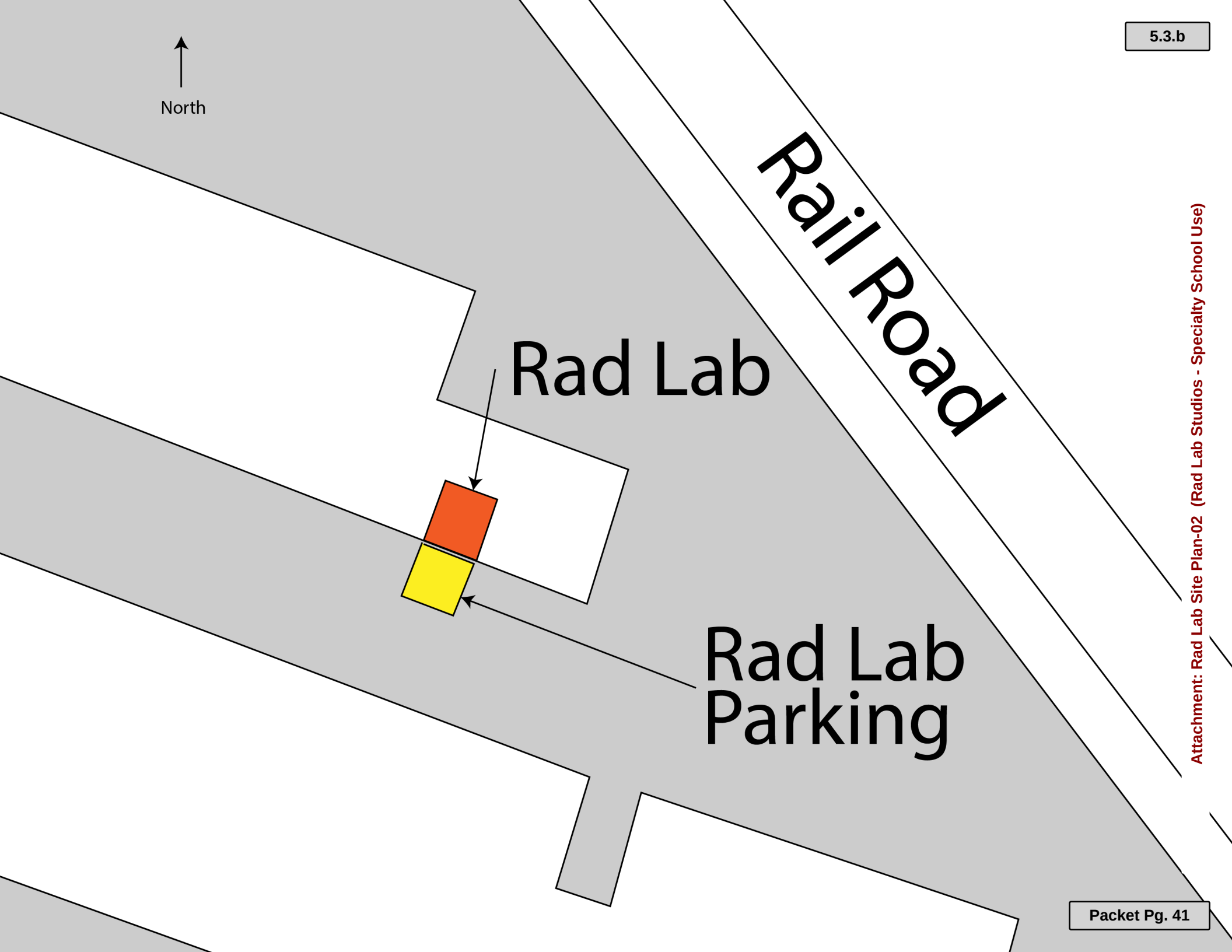
SUGGESTED MOTION I move to deny/approve the proposed use for a specialty school, known as Rad Lab Studios, located at 1349 S 500 E #243, in the Planned Industrial (PI-1) zone.

SUPPORTING DOCUMENTS

Rad Lab Site Plan-01 (PNG)
Rad Lab Site Plan-02 (PNG)
Rad Lab Site Plan-03 (PNG)
Rad Lab Zoning (PDF)



Attachment: Rad Lab Site Plan-01 (Rad Lab Studios - Specialty School Use)



Attachment: Rad Lab Site Plan-02 (Rad Lab Studios - Specialty School Use)

Attachment: Rad Lab Site Plan-03 (Rad Lab Studios - Specialty School Use)

REDACTED

From: RadLab
Sent: Monday, August 26, 2024 12:48 PM
To: Cody Opperman
Subject: Rad Lab Zoning

Hello,
We are Rad Lab Studios LLC, and we are a small business applying for a business license at 1349 S 500 E #243.

Narrative:
We started Rad Lab as a way to help kids get more hands-on experience, as most kids do not have access to things like CNC machines and 3D printers. The founder, Shane Wood, taught a prototyping class at BYU for a few years, and some of the professors remarked that students were coming in with much less hands-on, technical ability than in previous eras. We created Rad Lab as a solution to this.

Site Plan:
At this site, we plan to use CNC machines, 3D printers, and other tools to create different projects with kids and youth in order to teach them different processes and scientific/engineering principles.
In order to teach kids/youth various processes, we use a CNC router, a CNC laser, FDM 3D printers, SLA 3D printers, and other hand tools like drills and soldering irons. Tool use is modified based on the age and experience of the participants. We may also expand to welding. Some of these machines are loud, require ventilation, or create dust or other debris. Such machines would make many typical retail-type locations unsuitable for our operations.

Appropriateness of Zoning Requirements:
We feel that our business aligns with the PI-1 Planned Industrial Zone in its intent, especially under 17.7.701 Allowed uses of industrial zone: "Research and light manufacturing." We will be using various industrial-type equipment for light manufacturing projects with the students. The research aspect occurs in a couple different ways. We will be working with the students to research and test different designs, models, and projects. In addition, as a business we look at this as an opportunity to research the best ways to teach and educate kids in various STEM principles. Through it all, we are using light manufacturing processes (CNC machines, 3D printers, hand tools, etc.) to craft all of these projects. In addition, the owner plans to produce and release products related to STEM education using this site and the tools there. So again, while we teach kids and youth, the actual activity happening at our location is "research and light manufacturing." For these reasons, we believe our business fits under the Planned Industrial Zone.

Thank you for your time,
Shane Wood

Attachment: Rad Lab Zoning (Rad Lab Studios - Specialty School Use)

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Planning **Director Approval** *Patrick O'Brien*

AGENDA ITEM Review and action on an ordinance approving a Code Text Amendment known as General Provisions, of the American Fork City Municipal Code. Amending Section 17.1, the Code Text Amendment plans to update the designation of land use authority and appeal authority.

SUMMARY RECOMMENDATION
Planning Commission recommended approval at the September 4, 2024 regular scheduled meeting.

BACKGROUND
Staff has initiated a Code Text Amendment to amend Section 17.1 of the American Fork City Municipal Code. As the new state code has passed, staff have proposed creating new land use authorities and appeal authorities for subdivisions, conditional uses, and site plans. For both subdivisions and large-scale development, staff are proposing to create a Development Review Committee (DRC) Board where they will act upon preliminary plans and final plans for both residential and commercial/industrial properties. As for site plans and conditional uses, planning commission, or such other individual or department specifically designated by the terms of code, will be the approval body. All appeals for preliminary plans, final plats, conditional uses, and site plans will be the City Council.

BUDGET IMPACT
N/A

SUGGESTED MOTION
I move to adopt the ordinance approving the Code Text Amendment, amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority, and providing an effective date for the ordinance.

I move to deny the Code Text Amendment amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority.

I move to table the Code Text Amendment, amending Section 17.1, titled General Provisions,

relating to updating the designation of land use authority.

SUPPORTING DOCUMENTS

17.1 Land Use Designation rev. (PDF)
1. Section 17.1 General Provisions_CTA - Staff Report (1) (PDF)
09.04.2024 UNAPPROVED PC Meeting Minutes (DOCX)

ORDINANCE NO. 2024 - ___ - ___

AN ORDINANCE AMENDING SECTION 17.1.700 OF THE AMERICAN FORK CITY MUNICIPAL CODE, DESIGNATION OF LAND USE AUTHORITY AND APPEAL AUTHORITY, AND PROVIDING AN EFFECTIVE DATE FOR THE ORDINANCE.

WHEREAS, American Fork City seeks to promote the health, safety, morals, convenience, order, prosperity, and general welfare of American Fork City;

WHEREAS, the American Fork City Council finds it in the best interest of the City to modify and clarify the Land Use and Appeal Authorities;

WHEREAS, the American Fork City Council finds that the adoption of this ordinance would promote the health, safety and welfare of the City and its residents.

NOW THEREFORE, be it ordained by the city council of American Fork, Utah, that:

PART I
TEXT OF ORDINANCE

SECTION 1. Section 17.1.700 of the Municipal Code of American Fork City, relating to Designation of Land Use Authority and Appeal Authority, shall read as follows:

17.1.700 DESIGNATION OF LAND USE AUTHORITY AND APPEAL AUTHORITY

1. In the instance of approval of a residential building permit on a lot within an approved residential subdivision or other legal lot of record, the zone clearance and land use authority shall be the American Fork City Building Division. The appeal authority for any determination made by the building division related to zone clearance and land use shall be the board of adjustment. The appeal authority for any determination made by the building division related to the International Building Code shall be as provided in the IBC.
2. In the instance of approval of conditional use application or site plan, pursuant to Chapter 17.5 or 17.6 of the Development Code, the land use authority shall be the planning commission or such other individual or department specifically designated by the terms of the code. The appeal authority for such applications shall be the city council.
3. In the instance of approval of a subdivision pursuant to the provisions of Chapter 17.8 of the development code, the land use authority shall be the Development Review Committee, acting in an administrative capacity. The appeal authority for such application shall be as set forth in 17.8.212.
4. In the instance of approval of a large scale development pursuant to the provisions of Chapter 17.7 of the development code, the land use authority shall be the Development

Attachment: 17.1 Land Use Designation rev. (Section 17.1 Code Text Amendment - Development Review Committee)

Review Committee, acting in an administrative capacity. The appeal authority for such application shall be as set forth in 17.7.212.

PART II
CONFLICTING ORDINANCES, SEVERABILITY, AND ADOPTION

SECTION 1. Conflicting Provisions. Whenever the provisions of this Ordinance conflict with the provisions of any other ordinance, resolution, or part thereof, the more stringent shall prevail.

SECTION 2. Provisions Severable. This Ordinance and the various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause, or phrase is adjudged to be unconstitutional or invalid, it is hereby declared that the remainder of the ordinance shall not be affected thereby.
This amended ordinance shall take effect immediately upon its passage and publication as prescribed by law.

Passed by the American Fork City Council this ____ day of _____, 2024.

_____
Bradley J. Frost
American Fork City Mayor

ATTEST:

_____
Terilyn Lurker
City Recorder

Attachment: 17.1 Land Use Designation rev. (Section 17.1 Code Text Amendment - Development Review Committee)

REFERENCE:

17.1.700 DESIGNATION OF LAND USE AUTHORITY AND APPEAL AUTHORITY

5. In the instance of approval of a residential building permit on a lot within an approved residential subdivision or other legal lot of record, the zone clearance and land use authority shall be the American Fork City Building Division. The appeal authority for any determination made by the building division related to zone clearance land use shall be the board of adjustment. The appeal authority for any determination made by the building division related to the International Building Code shall be as provided in the IBC.

6. In the instance of approval of conditional use application or site plan, pursuant to Chapter 17.5 or 17.6 of the Development Code, the land use authority shall be the planning commission or such other individual or department specifically designated by the terms of the code. The appeal authority for such applications shall be the city council.

7. In the instance of approval of a subdivision pursuant to the provisions of Chapter 17.8 of the development code, the land use authority shall be the ~~city council~~Development Review Committee, acting in an administrative capacity. The appeal authority for such application shall be as set forth in 17.8.212 .

~~7.~~8. In the instance of approval of a large scale development pursuant to the provisions of Chapter 17.7 of the development code, the land use authority shall be the Development Review Committee, acting in an administrative capacity. The appeal authority for such application shall be as set forth in 17.7.212. ~~the district court.~~

~~8. In the instance of approval of a large scale development overlay zone, pursuant to the provisions of Chapter 17.7 of the development code, the land use authority shall be the city council, acting in a legislative capacity. The appeal authority for such applications shall be the district court.~~

~~(Ord. No. 2011-07-20, pt. I(§ 3), 7-12-2011)~~

Attachment: 17.1 Land Use Designation rev. (Section 17.1 Code Text Amendment - Development Review Committee)

Planning Commission Staff Report
Meeting Date: September 4, 2024

Agenda Topic

Public hearing, review, and recommendation on a proposed Code Text Amendment, known as General Provisions, of the American Fork City Municipal Code. Amending Section 17.1, the Code Text Amendment plans to update the designation of land use authority and appeal authority.

Background

Staff has initiated a Code Text Amendment to amend Section 17.1 of the American Fork City Municipal Code. As the new state code has passed, staff have proposed creating new land use authorities and appeal authorities for subdivisions, conditional uses, and site plans. For both subdivisions and large-scale development, staff are proposing to create a Development Review Committee (DRC) Board where they will act upon preliminary plans and final plans for both residential and commercial/industrial properties. As for site plans and conditional uses, planning commission, or such other individual or department specifically designated by the terms of code, will be the approval body. All appeals for preliminary plans, final plats, conditional uses, and site plans will be the City Council.

Potential Motions – Code Text Amendment

Approval

Madame Chair, I move to recommend approval for the proposed Code Text Amendment, amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority, and providing an effective date for the ordinance.

Denial

Madame Chair, I move to recommend denial for the proposed Code Text Amendment, amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority.

Table

Madame Chair, I move to table action for the proposed Code Text Amendment, amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority, and instruct staff/developer to……..

Attachment: 1. Section 17.1 General Provisions_CTA - Staff Report (1) (Section 17.1 Code Text Amendment - Development Review Committee)

UNAPPROVED MINUTES
09.04.2024

AMERICAN FORK CITY

PLANNING COMMISSION REGULAR SESSION

September 4th, 2024

The American Fork City Planning Commission met in a regular session on September 4th, 2024 at the American Fork City Hall, 31 North Church Street, commencing at 6:00 p.m.

Commissioners Present: Christine Anderson, Geoff Dupaix, Bruce Frandsen, Claire Oldham, Rodney Martin, Chris Christiansen

Commissioners Absent: David Bird, Harold Dudley,

Staff Present:

Travis Van Ekelenburg	Senior Planner
Cody Opperman	Planner
JJ Hsu	Engineer
Angie McKee	Administrative Assistant I

Others Present:

REGULAR SESSION

Christine Anderson led the "Pledge of Allegiance"

Roll Call

COMMON CONSENT AGENDA

Minutes of the August 21st, 2024 Planning Commission Regular Session.

Geoff Dupaix motioned to approve the Common Consent agenda

Claire Oldham seconded the motion.

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (Section 17.1 Code Text Amendment - Development Review Committee)

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**ABSTAIN**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

PUBLIC HEARINGS

a. **Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Municipal Planning Organization, of the American Fork City Municipal Code. Amending Section 17.2, the Code Text Amendment plans to update the procedures for municipal planning organization.**

Travis Van Ekelenburg reviewed the background information for public hearing item letter a: Staff has initiated a Code Text Amendment to amend Section 17.2 of the American Fork City Municipal Code. The proposed amendment looks to update the procedures for municipal planning organization. Staff are proposing creating a Development Review Committee (DRC) where it will be similar in nature to a Planning Commission or City Council Meeting. The DRC meeting will meet once every week to make decisions on preliminary plans and final plats for large-scale developments and subdivisions. The appointed board members will include three people: the Development Services Director, the Public Works Director, and the Fire Chief. If one of those appointed board members is not available to meet at a meeting, they may designate a designee to take their position. The DRC will act upon preliminary plans and final plats for subdivisions and large-scale developments. Any applicant that does not agree with the committee's decision can appeal to the City Council for their decision. Christine Anderson

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (Section 17.1 Code Text Amendment - Development Review Committee)

explained that these changes are designed to streamline the process. Geoff Dupaix asked what the planning commission's role will be if this DRC is making all the decisions. Cody Opperman explained that site plans will still come to the Planning Commission, and because the DRC meeting will be weekly, this will move these projects forward in a timelier manner. Claire Oldham asked for some clarification on how the current process is done in American Fork City, and Cody Opperman informed her of the review process, noting that due to state legislation, only the Development Services Director would be making recommendations on preliminary plans and final plats. This Code Text Amendment will allow a 3-person committee to make these recommendations instead of only one individual. Rodney Martin noted that this move is in line with what the state legislature has mandated, as the state was not satisfied with how long cities were taking to do plan reviews.

Public Hearing Opened

No Comments

Public Hearing Closed

Geoff Dupaix moved to recommend approval for the proposed Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization, and providing an effective date for the ordinance.

Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (Section 17.1 Code Text Amendment - Development Review Committee)

b. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as General Provisions, of the American Fork City Municipal Code. Amending Section 17.1, the Code Text Amendment plans to update the designation of land use authority and appeal authority.

Cody Opperman reviewed the background information for public hearing item letter b: Staff has initiated a Code Text Amendment to amend Section 17.1 of the American Fork City Municipal Code. As the new state code has passed, staff have proposed creating new land use authorities and appeal authorities for subdivisions, conditional uses, and site plans. For both subdivisions and large-scale development, staff are proposing to create a Development Review Committee (DRC) Board where they will act upon preliminary plans and final plans for both residential and commercial/industrial properties. As for site plans and conditional uses, planning commission, or such other individual or department specifically designated by the terms of code, will be the approval body. All appeals for preliminary plans, final plats, conditional uses, and site plans will be the City Council.

Public Hearing Opened

No Comments

Public Hearing Closed

Rodney Martin moved to recommend approval for the proposed Code Text Amendment, amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority, and providing an effective date for the ordinance.

Bruce Frandsen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (Section 17.1 Code Text Amendment - Development Review Committee)

Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

c. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Large Scale Development Overlay Zones, of the American Fork City Municipal Code. Amending Section 17.7, the Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone.

Cody Opperman reviewed the background information for public hearing item letter c: Staff has initiated a Code Text Amendment to amend Section 17.7 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone. Rather than a large-scale overlay zone, staff are proposing to change it to large-scale development. Large Scale Development goes into details about the approval procedures for their preliminary plans and final plans when submitted to staff for review. Rather than going to the Planning Commission and the City Council for approval, they will go to the Development Review Committee (DRC) board to get approved. Any decisions that the DRC makes for denial may be appealed to the City Council for their determination.

Public Hearing Opened

No Comments

Public Hearing Closed

Claire Oldham moved to recommend approval for the proposed Code Text Amendment, amending Section 17.7, titled Large-Scale Development Overlay Zones, relating to

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (Section 17.1 Code Text Amendment - Development Review Committee)

amending the approval procedure for the large-scale overlay zone, and providing an effective date for the ordinance.

Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

d. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Subdivisions, of the American Fork City Municipal Code. Amending Section 17.8, the Code Text Amendment plans to amend the approval procedure for subdivisions.

Travis Van Ekelenburg reviewed the background information for public hearing item letter d: Staff has initiated a Code Text Amendment to amend Section 17.8 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for subdivisions. The subdivision process will only include the Development Review Committee (DRC). The DRC will review the preliminary plans and finals plats associated with the development and ultimately act upon them once they are in an approvable form. Residential subdivision will have a three-time review process where the applicant will submit for the first time and have up to two resubmittals before an action is made by the DRC. Any denial the DRC makes can be appealed to the City Council to decide on the matter. Bruce Frandsen voiced his concerns that the public should be more involved when a subdivision is being considered, and removing the planning commission as the approval body takes away the option of the public being able to voice their opinions. Claire Oldham asked about the notification process once a subdivision request is filed. Travis Van Ekelenburg referenced the state minimums 10 day noticing requirement and reminded the commissioners that due to the State Code Change, only

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (Section 17.1 Code Text Amendment - Development Review Committee)

the Development Services Director would be making recommendations on subdivisions without this change to the code. He also noted that regardless of the approval body, the citizens will still receive the required notifications. Christine Anderson acknowledged the importance of Bruce Frandsen's concern and added that items in need of a public hearing such as zoning maps would still come before the planning commission. She feels that once things get to an administrative level where someone is basically looking at the plan and checking off the boxes for American Fork City code requirements, she thinks that is something that can be handled by the DRC. Bruce Frandsen agreed and was appreciative of the discussion and clarifications. Rodney Martin noted that during his time on the Planning Commission, he has felt at times there was some redundancy, and he likes the idea of streamlining things as much as possible.

Public Hearing Opened

No Comments

Public Hearing Closed

Bruce Frandsen moved to recommend approval for the proposed Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to amending the approval procedure for subdivisions and providing an effective date for the ordinance.

Rodney Martin seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (Section 17.1 Code Text Amendment - Development Review Committee)

Other Business

Cody Opperman informed the commissioners that code rewrite is still being worked on, along with the stationary and general plan amendments. He also mentioned that staff is working on an overlay map showing where developments are happening in the city, and possibly what Parcels are currently under review.

Adjournment

Geoff Dupaix motioned to adjourn the meeting.

Rodney Martin seconded the motion.

Meeting adjourned at 6:26PM

Angie McKee

Administrative Assistant I

The order of agenda items may change to accommodate the needs of the commissioners, public and staff.

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (Section 17.1 Code Text Amendment - Development Review Committee)

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Planning **Director Approval** *Patrick O'Brien*

AGENDA ITEM Review and action on an ordinance approving a Code Text Amendment, known as Municipal Planning Organization, of the American Fork City Municipal Code. Amending Section 17.2, the Code Text Amendment plans to update the procedures for municipal planning organization.

SUMMARY RECOMMENDATION
Planning Commission recommended approval at the September 4, 2024 regular scheduled meeting.

BACKGROUND
Staff has initiated a Code Text Amendment to amend Section 17.2 of the American Fork City Municipal Code. The proposed amendment looks to update the procedures for municipal planning organization. Staff are proposing creating a Development Review Committee (DRC) where it will be similar in nature to a Planning Commission or City Council Meeting. The DRC meeting will meet once every week to make decisions on preliminary plans and final plats for large-scale developments and subdivisions. The appointed board members will include three people: the Development Services Director, the Public Works Director, and the Fire Chief. If one of those appointed board members is not available to meet at a meeting, they may designate a designee to take their position.

The DRC will act upon preliminary plans and final plats for subdivisions and large-scale developments. Any applicant that does not agree with the committee's decision can appeal to the City Council for their decision.

BUDGET IMPACT
N/A

SUGGESTED MOTION
I move to adopt the ordinance approving a Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization, and providing an effective date for the ordinance.

I move to deny the Code Text Amendment, amending Section 17.2, titled Municipal Planning

Organization, relating to updating the procedures for municipal planning organization.

I move to table the Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization

SUPPORTING DOCUMENTS

4. Section 17.2 - Municipal Planning Organization _CTA - Staff Report (1) (PDF)
Development Review Committee 8.28 (1) (PDF)
09.04.2024 UNAPPROVED PC Meeting Minutes (DOCX)

Planning Commission Staff Report
Meeting Date: September 4, 2024

Agenda Topic

Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Municipal Planning Organization, of the American Fork City Municipal Code. Amending Section 17.2, the Code Text Amendment plans to update the procedures for municipal planning organization.

Background

Staff has initiated a Code Text Amendment to amend Section 17.2 of the American Fork City Municipal Code. The proposed amendment looks to update the procedures for municipal planning organization. Staff are proposing creating a Development Review Committee (DRC) where it will be similar in nature to a Planning Commission or City Council Meeting. The DRC meeting will meet once every week to make decisions on preliminary plans and final plats for large-scale developments and subdivisions. The appointed board members will include three people: the Development Services Director, the Public Works Director, and the Fire Chief. If one of those appointed board members is not available to meet at a meeting, they may designate a designee to take their position.

The DRC will act upon preliminary plans and final plats for subdivisions and large-scale developments. Any applicant that does not agree with the committee's decision can appeal to the City Council for their decision.

Potential Motions – Code Text Amendment

Approval

I move to recommend approval for the proposed Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization, and providing an effective date for the ordinance.

Denial

I move to recommend denial for the proposed Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization.

Table

Attachment: 4. Section 17.2 - Municipal Planning Organization _CTA - Staff Report (1) (17.2 Code Text Amendment - (DRC) Municipal Planning

Planning Commission Staff Report
Meeting Date: September 4, 2024

I move to table action for the proposed Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization, and instruct staff/developer to……..

Attachment: 4. Section 17.2 - Municipal Planning Organization _CTA - Staff Report (1) (17.2 Code Text Amendment - (DRC) Municipal Planning

ORDINANCE NO. 2024 - ___ - ___

AN ORDINANCE CREATING CHAPTER 17.2.600, ET. SEQ. OF THE AMERICAN FORK CITY MUNICIPAL CODE, DEVELOPMENT REVIEW COMMITTEE, AND PROVIDING AN EFFECTIVE DATE FOR THE ORDINANCE.

WHEREAS, American Fork City seeks to promote the health, safety, morals, convenience, order, prosperity, and general welfare of American Fork City;

WHEREAS, the American Fork City Council finds it in the best interest of the City to create a development review committee;

WHEREAS, the American Fork City Council finds that the adoption of this ordinance would promote the health, safety and welfare of the City and its residents.

NOW THEREFORE, be it ordained by the city council of American Fork, Utah, that:

PART I
TEXT OF ORDINANCE

SECTION 1. Section 17.2.600 of the Municipal Code of American Fork City, relating to Designation of Land Use Authority and Appeal Authority, shall read as follows:

17.2.600 DEVELOPMENT REVIEW COMMITTEE – POWERS AND DUTIES

Sec 17.2.600 Development Review Committee Appointed

There is hereby created the Development Review Committee. The committee shall be comprised of the following:

1. Development Services Coordinator or his or her designee;
2. Public Work Director or his or her designee;
3. Fire Chief or his or her designee.

At no time shall any person providing the formal review of a site plan, preliminary plan/plat or subdivision plat serve as the appointed designee to serve on the Development Review Committee charged with approving or denying said development application.

The Development Review Committee is hereby charged with the duties as set forth within this code.

Attachment: Development Review Committee 8.28 (1) (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

PART II
CONFLICTING ORDINANCES, SEVERABILITY, AND ADOPTION

SECTION 1. Conflicting Provisions. Whenever the provisions of this Ordinance conflict with the provisions of any other ordinance, resolution, or part thereof, the more stringent shall prevail.

SECTION 2. Provisions Severable. This Ordinance and the various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause, or phrase is adjudged to be unconstitutional or invalid, it is hereby declared that the remainder of the ordinance shall not be affected thereby.
This amended ordinance shall take effect immediately upon its passage and publication as prescribed by law.

Passed by the American Fork City Council this ____ day of _____, 2024.

_____
Bradley J. Frost
American Fork City Mayor

ATTEST:

_____
Terilyn Lurker
City Recorder

Attachment: Development Review Committee 8.28 (1) (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

UNAPPROVED MINUTES
09.04.2024

AMERICAN FORK CITY

PLANNING COMMISSION REGULAR SESSION

September 4th, 2024

The American Fork City Planning Commission met in a regular session on September 4th, 2024 at the American Fork City Hall, 31 North Church Street, commencing at 6:00 p.m.

Commissioners Present: Christine Anderson, Geoff Dupaix, Bruce Frandsen, Claire Oldham, Rodney Martin, Chris Christiansen

Commissioners Absent: David Bird, Harold Dudley,

Staff Present:

Travis Van Ekelenburg	Senior Planner
Cody Opperman	Planner
JJ Hsu	Engineer
Angie McKee	Administrative Assistant I

Others Present:

REGULAR SESSION

Christine Anderson led the "Pledge of Allegiance"

Roll Call

COMMON CONSENT AGENDA

Minutes of the August 21st, 2024 Planning Commission Regular Session.

Geoff Dupaix motioned to approve the Common Consent agenda

Claire Oldham seconded the motion.

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**ABSTAIN**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

PUBLIC HEARINGS

a. **Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Municipal Planning Organization, of the American Fork City Municipal Code. Amending Section 17.2, the Code Text Amendment plans to update the procedures for municipal planning organization.**

Travis Van Ekelenburg reviewed the background information for public hearing item letter a: Staff has initiated a Code Text Amendment to amend Section 17.2 of the American Fork City Municipal Code. The proposed amendment looks to update the procedures for municipal planning organization. Staff are proposing creating a Development Review Committee (DRC) where it will be similar in nature to a Planning Commission or City Council Meeting. The DRC meeting will meet once every week to make decisions on preliminary plans and final plats for large-scale developments and subdivisions. The appointed board members will include three people: the Development Services Director, the Public Works Director, and the Fire Chief. If one of those appointed board members is not available to meet at a meeting, they may designate a designee to take their position. The DRC will act upon preliminary plans and final plats for subdivisions and large-scale developments. Any applicant that does not agree with the committee's decision can appeal to the City Council for their decision. Christine Anderson

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

explained that these changes are designed to streamline the process. Geoff Dupaix asked what the planning commission's role will be if this DRC is making all the decisions. Cody Opperman explained that site plans will still come to the Planning Commission, and because the DRC meeting will be weekly, this will move these projects forward in a timelier manner. Claire Oldham asked for some clarification on how the current process is done in American Fork City, and Cody Opperman informed her of the review process, noting that due to state legislation, only the Development Services Director would be making recommendations on preliminary plans and final plats. This Code Text Amendment will allow a 3-person committee to make these recommendations instead of only one individual. Rodney Martin noted that this move is in line with what the state legislature has mandated, as the state was not satisfied with how long cities were taking to do plan reviews.

Public Hearing Opened

No Comments

Public Hearing Closed

Geoff Dupaix moved to recommend approval for the proposed Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization, and providing an effective date for the ordinance.

Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

b. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as General Provisions, of the American Fork City Municipal Code. Amending Section 17.1, the Code Text Amendment plans to update the designation of land use authority and appeal authority.

Cody Opperman reviewed the background information for public hearing item letter b: Staff has initiated a Code Text Amendment to amend Section 17.1 of the American Fork City Municipal Code. As the new state code has passed, staff have proposed creating new land use authorities and appeal authorities for subdivisions, conditional uses, and site plans. For both subdivisions and large-scale development, staff are proposing to create a Development Review Committee (DRC) Board where they will act upon preliminary plans and final plans for both residential and commercial/industrial properties. As for site plans and conditional uses, planning commission, or such other individual or department specifically designated by the terms of code, will be the approval body. All appeals for preliminary plans, final plats, conditional uses, and site plans will be the City Council.

Public Hearing Opened

No Comments

Public Hearing Closed

Rodney Martin moved to recommend approval for the proposed Code Text Amendment, amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority, and providing an effective date for the ordinance.

Bruce Frandsen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**

Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

c. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Large Scale Development Overlay Zones, of the American Fork City Municipal Code. Amending Section 17.7, the Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone.

Cody Opperman reviewed the background information for public hearing item letter c: Staff has initiated a Code Text Amendment to amend Section 17.7 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone. Rather than a large-scale overlay zone, staff are proposing to change it to large-scale development. Large Scale Development goes into details about the approval procedures for their preliminary plans and final plans when submitted to staff for review. Rather than going to the Planning Commission and the City Council for approval, they will go to the Development Review Committee (DRC) board to get approved. Any decisions that the DRC makes for denial may be appealed to the City Council for their determination.

Public Hearing Opened

No Comments

Public Hearing Closed

Claire Oldham moved to recommend approval for the proposed Code Text Amendment, amending Section 17.7, titled Large-Scale Development Overlay Zones, relating to

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

amending the approval procedure for the large-scale overlay zone, and providing an effective date for the ordinance.

Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

d. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Subdivisions, of the American Fork City Municipal Code. Amending Section 17.8, the Code Text Amendment plans to amend the approval procedure for subdivisions.

Travis Van Ekelenburg reviewed the background information for public hearing item letter d: Staff has initiated a Code Text Amendment to amend Section 17.8 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for subdivisions. The subdivision process will only include the Development Review Committee (DRC). The DRC will review the preliminary plans and finals plats associated with the development and ultimately act upon them once they are in an approvable form. Residential subdivision will have a three-time review process where the applicant will submit for the first time and have up to two resubmittals before an action is made by the DRC. Any denial the DRC makes can be appealed to the City Council to decide on the matter. Bruce Frandsen voiced his concerns that the public should be more involved when a subdivision is being considered, and removing the planning commission as the approval body takes away the option of the public being able to voice their opinions. Claire Oldham asked about the notification process once a subdivision request is filed. Travis Van Ekelenburg referenced the state minimums 10 day noticing requirement and reminded the commissioners that due to the State Code Change, only

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

the Development Services Director would be making recommendations on subdivisions without this change to the code. He also noted that regardless of the approval body, the citizens will still receive the required notifications. Christine Anderson acknowledged the importance of Bruce Frandsen's concern and added that items in need of a public hearing such as zoning maps would still come before the planning commission. She feels that once things get to an administrative level where someone is basically looking at the plan and checking off the boxes for American Fork City code requirements, she thinks that is something that can be handled by the DRC. Bruce Frandsen agreed and was appreciative of the discussion and clarifications. Rodney Martin noted that during his time on the Planning Commission, he has felt at times there was some redundancy, and he likes the idea of streamlining things as much as possible.

Public Hearing Opened

No Comments

Public Hearing Closed

Bruce Frandsen moved to recommend approval for the proposed Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to amending the approval procedure for subdivisions and providing an effective date for the ordinance.

Rodney Martin seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.2 Code Text Amendment - (DRC) Municipal Planning Organization)

Other Business

Cody Opperman informed the commissioners that code rewrite is still being worked on, along with the stationary and general plan amendments. He also mentioned that staff is working on an overlay map showing where developments are happening in the city, and possibly what Parcels are currently under review.

Adjournment

Geoff Dupaix motioned to adjourn the meeting.

Rodney Martin seconded the motion.

Meeting adjourned at 6:26PM

Angie McKee

Administrative Assistant I

The order of agenda items may change to accommodate the needs of the commissioners, public and staff.

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Planning **Director Approval** *Patrick O'Brien*

AGENDA ITEM Review and action on an ordinance approving a Code Text Amendment, known as Large Scale Development Overlay Zones, of the American Fork City Municipal Code. Amending Section 17.7, the Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone.

SUMMARY RECOMMENDATION
Planning Commission recommended approval at the September 4, 2024 regular scheduled meeting.

BACKGROUND
Staff has initiated a Code Text Amendment to amend Section 17.7 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone. Rather than a large-scale overlay zone, staff are proposing to change it to large-scale development. Large Scale Development goes into details about the approval procedures for their preliminary plans and final plans when submitted to staff for review. Rather than going to the Planning Commission and the City Council for approval, they will go to the Development Review Committee (DRC) board to get approved. Any decisions that the DRC makes for denial may be appealed to the City Council for their determination.

BUDGET IMPACT
N/A

SUGGESTED MOTION
I move to adopt the ordinance approving the Code Text Amendment, amending Section 17.7, titled Large-Scale Development Overlay Zones, relating to amending the approval procedure for the large-scale overlay zone, and providing an effective date for the ordinance.

I move to deny the Code Text Amendment, amending Section 17.7.200, titled Large-Scale Development Overlay Zones, relating to amending the approval procedure for the large-scale overlay zone.

I move to table the Code Text Amendment amending Section 17.7.200, titled Large-Scale

Development Overlay Zones, relating to amending the approval procedure for the large-scale overlay zone.

SUPPORTING DOCUMENTS

Large Scale Amendment 8.19.24 rev.(PDF)
2. Section 17.7 - Large Scale Development Overlay Zones _CTA - Staff Report (1) (PDF)
09.04.2024 UNAPPROVED PC Meeting Minutes (DOCX)

AN ORDINANCE AMENDING CHAPTER 17.7.200 ET SEQ. OF THE AMERICAN FORK MUNICIPAL CODE, PROCEDURE FOR OBTAINING APPROVAL OF A LARGE SCALE OVERLAY ZONE AND PROVIDING AN EFFECTIVE DATE FOR THE ORDINANCE.

WHEREAS, the City is authorized to enact ordinances as are necessary and proper to promote the health, safety, morals, convenience, order, prosperity, and general welfare of American Fork;

WHEREAS, the City desires to modify regulations related to approval of large scale developments; and

WHEREAS, the adoption of this ordinance will promote the public health, safety and welfare of the City.

NOW THEREFORE, be it ordained by the City Council of American Fork, Utah, that:

SECTION 1. Chapter 17.7.200 of the Municipal Code of American Fork City is hereby amended to read as follows:

Sec. 17.7.200 Procedure for Obtaining Approval of a Large Scale Development

Sec 17.7.201 Developer Confers With Development Review Committee
The developer(s) shall meet with the Development Review Committee to discuss the basic concept of the proposed large scale development and to obtain information pertaining to the general plan and zoning classification of the area proposed for subdivision, city requirements and standards for design and construction of streets, utilities and other requirements affecting the land proposed to be subdivided. The purpose of the conference(s) is to provide informal assistance to the developer(s) in the preparation of the plans early in the process. The Development Review Committee may suggest changes in the proposed layout so the project may be more fully consistent with the city's general plan and also with the city's development regulations and policies. The recommendations from the Development Review Committee prior to the submission of a formal application shall be purely advisory and in no way shall the conference be construed to constitute approval of the plan.

Sec 17.7.202 Developer Prepares Preliminary Plats And Supporting Materials And Submits To Staff
After the pre-submittal conference the developer shall prepare and submit to the Development Services Department a preliminary plat submittal packet containing the following:

1. An application for approval of the large scale development project, together with copies of plats and materials showing the layout of the proposed project, including the location, size and dimensions of all lots; the placement and cross-section of all proposed streets; the location of all public utility easements; the intended treatment of drainage; and the intended treatment of any other essential features of the proposed project
2. A geotechnical report for the project area
3. Evidence of payment of the required review fee.

Attachment: Large Scale Amendment 8.19.24 rev. (17.7 Code Text Amendment - Large Scale Overlay Zones)

4. Evidence of water right proposed to be conveyed to the city.
5. Evidence of review of the proposed project by required public utility agencies.
6. Other materials deemed by city staff to be essential for an adequate understanding of the proposed project. The scale of the plans, content of the materials, number of copies, time of submittal and other particulars regarding the materials provided in support of an application for approval shall be as established, from time to time, by action of the planning commission.

Sec 17.7.203 DRC Reviews Preliminary Plats, Documents, And Statements

Upon receipt of the preliminary plat submittal packet from the developer the Development Services Director or assignee shall review the plans, documents, and materials for completeness and for conformance with city requirements, standards and general plan, and submit said plans, documents, and statements or portions thereof to the Development Review Committee for their review and recommendation.

Sec 17.7.204 Development Review Committee Reports Results Of Review Of Preliminary Plats, Documents, And Statements To Developer

1. The Development Review Committee shall conduct a Development Review Conference to review and discuss the materials submitted by the developer.
2. Upon completion of review, the Development Review Committee shall provide the results of the review and comments to the Development Services Director or assignee. The results and comments shall be compiled and provided to the developer.
3. The Development Review Committee may suggest changes in order for the preliminary plat materials to be more consistent with the objectives of the general plan and development regulations and policies.

Sec 17.7.206 Development Review Committee Takes Final Action On Preliminary Plat And Supporting Materials

1. After considering the recommendation of all DRC members, the DRC may table the matter, approve, or grant approval, including granting approval upon conditions stated.
2. Approval by of the Preliminary Plat shall not constitute final approval of the project, but shall be deemed as approval to proceed with preparation of a final plat, detailed engineering and supporting materials.

Sec 17.7.207 Developer Prepares And Submits Final Plats, Detailed Engineering Plans And Supporting Material And Submits To Staff

After receiving authorization to proceed, the developer shall prepare and submit to the Development Services Department a final plat submittal packet containing the following:

1. Application for final plan/plat approval.
2. A reproducible drawing of the proposed final plat prepared in a format approved for recording at the office of the Utah County Recorder.
3. Copies of the detailed engineering documents and other supporting materials.
4. An itemized engineers estimate of the cost of constructing the required improvements.
5. Copy of project documentation.

Attachment: Large Scale Amendment 8.19.24 rev. (17.7 Code Text Amendment - Large Scale Overlay Zones)

6. Evidence of payment of review and recording fee.
7. Documents conveying water rights to city.
8. Evidence that any boundary conflicts with adjacent properties are fully resolved.
9. Other materials deemed by city staff to be essential for an adequate understanding of the proposed project.

   The scale of the final plan/plat, content of the materials, number of copies, time of submittal and other particulars regarding the materials provided in support of an application for final plan/plat approval shall be as established, from time to time, by the Development Services Director.

Sec 17.7.208 DRC Reviews Final Plans/Plats, Detailed Engineering And Supporting Materials

Upon receipt of the submission from the developer the Development Services Director or assignee shall review the plans/plats and supporting materials for accuracy and completeness. Upon determination of a complete application, the plans, documents and statements, or portions thereof, shall then be provided to the Development Review Committee and applicable public agencies for review of compliance with Federal, State and local laws and regulations, city requirements and standards, and the general plan.

Sec 17.7.209 Development Review Conference - DRC Reports - Results Of Review Of Final Plans/plat, Detailed Engineering Plans And Supporting Materials To Developer

1. The Development Review Committee shall conduct a Development Review Conference to review and discuss the materials submitted by the developer.
2. Upon completion of review, the Development Review Committee shall provide the results of the review and comments to the Development Services Director or assignee. The results and comments shall be compiled and provided to the developer.
3. The Development Review Committee may suggest changes to the submittal materials so that the final plat will conform with the development regulations and policies of the city and the terms of preliminary plat approval.

Sec 17.7.211 Development Review Committee Acts On Final Plan(s)/Plat(s) And Supporting Materials

A. When the final plan(s)/plat(s) and supporting materials required for approval have been completed in final form, the Development Review Committee shall act on the final plat(s) and supporting materials. After considering the recommendation of all DRC members, the DRC may table the matter, approve, or grant approval, including granting approval upon conditions stated. Approval of the final plat(s) shall be made only upon a finding that:
    1. The final plan(s)/plat(s) and supporting materials conform with terms of the preliminary approval.
    2. The final plan(s)/plat(s) complies with all city requirements and standards relating to large scale developments.
    3. The detailed engineering plans and materials comply with the city standards and policies.

Attachment: Large Scale Amendment 8.19.24 rev. (17.7 Code Text Amendment - Large Scale Overlay Zones)

4. The estimates of cost of constructing the required improvements are commensurate to market costs, as verified by the City Engineer.
5. The water rights conveyance documents have been provided.

B. If approved, the City Administrator, Community Development Services Director, and City Engineer shall sign the Final Plat(s) upon completion of all conditions. If any conditions are attached, the Final Plat(s) or construction drawings shall be amended to reflect such changes and an accurate Final Plat(s) shall be submitted to the City, prior to signing.

Sec 17.7.212 Appeals And Disputes

1. Developer may appeal to the city council~~,~~ a denial of the final plat(s). The appeal shall be made, in writing, within 30 calendar days of the final decision of the Development Services Director.

Sec 17.7.213 Developer Constructs Required Improvements Or Posts Performance Guarantee

Upon receipt of a final plat approval, the developer shall construct the required improvements or post performance guarantees in accordance with the provisions of Section 17.7.900 of this code.

Sec 17.7.214 City Records Plats And Documents

Upon: (1) the Development Review Committee's approval of any large scale development, and (2) completion of all conditions of approval, if any, and (3) posting of a performance guarantee or completion of construction of required improvements, as applicable, the city recorder shall act to record the final plat (for projects which propose the subdivision land) and any deeds or other supporting material required to be recorded at the office of the county recorder.

Sec 17.7.216 Duration Of Approval

1. The action of approval of the preliminary plat and the final plat(s) by the Development Review Committee shall be valid for a period of twelve months from the date of the respective approval. In the event that a final plat of any large scale development shall not have been recorded at the office of the county recorder, where required by ordinance, within twelve months from the date of approval, said approval shall be null and void. Further, in the event of failure of the developer to post performance guarantees or construct required improvements, as applicable, or satisfy any terms or conditions of approval, or provide any document required for final approval under this code or as a condition of final approval within twelve months of final approval, said approval shall be null and void.

Sec 17.7.217 Amendments

A large scale development which has been approved by the city may be amended as follows:

1. Technical correction. Where the proposed amendment is incidental in character and/or is determined by the city engineer to be technical in character, and does not affect the layout or content of the approved plan(s) or require the recording of replacement plat at the office of the county recorder, the amendment may be approved by the city staff member (city

Attachment: Large Scale Amendment 8.19.24 rev. (17.7 Code Text Amendment - Large Scale Overlay Zones)

engineer, development services director, building inspector, etc.) having responsibility for review of the proposed amendment.

2. Minor correction. Where the proposed amendment involves limited changes to the layout of the project (i.e., incidental adjustments to a building footprint, minor adjustments in the landscape treatment of an open space area, a change of materials for a fence, etc.) and, in the opinion of the Development Services Director, do not affect the layout of the project plan(s) or require the recording of a replacement plat at the office of the county recorder, the amendment may be approved by action of the Development Services Director.
3. Major correction. Any proposed amendment not determined to be a technical or minor correction shall be a major correction and shall follow the process required for approval of a new project.
4. Final plat amendments. In addition to the above, any amendment to a large scale development, which requires amendment of a subdivision plat or record of survey map (condominium plat) that has been recorded at the office of county recorder, shall conform to the provisions of state law regarding amendment of recorded plats.

Sec 17.7.218 Variances and Development Agreements

1. If the Large Scale Development requires a variance from City Code, said variance shall be obtained by the appropriate land use authority, as outline in the City Code, prior to approvals granted in section 17.7.211.
2. If the Large Scale Development proposes a phasing plan, density transfer, property transfer, project clustering or other special development request not specifically outlined in the City Code, a development agreement shall be approved by the City Council prior to any approval granted in section 17.7.211.

PART II
CONFLICTING ORDINANCES, SEVERABILITY, AND ADOPTION

SECTION 1. Conflicting Provisions. Whenever the provisions of this Ordinance conflict with the provisions of any other ordinance, resolution or part thereof, the more stringent shall prevail.

SECTION 2. Provisions Severable. This Ordinance and the various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause or phrase is adjudged to be unconstitutional or invalid it is hereby declared that the remainder of the ordinance shall not be affected thereby.

SECTION 3. Effective Date. This Ordinance shall take effect upon its passage and publication as required by law.

PASSED AND ADOPTED BY THE CITY COUNCIL OF AMERICAN FORK CITY, STATE OF UTAH, ON THIS THE _____ DAY OF _____, 2024.

Attachment: Large Scale Amendment 8.19.24 rev. (17.7 Code Text Amendment - Large Scale Overlay Zones)

AMERICAN FORK CITY

_____

BRADLEY J. FROST, MAYOR

ATTEST:

_____

CITY RECORDER

Attachment: Large Scale Amendment 8.19.24 rev. (17.7 Code Text Amendment - Large Scale Overlay Zones)

Planning Commission Staff Report
Meeting Date: September 4, 2024

Agenda Topic

Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Large Scale Development Overlay Zones, of the American Fork City Municipal Code. Amending Section 17.7, the Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone.

Background

Staff has initiated a Code Text Amendment to amend Section 17.7 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone. Rather than a large-scale overlay zone, staff are proposing to change it to large-scale development. Large Scale Development goes into details about the approval procedures for their preliminary plans and final plans when submitted to staff for review. Rather than going to the Planning Commission and the City Council for approval, they will go to the Development Review Committee (DRC) board to get approved. Any decisions that the DRC makes for denial may be appealed to the City Council for their determination.

Potential Motions – Code Text Amendment

Approval

I move to recommend approval for the proposed Code Text Amendment, amending Section 17.7, titled Large-Scale Development Overlay Zones, relating to amending the approval procedure for the large-scale overlay zone, and providing an effective date for the ordinance.

Denial

I move to recommend denial for the proposed Code Text Amendment, amending Section 17.7.200, titled Large-Scale Development Overlay Zones, relating to amending the approval procedure for the large-scale overlay zone, with the following findings:

[outline findings for denial here]

Attachment: 2. Section 17.7 - Large Scale Development Overlay Zones _CTA - Staff Report (1) (17.7 Code Text Amendment - Large Scale

Table

I move to table action for the proposed Code Text Amendment amending Section 17.7.200, titled Large-Scale Development Overlay Zones, relating to amending the approval procedure for the large-scale overlay zone, and instruct staff/developer to……..

Attachment: 2. Section 17.7 - Large Scale Development Overlay Zones _CTA - Staff Report (1) (17.7 Code Text Amendment - Large Scale

UNAPPROVED MINUTES
09.04.2024

AMERICAN FORK CITY

PLANNING COMMISSION REGULAR SESSION

September 4th, 2024

The American Fork City Planning Commission met in a regular session on September 4th, 2024 at the American Fork City Hall, 31 North Church Street, commencing at 6:00 p.m.

Commissioners Present: Christine Anderson, Geoff Dupaix, Bruce Frandsen, Claire Oldham, Rodney Martin, Chris Christiansen

Commissioners Absent: David Bird, Harold Dudley,

Staff Present:

Travis Van Ekelenburg	Senior Planner
Cody Opperman	Planner
JJ Hsu	Engineer
Angie McKee	Administrative Assistant I

Others Present:

REGULAR SESSION

Christine Anderson led the "Pledge of Allegiance"

Roll Call

COMMON CONSENT AGENDA

Minutes of the August 21st, 2024 Planning Commission Regular Session.

Geoff Dupaix motioned to approve the Common Consent agenda

Claire Oldham seconded the motion.

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.7 Code Text Amendment - Large Scale Overlay Zones)

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**ABSTAIN**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

PUBLIC HEARINGS

a. **Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Municipal Planning Organization, of the American Fork City Municipal Code. Amending Section 17.2, the Code Text Amendment plans to update the procedures for municipal planning organization.**

Travis Van Ekelenburg reviewed the background information for public hearing item letter a: Staff has initiated a Code Text Amendment to amend Section 17.2 of the American Fork City Municipal Code. The proposed amendment looks to update the procedures for municipal planning organization. Staff are proposing creating a Development Review Committee (DRC) where it will be similar in nature to a Planning Commission or City Council Meeting. The DRC meeting will meet once every week to make decisions on preliminary plans and final plats for large-scale developments and subdivisions. The appointed board members will include three people: the Development Services Director, the Public Works Director, and the Fire Chief. If one of those appointed board members is not available to meet at a meeting, they may designate a designee to take their position. The DRC will act upon preliminary plans and final plats for subdivisions and large-scale developments. Any applicant that does not agree with the committee's decision can appeal to the City Council for their decision. Christine Anderson

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.7 Code Text Amendment - Large Scale Overlay Zones)

explained that these changes are designed to streamline the process. Geoff Dupaix asked what the planning commission's role will be if this DRC is making all the decisions. Cody Opperman explained that site plans will still come to the Planning Commission, and because the DRC meeting will be weekly, this will move these projects forward in a timelier manner. Claire Oldham asked for some clarification on how the current process is done in American Fork City, and Cody Opperman informed her of the review process, noting that due to state legislation, only the Development Services Director would be making recommendations on preliminary plans and final plats. This Code Text Amendment will allow a 3-person committee to make these recommendations instead of only one individual. Rodney Martin noted that this move is in line with what the state legislature has mandated, as the state was not satisfied with how long cities were taking to do plan reviews.

Public Hearing Opened

No Comments

Public Hearing Closed

Geoff Dupaix moved to recommend approval for the proposed Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization, and providing an effective date for the ordinance.

Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.7 Code Text Amendment - Large Scale Overlay Zones)

b. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as General Provisions, of the American Fork City Municipal Code. Amending Section 17.1, the Code Text Amendment plans to update the designation of land use authority and appeal authority.

Cody Opperman reviewed the background information for public hearing item letter b: Staff has initiated a Code Text Amendment to amend Section 17.1 of the American Fork City Municipal Code. As the new state code has passed, staff have proposed creating new land use authorities and appeal authorities for subdivisions, conditional uses, and site plans. For both subdivisions and large-scale development, staff are proposing to create a Development Review Committee (DRC) Board where they will act upon preliminary plans and final plans for both residential and commercial/industrial properties. As for site plans and conditional uses, planning commission, or such other individual or department specifically designated by the terms of code, will be the approval body. All appeals for preliminary plans, final plats, conditional uses, and site plans will be the City Council.

Public Hearing Opened

No Comments

Public Hearing Closed

Rodney Martin moved to recommend approval for the proposed Code Text Amendment, amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority, and providing an effective date for the ordinance.

Bruce Frandsen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.7 Code Text Amendment - Large Scale Overlay Zones)

Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

c. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Large Scale Development Overlay Zones, of the American Fork City Municipal Code. Amending Section 17.7, the Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone.

Cody Opperman reviewed the background information for public hearing item letter c: Staff has initiated a Code Text Amendment to amend Section 17.7 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone. Rather than a large-scale overlay zone, staff are proposing to change it to large-scale development. Large Scale Development goes into details about the approval procedures for their preliminary plans and final plans when submitted to staff for review. Rather than going to the Planning Commission and the City Council for approval, they will go to the Development Review Committee (DRC) board to get approved. Any decisions that the DRC makes for denial may be appealed to the City Council for their determination.

Public Hearing Opened

No Comments

Public Hearing Closed

Claire Oldham moved to recommend approval for the proposed Code Text Amendment, amending Section 17.7, titled Large-Scale Development Overlay Zones, relating to

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.7 Code Text Amendment - Large Scale Overlay Zones)

amending the approval procedure for the large-scale overlay zone, and providing an effective date for the ordinance.

Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

d. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Subdivisions, of the American Fork City Municipal Code. Amending Section 17.8, the Code Text Amendment plans to amend the approval procedure for subdivisions.

Travis Van Ekelenburg reviewed the background information for public hearing item letter d: Staff has initiated a Code Text Amendment to amend Section 17.8 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for subdivisions. The subdivision process will only include the Development Review Committee (DRC). The DRC will review the preliminary plans and finals plats associated with the development and ultimately act upon them once they are in an approvable form. Residential subdivision will have a three-time review process where the applicant will submit for the first time and have up to two resubmittals before an action is made by the DRC. Any denial the DRC makes can be appealed to the City Council to decide on the matter. Bruce Frandsen voiced his concerns that the public should be more involved when a subdivision is being considered, and removing the planning commission as the approval body takes away the option of the public being able to voice their opinions. Claire Oldham asked about the notification process once a subdivision request is filed. Travis Van Ekelenburg referenced the state minimums 10 day noticing requirement and reminded the commissioners that due to the State Code Change, only

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.7 Code Text Amendment - Large Scale Overlay Zones)

the Development Services Director would be making recommendations on subdivisions without this change to the code. He also noted that regardless of the approval body, the citizens will still receive the required notifications. Christine Anderson acknowledged the importance of Bruce Frandsen's concern and added that items in need of a public hearing such as zoning maps would still come before the planning commission. She feels that once things get to an administrative level where someone is basically looking at the plan and checking off the boxes for American Fork City code requirements, she thinks that is something that can be handled by the DRC. Bruce Frandsen agreed and was appreciative of the discussion and clarifications. Rodney Martin noted that during his time on the Planning Commission, he has felt at times there was some redundancy, and he likes the idea of streamlining things as much as possible.

Public Hearing Opened

No Comments

Public Hearing Closed

Bruce Frandsen moved to recommend approval for the proposed Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to amending the approval procedure for subdivisions and providing an effective date for the ordinance.

Rodney Martin seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.7 Code Text Amendment - Large Scale Overlay Zones)

Other Business

Cody Opperman informed the commissioners that code rewrite is still being worked on, along with the stationary and general plan amendments. He also mentioned that staff is working on an overlay map showing where developments are happening in the city, and possibly what Parcels are currently under review.

Adjournment

Geoff Dupaix motioned to adjourn the meeting.

Rodney Martin seconded the motion.

Meeting adjourned at 6:26PM

Angie McKee

Administrative Assistant I

The order of agenda items may change to accommodate the needs of the commissioners, public and staff.

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.7 Code Text Amendment - Large Scale Overlay Zones)

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Planning **Director Approval** *Patrick O'Brien*

AGENDA ITEM Review and action on an ordinance approving a Code Text Amendment, known as Subdivisions, of the American Fork City Municipal Code. Amending Section 17.8, the Code Text Amendment plans to amend the approval procedure for subdivisions.

SUMMARY RECOMMENDATION
Planning Commission recommended approval at the September 4, 2024 regular scheduled meeting.

BACKGROUND
Staff has initiated a Code Text Amendment to amend Section 17.8 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for subdivisions. The subdivision process will only include the Development Review Committee (DRC). The DRC will review the preliminary plans and finals plats associated with the development and ultimately act upon them once they are in an approvable form. Residential subdivision will have a three-time review process where the applicant will submit for the first time and have up to two resubmittals before an action is made by the DRC. Any denial the DRC makes can be appealed to the City Council to decide on the matter.

BUDGET IMPACT
N/A

SUGGESTED MOTION
I move to adopt the ordinance approving the Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to amending the approval procedure for subdivisions and providing an effective date for the ordinance.

I move to deny the Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to amending the approval procedure for subdivisions.

I move to table the Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to relating to amending the approval procedure for subdivisions.

SUPPORTING DOCUMENTS

3. Section 17.8 - Subdivisions_CTA - Staff Report1 (1) (PDF)
Subdivision Approval 7.22.24 rev (PDF)
09.04.2024 UNAPPROVED PC Meeting Minutes (DOCX)

Planning Commission Staff Report
Meeting Date: September 4, 2024

Agenda Topic

Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Subdivisions, of the American Fork City Municipal Code. Amending Section 17.8, the Code Text Amendment plans to amend the approval procedure for subdivisions.

Background

Staff has initiated a Code Text Amendment to amend Section 17.8 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for subdivisions. The subdivision process will only include the Development Review Committee (DRC). The DRC will review the preliminary plans and finals plats associated with the development and ultimately act upon them once they are in an approvable form. Residential subdivision will have a three-time review process where the applicant will submit for the first time and have up to two resubmittals before an action is made by the DRC. Any denial the DRC makes can be appealed to the City Council to decide on the matter.

Potential Motions – Code Text Amendment

Approval

I move to recommend approval for the proposed Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to amending the approval procedure for subdivisions and providing an effective date for the ordinance.

Denial

I move to recommend denial for the proposed Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to amending the approval procedure for subdivisions.

Table

I move to table action for the proposed Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to relating to amending the approval procedure for subdivisions, and instruct staff/developer to……..

Attachment: 3. Section 17.8 - Subdivisions_CTA - Staff Report1 (1) (17.8 Code Text Amendment - Subdivision Approval Procedure)

ORDINANCE NO. 2024 - ___ - ___

AN ORDINANCE AMENDING CHAPTER 17.8.200 OF THE MUNICIPAL CODE OF AMERICAN FORK CITY, UTAH, RELATING TO THE PROCEDURE FOR OBTAINING APPROVAL OF A SUBDIVISION.

WHEREAS the City is authorized to enact ordinances as are necessary and proper to promote the health, safety, morals, convenience, order, prosperity, and general welfare of American Fork;

WHEREAS the City is authorized by law to enact ordinances establishing regulations for development within the City;

WHEREAS Utah Code Ann §10-9a-604.1 establishes a process for subdivision review and approval; and

WHEREAS the City desires to amend its subdivision review and approval process, consistent with Utah Code.

BE IT ORDAINED BY THE CITY COUNCIL OF AMERICAN FORK CITY, UTAH, AS FOLLOWS:

PART I

TEXT OF ORDINANCE

SECTION 1. Chapter 17.8.200 of the Municipal Code of American Fork City, relating to the procedure for obtaining approval of a subdivision shall be amended to read as follows:

Sec 17.8.201 Subdivider Confers With Development Review Committee

1. The subdivider may meet with the Development Review Committee in a pre-application meeting to discuss the basic concept of the proposed subdivision and to obtain information pertaining to the general plan and zoning classification of the area proposed for subdivision, city requirements and standards for design and construction of streets, utilities and other requirements affecting the land proposed to be subdivided.
2. The purpose of the conference(s) is to provide informal assistance to the subdivider in the preparation of the plans early in the process. The Development Review Committee may suggest changes in the proposed layout so the project is more fully consistent with the city's general plan and also with the city's development regulations and policies. The recommendations from the Development Review Committee prior to the subdivision application shall be purely advisory and in no way shall the conference be construed to constitute approval of the plan.

Sec 17.8.202 Subdivider Prepares and Submits Preliminary Plat And Supporting Materials

Attachment: Subdivision Approval 7.22.24 rev (17.8 Code Text Amendment - Subdivision Approval Procedure)

After the pre-submittal conference, if applicable, the subdivider shall prepare and submit to the Development Services Department a preliminary plat submittal packet containing the following:

1. An application for approval of the subdivision project, together with copies of plans and materials showing the layout of the proposed project, including the location, size and dimensions of all lots; the placement and cross-section of all proposed streets; the location of all public utility easements; the intended treatment of drainage; and the intended treatment of any other essential features of the proposed subdivision.
2. A geotechnical report for the subdivision area.
3. Evidence of payment of the required review fee.
4. Evidence of water right proposed to be conveyed to the city.
5. Evidence of review of the proposed subdivision of required public utility agencies.
6. Other materials deemed by city staff to be essential for an adequate understanding of the proposed project.

Sec 17.8.203 DRC Reviews Preliminary Plans, Documents, And Statements

Upon receipt of the preliminary plat submittal packet from the subdivider the Development Services Director or assignee shall review the plans, documents, and materials for completeness and for conformance with city requirements and standards and the general plan, and submit said plans, documents and statements or portions thereof to the Development Review Committee for their review and recommendation.

Sec 17.8.204 Development Review Committee Reports Results Of Review Of Preliminary Plans, Documents, And Statements To Subdivider

1. The Development Review Committee shall conduct a Development Review Conference to review and discuss the materials submitted by the subdivider.
2. Upon completion of review, the Development Review Committee shall provide the results of the review and comments to the Development Services Director or assignee. The results and comments shall be compiled and provided to the subdivider.
3. The Development Review Committee may suggest changes in order for the preliminary plan materials to be more consistent with the objectives of the general plan and development regulations and policies.

Sec 17.8.205 – Reserved.

Sec 17.8.206 Development Review Committee Takes Action On Preliminary Plans And Supporting Materials

1. After considering the recommendation of all Development Review Committee members, the DRC, acting as the administrative land use authority, may table the matter, deny, or grant approval, including granting approval upon conditions stated.

Attachment: Subdivision Approval 7.22.24 rev (17.8 Code Text Amendment - Subdivision Approval Procedure)

2. Approval of the Preliminary Plan by DRC shall not constitute final approval of the project, but shall be deemed as approval to proceed with preparation of a final plat, detailed engineering and supporting materials.

Sec 17.8.207 Subdivider Prepares And Submits Final Plats, Detailed Engineering Plans And Supporting Material And Submits To Staff

After receiving authorization to proceed, the subdivider shall prepare and submit to the Development Services Department a final plat submittal packet containing the following:

1. Application for final plat approval.
2. A reproducible drawing of the proposed final plat prepared in a format approved for recording at the office of the Utah County Recorder.
3. Copies of the detailed engineering documents and other supporting materials.
4. An itemized engineers estimate of the cost of constructing the required improvements.
5. Evidence of payment of review and recording fee.
6. Documents conveying water rights to city.
7. Evidence that any boundary conflicts with adjacent properties are fully resolved.
8. Other materials deemed by city staff to be essential for an adequate understanding of the proposed project.

Sec 17.8.208 DRC Reviews Final Plats, Detailed Engineering And Supporting Materials

Upon receipt of the submission from the subdivider the Development Services Director or assignee shall review the plans, documents, and statements for completeness. Upon determination of a complete application, the plans, documents and statements, or portions thereof, shall then be provided to the Development Review Committee and applicable public agencies for review of compliance with Federal, State and local laws and regulations, city requirements and standards, and the general plan.

Sec 17.8.209 Development Review Conference - DRC Reports - Results Of Review Of Final Plat, Detailed Engineering Plans And Supporting Materials To Subdivider

1. The Development Review Committee shall conduct a Development Review Conference to review and discuss the materials submitted by the subdivider.
2. Upon completion of review, the Development Review Committee shall provide the results of the review and comments to the Development Services Director or assignee. The results and comments shall be compiled and provided to the subdivider.
3. The Development Review Committee may suggest changes to the submittal materials so that the final plat will conform with the development regulations and policies of the city and the terms of preliminary plan approval.

Sec 17.8.210 - Reserved

Attachment: Subdivision Approval 7.22.24 rev (17.8 Code Text Amendment - Subdivision Approval Procedure)

Sec 17.8.211 Development Review Committee Acts on Final Plat, And Supporting Materials

1. After considering the recommendation of all Development Review Committee members, the DRC, acting as the administrative land use authority, may table the matter, deny, or grant approval, including granting approval upon conditions stated. Approval of the final plat shall be made only upon a finding that:

   A. The final plat conforms with terms of the preliminary plan approval.
   B. The final plat complies with all city requirements and standards relating to subdivisions.
   C. The detailed engineering plans and materials comply with the city standards and policies.
   D. The estimates of cost of constructing the required improvements are realistic.
   E. The water rights conveyance documents have been provided.

2. If approved, the City Manager, Community Development Director, and City Engineer shall sign the Final Plat upon completion of all conditions. If any conditions are attached, the Final Plat or construction drawings shall be amended to reflect such changes and an accurate Final Plat shall be submitted to the City, prior to signing

Sec 17.8.212 – Appeals and Disputes

1. For a dispute arising from the subdivision ordinance review, subdivider may appeal to the ~~Planning Commission,~~ city council a denial of the final subdivision plat. The appeal shall be made, in writing, within 30 days of the final decision of the Development Review Committee.
2. For a dispute arising from the subdivision improvement plans, the subdivider may request, in writing, that the City assemble an appeal panel to review and approve or deny the final revised set of plans.
   a. The appeal panel shall be comprised of one licensed engineer designated by the subdivider, one licensed engineer designated by the city, and one licensed engineer agreed upon by the engineers designated by the subdivider and the city.
   b. The subdivider shall pay one half of the cost of the panel and the city's appeal fee.

Sec 17.8.213 Subdivider Constructs Required Improvements Or Posts Performance Guarantee

Upon receipt of final plat approval, the subdivider shall construct the required improvements or post performance guarantees in accordance with the provisions of Chapter 17.9.

Sec 17.8.214 City Records Plats And Documents

Upon receipt of approval of the final plat from the Development Review Committee and completion of all conditions of approval the city recorder shall act to record the final plat and any

Attachment: Subdivision Approval 7.22.24 rev (17.8 Code Text Amendment - Subdivision Approval Procedure)

deeds or other supporting material required to be recorded at the office of the county recorder.

Sec 17.8.215 Duration Of Approvals

1. Preliminary plan. Approval of the preliminary plan shall remain valid for a period of one year from the date of approval. The approval may be extended or reaffirmed by the Development Review Committee, for a period not to exceed one year, following receipt of a written request from the owner, submitted prior to the conclusion of the twelve-month approval period and upon a finding that the conditions applicable to the project and the vicinity are substantially the same as at the time of initial approval.
2. Final plat. The action of approval shall be valid for a period of one year. In the event that the final plat of any subdivision project shall not have been recorded at the office of the county recorder within one year from the date of approval said approval shall be null and void. The approval may be extended or reaffirmed by the Development Review Committee, for a period not to exceed one year, following receipt of a written request from the owner, submitted prior to the conclusion of the twelve-month approval period and upon a finding that the conditions applicable to the project and the vicinity are substantially the same as at the time of initial approval.
3. Effect on existing approved plats. Any plat granted final approval prior to the effective date of this section shall, for purposes of compliance herewith, be deemed to have been approved on January 12, 2006, the date on which this provision was first codified by way of Ordinance 05-11-58.

Sec 17.8.216 Amendments

The plans, plats, documents, and statements may be amended by following the same procedure required for initial approval. No change shall be made which is contrary to the intent of the city's land use plan or the standards and requirements of this code. Any amendment of a recorded final plat shall not be approved or recorded except in conformance with the terms and conditions established by state law.

Sec 17.8.217 Amended Plats

When major changes in a plat of a subdivision which has been recorded are made, approval of said subdivision shall be vacated and an amended plat thereof approved and filed in accordance with the requirements of this code. No change shall be made in approved plats unless approval thereof has been obtained by the Development Review Committee.

PART II

CONFLICTING ORDINANCES, SEVERABILITY, AND ADOPTION

SECTION 1. Conflicting Provisions. Whenever the provisions of this Ordinance conflict with the provisions of any other ordinance, resolution, or part thereof, the more stringent shall prevail.

Attachment: Subdivision Approval 7.22.24 rev (17.8 Code Text Amendment - Subdivision Approval Procedure)

SECTION 2. Provisions Severable. This Ordinance and the various sections, clauses and paragraphs are hereby declared to be severable. If any part, sentence, clause, or phrase is adjudged to be unconstitutional or invalid, it is hereby declared that the remainder of the ordinance shall not be affected thereby.

SECTION 3. Effective Date. This amended ordinance shall take effect immediately upon its passage and publication as prescribed by law.

Passed by the American Fork City Council this ____ day of _____, 2024.

_____
Bradley J. Frost
American Fork City Mayor

ATTEST:

_____
Terilyn Lurker
City Recorder

Attachment: Subdivision Approval 7.22.24 rev (17.8 Code Text Amendment - Subdivision Approval Procedure)

UNAPPROVED MINUTES
09.04.2024

AMERICAN FORK CITY

PLANNING COMMISSION REGULAR SESSION

September 4th, 2024

The American Fork City Planning Commission met in a regular session on September 4th, 2024 at the American Fork City Hall, 31 North Church Street, commencing at 6:00 p.m.

Commissioners Present: Christine Anderson, Geoff Dupaix, Bruce Frandsen, Claire Oldham, Rodney Martin, Chris Christiansen

Commissioners Absent: David Bird, Harold Dudley,

Staff Present:

Travis Van Ekelenburg	Senior Planner
Cody Opperman	Planner
JJ Hsu	Engineer
Angie McKee	Administrative Assistant I

Others Present:

REGULAR SESSION

Christine Anderson led the "Pledge of Allegiance"

Roll Call

COMMON CONSENT AGENDA

Minutes of the August 21st, 2024 Planning Commission Regular Session.

Geoff Dupaix motioned to approve the Common Consent agenda

Claire Oldham seconded the motion.

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.8 Code Text Amendment - Subdivision Approval Procedure)

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**ABSTAIN**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

PUBLIC HEARINGS

a. **Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Municipal Planning Organization, of the American Fork City Municipal Code. Amending Section 17.2, the Code Text Amendment plans to update the procedures for municipal planning organization.**

Travis Van Ekelenburg reviewed the background information for public hearing item letter a: Staff has initiated a Code Text Amendment to amend Section 17.2 of the American Fork City Municipal Code. The proposed amendment looks to update the procedures for municipal planning organization. Staff are proposing creating a Development Review Committee (DRC) where it will be similar in nature to a Planning Commission or City Council Meeting. The DRC meeting will meet once every week to make decisions on preliminary plans and final plats for large-scale developments and subdivisions. The appointed board members will include three people: the Development Services Director, the Public Works Director, and the Fire Chief. If one of those appointed board members is not available to meet at a meeting, they may designate a designee to take their position. The DRC will act upon preliminary plans and final plats for subdivisions and large-scale developments. Any applicant that does not agree with the committee's decision can appeal to the City Council for their decision. Christine Anderson

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.8 Code Text Amendment - Subdivision Approval Procedure)

explained that these changes are designed to streamline the process. Geoff Dupaix asked what the planning commission's role will be if this DRC is making all the decisions. Cody Opperman explained that site plans will still come to the Planning Commission, and because the DRC meeting will be weekly, this will move these projects forward in a timelier manner. Claire Oldham asked for some clarification on how the current process is done in American Fork City, and Cody Opperman informed her of the review process, noting that due to state legislation, only the Development Services Director would be making recommendations on preliminary plans and final plats. This Code Text Amendment will allow a 3-person committee to make these recommendations instead of only one individual. Rodney Martin noted that this move is in line with what the state legislature has mandated, as the state was not satisfied with how long cities were taking to do plan reviews.

Public Hearing Opened

No Comments

Public Hearing Closed

Geoff Dupaix moved to recommend approval for the proposed Code Text Amendment, amending Section 17.2, titled Municipal Planning Organization, relating to updating the procedures for municipal planning organization, and providing an effective date for the ordinance.

Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.8 Code Text Amendment - Subdivision Approval Procedure)

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.8 Code Text Amendment - Subdivision Approval Procedure)

b. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as General Provisions, of the American Fork City Municipal Code. Amending Section 17.1, the Code Text Amendment plans to update the designation of land use authority and appeal authority.

Cody Opperman reviewed the background information for public hearing item letter b: Staff has initiated a Code Text Amendment to amend Section 17.1 of the American Fork City Municipal Code. As the new state code has passed, staff have proposed creating new land use authorities and appeal authorities for subdivisions, conditional uses, and site plans. For both subdivisions and large-scale development, staff are proposing to create a Development Review Committee (DRC) Board where they will act upon preliminary plans and final plans for both residential and commercial/industrial properties. As for site plans and conditional uses, planning commission, or such other individual or department specifically designated by the terms of code, will be the approval body. All appeals for preliminary plans, final plats, conditional uses, and site plans will be the City Council.

Public Hearing Opened

No Comments

Public Hearing Closed

Rodney Martin moved to recommend approval for the proposed Code Text Amendment, amending Section 17.1, titled General Provisions, relating to updating the designation of land use authority and appeal authority, and providing an effective date for the ordinance.

Bruce Frandsen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**

Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

c. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Large Scale Development Overlay Zones, of the American Fork City Municipal Code. Amending Section 17.7, the Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone.

Cody Opperman reviewed the background information for public hearing item letter c: Staff has initiated a Code Text Amendment to amend Section 17.7 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for the large-scale overlay zone. Rather than a large-scale overlay zone, staff are proposing to change it to large-scale development. Large Scale Development goes into details about the approval procedures for their preliminary plans and final plans when submitted to staff for review. Rather than going to the Planning Commission and the City Council for approval, they will go to the Development Review Committee (DRC) board to get approved. Any decisions that the DRC makes for denial may be appealed to the City Council for their determination.

Public Hearing Opened

No Comments

Public Hearing Closed

Claire Oldham moved to recommend approval for the proposed Code Text Amendment, amending Section 17.7, titled Large-Scale Development Overlay Zones, relating to

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.8 Code Text Amendment - Subdivision Approval Procedure)

amending the approval procedure for the large-scale overlay zone, and providing an effective date for the ordinance.

Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

d. Public hearing, review, and recommendation on a proposed Code Text Amendment, known as Subdivisions, of the American Fork City Municipal Code. Amending Section 17.8, the Code Text Amendment plans to amend the approval procedure for subdivisions.

Travis Van Ekelenburg reviewed the background information for public hearing item letter d: Staff has initiated a Code Text Amendment to amend Section 17.8 of the American Fork City Municipal Code. The Code Text Amendment plans to amend the approval procedure for subdivisions. The subdivision process will only include the Development Review Committee (DRC). The DRC will review the preliminary plans and finals plats associated with the development and ultimately act upon them once they are in an approvable form. Residential subdivision will have a three-time review process where the applicant will submit for the first time and have up to two resubmittals before an action is made by the DRC. Any denial the DRC makes can be appealed to the City Council to decide on the matter. Bruce Frandsen voiced his concerns that the public should be more involved when a subdivision is being considered, and removing the planning commission as the approval body takes away the option of the public being able to voice their opinions. Claire Oldham asked about the notification process once a subdivision request is filed. Travis Van Ekelenburg referenced the state minimums 10 day noticing requirement and reminded the commissioners that due to the State Code Change, only

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.8 Code Text Amendment - Subdivision Approval Procedure)

the Development Services Director would be making recommendations on subdivisions without this change to the code. He also noted that regardless of the approval body, the citizens will still receive the required notifications. Christine Anderson acknowledged the importance of Bruce Frandsen's concern and added that items in need of a public hearing such as zoning maps would still come before the planning commission. She feels that once things get to an administrative level where someone is basically looking at the plan and checking off the boxes for American Fork City code requirements, she thinks that is something that can be handled by the DRC. Bruce Frandsen agreed and was appreciative of the discussion and clarifications. Rodney Martin noted that during his time on the Planning Commission, he has felt at times there was some redundancy, and he likes the idea of streamlining things as much as possible.

Public Hearing Opened

No Comments

Public Hearing Closed

Bruce Frandsen moved to recommend approval for the proposed Code Text Amendment, amending Section 17.8, titled Subdivisions, relating to amending the approval procedure for subdivisions and providing an effective date for the ordinance.

Rodney Martin seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Chris Christiansen	**AYE**
Rodney Martin	**AYE**
Geoff Dupaix	**AYE**
Bruce Frandsen	**AYE**
Clair Oldham	**AYE**

The motion passed

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.8 Code Text Amendment - Subdivision Approval Procedure)

Other Business

Cody Opperman informed the commissioners that code rewrite is still being worked on, along with the stationary and general plan amendments. He also mentioned that staff is working on an overlay map showing where developments are happening in the city, and possibly what Parcels are currently under review.

Adjournment

Geoff Dupaix motioned to adjourn the meeting.

Rodney Martin seconded the motion.

Meeting adjourned at 6:26PM

Angie McKee

Administrative Assistant I

The order of agenda items may change to accommodate the needs of the commissioners, public and staff.

Attachment: 09.04.2024 UNAPPROVED PC Meeting Minutes (17.8 Code Text Amendment - Subdivision Approval Procedure)

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Community Services **Director Approval** *Derric Rykert*

AGENDA ITEM Review and action on a agreement with Condie Construction Company for the reconstruction project at the American Fork Boat Harbor.

SUMMARY RECOMMENDATION
Staff recommends approval of the agreement with Condie Construction Company for the reconstruction of the American Fork Boat Harbor.

BACKGROUND
American Fork City operates the American Fork Boat Harbor. The parks department pursued and received grant funding in the amount of $3,656,643. Grants are matching funds and will be expensed by the city and reimbursed from the following organizations:
Utah Department of Natural Resources/Forestry Fire & State Lands: $2,000,000
Utah County TRCC: $1,456,643
Division of Wildlife Resources: $200,000
The project improvements include: new asphalt and striping, onsite stormwater system, replaced entrance booth, new restroom building, jetty slope restoration and improvements, playground area, pavilions, new sand and landscaped beach area with amenities such as kayak launch, shade structures, hammock stands. The project was designed by JUB Engineers in conjunction with staff. The City issued an RFP and had 8 participants at the pre bid meeting with 2 submittals for consideration. Condie Construction is the low bidder. The project is projected to start in October with substantial completion by May 1, 2025. Final Completion May 22, 2025 to open in time for Memorial Day.

BUDGET IMPACT
Grant funding for the project is $3,656,463. The bid award amount is $3,547,050.03.

SUGGESTED MOTION
Move to approve the Mayor sign the agreement and notice to proceed with Condie Construction for the reconstruction of the American Fork Boat Harbor.

SUPPORTING DOCUMENTS

AF-BoatHarbor_ColorSitePlan_FINAL-2024-05-08_opt (PDF)
AFBH_Addendum1_08.30.24 (PDF)

AFBH_Bid_Plans_08.22.24 (4) (PDF)
AFBH_Bid_Specs_08.22.24 (4) (PDF)
AFBH_Addendum2_09.10.24 (PDF)
AFBH_Addendum3_09.12.24 (PDF)
AFBH_NoA (PDF)
AFBH_NTP (PDF)
AFBH-Agreement (PDF)
AFBH-BidTab (PDF)

AMERICAN FORK BOAT HARBOR

PARKING LOT & AMENITY IMPROVEMENTS

PHASE 1

PHASE 2

PHASE 3

LEGEND

01 BOAT HARBOR ENTRY & ACCESS TO 100 WEST.
02 GATEHOUSE
03 RESTROOM
04 ASPHALT TRAIL (10')
05 IMPROVED LAWN AREA
06 PLAYGROUND, WITH NATURE-INSPIRED PLAY ELEMENTS
07 HAMMOCK POSTS & CORNHOLE BOARDS
08 SAND VOLLEYBALL
09 IMPROVED PARKING AREA
10 SAND BEACH
11 IMPROVED TRAILER PARKING
12 EXISTING BOAT RAMP, TO REMAIN
13 SHADE UMBRELLA, IN-GROUND
14 EQUIPMENT RENTAL KIOSK
15 DOCK & KAYAK LAUNCH
16 VEHICLE TURN-AROUND
17 PAVILION, TYP.
18 PICNIC TABLES
19 IMPROVED ROCK SHORELINE & FISHING ACCESS
20 EXISTING RIVER & TREES TO REMAIN
21 EXISTING RESTROOM

N

0 40 80
SCALE IN FEET

AMERICAN FORK 18 53

J-U-B ENGINEERS, INC.

THE LANGDON GROUP | GATEWAY MAPPING INC.

J-U-B FAMILY OF COMPANIES

Attachment: AF-BoatHarbor_ColorSitePlan_FINAL-2024-05-08_opt (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.

J-U-B COMPANIES THE LANGDON GROUP GATEWAY MAPPING INC.

ADDENDUM NO. 1

AMERICAN FORK CITY
AMERICAN FORK BOAR HARBOR RECONSTRUCTION

August 30, 2024

Addendum No. 1 to the Plans, Contract Documents, and Specifications prepared by J-U-B ENGINEERS, Inc. is hereby submitted for use in bid preparation and submittal. Contractor must acknowledge receipt of all Addenda on the Bid Form.

The following clarifications, additions, and/or deletions are hereby made part of the American Fork Boat Harbor Reconstruction as fully and completely as if the same were entirely set forth in the Contract Documents and Specifications.

The corrections, clarifications, changes, and approvals described herein shall become an integral part of any contract entered into between the Owner and Contractor.

MEETING MINUTES
The sign-in sheet and meeting minutes from the mandatory pre-bid meeting on August 29, 2024, at 2p.m. MST are attached.

PREBID MEETING QUESTIONS AND RESPONSES
The questions and responses that were asked at the pre-bid meeting are attached.

GEOTECHNICAL REPORT
The geotechnical report from GSH, dated March 22, 2024, is attached.

VOLUME I FRONT ENDS

1. C-111 Advertisement for Bids: The prebid meeting was changed to be mandatory.

2. C-410 Bid Form for Construction Contract
   - Bid Item 11 Remove Chain and Post Fence and Chainlink Fence - Updated Estimate Quantity
   - Bid Item 21 Excavation – Updated Estimate Quantity
   - Bid Item 22 Borrow – Updated Estimate Quantity
   - Bid Item 30 6’ Chainlink Fence – Updated Estimate Quantity
   - Bid Item 59 Preservation of Existing Trees – Removed bid item

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.

J-U-B COMPANIES THE LANGDON GROUP GATEWAY MAPPING INC.

VOLUME II TECHNICAL SPECIFICATIONS

1. Table of Contents
2. Specification 01 22 00 Measurement and Payment,
    - Section 1.14 Bid Item #6 Remove and Dispose Asphalt was modified
    - Section 1.67 Bid Item #59 Preservation of Existing Trees is removed
    - Section 1.86 Bid Item #78 Pavilion was modified
3. Specification 01 56 39 Tree Protection and Preservation was modified.

VOLUME III DRAWINGS

1. On Sheet CD101, perimeter and fences around the NE sheds and well are being removed.
2. On Sheets CD101-103, modifying Note 2 to remove reference to detail on Sheet DD503.
3. On Sheet CS101, perimeter and chainlink fences around the NE sheds and well are being installed.
4. On Sheet DD501, Detail 7 has been modified.
5. On Sheet DD503, Detail 3 has been added: "6' Chainlink Fence". Detail 2 is no longer being used.

Notice is hereby given that this Addendum must be signed and enclosed with a sealed bid for the American Fork Boat Harbor Reconstruction as evidence that the Bidder has familiarized himself/herself with all changes incorporated herein.

NAME OF BIDDER:_____

BY: _____ _____

Signature Date

_____

Name (Print) Title

Submitted By:
J-U-B Engineers, Inc.

Daniel Netzley, P.E.
Project Engineer

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

Attachments:

Pre-Bid Conference Meeting Minutes
Pre-Bid Conference Sign-In Sheet
Geotechnical Report from GSH dated March 22, 2024
Volume I Front Ends: C-111 Advertisement for Bids and C-410 Bid Form
Volume II Technical Specifications: 01 22 00 Measurement and Payment and
Specification 01 56 39 Tree Protection and Preservation
Volume III Drawings: Sheet CD101, CD102, CD103, CS101, DD501 and DD503.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.

J-U-B COMPANIES THE LANGDON GROUP GATEWAY MAPPING INC.

PREBID MEETING QUESTIONS AND RESPONSES

Questions are in black and the responses are in red.

1. Is this prebid meeting mandatory?
   The prebid meeting is mandatory and has been changed in Addendum 1 to note that.

2. Can you clarify the Bid Item 78 that talks about the concrete foundation and then it will be paid under a different bid item?
   Bid item has been changed to show that the concrete foundation will be included with the bid item.

3. Can you clarify on Bid Item 6 that reads the Owner and Contractor will choose the location of disposing of the asphalt removal material?
   Bid Item 6 has been changed to read that a portion will be laid on the overflow parking and the rest will be trucked to a location chosen by the Contractor.

4. It will be hard to finish paving by November 30th and follow Project Spec 01 56 39 requirement of at least 30 days in advance of submitting tree protection.
   Project Spec 01 56 39 was modified to ease the requirements to protect the existing trees. A majority of the funding for the project has an expenditure deadline by the end of 2024.

5. Can CAD files be shared?
   Yes, CAD files will be shared to the email addresses provided in the prebid metting attendance record. Note that the CAD files are not project documents and a discrepancy from between the CAD files and the plans will be awarded to the plans.

6. Can an Engineer's Estimate be given?
   The Engineer's Estimate will be sent on September 3.

7. Can the amount of asphalt that will need to be taken from the site that will not be used for the overflow parking be provided?
   The quantity will be sent on September 3.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

AMERICAN FORK CITY
AMERICAN FORK BOAT HARBOR RECONSTRUCTION
PRE-BID CONFERENCE MEETING MINUTES

Thursday, August 29th @ 2:00 p.m. at American Fork City Fitness Center Admin. Offices

Introductions:

Name	Company	Role	Email	Phone Number
Derric Rykert	American Fork City	Project Manager	drykert@americanfork.gov	801-763-3023
Jason Thomson	American Fork City	Parks Superintendent	jthomson@americanfork.gov	801-763-3023
Jerron Atkin	J-U-B Engineers	Project Manager	jatkin@jub.com	
Daniel Netzley	J-U-B Engineers	Construction/Civil Project Engineer	dnetzley@jub.com	
Seth Vance (Not Present)	J-U-B Engineers	Landscape Architect	svance@jub.com	

Description of Project:

The project is generally described as follows:

- Site clearing, asphalt removal and disposal, regrading of site, reconstruction of site parking, and installation of sand/oil separators with storm drain pipes.
- Removal and construction of toll booth
- 10’ Asphalt Trail
- Installation of new restroom
- Jetty slope rehabilitation
- Installation of beach amenities – sand, benches, pavilions, picnic tables, sand volleyball, kayak rental kiosk, kayak launch dock, shade umbrellas
- Installation of playground equipment and appurtenances
- Focal point amenities – pavilions, bike racks, picnic tables

Items to Address:

1. Sign-in Sheet- Each attendee should sign-in with their name, company, and contact information.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

2. Interested Parties-
    a. American Fork City - Owner, site access.
    b. Utah Lake Authority – Provided funding

3. Schedules-

Selection Schedule

Date	Selection Process
Monday, August 26th, 2024	Issue Invitation to Bid.
Thursday, August 29th, 2024	Pre-bid meeting at 2 p.m. MST.
Friday, September 6th, 2024	End of inquiries, questions and interpretation period (5 p.m. MST).
Tuesday, September 10th, 2024	Final Addendum Issued (if required).
Thursday, September 12th, 2024	Bid submittal due (3:00 p.m. MST).

Construction Schedule

Date	Selection Process
Monday, September 30th, 2024	Anticipated Start Date
Saturday, November 30th, 2024[1]	Parking Lot is Completed
Thursday, May 1st, 2024	Substantial Completion
Thursday, May 22nd, 2024	Final Completion

[1] Parking lot may be paved in the spring, but the Owner would like it paved this year due to funding deadlines.

4. Contract Documents- Standard EJCDC Contract Documents
    a. Bid Form with prices filled out
    b. Addendum/Addenda acknowledgement
    c. Bid Form Agreement filled out
    d. 5% Bid Bond and form filled out
    e. Copy of Bidder's Utah business license
    f. Qualifications as written on Bid Form
        i. Personnel
        ii. Project Experience in:
            1. Concrete Curb/Sidewalk
            2. Asphalt Pavement
            3. Shoreline or related
            4. Landscape/Playground Equipment

5. Bid Form and Measurement and Payment-
    a. Bid Items 1-3 – General
    b. Bid Items 4-48 – Civil
    c. Bid Items 49-79 – Landscaping
    d. Bid Items 80-94 – Structural (Toll Booth)

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

6. Project Funding:
    a. Local and State funds
    b. No requirements for AIS, Davis Bacon Wages, MBE/DBE, or Build America, Buy America (BABA),

7. Liquidated damages-
    a. Substantial Completion: Contractor shall pay Owner $_1000.00_ for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
    b. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $_1000.00_ for each day that expires after such time until the Work is completed and ready for final payment.
    c. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

8. Temporary Power and water-
    a. Power-Coordinate with Rocky Mountain Power
    b. Water-Coordinate with American Fork City

9. Permits and Agreements-Information is on the Drawings.
    a. City Permits – Will not be charged a fee, but will have to file
        a. Building Permit
        b. Work in ROW
        c. Fire hydrant meter – May require a reimbursable payment

10. Additional Specifications: Included in the Technical Specifications.
    a. American Fork Municipal Code, specifically **Title 15.01** https://americanfork.municipalcodeonline.com/book?type=ordinances#name=PREFACE
    b. APWA.

11. Submittals, RFIs, etc.
    a. Contractor must provide a subscription to manage construction phase documents online or have a system to keep track of documents.

12. Protect in place
    a. Utilities- power meter/some power poles and electrical boxes/irrigation water
    b. Vault toilet
    c. Well pump and concrete pad
    d. Boat ramp/gangway ramps/floating docks

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

~~e. Boundary fence~~
f. Bridge/culvert

13. Construction Staging/Stock piling/Work areas- Project site.

14. Adjacent Properties – Any damage to public or private property resulting from construction activities shall be restored to equal or better condition at the Contractor's own expense.
    a. North/East Property Owner – Timp Marina Club – 13:076:0033

15. Existing Conditions – All of the work included in this project is within ROW or property owned by American Fork City. It is anticipated that the Contractor may encounter existing utilities and facilities that have not been identified on the plans.

16. Geotechnical-Geotechnical Report is included in Bid Package.
    a. GSH, March 22, 2024. (Will include in Addendum 1)
    b. Water at 4-5 feet.
    c. Dewatering – IS possible – Need buoyancy calculations for manholes

17. Dewatering
    a. See the Geotech report.
    b. Dewatering Plan is required, if necessary.
    c. Reliable temporary/backup power is required. Plan must be stamped by a Utah PE.

18. Excavated Material –Excess excavated material to be disposed of by the Contractor.

19. Inspections - All construction efforts associated with this project and as prescribed in the project specifications will be subject to, but not limited to, daily inspections and site observation American Fork City personnel, J-U-B Engineers, and County and local, federal and state personnel as required. Almost daily site visits will be made for construction observation and answering questions.

20. Materials Testing and Compaction and Concrete Testing – The Contractor is responsible for quality control and shall hire a third party testing agency to perform whatever quality control testing is necessary in order to meet its obligation to comply with the requirements of the construction contract. The Contractor shall submit all copies of such test results to the Engineer, as it may be used to help evaluate the Contractor's compliance with the requirements of the Contract. No separate payment will be made for materials certification and testing.
    a. Contractor to provide 3rd party testing on all soils, concrete, compaction, etc.
    b. Special inspections related to the building are noted on sheet S-001.
    c. Testing pipelines air.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

21. Surveying – Engineer/Owner will set and/or identify construction survey control points for use by the Contractor prior to commencement of the contract times. Engineer/Owner will provide vertical and horizontal controls on time on the project site. Contractor shall not disturb Engineer established control points. Disturbance and restaking may require additional cost from Contractor.

22. Traffic Control/Roadway – must be maintained.

23. Warranty-Failure of the constructed product before the end of the warranty period is the responsibility of the Contractor.

24. Safety – The Contractor is responsible for safety on the project as directed by federal, state, and local governments.

25. Work Sequencing–
    a. The Contractor will have 7 months (152 days) from Notice of Award to substantial completion (5/1/24) and 22 additional days (174 days total) to final completion.
    b. AF works M-F for inspections. AF can provide someone on other days if notified ahead of time.
    c. Asphalt must be fully paved before batch plants are closed: Nov 30, 2024. See AF Code 15.01.1320 (50°F and rising)

26. Subcontractors, Superintendents, Foremen – State these in your Bid.

27. Project will be awarded based on the following-
    a. See Following page

Questions or Concerns

Q1. Is this prebid meeting mandatory?

A1. The prebid meeting is mandatory and has been changed in Addendum 1 to note that.

Q2. Can you clarify the Bid Item 78 that talks about the concrete foundation and then it will be paid under a different bid item?

A2. Bid item has been changed to show that the concrete foundation will be included with the bid item.

Q3. Can you clarify on Bid Item 6 that reads the Owner and Contractor will choose the location of disposing of the asphalt removal material?

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

A3. Bid Item 6 has been changed to read that a portion will be laid on the overflow parking and the rest will be trucked to a location chosen by the Contractor.

Q4. It will be hard to finish paving by November 30th and follow Project Spec 01 56 39 requirement of at least 30 days in advance of submitting tree protection.

A4. Project Spec 01 56 39 was modified to ease the requirements to protect the existing trees. A majority of the funding for the project has an expenditure deadline by the end of 2024.

Q5. Can CAD files be shared?

A5. Yes, CAD files will be shared to the email addresses provided in the prebid metting attendance record. Note that the CAD files are not project documents and a discrepancy from between the CAD files and the plans will be awarded to the plans.

Q6. Can an Engineer's Estimate be given?

A6. The Engineer's Estimate will be sent out on September 3.

Q7. Can the amount of asphalt that will need to be taken from the site that will not be used for the overflow parking be provided?

A7. Yes, the quantity will be sent out on September 3.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

SELECTION AND DISQUALIFICATION PROCESS

Selection Process:
A panel representing the city, J-U-B Engineers, and other interested parties may participate in the proposal evaluation and contractor selection process. Members of this team will individually review contractor responses, followed by a single consensus score. If necessary, the selection team may choose to interview some or all of the proposing firms.

Selection Criteria:
Project Understanding (30 points):

- Provide 1 page memo of understanding of the project's critical factors and considerations that might present a challenge.

Value (30 points):

- Value provided for the proposed fee.

Project Team and Experience (20 points):

- Qualifications and relevant experience of personnel on the proposed project team, as described in Paragraph 2.01.D of EJCDC C-410 Form for Construction Contract.
- Project experience, as described in Paragraph 2.01.E of EJCDC C-410 Form for Construction Contract.

Project Approach (20 points):

- Provide Construction schedule; preliminary is sufficient.

Disqualifications:
Incomplete/Non-Responsiveness:

- Bids may be disqualified if any content is missing or is substantially incomplete.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

Thursday, August 29, 2024

	Name	Phone Number	Email Address	Organization
1	Ed Kluber		eKluber@condieconstruction.com	Condie Construction
2	Sam Adams		samuel.adams@kilgorecontracting.com	Kilgore Contracting
3	JOSH WEIGHT		Josh.Weight@mmwin.us	MOUNTIAN WEST INDUSTRIAL
4	Heather Stewart		Corson@beckconstruct.com	Beck Construction & Exc
5	Michele Anderson		michele.anderson@stakerparson.com	Staker Parson
6	Lauren Eifert		leifert@genevarock.com	Geneva Rock
7	Taylor Mortensen		taylor@evansgrader.com	Evans Grader & Paving
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Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

REPORT
GEOTECHNICAL STUDY
AMERICAN FORK MARINA PAVEMENTS
6398 SOUTH 100 WEST
AMERICAN FORK, UTAH

Submitted To:

J-U-B Engineers, Inc.
392 East Winchester Street
Salt Lake City, Utah 84107

Submitted By:

GSH Geotechnical, Inc.
473 West 4800 South
Salt Lake City, Utah 84123

March 22, 2024

Job No. 3054-003-24

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

March 22, 2024
Job No. 3054-003-24

Mr. Jerron Atkin
J-U-B Engineers, Inc.
392 East Winchester Street
Salt Lake City, Utah 84107

Mr. Atkin:

Re: Report
Geotechnical Study
American Fork Marina Pavements
6398 South 100 West
American Fork, Utah

1. INTRODUCTION

1.1 GENERAL

This report presents the results of our geotechnical study performed at the site of the proposed American Fork Marina Pavements to be located at 6398 South 100 West in American Fork, Utah. The general location of the site with respect to existing roadways, as of 2024, is presented on Figure 1, Vicinity Map. A more detailed layout of the site showing proposed facilities, existing roadways, and the test pits excavated in conjunction with this study is presented on Figure 2, Site Plan.

1.2 OBJECTIVES AND SCOPE

The objectives and scope of the study were planned in discussions between Mr. Jerron Atkin of J-U-B Engineers, Inc., and Mr. Robert Gifford of GSH Geotechnical, Inc. (GSH).

In general, the objectives of this study were to:

1. Define and evaluate the subsurface soil and groundwater conditions across the site.

2. Provide appropriate earthwork and pavement recommendations to be utilized in the design and construction of the proposed facilities.

GSH Geotechnical, Inc.
473 West 4800 South
Salt Lake City, Utah 84123
Tel: 801.685.9190 Fax: 801.685.2990
www.gshgeo.com

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

In accomplishing these objectives, our scope has included the following:

1. A field program consisting of the excavating, logging, and sampling of 8 exploration test pits.

2. A laboratory testing program.

3. An office program consisting of the correlation of available data, engineering analysis, and the preparation of this summary report.

1.3 AUTHORIZATION

Authorization was provided by returning a signed copy of the Professional Services Agreement No. 23-1101 dated November 1, 2023.

1.4 PROFESSIONAL STATEMENTS

Supporting data upon which our recommendations are based are presented in subsequent sections of this report. Recommendations presented herein are governed by the physical properties of the soils encountered in the exploration test pits, projected groundwater conditions, and the layout and design data discussed in Section 2, Proposed Construction. If subsurface conditions other than those described in this report are encountered and/or if design and layout changes are implemented, GSH must be informed so that our recommendations can be reviewed and amended, if necessary.

Our professional services have been performed, our findings developed, and our recommendations prepared in accordance with generally accepted engineering principles and practices in this area at this time.

2. PROPOSED CONSTRUCTION

Plans are to install new pavements in the existing parking areas at the American Fork Marina/Boat Harbor. Projected traffic in these areas is anticipated to consist of a light volume of automobiles and light trucks, occasional medium-weight trucks, and no heavyweight trucks.

Site development will require some earthwork in the form of minor cutting and filling. At this time, we anticipate that maximum site grading cuts and fills, excluding utilities, will be on the order of 1 to 3 feet.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

3. SITE INVESTIGATIONS

3.1 GENERAL

Subsurface conditions in unexplored locations or at other times may vary from those encountered at specific test pit locations. If such variations are noted during construction or if project development plans are changed, GSH must review the changes and amend our recommendations, if necessary.

Test pit locations were established by estimating distances and angles from site landmarks. If increased accuracy is desired by the client, we recommend that the test pit locations and elevations be surveyed.

3.2 FIELD PROGRAM

To define and evaluate the subsurface soil and groundwater conditions across the site, 8 test pits were excavated within the accessible areas. These test pits were completed to depths ranging from 3.5 to 11.5 feet with a moderate-sized rubber track-mounted excavator. Excavation refusal within non-engineered fills containing concrete debris terminated Test Pits TP-5, TP-6, and TP-7. The approximate locations of the test pits are presented on Figure 2.

The field portion of our study was under the direct control and continual supervision of an experienced member of our geotechnical staff. During the course of the excavation operations, a continuous log of the subsurface conditions encountered was maintained. In addition, samples of the typical soils encountered were obtained for subsequent laboratory testing and examination. The soils were classified in the field based upon visual and textural examination. These classifications were supplemented by subsequent inspection and testing in our laboratory. Graphical representation of the subsurface conditions encountered is presented on Figures 3A through 3H, Test Pit Logs. Soils were classified in accordance with the nomenclature described on Figure 4, Key to Test Pit Log (USCS).

A 2.42-inch inside diameter thin-wall drive sampler was utilized at select locations and depths within the test pit excavations to collect soil samples for further examination and laboratory testing.

Following completion of excavation operations, 1.25-inch diameter slotted PVC pipe was installed in Test Pits TP-1, TP-3, TP-4, and TP-8 to provide a means of monitoring the groundwater fluctuations. The test pits were then backfilled. Although an effort was made to compact the backfill with the excavator, backfill was not placed in uniform lifts and compacted to a specific density. Consequently, settlement of the backfill with time is likely to occur.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

3.3 LABORATORY TESTING

3.3.1 General

To provide data necessary for our engineering analysis, a laboratory testing program was performed. This program included moisture, density, full and partial gradation, and CBR tests. The following paragraphs describe the tests and summarize the test data.

3.3.2 Moisture and Density Tests

To provide index parameters and to correlate other test data, moisture and density tests were performed on selected samples. The results of these tests are presented on the test pit logs, Figures 3A through 3H.

3.3.3 Gradation Test

Full and partial gradation tests were performed to aid in classifying soils. The tests results are tabulated on the following table and are presented on the test pit logs, Figures 3A through 3H:

Test Pit No.	Depth (feet)	Percent Passing Sieve											
		3"	2"	1"	3/4"	3/8"	No. 4	No. 10	No. 40	No. 100	No. 200	Soil Classification	Meets UDOT Specifications
TP-7	3.5	69.8	61.1	55.7	55.7	48.7	44.6	41.7	33.2	25.7	22.5	GM/GC (Fill)	No

3.3.4 Partial Gradation Tests

To aid in classifying the granular soils, partial gradation tests were performed. Results of the tests are tabulated below and presented on the test pit logs, Figures 3A through 3H:

Test Pit No.	Depth (feet)	Percent Passing No. 200 Sieve	Moisture Content Percent	Soil Classification
TP-1	11.0	30.3	45.7	SM/SC
TP-2	7.0	30.7	29.2	SM/SC
TP-3	7.0	11.7	16.5	SP/SM (Fill)
TP-4	8.0	18.8	31.0	SM/SC (Fill)
TP-5	4.0	2.2	18.2	SM/SC (Fill)
TP-6	3.5	13.6	9.8	SM/SC (Fill)
TP-8	5.0	5.2	5.0	SP/SC (Fill)
TP-8	9.0	15.8	14.4	SM

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

3.3.5 California Bearing Ratio (CBR) Test

A California Bearing Ratio (CBR) test was performed on the representative sample of fill soils obtained from the site. The test was performed in accordance with the Utah Department of Transportation Procedure 8-9-22 "California Bearing Ratio Soil" as presented in the Utah State Department of Highways Manual of Instruction, Part 8, Materials. The results of the CBR test are presented below:

Soil Classification	SM/SC (Fill)		
Before Soaking	Dry Density	135.2	pcf
	Moisture Content	6.2	percent
After Soaking	Dry Density	129.4	pcf
	Moisture Content (Upper 1" of Sample)	8.0	percent
	Surcharge	5	lbs
	Swell	0.49	percent
CBR	Surcharge	5	lbs
	At 0.1" penetration	23.0	percent
	At 0.2" penetration	45.0	percent

4. SITE CONDITIONS

4.1 SURFACE

The site is located at 6398 South 100 West in American Fork, Utah. The site is currently developed as an asphalt parking area and water vessel loading dock. The topography of the site is relatively flat, grading down to the south with a total relief of approximately 4 to 6 feet. Site vegetation consists of riparian vegetation and mature trees along the western border of the site.

The site is bounded to the north by vehicle storage/campground areas along with 100 West Street; to the east by vacant/undeveloped agricultural/grass land; and to the south and west by Utah Lake.

4.2 SUBSURFACE SOIL

The following paragraphs provide generalized descriptions of the subsurface profiles and soil conditions encountered within the test pits conducted during this study. As previously noted, soil conditions may vary in unexplored locations.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

The test pits were excavated to depths ranging from 3.5 to 11.5 feet. The soil conditions encountered in each of the test pits, to the depths explored, were generally similar across the test pit locations.

- The test pits were performed within existing parking lot areas and encountered 2 to 3 inches of asphalt.

- Non-engineered fill soils were encountered in each test pit, to depths of up to 10.5 feet beneath the existing ground surface. The non-engineered fill soils contained concrete debris and other deleterious material and primarily consisted of clay with varying silt, sand, and gravel content as well as sand and gravel with varying clay and silt content.

- Natural soils were encountered below the non-engineered fill or the ground surface in Test Pits TP-1, TP-2, and TP-8. The natural soils consisted primarily of clay with varying silt and sand content as well as sand with varying clay and silt content.

- Materials causing excavation refusal were encountered within the non-engineered fills containing concrete debris in Test Pits TP-5, TP-6, and TP-7 at depths ranging from 3.5 to 4.0 feet below the existing ground surface.

The natural clay soils were medium stiff to stiff, moist to saturated, gray and black in color.

The natural sand soils were medium dense, moist to saturated, and black in color.

For a more descriptive interpretation of subsurface conditions, please refer to Figures 3A through 3H, Test Pit Logs. The lines designating the interface between soil types on the test pit logs generally represent approximate boundaries. In situ, the transition between soil types may be gradual.

4.3 GROUNDWATER

March 1, 2024 (2 days following excavation), groundwater was measured within the PVC pipes installed as tabulated below:

Test Pit No.	Groundwater Depth (feet)
	March 1, 2024
TP-1	5.0
TP-3	4.0
TP-4	5.0
TP-8	5.0

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

Groundwater levels vary with changes in season and rainfall, construction activity, irrigation, snow melt, surface water run-off, and other site-specific factors.

5. DISCUSSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

GSH observed the pavement areas throughout the site are visually distressed with cracking, spalling, longitudinal, transversal, and alligator cracking, as well as potholes/bird baths. Our exploration borings confirmed that asphalt thicknesses (2.0 to 3.0 inches) are not consistent throughout the site and do not meet the required thickness for parking areas. Additionally, the gradations of the subgrade were significantly outside of UDOT specifications. The condition of the pavements is poor, will continue to degrade, and will eventually form more potholes and larger cracking that will have a detrimental effect on the passing vehicles.

Due to the poor condition of the asphalt in these distressed areas, GSH recommends removing the existing asphalt, removing and stockpiling the in situ soils, and installing 3 inches of asphalt over 8 inches of UDOT spec roadbase over properly prepared subgrade as recommended in section 5.2.1 Site Preparation, of this report. It must be noted that the gradations of the subgrade soils tested were significantly outside of the specifications for UDOT road base and, therefore, should not be re-utilized as road base. However, these materials may be blended and re-utilized as a subbase/subgrade material.

Due to the proposed usage of the asphalt areas and proximity to water, GSH recommends utilizing an asphalt additive such as fiberglass or other synthetic fibers to strengthen the proposed pavement sections and reduce the risk of future distress.

Prior to proceeding with construction, demolition and removal of the existing pavements, associated debris, non-engineered fill, as well as the removal of all surface vegetation, root systems, topsoil, and any deleterious materials from beneath new pavements is required. All existing utility locations should be reviewed to assess their impact on the proposed construction and abandoned and/or relocated as appropriate.

Due to the developed nature of this site and the surrounding area, additional non-engineered fills may exist in unexplored areas of the site. Based on our experience, non-engineered fills are frequently erratic in composition and consistency.

Detailed discussions pertaining to earthwork and pavements of the site are presented in the following sections.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

5.2 EARTHWORK

5.2.1 Site Preparation

Prior to proceeding with construction, demolition and removal of the existing pavements and associated debris, and any deleterious materials from beneath the proposed pavements and exterior flatwork areas is required. All existing utility locations should be reviewed to assess their impact on the proposed construction and abandoned and/or relocated as appropriate. Non-engineered fills may remain in pavement areas if properly prepared as indicated below, however if non-engineered fill are to remain in place, the pavement sequences may experience similar degradation in the near future.

In situ, non-engineered fills may remain below flexible pavements if free of debris and deleterious materials and if properly prepared. Proper preparation below pavements will consist of the removal of the upper 12 inches, followed by the scarification of the next 12 inches, followed by the replacement of the removed 12 inches with moisture preparation and re-compaction to the requirements of structural fill. Even with proper preparation, pavements established overlying non-engineered fills may encounter some long-term movements unless the non-engineered fills are completely removed.

The gradation of the in situ soils tested was significantly outside of the specifications for UDOT road base and, therefore, should not be re-utilized as road base. However, this material may be blended and re-utilized as a subbase/subgrade material.

Prior to proceeding with installing the new pavement sequence, deleterious materials must be removed from below all new pavements. It must be noted that even with proper preparation, pavements established overlying non-engineered fills and existing pavements/road base may encounter some long-term movements unless the non-engineered fills are completely removed, and a suitable and consistent thickness of road base is in place.

It must be noted that from a handling and compaction standpoint, soils containing high amounts of fines (silts and clays) are inherently more difficult to rework and are very sensitive to changes in moisture content, requiring very close moisture control during placement and compaction. This will be very difficult, if not impossible, during wet and cold periods of the year.

Subsequent to stripping and prior to the placement of structural site grading fills, exterior flatwork, and pavements, the exposed subgrade must be proof rolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice.

Subgrade preparation as described must be completed prior to placing overlying non-frost susceptible subbase, road base, and asphaltic pavement.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH must be notified prior to the placement of structural site grading fills and pavements to verify that all loose/disturbed soils and non-engineered fills have been completely removed and/or properly prepared.

5.2.2 Structural Fill

Structural fill is defined as all fill which will ultimately be subjected to structural loadings, such as imposed by footings, floor slabs, pavements, etc. Structural fill will be required as backfill over foundations and utilities, as site grading fill, and as replacement fill below footings. All structural fill must be free of surface vegetation, root systems, rubbish, topsoil, frozen soil, and other deleterious materials.

Structural site grading fill is defined as structural fill placed over relatively large open areas to raise the overall grade. For structural site grading fill, the maximum particle size shall not exceed 4 inches; although, occasional larger particles, not exceeding 8 inches in diameter, may be incorporated if placed randomly in a manner such that "honeycombing" does not occur, and the desired degree of compaction can be achieved. The maximum particle size within structural fill placed within confined areas shall be restricted to 2 inches.

Imported structural fill below foundations and floor slabs shall consist of a well graded sand and gravel mixture with less than 30 percent retained on the three-quarter-inch sieve and less than 20 percent passing the No. 200 sieve (clays and silts). Non-frost-susceptible subbase shall consist of gravel soil with less than 7 percent fines.

On-site granular soils may be re-utilized as structural site grading fill if they meet the criteria for such, as stated herein. However, should some of these soils contain coarse gravel in excess of 30 percent retained on the three-quarter-inch sieve by weight and, therefore, cannot be tested for compaction using conventional means (laboratory Proctors and nuclear densometer), then re-utilization of these fill/natural soils as structural site grading fill will require either screening and/or full-time observation during placement to document compaction means and methods.

The gradation of the in situ soils tested was significantly outside of the specifications for UDOT road base and, therefore, should not be re-utilized as road base. However, this material may be blended and re-utilized as a subbase/subgrade material.

Fine-grained soils, such as clays and silts, are not recommended for re-utilization as structural fill.

To stabilize soft subgrade conditions (if encountered) or where structural fill is required to be placed closer than 2.0 feet above the water table at the time of construction, a mixture of coarse angular gravels and cobbles and/or 1.5- to 2.0-inch gravel (stabilizing fill) should be utilized. It may also help to utilize a stabilization fabric, such as Mirafi 600X or equivalent, placed on the natural ground if 1.5- to 2.0-inch gravel is used as stabilizing fill.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

All material utilized as road base must meet the gradation and material requirements for UDOT Spec road base which is summarized below:

Aggregate Properties			
	Aggregate Class		
	A	B	
Dry Rodded Unit Weight	No less than 75 lb/ft^3		AASHTO T 19
Liquid Limit/Plastic Index	Non-plastic	PI ≤ 6	AASHTO T 89 AASHTO T 90
Aggregate Wear	Not to exceed 50 percent		AASHTO T 96
Gradation	Table 2		AASHTO T 11 AASHTO T 27
CBR with a 10 lb surcharge measured at 0.20 in penetration	70% Min	N/A	AASHTO T 193
Two Fractured Faces	50% Min	N/A	AASHTO T 335

Gradation Limits		
Sieve Size	**Job Mix Gradation Target Blend**	**Job Mix Gradation Tolerance**
1 1/2 inch	100	
1 inch	90-100	± 9.0
3/4 inch	70-85	± 9.0
1/2 inch	65-80	± 9.0
3/8 inch	55-75	± 9.0
No. 4	40-65	± 7.0
No. 16	25-40	± 5.0
No. 200	7-10	± 3.0

5.2.3 Fill Placement and Compaction

All structural fill shall be placed in lifts not exceeding 8 inches in loose thickness. Structural fills shall be compacted in accordance with the percent of the maximum dry density as determined by the AASHTO[1] T180 (ASTM[2] D1557) compaction criteria in accordance with the table on the following page.

[1] American Association of State Highway and Transportation Officials
[2] American Society for Testing and Materials

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

Location	Total Fill Thickness (feet)	Minimum Percentage of Maximum Dry Density
Beneath an area extending at least 5 feet beyond the perimeter of the structure	0 to 5	95
Site grading fills outside area defined above	0 to 5	90
Utility trenches within structural areas	--	96
Road base	--	96

Structural fills greater than 5 feet thick are not anticipated at the site.

Subsequent to stripping and prior to the placement of structural site grading fill, the subgrade shall be prepared as discussed in Section 5.2.1, Site Preparation, of this report. In confined areas, subgrade preparation shall consist of the removal of all loose or disturbed soils.

Coarse angular gravel and cobble mixtures (stabilizing fill), if utilized, shall be end dumped, spread to a maximum loose lift thickness of 15 inches, and compacted by dropping a backhoe bucket onto the surface continuously at least twice. As an alternative, the stabilizing fill may be compacted by passing moderately heavy construction equipment or large self-propelled compaction equipment at least twice. Subsequent fill material placed over the coarse gravels and cobbles shall be adequately compacted so that the "fines" are "worked into" the voids in the underlying coarser gravels and cobbles. Where soil fill materials are to be placed directly over more than about 18 inches of clean gravel, a separation geofabric, such as Mirafi 140N or equivalent, is recommended to be placed between the gravel and subsequent soil fills.

Non-structural fill may be placed in lifts not exceeding 12 inches in loose thickness and compacted by passing construction, spreading, or hauling equipment over the surface at least twice.

5.2.4 Utility Trenches

All utility trench backfill material below structurally loaded facilities (flatwork, pavements, etc.) shall be placed at the same density requirements established for structural fill. If the surface of the backfill becomes disturbed during the course of construction, the backfill shall be proof rolled and/or properly compacted prior to the construction of any exterior flatwork over a backfilled trench. Proof rolling shall be performed by passing moderately loaded rubber tire-mounted construction equipment uniformly over the surface at least twice. If excessively loose or soft areas are encountered during proof rolling, they shall be removed to a maximum depth of 2 feet below design finish grade and replaced with structural fill.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

Many utility companies and City-County governments are now requiring that Type A-1a or A-1b (AASHTO Designation – granular soils with limited fines) soils be used as backfill over utilities. These organizations are also requiring that in public roadways, the backfill over major utilities be compacted over the full depth of fill to at least 96 percent of the maximum dry density as determined by the AASHTO T180 (ASTM D1557) method of compaction. GSH recommends that as the major utilities continue onto the site that these compaction specifications are followed.

Fine-grained soils, such as silts and clays, are not recommended for utility trench backfill in structural areas.

The static groundwater table was encountered as shallow as 4.0 feet below the existing surface and may be shallower with seasonal fluctuations. Dewatering of utility trenches and other excavations below this level should be anticipated.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

Due to the relatively shallow excavation refusal depths, difficult excavation should be anticipated within deeper excavations such as those for construction of utilities. However, larger excavation equipment may be utilized to reach required design depths.

5.3 GROUNDWATER

March 1, 2024 (2 days following excavation), groundwater was measured within the PVC pipes installed as tabulated below:

Test Pit No.	Groundwater Depth (feet)
	March 1, 2024
TP-1	5.0
TP-3	4.0
TP-4	5.0
TP-8	5.0

Based on the anticipated cuts necessary to reach design subgrades, we anticipate temporary and permanent dewatering may be necessary. Additionally, temporary dewatering may be required for deeper excavations, such as those for utility construction and/or for the removal of non-engineered fills.

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

The groundwater measurements presented are conditions at the time of the field exploration and may not be representative of other times or locations. Groundwater levels may vary seasonally and with precipitation, as well as other factors including irrigation. Evaluation of these factors is beyond the scope of this study. Groundwater levels may, therefore, be at shallower or deeper depths than those measured during this study, including during construction and over the life of the structure.

The extent and nature of any dewatering required during construction will be dependent on the actual groundwater conditions prevalent at the time of construction and the effectiveness of construction drainage to prevent run-off into open excavations.

5.4 PAVEMENTS

Due to the proposed usage of the asphalt areas and proximity to water, GSH recommends utilizing an asphalt additive such as fiberglass or other synthetic fibers to strengthen the proposed pavement sections and reduce the risk of future distress.

The natural clay soils and non-engineered fills will exhibit poor pavement support characteristics when saturated. All pavement areas must be prepared as previously discussed (see Section 5.2.1, Site Preparation). Under no circumstances shall pavements be established over unprepared non-engineered fills, loose or disturbed soils, topsoil, surface vegetation, root systems, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. With the subgrade soils, a CBR of 20, and the estimated projected traffic as discussed in Section 2, Proposed Construction, the following pavement sections are recommended:

Paved Areas

(Light Volume of Automobiles and Light Trucks,
Occasional Medium-Weight Trucks,
and No Heavyweight Trucks)
[Up to 90 equivalent 18-kip axle loads per day]

Flexible Pavements:
(Asphalt Concrete)

3.0 inches	Asphalt concrete
8.0 inches	Aggregate base
Over	Properly prepared fills, natural subgrade soils, and/or structural site grading fill extending to properly prepared fills and/or natural subgrade soils

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

Rigid Pavements:
(Non-reinforced Concrete)

5.0 inches	Portland cement concrete (non-reinforced)
5.0 inches	Aggregate base
Over	Properly prepared fills, natural subgrade soils, and/or structural site grading fill extending to properly prepared fills and/or natural subgrade soils

For dumpster pads, we recommend a pavement section consisting of 8 inches of Portland cement concrete, 12 inches of aggregate base, over properly prepared natural subgrade or site grading structural fills. Dumpster pads shall not be constructed overlying non-engineered fills under any circumstances.

These above rigid pavement sections are for non-reinforced Portland cement concrete. Concrete shall be designed in accordance with the American Concrete Institute (ACI) and joint details shall conform to the Portland Cement Association (PCA) guidelines. The concrete shall have a minimum 28-day unconfined compressive strength of 4,000 pounds per square inch and contain 6 percent ±1 percent air-entrainment.

The crushed stone shall conform to applicable sections of the current Utah Department of Transportation (UDOT) Standard Specifications. All asphalt material and paving operations shall meet applicable specifications of the Asphalt Institute and UDOT. A GSH technician shall observe placement and perform density testing of the base course material and asphalt.

Please note that the recommended pavement section is based on estimated post-construction traffic loading. If the pavement is to be constructed and utilized by construction traffic, the above pavement section may prove insufficient for heavy truck traffic, such as concrete trucks or tractor-trailers used for construction delivery. Unexpected distress, reduced pavement life, and/or premature failure of the pavement section could result if subjected to heavy construction traffic and the owner should be made aware of this risk. If the estimated traffic loading stated herein is not correct, GSH must review actual pavement loading conditions to determine if revisions to these recommendations are warranted.

5.5 SITE VISITS

GSH must verify that all topsoil/disturbed soils, non-engineered fill, and any other unsuitable soils have been removed and/or properly prepared, and that suitable soils have been encountered prior to placing site grading fills, and pavements. Additionally, GSH must observe fill placement and verify in-place moisture content and density of fill materials placed at the site.

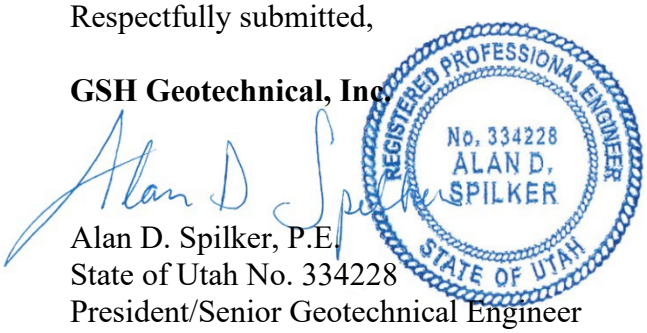
Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

6. CLOSURE

If you have any questions or would like to discuss these items further, please feel free to contact us at (801) 685-9190.

Respectfully submitted,

GSH Geotechnical, Inc.



Alan D. Spilker, P.E.
State of Utah No. 334228
President/Senior Geotechnical Engineer

ADS:jmt

Encl. Figure 1, Vicinity Map
Figure 2, Site Plan
Figures 3A through 3H, Test Pit Logs
Figure 4, Key to Test Pit Log (USCS)

Addressee (email)

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.
JOB NO. 3054-003-24

0.10 0 0 0 0 0 0.1 0.2 0.3 0.4 MI 0.5

200 0 0 200 400 600 M 800

REFERENCE:
ALL TRAILS - NATIONAL GEOGRAPHIC TERRAIN
DATED 2024

FIGURE 1
VICINITY MAP

GSH

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.
JOB NO. 3054-003-24

APPROXIMATE SCALE IN FEET
75 0 75 150

REFERENCE:
ADAPTED FROM AERIAL PHOTOGRAPH
DOWNLOADED FROM GOOGLE EARTH
IMAGERY - NOT DATED

FIGURE 2
SITE PLAN

GSH

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-1

CLIENT: J-U-B Engineers, Inc. PROJECT NUMBER: 3054-003-24

PROJECT: American Fork Marina Pavements DATE STARTED: 2/28/24 DATE FINISHED: 2/28/24

LOCATION: 6398 South 100 West, American Fork, Utah GSH FIELD REP.: AE

EXCAVATING METHOD/EQUIPMENT: CAT 430D - Backhoe

GROUNDWATER DEPTH: 5.0' (3/1/24) ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
		2" ASPHALT								
	CL FILL	SILTY CLAY, FILL with fine to coarse sand								slightly moist medium stiff
	CL	SILTY CLAY gray/black			36.3	79				moist medium stiff
▽		grades black	5							saturated
	SM/ SC	SILTY/CLAYEY FINE TO MEDIUM SAND with organics; brown								saturated medium dense
			10		45.7		30.3			
		End of exploration at 11.5'. No significant sidewall caving. Installed 1.25" diameter slotted PVC pipe to 11.5'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3A

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-2

CLIENT: J-U-B Engineers, Inc. PROJECT NUMBER: 3054-003-24

PROJECT: American Fork Marina Pavements DATE STARTED: 2/28/24 DATE FINISHED: 2/28/24

LOCATION: 6398 South 100 West, American Fork, Utah GSH FIELD REP.: AE

EXCAVATING METHOD/EQUIPMENT: CAT 430D - Backhoe

GROUNDWATER DEPTH: 6.0' (2/28/24) ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
		2" ASPHALT								
	CL FILL	SILTY CLAY, FILL with fine and coarse gravel; gray								slightly moist stiff
	CL	SILTY CLAY gray/black			32.2	83				moist stiff
▼			5							saturated
	SM/ SC	SILTY/CLAYEY FINE TO COARSE SAND with layers of fine and coarse gravel up to 2" thick; black								saturated medium dense
					29.2		30.7			
		grades with organics and trace coarse gravel	10							
		End of exploration at 10.5'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3B

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-3

CLIENT: J-U-B Engineers, Inc. PROJECT NUMBER: 3054-003-24

PROJECT: American Fork Marina Pavements DATE STARTED: 2/28/24 DATE FINISHED: 2/28/24

LOCATION: 6398 South 100 West, American Fork, Utah GSH FIELD REP.: AE

EXCAVATING METHOD/EQUIPMENT: CAT 430D - Backhoe

GROUNDWATER DEPTH: 4.0' (3/1/24) ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
		3" ASPHALT								
	CL FILL	SILTY CLAY, FILL with trace sand; black								slightly moist medium stiff
▼					33.3	82				saturated
	SP/ SM/ FILL	FINE TO COARSE SAND, FILL with some silt, trace clay, and fine and coarse gravel; black	5							saturated medium dense
					16.5		11.7			
	SM/ SC FILL	SILTY/CLAYEY FINE TO MEDIUM SAND, FILL with 3" cement slab; fine and coarse gravel; black								saturated medium dense
			10							
		End of exploration at 10.5'. No significant sidewall caving. Installed 1.25" diameter slotted PVC pipe to 10.5'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3C

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-4

CLIENT: J-U-B Engineers, Inc. PROJECT NUMBER: 3054-003-24

PROJECT: American Fork Marina Pavements DATE STARTED: 2/28/24 DATE FINISHED: 2/28/24

LOCATION: 6398 South 100 West, American Fork, Utah GSH FIELD REP.: AE

EXCAVATING METHOD/EQUIPMENT: CAT 430D - Backhoe

GROUNDWATER DEPTH: 5.0' (3/1/24) ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
		3" ASPHALT								
	CL FILL	SILTY CLAY, FILL with fine to medium sand; black								moist stiff
▼					30.7	85				
			5							saturated
	SM/ SC FILL	SILTY/CLAYEY FINE TO COARSE SAND, FILL with fine and coarse gravel, organics, and 3" layer of concrete; brown								saturated medium dense
					31.0		18.8			
		End of exploration at 8.5'. No significant sidewall caving. Installed 1.25" diameter slotted PVC pipe to 8.5'.	10							
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3D

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-5

CLIENT: J-U-B Engineers, Inc. PROJECT NUMBER: 3054-003-24

PROJECT: American Fork Marina Pavements DATE STARTED: 2/28/24 DATE FINISHED: 2/28/24

LOCATION: 6398 South 100 West, American Fork, Utah GSH FIELD REP.: AE

EXCAVATING METHOD/EQUIPMENT: CAT 430D - Backhoe

GROUNDWATER DEPTH: Not Encountered (2/28/24) ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
		2" ASPHALT								
	SM/SC FILL	SILTY/CLAYEY FINE SAND, FILL with fine and coarse gravel; major roots (topsoil) to 6"; brown 6" layer of concrete								moist medium dense
					18.2		21.2			
		Refusal at 4.0' on concrete. No significant sidewall caving. No groundwater encountered at time of excavation.	5							
			10							
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3E

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-6

CLIENT: J-U-B Engineers, Inc. PROJECT NUMBER: 3054-003-24

PROJECT: American Fork Marina Pavements DATE STARTED: 2/28/24 DATE FINISHED: 2/28/24

LOCATION: 6398 South 100 West, American Fork, Utah GSH FIELD REP.: AE

EXCAVATING METHOD/EQUIPMENT: CAT 430D - Backhoe

GROUNDWATER DEPTH: Not Encountered (2/28/24) ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
		2" ASPHALT								
	SM/SC FILL	SILTY/CLAYEY FINE TO COARSE SAND, FILL with fine and coarse gravel; gray								slightly moist medium dense
					9.8		13.6			
		Refusal at 3.5' on non-engineered fill/concrete. No significant sidewall caving. No groundwater encountered at time of excavation.	5							
			10							
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3F

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-7

CLIENT: J-U-B Engineers, Inc. PROJECT NUMBER: 3054-003-24

PROJECT: American Fork Marina Pavements DATE STARTED: 2/28/24 DATE FINISHED: 2/28/24

LOCATION: 6398 South 100 West, American Fork, Utah GSH FIELD REP.: AE

EXCAVATING METHOD/EQUIPMENT: CAT 430D - Backhoe

GROUNDWATER DEPTH: Not Encountered (2/28/24) ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
		3" ASPHALT								
	GM/GC FILL	SILTY/CLAYEY FINE AND COARSE GRAVEL, FILL with fine to coarse sand; brown								slightly moist medium dense
					12.3		22.5			
		Refusal at 3.5' on non-engineered fill/concrete. No significant sidewall caving. No groundwater encountered at time of excavation.	5							
			10							
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3G

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-8

CLIENT: J-U-B Engineers, Inc. PROJECT NUMBER: 3054-003-24

PROJECT: American Fork Marina Pavements DATE STARTED: 2/28/24 DATE FINISHED: 2/28/24

LOCATION: 6398 South 100 West, American Fork, Utah GSH FIELD REP.: AE

EXCAVATING METHOD/EQUIPMENT: CAT 430D - Backhoe

GROUNDWATER DEPTH: 5.0' (3/1/24) ELEVATION: ---

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
		2" ASPHALT								
	SP/SC FILL	FINE TO COARSE SAND, FILL with some clay and fine and coarse gravel; brown								slightly moist medium dense
▼			5		5.0		5.2			saturated
	SM	SILTY FINE TO COARSE SAND with fine and coarse gravel; brown								saturated medium dense
			10		14.4		15.8			
		End of exploration at 11.5'. No significant sidewall caving. Installed 1.25” diameter slotted PVC pipe to 11.5’.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3H

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

CLIENT: J-U-B Engineers, Inc.
PROJECT: American Fork Marina Pavements
PROJECT NUMBER: 3054-003-24

KEY TO TEST PIT LOG

WATER LEVEL	USCS	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪

COLUMN DESCRIPTIONS

① **Water Level:** Depth to measured groundwater table. See symbol below.

② **USCS:** (Unified Soil Classification System) Description of soils encountered; typical symbols are explained below.

③ **Description:** Description of material encountered; may include color, moisture, grain size, density/consistency,

④ **Depth (ft.):** Depth in feet below the ground surface.

⑤ **Sample Symbol:** Type of soil sample collected at depth interval shown; sampler symbols are explained below.

⑥ **Moisture (%):** Water content of soil sample measured in laboratory; expressed as percentage of dryweight of

⑦ **Dry Density (pcf):** The density of a soil measured in laboratory; expressed in pounds per cubic foot.

⑧ **% Passing 200:** Fines content of soils sample passing a No. 200 sieve; expressed as a percentage.

⑨ **Liquid Limit (%):** Water content at which a soil changes from plastic to liquid behavior.

⑩ **Plasticity Index (%):** Range of water content at which a soil exhibits plastic properties.

⑪ **Remarks:** Comments and observations regarding drilling or sampling made by driller or field personnel. May include other field and laboratory test results using the following abbreviations:

CEMENTATION:

Weakly: Crumbles or breaks with handling or slight finger pressure.

Moderately: Crumbles or breaks with considerable finger pressure.

Strongly: Will not crumble or break with finger pressure.

MODIFIERS:

Trace <5%

Some 5-12%

With > 12%

MOISTURE CONTENT (FIELD TEST):

Dry: Absence of moisture, dusty, dry to the touch.

Moist: Damp but no visible water.

Saturated: Visible water, usually soil below water table.

Descriptions and stratum lines are interpretive; field descriptions may have been modified to reflect lab test results. Descriptions on the logs apply only at the specific boring locations and at the time the borings were advanced; they are not warranted to be representative of subsurface conditions at other locations or times.

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISIONS			USCS SYMBOLS	TYPICAL DESCRIPTIONS
COARSE-GRAINED SOILS More than 50% of material is larger than No. 200 sieve size.	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve.	CLEAN GRAVELS (little or no fines)	GW	Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
			GP	Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines
		GRAVELS WITH FINES (appreciable amount of fines)	GM	Silty Gravels, Gravel-Sand-Silt Mixtures
			GC	Clayey Gravels, Gravel-Sand-Clay Mixtures
	SANDS More than 50% of coarse fraction passing through No. 4 sieve.	CLEAN SANDS (little or no fines)	SW	Well-Graded Sands, Gravelly Sands, Little or No Fines
			SP	Poorly-Graded Sands, Gravelly Sands, Little or No Fines
		SANDS WITH FINES (appreciable amount of fines)	SM	Silty Sands, Sand-Silt Mixtures
			SC	Clayey Sands, Sand-Clay Mixtures
FINE-GRAINED SOILS More than 50% of material is smaller than No. 200 sieve size.	SILTS AND CLAYS Liquid Limit less than 50%		ML	Inorganic Silts and Very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity
			CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
			OL	Organic Silts and Organic Silty Clays o f Low Plasticity
	SILTS AND CLAYS Liquid Limit greater than 50%		MH	Inorganic Silts, Micacious or Diatomacious Fine Sand or Silty Soils
			CH	Inorganic Clays of High Plasticity, Fat Clays
			OH	Organic Silts and Organic Clays of Medium to High Plasticity
HIGHLY ORGANIC SOILS			PT	Peat, Humus, Swamp Soils with High Organic Contents

Note: Dual Symbols are used to indicate borderline soil classifications.

STRATIFICATION:

DESCRIPTION	THICKNESS
Seam	up to 1/8"
Layer	1/8" to 12"

Occasional: One or less per 6" of thickness

Numerous; More than one per 6" of thickness

TYPICAL SAMPLER GRAPHIC SYMBOLS

- Bulk/Bag Sample
- Standard Penetration Split Spoon Sampler
- Rock Core
- No Recovery
- 3.25" OD, 2.42" ID D&M Sampler
- 3.0" OD, 2.42" ID D&M Sampler
- California Sampler
- Thin Wall

WATER SYMBOL

- Water Level

FIGURE 4

GSH

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

ADVERTISEMENT FOR BIDS

ADDENDUM 1

AMERICAN FORK CITY
AMERICAN FORK, UTAH
AMERICAN FORK BOAT HARBOR RECONSTRUCTION

General Notice

American Fork City (Owner) is requesting Bids for the construction of the following Project:

American Fork Boat Harbor Reconstruction
83-23-013

Bids for the construction of the Project will be received at the **American Fork City Fitness Center Administration** located at **454 N Center St, AMERICAN FORK, UT 84003,** until **September 12, 2024**, at **3:00 pm** local time. At that time, the Bids received will be **privately** opened and read.

The Project includes the following Work:

The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

Bids are requested for the following Contract: **American Fork Boat Harbor Reconstruction / 83-23-013**

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be found at the following designated website:

https://bids.sciquest.com/apps/Router/PublicEvent?CustomerOrg=StateOfUtah

Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the designated website as a plan holder, even if Bidding Documents are obtained from a plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

Pre-bid Conference

A pre-bid conference for the Project will be held on **August 29, 2024,** at **2:00 pm** at the **American Fork City Fitness Center Administration Offices** located at **454 N Center St., AMERICAN FORK, UT 84003.** Attendance at the pre-bid conference is mandatory. ~~not required but is strongly encouraged.~~

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

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The selection process schedule is expected to proceed as outlined in Table 1.

Table 1. Selection Schedule

Date	Selection Process
Monday, August 26th, 2024	Issue Invitation to Bid.
Thursday, August 29th, 2024	Pre-bid meeting at 2 p.m. MST.
Friday, September 6th, 2024	End of inquiries, questions and interpretation period (5 p.m. MST).
Tuesday, September 10th, 2024	Final Addendum Issued (if required).
Thursday, September 12th, 2024	Bid submittal due (3:00 p.m. MST).

Table 2. Construction Schedule

Date	Selection Process
Monday, September 30th, 2024	Anticipated Start Date
Saturday, November 30th, 2024	Parking Lot is Completed
Thursday, May 1st, 2024	Substantial Completion
Thursday, May 22nd, 2024	Final Completion

This Advertisement is issued by:

Owner: **American Fork city**
By: Derric Rykert
Title: Project Manager
Date: August 26, 2024

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BID FORM FOR CONSTRUCTION CONTRACT

ADDENDUM 1

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

American Fork City

51 E Main St,

American Fork, UT, 84003

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;

C. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;

D. Personnel and Qualifications

1. Present information which will identify key personnel who will be assigned to the project, including project manager, and project superintendent(s).

2. Describe the background and experience of each of these individuals. Provide detailed resumes for the project manager, and project superintendent(s).

3. Describe the approach to scheduling and accomplishing the work; including paving the parking lot by Dec 1, 2024. Identify which major trade work (i.e. structural, mechanical, earthwork) will be completed by the contractor's forces and which will be performed by subcontractors.

E. Project Experience

1. The Contractor, or subcontractor, should have experience with work as shown in the Base Bid Table below. Proposals shall include project experience in four categories: concrete curb/sidewalk experience, asphalt pavement experience, shoreline or related experience, and landscape/playground experience. A single project example may be used to show qualifications in all four categories, however a minimum of three projects

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should be submitted to show the Contractor's experience. A reference should be submitted for each project including the Owner's name, organization, and contact information.

a. Concrete Curb/Sidewalk Experience

1) (3) projects completed in the last 5 years with at least 500 linear feet of curb and gutter replacement and 500 linear feet of sidewalk replacement.

b. Asphalt Pavement Experience

1) (3) projects completed in the last 5 years with at least 500 tons of hot-mix asphalt installed.

c. Shoreline or Related Experience

1) (2) projects completed in the last 10 years with shoreline or related experience, including weed management.

d. Landscape/Playground Equipment Experience

1) (3) projects similar in scope and fee completed in the last 5 years involving landscape/playground equipment

F. Claims, Disputes, and Projects Completed by Sureties

1. List all the Contractor's projects that are currently in a claims dispute or have been in a claims dispute in the last five years. Give the owner, owners contact information, and reason for dispute.

2. List all the Contractor's projects that have been completed by a surety in the last five years. Give owner and contact information for each project listed.

ARTICLE 3—BASIS OF BID—UNIT PRICES

3.01 *Unit Price Bids*

Bidder will perform the following work at the indicated unit prices:

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Base Bid					
Item No.	**Description**	**Estimated Quantity**	**Unit**	**Bid Unit Price**	**Bid Amount**
1	Mobilization/Demobilization	1	LS	$	$
2	As-Built/Record Drawings	1	LS	$	$
3	Storm Water Pollution Prevention Plan (SWPPP)	1	LS	$	$
4	Weed Removal and Management Plan - Jetty	1	LS	$	$
5	General Removal and Disposal	1	LS	$	$
6	Remove and Dispose Asphalt Pavement	15,614	SY	$	$
7	Clearing and Grubbing	1	LS	$	$
8	Remove and Dispose Tree	10	EA	$	$
9	Relocate Light Poles and Electric Junction Boxes	1	LS	$	$
10	Remove and Dispose Toll Booth	1	LS	$	$
11	Remove Chain and Post Fence and Chainlink Fence	1,127	LF	$	$
12	Remove Entrance Gate	1	LS	$	$
13	6” Thick Vehicular Concrete	1,259	SF	$	$
14	4” Thick Concrete Sidewalk	1,160	SF	$	$
15	Concrete Flatwork	2,296	SF	$	$
16	6” Thick Concrete Drive Approach	1	EA	$	$
17	HMA, PG-54-22, SP-1/2, 75ND, 3” Thick with Max 15% RAP – Asphalt Trail	304	TON	$	$
18	HMA, PG-54-22, SP-1/2, 75ND, 3” Thick with Max 15% RAP – Parking Lot	2,828	TON	$	$
19	Untreated Base Course	3,467	CY	$	$
20	Granular Borrow	5,617	CY	$	$
21	Excavation	19,300 ~~6,500~~	CY	$	$
22	Borrow	1,950 ~~1,300~~	CY	$	$
23	Handicap Ramp	7	EA	$	$
24	4’ Concrete Valley Gutter	1,433	LF	$	$
25	Open 24” Curb and Gutter	3,320	LF	$	$

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26	Vehicular Gate at Entrance (36'-Wide Manual Double Swing Gate)	1	LS	$	$
27	Relocated Vehicular Gate (12'-Wide Manual Slide Gate)	1	LS	$	$
28	General Relocation	1	LS	$	$
29	4' Chainlink Fence	18	LF	$	$
30	6' Chainlink Fence	908	LF	$	$
31	Dumpster Enclosure	1	LS	$	$
32	Concrete Wheel Stop	35	EA	$	$
33	Sign with 8" Dia. Bollard	22	EA	$	$
34	Stationary 6" Dia. Bollard	6	EA	$	$
35	Striping	1	LS	$	$
36	Harbor Slope Protection	1699	SY	$	$
37	Lake Exposed Slope Protection	807	SY	$	$
38	Inlet Basin, 3'x3', 5-7Ft Deep	5	EA	$	$
39	Storm Drain Manhole, 5-Ft, 6Ft Deep	1	EA		
40	Sand/Oil Separator – OSS-A1	1	EA	$	$
41	Sand/Oil Separator – OSS-B1	1	EA	$	$
42	Sand/Oil Separator – OSS-C1	1	EA	$	$
43	Sand/Oil Separator – OSS-D1	1	EA	$	$
44	18" Reinforced Concrete Pipe	472	LF	$	$
45	24" Reinforced Concrete Pipe	18	LF	$	$
46	18" Flared End Section Pipe Outlet	2	EA	$	$
47	24" Flared End Section Pipe Outlet	1	EA	$	$
48	CXT Tioga Restroom Building	1	LS	$	$
49	Fine Grading (Landscape Areas)	1	LS	$	$
50	Washed Beach Sand	762	CY	$	$
51	Engineered Wood Fiber (Playground)	2,785	SF	$	$
52	Steel Edging (1/8" Thick, 6" Tall- Corten/Borcon)	880	LF	$	$
53	Sod	1,064	SF	$	$
54	Shredded Bark Mulch	3,822	SF	$	$
55	1" Desert Rose Stone Mulch (3" Depth)	11,402	SF	$	$
56	3"-6" Wasatch Grey Stone Mulch (4" Depth)	14,668	SF	$	$

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57	1/4" Minus Chat (Path Material)	1,386	SF	$	$
58	2" Caliper Deciduous Tree	15	EA	$	$
59	~~Preservation of Existing Trees~~ NOT USED	~~1~~	~~LS~~	~~$~~	~~$~~
60	Topsoil	406	CY	$	$
61	Weed Barrier Fabric	26,016	SF	$	$
62	Concrete Mow Curb (6" Wide)	5	LF	$	$
63	Cast-in-Place 8" Deep-Edge Concrete Curb Wal' (Playground)	93	LF	$	$
64	Cast-in-Place Concrete Seat Wall (12" Wide)	237	LF	$	$
65	Lodge Pole Fence	241	LF	$	$
66	Shade Umbrellas	6	EA	$	$
67	Modular Floating Dock, Gangway, and Kayak Launch	1	LS	$	$
68	Timber Hammock Posts	10	EA	$	$
69	Trash Receptacles (Powder Coated)	5	EA	$	$
70	Cornhole Board	2	EA	$	$
71	Playground Equipment	1	LS	$	$
72	Log Playground Barrier, Treated Logs	5	LF	$	$
73	Specialty, Treated Logs and Stumps	10	LF	$	$
74	Natural (Untreated) Logs and Stumps	201	LF	$	$
75	6' Bench (With Back)	6	EA	$	$
76	6' Aluminum Picnic Tables (Powder-Coated)	6	EA	$	$
77	Collapsible Access Control Bollard	2	EA	$	$
78	Pavilion	2	EA	$	$
79	Bike Rack	2	EA	$	$
80	Import Building Foundation	1	LS	$	$
81	Building Concrete and Reinforcing	1	LS	$	$
82	Rough Carpentry	1	LS	$	$
83	Shop Fabricated Roof Trusses	1	LS	$	$
84	Siding	1	LS	$	$
85	Stone Veneer and Associated Items	1	LS	$	$
86	Metal Fabrications	1	LS	$	$
87	Thermal and Moisture Protection	1	LS	$	$

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88	Batt/Blown-In/Sprayed-In Insulation	1	LS	$	$
89	Roofing	1	LS	$	$
90	Interior Finish	1	LS	$	$
91	Doors, Frames, and Hardware	1	LS	$	$
92	Glazing	1	LS	$	$
93	Miscellaneous Building Item	1	LS	$	$
94	Building Electrical	1	LS	$	$
Total of All Unit Price Bid Items:					$

A. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder agrees that the Work will be substantially complete on or before **May 1, 2025,** and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **May 22, 2025.**

4.03 The parking lot is the first priority and must be completed by **November 30, 2024**.

4.04 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

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ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

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11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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BIDDER hereby submits this Bid as set forth above:

Bidder:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

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AMERICAN FORK CITY

AMERICAN FORK BOAT HARBOR RECONSTRUCTION

VOLUME II TECHNICAL SPECIFICATIONS

ADDENDUM 1

LIST OF SPECIFICATION PRIORITIES

1. Project Specifications listed below ~~above~~
2. American Fork Standards, Specifications, and Code
3. American Public Works Association (APWA) 2017 Specifications

If there is any discrepancy, conflict or inconsistency within the Technical Specifications themselves, the Contractor shall provide the better quality or greater quality of Work or materials, as applicable, unless Owner directs otherwise in writing.

The following are modifications, special provisions, or additions to the APWA specifications:

TABLE OF CONTENTS

Measurement and Payment ..... Section 01 22 00

Tree Protection and Preservation ..... Section 01 56 39

Closeout Procedures ..... Section 01 78 50M

Selective Structure Demolition ..... Section 02 41 19

Dewatering ..... Section 02 42 00

Maintenance of Concrete ..... Section 03 01 00

Concrete Forming and Accessories ..... Section 03 10 00

Concrete Expansion and Construction Joints ..... Section 03 15 16

Concrete Reinforcing ..... Section 03 20 00

Cast-In-Place Concrete ..... Section 03 30 00

Metal Fabrication ..... Section 05 50 00

Miscellaneous Rough Carpentry ..... Section 06 10 53

Framing and Sheathing ..... Section 06 16 00

Shop-Fabricated Wood Trusses ..... Section 06 17 53

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Bituminous Damp Proofing ..... Section 07 11 13

Thermal Insulation ..... Section 07 21 00

Loose-Fill Insulation ..... Section 07 21 23

Soffit Panels ..... Section 07 42 93

Sheet Metal Roofing ..... Section 07 61 00

Sheet Metal Flashing and Trim ..... Section 07 62 00

Penetration Firestopping ..... Section 07 84 13

Joint Protection ..... Section 07 90 00

Metal Doors and Frames ..... Section 08 11 00

Door Hardware ..... Section 08 71 00

Glazing ..... Section 08 80 00

Plaster and Gypsum Board ..... Section 09 20 00

Painting and Coating ..... Section 09 90 00

Landscape Grading ..... Section 32 91 19

Planting ..... Section 32 94 23

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August 30, 2024

SECTION 01 22 00
MEASUREMENT AND PAYMENT
ADDENUM 1

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Authority

B. Payment

C. Defect Assessment

D. Non-Payment for Rejected Products

E. General Description of Measurement and Payment

F. Alternates

G. Schedule of Bid Items

1.2 DESCRIPTION OF WORK

A. The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

1.3 AUTHORITY

A. See EJCDC C-700 General Conditions 10.07 and 10.08

B. Take all measurements and compute quantities to estimate percent complete of each item listed in the schedule of values. The Engineer will verify measurements and quantities and percent complete.

1.4 PAYMENT

A. See EJCDC C-700 General Conditions 15.01

B. Payment Includes: Full compensation for all required labor, products, tools, equipment, plant, transportation, services, and incidentals; erection, application or installation of an item of the Work; overhead and profit.

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1. See EJCDC C-700 General Conditions and Article 14

B. Replace the Work, or portions of the Work, not conforming to specified requirements.

C. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Owner will direct one of the following remedies:
   1. The defective Work may remain, but the unit sum will be adjusted to a new sum at the discretion of the Engineer.
   2. The defective Work will be partially repaired to the instructions of the Owner, and the unit sum will be adjusted to a new sum at the discretion of the Engineer.

D. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.

E. The authority of the Engineer to assess the defect and identify payment adjustment is final.

1.6 NON-PAYMENT FOR REJECTED PRODUCTS

A. Payment will not be made for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from the transporting vehicle.
   4. Products placed beyond the lines and levels of the required Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling, and disposing of rejected Products.
   7. Removing rejected materials and/or work and replacing with materials and/or work in compliance with these specifications.

1.7 GENERAL DESCRIPTION OF MEASUREMENT AND PAYMENT

A. Measurement and Payment for the bid items listed in Base Bid shall be based on the description in the Technical Specifications and Drawings. Unless the work to be done is so specifically called out to be measured and paid for in Base Form, payment for such work shall be included in other applicable items, and there shall be no separate measurement and payment for the work.

B. Items listed in EJCDC C-410 – Bid Form as lump sum (L.S.) shall include all work for the complete installation as generally described in the Drawings and the Technical Specifications.

C. Payment shall be made at the contract bid price listed in the Bid Form.

D. Partial payment for unit price bid items and lump sum bid items only partially completed at the end of monthly pay periods shall be made based upon the Engineers interpretation of the percentage of work completed. Partial payment for materials delivered and stored will be considered, if said materials have been submitted to the

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Engineer for review per Section 01 33 00 – Submittal Procedures and supporting invoices and documentation have been provided.

E. Quantities indicated in the Bid Form are for bidding and contract purposes only, unless specified otherwise in the Technical Specifications.

F. If the actual work requires more or fewer quantities than those quantities indicated in the Bid Form, the Contractor shall provide the required quantities.

G. Payment Includes: Full compensation for all required labor, products, tools, equipment, materials, transportation, services and incidentals, erection, application, or installation of an item of the Work, including mobilization, demobilization, supervision, overhead and profit.

H. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit price for work which is incorporated in or made necessary by the Work unless specified otherwise.

I. Material the Contractor removes from the site will be returned to the Owner if requested by the Owner.

J. Construction Staking will be performed by the OWNER's Representative.

1.8 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement

B. Coordinate related work and modify surrounding work.

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SCHEDULE OF BID ITEMS – BASE BID

1.9 MOBILIZATION/DEMOBLIZATION – BID ITEM #1

A. Measurement shall be lump sum for the job, complete. Payment shall be as outline below:

PAY FACTORS FOR MOBILIZATION/DEMOBILIZATION AND TEMPORARY FACILITIES	
Percent of Original Contract Amount Earned Not Including Materials Purchased	Percent of Amount Bid for Mobilization to be Paid
5	40
15	20
40	30
50	10

B. This includes, but not limited to, all labor and equipment and materials for, safely moving equipment and related materials to and from the site, sanitation facilities, traffic control required permitting, temporary utilities and controls, project related documentation and coordination with State and Local authorities. Payment for the performance of the mobilization/demobilization work as specified herein will be made at the contract lump sum price for "Mobilization/Demobilization" as listed in the Bid Schedule.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.10 AS-BUILT/RECORD DRAWINGS – BID ITEM #2

A. Measurement shall be lump sum for the job, complete.

B. This includes, but not limited to, all labor and equipment and materials to provide as-built/record drawings as specified in these Specifications and elsewhere in these Contract Documents.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.11 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) – BID ITEM #3

A. Measurement shall be lump sum for the job, complete. Payment shall be as outline below:

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PAY FACTORS FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	
Amount Paid	When Paid
25% of bid item amount	With first estimate
Remaining portion of bid item paid as percentage of the contract completed	With each subsequent estimate

B. Payment for this bid item shall include all costs associated with preparation and implementation of a (SWPPP) and obtaining the Utah Pollutant Discharge Elimination (UPDES) Storm Water permit.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.12 WEED REMOVAL AND MANAGEMENT PLAN – JETTY – BID ITEM #4

A. No direct measurement will be made for weed removal and management plan. This item shall include all equipment, labor, and materials to provide weed removal and management plan for the jetty, including the implementation of the plan for the removal of vegetation. Plan shall include the application of herbicides by Commercial Pesticide Applicator registered in Utah. The plan should be created and executed for the site for construction as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.13 GENERAL REMOVAL AND DISPOSAL – BID ITEM #5

A. Measurement for this item shall be per lump sum. Payment shall include all items not accounted for in the removal bid items, Bid Items 6-13, required to prepare and maintain the site for construction as specified in these Specifications, Plans, and elsewhere in these Contract Documents. Included in this item is coordination with Owner for removal of any other items found in project limits.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.14 REMOVE AND DISPOSE ASPHALT PAVEMENT – BID ITEM #6

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to remove and dispose existing asphalt from the site

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and roadway as called out on the plans. Work includes demolition, sawcutting, hauling, and disposing of asphalt material from the work site to the overflow parking for a portion of the asphalt and the rest to a location chosen by the Contractor. ~~a location chosen by the Owner and Contractor~~. Subgrade removal will be paid for in Excavation bid item. Asphalt is to be sawcut to full depth. No additional payment will be made for sawcutting to provide a clean edge immediately before placing asphalt.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.15 CLEARING AND GRUBBING – BID ITEM #7

A. Measurement shall be lump sum of clearing and grubbing. This includes, but is not limited to, all labor, equipment and materials required for stripping and disposing of vegetation, including but not limited to stumps, roots, shrubs, vegetation, and vegetative debris within the construction limits to cut, remove, haul, and properly dispose of. Trees greater than 4" at 2' from top of existing ground shall be paid out in Remove and Dispose Tree bid item. The price also includes disposal fees. Work on the jetty will be paid under a different bid item.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.16 REMOVE AND DISPOSE TREE– BID ITEM #8

A. Measurement shall be per each tree removed with a diameter of 4 inches or larger measured at a point 2 feet above the existing ground, anything smaller shall be paid for in the Clearing and Grubbing bid item. CONTRACTOR is to verify size with OWNER prior to removal. This includes, but is not limited to, all labor, equipment and materials required for removal of trees called out in the plans to remove, including stumps and roots to cut, wood chip, remove, haul, and properly dispose of to 18" below grade. The price also includes disposal fees.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.17 RELOCATE LIGHT POLES AND ELECTRIC JUNCTION BOXES– BID ITEM #9

A. No direct measurement will be made for relocation of light poles and electric junction boxes. This item shall include all equipment, labor, and materials to remove and coordinate the relocation of light poles and electric junction boxes as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.18 REMOVE AND DISPOSE TOLL BOOTH– BID ITEM #10

A. Measurement for this item shall be lump sum. This item shall include all equipment, labor, and materials to remove and dispose of the complete toll booth station, foundation, and all contents. Contractor is to verify with Owner of all items to be returned located inside the building. Also included is the coordination and removal/abandoning of the existing power lateral.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.19 REMOVE CHAIN AND POST FENCE AND CHAINLINK FENCE– BID ITEM #11

A. Measurement for this item shall be by the linear foot. Payment shall be full compensation for labor, materials, equipment, and appurtenances required to remove and dispose of existing fence per project plans and specifications. If a portion of the existing fence remains, and the fence will not be continued under this project, this item includes furnishing and installing an end post matching the existing fence end posts in size, shape, material, construction, color, and mounting method. This item includes removing and disposing of the fence materials and any concrete foundations and furnishing, placing, backfilling and compacting holes of removed posts.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.20 REMOVE ENTRANCE GATE– BID ITEM #12

A. Measurement for this item shall be lump sum. Payment shall be full compensation for labor, materials, equipment, and appurtenances required to remove and dispose of existing entrance gate per project plans and specifications. If a portion of the existing fence remains, and the fence will not be continued under this project, this item includes furnishing and installing an end post matching the existing fence end posts in size, shape, material, construction, color, and mounting method. This item includes removing and disposing of the gate materials and any concrete foundations and furnishing, placing, backfilling and compacting holes of removed posts.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.21 6” THICK VEHICULAR CONCRETE– BID ITEM #13

A. Measurement shall be by the square foot of vehicular concrete furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the concrete, including expansion joints and rebar. This also includes all necessary forms, expansion/contraction material, curing material, and all other

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necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.22 4" THICK CONCRETE SIDEWALK– BID ITEM #14

A. Measurement shall be by the square foot of 4" thick sidewalk furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the sidewalk, including expansion joints. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.23 CONCRETE FLATWORK– BID ITEM #15

A. Measurement shall be by the square foot of 4" thick sidewalk furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the concrete flatwork, including expansion joints and rebar. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.24 6" THICK CONCRETE DRIVE APPROACH – BID ITEM #16

A. Measurement shall be per concrete drive approach furnished and installed. The area in which concrete drive approaches and sidewalks cross are measured under this this item, as will driveway flares. Areas in which concrete drive approaches and curb and gutter cross are not measured under this item - measurement of concrete drive approaches will begin at the back of curb line. Payment shall be full compensation for all labor, equipment, and materials for excavating, preparing grade, and furnishing, forming, placing, and finishing concrete drive approach. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.25 HMA, PG-64-22, SP-1/2, 75ND, 3" THICK WITH MAX 15% RAP - ASPHALT TRAIL – BID ITEM #17

A. Measurement for the asphalt shall be per ton based upon weigh tickets obtained in the field by the inspector. Included in this item is all labor, equipment and materials required to furnish and install asphalt to required thickness. This includes, but is not limited to, tackifier, compaction, preparing and verifying final base grade, material testing, ensuring positive drainage in all locations, and other related appurtenances as shown on the drawings and described in the specifications and contract documents. Eligible payment will be for measured/weighed tons of asphalt material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract ton (TON) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.26 HMA, PG-64-22, SP-1/2, 75ND, 3" THICK WITH MAX 15% RAP – PARKING LOT – BID ITEM #18

A. Measurement for the asphalt shall be per ton based upon weigh tickets obtained in the field by the inspector. Included in this item is all labor, equipment and materials required to furnish and install asphalt to required thickness. This includes, but is not limited to, tackifier, compaction, preparing and verifying final base grade, material testing, ensuring positive drainage in all locations, and other related appurtenances as shown on the drawings and described in the specifications and contract documents. Eligible payment will be for measured/weighed tons of asphalt material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract ton (TON) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.27 UNTREATED BASE COURSE – BID ITEM #19

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to import, place, and compact untreated base course under all asphalt, pedestrian concrete, vehicular concrete, concrete flatwork, concrete drive approach, sidewalk, valley gutter, curb and gutter, handicap ramp, and dumpster enclosure, except as noted in other bid items. Eligible payment will be for placed and compacted cubic yards of untreated base course material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.28 GRANULAR BORROW – BID ITEM #20

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to import, place, and compact granular borrow as shown on the plans. Borrow used for locations other than under pavement as shown in the plans will

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be paid for under a separate item. Eligible payment will be placed and compacted cubic yards of granular borrow material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.29 EXCAVATION – BID ITEM #21

A. Measurement for this item shall be cubic yard. This item shall include all equipment, labor, and materials to excavate as shown in the drawings within the limit of construction including, but not limited to, soil and rock. This includes hauling and disposal fees. No additional payment will be made for over-excavation, unless as written approval by Engineer.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.30 BORROW – BID ITEM #22

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to furnish and install the borrow as shown in the drawings within the limit of construction. Eligible payment will be for measured/weighed cubic yards of borrow material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.31 HANDICAP RAMP– BID ITEM #23

A. Measurement shall be per ramp furnished and installed. This includes, but is not limited to, all labor, equipment, and materials necessary to form, pour, and finish the American Disabilities Act (ADA) Ramp, including expansion joints, curb wall (if needed), and raised truncated domes. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. The ADA Ramp is to be built in accordance with the 2010 ADA Standards for Accessible Design and Manual on Uniform Traffic Control Devices (MUTCD). Excluded from this item but included in another is: untreated base course material, sign(s), and signpost(s).

B. Payment shall be made at the contract each (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.32 4’ CONCRETE VALLEY GUTTER– BID ITEM #24

A. Measurement for this item shall be per linear foot. This item includes all labor, equipment, materials necessary to haul, form, pour, and finish the 4’ concrete valley gutter as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents. Included are expansion joints and sealant. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.33 OPEN 24” CURB AND GUTTER– BID ITEM #25

A. Measurement for this item shall be per linear foot. This item includes all labor, equipment, materials necessary to haul, form, pour, and finish the open 24” curb and gutter as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents. Included are expansion joints and sealant. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.34 VEHICULAR GATE AT ENTRANCE (36’-WIDE MANUAL DOUBLE SWING GATE) – BID ITEM #26

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the swing gates per manufactures instructions and as shown on the drawings, including but not limited to, caps, couplings, fittings and hardware, and other appurtenances required for complete and operational swing gates. Also included is excavation, post foundations, compaction, and backfill material. Gate shall feature a locking mechanism with three (3) functioning keys approved by Owner. The static fencing is paid for under other pay items.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.35 RELOCATED VEHICULAR GATE (12’-WIDE MANUAL SLIDE GATE) – BID ITEM #27

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the reinstallation of the existing slide gate per manufactures instructions and as shown on the drawings, including but not limited to, caps, couplings, fittings and hardware, and other appurtenances required for complete and operational slide gate. Also included is excavation, post foundations, compaction, and backfill material. Gate shall feature a locking mechanism with three (3) functioning keys approved by Owner. The static fencing is paid for under other pay items.

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B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.36 GENERAL RELOCATION– BID ITEM #28

A. Measurement for this item shall be per lump sum. Payment shall include all items not accounted for relocation, including shed and flagpole as specified in these Specifications, Plans, and elsewhere in these Contract Documents. Shed is to be installed on a concrete foundation, included in this pay item. Also included is the flagpole foundation. Included in this item is coordination with Owner for relocation of any other items found in project limits.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.37 4’ CHAINLINK FENCE – BID ITEM #29

A. Measurement for this item shall be per linear foot. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the fencing per manufactures instructions (matching existing fence type) and as shown on the drawings, including but not limited to, line posts, caps, couplings, fittings, hardware, and other appurtenances required for a complete fence installation. Also included is excavation, post foundations, compaction, and backfill material.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.38 6’ CHAINLINK FENCE – BID ITEM #30

A. Measurement for this item shall be per linear foot. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the fencing per manufactures instructions (matching existing fence) and as shown on the drawings, including but not limited to, line posts, caps, couplings, fittings, hardware, and other appurtenances required for a complete fence installation. Also included is excavation, post foundations, compaction, and backfill material. The enclosure gate is paid for under another pay item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.39 DUMPSTER ENCLOSURE– BID ITEM #31

A. Measurement shall be lump sum for furnishing and installing dumpster enclosure. This includes but is not limited to all costs to complete the dumpster enclosure, including concrete slab, concrete curb, concrete foundation, CMU wall, relocation of dumpster,

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and double swing gate as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.40 CONCRETE WHEEL STOP– BID ITEM #32

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install concrete wheel stop as specified in these Specifications and elsewhere in these Contract Documents. Included is drilling holes through pavement for the installation of the wheel stop. Wheel stops that are cracked during construction will be replaced at Contractor's expense.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.41 SIGN WITH 8" DIA. BOLLARD– BID ITEM #33

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install sign with bollard as specified in these Specifications and elsewhere in these Contract Documents. Included is the furnishing and installing steel pipe, sign, steel tube, concrete foundation, as well as paint. Also included is 1 foot of over excavation and placement of compacted (95%) granular borrow subgrade.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.42 STATIONARY 6" DIA. BOLLARD– BID ITEM #34

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install stationary bollard as specified in these Specifications and elsewhere in these Contract Documents. Included is the furnishing and installing steel pipe and concrete foundation, as well as paint. Also included is 1 foot of over excavation and placement of compacted (95%) granular borrow subgrade.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.43 STRIPING– BID ITEM #35

A. Measurement shall be lump sum for furnishing and installing striping. This includes but is not limited to all costs to complete the markings, including arrows, stop bars, crosswalks, and curb painting. All material shall be installed in accordance with manufacturer specifications and shall be placed reflecting current conditions or as

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directed, also as directed in the 2010 ADA Standards for Accessible Design, MUTCD, and these drawings. Parking stalls and restricted striping are four inches (4") wide white lines. Also included is painted asphalt on the "Heavy Duty Asphalt Pavement Section"

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.44 HARBOR SLOPE PROTECTION – BID ITEM #36

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to import, place, and compact D50=6" riprap and 4" infill/bedding material as specified in these Specifications and elsewhere in these Contract Documents. Also included is the breaking and shaping of the existing concrete on the jetty slopes to receive the infill/bedding material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.45 LAKE EXPOSED SLOPE PROTECTION – BID ITEM #37

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to import, place, and compact D50=36" riprap and 6" infill/bedding material as specified in these Specifications and elsewhere in these Contract Documents. Also included is the breaking and shaping of the existing concrete on the jetty slopes to receive the infill/bedding material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.46 INLET BASIN, 3'X3', 5-7FT DEEP – BID ITEM #38

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install storm drain inlet box with grate and frame as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to inlet box, frame, grate, risers, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.47 STORM DRAIN MANHOLE, 5-FT, 6FT DEEP – BID ITEM #39

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install storm drain manhole with lid as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to manhole, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.48 SAND/OIL SEPERATOR – OSS-A1 – BID ITEM #40

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-A1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.49 SAND/OIL SEPERATOR – OSS-B1 – BID ITEM #41

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-B1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.50 SAND/OIL SEPERATOR – OSS-C1 – BID ITEM #42

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-C1 and D1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary,

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structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.51 SAND/OIL SEPERATOR – OSS-D1 – BID ITEM #43

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-D1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.52 18” REINFORCED CONCRETE PIPE – BID ITEM #44

A. Measurement for this item shall be per linear foot. This item shall include all equipment, labor, and materials to furnish and install 18” RCP storm drain as specified in these Specifications and elsewhere in these Contract Documents. This item also includes but is not limited to excavation, trenching, shoring, slope stabilization, personal protection as necessary, pipe fittings, pipe appurtenances, bedding material, foundation stabilization as required, zone backfill material (APWA 33 05 20, Plan 381) placed, compacted, complete, and in place.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.53 24” REINFORCED CONCRETE PIPE – BID ITEM #45

A. Measurement for this item shall be per linear foot. This item shall include all equipment, labor, and materials to furnish and install 24” RCP storm drain as specified in these Specifications and elsewhere in these Contract Documents. This item also includes but is not limited to excavation, trenching, shoring, slope stabilization, personal protection as necessary, pipe fittings, pipe appurtenances, bedding material, foundation stabilization as required, zone backfill material (APWA 33 05 20, Plan 381) placed, compacted, complete, and in place.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.54 18" FLARED END SECTION PIPE OUTLET – BID ITEM #46

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install flared end with Oldcastle FES trash guard (or approved equivalent), as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to furnishing and installing trash guard hardware, connecting pipe to flared end, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, energy dissipation apron rock, well graded backfill material, compacted and in place as shown on the plans. Also included is the nonwoven geotextile fabric that wraps the riprap at the daylighting of pipe.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.55 24" FLARED END SECTION PIPE OUTLET – BID ITEM #47

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install flared end with Oldcastle FES trash guard (or approved equivalent), as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to furnishing and installing trash guard hardware, connecting pipe to flared end, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, energy dissipation apron rock, well graded backfill material, compacted and in place as shown on the plans. Also included is the nonwoven geotextile fabric that wraps the riprap at the daylighting of pipe.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.56 CXT TIOGA RESTROOM BUILDING– BID ITEM #48

A. Measurement shall be lump sum for coordination for installation of CXT Tioga Double Vault Toilet. Owner will purchase restroom. Included is coordination with CXT, who will be delivering, unloading, excavating, and backfilling for building, and all else as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.57 FINE GRADING (LANDSCAPE AREAS)– BID ITEM #49

A. Measurement for this item shall be based on the square footage of fine grading in all softscape areas including final grade preparation in all areas to receive mulches and turf. Also included are other labor, equipment, materials, cleaning, and related

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appurtenances as shown on the drawings and specifications required to provide fine grading.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.58 WASHED BEACH SAND – BID ITEM #50

A. Measurement for this item shall be based on the cubic yards of sand installed at 10" depth in the beach area including final grade preparation in all areas to receive washed beach sand. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide washed beach sand. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.59 ENGINEERED WOOD FIBER (PLAYGROUND) – BID ITEM #51

A. Measurement for this item shall be based on the square foot of 14" depth engineered wood fiber installed inside of the playground wall. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide fine grading. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.60 STEEL EDGING (1/8" THICK, 6" TALL- CORTEN/BORCON) – BID ITEM #52

A. Measurement for this item shall be based on the linear foot of 1/8" thick, 6" tall corten/borcon steel edging installed, including cutting, securing, and placement. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install steel edging.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.61 SOD – BID ITEM #53

A. Measurement for this item shall be based on the square footage of area to receive sod including final grade preparation. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide sod installation.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.62 SHREDDED BARK MULCH – BID ITEM #54

A. Measurement for this item shall be based on the square foot of 3" depth of bark mulch installed along the backside of the log barrier at a width of approx. 15 feet, including final grade preparation in all areas to receive bark mulch. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide bark mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.63 1" DESERT ROSE STONE MULCH (3" DEPTH) – BID ITEM #55

A. Measurement for this item shall be based on the square foot of 3" depth of 1" Desert Rose stone mulch installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 1" stone mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.64 3"-6" WASATCH GREY STONE MULCH (4" DEPTH) – BID ITEM #56

A. Measurement for this item shall be based on the square foot of 6" depth of 3"-6" Wasatch Grey stone mulch installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 3"-6" Wasatch Grey stone mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.65 1/4" MINUS CHAT (PATH MATERIAL) – BID ITEM #57

A. Measurement for this item shall be based on the square foot of 3" depth of ¼" minus chat installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install ¼" minus chat. Contractor shall provide weight tickets or verification of quantity.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.66 2" CALIPER DECIDUOUS TREE – BID ITEM #58

A. Measurement for this item shall be based on each 2" caliper deciduous tree installed, including all digging, placement, backfill, watering, and staking. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 2" caliper deciduous tree.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.67 ~~PRESERVATION OF EXISTING TREES~~ NOT USED – BID ITEM #59

~~A. Measurement for this item shall be lump sum. This item includes labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install tree preservation measures for each tree to be protected.~~

~~B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.~~

1.68 TOPSOIL– BID ITEM #60

A. Measurement for this item shall be based on the cubic yard of topsoil installed at 4" depth for sod areas and 12" depth to the mature dripline of the individual trees, including all placement, final grade preparation, and backfilling of tree pits. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install topsoil for the sod and trees. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.69 WEED BARRIER FABRIC– BID ITEM #61

A. Measurement for this item shall be based on the square foot of weed barrier fabric installed, including all placement, staking, securing, and final grade preparation. Also included are other labor, equipment, materials, cleaning, and related appurtenances and connections as shown on the drawings and specifications required to provide and install weed barrier fabric.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.70 CONCRETE MOW CURB (6" WIDE) – BID ITEM #62

A. Measurement for this bid item shall be per linear foot of mow curb installed. This includes but is not limited to all labor, equipment, and materials to install the mow curb to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.71 CAST-IN-PLACE 8" DEEP-EDGE CONCRETE CURB WALL (PLAYGROUND) – BID ITEM #63

A. Measurement for this bid item shall be per linear foot of curb wall installed. This includes but is not limited to all labor, equipment, and materials to install the new curb wall to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material, untreated base course, fiber and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.72 CAST-IN-PLACE CONCRETE SEAT WALL (12" WIDE) – BID ITEM #64

A. Measurement for this bid item shall be per linear foot of concrete seat wall installed. This includes but is not limited to all labor, equipment, and materials to install the seat wall to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material, untreated base course, fiber and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.73 LODGE POLE FENCE – BID ITEM #65

A. Measurement for this item shall be based on the linear foot of wood lodge pole fencing installed per drawing details, including cutting, securing, and placement. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install lodge pole fencing.

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B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.74 SHADE UMBRELLAS – BID ITEM #66

A. Measurement for this item shall be per each. This item shall include all labor, equipment, hardware, materials, and related appurtenances as shown on the drawings and specifications required to install Owner provided shade umbrella per manufacturer's instructions and details.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.75 MODULAR FLOATING DOCK, GANGWAY, AND KAYAK LAUNCH – BID ITEM #67

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor and materials required for the installation of the Owner provided modular floating dock, gangway, and kayak launch per manufacturer's instructions and as shown on the drawings.

B. Payment shall be made at the contract lump sum (LS) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.76 TIMBER HAMMOCK POSTS – BID ITEM # 68

A. Measurement for this item shall be per each. This item shall include all labor, equipment, hardware, materials, and related appurtenances as shown on the drawings and specifications required to provide and install a single timber hammock post.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.77 TRASH RECEPTACLES (POWDER COATED) – BID ITEM #69

A. Measurement for this item shall be per each. This item shall include all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install an Owner provided trash receptacle. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.78 CORNHOLE BOARD – BID ITEM #70

A. Measurement for this item shall be per each. This item shall include all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install an Owner provided pre-cast concrete cornhole board.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.79 PLAYGROUND EQUIPMENT – BID ITEM #71

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the Owner provided playground equipment per manufacturer's instructions and as shown on the drawings. Also included is excavation, post foundations, and compaction. The engineered wood fiber is paid for under a separate pay item.

B. Payment shall be made at the contract lump sum (LS) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.80 LOG PLAYGROUND BARRIER, TREATED LOGS – BID ITEM #72

A. Measurement for this item shall be per linear foot of treated log/stump. This item includes all labor, equipment, materials necessary to cut and install natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.81 SPECIALTY, TREATED LOGS AND STUMPS – BID ITEM #73

A. Measurement for this item shall be per linear foot of treated log/stump. This item includes all labor, equipment, materials necessary to cut, treat, and install Owner provided natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.82 NATURAL (UNTREATED) LOGS AND STUMPS – BID ITEM #74

A. Measurement for this item shall be per linear foot of untreated log/stump. This item includes all labor, equipment, materials necessary to cut and install Owner provided

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natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.83 6' BENCH (WITH BACK) – BID ITEM #75

A. Measurement for this item shall be based on each Owner provided 6' bench with back installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 6' bench with back. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.84 6' ALUMINUM PICNIC TABLES (POWDER-COATED) – BID ITEM #76

A. Measurement for this item shall be based on each Owner provided 6' picnic table installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a picnic table.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.85 COLLAPSIBLE ACCESS CONTROL BOLLARD – BID ITEM #77

A. Measurement for this item shall be based on each Owner provided access control bollard installed. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install the bollard.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.86 PAVILION – BID ITEM #78

A. Measurement for this item shall be based on each Owner provided 9'x18' pavilion structure installed, including all structural footing requirements from the manufacturer. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 9'x18' pavilion. ~~Concrete and~~ UTBC will be paid under a different bid item~~.s.~~

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B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.87 BIKE RACK – BID ITEM #79

A. Measurement for this item shall be based on each Owner provided 5-loop bike rack assembly installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 5-loop bike rack assembly.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.88 IMPORT BUILDING FOUNDATION MATERIAL – BID ITEM #80

A. No direct measurement will be made for this item. Included in this item are all equipment, materials, labor, and costs of work in the delivery, supplying, placing, and compacting material in place as described in the Specifications and Contract Documents.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.89 BUILDING CONCRETE AND REINFORCING – BID ITEM #81

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. This item includes all earthwork, formwork, and other related items required to place the building concrete and reinforcing. All concrete and reinforcing required for the building and the concrete slabs within the building and concrete entry pad outside of walk door are included in this item. Imported foundation material shall be paid for under a separate item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.90 ROUGH CARPENTRY – BID ITEM #82

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All woodwork not visible in the finished building is included in this item. All wall framing, temporary wall supports, blocking between trusses, permanent truss bracing, roof sheathing, wall blocking for cabinets and other wall mounted appurtenances, and other wood elements permanently or temporarily attached to the trusses or wall needed for construction are included in this item.

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B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.91 SHOP FABRICATED ROOF TRUSSES – BID ITEM #83

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct and install the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.92 SIDING – BID ITEM #84

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. This includes all non-stone siding, trim, accessories, and other items required for this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.93 STONE VENEER AND ASSOCIATED ITEMS – BID ITEM #85

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to install the item. All lathe, channels, trims, grout, waterproofing membrane, etc. required for the typical installation of finish are included in this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.94 METAL FABRICATIONS – BID ITEM #86

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All structural steel and miscellaneous fabrications from any metal used in any application for the construction of the building is included in this item. This item also includes all painting, galvanizing, coating, or other finishing of said fabrications.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.95 THERMAL AND MOISTURE PROTECTION – BID ITEM #87

A. No direct measurement will be made for this item. All waterproofing, water repellants, vapor retarders, joint sealants, weather barriers, and expansion joints are included in this item. Rigid, Batt, or Blown-in insulation shall be paid for under separate items. This item also includes all equipment, materials, labor, and costs of work required to construct the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.96 BATT/BLOWN-IN/SPRAYED-IN INSULATION – BID ITEM #88

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to install the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.97 ROOFING – BID ITEM #89

A. No direct measurement will be made for this item. All metal flashing, metal trim, rain gutters, downspouts, paint, and the standing seam roof system. This item includes all equipment, materials, labor, and costs of work required to construct the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.98 INTERIOR FINISH – BID ITEM #90

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All gypsum board, taping, plastering, texturing, paint, trim, flooring, sealant, hardware, and anchors required to install this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.99 DOORS, FRAMES, AND HARDWARE – BID ITEM #91

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All additional trim, sealant, hardware, paint, and anchors required to install the doors and frames are included in this item.

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B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.100 GLAZING – BID ITEM #92

A. No direct measurement will be made for this item. This item includes all windows, glass, equipment, materials, labor, and costs of work required to construct/install the item. Water proofing, flashing, and sealants are included in other bid items.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.101 MISCELLANEOUS BUILDING ITEMS – BID ITEM #93

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required for the construction of any item pertaining to the building that is not included in another bid item. This shall include all items within 5 ft of the building perimeter not specifically listed to complete the building systems to achieve a weather tight, structurally sound, secure, and safe building meeting Owner requirements. This shall also include applicable building permitting (fees paid by Owner).

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.102 BUILDING ELECTRICAL– BID ITEM #94

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All interior and exterior lighting, outlets, switches, panels, controls, wiring, conduits, labels, coordination with Rocky Mountain Power and other trades, and other items necessary for a complete job as shown in the Drawings and as described in the Specifications and elsewhere in the Contract Documents, and related components not covered under another bid item required for the construction of the building, is included in this item. Also included is stubbing a conduit to the west for future internet.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

PART 2 EXECUTION – NOT USED

END OF SECTION

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

July 17, 2024

SECTION 01 56 39
TEMPORARY TREE AND PLANT PROTECTION
ADDENDUM 1

PART 1 – GENERAL

Tree Protection and Preservation Notes

1. Use extreme care when trenching for irrigation inside the tree's dripline. Install sprinkler lines adjacent to sidewalks/hardscape where possible, to avoid trenching next to trees.
2. No equipment shall be allowed inside the tree dripline.
3. No roots larger than 4" in diameter will be cut. All roots will be cut cleanly with a saw. In situations where a root has been damaged, a clean cut shall be made on the root at the edge of the trench closest to the tree trunk.
4. When installing new plants inside the tree's dripline, adjust locations as needed to avoid roots over 2" diameter.
5. Trees shall not be used to support any scaffolding, signs, temporary utility, or any other device. If damage occurs to a protected tree, immediate contact shall be made with the owner/landscape architect.
6. Do not change the soil grade by cutting or filling inside the tree canopy/drip edge.
7. Contractor is responsible to ensure that trees are property protected and maintained throughout construction. Damaged or dead trees will be replaced in kind (size, species, etc.) or as indicated in the specs.
8. Before any clearing is done, the Contractor shall arrange a conference on the site with the Landscape Architect and Owner's Representative to identify trees and shrubs that are to be protected or removed. The Contractor shall not commence with clearing and grubbing prior to having a clear understanding of existing conditions to be preserved.
9. Certifications: Submit appropriate evidence of certification of all arborists to be employed on the Project.
10. Photo Documentation: Prior to beginning any site operations, Contractor shall photograph all existing trees and plant material inside the project work limit line, and within 15' of the project work limit line.

Temporary Tree and Plant Protection

A. Maintenance:
    1. Maintain existing tree, shrubs, and vegetation as indicated in Contract Documents:
        a) Remove and replace vegetation that dies or is damaged beyond repair due to construction activities.
        b) Damage to any tree, shrub, or vegetation that has been indicated to remain and be protected, will have a cost associated with it. This includes branches, trunk and root systems:
            1) Trees: $1,000.00.
            2) Shrubs: $ 100.00.
            3) Vegetation: $ 50.00.

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B. Pruning:
   1. Provide a qualified Tree Service Firm if pruning is required:
      a) Coordinate with authorities having jurisdiction.
      b) Coordinate with Owner and Architect on site before pruning is to begin.

~~1.1 SUMMARY~~

~~A. The work of this Section consists of providing all equipment and materials and doing all work necessary for protection of existing trees, shrubs, landscape, wetlands, and other plant materials from damage as a result of the Contractor's operations, as indicated on the Contract Documents and as specified. Tree and plant protection shall include, but not be limited to:~~
   ~~1. Tree protection fencing.~~
   ~~2. Boxing of tree trunks.~~
   ~~3. Root pruning.~~
   ~~4. All other tree and plant protection indicated.~~

~~1.2 REFERENCES~~

~~A. The following standards shall apply to the work of this Section.~~
   ~~1. International Society of Arboriculture (ISA): Guide for Plant Appraisal~~

~~1.3 SUBMITTALS~~

~~A. Proposed methods, materials, and schedule for tree and plant protection shall be submitted for approval. This should include a plan showing points of access to and from the site and show a workable system of onsite haul routes that protect existing landscape and wetland areas designated for protection. This plan should be submitted to the Landscape Architect for review and comment prior to commencement of work.~~

~~B. Proposed methods, materials, and schedule for root pruning and tree fertilization shall be submitted for approval.~~

~~C. Certifications: Submit appropriate evidence of certification of all arborists to be employed on the Project.~~

~~D. Licenses: Submit appropriate evidence of licensing of all chemical applicators to be employed on the Project.~~

~~E. MSDS: Submit Material Safety Data Sheets (MSDS) of all chemicals to be applied on the Project.~~

~~F. Photo Documentation: Prior to beginning any site operations, Contractor shall photograph all existing trees and plant material inside the project work limit line, and within 15' of the~~

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project work limit line.

G. At least 30 days prior to ordering materials, the Contractor shall submit to the Owner's Representative, representative samples, certifications, manufacturer's product data and certified test results for materials as specified below. No materials shall be ordered or delivered until the required submittals have been reviewed and approved by the Owner's Representative. Delivered materials shall closely match the approved samples. Approval shall not constitute final acceptance. The Owner's Representative reserves the right to reject, on or after delivery, any material that does not meet these Specifications.

1.4 QUALITY ASSURANCE

A. Work of root pruning, fertilizing, spraying, and similar activities shall be undertaken only by certified Arborists and chemical applicators, as pertinent to the work being performed.

1. Application of chemicals shall be performed by licensed chemical applicators.
2. Arborist shall be a professional Certified Arborist with a minimum five years' experience, who has successfully completed a certification program.

1.5 LIABILITY FOR DAMAGES

A. The Contractor shall be liable for all damage and/or disturbance to existing trees and shrubs not otherwise designated for removal. For bidding and general work guidelines prior to on- site tree protection conference, the Contractor shall assume all trees within the Limit of Work shall be saved unless specifically designated to be removed on the Plans. Actual charges for damage to plants shall be in accordance with the schedules defined herein, with assessed charges to be deducted from sums payable under the Construction Contract.

1. Damage which, in the Owner's Representative's opinion, can be remedied by corrective maintenance shall be repaired immediately.
2. Trees or shrubs which are damaged irreparably shall, at the Owner's Representative's discretion, be replaced by the Contractor with new trees or shrubs of the same size and type.
3. If replacement of damaged trees is not feasible as determined by the Owner's Representative, the full replacement costs will be assessed to the Contractor's account at values based upon the square inches of cross-sectional area of trunk (measured at 4 ft. above grade), in accordance with the Trunk Formula Method described in the ISA Guide described herein, and the following table:

   $75.00/square inch for trees less than or equal to 6-inch diameter
   $50.00/square inch for trees greater than 6 inch and less than 18-inch diameter
   $40.00/square inch for trees greater than or equal to 18-inch diameter

B. Damaged trees or shrubs which require removal and/or replacement shall be removed according to the Specification requirements for removals, including refilling and repair of ground surface, with such costs to be borne by the Contractor in addition to assessed

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charges described herein.

C. The Contractor shall be liable for all damage and/or disturbance to existing adjacent lands beyond the Limit of Work. Actual damage to these areas, caused by the Contractor, shall be repaired to the satisfaction of the Owner's Representative, at no additional cost to the Owner. Repairs may include pruning or removing damaged vegetation in accordance with current horticultural practices, replacement of damaged vegetation, restoration of the ground plane to its original condition, and any other work required to restore the area to its original condition as depicted in the site photographs taken at the beginning of construction. The project will not be accepted until all repair work is complete.

1.6 DAMAGE PENALTIES

A. A fine of $1,000 will be levied against the Contractor for each incident of construction damage inside tree protection areas.

B. Visible damage to the tree trunks or to tree roots within the protected areas will cause the Owner to withhold from the Contractor an amount in accordance with and as described under Paragraph titled, Liability for Damages, in this Section, for a period of two years. After that period the impact of the damage will be assessed by the Owner's Representative and Owner. If in the opinion of the Owner's Representative or Owner, the tree is in fair to good health the damage fine will be refunded; if the tree is in poor condition or lost the fine will not be refunded.

1.7 ON-SITE PRECONSTRUCTION CONFERENCE

A. Before the start of any work on the site, preceding the arrival of equipment, materials, or vehicles to the site, and prior to the commencement of any clearing on the site, the Contractor shall arrange a preconstruction conference on the site with the Owner's Representative to identify trees and shrubs that are to be protected or removed. The Contractor shall not commence with clearing and grubbing prior to having a clear understanding of existing conditions to be preserved. In addition to the responsibilities and penalties described in this part of the specification, the Contractor shall be held responsible for any and all clearing, damage or destruction to plant material that results from the Contractor's failure to schedule and attend the preconstruction conference on site. In the event of said clearing, damage, or destruction, the Contractor will be assessed the full penalties described in this Section.

PART 2 - PRODUCTS

2.1 TREE PROTECTION FENCING

A. Tree protection fencing shall be equal to the following:
   1. New high density polyethylene laminar netting. Mesh dimensions shall be 3-3/4 in. x 2 in. with 1/2 in. strands. Fabric color shall be safety orange.
   2. Stakes for fencing shall be 6 ft. long wood or metal drive stakes, commonly used

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to support fencing. Attachment shall be by staples to wood or wiring to metal.

3. Unless otherwise indicated, height of fencing shall be 6 ft.

B. Tree protection fence is not to be substituted for construction security fencing.

2.2 BOXING

A. Existing trees indicated to remain, and which may, in the Owner's Representative's opinion, be damaged by the Contractor's equipment and operations shall be protected by boxing.

B. Boxing shall be 4 in. x 4 in. with two 2 in. x 4 in. rails. Box shall be approximately 8 ft. x 8 ft. in size centered on the tree trunk, to a height of approximately 6 ft.

2.3 FERTILIZER

A. Fertilizer shall be a commercial product complying with State and Federal fertilizer laws. Deliver to the site in the original unopened containers that shall bear the manufacturer's certificate of compliance covering analysis. Liquid fertilizer for subsurface hydraulic injection to correct soil nutrient deficiencies shall be a product meeting the requirements of ANSI 300 and as modified by this paragraph. Liquid fertilizer shall include a slow-release form of nitrogen (50% of N to be water insoluble), phosphorus and potassium; shall be chloride free; shall have a low salt content; and shall have a wetting agent to aid with dispersion. Fertilizer shall contain required micro-nutrients established by soil test analysis.

PART 3 - EXECUTION

3.1 IDENTIFICATION OF TREES AND SHRUBS TO REMAIN

A. **Before any clearing is done, the Contractor shall arrange a conference on the site with the Landscape Architect and Owner's Representative to identify trees and shrubs that are to be protected or removed.** The Contractor shall not commence with clearing and grubbing prior to having a clear understanding of existing conditions to be preserved.

B. The Contractor shall be responsible for the protection of all existing trees and plants designated to remain for the length of the construction period, including liability for all damages as specified herein. The placement of protection devices additional to those specified shall, however, be at the Contractor's discretion and with no additional cost to the Owner.

3.2 PROTECTION OF EXISTING TREES AND SHRUBS

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A. Trees to remain within work area shall have tree protection fencing, posts, and bracing erected.

1. Protection shall be maintained throughout the duration of the Project. Fencing does not relieve the Contractor of other protection responsibilities.
2. Repair or replace trees indicated to remain which are damaged by construction operations, in a manner acceptable to Owner's Representative. Employ licensed arborist to repair damage to trees.
3. Such trees which are injured due to the Contractor's operations to such a degree that, in the opinion of the Owner's Representative, their usefulness or appearance are significantly impaired, shall be replaced with equivalent items at the Contractor's expense.

B. Materials, debris, fill, or equipment shall not be stored or operated under the dripline of existing trees which are to remain, except as actually required to construct the proposed work in those areas.

C. Tree protection fencing, posts, and bracing shall be provided at the tree's drip line to protect existing trees from damage during construction. In the case of trees with a small dripline, the fencing shall be a minimum of 6' from the tree trunk.

D. Where construction activities must occur within the dripline of an existing tree to remain, the contractor shall protect said trees by the following method:
1. Boxing of Tree with Wood: Boxing shall be 4 in. x 4 in. posts with two 2 in. x 4 in. rails. Box shall be approximately 8 ft. x 8 ft. in size centered on the tree trunk, to a height of approximately 6 ft. Provide bracing so as to avoid driving posts/rods/stakes into the ground within the tree drip line.

E. Water trees and other vegetation to remain within Limits of Contract work as required to maintain their health during course of construction operations. Hand water plant material if necessary.

3.3 TREE CUTTING, PRUNING AND REMOVAL

A. Pruning shall be performed in accordance with current horticultural practices.

B. Tree removal shall be performed in accordance with the requirements of current horticultural practices.

C. Trees and plants designated to be saved shall be protected during pruning operations and all subsequent construction. The Contractor shall provide the handwork necessary to complete pruning operations without damage to adjacent trees in accordance with current horticultural practices, of this Contract. The Contractor shall provide the means necessary to prevent scrapes and scars to trunks and branches, and such damage shall require the Contractor to be assessed as previously specified above, or to replace damaged material to the satisfaction of the Owner's Representative.

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3.4 ROOT PRUNING

A. Where construction will be in close proximity to existing trees designated to remain, roots shall be pruned prior to trenching and tunneling operations. Root pruning shall be performed as early as possible before trenching or tunneling operations. Proximity shall be as determined in the field by the Owner's Representative.

B. Root pruning is the physical cutting of tree roots to minimize root damage and promote healing. Root prune using a sharpened spade for all roots smaller than one inch diameter. Root prune using an ax or chainsaw for all roots greater than one inch diameter. Any method which tears roots or disturbs the soil beyond the grading limit is unacceptable. Backhoe buckets or any other excavating machine to root prune is not allowed.

C. Backfill root pruning trench with existing soil mixed with peat moss to a mixture of approximately 75% loam and 25% humus by volume. Tamp soil in six-inch lifts. Each lift shall be compacted to a point at which a footprint makes only a 1/16-inch impression.

D. Apply mulch to a depth of 4 inches at minimum 10 ft. to 15 ft. radius around tree to reduce compaction and increase moisture retention. Pull mulch 6-inches away from tree trunk.

3.5 FERTILIZING

A. Fertilization of designated trees shall be by soil injection of liquid fertilizer. The fertilizer shall be mixed with water and injected into the soil under pressure using a hydraulic sprayer and a feeding needle.

B. Sprayer pressure shall be set to 100-200 psi.

C. Injection points shall be spaced 3 feet on center beneath the dripline of the tree. Place the first band of injections approximately 1/4 the distance from the trunk to the edge of the dripline. Successive bands shall be spaced 3 feet apart out to one to three feet beyond the edge of the dripline.

D. The feeding needle shall be inserted twelve to eighteen inches into the soil. Rotate the feeding needle by 90 degrees during the injection process to ensure distribution of the fertilizer in all directions.

E. The liquid fertilizer shall be a suspension grade fertilizer design to be mixed and applied in water using a high-volume hydraulic sprayer.

F. Mixing and application rates shall be in accordance with the soil test report recommendations to an approved area under the dripline. Strong mechanical agitation shall be applied to maintain suspension. Use a 3 foot by 3 foot injection spacing.

G. Fertilizing of all trees shall occur at the completion of the Work. But under no circumstances shall fertilization be delayed more than one planting season. Should

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~~construction be delayed for any reason, the Contractor shall be required to fertilize all designated trees disturbed up to the time of the construction delay.~~

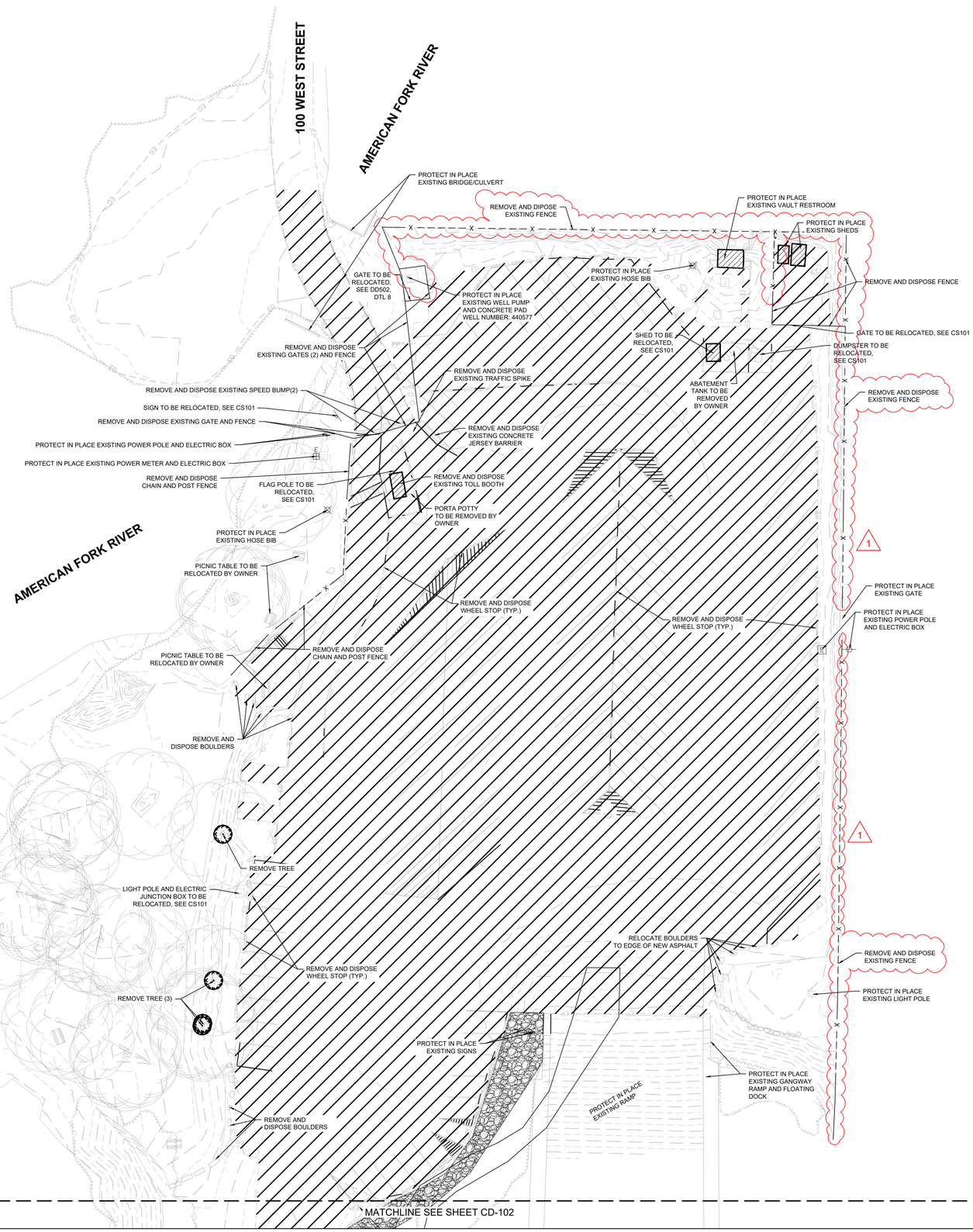
~~3.6 REMOVAL OF TREE AND SHRUB PROTECTION MATERIAL~~

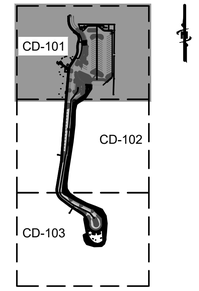
~~A. Contractor shall remove and discard in a legal manner all tree protection material, excavated soil, pruned vegetation and all debris and trash from the site at the completion of the Contract.~~

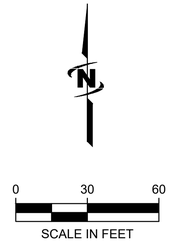
END OF SECTION

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

MATCHLINE PROJECT LIMITS







811
Know what's **below.**
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

NOTES:

1. ALL UTILITIES ARE TO BE PROTECTED IN PLACE UNLESS CALLED OUT FOR REMOVAL.
2. ANY TREE NOT SPECIFICALLY CALLED OUT TO BE REMOVED SHOULD BE PROTECTED IN PLACE, EXCEPT ALONG JETTY SLOPE TO BE CLEARED AND GRUBBED, COORDINATE WITH OWNER FOR TREE REMOVAL. 1

REMOVE AND DISPOSE ASPHALT PAVEMENT. ROTOMILL ASPHALT PAVEMENT AND STOCKPILE TAILINGS IN COORDINATION WITH CITY.

CLEAR AND GRUB EXISTING JETTY SLOPE PER WEED REMOVAL AND MANAGEMENT PLAN

J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9052
www.jub.com

BID SET

REGISTERED PROFESSIONAL ENGINEER
12717219-2202
DANIEL AARON NETZLEY
8/24/2024
STATE OF UTAH

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NO.	REVISION	DESCRIPTION	BY	DATE
1		ADDENDUM 1	JRA	8/30/24

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DEMOLITION PLAN

FILE:	83-23-013_CD-10X
JUB PROJ. # :	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA
	ONE INCH AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:	8/30/2024

SHEET NUMBER:
CD101

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

Plot Date:8/30/2024 11:47 AM Plotted By: Daniel Netzley
Date Created: 7/24/2024 - I:\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORREPAIRING\LOTUDESIGN\CAD\SHEETS\83-23-013_CD-10X.DWG

MATCHLINE SEE SHEET CD-101

MATCHLINE PROJECT LIMITS

UTAH LAKE

LIGHT POLE AND ELECTRIC JUNCTION BOX TO BE RELOCATED, SEE CS102

PROTECT IN PLACE EXISTING FLOATING DOCK AND GANGWAY RAMP

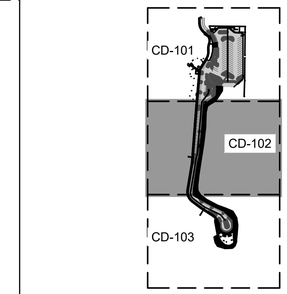
PROTECT IN PLACE EXISTING LIGHT POLE

PROTECT IN PLACE EXISTING FLOATING DOCK AND GANGWAY RAMP

PROTECT IN PLACE EXISTING LIGHT POLE

MATCHLINE SEE SHEET CD-103

MATCHLINE PROJECT LIMITS



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SCALE IN FEET

AMERICAN FORK BOAT HARBOR

Know what's **below.** **Call** before you dig.

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NO.	REVISION	BY	DATE
1	ADDENDUM 1	DAN/JRA	8/30/24

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DEMOLITION PLAN

FILE :	83-23-013_CD-10X
JUB PROJ. # :	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA
ONE INCH	AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:	8/30/2024

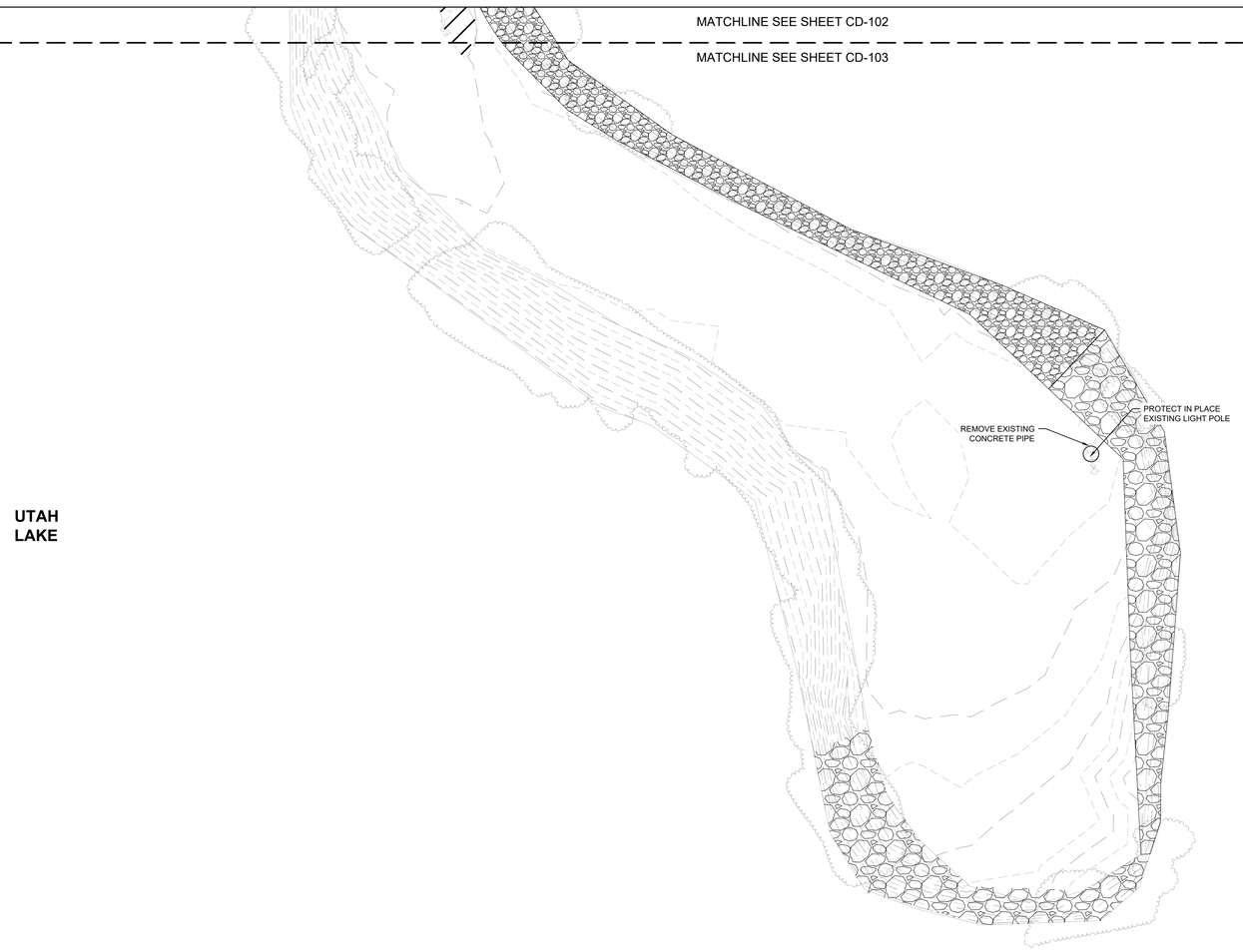
SHEET NUMBER:
CD102

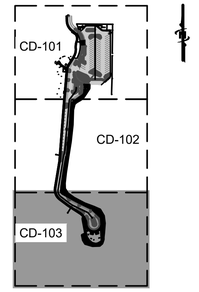
Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

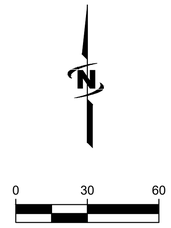
Plot Date:8/30/2024 11:47 AM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013 BOATHARBORPARKING\LOT\DESIGN\CAD\SHEETS\83-23-013_CD-10X.DWG

MATCHLINE SEE SHEET CD-102

MATCHLINE SEE SHEET CD-103







MATCHLINE PROJECT LIMITS

MATCHLINE PROJECT LIMITS

MATCHLINE PROJECT LIMITS

811

Know what's **below.**
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

NOTES:

1. ALL UTILITIES ARE TO BE PROTECTED IN PLACE UNLESS CALLED OUT FOR REMOVAL.
2. ANY TREE NOT SPECIFICALLY CALLED OUT TO BE REMOVED SHOULD BE PROTECTED IN PLACE, EXCEPT ALONG JETTY SLOPE TO BE CLEARED AND GRUBBED. COORDINATE WITH OWNER FOR TREE REMOVAL. 1

REMOVE AND DISPOSE ASPHALT PAVEMENT. ROTOMILL ASPHALT PAVEMENT AND STOCKPILE TAILINGS IN COORDINATION WITH CITY.

CLEAR AND GRUB EXISTING JETTY SLOPE PER WEED REMOVAL AND MANAGEMENT PLAN

J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9052
www.jub.com

BID SET

REGISTERED PROFESSIONAL ENGINEER
12717219-2202
DANIEL AARON NETZLEY
07/24/2024
STATE OF UTAH

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NO.	REVISION	BY	DATE
1	ADDENDUM 1	DAN/JRA	8/30/24

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DEMOLITION PLAN

FILE : 83-23-013_CD-10X
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/30/2024

SHEET NUMBER:
CD103

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

Plot Date:8/30/2024 11:47 AM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\01PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_CD-10X.DWG

MATCHLINE PROJECT LIMITS

STILL SURFACE
13:075:0033

AMERICAN FORK CITY
13:075:0003

100 WEST STREET

AMERICAN FORK RIVER

TIMP MARINA CLUB
6186 N 6000 W
13:076:0033

PROPERTY LINE

LEASE LINE

Existing Dirt Parking Area

INSTALL 6' CHAINLINK FENCE (3/DD502)

INSTALL DUMPSTER ENCLOSURE AND RELOCATE GARBAGE DUMPSTER (7/DD502)

CONSTRUCT VEHICULAR CONCRETE WITH ADA RAMPS (6/DD502, 9/DD502)

CONST. 5' CONCRETE SIDEWALK (8/9/DD501)

Existing Sheds

CONST. 5' SIDEWALK (8/9/DD501)

BOAT CLEAN OFF AREA

CONST. CURB AND GUTTER (2/DD501)

INSTALL 6' FENCE AND 12' MANUAL SLIDE GATE

CONSTRUCT VEHICULAR CONCRETE WITH PEDESTRIAN RAMPS (6/DD501, 9/DD502)

FENCING/VEHICULAR GATE (8/DD502)

INSTALL 6' FENCE

INSTALL DO NOT ENTER (R5-1) 30X30 (2/DD501)

INSTALL RELOCATED SHED

4" SWL

4" SYL

4" BWL

CONST. TOLL BOOTH AREA (3/DD502)

CONST. 4" VALLEY GUTTER

INSTALL CONCRETE WHEEL STOP (TYP) (1/DD501)

17' STALLS

18 STALLS

2' STALLS

CONST. CURB AND GUTTER (2/DD501)

CONST. 10' ASPHALT TRAIL (10/DD501)

CONST. CURB AND GUTTER (2/DD501)

INSTALL SPEED LIMIT SIGN (15 MPH) 24X30 (R2-1) (2/DD501)

UTAH LAKE BOUNDARY

1 STALL

7 STALLS

8 STALLS

SEE LANDSCAPE SHEETS FOR BEACH AREA

CONCRETE SEAT WALL. SEE LANDSCAPE PLANS

CONCRETE PADS. SEE LANDSCAPE PLANS

INSTALL DO NOT ENTER (R5-1) 30X30 (WEST) AND STOP SIGN (R1-1) 30X30 (EAST) (2/DD501)

SB

4" SWL (TYP)

INSTALL DO NOT ENTER (R5-1) 30X30 (2/DD501)

CXT TIOGA DOUBLE VAULT TOILET TO BE INSTALLED BY CXT. CONTRACTOR TO COORDINATE INSTALLATION.

CONST. ACCESSIBLE PARKING AREA (5/DD501)

STORM DRAIN SYSTEM

INSTALL RELOCATED LIGHT POLE AND ELECTRIC BOX

INSTALL STOP SIGN (R1-1) 30X30 (2/DD501)

CONST. ACCESSIBLE PARKING AREA (5/DD501)

INSTALL STOP SIGN (R1-1) 30X30 (2) (2/DD501)

INSTALL STOP SIGN (R1-1) 30X30 (2/3/DD501)

INSTALL 6' CHAINLINK FENCE (3/DD502)

CONST. CURB AND GUTTER (2/DD501)

CONCRETE SEAT WALL SEE LANDSCAPE PLANS

CONST. ACCESSIBLE PARKING AREA (5/DD501)

INSTALL ADA RAMP (6/DD501)

COLLAPSIBLE BOLLARDS. SEE LANDSCAPE SHEETS (5/DD501)

INSTALL DRIVEWAY APPROACH (1/DD501)

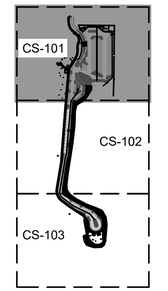
CONCRETE SEAT WALL SEE LANDSCAPE PLANS

INSTALL RELOCATED LIGHT POLE AND ELECTRIC BOX

Existing Ramp

CONSTRUCT CURB AND GUTTER (2/DD501)

SHEET CS-102



0 30 60
SCALE IN FEET

NOTES:

1. SEE CU SHEETS FOR INSTALLATION OF STORM DRAIN SYSTEM.
2. ALL RADIAL DIMENSIONS ON CURB AND GUTTER ARE FROM TBC

STRIPING (1/DD502)

SWL = SOLID WHITE LINE
SYL = SOLID YELLOW LINE
SB = STOP BAR, 12" SOLID WHITE LINE
BWL = BROKEN WHITE LINE

VEHICULAR CONCRETE PAVEMENT SECTION (9/DD502)

NORMAL ASPHALT PAVEMENT SECTION (11/DD501)

HEAVY DUTY ASPHALT PAVEMENT SECTION (12/DD501)

6" RIPRAP TO BE INSTALLED (1/DD506)

36" RIPRAP TO BE INSTALLED (2/DD506)

PEDESTRIAN FLAT CONCRETE TO BE INSTALLED (9/DD501)

811 UTAH LAKE

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NO.	REVISION	DESCRIPTION	BY	DATE
1		ADDENDUM 1	DANJRA	8/30/24

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

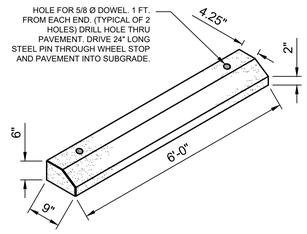
SITE PLAN

FILE:	83-23-013_CS-101
JUB PROJ. #	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA
	ONE INCH AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:	8/30/2024

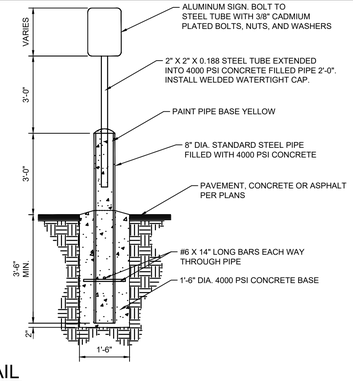
SHEET NUMBER:
CS101

Plot Date:8/30/2024 11:47 AM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_CS-101.DWG

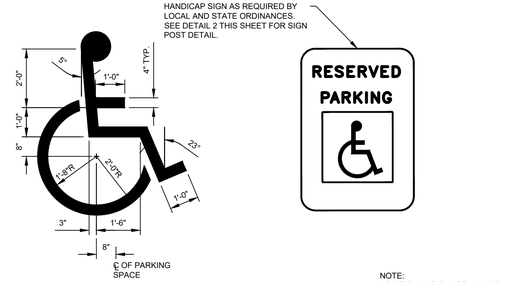
Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)



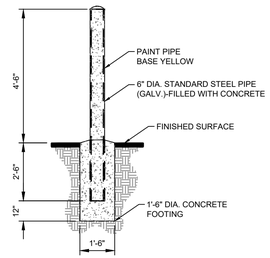
1 CONCRETE WHEEL STOP
SCALE:N.T.S.



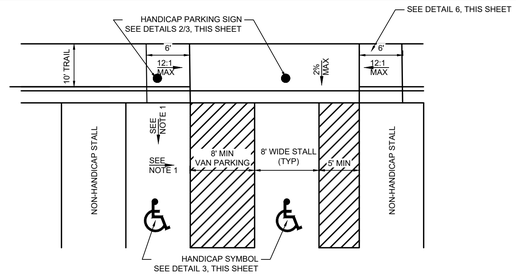
2 SIGN DETAIL
SCALE:N.T.S.



3 TYPICAL HANDICAP SYMBOL AND SIGN
SCALE:N.T.S.

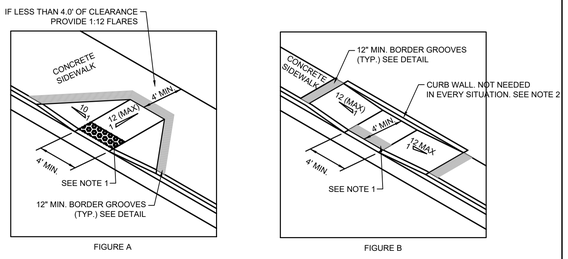


4 STATIONARY BOLLARD
SCALE:N.T.S.



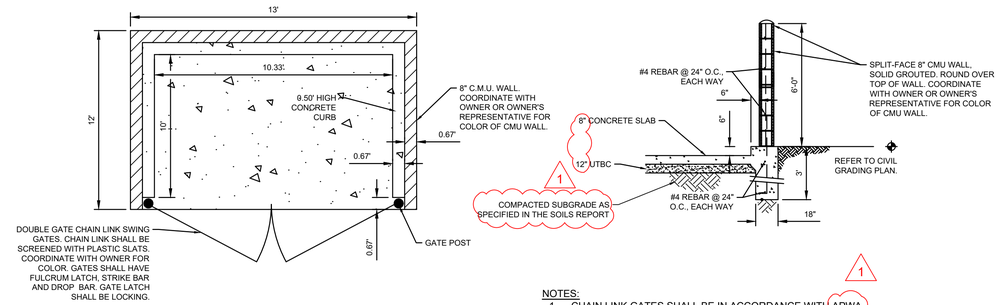
NOTES:
1. SLOPES IN PARKING LOT FOR HANDICAP PARKING ARE 2% MAX, 1.5% MIN FOR ASPHALT PAVEMENT, 1% MIN FOR CONCRETE PAVEMENT.

5 TYPICAL HANDICAP PARKING STALL
SCALE:N.T.S.



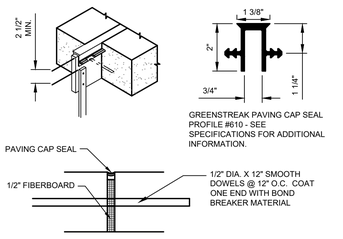
NOTES:
1. CONTINUOUS DETECTABLE WARNING SURFACE @ ALL HAZARDOUS ROUTES
2. CURB WALL HEIGHT SHALL BE NO HIGHER THAN 8". COORDINATE WITH ENGINEER WHEN CURB WALL IS NEEDED.

6 TYPICAL ADA RAMP DETAIL
SCALE:N.T.S.

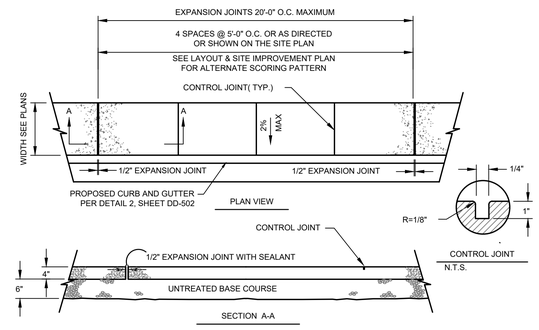


NOTES:
1. CHAIN LINK GATES SHALL BE IN ACCORDANCE WITH APWA SPECIFICATION 32 31 13 - CHAIN LINK FENCES AND GATES.
2. UTBC SHALL BE COMPACTED TO 95% OF MAX. DRY DENSITY PER ASTM D-1557

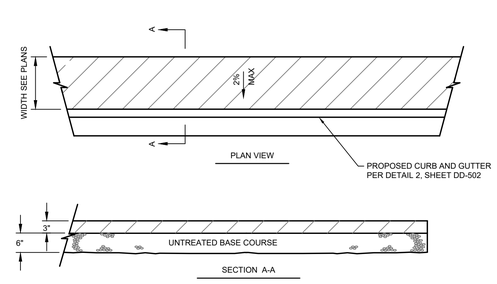
7 DUMPSTER ENCLOSURE
SCALE: N.T.S.



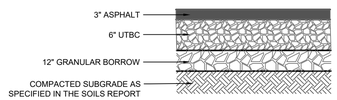
8 TYPICAL EXPANSION JOINT DETAIL
SCALE:N.T.S.



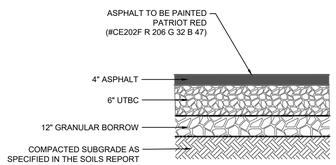
9 CONCRETE SIDEWALK DETAIL
SCALE:N.T.S.



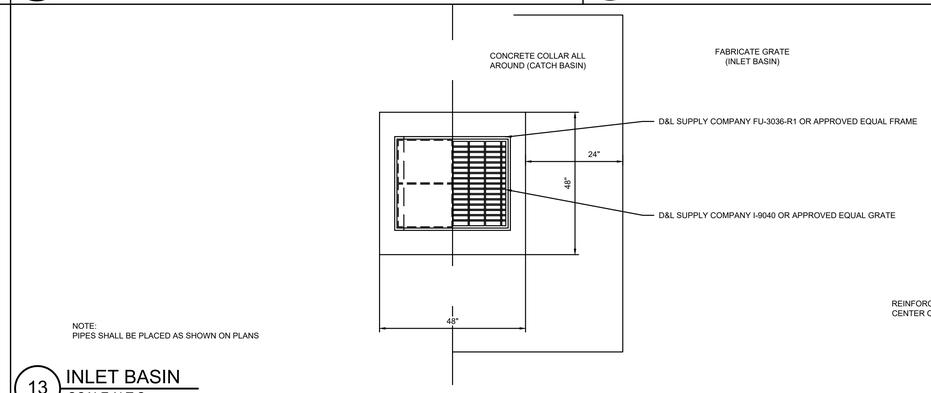
10 ASPHALT TRAIL DETAIL
SCALE:N.T.S.



11 NORMAL ASPHALT PAVEMENT SECTION
SCALE:N.T.S.



12 HEAVY DUTY ASPHALT PAVEMENT SECTION
SCALE:N.T.S.



NOTE:
PIPES SHALL BE PLACED AS SHOWN ON PLANS

13 INLET BASIN
SCALE:N.T.S.

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8/7/24/2024
STATE OF UTAH

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NO.	DESCRIPTION	DATE	BY
1	ADDENDUM 1	8/30/24	DAN/JRA

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DETAILS

FILE :	83-23-013_DD50X
JUB PROJ. # :	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA

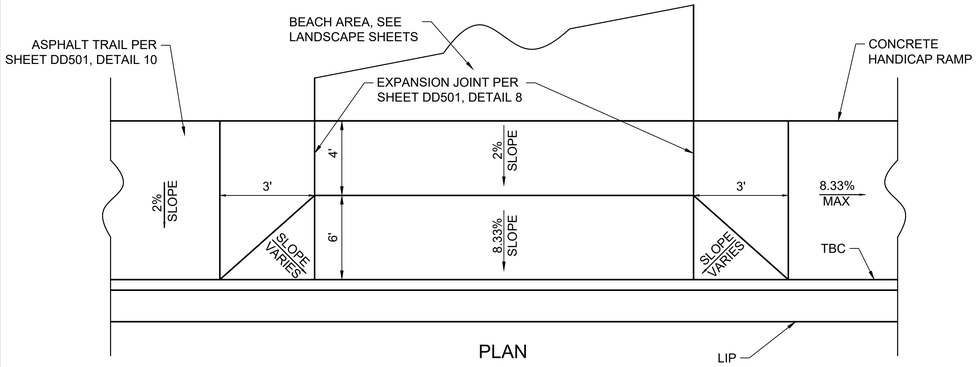
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 8/30/2024

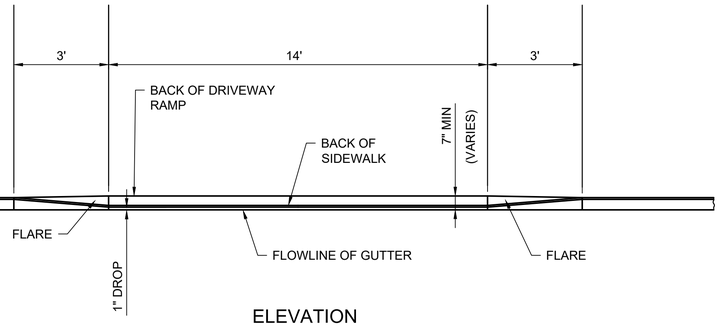
SHEET NUMBER:
DD501

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

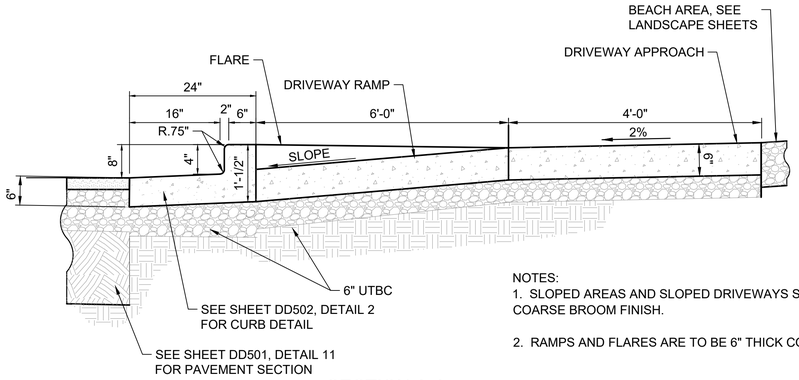
Plot Date:8/30/2024 12:18 PM Plotted By: Daniel Netzley
Date Created:6/28/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEET\83-23-013_DD50X.DWG



PLAN



ELEVATION



SECTION A-A
N.T.S.

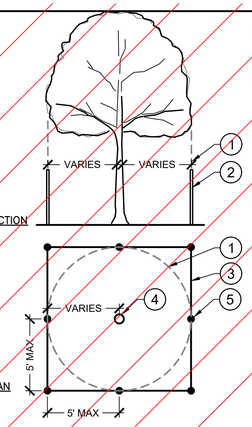
NOTES:
1. SLOPED AREAS AND SLOPED DRIVEWAYS SHALL HAVE A COARSE BROOM FINISH.

2. RAMPS AND FLARES ARE TO BE 6" THICK CONCRETE.

1 STANDARD DRIVE APPROACH
SCALE: N.T.S.

1. DRIPLINE OF TREE CANOPY
2. ORANGE CONSTRUCTION FENCE STAKED 5'–0" O.C. MAX. W/METAL T–POSTS (SEE SPECS)
3. TREE PROTECTION FENCE OUTSIDE OF DRIPLINE OF TREE. SEE SPECS.
4. TREE TRUNK
5. METAL T–POST 5' O.C.

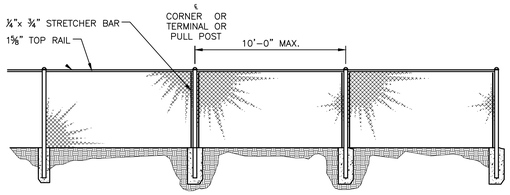
NOTES:
1. DO NOT STORE OR OPERATE ANY MATERIALS, EQUIPMENT, DEBRIS, ETC. INSIDE FENCE.
2. IF REQUIRED BY CONSTRUCTION, ONLY HAND EXCAVATION IS ALLOWED WITHIN THIS AREA.
3. REMOVE ONLY UPON APPROVAL OF LANDSCAPE ARCHITECT.
4. SEE TREE PROTECTION AND PRESERVATION NOTES AND TECHNICAL SPECIFICATIONS.



1. TREE PROTECTION PRACTICES INCLUDE ESTABLISHING THE TREE PROTECTION ZONE (TPZ) PER DETAIL.
2. THERE WILL BE NO DIGGING, TRENCHING, GRADING, OR STORING OF MATERIALS OR EQUIPMENT IN THE TPZ.
3. NO EQUIPMENT (EXCEPT FOR A SOD CUTTER) SHALL BE ALLOWED INSIDE THE TPZ. IF SPECIAL PROVISION FOR EXCAVATION IS APPROVED BY OWNER, IT SHALL BE DONE BY HAND OR A SOIL VACUUM.
4. USE TUNNELING OR BORING FOR IRRIGATION AND UTILITIES INSIDE THE TPZ. NO ROOTS LARGER THAN 4" IN DIAMETER WILL BE CUT. ALL ROOTS WILL BE CUT CLEANLY WITH A SAW. IN SITUATIONS WHERE A ROOT HAS BEEN DAMAGED, A CLEAN CUT SHALL BE MADE ON THE ROOT AT THE EDGE OF THE TRENCH CLOSEST TO THE TREE TRUNK.
5. TREES SHALL NOT BE USED TO SUPPORT ANY SCAFFOLDING, SIGNS, TEMPORARY UTILITY, OR ANY OTHER DEVICE. IF DAMAGE OCCURS TO A PROTECTED TREE, IMMEDIATE CONTACT SHALL BE MADE WITH THE OWNER.
6. DO NOT CHANGE THE SOIL GRADE BY CUTTING OR FILLING IN THE TPZ.
7. CONTRACTOR SHALL SUBMIT A SCHEDULE FOR WEEKLY WATERING AND INDICATE THE INDIVIDUAL WHO IS RESPONSIBLE TO ENFORCE TREE PROTECTION REQUIREMENTS AS SET FORTH IN THE DRAWINGS, NOTES, DETAILS, AND SPECS. TREE PROTECTION IN ADDITION TO WHAT IS SHOWN ON THE PLAN MAY BE REQUIRED.
8. CONTRACTOR IS RESPONSIBLE TO ENSURE TREES ARE PROPERLY PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION. DAMAGED OR DEAD TREES WILL BE REPLACED IN KIND (SIZE, SPECIES, ETC) OR AS INDICATED IN THE SPECS.
9. SEE SPECIFICATION SECTION 005639 TREE PROTECTION & PRESERVATION

2 TREE PROTECTION ZONE (TPZ)
NTS

MUN–AFBH–13



HEIGHT OF FABRIC	DEPTH OF POST	LENGTH OF END, CORNER OR PULL POSTS	LENGTH OF LINE POSTS	SIZE OF POSTS	
				END, CORNER AND PULL PIPE OPTION	LINE POST (MIN. SIZE) PIPE OPTION
6'	3'+	11'+	10'–8"	2⅞"	2⅜"

NOTES:
1. ALL FABRIC, POSTS, CONNECTIONS, ETC. SHALL BE BLACK VINYL COATED.
2. ALL FABRIC SHALL BE 6 FEET HIGH CHAIN LINK OF 2" GALVANIZED MESH OF 9–GAUGE.
3. ALL STEEL PIPE MEMBER SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A–120, SCHEDULE 40, HOT DIPPED ZINC COATED STEEL PIPE.
4. ALL POSTS SHALL BE SET IN CONCRETE AND SHALL BE TOPPED WITH BALL TYPE OR OTHER APPROVED ORNAMENT.
5. ALL END, CORNER OR PULL POST SHALL BE 11 FEET IN LENGTH WITH A MINIMUM DIAMETER OF 2 ⅜ INCHES. ALL LINE POSTS SHALL BE 10' 8" IN LENGTH WITH A MINIMUM DIAMETER OF 2 ⅜ INCHES.

3 6' CHAINLINK FENCE
SCALE: N.T.S.

1

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Phone: 801.886.9052
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12717219-2202
DANIEL AARON NETZLEY
6/12/2024
STATE OF UTAH

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NO.	DESCRIPTION	BY	DATE
1	ADDENDUM 1	JRA	8/30/24

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DETAILS

FILE :	83-23-013_DD50X
JUB PROJ. # :	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA

ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 8/30/2024

SHEET NUMBER:
DD503

Attachment: AFBH_Addendum1_08.30.24 (Contract for Boat Harbor Reconstruction)

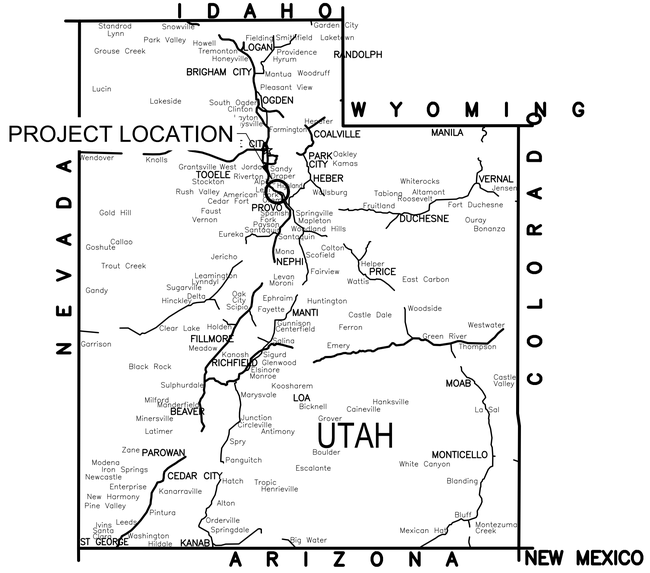
Plot Date:8/30/2024 11:48 AM Plotted By: Daniel Netzley
Date Created:6/28/2024 \\JUBCENTRALCLIENTSUTTAMERICANFORKCITYPROJECTS\83-23-013_BOATHARBORPARKINGLOTDESIGN\CADSHEETS\83-23-013_DD50X.DWG

AMERICAN FORK BOAT HARBOR RECONSTRUCTION

AMERICAN FORK CITY

AUGUST 2024

BID SET



AREA MAP

PROJECT VICINITY MAP

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AMERICAN FORK 18 53

PROJECT NO. 83-23-013

REGISTERED PROFESSIONAL ENGINEER
12717219-2202
DANIEL AARON NEITZEL
07/24/2024
STATE OF UTAH

LICENSED LANDSCAPE ARCHITECT
SETH VANCE
10433883-5301
08/14/2024
STATE OF UTAH

PROFESSIONAL ENGINEER
No. 7944020-2202
BRANDON LEE COX
STATE OF UTAH
JUL 01 2024

J-U-B ENGINEERS, INC.

392 E. Winchester St., Suite 300, Salt Lake City, UT 84107
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THE LANGDON GROUP
GATEWAY MAPPING INC.

J-U-B FAMILY OF COMPANIES

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LAST UPDATED: 8/22/2024

SHEET NUMBER: CC101

Plot Date:8/22/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEET\83-23-013_G-00X.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

GENERAL NOTES

1. AMERICAN FORK CITY AND THE ENGINEER HAVE JURISDICTION OVER THIS PROJECT. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND BUSINESS LICENSES PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR DUST ABATEMENT AND ANY LIABILITY ISSUES RELATED TO DUST AT ANY LOCATION WHICH MAY BE CAUSED BY THIS PROJECT.
3. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND PROTECTION OF PEDESTRIANS IN AND AROUND THIS WORK. REFERENCE THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD LATEST EDITION FOR WORK ZONE TRAFFIC CONTROL).
4. ANY WORK DONE WITHIN A PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE TRANSPORTATION AGENCY AND SHALL MEET THE REQUIREMENTS OF THAT AGENCY AND, IN PARTICULAR, REQUIREMENTS OF ANY RIGHT-OF-WAY SPECIAL USE PERMIT, OR OTHER PERMIT. ALL WORK SHALL MEET CURRENT OSHA REQUIREMENTS.
5. WHERE WORK IS PERFORMED ON EASEMENTS, THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO ELIMINATE ANY ADVERSE EFFECTS ON THE ADJACENT PROPERTY AND/OR TO RESTORE IT TO ITS ORIGINAL CONDITION.
6. ALL DISTANCES AND DATA SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. IN CASE OF CONFLICT THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY SO THAT CLARIFICATION MAY BE MADE PRIOR TO THE START OF THE WORK.
7. THE CONTRACTOR SHALL ARRANGE FOR, SECURE AND PAY FOR DIRECTLY, ANY AND ALL TEMPORARY UTILITY SUPPLIES (E.G. WATER, POWER, AND TELEPHONE) IT MAY REQUIRE FOR PROSECUTION OF ITS WORK. THE COST OF SUCH UTILITIES SHALL BE INCLUDED IN THE APPROPRIATE BID ITEM WITH WHICH IT IS ASSOCIATED.
8. SHOULD CONSTRUCTION BE HALTED BECAUSE OF INCLEMENT WEATHER CONDITIONS, THE CONTRACTOR WILL COMPLETELY CLEAN UP ALL AREAS AND MAINTAIN THE SURFACE IN GOOD CONDITION DURING THE SHUT-DOWN PERIOD.
9. THE CONTRACTOR'S PERSONNEL, EQUIPMENT, AND OPERATIONS SHALL COMPLY FULLY WITH ALL APPLICABLE STANDARDS, REGULATIONS, AND REQUIREMENTS OF EXISTING FEDERAL, UTAH STATE, AND LOCAL GOVERNMENTAL AGENCIES, INCLUDING AMERICAN FORK CITY AND UTAH COUNTY.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL LOCAL, STATE, AND FEDERAL PERMITS REQUIRED FOR STORM WATER POLLUTION PREVENTION AS A RESULT OF CONSTRUCTION ACTIVITIES. WHEN CALLED FOR IN THE CONTRACT DOCUMENTS, CONTRACTOR SHALL PREPARE A STORM WATER POLLUTION PREVENTION PLAN FOR APPROVAL BY THE ENGINEER AND FOR SUBMITTAL TO LOCAL AUTHORITIES FOR REVIEW AND APPROVAL. IF THE CONSTRUCTION WILL DISTURB MORE THAN ONE ACRE, CONTRACTOR SHALL FILE A "NOTICE OF INTENT" FOR PERMIT COVERAGE UNDER THE STATE'S UPDES STORM WATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES (UTR300000) AND PAY ALL ASSOCIATED FEES. THE NOI MAY BE FILED ELECTRONICALLY AT THE FOLLOWING WEBSITE: HTTPS://DEQ.UTAH.GOV/WATER-QUALITY/GENERAL-CONSTRUCTION-STORM-WATER-UPDES-PERMITS. THE CONSTRUCTION GENERAL PERMIT (CGP) DOES NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH OTHER REGULATIONS OR CONTRACT REQUIREMENTS REGARDING STORM WATER POLLUTION PREVENTION INCLUDING BUT NOT LIMITED TO: PROTECTION OF SURFACE WATERS, PREVENTION OF SOIL RUNOFF INTO DRAINS, DUST CONTROL, PREVENTION OF TRACKING SOILS TO ADJACENT STREETS, FUEL CONTAINMENT, SPILL CONTROL, ETC.
11. OBTAIN PERMIT FROM AMERICAN FORK CITY.
12. ALL WORK SHALL BE CONTAINED IN OR LIMITED TO THE CITY'S PROPERTY, EASEMENTS, OR APPROVED STAGING AREAS.
13. SLOPE ON ALL FOOTING DRAINS TO BE MINIMUM OF 0.5%.
14. THE GEOTECHNICAL EVALUATION FOR THIS PROJECT IS FOUND IN THE PROJECT SPECIFICATIONS. RECOMMENDATIONS FROM THE REPORT SHALL BE FOLLOWED. IN THE EVENT OF A CONFLICT WITH THE PROJECT SPECIFICATIONS, THE ENGINEER AND THE GEOTECHNICAL ENGINEER WILL APPROVE THE PROPER COURSE OF ACTION. REFER TO GEOTECHNICAL REPORT FOR SUBSURFACE SOILS INFORMATION.
15. CONTRACTOR TO PROVIDE, CONSTRUCT, MAINTAIN AND REMOVE A TEMPORARY FENCE AROUND THE CONSTRUCTION SITE USED TO PROTECT NEIGHBORING PROPERTIES FROM DAMAGE. CONTRACTOR IS ALSO RESPONSIBLE TO PROTECTION TO SAFE GUARD WORK SITE. PAY ITEM TO BE INCLUDED IN MOBILIZATION.
16. THE ENGINEER WILL PROVIDE VERTICAL AND HORIZONTAL CONTROLS ONE TIME ON THE PROJECT SITE. ANY ADDITIONAL CONSTRUCTION STAKING REQUIRED TO COMPLETE THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES AND BE RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES AND EXISTING IMPROVEMENTS AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION ACTIVITIES.

EARTHWORK

1. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING AND CONSTRUCTING STABLE EXCAVATIONS AS REQUIRED TO MAINTAIN STABILITY OF BOTH EXCAVATION SIDES AND BOTTOM. ALL EXCAVATIONS SHOULD BE SLOPED OR SHORED IN THE INTEREST OF SAFETY FOLLOWING LOCAL, STATE, AND FEDERAL REGULATIONS, INCLUDING CURRENT OSHA EXCAVATION AND TRENCH SAFETY STANDARDS.
2. THE CONTRACTOR SHALL EXCAVATE THE SITE TO THE LIMITS AND ELEVATIONS SHOWN ON THE PLANS.
3. THE CONTRACTOR SHALL LIMIT WORK AREA TO THE LIMITS OF THE DISTRICT PROPERTY, RIGHT OF WAY, AND APPROVED EASEMENTS.
4. GRASS, VEGETATION, AND TREES, TOGETHER WITH THE MAJOR PORTIONS OF THE ROOT STRUCTURE, SHALL BE REMOVED PRIOR TO CONSTRUCTION OF IMPROVEMENTS, AS INDICATED IN THE PLANS.
5. CONTRACTOR SHALL RETAIN AND PROTECT ACROSS ENTIRE SITE ALL EXISTING FEATURES INCLUDING UTILITIES, ROADS, CANALS, FENCES, STRUCTURES, TREES, ETC. THAT ARE NOT IN DIRECT CONFLICT WITH THE WORK. DAMAGE BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. FINISH GRADE SLOPE AWAY FROM BUILDINGS/STRUCTURES AT A MINIMUM OF 2% OR A MAXIMUM OF 25% FOR A MINIMUM DISTANCE OF 10' OR TO THE CATCH POINT WITH EXISTING GRADE (WHICH EVER IS GREATER) UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS TO EXCAVATE, DEWATER AND CONSTRUCT THE STRUCTURE ON FIRM FOUNDATION MATERIAL, WITH CONCRETE AND REINFORCEMENT PLACED IN A DRY, SAFE ENVIRONMENT PER THE SPECIFICATIONS. DEWATERING DISCHARGE POINTS SHALL BE APPROVED BY THE CITY ENGINEER.
8. EXCAVATION SHALL BE DONE IN ACCORDANCE WITH OSHA REQUIREMENTS (LATEST REVISION) AND MANDATED EXCAVATION SAFETY REQUIREMENTS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SLOPE STABILITY AND EROSION CONTROL ON EXCAVATED SLOPES DURING CONSTRUCTION.
10. THE ENGINEER SHALL BE NOTIFIED WHEN THE EXCAVATION HAS REACHED FOUNDATION LEVEL TO ALLOW ENGINEER TO EXAMINE THE FOUNDATION MATERIALS. THE ENGINEER MUST EXAMINE THE SITE PRIOR TO FORMING THE FOOTINGS.
11. TEMPORARY SHORING OF THE EXCAVATION, IF REQUIRED, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. THE SLOPES OF EXCAVATIONS AND/OR FILLS SHALL BE SHAPED TO MEET SAFETY REQUIREMENTS DEPENDENT ON SOIL TYPES, BUT IN NO CASE SHALL THE FINISHED SLOPE BE IN EXCESS OF 3:1 FOR CUT AREAS OR 3:1 FOR FILL AREAS EXCEPT AS APPROVED OTHERWISE BY THE CITY ENGINEER.

EXISTING UTILITIES

1. APPROXIMATE LOCATIONS OF UTILITIES ARE SHOWN ON THE PLANS. THEY ARE TO BE USED FOR GENERAL INFORMATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE APPROPRIATE UTILITY COMPANIES WHEN CONSTRUCTION MIGHT INTERFERE WITH NORMAL OPERATION OF ANY UTILITIES. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE APPROPRIATE UTILITY COMPANY FIELD-LOCATE ANY UTILITY INSTALLATIONS WHICH MIGHT BE AFFECTED BY CONSTRUCTION PRIOR TO BEGINNING WORK IN THAT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SERVICE OF EXISTING UTILITIES AND FOR RESTORING ANY UTILITIES DAMAGED DUE TO CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. DEPTHS AND ELEVATIONS OF UTILITIES ARE UNKNOWN UNLESS OTHERWISE SHOWN. CONTRACTOR SHALL FIELD VERIFY UTILITY DEPTHS, ELEVATIONS, ANY DISCREPANCIES AND/OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

INSPECTION AND TESTING

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MATERIALS TESTING INCLUDING BUT NOT LIMITED TO CONCRETE, ASPHALT, AND COMPACTION. ALL TESTS SHALL MEET MINIMUM ENGINEER REQUIREMENTS. SEE THE CONTRACT DOCUMENTS AND DRAWINGS FOR FREQUENCY OF TESTING. RESULTS ARE TO BE DELIVERED TO SPECIAL INSPECTOR, OWNER, AND ENGINEER.
2. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ENGINEER AND SPECIAL INSPECTOR FOR INSPECTIONS OF WORK AT APPROPRIATE INTERVALS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PAY FOR ADDITIONAL INSPECTIONS THAT ARE THE RESULT OF HIS WORKMANSHIP.

CONTACT PHONE NUMBERS

CITY -

DERRIC RYKERT	801-763-3084	PROJECT MANAGER
JAY BREMS	801-763-3060	CULINARY WATER/PI
ASHTON HARDY	801-763-3060	SEWER/STORM DRAIN
DEE HOWARD	801-763-3060	CITY INSPECTOR
TYLER MEZENEN	801-763-3060	SWPPP INSPECTOR
MAT SACCO	801-763-3045	FIRE MARSHAL

ENGINEER -

JERRON ATKIN	801-589-2229 m	PROJECT MANAGER
DANIEL NETZLEY	435-881-8988 m	PROJECT ENGINEER
J-U-B OFFICE	801-886-9052 o	

TIMPANOGOS SPECIAL SERVICE DISTRICT -
DAVID BARLOW 801-756-5231

AMERICAN FORK IRRIGATION COMPANY -
ERNIE JOHN 801-471-6576

MITCHELL HOLLOW IRRIGATION COMPANY -
DALE JONES 801-768-8150

ROCKY MOUNTAIN POWER -
TERIA WALKER 801-756-1310

811
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392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9052
www.jub.com

BID SET

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12717219-2202
DANIEL AARON NETZLEY
07/24/2024
STATE OF UTAH

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	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

GENERAL NOTES

FILE : 83-23-013_G-00X
JUB PROJ. # : 83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
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LAST UPDATED: 8/22/2024

SHEET NUMBER:
CN101

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Plot Date:8/22/2024 5:05 PM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_G-00X.DWG

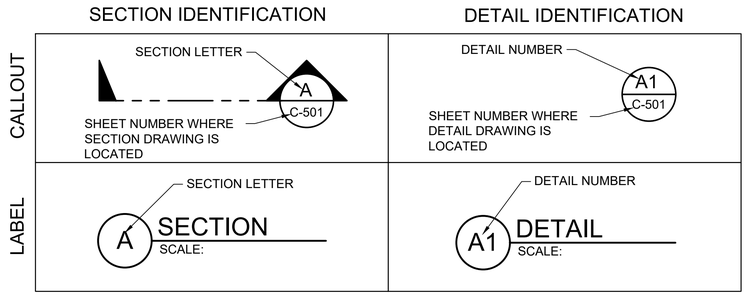
LINE LEGEND

LINE DESCRIPTION	PROPOSED LINE	EXISTING LINE
POWER / COMMUNICATIONS		
OVERHEAD POWER	OHP	OHP
UNDERGROUND POWER	UP	UP
OVERHEAD TELEPHONE	OHT	OHT
UNDERGROUND TELEPHONE	UT	UT
FIBER OPTIC	F/O	F/O
CABLE TELEVISION	CTV	CTV
UNDERGROUND POWER, TEL, CABLE TV		P,T,CTV
UNDERGROUND POWER, TEL, CABLE TV, GAS		P,T,CTV,G
STORM DRAIN		
STORM DRAIN (GENERAL)	SD	SD
STORM DRAIN	X"SD	X"SD
ROOF DRAIN	RD	RD
LAND DRAIN	LD	LD
SANITARY SEWER		
SANITARY SEWER (GENERAL)	SS	SS
SANITARY SEWER	X"SS	X"SS
SANITARY SEWER SERVICE	SS SS	SS SS
SEWER FORCE MAIN	FM	FM
WATER		
WATER (GENERAL)	W	W
WATER (SPECIFIED SIZE)	X"W	X"W
WATER SERVICE	WS WS	WS WS
GAS		
NATURAL GAS	G	G
NATURAL GAS SERVICE	G G	G G
HIGH PRESSURE GAS	HPG	HPG
LIQUID GAS	LG	LG
UTILITY		
CHLORINE LINE	CHL	CHL
INDUSTRIAL WASTE WATER	IWW	IWW
DRAIN LINE	DL	DL

LINE DESCRIPTION	PROPOSED LINE	EXISTING LINE
BOUNDARY		
PROPERTY LINE	P/L	P/L
PROPERTY LINE		
RIGHT OF WAY	R/W	R/W
TEMPORARY EASEMENT	T/E	T/E
PERMANENT EASEMENT	P/E	P/E
TOWNSHIP AND RANGE		
SECTION LINE		
QUARTER SECTION LINE		
1/16 SECTION LINE		
STATE LINE		
COUNTY LINE		
SITE		
FENCE	X	X
MAJOR CONTOUR	2521	
MINOR CONTOUR		
GRADE BREAK		GB
TOP OF BANK		TOB
TOE OF SLOPE		TOE
CUT LIMITS		
CUT LIMITS	CUT	
FILL LIMITS		
FILL LIMITS	FILL	
DITCH		
STORM SWALE		
EDGE OF WATER		
HIGH WATER		
WETLAND		WET
WETLAND BOG		BOG
WETLAND MARSH		MRSH
WETLAND SWAMP		SWMP
ROADWAY		
ROAD SHOULDER		
ROAD CENTERLINE		
ROAD ASPHALT		EP
ROAD GRAVEL	EG	EG
TOP BACK OF CURB		
LIP OF GUTTER		
LANDSCAPING LIMITS	LS	LS

SECTION AND DETAIL IDENTIFIERS

NOTE:
A DASH MAY BE PLACED IN THE LOWER PORTION OF THE IDENTIFIER IF THE DETAIL DRAWING OR SECTION VIEW IS LOCATED ON THE SAME SHEET.



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AMERICAN FORK CITY

LINE LEGEND AND DETAIL KEY

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SHEET NUMBER:
CN102

Plot Date:8/22/2024 5:05 PM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOTDESIGN\CAD\SHEETS\83-23-013_G-00X.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
SURVEY		
CAP (ALUMINUM)		
CAP (BRASS)		
CHISELED X		
CTRL PT GENERIC		
CTRL PT ½" REBAR	1/2" PIN CONTROL PT	
CTRL PT ⅝" REBAR	5/8" PIN CONTROL PT	
CTRL PT 60D NAIL	60D	
CTRL PT HUB & TACK	HT	
CTRL PT PK NAIL	PK	
CTRL PT TEMP BENCH MARK	TBM	
NAIL		
NAIL AND TAG	N/T	
NAIL (PK)	PK	
BOLT		
DRILL STEEL		
REBAR (½")		
REBAR (⅝")		
STAINLESS STEEL ROD		
IRON PIPE		
RAILROAD SPIKE		
R/W MONUMENT		
STONE		
SECTION CORNER. MON.	22 15 21 16	
SECTION QUARTER MON.	15 22	
SITE		
BOLLARD		
BOULDER		
DRINKING FOUNTAIN	DF	DF
FLAGPOLE		
GATE		
MAIL BOX	M	M
PARKING METER	PM	PM
POST		
SIGN		
SPOT ELEVATION		
TREE (SHRUB)		
TREE (STUMP)		
TREE (CONIFEROUS)		
TREE (DECIDUOUS)		
TEST HOLE	TH	
WELL	W	
WELL (MONITORING)	M	M

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
UTILITIES		
MANHOLE (GENERIC)		
PRESSURE CLEAN OUT AT GRADE	PCO	PCO
THRUST BL0CK		
VAULT	V	V
COMMUNICATION		
TELE. MANHOLE	T	
TELE. PEDESTAL	T	T
TELE. POLE		
TV PEDESTAL	TV	TV
GUY WIRE		
DOMESTIC WATER		
FIRE HYDRANT		
SPIGOT		
YARD HYDRANT		
WATER MANHOLE	W	
WATER METER		
WATER VALVE	W	W
ELECTRIC		
ELEC. MANHOLE	E	
ELEC. METER	E	E
ELEC. TRANS.	E	E
JUNCTION BOX	J	J
POWER POLE		
POWER STUB	E	E
STREET LIGHT		
TRAFFIC SIGNAL POLE		
NATURAL GAS		
GAS METER	G	G
GAS VALVE	G	G
SANITARY SEWER		
CLEANOUT		
SEWER STUB	S	S
SS MANHOLE		
STORM DRAIN		
CATCH BASIN		
DRY WELL	DW	DW
FLARE END		
GREASE TRAP		
SD MANHOLE	D	

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
FITTINGS		
BEND (11.25°)		
BEND (22.5°)		
BEND (45°)		
BEND (90°)		
CAP		
COUPLING		
CROSS		
REDUCER (CONCENTRIC)		
REDUCER (ECCENTRIC)		
TEE		
TRUE UNION		
WYE		
VALVES		
AIR VALVE	A	A
BLOW OFF	B	B
COMBO VALVE	C	C
BALL VALVE (N.C.)		
BALL VALVE (N.O.)		
BUTTERFLY VALVE		
CHECK VALVE		
CHECK VALVE (FLANGE)		
CHECK VALVE (MJ)		
GATE VALVE		
PLUG VALVE (N.C.)		
PLUG VALVE (N.O.)		
ROAD MARKINGS		
TURN ARROW		
ARROW STRAIGHT		
ARROW STRAIGHT/TURN		
BICYCLE ROUTE		
CAR		
HANDICAP SYMBOL		
ROADWAY		
INTERSTATE ROUTE	25	
MAST ARM		
PEDESTRIAN SIGNAL		
STATE ROUTE	14	
TRAFFIC LIGHT		

SYMBOL DESCRIPTION	EXISTING SYMBOL	PROPOSED SYMBOL
ROADWAY (CONT.)		
TYPE 2 BARRICADE		
US ROUTE	287	
TRAFFIC ATTENUATOR		
JERSEY BARRIER		

ABBREVIATIONS

ASSY	ASSEMBLY
>	ANGLE
@	AT (MEASUREMENTS)
BLDG	BUILDING
BM	BENCH MARK
BSC	BITUMINOUS SURFACE COURSE
BSW	BACK OF SIDEWALK
BW	BOTH WAYS
C	CHANNEL (STRUCTURAL)
C/L	CENTER LINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONT	CONTINUOUS
CPLG	COUPLING
CU FT	CUBIC FEET
CU YD	CUBIC YARD
DEG OR °	DEGREE
DET	DETAIL
DIA OR Ø	DIAMETER
DIP	DUCTILE IRON PIPE
DIST	DISTRIBUTION
DWG	DRAWING
EA	EACH
ELB	ELBOW
ELEV	ELEVATION
EW	EACH WAY
EXIST	EXISTING
FG	FINISH GRADE
FH	FIRE HYDRANT
FLG	FLANGE
FT OR '	FEET
GV	GATE VALVE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN OR "	INCH
LB OR #	POUND
LF	LINEAL FEET
LN	LINEAL
MAX	MAXIMUM
MIN	MINIMUM
NO OR #	NUMBER
PE	POLYETHYLENE
PL	PLATE
PL	PROPERTY LINE
PVC	POLYVINYL-CHLORIDE
R	RADIUS
RP	RADIUS POINT
R&R	REMOVE & REPLACE
REM	REMOVE
REQ'D	REQUIRED
REV	REVISION
R/W	RIGHT-OF-WAY

S	SLOPE
SPEC	SPECIFICATION
STA	STATION
STD	STANDARD
STL	STEEL
ST STL	STAINLESS STEEL
TBC	TOP BACK OF CURB
TYP	TYPICAL
TFC	TOP FACE OF CONCRETE
W/	WITH
W/O	WITHOUT
W/REQ'D	WHERE REQUIIRED

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12717219-2202
DANIEL AARON NETZLEY
07/24/2024
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NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

SYMBOL LEGEND AND ABBREVIATIONS

FILE:	83-23-013_G-00X
JUB PROJ. #:	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA

ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

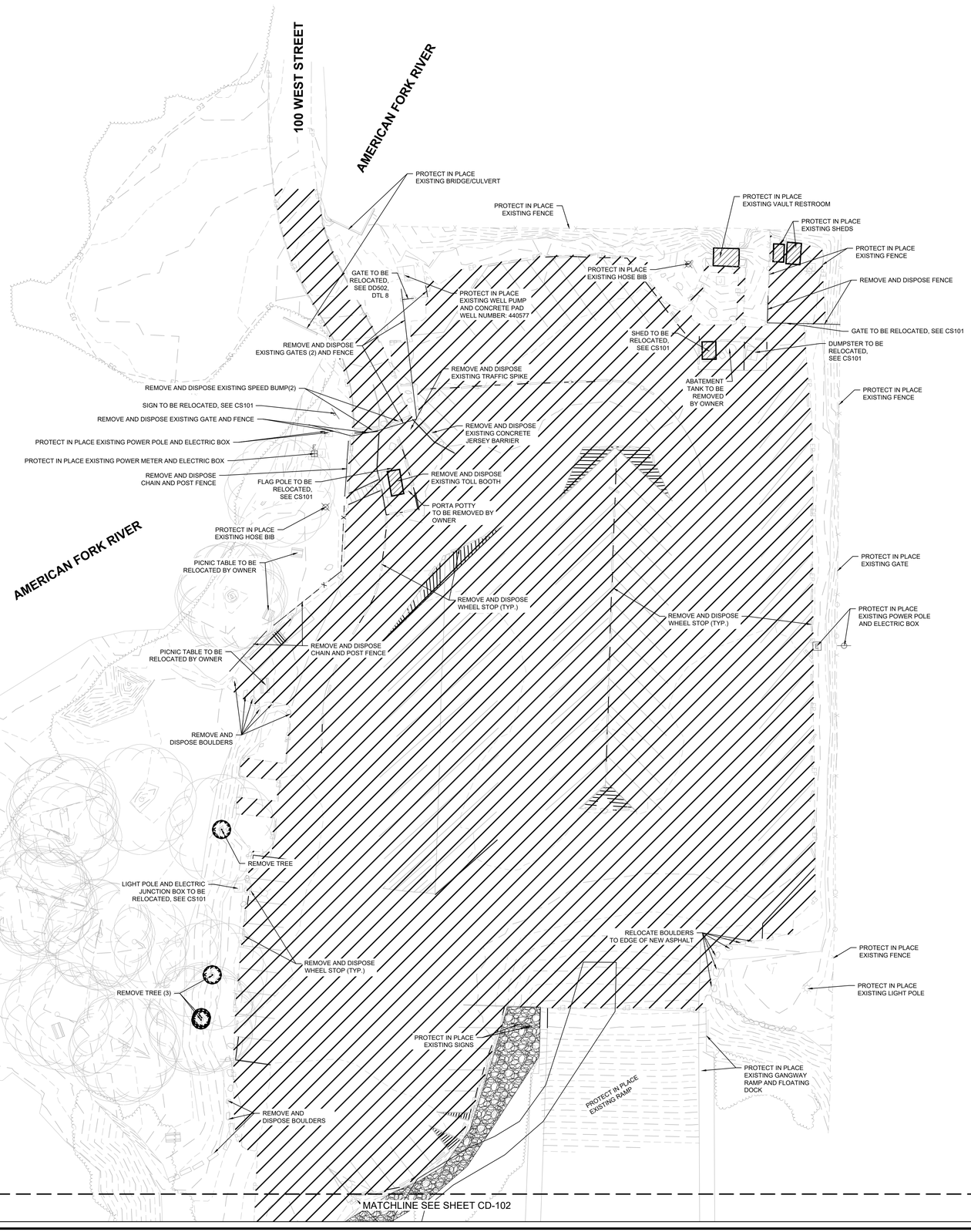
LAST UPDATED: 8/22/2024

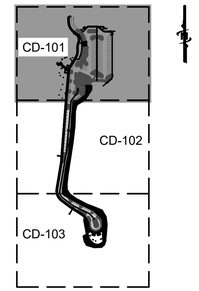
SHEET NUMBER:
CN103

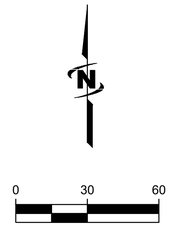
Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Plot Date:8/22/2024 5:05 PM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEET\83-23-013_G-00X.DWG

MATCHLINE PROJECT LIMITS







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AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DEMOLITION PLAN

FILE :	83-23-013_CD-10X
JUB PROJ. # :	83-23-013
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SHEET NUMBER:
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Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Plot Date:8/22/2024 5:50 PM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITY\PROJECTS\83-23-013_BOATHARBOR\PARKING\LOT\DESIGN\CAD\SHEET\83-23-013_CD-10X.DWG

MATCHLINE SEE SHEET CD-101

MATCHLINE PROJECT LIMITS

UTAH LAKE

LIGHT POLE AND ELECTRIC JUNCTION BOX TO BE RELOCATED, SEE CS102

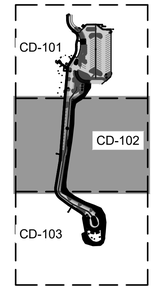
PROTECT IN PLACE EXISTING FLOATING DOCK AND GANGWAY RAMP

PROTECT IN PLACE EXISTING LIGHT POLE

PROTECT IN PLACE EXISTING FLOATING DOCK AND GANGWAY RAMP

PROTECT IN PLACE EXISTING LIGHT POLE

MATCHLINE SEE SHEET CD-103



N

0 30 60

SCALE IN FEET

MATCHLINE PROJECT LIMITS

AMERICAN FORK BOAT HARBOR

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AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DEMOLITION PLAN

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SHEET NUMBER:
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Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_CD-10X.DWG

MATCHLINE SEE SHEET CD-102

MATCHLINE SEE SHEET CD-103

MATCHLINE PROJECT LIMITS

MATCHLINE PROJECT LIMITS

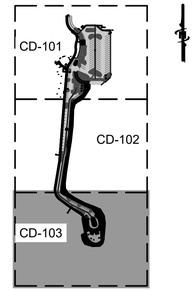
MATCHLINE PROJECT LIMITS

UTAH LAKE

AMERICAN FORK BOAT HARBOR

REMOVE EXISTING CONCRETE PIPE

PROTECT IN PLACE EXISTING LIGHT POLE



N

0 30 60

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AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DEMOLITION PLAN

FILE :	83-23-013_CD-10X
JUB PROJ. # :	83-23-013
DRAWN BY:	DAN
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Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013 BOATHARBOR\PARKING\GOTDESIGN\CAD\SHEETS\83-23-013_CD-10X.DWG

MATCHLINE PROJECT LIMITS

AMERICAN FORK CITY
13:075:0003

STILL SURFACE
13:075:0033

PROPERTY LINE

LEASE LINE

100 WEST STREET

AMERICAN FORK RIVER

TIMP MARINA CLUB
6186 N 6000 W
13:076:0033

INSTALL 6' CHAINLINK FENCE (MATCH EXISTING) AND CONNECT TO EX. FENCE

INSTALL DUMPSTER ENCLOSURE AND RELOCATE GARBAGE DUMPSTER (7/DD501)

CONSTRUCT VEHICULAR CONCRETE WITH ADA RAMPS (6/DD501) (9/DD502)

CONST. 5' CONCRETE SIDEWALK (8/9 DD501)

Existing Fence

Existing Dirt Parking Area

4" SWL

4" SYL

FENCING/VEHICULAR GATE (8/DD502)

INSTALL 6' FENCE

CONST. 5' SIDEWALK (8/9 DD501)

BOAT CLEAN OFF AREA

CONST. CURB AND GUTTER (2/DD501)

INSTALL 6' FENCE AND 12' MANUAL SLIDE GATE

CONSTRUCT VEHICULAR CONCRETE WITH PEDESTRIAN RAMPS (6/DD501) (9/DD502)

Existing Shrubs

INSTALL DO NOT ENTER (R5-1) 30X30 (2/DD501)

INSTALL RELOCATED SHED

4" BWL

CONST. TOLL BOOTH AREA (3/DD501)

CONST. 4" VALLEY GUTTER

INSTALL CONCRETE WHEEL STOP (TYP) (1/DD501)

17' STALLS

18 STALLS

2' STALLS

CONST. CURB AND GUTTER (2/DD501)

CONST. 10' ASPHALT TRAIL (10/DD501)

CONST. CURB AND GUTTER (2/DD501)

INSTALL SPEED LIMIT SIGN (15 MPH) 24X30 (R2-1) (2/DD501)

UTAH LAKE BOUNDARY

1 STALL

7 STALLS

8 STALLS

SEE LANDSCAPE SHEETS FOR BEACH AREA

CONCRETE SEAT WALL. SEE LANDSCAPE PLANS

CONCRETE PADS. SEE LANDSCAPE PLANS

INSTALL DO NOT ENTER (R5-1) 30X30 (WEST) AND STOP SIGN (R1-1) 30X30 (EAST) (2/DD501)

SB

4" SWL (TYP)

INSTALL DO NOT ENTER (R5-1) 30X30 (2/DD501)

CXT TIOGA DOUBLE VAULT TOILET TO BE INSTALLED BY CXT. CONTRACTOR TO COORDINATE INSTALLATION.

CONST. ACCESSIBLE PARKING AREA (5/DD501)

STORM DRAIN SYSTEM

INSTALL RELOCATED LIGHT POLE AND ELECTRIC BOX

INSTALL STOP SIGN (R1-1) 30X30 (2/DD501)

CONCRETE SEAT WALL SEE LANDSCAPE PLANS

CONST. CURB AND GUTTER (2/DD501)

CONST. ACCESSIBLE PARKING AREA (5/DD501)

INSTALL ADA RAMP (6/DD501)

COLLAPSIBLE BOLLARDS. SEE LANDSCAPE SHEETS (5/DD501)

INSTALL DRIVEWAY APPROACH (1/DD501)

CONCRETE SEAT WALL SEE LANDSCAPE PLANS

CONST. 4" VALLEY GUTTER (2/DD501)

CONSTRUCT CURB AND GUTTER (2/DD501)

INSTALL RELOCATED LIGHT POLE AND ELECTRIC BOX

INSTALL STOP SIGN (R1-1) 30X30 (2) (2/DD501)

CONST. ACCESSIBLE PARKING AREA (5/DD501)

STORM DRAIN SYSTEM

Existing Ramp

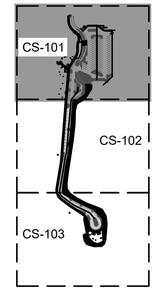
Existing Fence

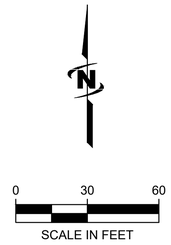
INSTALL STOP SIGN (R1-1) 30X30 (2/3/DD501)

TIMP MARINA CLUB
6186 N 6000 W
13:076:0033

UTAH LAKE BOUNDARY

SHEET CS-102





NOTES:

1. SEE CU SHEETS FOR INSTALLATION OF STORM DRAIN SYSTEM.
2. ALL RADIAL DIMENSIONS ON CURB AND GUTTER ARE FROM TBC

STRIPING (1/DD502)

SWL = SOLID WHITE LINE
SYL = SOLID YELLOW LINE
SB = STOP BAR, 12" SOLID WHITE LINE
BWL = BROKEN WHITE LINE

VEHICULAR CONCRETE PAVEMENT SECTION (9/DD502)

NORMAL ASPHALT PAVEMENT SECTION (11/DD501)

HEAVY DUTY ASPHALT PAVEMENT SECTION (12/DD501)

6" RIPRAP TO BE INSTALLED (1/DD506)

36" RIPRAP TO BE INSTALLED (2/DD506)

PEDESTRIAN FLAT CONCRETE TO BE INSTALLED (9/DD501)

811 UTAH LAKE

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NO.	DESCRIPTION	BY	APPR.	DATE
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AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

SITE PLAN

FILE: 83-23-013_CS-101
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/22/2024

SHEET NUMBER:
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Plot Date:8/22/2024 5:54 PM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_CS-101.DWG

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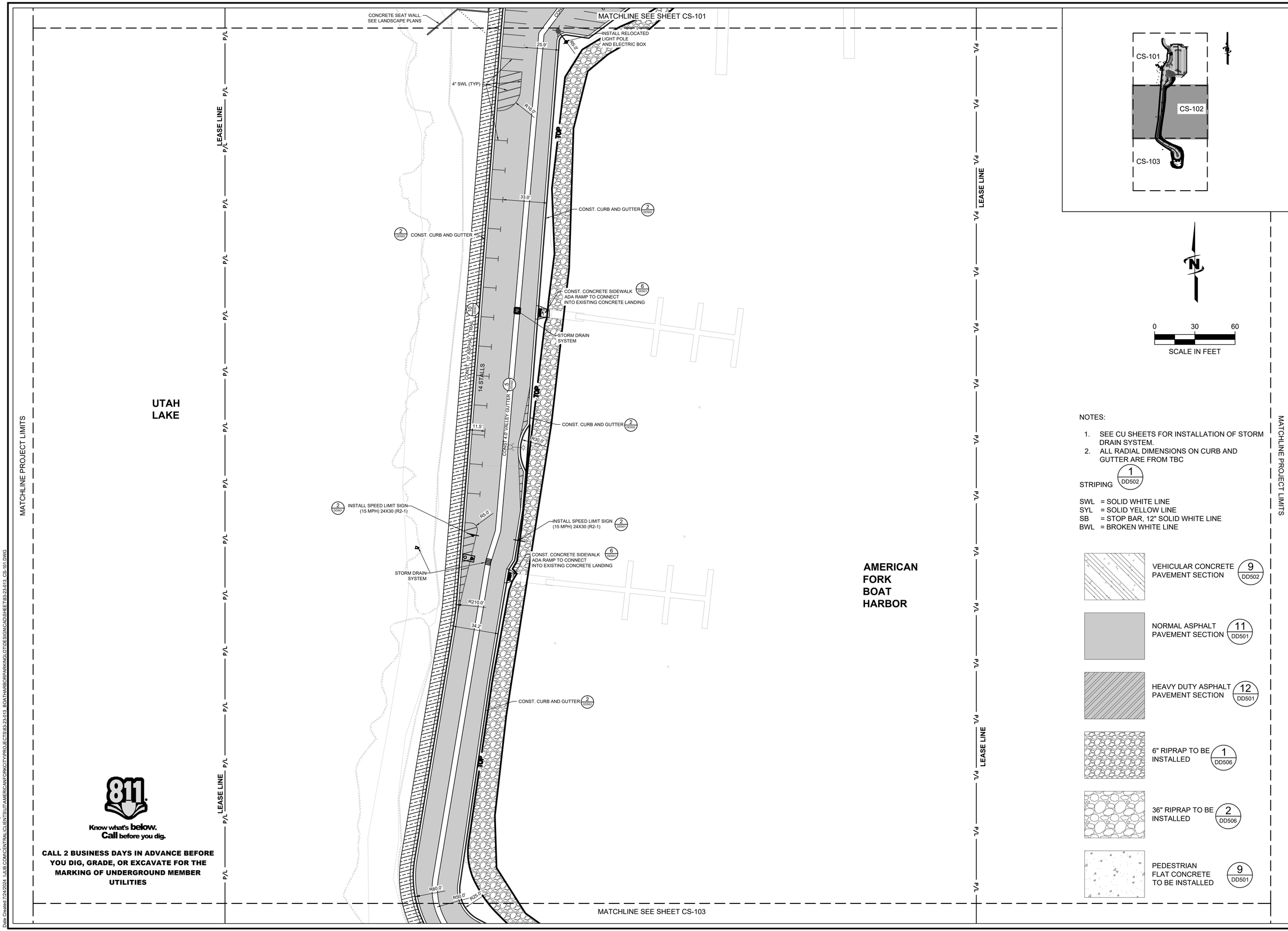

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VEHICULAR CONCRETE PAVEMENT SECTION 9 DD502

NORMAL ASPHALT PAVEMENT SECTION 11 DD501

HEAVY DUTY ASPHALT PAVEMENT SECTION 12 DD501

6" RIPRAP TO BE INSTALLED 1 DD506

36" RIPRAP TO BE INSTALLED 2 DD506

PEDESTRIAN FLAT CONCRETE TO BE INSTALLED 9 DD501

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LAST UPDATED: 8/22/2024

SHEET NUMBER:
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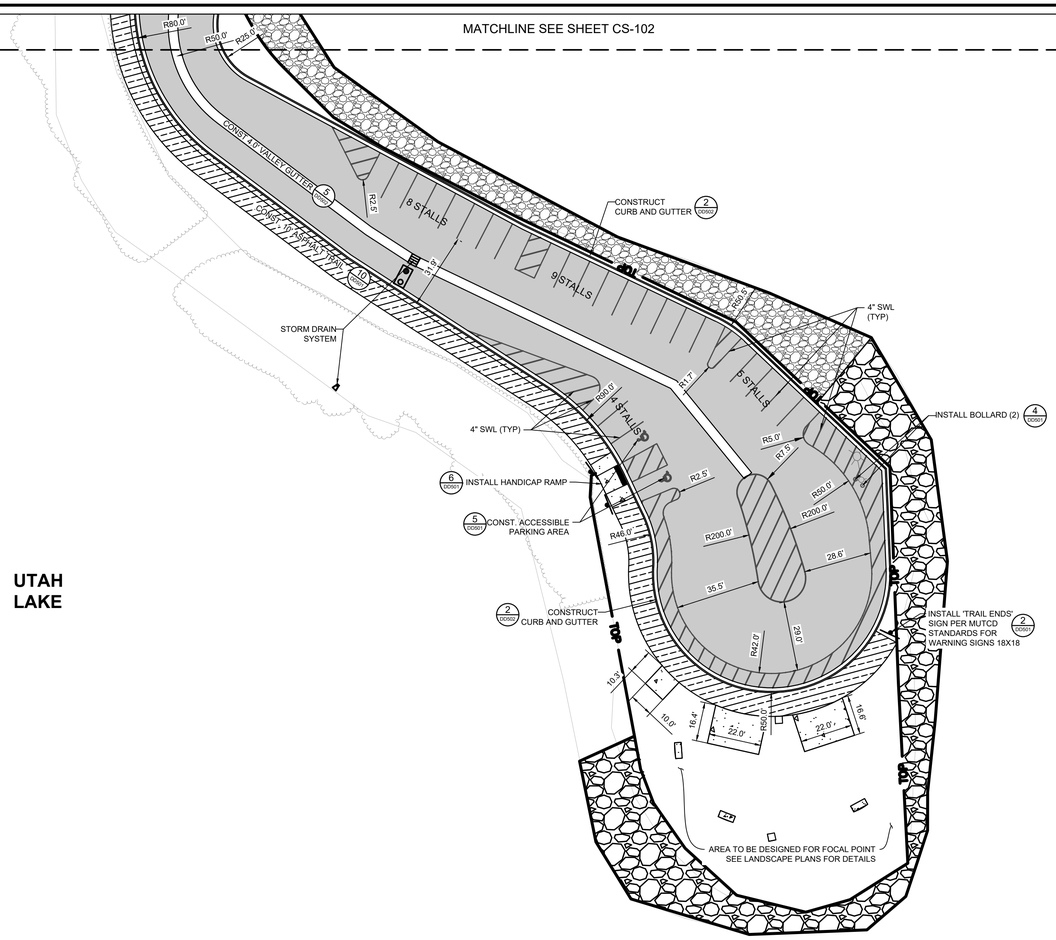
Plot Date:8/22/2024 5:33 PM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\UB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013 BOATHARBORPARKINGLOT\DESIGN\CAD\SHEET\83-23-013_CS-101.DWG

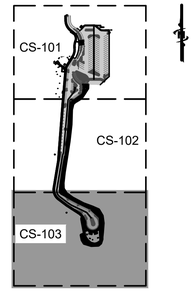
Attachment: AFBH Bid Plans. 08.22.24 (4) (Contract for Boat Harbor Reconstruction)

MATCHLINE SEE SHEET CS-102



UTAH LAKE

AMERICAN FORK BOAT HARBOR



N

0 30 60

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LEASE LINE

MATCHLINE PROJECT LIMITS

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J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9052
www.jub.com

BID SET

REGISTERED PROFESSIONAL ENGINEER
12717219-2202
DANIEL AARON NETZLEY
07/24/2024
STATE OF UTAH

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE USED WITHOUT J-U-B'S WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

SITE PLAN

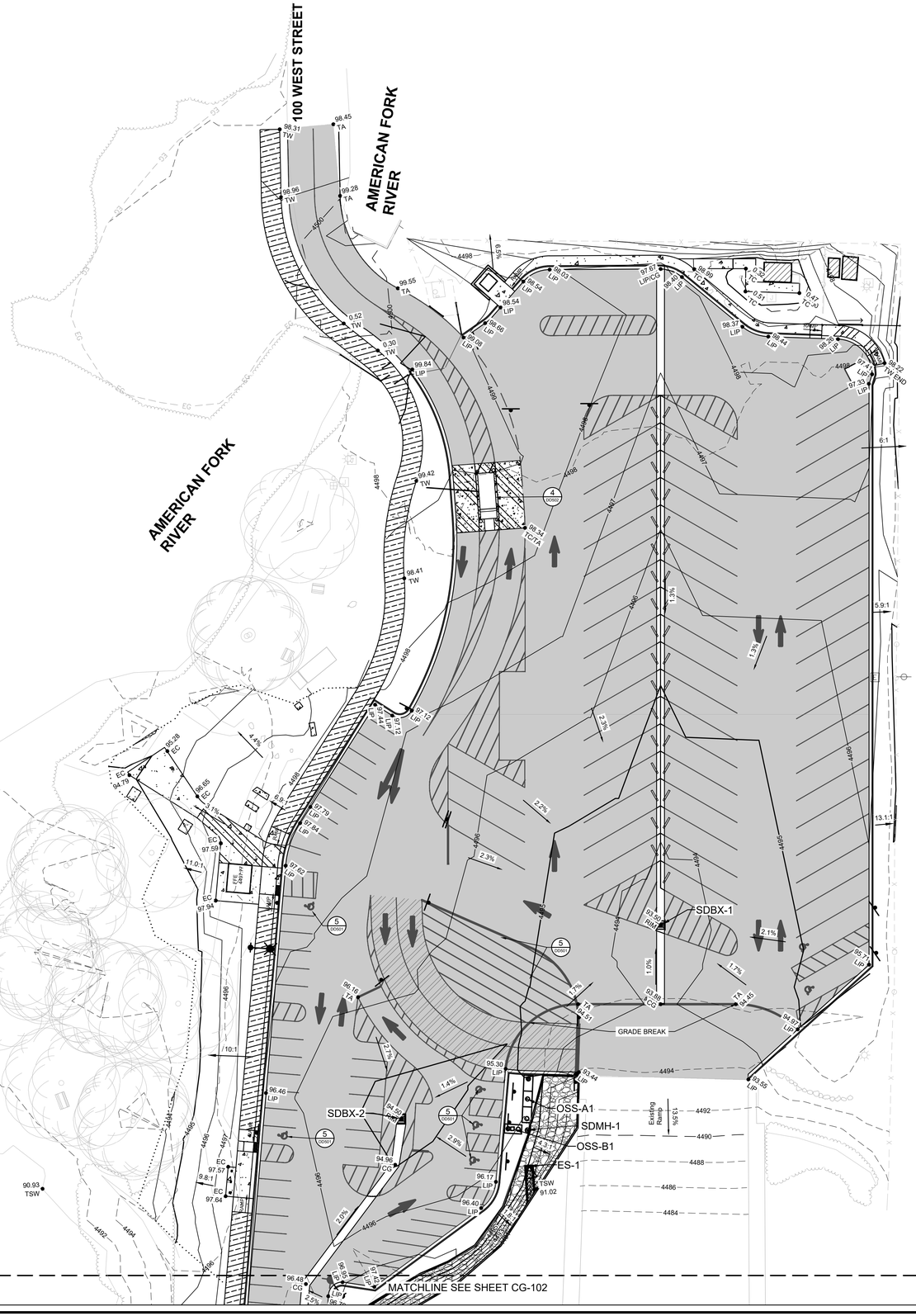
FILE : 83-23-013_CS-101
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/22/2024

SHEET NUMBER:
CS103

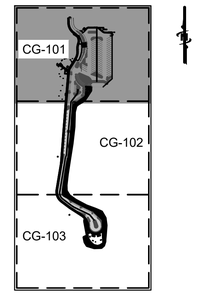
Plot Date:8/22/2024 5:33 PM Plotted By: Daniel Netzley
Data Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKING\LOT\DESIGN\CAD\SHEETS\83-23-013_CS-101.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

MATCHLINE PROJECT LIMITS



MATCHLINE PROJECT LIMITS



811 Know what's below. Call before you dig.

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N

0 30 60
SCALE IN FEET

LEGEND

CALLOUT	DESCRIPTION
X.X%	GRADING SLOPE AND DIRECTION (DOWNHILL)
CG	CENTER OF GUTTER
TA	TOP OF ASPHALT
TC	TOP OF CONCRETE
RIM	RIM OF STRUCTURE
FL	FLOW LINE
FFE	FINISH FLOOR
STW	SURVEYED TOP OF WATER
4234	EXISTING CONTOUR MINOR (4234.00)
4235	EXISTING CONTOUR MAJOR (4235.00)
4234	CONTOUR MINOR (FG) (4234.00)
4235	CONTOUR MAJOR (FG) (4235.00)

- VEHICULAR CONCRETE PAVEMENT SECTION — 9 / DD502
- NORMAL ASPHALT PAVEMENT SECTION — 11 / DD501
- HEAVY DUTY ASPHALT PAVEMENT SECTION — 12 / DD501
- 6" RIPRAP TO BE INSTALLED — 1 / DD506
- 36" RIPRAP TO BE INSTALLED — 2 / DD506
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	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

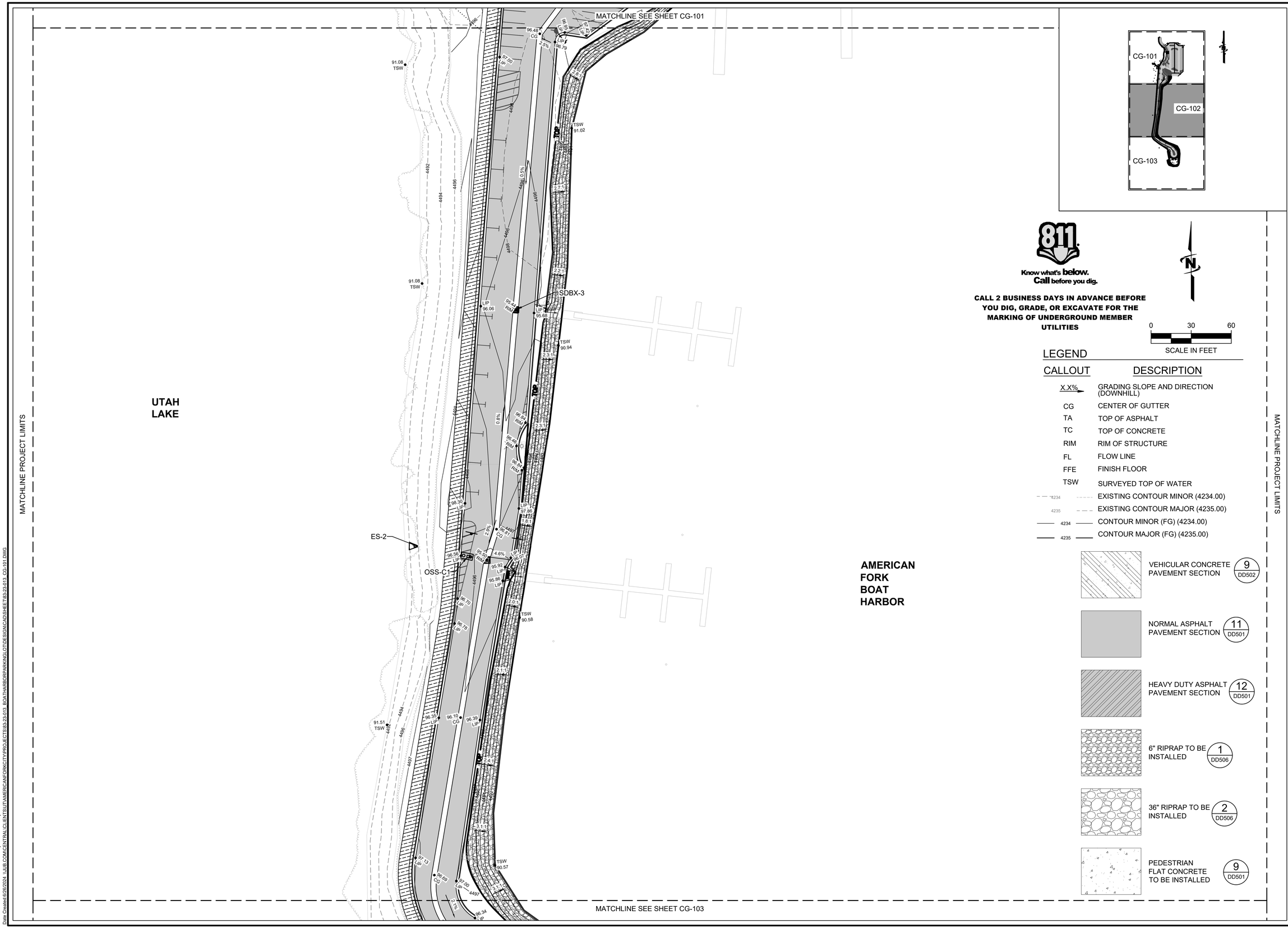
GRADING PLAN

FILE: 83-23-013_CG-101
JUB PROJ. # : 83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/22/2024

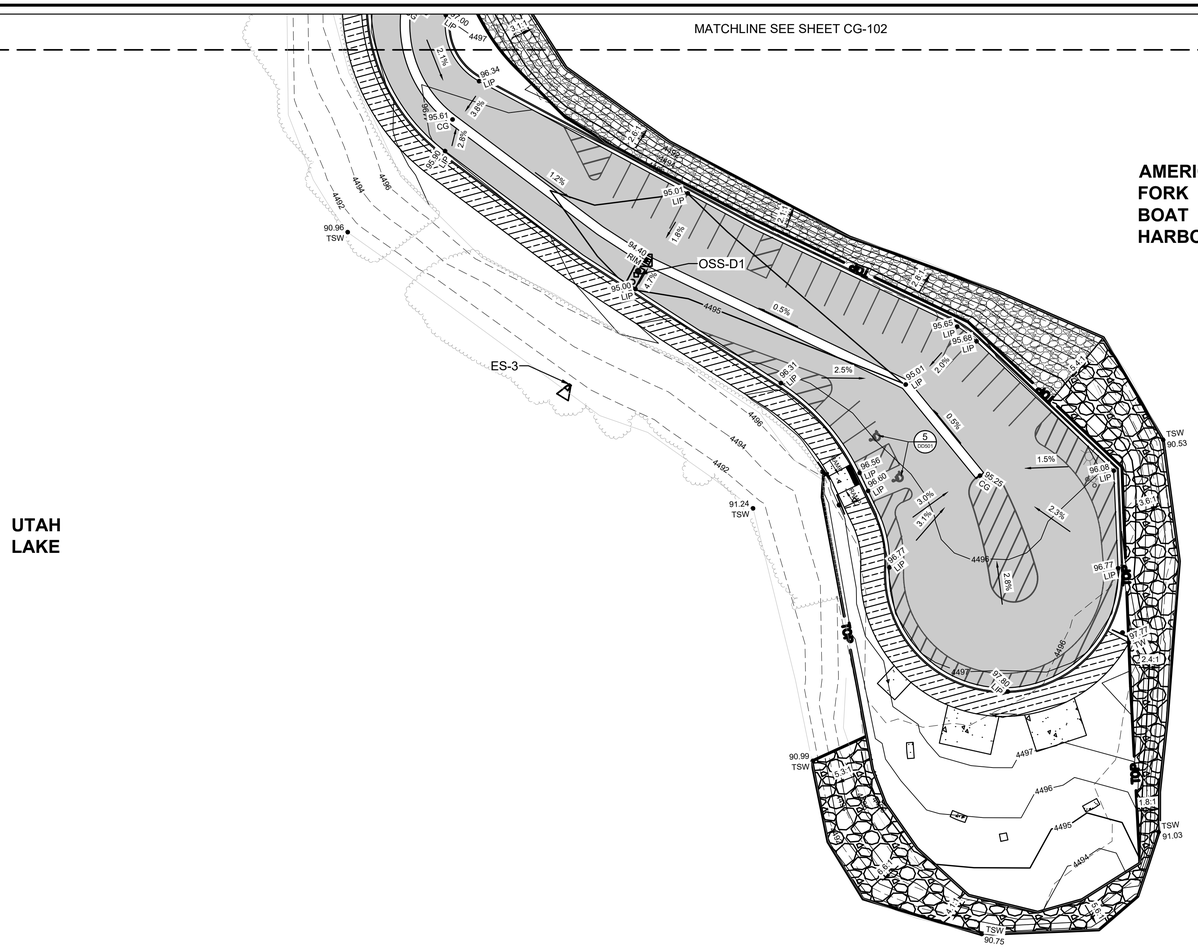
SHEET NUMBER:
CG101

Plot Date:8/22/2024 5:55 PM Plotted By: Daniel Netzley
Date Created:8/26/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEET\83-23-013_CG-101.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

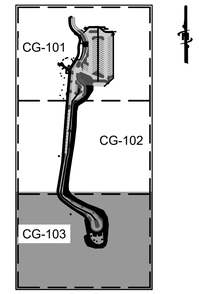

MATCHLINE SEE SHEET CG-101
MATCHLINE SEE SHEET CG-103
MATCHLINE PROJECT LIMITS
MATCHLINE PROJECT LIMITS
UTAH LAKE
AMERICAN FORK BOAT HARBOR
SDBX-3
ES-2
OSS-C1
91.08 TSW
91.08 TSW
91.51 TSW
TSW 91.02
TSW 90.94
TSW 90.58
TSW 90.57
96.48 CG
96.79 LIP
97.40 LIP
95.66 LIP
96.06 LIP
95.66 RIM
96.82 RIM
96.48 RIM
98.30 LIP
96.81 CG
95.56 LIP
95.50 RIM
95.92 LIP
95.86 LIP
96.70 LIP
96.79 LIP
96.35 LIP
96.10 CG
96.39 LIP
97.73 LIP
96.69 CG
97.00 LIP
96.54 LIP
97.85 LIP
4.6%
4.8%
4.5%
4.5%
4.5

MATCHLINE SEE SHEET CG-102



MATCHLINE PROJECT LIMITS

MATCHLINE PROJECT LIMITS



811
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N

0 30 60
SCALE IN FEET

LEGEND

CALLOUT	DESCRIPTION
X.X%	GRADING SLOPE AND DIRECTION (DOWNHILL)
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4234	CONTOUR MINOR (FG) (4234.00)
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VEHICULAR CONCRETE PAVEMENT SECTION 9 / DD502

NORMAL ASPHALT PAVEMENT SECTION 11 / DD501

HEAVY DUTY ASPHALT PAVEMENT SECTION 12 / DD501

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NO.	DESCRIPTION	BY	APPL	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

GRADING PLAN

FILE :	83-23-013_CG-101
JUB PROJ. # :	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA

ONE INCH
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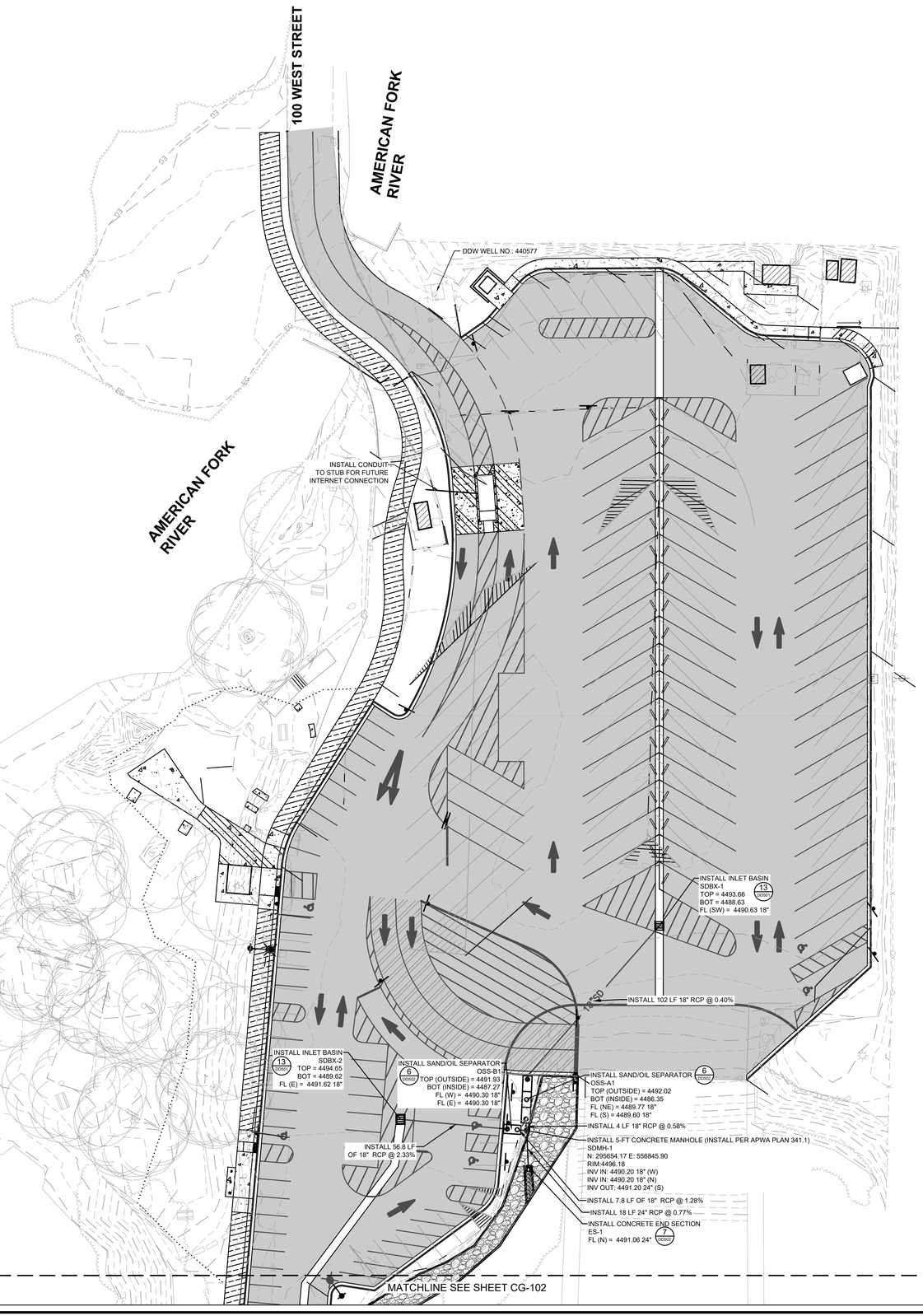
LAST UPDATED: 8/22/2024

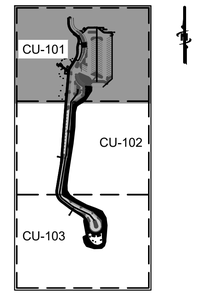
SHEET NUMBER:
CG103

Plot Date:8/22/2024 5:33 PM Plotted By: Daniel Netzley
Date Created:6/26/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKINGLOTDESIGN\CAD\SHEETS\83-23-013_CG-101.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

MATCHLINE PROJECT LIMITS





N

0 30 60

SCALE IN FEET

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NOTES:

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2. A POTENTIAL DESIGN CHANGE ORDER MAY BE ISSUED BY AMERICAN FORK CITY AT A FUTURE DATE THAT WILL ADDRESS THE FIRE DEPARTMENT REQUIREMENTS FOR FIRE PROTECTION FOR THIS SITE.

VEHICULAR CONCRETE PAVEMENT SECTION — 9 / DD502

NORMAL ASPHALT PAVEMENT SECTION — 11 / DD501

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NO.	DESCRIPTION	BY	APP'L	DATE
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AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

UTILITY PLAN

FILE :	83-23-013_CU-101
JUB PROJ. # :	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA

ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 8/22/2024

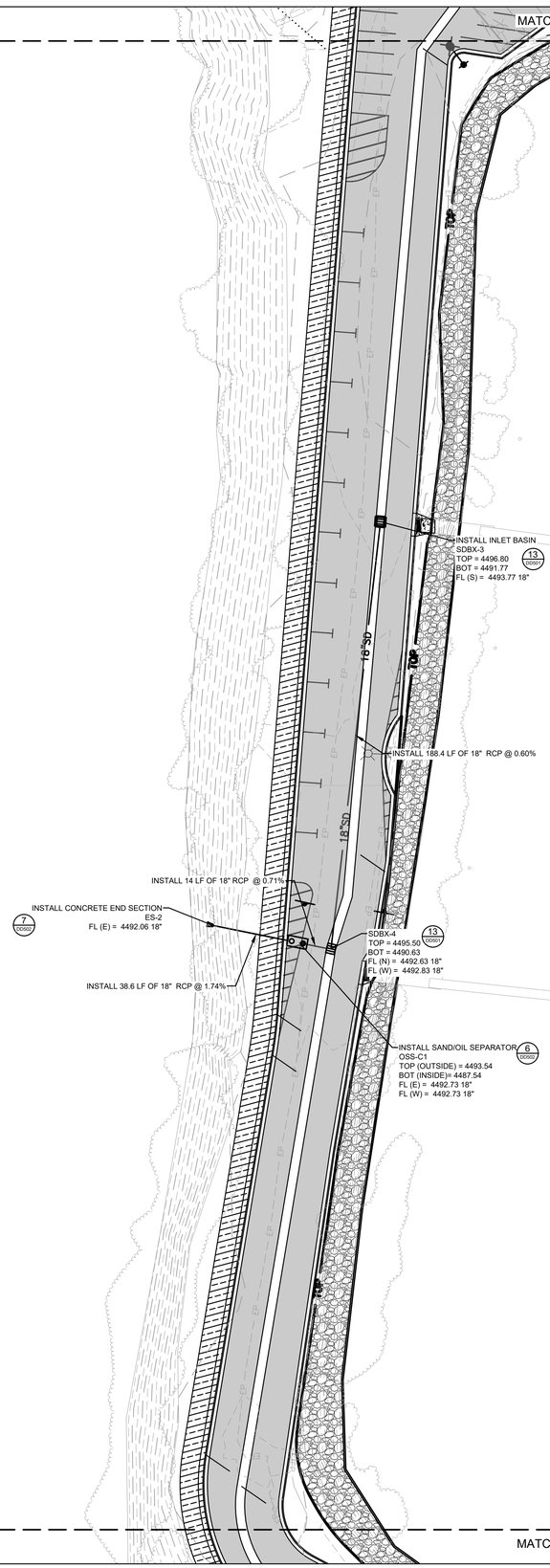
SHEET NUMBER:
CU101

Plot Date:8/22/2024 5:55 PM Plotted By: Daniel Netzley
Date Created:8/27/2024 I:\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORRPARKING\LOTDESIGN\CAD\SHEETS\83-23-013_CU-101.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

MATCHLINE PROJECT LIMITS

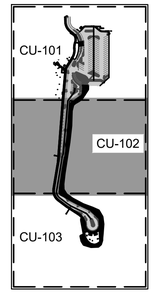
MATCHLINE SEE SHEET CG-101



MATCHLINE SEE SHEET CG-103

UTAH LAKE

AMERICAN FORK BOAT HARBOR



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AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

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JUB PROJ. # :	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA

ONE INCH
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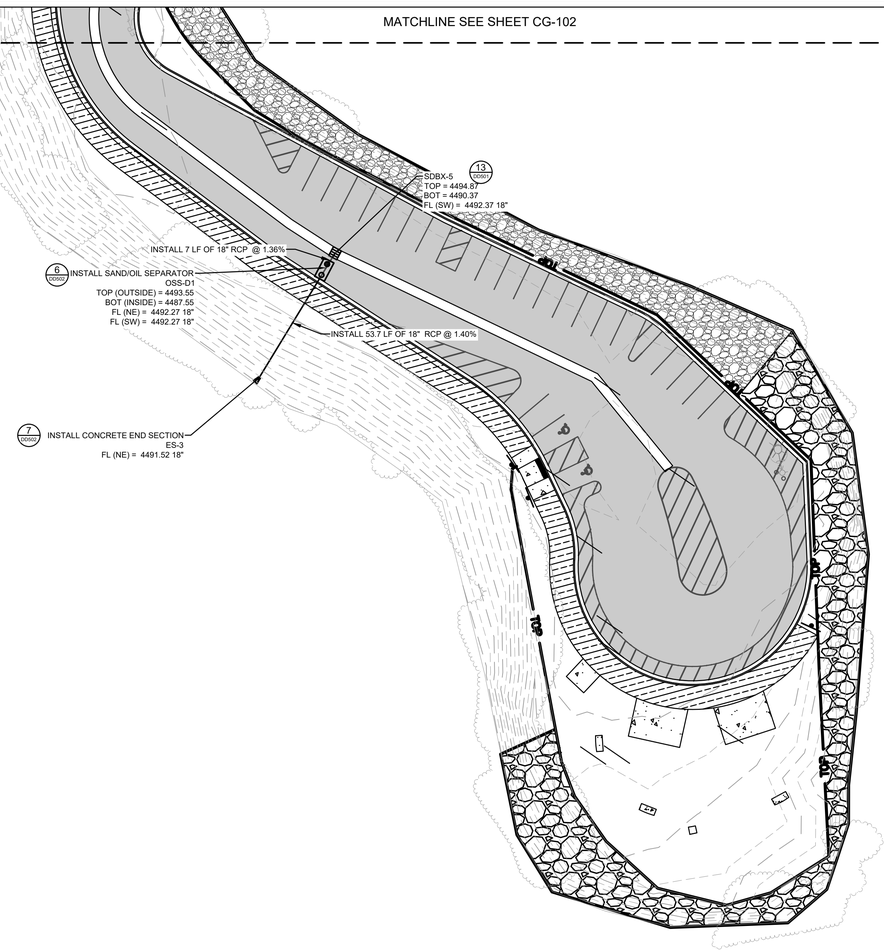
LAST UPDATED: 8/22/2024

SHEET NUMBER:
CU102

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

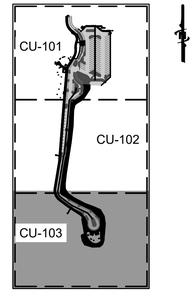
Plot Date:8/22/2024 5:34 PM Plotted By: Daniel Netzley
Date Created:8/27/2024 I:\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORREPAIRN6LOT\DESIGN\CAD\SHEETS\83-23-013_CU-101.DWG

MATCHLINE SEE SHEET CG-102



UTAH LAKE

AMERICAN FORK BOAT HARBOR



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36" RIPRAP TO BE INSTALLED 2 DD506

PEDESTRIAN FLAT CONCRETE TO BE INSTALLED 9 DD501

MATCHLINE PROJECT LIMITS

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UTILITY PLAN

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LAST UPDATED: 8/22/2024

SHEET NUMBER:
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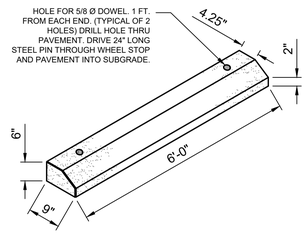
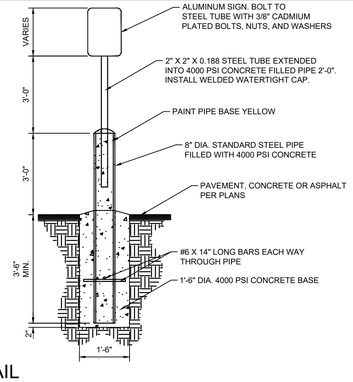
Plot Date:8/22/2024 5:34 PM Plotted By: Daniel Netzley
Date Created:8/27/2024 - N:\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORRPARKING\LOT\DESIGN\CAD\SHEETS\83-23-013_CU-101.DWG



1 CONCRETE WHEEL STOP
SCALE:N.T.S.



2 SIGN DETAIL
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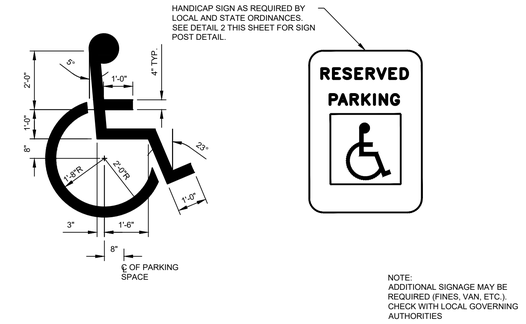
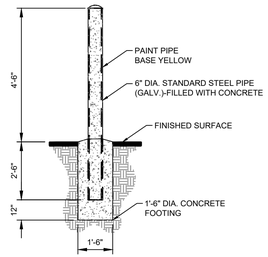
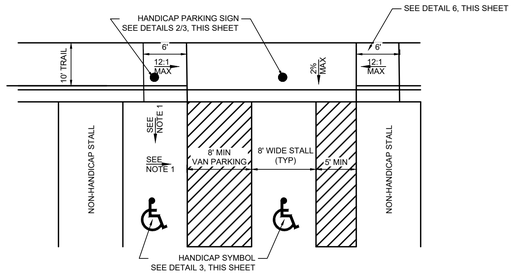


3 TYPICAL HANDICAP SYMBOL AND SIGN
SCALE:N.T.S.

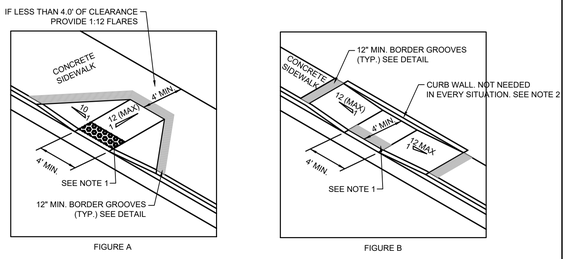


4 STATIONARY BOLLARD
SCALE:N.T.S.



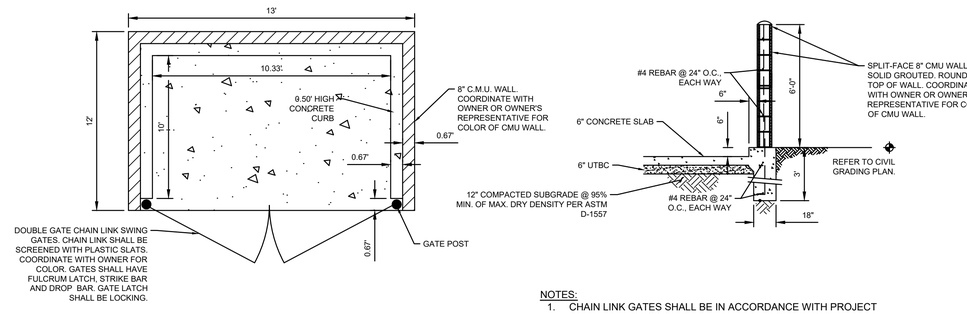
NOTES:
1. SLOPES IN PARKING LOT FOR HANDICAP PARKING ARE 2% MAX, 1.5% MIN FOR ASPHALT PAVEMENT, 1% MIN FOR CONCRETE PAVEMENT.

5 TYPICAL HANDICAP PARKING STALL
SCALE:N.T.S.



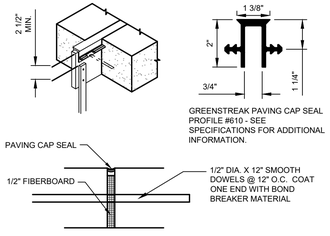
NOTES:
1. CONTINUOUS DETECTABLE WARNING SURFACE @ ALL HAZARDOUS ROUTES
2. CURB WALL HEIGHT SHALL BE NO HIGHER THAN 8". COORDINATE WITH ENGINEER WHEN CURB WALL IS NEEDED.

6 TYPICAL ADA RAMP DETAIL
SCALE:N.T.S.

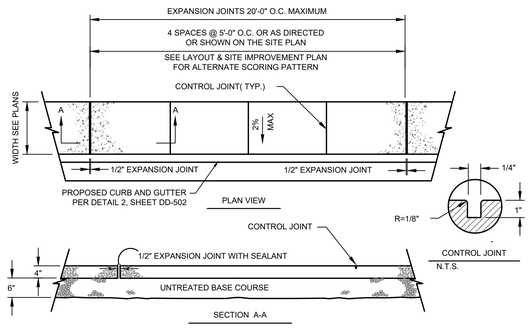


NOTES:
1. CHAIN LINK GATES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATION 32 31 13 - CHAIN LINK FENCES AND GATES.
2. UTBC SHALL BE COMPACTED TO 95% OF MAX. DRY DENSITY PER ASTM D-1557

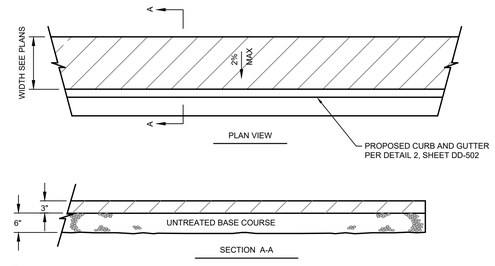
7 DUMPSTER ENCLOSURE
SCALE: N.T.S.



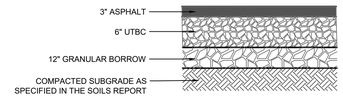
8 TYPICAL EXPANSION JOINT DETAIL
SCALE:N.T.S.



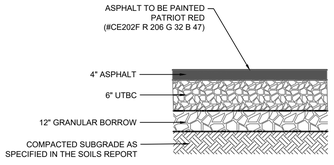
9 CONCRETE SIDEWALK DETAIL
SCALE:N.T.S.



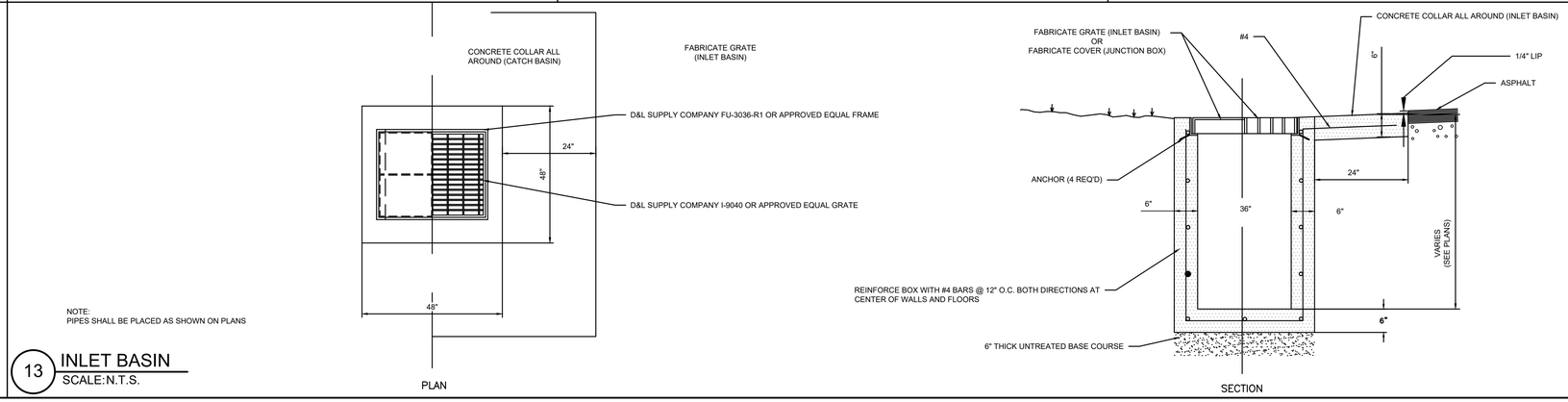
10 ASPHALT TRAIL DETAIL
SCALE:N.T.S.



11 NORMAL ASPHALT PAVEMENT SECTION
SCALE:N.T.S.



12 HEAVY DUTY ASPHALT PAVEMENT SECTION
SCALE:N.T.S.



13 INLET BASIN
SCALE:N.T.S.

J-U-B ENGINEERS, INC.
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NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

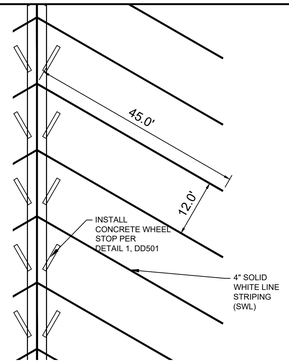
DETAILS

FILE : 83-23-013_DD50X
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/13/2024

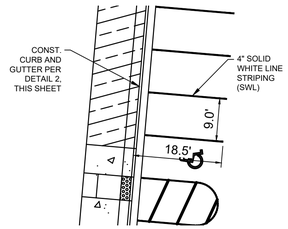
SHEET NUMBER:
DD501

Plot Date:8/22/2024 5:09 PM Plotted By: Daniel Netzley
Data Created:6/28/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_DD50X.DWG

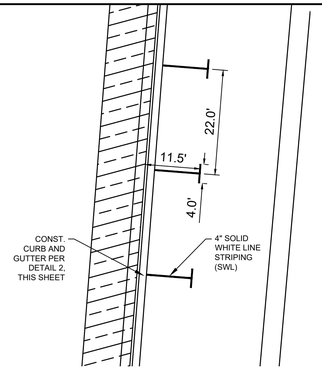
Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)



TYPE 1A - TYPICAL 30° BOAT TRAILER PARKING

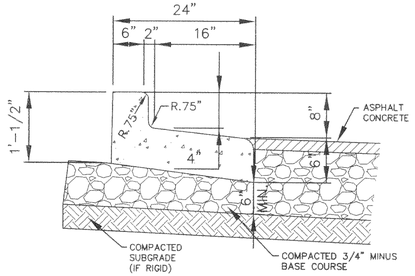


TYPE 1B - TYPICAL 90° CAR PARKING



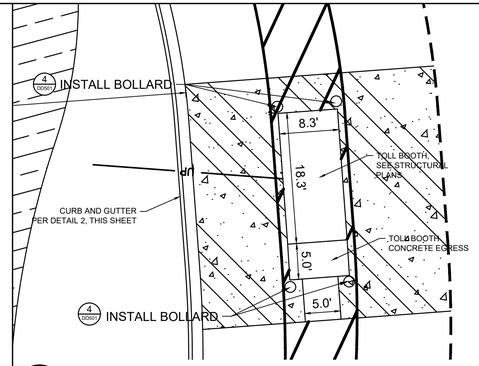
TYPE 1C - TYPICAL PARALLEL CAR PARKING

1 STRIPING DETAIL
SCALE:1" = 15'

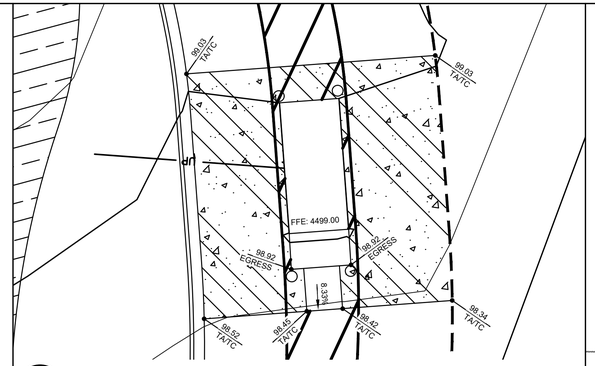


REVERSE LIP CURB & GUTTER "PRIVATE USE ONLY"
–NTS–

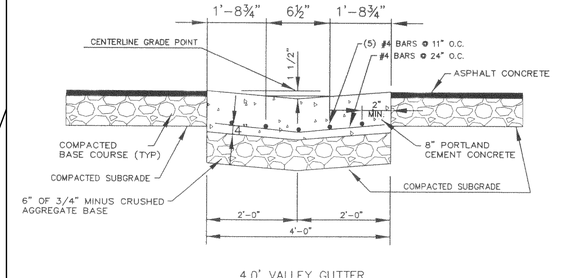
2 OPEN FACE 24" CURB AND GUTTER
SCALE:N.T.S.



3 TOLL BOOTH AREA DETAIL - PLAN
SCALE:N.T.S.



4 TOLL BOOTH AREA DETAIL - GRADING
SCALE:N.T.S.



4.0' VALLEY GUTTER
–NTS–

5 4' VALLEY GUTTER
SCALE:N.T.S.

STRUCTURE	OSS–A1
GALLON CAPACITY	4500

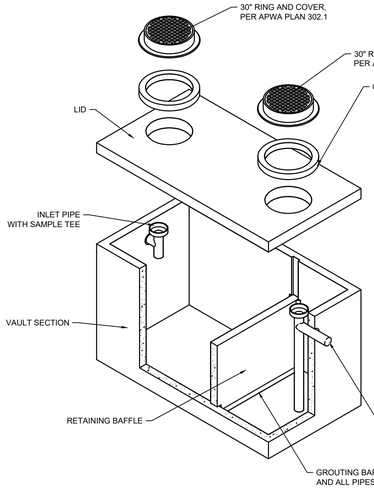
STRUCTURE	OSS–B1
GALLON CAPACITY	1000

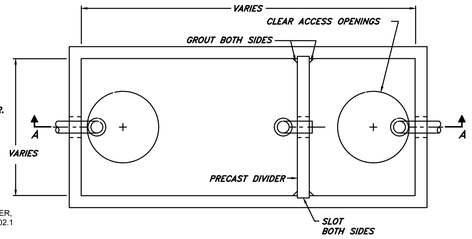
STRUCTURE	OSS–C1
GALLON CAPACITY	1500

STRUCTURE	OSS–D1
GALLON CAPACITY	1500

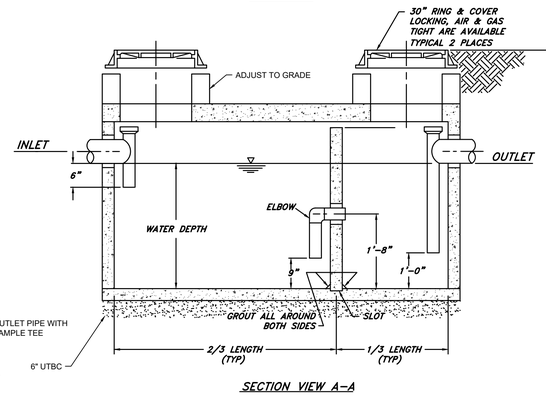
NOTES:

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH f'c = 4500 psi
2. REBAR: ASTM A–615 GRADE 60
3. MESH: ASTM A–185 GRADE 65
4. DESIGN: ACI–318–83 BUILDING CODE ASTM C–857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
5. LOADS: H–25 TRUCK WHEEL w/ 30% IMPACT PER AASHTO
6. FILL w/ CLEAN WATER PRIOR TO START–UP OF SYSTEM
7. CONTRACTOR TO SUPPLY & INSTALL ALL PIPING & SAMPLING TEES
8. GRAY WATER ONLY, BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER
9. BOXES ARE TO BE DESIGNED IN CONSIDERATION OF BUOYANCY. CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS TO ENGINEER.
10. SEE SHEET DD504 AND DD505 FOR OSS SIZING CALCULATIONS.



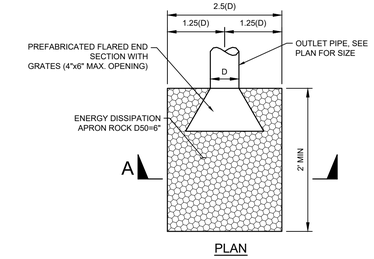


PLAN VIEW

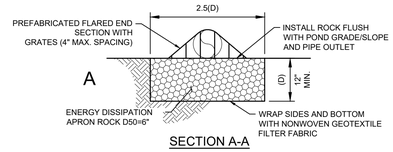


SECTION VIEW A–A

6 SAND/OIL SEPARATOR
SCALE:N.T.S.

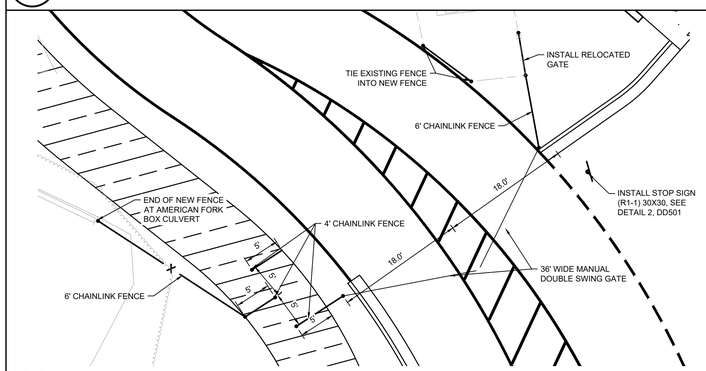


PLAN

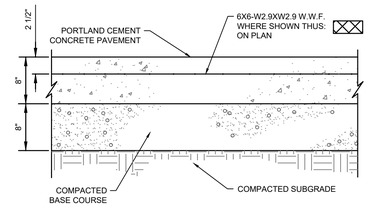


SECTION A-A

7 CONCRETE END SECTION
SCALE:N.T.S.



8 VEHICULAR GATE AND FENCING DETAIL
SCALE:N.T.S.



9 VEHICULAR PAVEMENT SECTION
SCALE:N.T.S.

J-U-B ENGINEERS, INC.
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BID SET

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NO.	DESCRIPTION	BY	APP.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

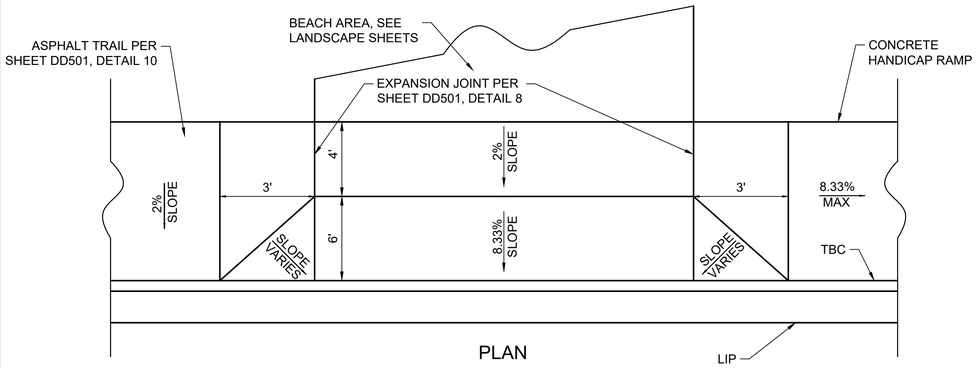
DETAILS

FILE : 83-23-013_DD50X
JUB PROJ. # : 83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/13/2024

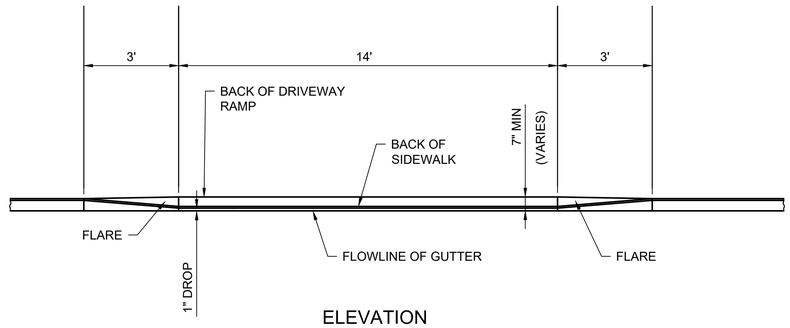
SHEET NUMBER:
DD502

Attachment: AFBH Bid Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

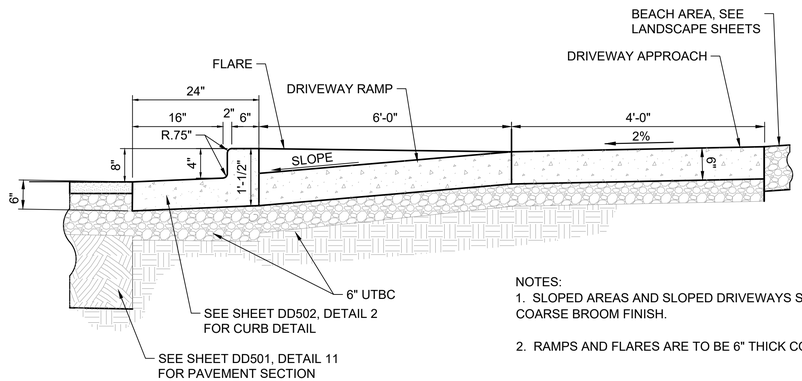
Plot Date:8/22/2024 5:46 PM Plotted By: Daniel Netzley
Date Created:6/28/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEET\83-23-013_DD50X.DWG



PLAN



ELEVATION



SECTION A-A
N.T.S.

NOTES:
1. SLOPED AREAS AND SLOPED DRIVEWAYS SHALL HAVE A COARSE BROOM FINISH.

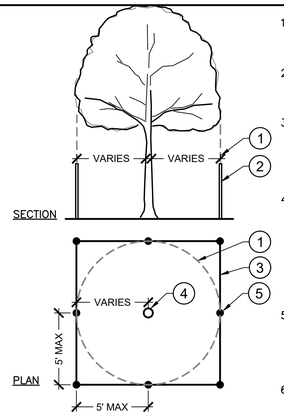
2. RAMPS AND FLARES ARE TO BE 6" THICK CONCRETE.

1 STANDARD DRIVE APPROACH

SCALE: N.T.S.

1. DRIPLINE OF TREE CANOPY
2. ORANGE CONSTRUCTION FENCE STAKED 5'–0" O.C. MAX. W/METAL T–POSTS (SEE SPECS)
3. TREE PROTECTION FENCE OUTSIDE OF DRIPLINE OF TREE. SEE SPECS.
4. TREE TRUNK
5. METAL T–POST 5' O.C.

NOTES:
1. DO NOT STORE OR OPERATE ANY MATERIALS, EQUIPMENT, DEBRIS, ETC. INSIDE FENCE.
2. IF REQUIRED BY CONSTRUCTION, ONLY HAND EXCAVATION IS ALLOWED WITHIN THIS AREA.
3. REMOVE ONLY UPON APPROVAL OF LANDSCAPE ARCHITECT.
4. SEE TREE PROTECTION AND PRESERVATION NOTES AND TECHNICAL SPECIFICATIONS.



1. TREE PROTECTION PRACTICES INCLUDE ESTABLISHING THE TREE PROTECTION ZONE (TPZ) PER DETAIL.
2. THERE WILL BE NO DIGGING, TRENCHING, GRADING, OR STORING OF MATERIALS OR EQUIPMENT IN THE TPZ.
3. NO EQUIPMENT (EXCEPT FOR A SOD CUTTER) SHALL BE ALLOWED INSIDE THE TPZ. IF SPECIAL PROVISION FOR EXCAVATION IS APPROVED BY OWNER, IT SHALL BE DONE BY HAND OR A SOIL VACUUM.
4. USE TUNNELING OR BORING FOR IRRIGATION AND UTILITIES INSIDE THE TPZ. NO ROOTS LARGER THAN 4" IN DIAMETER WILL BE CUT. ALL ROOTS WILL BE CUT CLEANLY WITH A SAW. IN SITUATIONS WHERE A ROOT HAS BEEN DAMAGED, A CLEAN CUT SHALL BE MADE ON THE ROOT AT THE EDGE OF THE TRENCH CLOSEST TO THE TREE TRUNK.
5. TREES SHALL NOT BE USED TO SUPPORT ANY SCAFFOLDING, SIGNS, TEMPORARY UTILITY, OR ANY OTHER DEVICE. IF DAMAGE OCCURS TO A PROTECTED TREE, IMMEDIATE CONTACT SHALL BE MADE WITH THE OWNER.
6. DO NOT CHANGE THE SOIL GRADE BY CUTTING OR FILLING IN THE TPZ.
7. CONTRACTOR SHALL SUBMIT A SCHEDULE FOR WEEKLY WATERING AND INDICATE THE INDIVIDUAL WHO IS RESPONSIBLE TO ENFORCE TREE PROTECTION REQUIREMENTS AS SET FORTH IN THE DRAWINGS, NOTES, DETAILS, AND SPECS. TREE PROTECTION IN ADDITION TO WHAT IS SHOWN ON THE PLAN MAY BE REQUIRED.
8. CONTRACTOR IS RESPONSIBLE TO ENSURE TREES ARE PROPERLY PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION. DAMAGED OR DEAD TREES WILL BE REPLACED IN KIND (SIZE, SPECIES, ETC) OR AS INDICATED IN THE SPECS.
9. SEE SPECIFICATION SECTION 005639 TREE PROTECTION & PRESERVATION

2 TREE PROTECTION ZONE (TPZ)

NTS

MUN–AFBH–13

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AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DETAILS

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JUB PROJ. # : 83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/13/2024

SHEET NUMBER:
DD503

Plot Date:8/22/2024 5:09 PM Plotted By: Daniel Netzley
Date Created:4/28/2024 \\JUB\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEET\83-23-013_DD50X.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Catchment Name

Project Name
Project No. 10-xx-xxx

Catchment Parameters

Sub-catchment	C_1	$Area_1$ (ac)	C_2	$Area_2$ (ac)	C_3	$Area_3$ (ac)	C_4	$Area_4$ (ac)	C_T	$Area_T$ (ac)
A1	0.90	2.31							0.90	2.31
								Total A		2.31
								Comp. C	0.9	

	Sheet Flow Calculation				Gutter Flow					
Sub-catchment	n (unitless)	L (ft)	s (ft/ft)	$T_{c\text{-sheet}}$ (min)	Slope (ft/ft)	L_{gutter} (ft)	Interc. Coeff.	V_{gutter} (fps)	$T_{c\text{-gutter}}$ (min)	T_c (min)
A1	0.24									10.0

	Design Storm Intensities				Design Storm Flow Rates			
Sub-catchment	i_2 (in/hr)	i_{25} (in/hr)	i_{50} (in/hr)	i_{100} (in/hr)	Q_2 (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
A1	0.00	2.94	0.00	5.60	0.00	6.12	0.00	11.67
					0.00	6.12	0.00	11.67

$$Q = CiA$$

$$V_{gutter} = 3.281 k S_p^{0.5}$$

$$T_{c-gutter} = \frac{L_{gutter}}{60 \cdot V_{gutter}}$$

$$T_{c-sheet} = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} s^{0.4}}$$

$$T_c = T_{c-gutter} + T_{c-sheet}$$

V. 2020-03-17

Catchment Name

Project Name
Project No. 10-xx-xxx

Pipe Sizing

Allowable Limits	Velocity (ft/sec)	Flow depth (%)
Min	3.0	0.0
Max	10.0	90.0

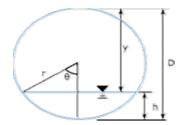
				Minimum Pipe Slope			Maximum Pipe Slope		
Pipe Id	Design Flow (cfs)	Mannings (n)	Pipe Size (in)	Min. Slope[1] (%)	V (fps)	Flow Depth (%)	Max. Slope[2] (%)	V (fps)	Flow Depth (%)
SDBX-1 TO OSS-A1	6.12	0.013	18	0.40	4.3	75.5	0.50	4.7	69.0
OSS-A1 TO SDMH-1	6.12	0.013	18	0.58	5.0	65.4	2.10	8.2	44.0
SDMH-1 TO ES-1	7.45	0.013	24	0.77	5.9	42.4	0.50	5.0	47.9

Pipe velocity solved using the Mannings equation at the respective flow depth.
Flow depth solved using itterative solutions of the Manning's equation

$$Q = \frac{1.49}{n} \cdot A \cdot R_h^{\frac{2}{3}} \cdot S^{\frac{1}{2}}$$

$$r = \frac{D}{2} \qquad h = 2r - y \qquad \theta = 2\arccos\left(\frac{r-h}{r}\right)$$

$$A = \pi \cdot r^2 - \frac{r^2(\theta - \sin\theta)}{2} \qquad R_h = \frac{A}{P} \qquad P = 2\pi r - r\theta$$



Note:
[1] Slightly decreased slopes may be considered where the depth of flow will be 0.3 of the diameter or greater for design average flow. (10-State Standards, Paragraph 33.42)
[2] Maximum slopes greater than 20% require additional restraint. (10-State Standards, Paragraph 33.46)

V. 2020-03-17

Catchment Name

Project Name
Project No. 10-xx-xxx

OIL/SAND SEPARATOR

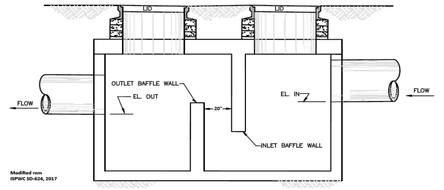
Peak Flow Design Storm 100 -year
Peak Flow Rate (Q_{Peak}) 11.67 cfs

$$Q_{WQ} = C * i_{WQ} * A$$

Design Calculations

Vault Size =	1500	gallon	Peak Throat Velocity (v_{Peak}) =	0.47	ft/sec
No. of S&G Traps =	3				
Baffle Spacing =	20	inch	Allowed Max Flow rate ($Q_{Max,A}$) =	4.15	ft^3/sec
Throat Width =	60	inch	Max Flow rate (Q_{Max}) =	3.89	ft^3/sec
Total Throat Area =	25.00	ft^2	Bypass Flow Rate =	0	ft^3/sec

Checks: V_{Peak} < 0.5 PASS
Bypass Required FALSE



Bypass calcluations

	Inlet	Bypass			
Flow rate =	12.45	0.00	ft^3/sec		
Mannings =			(unitless)		
Pipe dia =			in		
Pipe slope =			%		
Flow depth =			ft	Difference =	ft

V. 2020-03-17

1 CATCHMENT AREA A1 PIPE AND OSS CALCULATIONS
SCALE:N.T.S.

Catchment Name

Project Name
Project No. 10-xx-xxx

Catchment Parameters

Sub-catchment	C_1	$Area_1$ (ac)	C_2	$Area_2$ (ac)	C_3	$Area_3$ (ac)	C_4	$Area_4$ (ac)	C_T	$Area_T$ (ac)
B1	0.90	0.50	0.20	0.03					0.86	0.53
								Total A		0.53
								Comp. C	0.86	

	Sheet Flow Calculation				Gutter Flow					
Sub-catchment	n (unitless)	L (ft)	s (ft/ft)	$T_{c\text{-sheet}}$ (min)	Slope (ft/ft)	L_{gutter} (ft)	Interc. Coeff.	V_{gutter} (fps)	$T_{c\text{-gutter}}$ (min)	T_c (min)
B1	0.24									10.0

	Design Storm Intensities				Design Storm Flow Rates			
Sub-catchment	i_2 (in/hr)	i_{25} (in/hr)	i_{50} (in/hr)	i_{100} (in/hr)	Q_2 (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
B1	0.00	2.94	0.00	5.60	0.00	1.33	0.00	2.53
					0.00	1.33	0.00	2.53

$$Q = CiA$$

$$V_{gutter} = 3.281 k S_p^{0.5}$$

$$T_{c-gutter} = \frac{L_{gutter}}{60 \cdot V_{gutter}}$$

$$T_{c-sheet} = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} s^{0.4}}$$

$$T_c = T_{c-gutter} + T_{c-sheet}$$

V. 2020-03-17

Catchment Name

Project Name
Project No. 10-xx-xxx

Pipe Sizing

Allowable Limits	Velocity (ft/sec)	Flow depth (%)
Min	3.0	0.0
Max	10.0	90.0

				Minimum Pipe Slope			Maximum Pipe Slope		
Pipe Id	Design Flow (cfs)	Mannings (n)	Pipe Size (in)	Min. Slope[1] (%)	V (fps)	Flow Depth (%)	Max. Slope[2] (%)	V (fps)	Flow Depth (%)
SDBX-2 TO OSS-B1	1.33	0.013	12	2.33	5.7	33.6	3.00	6.3	31.5
OSS-B1 TO SDMH-1	1.33	0.013	12	1.28	4.6	39.5	3.00	6.3	31.5

Pipe velocity solved using the Mannings equation at the respective flow depth.
Flow depth solved using itterative solutions of the Manning's equation

$$Q = \frac{1.49}{n} \cdot A \cdot R_h^{\frac{2}{3}} \cdot S^{\frac{1}{2}}$$

$$r = \frac{D}{2} \qquad h = 2r - y \qquad \theta = 2\arccos\left(\frac{r-h}{r}\right)$$

$$A = \pi \cdot r^2 - \frac{r^2(\theta - \sin\theta)}{2} \qquad R_h = \frac{A}{P} \qquad P = 2\pi r - r\theta$$

Note:
[1] Slightly decreased slopes may be considered where the depth of flow will be 0.3 of the diameter or greater for design average flow. (10-State Standards, Paragraph 33.42)
[2] Maximum slopes greater than 20% require additional restraint. (10-State Standards, Paragraph 33.46)

V. 2020-03-17

Catchment Name

Project Name
Project No. 10-xx-xxx

Sand and Grease Trap

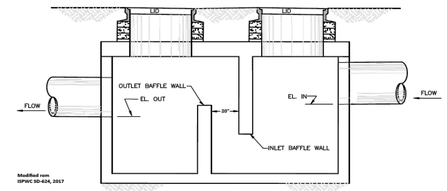
Peak Flow Design Storm 100 -year
Peak Flow Rate (Q_{Peak}) 2.53 cfs

$$Q_{WQ} = C * i_{WQ} * A$$

Design Calculations

Vault Size =	1000	gallon	Peak Throat Velocity (v_{Peak}) =	0.47	ft/sec
No. of S&G Traps =	1				
Baffle Spacing =	16	inch	Allowed Max Flow rate ($Q_{Max,A}$) =	3.33	ft^3/sec
Throat Width =	48	inch	Max Flow rate (Q_{Max}) =	2.53	ft^3/sec
Total Throat Area =	5.33	ft^2	Bypass Flow Rate =	0	ft^3/sec

Checks: V_{Peak} < 0.5 PASS
Bypass Required FALSE



Bypass calcluations

	Inlet	Bypass			
Flow rate =	3.33	0.00	ft^3/sec		
Mannings =			(unitless)		
Pipe dia =			in		
Pipe slope =			%		
Flow depth =	0.00	0.00	ft	Difference =	ft

V. 2020-03-17

1 CATCHMENT AREA B1 PIPE AND OSS CALCULATIONS
SCALE:N.T.S.

J-U-B ENGINEERS, INC.
J-U-B ENGINEERS, INC.
392 E. Winchester St.
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www.jub.com

BID SET

REGISTERED PROFESSIONAL ENGINEER
12717219-2202
DANIEL AARON NETZLEY
07/24/2024
STATE OF UTAH

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NO.	DESCRIPTION	BY	APP.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DETAILS

FILE: 83-23-013_DD50X
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/13/2024

SHEET NUMBER:
DD504

Plot Date:8/22/2024 5:10 PM Plotted By: Daniel Netzley
Data Created:6/28/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\GI\TYPRO\EICTS\83-23-013_BOAT HARBOR\PARKING LOT\DESIGN\CAD\SHEET\83-23-013_DD50X.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Catchment Name

Project Name
Project No. 10-xx-xxx

Catchment Parameters

Sub-catchment	C_1	$Area_1$ (ac)	C_2	$Area_2$ (ac)	C_3	$Area_3$ (ac)	C_4	$Area_4$ (ac)	C_T	$Area_T$ (ac)
C1	0.90	0.46							0.90	0.46
C2	0.90	0.28							0.90	0.28
								Total A		0.74
								Comp. C	0.9	

	Sheet Flow Calculation				Gutter Flow					
Sub-catchment	n (unitless)	L (ft)	s (ft/ft)	$T_{c\text{-sheet}}$ (min)	Slope (ft/ft)	L_{gutter} (ft)	Interc. Coeff.	V_{gutter} (fps)	$T_{c\text{-gutter}}$ (min)	T_c (min)
C1	0.24									**10.0**
C2	0.24									**10.0**

	Design Storm Intensities				Design Storm Flow Rates			
Sub-catchment	i_2 (in/hr)	i_{25} (in/hr)	i_{50} (in/hr)	i_{100} (in/hr)	Q_2 (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
C1	0.00	2.94	0.00	5.60	0.00	1.22	0.00	2.33
C2	0.00	2.94	0.00	5.60	0.00	0.74	0.00	1.41
					0.00	**1.96**	**0.00**	**3.74**

$$Q = CiA$$

$$V_{gutter} = 3.281 k S_p^{0.5}$$

$$T_{c-gutter} = \frac{L_{gutter}}{60 \cdot V_{gutter}}$$

$$T_{c-s} = \frac{0.007(nL)^{0.8}}{(P_2)^{0.5} S^{0.4}}$$

$$T_c = T_{c-gutter} + T_{c-sheet}$$

V. 2020-03-17

Catchment Name

Project Name
Project No. 10-xx-xxx

Pipe Sizing

Allowable Limits	Velocity (ft/sec)	Flow depth (%)
Min	3.0	0.0
Max	10.0	90.0

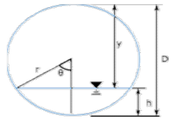
				Minimum Pipe Slope			Maximum Pipe Slope		
Pipe Id	Design Flow (cfs)	Mannings (n)	Pipe Size (in)	Min. Slope[1] (%)	V (fps)	Flow Depth (%)	Max. Slope[2] (%)	V (fps)	Flow Depth (%)
SDBX-3 TO SDBX-4	1.22	0.013	18	0.60	3.3	26.1	1.00	4.0	23.0
SDBX-4 TO OSS-C1	1.96	0.013	18	0.71	4.0	31.9	1.00	4.6	29.2
OSS-C1 TO ES-2	1.96	0.013	18	1.74	5.6	25.4	5.00	8.1	19.5

Pipe velocity solved using the Mannings equation at the respective flow depth.
Flow depth solved using itterative solutions of the Manning's equation

$$Q = \frac{1.49}{n} \cdot A \cdot R_h^{\frac{2}{3}} \cdot S^{\frac{1}{2}}$$

$$r = \frac{D}{2} \qquad h = 2r - y \qquad \theta = 2\arccos\left(\frac{r-h}{r}\right)$$

$$A = \pi \cdot r^2 - \frac{r^2(\theta - \sin\theta)}{2} \qquad R_h = \frac{A}{P} \qquad P = 2\pi r - r\theta$$



Note:
[1] Slightly decreased slopes may be considered where the depth of flow will be 0.3 of the diameter or greater for design average flow. (10-State Standards, Paragraph 33.42)
[2] Maximum slopes greater than 20% require additional restraint. (10-State Standards, Paragraph 33.46)

V. 2020-03-17

Catchment Name

Project Name
Project No. 10-xx-xxx

Sand and Grease Trap

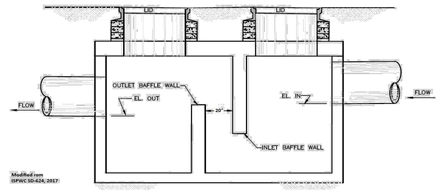
Peak Flow Design Storm 100 -year
Peak Flow Rate (Q_{Peak}) 3.74 cfs

$$Q_{WQ} = C * i_{WQ} * A$$

Design Calculations

Vault Size =	1500	gallon	Peak Throat Velocity (v_{Peak}) =	0.50	ft/sec
No. of S&G Traps =	1				
Baffle Spacing =	18	inch	Allowed Max Flow rate ($Q_{Max,A}$) =	4.15	ft^3/sec
Throat Width =	60	inch	Max Flow rate (Q_{Max}) =	3.74	ft^3/sec
Total Throat Area =	7.50	ft^2	Bypass Flow Rate =	0	ft^3/sec

Checks: $V_{Peak} < 0.5$ PASS
Bypass Required FALSE



Bypass calcluations

	Inlet	Bypass			
Flow rate =	4.15	0.00	ft^3/sec		
Mannings =			(unitless)		
Pipe dia =			in		
Pipe slope =			%		
Flow depth =	0.00	0.00	ft	**Difference =**	**ft**

V. 2020-03-17

1 CATCHMENT AREA C1 PIPE AND CSS CALCULATIONS
SCALE:N.T.S.

J-U-B ENGINEERS, INC.
J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
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www.jub.com

BID SET

REGISTERED PROFESSIONAL ENGINEER
12717219-2202
DANIEL AARON NETZLEY
07/24/2024
STATE OF UTAH

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NO.	DESCRIPTION	BY	APPR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DETAILS

FILE: 83-23-013_DD50X
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/13/2024

SHEET NUMBER:
DD505

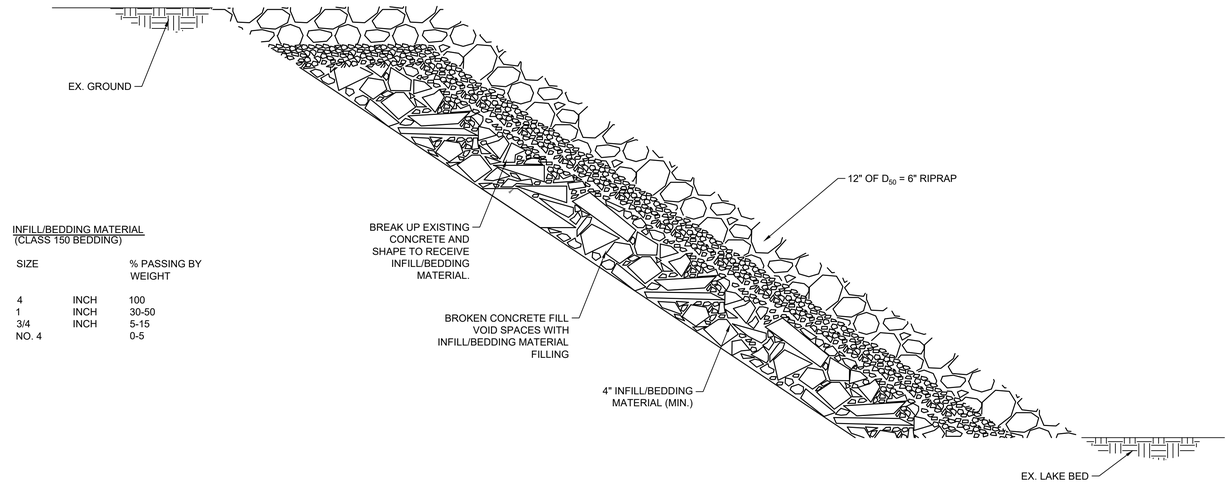
Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Catchment Name
Project Name
Project No. 10-xx-xxx
Catchment Parameters
Pipe Sizing
Sand and Grease Trap
Design Calculations
Bypass calcluations
Pipe velocity solved using the Mannings equation at the respective flow depth.
Flow depth solved using itterative solutions of the Manning's equation
Note:
[1] Slightly decreased slopes may be considered where the depth of flow will be 0.3 of the diameter or greater for design average flow. (10-State Standards, Paragraph 33.42)
[2] Maximum slopes greater than 20% require additional restraint. (10-State Standards, Paragraph 33.46)
V. 2020-03-17

1 CATCHMENT AREA D1 PIPE AND CSS CALCULATIONS
SCALE:N.T.S.

Plot Date:8/22/2024 5:10 PM Plotted By: Daniel Netzley
Data Created:6/28/2024 \\JUB.COM\C$\CENTRAL\CLIENTS\UT\AMERICANFORK\GI\TYPROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_DD50X.DWG

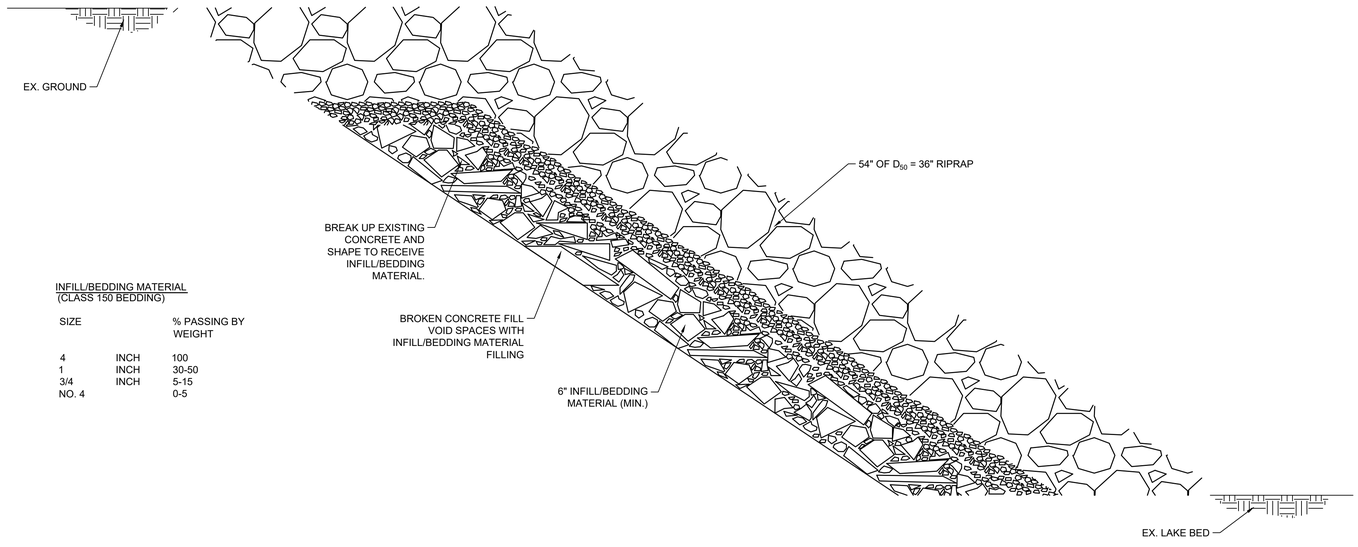
NOTES:
1. CONTRACTOR SHALL SUBMIT RIPRAP GRADATION TO ENGINEER PER REVIEW.



INFILL/BEDDING MATERIAL
(CLASS 150 BEDDING)

SIZE		% PASSING BY WEIGHT
4	INCH	100
1	INCH	30-50
3/4	INCH	5-15
NO. 4		0-5

A1 HARBOR SLOPE PROTECTION DETAIL
SCALE:N.T.S.



INFILL/BEDDING MATERIAL
(CLASS 150 BEDDING)

SIZE		% PASSING BY WEIGHT
4	INCH	100
1	INCH	30-50
3/4	INCH	5-15
NO. 4		0-5

A2 LAKE EXPOSED SLOPE PROTECTION DETAIL
SCALE:N.T.S.

J-U-B ENGINEERS, INC.
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Salt Lake City, UT 84107
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07/24/2024
STATE OF UTAH

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NO.	DESCRIPTION	BY	APPL	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DETAILS

FILE : 83-23-013_DD50X
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/13/2024

SHEET NUMBER:
DD506

Plot Date:8/22/2024 5:10 PM Plotted By: Daniel Netzley
Date Created:6/28/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEET\83-23-013_DD50X.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PLANTING NOTES

1. The Contractor shall be familiar with the planting and irrigation technical specifications -- failure to do so will not relieve the contractor of his responsibility to fulfill all requirements in said specifications.

2. Prior to any planting operations, the irrigation system shall be fully operational and all planting areas shall be thoroughly moistened.

3. The planting plan is diagrammatic, and all plant locations are approximate. Plant symbols and mulch hatches on the plans take precedence over quantities shown in the Plant Material Schedule. The Contractor shall verify all quantities and notify the Landscape Architect of any discrepancies between the quantities listed and the symbols shown. The Plant Material Schedule is for the Contractor's convenience only.

4. No substitution of size, grade, variety or any species shall be permitted except by written permission of the Landscape Architect. Upon receiving Notice to Proceed, the Contractor shall provide written proof that the specified plant material is available and has been secured or reserved specifically for this project. Obtain nursery stock and other plant materials from reliable and stable sources prior to order and delivery.

5. Final Grade Preparation
   A. The subgrade Material Shall be rough graded to plus or minus one tenth (+0.1) foot of the final rough grade, which will allow the Contractor to achieve final finished grade through the placement of the topsoil.
   B. Protect existing trees, shrubs, lawns, existing structures, fences, roads, sidewalks, paving, curb and gutter and other features during Construction.
   C. Protect above or below grade utilities. Contact utility companies to repair damage to utilities. Contractor shall pay all cost of repairs which he causes.
   D. Maintain all benchmarks, control monuments and stakes, whether newly established by surveyor or previously existing. Protect from damage and dislocation.
   E. Grading Intent: Spot elevations and contours indicated are based on the best available data. The intent is to maintain constant slopes between spot elevations.
   F. Conduct work in an orderly manner. Do not create a nuisance. Do not permit soil accumulation on streets or sidewalks. Do not allow soil to be washed into sewers and storm drains.
   G. Grade slopes to provide adequate drainage after compaction. Do not create water pockets or ridges. Use all means necessary to prevent erosion of freshly graded areas during construction until surfaces have been constructed and landscaping areas have taken hold.
   H. Grades shall be smooth, even, and maintain a consistent uniform slope. Grades with undulating surfaces will be rejected and require re-grading.
   I. The Contractor shall maintain a minimum of two (2) percent drainage away from all buildings, structures, and walls. Finished grades shall be smoothed to eliminate puddling or standing water.
   J. All finished grades shall be approved by the Landscape Architect prior to installation of any plant materials.

6. All planting areas shall receive a minimum of four (4) inches of imported topsoil in turf areas and twelve (12) inches in planting beds. All topsoil used on this project shall meet the following criteria:
   A. pH:.....5.5 - 8.0
   B. EC (electrical conductivity):.....<2.0 mmhos per centimeter
   C. SAR (sodium absorption ratio):.....<3.0
   D. % OM (percent organic matter):.....2%
   E. Texture (particle size per USDA classification):
      I. Sand:..... <70%
      II. Silt:.....<70%
      III. Clay:.....<30%
      IV. Stone Fragments (gravels or any soil particle Greater than two (2) mm in size):.....<5% (by volume)
      V. Rocks > 1.5".....None

   In addition, the topsoil shall be fertile, friable, natural loam and shall be capable of sustaining vigorous plant growth. It shall be free of stones, lumps, clods of hard earth, plants or their roots, sticks, and other extraneous matter. The topsoil shall contain neither noxious weeds nor their seeds. It shall not be used for planting operations while in a frozen or muddy condition. An appropriate fertilizer and mycorrhizae inoculant may be used to provide needed nutrients for healthy and vigorous plant growth. Follow recommendation of topsoil report.

7. The following procedure shall be followed in placing all topsoil:
   A. All areas to receive topsoil which have a slope of less than ten (10) percent shall be cross-ripped to a depth of four (4) to six (6) inches.
   B. The surface of the subgrade shall be scarified to a depth of two (2) inches to provide a transition zone between the subgrade and the topsoil. Place the topsoil on the subgrade and fine grade to the final finished grade and topsoil depths as indicated on the drawings and in these notes.
   C. Any required soil amendments (i.e. organic matter, fertilizer, gypsum, etc.) shall be thoroughly blended with imported or screened topsoil prior to placement. (Do not place amendments on top of topsoil and then blend.) Where only a dry, granular fertilizer is to be added, it may be applied to the surface and raked in during the fine grading process.

8. The Contractor shall obtain a soil analysis from any authorized soil testing agency of any existing stockpiled or imported topsoil to be used on the project to verify that it conforms to the topsoil specifications. Test results shall include horticultural nutrient recommendations. The soil samples shall be obtained per the testing agency directions. Allow ten (10) working days to obtain test results. The costs for such testing shall be the responsibility of the Contractor. Prior to delivery of the imported topsoil to the site, the Contractor shall provide to the Landscape Architect the name and location of the topsoil source, along with the certified soil analysis of the topsoil to be used. The analysis shall verify that the proposed topsoil meets the topsoil specifications, and is capable of supporting healthy plant growth.

9. After imported top soil has been delivered to the site, a second soils test may be required to verify that it is indeed the same soil as previously tested and designated for use in this project. No substitution of top soil shall be allowed without prior written authorization from the Landscape Architect.

10. All plants used for this project shall conform to the following:
    A. Any inspection certificates required by law shall accompany each delivery of plants and such certificate shall be filed with the Landscape Architect. All plants shall be subject to inspection and approval at the place of growth or upon delivery to the site for their quality, size, species, and variety. Such approval shall not impair the right of inspection and rejection at the site or during progress of work for size and condition of the plants, latent defects, or injuries. Any and all rejected plants shall be removed immediately from the premises by the Contractor. The Contractor shall make all replacements at his expense should he fail to comply in full with any of the specifications. Necessary replacements will be made as soon as weather conditions permit and all such plants replaced shall conform to all specifications herein.
    B. Plants shall be fresh and vigorous, of normal habit and growth, and free of disease, insects and insect eggs and insect larvae, weeds and weed seed. No heeled-in plants from cold storage shall be accepted except on approval by the Landscape Architect prior to installation.

11. All plants shall be installed using the following procedures:
    A. Plants shall be generally located as indicated by the drawing. The Contractor shall stake out the location of all plants and planting areas, and no excavation or installation shall commence until such locations have been approved by the Landscape Architect.
    B. All trees and shrubs shall be planted in pits as detailed in the planting details contained herein or as noted on the drawings. Tree and shrub pits shall be circular in outline, with 45° angled sides and the base diameter of the plant pit at least two (2) times the diameter of the rootball of each plant to be installed. They shall be one to two and one half (1 - 2 ½) inches shallower than the rootball depth. When the plant is properly placed in the plant pit, the root collar shall be at or approximately one (1) inch above finished grade. The sides of the plant pit shall be roughened, and not smooth or sculpted.
    C. All plant and tree pits shall be backfilled with imported topsoil mix and required amendments. See Notes 6 and 7.
    D. For container grown plants, remove the container and place the plant vertically in the plant pit, directly on undisturbed soil. The root crown or collar shall be at or approximately one (1) inch above the finished grade. Perennial plants and ornamental grasses shall be planted with root collar at finished grade.
    E. For balled and burlapped plants, place the plant vertically in the center of the pit, with the rootball resting on undisturbed soil. Cut and remove the wire basket and burlap or other wrapping material from the rootball. This may be done with the rootball in the pit. Any burlap or wire pieces underneath the rootball may be left in place if they cannot be removed. Do not fold the burlap over, but cut away as much as possible without disturbing the rootball. No burlap shall be pulled from under the rootball. Backfill the bottom one third (1/3) of the pit as the wire and burlap are removed. In all cases, maintain the integrity of the rootball.
    F. Specified backfill material shall be carefully and firmly worked and tamped under and around the rootball to fill all voids. When backfilled and compacted to two thirds (2/3) the depth of the pit, thoroughly water with a hose to completely soak the roots and remove any air pockets.
    G. The plant pit shall then be completely backfilled with the specified backfill mix and tamped well. A shallow watering basin or rain cup shall be formed around each plant. This basin will be equal in diameter to that of the original planting pit.
    H. After planting, the following operations shall be performed:
       I. Stake and mulch all trees per installation details.
       II. Remove all nursery stakes ties, and tags from all plants. Prune and remove any dead, damaged, or broken branches. Maintain side growth on all trees.

12. Staking shall be performed as follows:
    A. Tree staking is only required if necessitated by consistent high winds on site to prevent trees from blowing/tipping over. For bidding purposes, include staking for all trees. During construction the owner, landscape architect, and contractor shall determine if tree staking should be provided. Should staking not be required, contractor shall provide a credit to the owner equal to associated materials and labor costs.
    B. Two (2) 2"x 2" square or 2" diameter round wood stakes, minimum ten (10) feet in length, shall be used to support each tree planted under this contract unless otherwise indicated. Metal t-posts shall not be used.
    C. Tree ties shall conform to the staking detail shown on the planting detail sheet. Wire and vinyl hose shall not be used.
    D. Each stake shall be located adjacent to the rootball, on opposing sides, to provide maximum support to the trunk. Do not penetrate the rootball with the stake.
    E. The stakes shall be driven into the pit bottom after the tree has been placed in the pit, but before backfilling begins so as to avoid damage to the roots.
    F. Stakes and ties shall be removed after one (1) full growing season from the time the tree was installed.

13. All plants shall be thoroughly watered immediately after planting. This shall mean full and thorough saturation of all backfill in the pits and beds during the same day of planting. Water shall be applied only by open end hose at very low pressure to avoid air pockets, injury to the plant, or washing away of backfill. When installed, watered, and fully settled, the plants shall be vertical. Subsequent watering shall be provided by the site's irrigation system. The Contractor shall ensure that all plants, especially trees, receive sufficient water to maintain healthy growth and vigor. Over-watering shall be avoided, and prolonged saturation of the soil around the trees shall be eliminated by appropriately controlling the irrigation circuit which provides water to that area.

14. A weed barrier fabric shall be placed in all planting beds to receive stone mulch to prevent the growth and spread of unwanted vegetation. The fabric shall be Typar #3301B or approved equal. Do not install weed barrier fabric under bark mulch.

15. Mulch (see plant materials schedule and specifications for size requirements) shall be placed to a depth of three (3) inches on top of the topsoil in all planting beds and over tree planting pits. The finished grade of the mulch shall be as follows:
    A. Two (2) inches below the surface or finished grade of any paving, mowstrips, or walks adjacent to the planting area.
    B. One (1) inch below top of metal edging.
    C. At adjacent finished grade of the turf surrounding tree planting pits.
    D. In tree pits, the mulch shall be kept six (6) inches away from the base of the tree.
    E. Just prior to placement of the mulch, the Contractor shall treat the mulched areas with a pre-emergent herbicide according to the manufacturer's recommendations.

16. For projects with turf grass sod, all sod used for this project shall be free of grassy and broad-leaf weeds, contain no bare or burned spots, and be clean and strongly rooted. It shall be of the varieties noted in the plans and Plant Material Schedule. The sod shall be cut using approved methods and equipment. It shall be cut in pieces not exceeding one (1) square yard, with a uniform thickness on all pieces. Sod thickness may vary between a minimum of one (1) inch and maximum one and one half (1 ½) inches, but must be consistent throughout this project. The Contractor shall notify the Landscape Architect of the source of the sod prior to placement. The sod shall be stripped and delivered to the site not more than twenty four (24) hours prior to laying. It shall be maintained in a moist and healthy condition to encourage immediate growth.

17. The following procedure shall be followed when installing the sod:
    A. Lay the sod on smooth, moist topsoil, working off planks if required.
    B. Rake the topsoil to loosen and level prior to placing each course of sod.
    C. Lay strips perpendicular to the direction of the slope. Strips shall be parallel to each other, with their end seams staggered. The sod shall be neither stretched nor overlapped, and all joints shall be butted tightly together.
    D. Roll the sod immediately after placing and thoroughly water with a fine spray to a depth sufficient that the underside of the new sod and the soil immediately below the sod are thoroughly wet.
    E. On slopes two (2) horizontal to one (1) vertical or steeper, lay the sod perpendicular to the slope and secure every row with wooden pegs at two (2) feet maximum on center. Drive the pegs flush with the soil portion of the sod.
    F. Sod pieces shall be laid tightly together. Sod areas with gaps caused by pieces not being laid tightly enough together or areas with ridges from overlapping pieces shall not be accepted and the Contractor will be required to re-lay the sod.

18. Throughout the course of planting, excess and waste materials as well as excavated subsoil shall be continuously and promptly removed. All areas shall be kept clear and all reasonable precautions taken to avoid damage to existing structures, plants, and grass. When planting has been completed in an area, it shall be thoroughly cleaned of all debris, rubbish, subsoil, and waste materials. These shall be removed from the property and disposed of legally. All planting tools shall also be put away.

19. Substantial Completion shall be defined as the complete installation of all plant materials, staking, mulching, and other work on the project in its entirety. Substantial completion shall not be given on designated portions of a project.
    S. At substantial completion of all planting work outlined in these plans, the Contractor shall contact the Landscape Architect to arrange for a walk through to verify that all aspects of the work have been completed. Work must be fully completed (except for final clean-up) according to all plans, notes, and specifications and exhibit professional workmanship.
    T. Notice by the Contractor shall be given, in writing, at least three (3) days in advance to the Owner's Representative and Landscape Architect so that proper scheduling can be made for those who are to attend.
    U. At the appointed time, an inspection of all plant materials, including staking and mulching, shall be made.
    V. A list of uncompleted items (punch list) shall be generated by the Landscape Architect and distributed to the Contractor and other involved parties within three (3) days of the substantial completion inspection. Each item on the punch list shall be corrected before the project will be approved and accepted by the Owner's representative. The Contractor will be back charged for time spent by the Owner and any consultants who have been brought to the site for a final inspection when the project is not ready for said inspection.

22. The maintenance/establishment period shall begin one (1) day after the substantial completion inspection. The Contractor shall complete all punch list items during this period, as well as maintain and operate the entire irrigation system. The Contractor shall maintain all plantings until the turf is fully established. The turf shall be considered fully established when turf grass stands come in uniform and thick, with no bare or thin spots, and roots have begun to spread and knit together. No weeds shall be allowed in the grass areas. The maintenance and establishment shall be a minimum period of sixty (60) days (or greater if so identified in the technical specifications), and shall take place during the growing season defined as April 15th through October 15th. Should the maintenance and establishment period not be fully complete prior to October 15th, the balance of the time shall be carried over and start up again on April 15th. Should mild winter weather allow the continuance of work beyond October 15th, the contractor, owner, and landscape architect may mutually agree if these dates can be adjusted along with specific requirements to do so. The maintenance work required shall include but not be limited to the following:
    A. Appropriate watering of all plant materials.
    B. Weeding and removal of all weeds from groundcover and planting areas.
    C. Replacement of any dead, dying, or damaged trees, shrubs, perennials, or groundcover.
    D. Filling and replanting of any low areas which may cause standing water.
    E. Adjusting of sprinkler head heights and watering patterns.
    F. Filling and re-compaction of eroded areas, along with any required re-seeding and/or replanting.
    G. The turf grass shall be mowed when the blades reach three (3) inches tall and maintained to a minimum height of two (2) inches. No more than one third (1/3) of the blade shall be removed per cutting. The cutting frequency shall be once every five (5) to seven (7) days depending upon turf grass height and growth rate.
    H. Weekly removal of all trash, litter, clippings, and all foreign debris.
    I. At thirty (30) days after planting, a balanced fertilizer (16-16-16) shall be applied to the turf grass areas at a rate of one half (½) pound of nitrogen per one thousand (1,000) square feet.
    J. At intervals of thirty (30) days after the first application of fertilizer to the turf grass, apply a balanced fertilizer (16-16-16) at a rate of one half (½) pound of nitrogen per one thousand (1,000) square feet until the turf grass is established.

23. A final inspection shall be held prior to the end of the maintenance period to ensure that all punch list items have been completed and the entire project is ready for acceptance by the Owner. Upon satisfaction that the Contractor has completed all punch list items, the irrigation system is fully and completely functional, and the required As-Built drawings and maintenance manuals have been submitted, the Owner shall accept the project. An official letter of final acceptance shall be prepared and issued to the Contractor, Landscape Architect, and the Owner's representative. Upon final acceptance of the project by the Owner's representative, the Owner shall assume full responsibility for the project, and the guarantee period shall begin.

24. Upon final acceptance of the project as being properly installed, the Contractor shall guarantee the plant materials as follows:
    A. All shrubs and groundcovers shall be guaranteed by the Contractor as to growth and health for a period of sixty (60) days after completion of the maintenance period and final acceptance.
    B. All trees shall be guaranteed by the Contractor to live and grow in an acceptable upright position for a period of one (1) year after completion of the maintenance period and final acceptance.
    C. Any tree with 30% dead or missing canopy, shall be replaced as part of this plant guarantee.

25. The Contractor shall, within fifteen (15) days after receiving written notification by Owner's representative, remove and replace all guaranteed plant materials which die or become unhealthy or appear to be in a badly impaired condition at any time during the guarantee period. Any plants that settle below or rise above the desired finished grade shall also be reset to the proper grade.
    A. All replacements shall be plants of the same kind, size, and quality as originally specified in the "plant list" and they shall be furnished, planted, staked, and maintained as specified herein at no additional cost to the owner.
    B. The Contractor will not be responsible for plants destroyed or lost due to occupancy of the project, vandalism on the part of others, or improper maintenance or lack thereof.

J-U-B ENGINEERS, INC.
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BID SET

REGISTERED LANDSCAPE ARCHITECT
SETH VANCE
#5338835301
08/14/2024
STATE OF UTAH

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NO.	DESCRIPTION	BY	APP.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

PLANTING NOTES

FILE: 83-23-013_L-10X
JUB PROJ. #: 83-23-013
DRAWN BY: KR
DESIGN BY: SV
CHECKED BY: AJN
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/14/2024

SHEET NUMBER:
L-001

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Plot Date:8/14/2024 5:47 PM Plotted By: Andrew Noorlander
Date Created:8/14/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-019_BOATHARBORPARKING\LOTDESIGN\CAD\SHEET\83-23-013_L-10X.DWG

LEGEND	
	WASHED FINE BEACH SAND, AVAILABLE FROM STAKER PARSON, PROVIDE SAMPLE FOR APPROVAL PRIOR TO PURCHASING, MIN. 10" DEPTH
	ENGINEERED WOOD FIBER IN PLAYGROUND. DEPTH PER PLAYGROUND MANUFACTURER REQUIREMENTS
	LONG STRAND SHREDDED BARK MULCH, BROWN, MIN. 3" DEPTH
	3" TO 6" ANGULAR CRUSHED ROCK MULCH, COLOR: WASATCH GREY, MIN. 6" DEPTH, OVER WEED BARRIER
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	CHAT PATH, COMPACTED, WASATCH GREY W/ PATH STABILIZER, MIN 3" DEPTH, OVER WEED BARRIER
	SOD. KENTUCKY BLUEGRASS BLEND, PATCH & REPAIR TO TIE INTO EXISTING TURF GRASS
	VEHICULAR CONCRETE, SEE CIVIL SITE PLAN & DETAIL
	CONCRETE FLATWORK, SEE CIVIL SITE PLAN

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
TREES				
×	EXI MTG	23	Existing Tree to Remain	Existing
	CO	1	Celtis occidentalis Common Hackberry	2"
	RP	4	Robinia pseudoacacia Black Locust	2"

NOTE:

1. ALL PROPOSED TREES TO BE WATERED FOR THE 1ST YEAR WITH A TREE WATERING BAG. (SLOW RELEASE WATERING BAGS. TREEGATOR ORIGINAL. INSTALL PER MANUFACTURERS RECOMMENDATION). UNTIL ESTABLISHED.
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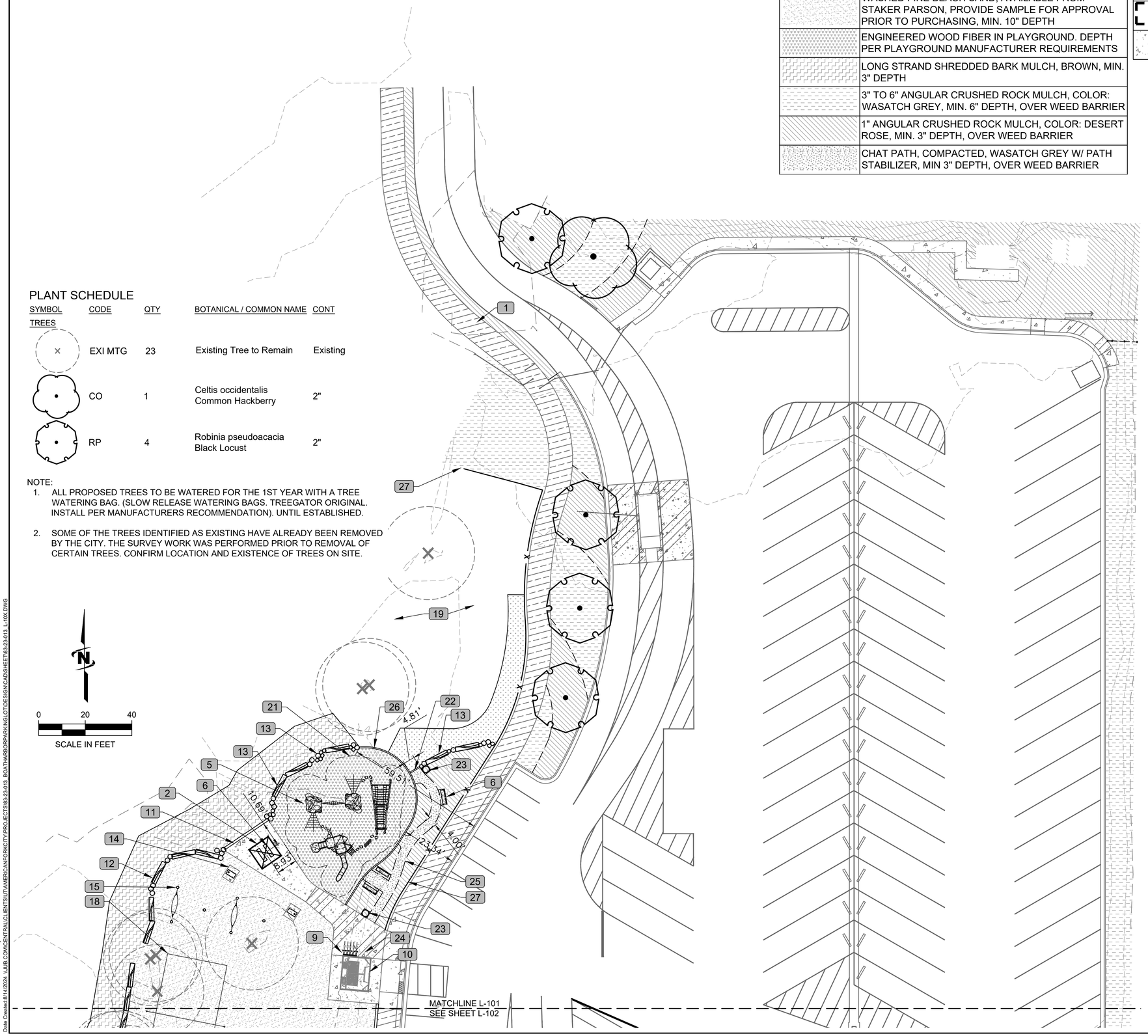

REFERENCE NOTES SCHEDULE

NOTE: ITEMS LISTED IN SCHEDULE MAY NOT APPEAR ON EVERY SHEET.

SYMBOL	DESCRIPTION
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2	10'X10' SHADE UMBRELLA, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS
3	5' WIDE GANGWAY RAMP & MODULAR FLOATING DOCK. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
4	KAYAK LAUNCH DOCK ACCESSORY. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
5	PLAYGROUND EQUIPMENT. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
6	6' BENCH WITH BACK, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS. SEE SURFACE MOUNT DETAIL, SHEET L-501
7	6' PICNIC TABLE, TYP. POWDER COATED TOP & BASE. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
8	PAVILION, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. CLASSIC RECREATION SIERRA MODEL 9'X18'. INSTALL PER MANUFACTURER DETAILS.
9	BIKE RACK. 5 LOOP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
10	CXT TIOGA RESTROOM. SEE CIVIL SITE PLAN.
11	CONCRETE SEAT WALL (TYP), SEE DETAIL, SHEET L-501
12	NATURAL (UNTREATED) LOGS & STUMPS FOR TRANSITION & BORDER MATERIAL. OWNER PROVIDED & CONTRACTOR INSTALLED. SEE PLAN FOR GENERAL LOCATION & ORIENTATION BURY LOGS & STUMPS MIN. 1/3 INTO THE GROUND.
13	SPECIALTY, TREATED LOGS & STUMPS, OWNER PROVIDED & CONTRACTOR INSTALLED. SEE DETAIL, SHEET L-501
14	CONCRETE CORNHOLE BOARD. TYP. SET ON A 6'X5' CONCRETE BASE. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS. SEE DETAIL, SHEET L-501
15	HAMMOCK POSTS. 8"X8" TIMBER POSTS WITH SHOULDER EYE-BOLT. SEE DETAIL, SHEET L-501
16	COLLAPSIBLE BOLLARD. OWNER PROVIDED & CONTRACTOR INSTALLED. BOLLARD BY TRAFFIC GUARD, MODEL#: LPHDHB. INSTALL PER MANUFACTURER DETAILS.
17	LOCATION OF FUTURE KAYAK RENTAL KIOSK
18	LOCATION OF SAND VOLLEYBALL. OWNER PROVIDED. FUTURE INSTALLATION BY OWNER
19	EXISTING GRASS
20	CONTRACTOR TO INSTALL LARGE RIP RAP ROCKS WITH FLAT SIDES UP TO CREATE ACCESS POINTS TO WATER.
21	PLAYGROUND SAFETY FALL ZONE. SEE MANUFACTURER DETAILS.
22	CONCRETE MOW CURB, SEE SURFACE MOUNT DETAIL, SHEET L-502
23	32 GAL. TRASH RECEPTACLE (TYP), OWNER PROVIDED & CONTRACTOR INSTALLED. SURFACE MOUNT ON 3'X3' CONCRETE PAD, SEE SURFACE MOUNT DETAIL, SHEET L-501
24	LOCATION FOR CITY-PROVIDED ROLLAWAY TRASH BIN
25	METAL EDGING, SEE DETAIL, SHEET L-501
26	PLAYGROUND CURB WALL, SEE DETAIL, SHEET L-501
27	LODGE POLE FENCE, SEE DETAIL, SHEET L-501

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SETH VANCE
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08/14/2024
STATE OF UTAH

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NO.	DESCRIPTION	BY	APPL	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

LANDSCAPE AND AMENITIES PLAN

FILE	83-23-013_L-10X
JUB PROJ. #	83-23-013
DRAWN BY:	KR
DESIGN BY:	SV
CHECKED BY:	AJN

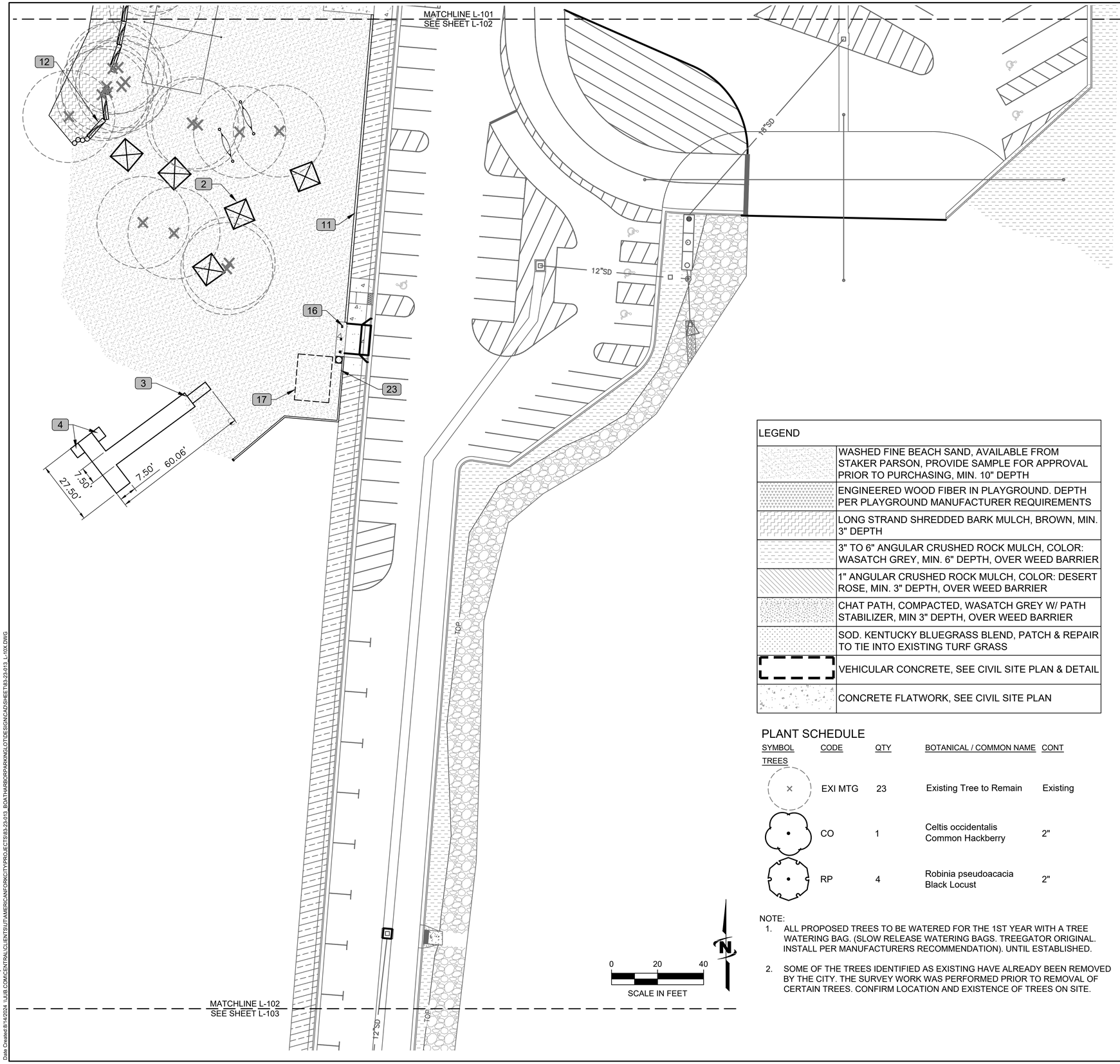
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 8/14/2024

SHEET NUMBER:
L-101

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Plot Date:8/14/2024 5:48 PM Plotted By: Andrew Noorlander
Date Created:8/14/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINSLOT\DESIGN\CAD\SHEET\83-23-013_L-10X.DWG



REFERENCE NOTES SCHEDULE

NOTE: ITEMS LISTED IN SCHEDULE MAY NOT APPEAR ON EVERY SHEET.

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LEGEND

	WASHED FINE BEACH SAND, AVAILABLE FROM STAKER PARSON, PROVIDE SAMPLE FOR APPROVAL PRIOR TO PURCHASING, MIN. 10" DEPTH
	ENGINEERED WOOD FIBER IN PLAYGROUND. DEPTH PER PLAYGROUND MANUFACTURER REQUIREMENTS
	LONG STRAND SHREDDED BARK MULCH, BROWN, MIN. 3" DEPTH
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	CONCRETE FLATWORK, SEE CIVIL SITE PLAN

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
TREES				
×	EXI MTG	23	Existing Tree to Remain	Existing
	CO	1	Celtis occidentalis Common Hackberry	2"
	RP	4	Robinia pseudoacacia Black Locust	2"

NOTE:

1. ALL PROPOSED TREES TO BE WATERED FOR THE 1ST YEAR WITH A TREE WATERING BAG. (SLOW RELEASE WATERING BAGS. TREEGATOR ORIGINAL. INSTALL PER MANUFACTURERS RECOMMENDATION). UNTIL ESTABLISHED.
2. SOME OF THE TREES IDENTIFIED AS EXISTING HAVE ALREADY BEEN REMOVED BY THE CITY. THE SURVEY WORK WAS PERFORMED PRIOR TO REMOVAL OF CERTAIN TREES. CONFIRM LOCATION AND EXISTENCE OF TREES ON SITE.

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BID SET

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NO.	DESCRIPTION	BY	APPL	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

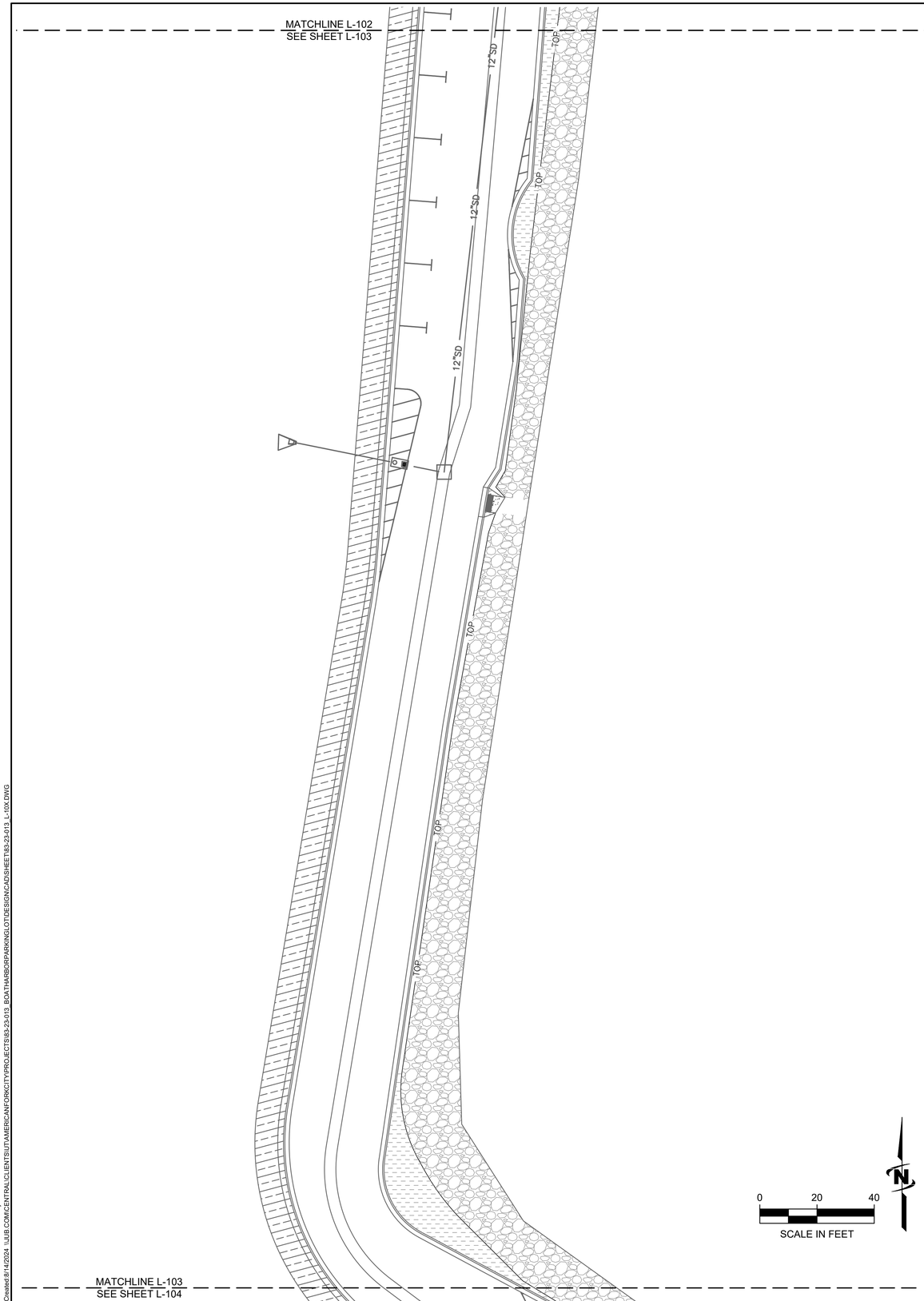
LANDSCAPE AND AMENITIES PLAN

FILE: 83-23-013_L-10X
JUB PROJ. #: 83-23-013
DRAWN BY: KR
DESIGN BY: SV
CHECKED BY: AJN
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/14/2024

SHEET NUMBER:
L-102

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Plot Date:8/14/2024 5:48 PM Plotted By: Andrew Noorlander
Date Created:8/14/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOTDESIGN\CAD\SHEETS\83-23-013_L-10X.DWG



LEGEND	
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PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
TREES				
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6	6' BENCH WITH BACK, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS. SEE SURFACE MOUNT DETAIL, SHEET L-501
7	6' PICNIC TABLE, TYP. POWDER COATED TOP & BASE. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
8	PAVILION, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. CLASSIC RECREATION SIERRA MODEL 9'X18'. INSTALL PER MANUFACTURER DETAILS.
9	BIKE RACK. 5 LOOP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
10	CXT TIOGA RESTROOM. SEE CIVIL SITE PLAN.
11	CONCRETE SEAT WALL (TYP), SEE DETAIL, SHEET L-501
12	NATURAL (UNTREATED) LOGS & STUMPS FOR TRANSITION & BORDER MATERIAL. OWNER PROVIDED & CONTRACTOR INSTALLED. SEE PLAN FOR GENERAL LOCATION & ORIENTATION. BURY LOGS & STUMPS MIN. 1/3 INTO THE GROUND.
13	SPECIALTY, TREATED LOGS & STUMPS, OWNER PROVIDED & CONTRACTOR INSTALLED. SEE DETAIL, SHEET L-501
14	CONCRETE CORNHOLE BOARD. TYP. SET ON A 6'X5' CONCRETE BASE. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS. SEE DETAIL, SHEET L-501
15	HAMMOCK POSTS. 8"X8" TIMBER POSTS WITH SHOULDER EYE-BOLT. SEE DETAIL, SHEET L-501
16	COLLAPSIBLE BOLLARD. OWNER PROVIDED & CONTRACTOR INSTALLED. BOLLARD BY TRAFFIC GUARD, MODEL#: LPHDHB. INSTALL PER MANUFACTURER DETAILS.
17	LOCATION OF FUTURE KAYAK RENTAL KIOSK
18	LOCATION OF SAND VOLLEYBALL. OWNER PROVIDED. FUTURE INSTALLATION BY OWNER
19	EXISTING GRASS
20	CONTRACTOR TO INSTALL LARGE RIP RAP ROCKS WITH FLAT SIDES UP TO CREATE ACCESS POINTS TO WATER.
21	PLAYGROUND SAFETY FALL ZONE. SEE MANUFACTURER DETAILS.
22	CONCRETE MOW CURB, SEE SURFACE MOUNT DETAIL, SHEET L-502
23	32 GAL. TRASH RECEPTACLE (TYP), OWNER PROVIDED & CONTRACTOR INSTALLED. SURFACE MOUNT ON 3'X3' CONCRETE PAD, SEE SURFACE MOUNT DETAIL, SHEET L-501
24	LOCATION FOR CITY-PROVIDED ROLLAWAY TRASH BIN
25	METAL EDGING, SEE DETAIL, SHEET L-501
26	PLAYGROUND CURB WALL, SEE DETAIL, SHEET L-501
27	LODGE POLE FENCE, SEE DETAIL, SHEET L-501

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LICENSED LANDSCAPE ARCHITECT
SETH VANCE
#5338835301
08/14/2024
STATE OF UTAH

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NO.	DESCRIPTION	BY	APPL	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

LANDSCAPE AND AMENITIES PLAN

FILE : 83-23-013_L-10X
JUB PROJ. # : 83-23-013
DRAWN BY: KR
DESIGN BY: SV
CHECKED BY: AJN
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 8/14/2024

SHEET NUMBER:
L-103

Plot Date:8/14/2024 5:48 PM Plotted By: Andrew Nootlander
Date Created:8/14/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_L-10X.DWG

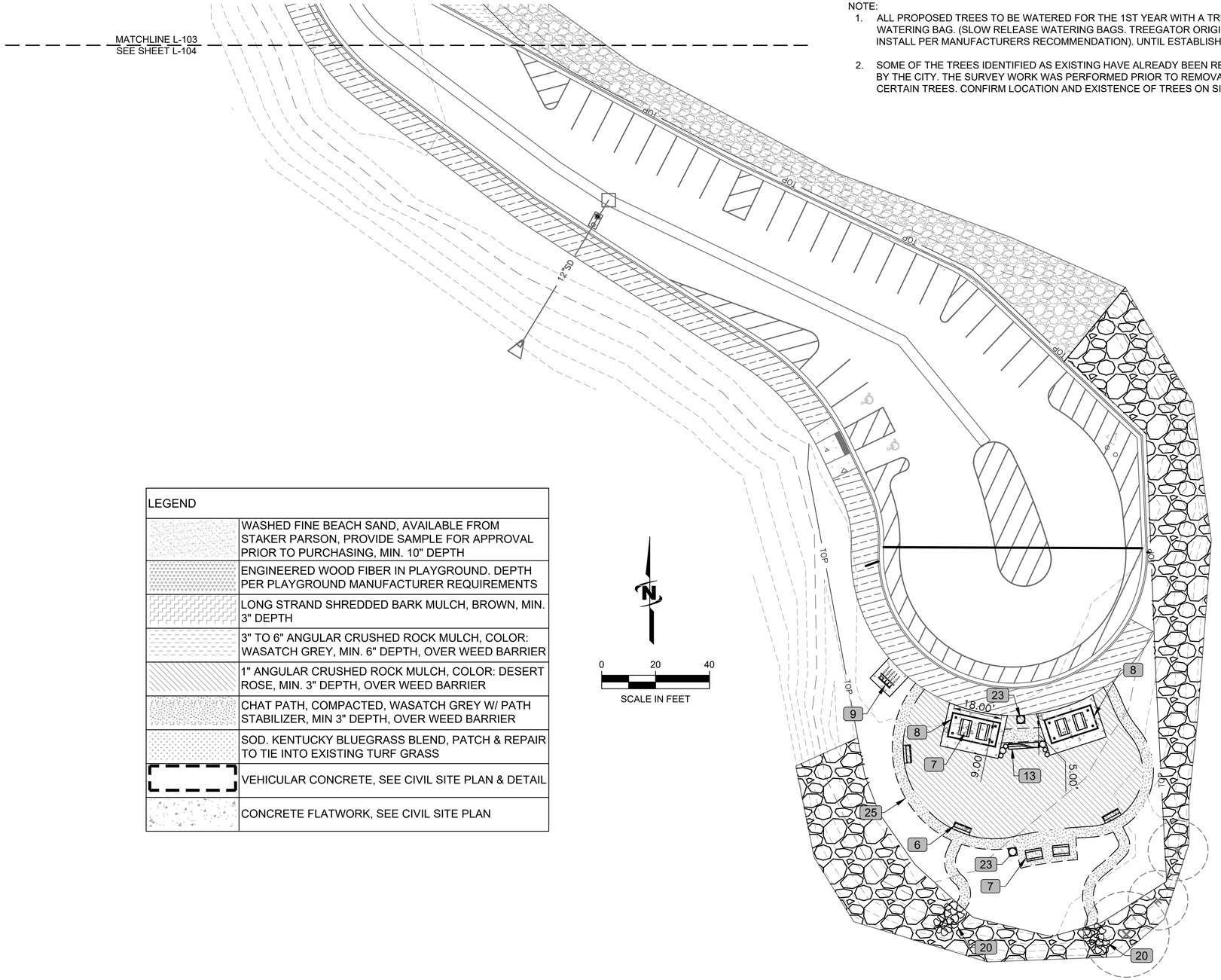
Attachment: AFBH_Bid Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
TREES				
×	EXI MTG	23	Existing Tree to Remain	Existing
•	CO	1	Celtis occidentalis Common Hackberry	2"
•	RP	4	Robinia pseudoacacia Black Locust	2"

NOTE:
1. ALL PROPOSED TREES TO BE WATERED FOR THE 1ST YEAR WITH A TREE WATERING BAG. (SLOW RELEASE WATERING BAGS. TREEGATOR ORIGINAL. INSTALL PER MANUFACTURERS RECOMMENDATION). UNTIL ESTABLISHED.
2. SOME OF THE TREES IDENTIFIED AS EXISTING HAVE ALREADY BEEN REMOVED BY THE CITY. THE SURVEY WORK WAS PERFORMED PRIOR TO REMOVAL OF CERTAIN TREES. CONFIRM LOCATION AND EXISTENCE OF TREES ON SITE.

MATCHLINE L-103
SEE SHEET L-104



LEGEND	
	WASHED FINE BEACH SAND, AVAILABLE FROM STAKER PARSON, PROVIDE SAMPLE FOR APPROVAL PRIOR TO PURCHASING, MIN. 10" DEPTH
	ENGINEERED WOOD FIBER IN PLAYGROUND. DEPTH PER PLAYGROUND MANUFACTURER REQUIREMENTS
	LONG STRAND SHREDDED BARK MULCH, BROWN, MIN. 3" DEPTH
	3" TO 6" ANGULAR CRUSHED ROCK MULCH, COLOR: WASATCH GREY, MIN. 6" DEPTH, OVER WEED BARRIER
	1" ANGULAR CRUSHED ROCK MULCH, COLOR: DESERT ROSE, MIN. 3" DEPTH, OVER WEED BARRIER
	CHAT PATH, COMPACTED, WASATCH GREY W/ PATH STABILIZER, MIN 3" DEPTH, OVER WEED BARRIER
	SOD. KENTUCKY BLUEGRASS BLEND, PATCH & REPAIR TO TIE INTO EXISTING TURF GRASS
	VEHICULAR CONCRETE, SEE CIVIL SITE PLAN & DETAIL
	CONCRETE FLATWORK, SEE CIVIL SITE PLAN

N

0 20 40
SCALE IN FEET

REFERENCE NOTES SCHEDULE

NOTE: ITEMS LISTED IN SCHEDULE MAY NOT APPEAR ON EVERY SHEET.

SYMBOL	DESCRIPTION
1	10' WIDE ASPHALT TRAIL, SEE CIVIL SITE PLAN
2	10'X10' SHADE UMBRELLA, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS
3	5' WIDE GANGWAY RAMP & MODULAR FLOATING DOCK. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
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AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

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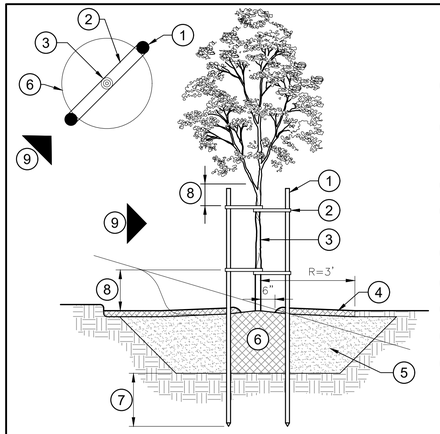
Date Created:8/14/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORRPARKN\SLOT\DESIGN\CAD\SHEET\83-23-013_L-10X.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

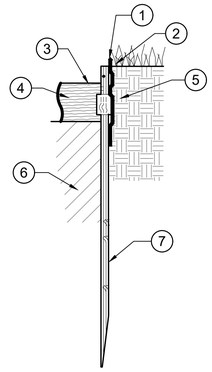


1. 2" DIA. OR 2" x 2" SQ. x 10' STRAIGHT WOODEN STAKE (2 REQUIRED)
2. V.I.T. CINCH-TIE VINYL TREE TIE (2 PER STAKE, LENGTH AS REQUIRED). SECURE TO STAKE W/ GALV. NAIL. 1 (PER TIE)
3. TREE TRUNK
4. 3" LAYER MULCH AROUND EACH TREE (3' RADIUS CIRCLE WHEN IN TURF)
5. SEE TREE/SHRUB PLANTING DETAIL
6. ROOT BALL
7. 24" MIN.
8. 6" MAX.
9. PREVAILING WIND DIRECTION

1 DECIDUOUS TREE STAKING

NTS

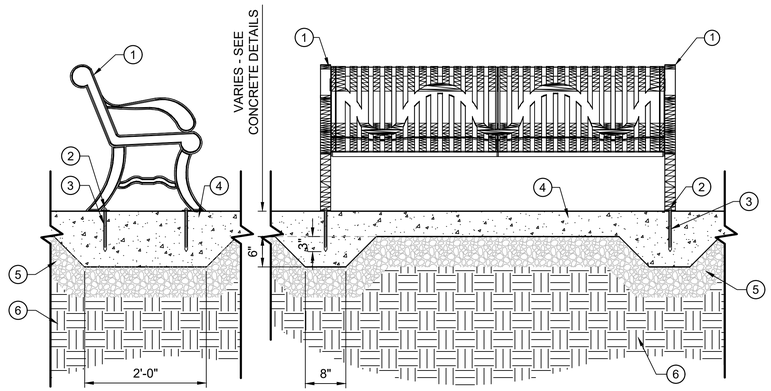
MUN–AFBH–Ø1



1. METAL EDGING
2. FINISH GRADE FOR LAWN AREAS: 1" BELOW TOP OF EDGING FOR SEED; 1-1/2" FOR SOD
3. FINISH GRADE OF MULCH 2" BELOW TOP OF EDGING
4. MULCH - SEE PLANNT MATERIAL SCHEDULE FOR TYPE AND SIZE
5. COMPACT GRADES ADJACENT TO EDGING TO AVOID SETTLING
6. TOPSOIL - SEE NOTES AND SPECIFICATIONS FOR TYPE AND DEPTH
7. 12" STAKES @ 4' O.C. (TYP.)

2 LANDSCAPE METAL EDGING

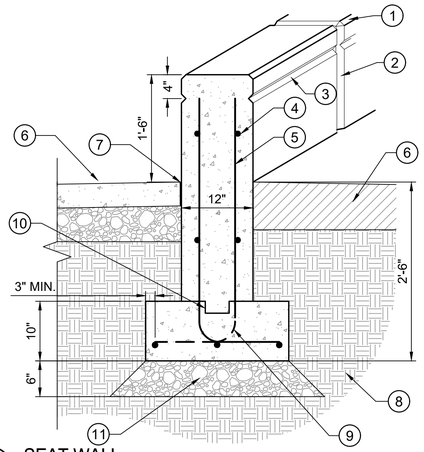
NTS



1. SITE FURNISHING (BENCH, PICNIC TABLE, & LITTER BIN) - SEE PLAN FOR INFORMATION ON SPECIFIC FURNISHING ITEM & WHERE TO SOURCE
2. STAINLESS STEEL DROP IN ANCHORS AND BOLTS, LENGTH AS REQUIRED TO EMBED INTO THICKENED SECTION OF CONCTRETE TO A 3" MIN. DEPTH AND TO ALLOW PROPER BENCH CONNECTION.
3. DRILL MOUNTING HOLES THROUGH CONCRETE AT SPECIFIED BOLT DIAMETER. EPOXY TO REQUIRED DEPTH.
4. CONCRETE PAD (SEE CONCRETE DETAILS)
5. 6" UTBC COMPACTED TO 95% MDD
6. UNDISTURBED OR COMPATED SUBGRADE COMPACTED TO 95% MDD

3 SURFACE MOUNTING DETAIL

NTS



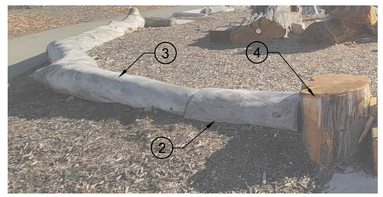
1. 3/4" CHAMFERED EDGE
2. 3/4" V-NOTCH CONTROL JOINT SPACED EVENLY ALONG WALL AT MIN. 10' O.C.
3. TWO 3/4" CHAMFERED STRIPS TO CREATE CAP APPEARANCE
4. #3 REBAR @ 16" O.C. HORIZONTAL, EACH FACE. 3" CLEARANCE
5. #4 BARS @ 12" O.C.
6. MATERIAL PER PLAN. SEE GRADING PLAN
7. EXPANSION JOINT WHEN ABUTTING CONCRETE
8. UNDISTURBED OR COMPACTED SUBGRADE
9. ALTERNATE HOOK DIRECTION
10. 2"x4" KEYWAY
11. UTBC COMPACTED TO 95%

4 SEAT WALL

NTS

EXAMPLE PHOTO ONLY. SHOWS V-NOTCH CONTROL JOINT. REFER TO DETAIL FOR CONSTRUCTION PURPOSES.

NOTES:
1. ALL CONCRETE SHALL HAVE fc=3000 PSI.
2. ALL STEEL SHALL BE 60 KSI DEFORMED REINFORCING BAR.
3. FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL, OR FOUNDATION ROCK IF INADEQUATE SOIL IS PRESENT.
4. REINFORCING BAR INSIDE FORMS SHALL HAVE 3" COVER MINIMUM.



1. STUMPS, STAGGERED HEIGHT BETWEEN 12" ABOVE FINISH GRADE AND 24" ABOVE FINISH GRADE
2. BURIED MIN. 1/3
3. BARK REMOVED, SANDED
4. HARD CORNERS ROUNDED

NOTE:
PHOTOS ARE EXAMPLES ONLY TO ILLUSTRATE PRINCIPLES TO BE APPLIED TO SITE/CONSTRUCTION CONDITIONS. SEE PLAN FOR LOG/STUMP LAYOUT. SPECIALTY LOGS TO BE A MINIMUM OF 18" DIA. AND SPECIALTY STUMPS TO BE A MINIMUM OF 24" DIA. LOGS TO BE A MIN. LENGTH OF 5', AND BE INSTALLED TO NOT HAVE GAPS BETWEEN ADJACENT LOG/STUMP.

SPECIALTY LOGS AND STUMPS TO HAVE BARK STRIPPED, HARD CORNERS ROUNDED OFF OR CHAMFERED, ROUGH SURFACES SANDED SMOOTH.

APPLY CABOT AUSTRALIAN TIMBER OIL AT INSTALLATION. CONTRACTOR TO INCLUDE OIL REAPPLICATION EVERY SIX (6) MONTHS FOR THE FIRST TWO (2) YEARS AS PART OF BASE BID.

5 SPECIALTY LOGS & STUMPS

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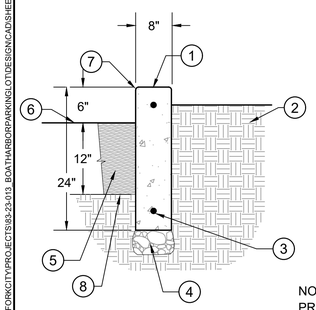
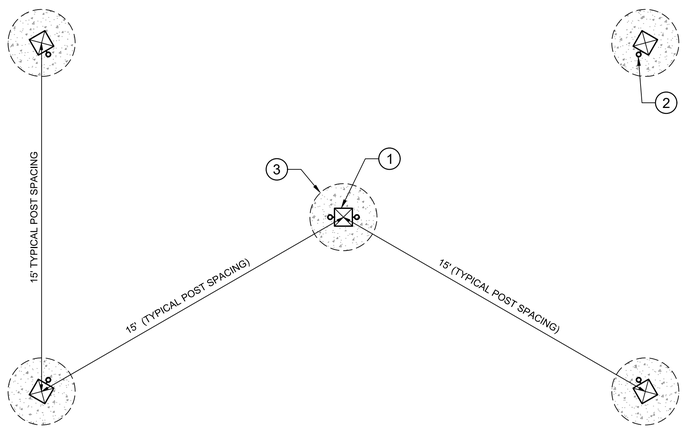


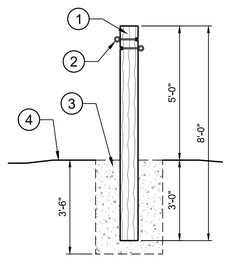
1. 8" CONCRETE CURB WALL DEEP EDGE
2. UNDISTURBED OR 95% MDD COMPACTED SUBGRADE
3. #4 REBAR CONT.
4. 4" UNTREATED BASE COURSE COMPACTED TO 95% MDD
5. 12" SOFT FALL MATERIAL
6. FINISH GRADE
7. 1/2" RADIUS
8. SOF' FALL GEOTEXTILE FABRIC

NOTE:
PROVIDE CONTROL JOINTS EVERY 10' AND EXPANSION JOINTS EVERY 30'. BREAK REBAR AT EXPANSION JOINT AND INSTALL DOWELS.

6 DEEP-EDGE CURB WALL (PLAYGROUND)

NTS

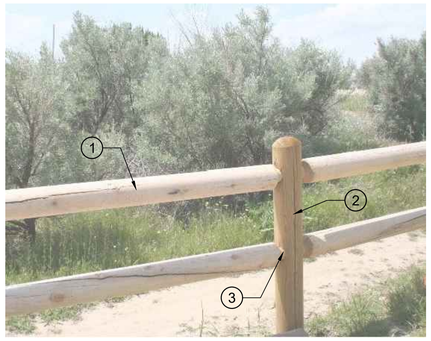




1. 8"X8" TIMBER POST, TREATED FOR OUTDOOR USE, 8' HEIGHT, SET IN CONCRETE FOOTING. POST TO HAVE 5 FEET OF EXPOSED SURFACE ABOVE FINISHED GRADE.
2. 1/2"X8" STAINLESS STEEL SHOULDER EYE BOLT INSTALLED IN A PRE-DRILLED HOLE WITH WASHER AND NUT SET INTO A 1" COUNTERBORED HOLE. WHERE TWO (2) EYE BOLTS ARE REQUIRED ON THE SAME POST (CENTER POSTS) BOLTS TO BE SPACED MIN. OF 4" APART
3. CONC. FOOTING, 30" DIA. X 42" HIGH SONOTUBE
4. FINISHED GRADE

7 HAMMOCK POSTS-TIMBER

NTS



1. 3 1/2" DIA. RAIL, DOWELED ON ENDS. MIN. LENGTH 8', MAX. LENGTH 10'
2. 6" DIA. POST WITH STANDARD DOME CAP, INSTALLED 42' ABOVE GRADE, 30" BELOW GRADE
3. HOLE FOR DOWELED RAIL, 2 1/2" DIA.
4. CONCRETE FOOTING (NOT SHOWN), 18" DIA. X 30" DEEP

8 LODGE POLE FENCE - 2 RAIL

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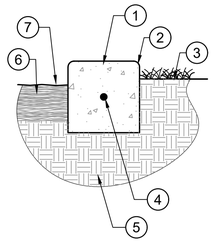
Plot Date:8/14/2024 5:48 PM Plotted By: Andrew Noorlander
Date Created:6/27/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\01PROJECTS\83-23-013_BOATHARBORPARKING\LOTDESIGN\CADSHEETS\83-23-013_L-60X.DWG

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)



1. 6" x 6" CONCRETE MOW STRIP (MIN. 2000 PSI AT 28 DAYS)
2. 1/2" RADIUS TROWLED EDGES (TYP.)
3. FINISH GRADE FOR LAWN AREAS: 1" BELOW TOP OF CONCRETE FOR SEED; 1-1/2" FOR SOD
4. #3 REBAR CONT. (LAP 12" AT SPLICES)
5. UNDISTURBED OR COMPACTED SUBGRADE AT 90% RELATIVE DENSITY
6. 3" LAYER ROCK MULCH BED AREAS
7. FINISH GRADE AT 2" BELOW TOP OF CONCRETE FOR ROCK MULCH BED AREAS

NOTE: PROVIDE CONSTRUCTION OR CONTROL JOINTS AT 5' O.C. MAX. AND EXPANSION JOINTS WHERE MOWSTRIP ABUTS ANY MASONRY TYPE IMPROVEMENT.

1 6" CONCRETE MOWSTRIP

NTS

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Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

GENERAL REQUIREMENTS

1. THESE GENERAL STRUCTURAL NOTES AND SPECIFICATIONS SUPPLEMENT THE PROJECT WRITTEN TECHNICAL SPECIFICATIONS AND THE PROJECT STRUCTURAL DRAWINGS.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION BRACING, TEMPORARY SHORING, AND OTHER SITE SAFETY CONTROLS REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS, TO INSURE THE STABILITY AND SAFETY OF ALL CONSTRUCTION UNTIL IT IS COMPLETED AND SELF-SUPPORTING.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL WATER, BOTH ABOVE AND BELOW GROUND, RUNOFF AND OTHER ENVIRONMENTAL CONTROLS REQUIRED DURING CONSTRUCTION TO INSURE THE SITE IS MAINTAINED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
4. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION DETAILS AND METHODS FOR THIS STRUCTURE. CONNECTION DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR IN NATURE TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION OR INSTRUCTION.
5. PRIOR TO IMPLEMENTING ANY CHANGES TO THESE PLANS, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED IN WRITING FOR THEIR WRITTEN APPROVAL. CHANGES IMPLEMENTED WITHOUT THE ARCHITECT/ENGINEERS WRITTEN APPROVAL SHALL RELIEVE THE ARCHITECT/ENGINEER OF ANY CLAIM OR LIABILITY RESULTING FROM THAT PORTION OF THE STRUCTURE CHANGED OR AFFECTED BY THE CHANGE.

CONTRACTOR RESPONSIBILITY FOR COORDINATION

1. IT IS THE CONTRACTORS PRIME RESPONSIBILITY TO COORDINATE THE WORK SHOWN ON ALL OF THE PROJECT DRAWINGS, GENERAL, SPECIAL AND TECHNICAL SPECIFICATIONS.
2. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONSTRUCTION MATERIAL TYPES DIMENSIONS, ELEVATIONS AND CONDITIONS.
3. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS AND IN THE FIELD PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION, ANY DISCREPANCY SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CAREFULLY STUDY AND COORDINATE THE CONSTRUCTION REQUIREMENTS SHOWN ON BOTH THE ARCHITECTURAL AND THE STRUCTURAL DRAWINGS. WHEN CONFLICTS OR DISCREPANCIES ARE FOUND BETWEEN THESE PLAN SETS AND/OR WITHIN THESE DRAWINGS, THE CONTRACTOR SHALL REPORT THEM IMMEDIATELY TO THE PROJECT ARCHITECT/ENGINEER FOR DIRECTION AND/OR CLARIFICATION.
5. ANY CONSTRUCTION WORK DONE BY THE CONTRACTOR BEFORE OBTAINING SUCH CLARIFICATION FROM THE PROJECT ARCHITECT/ENGINEER SHALL BE AT THE CONTRACTORS OWN RISK AND COST. FURTHERMORE; ANY WORK REQUIRED TO CORRECT, REPLACE AND/OR RESTORE THE WORK AS DIRECTED BY THE ARCHITECT/ENGINEER SHALL BE AT THE CONTRACTORS OWN RISK AND COST.

CODES

1. INTERNATIONAL BUILDING CODE, IBC 2021 EDITION.
2. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-16.
3. AMERICAN CONCRETE INSTITUTE, ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE; REFERENCED EDITION.
4. NATIONAL DESIGN SPECIFICATIONS, NDS FOR WOOD CONSTRUCTION; CURRENT EDITION.

SUBMITTALS

SUBMIT PRODUCT OR MATERIAL INFORMATION TO THE ARCHITECT/ENGINEER FOR REVIEW FOR THE FOLLOWING ITEMS:

1. CONCRETE MIX DESIGNS AND ADMIXTURES.
2. EXPANSION BOLTS.
3. ADHESIVE ANCHORS.

DEFERRED SUBMITTALS

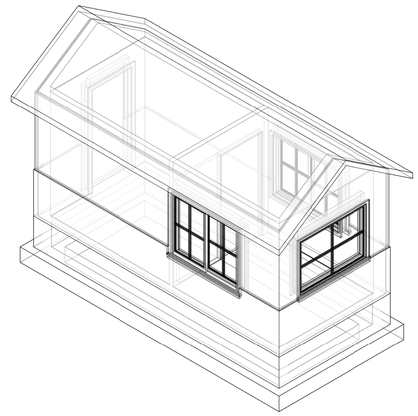
THE FOLLOWING ITEMS TO BE DESIGNED BY OTHERS ARE CONSIDERED "DEFERRED SUBMITTALS". DEFERRED SUBMITTALS SHALL BE ACCOMPANIED BY DESIGN DRAWINGS, SHOP DRAWINGS AND STRUCTURAL CALCULATIONS, STAMPED AND SIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF UTAH.

1. PRE-ENGINEERED AND SHOP FABRICATED WOOD JOISTS AND TRUSSES.

SHOP DRAWINGS

SUBMIT SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THE FOLLOWING ITEMS:

1. REINFORCING STEEL FOR ALL CONCRETE.



SPECIAL INSPECTIONS

SPECIAL INSPECTIONS PER IBC CHAPTER 17 ARE REQUIRED FOR THE FOLLOWING ITEMS:
C INDICATES CONTINUOUS, P INDICATES PERIODIC.

		FREQUENCY
1.	SOILS.	
	A. SITE PREPARATION:	P
	B. FILL MATERIAL VERIFICATION:	C
	C. FILL PLACEMENT AND COMPACTION:	C
	D. LIFT THICKNESS:	C
2.	CONCRETE.	
	A. REINFORCEMENT PLACEMENT:	P
	B. REINFORCING WELDING: REFER TO STEEL WELDING REQUIREMENTS	
	C. PLACEMENT OF CAST-IN-PLACE ANCHORS:	P
	D. VERIFICATION OF USE OF REQUIRED MIX:	P
	E. CONCRETE PLACEMENT:	C
	F. VERIFICATION OF IN-SITU CONCRETE PRIOR TO REMOVAL OF FORMS AND SHORES FROM ELEVATED BEAMS AND SLABS	P
3.	POST INSTALLED CONCRETE ANCHORS.	
	A. INSTALLATION:	C

DESIGN CRITERIA

1. OCCUPANCY OR USE CATEGORY; IBC CHAPTER 3: B
   A. RISK CATEGORY; ASCE TABLE 1.5-2: II
2. LIVE LOADS:
   A. ROOF LIVE LOAD: 20 PSF
3. SNOW LOADS:
   A. FLAT ROOF SNOW LOAD, P_f: 33 PSF
   B. GROUND SNOW LOAD, P_g: 33 PSF
   C. SNOW IMPORTANCE FACTOR, I_s: 1.00
   D. SNOW EXPOSURE FACTOR, C_e: 0.8
   E. THERMAL FACTOR, C_t: 1.2
   F. UNBALANCED SNOW PER ASCE-7, CHAPTER 7
4. DEAD LOADS:
   A. ROOF DEAD LOAD: 15 PSF
   B. FLOOR DEAD LOAD: 65 PSF
5. WIND:
   A. ULTIMATE DESIGN WIND SPEED, V_{ult}: 103 MPH (ASCE 7-16)
   B. NOMINAL DESIGN WIND SPEED, V_{asd}: 80 MPH
   C. SITE WIND EXPOSURE: D
   D. WIND IMPORTANCE FACTOR: 1.0
   E. ENCLOSURE CLASSIFICATION: ENCLOSED BUILDING
   F. INTERNAL PRESSURE COEFFICIENTS: +0.18 TO -0.18
   G. COMPONENT & CLADDING (FOR DEFFERED SUBMITTALS)
      a. DESIGN WIND PRESSURES: +24PSF / -59PSF
6. EARTHQUAKE:
   A. SEISMIC IMPORTANCE FACTOR, I_e: 1.0
   B. MAPPED SPECTRAL RESPONSE ACCELERATION:
      a. SHORT PERIOD, S_s: 1.240
      b. 1-SECOND, S_1: 0.446
   C. SOIL SITE CLASS: D
   D. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
      a. SHORT PERIOD, S_{ds}: 0.992
      b. 1-SECOND, S_{d1}: 0.827
   E. SEISMIC DESIGN CATEGORY: D
   F. BASIC SEISMIC FORCE RESISTING SYSTEM(S):
      a. LIGHT-FRAME WOOD WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
         1. RESPONSE MODIFICATION COEFFICIENT, R: 6.5
         2. SEISMIC RESPONSE COEFFICIENT, C_s: 0.153
      b. ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE PROCEDURE
7. MECHANICAL LOADS: FRAMING IS ADEQUATE TO RESIST LOADS INDUCED BY PROPOSED MINI SPLIT.
8. SOIL DESIGN PARAMETERS:
   A. NET ALLOWABLE SOIL BEARING PRESSURES; Q_n: 1,500 PSF (ASSUMED)
   B. NATIVE SOIL UNIT WEIGHT, W_s: 110 PCF (ASSUMED)
   C. EQUIVALENT DRAINED FLUID PRESSURES (ABOVE GW)
      a. ACTIVE; K_a: 35 PCF (ASSUMED)
      b. AT REST; K_r: 55 PCF (ASSUMED)
      c. PASSIVE; K_p: 200 PCF (ASSUMED)
   D. COEFICIENT OF FRICTION, SOIL TO CONCRETE; F: 0.25 (ASSUMED)
   E. VERTICAL SURCHARGE; D_s: 2.0-FT
   F. MODULUS OF SUBGRADE REACTION; K_m: 100 PCI (ASSUMED)
   G. FROST DEPTH; D_f: 2.50-FT

FOUNDATIONS

1. ALL FOOTINGS TO BE PLACED ON FIRM UNDISTURBED, INORGANIC MATERIAL. PROOF ROLL SUB-GRADE PRIOR TO PLACING CONCRETE WHERE THE MATERIAL HAS BEEN DISTURBED BY THE EXCAVATING EQUIPMENT.
2. ALL PIERS AND FOOTINGS OUTSIDE OR AT THE PERIMETER OF THE STRUCTURE, OR IN OTHER UNHEATED AREAS SHALL BE SET TO A DEPTH OF AT LEAST 30-IN. BELOW FINISH GRADE, UNLESS OTHER WISE NOTED ON THE PLANS.
3. ALL FOUNDATIONS AND RETAINING WALLS BELOW FINISH GRADE SHALL RECEIVE AN APPROVED DAMP-PROOF COATING. FOUNDATION WALLS BELOW MAXIMUM ANTICIPATED GROUND WATER LEVELS SHALL RECEIVE AN APPROVED WATER-PROOF COATING; EXTEND WATER-PROOFING TO A MINIMUM OF 1'-0" ABOVE THE MAXIMUM ANTICIPATED GROUND WATER LEVEL.
4. ALLOWABLE BEARING PRESSURE FOR ALL FOOTINGS QA = 1,500 PSF (ASSUMED)
5. LOCAL AREAS OF SOFT AND/OR UNACCEPTABLE MATERIAL ENCOUNTERED AT BOTTOM OF FOOTING ELEVATIONS INDICATED ON THE PLANS MUST BE OVER-EXCAVATED AND BROUGHT UP TO DESIGN GRADE WITH COMPACTED STRUCTURAL FILL OR LEAN CONCRETE FILL.
6. ALL STRUCTURAL FILL AND/OR BACKFILL SHALL BE GRANULAR, FREE DRAINING, MATERIAL; UNIFIED SOILS CLASSIFICATION GW, GP, GM OR SW; MAXIMUM AGGREGATE SIZE OF 3-IN. AND NO MORE THAN 7% PASSING A NUMBER 200 SIEVE. MATERIAL SHALL BE PLACED IN LIFTS NO GREATER THAN 6-IN. IN DEPTH AND COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED PER ASTM D1557.
7. DESIGN FOR THE MITIGATION OF SUBSURFACE WATER FLOW AND/OR PERCHED WATER TABLES SHALL BE THE RESPONSIBILITY OF OTHERS.
8. AS INDICATED ON THE PLANS AND ALL EXCAVATED AREAS UNDERNEATH CONCRETE STRUCTURES SHALL BE BACKFILLED WITH CONTROLLED DENSITY FILL (CDF) OTHERWISE CALLED CONTROLLED LOW STRENGTH MATERIAL (CLSM). CDF SHALL BE A MIXTURE OF CEMENT, FINE AND COURSE AGGREGATE, FLY ASH AND ADMIXTURES FORMULATED TO BE FLOWABLE AND SELF-CONSOLIDATING WITH A NET 28 DAY COMPRESSIVE STRENGTH OF 200 TO 300 PSI.
9. THE ENGINEER SHALL BE NOTIFIED IN WRITING IF ANY GROUND WATER, CLAY TYPE SOILS, DEBRIS OR UNCONSOLIDATED MATERIALS ARE ENCOUNTERED DURING EXCAVATIONS FOR FOUNDATIONS.

GENERAL SYMBOL LEGEND

- SLOPE DIRECTION (DOWN)
- SPAN DIRECTION
- XX'-XX" — MISCELLANEOUS ELEVATION
- A / - — ELEVATION REFERENCE
- A / - — SECTION CUT
- A / - — DETAIL CUT
- /A — REVISION
- 0'-0" — FINISH FLOOR ELEVATION

CAST-IN-PLACE CONCRETE

1. PROJECT CONCRETE MIX TYPES: CONCRETE SHALL BE PROPORTIONED AND FURNISHED FOR THE VARIOUS PROJECT USES AS INDICATED ON THE PLANS AND AS FOLLOWS:
   A. M3000-INT: CONCRETE MIX FOR INTERIOR SLABS ON GRADE: F'_c: 3,000 PSI, ABSOLUTE WATER-CEMENT RATIO BY WEIGHT: 0.50, AIR CONTENT: 0 TO 2% (NON-AIR ENTRAINED MIX).
   B. M3500-FND: STANDARD EXTERIOR CONCRETE MIX FOR NON-LIQUID RETAINING BUILDING FOOTINGS/FOUNDATION WALLS: F'_c 3,500 PSI, ABSOLUTE WATER-CEMENT RATIO BY WEIGHT: 0.55, AIR CONTENT: 6% (+/- 1.5%)
   C. M-CDF: MIX FOR CONTROLLED DENSITY FILL (CDF) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM). CDF SHALL BE A MIXTURE OF CEMENT, FINE AND COURSE AGGREGATE, FLY ASH AND ADMIXTURES FORMULATED TO BE FLOWABLE AND SELF-CONSOLIDATING WITH A NET 28 DAY COMPRESSIVE STRENGTH OF 200 TO 300 PSI.
2. CONCRETE MIX COMPONENTS
   A. A WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494, USED IN STRICT CONFORMANCE WITH THE MANUFACTURERS INSTRUCTIONS, SHALL BE INCORPORATED IN ALL CONCRETE MIX DESIGNS.
   B. HIGHER WATER-CEMENT RATIOS THAN SHOWN ABOVE MAY BE USED IF SUBSTANTIATED IN ACCORDANCE WITH ACI 318-14, CHAPTER 19.
   C. FLY-ASH CONFORMING TO ASTM C618 TYPE F OR C, MAY REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.
   D. CEMENT: ASTM C150 TYPE I OR II.
   E. WATER: CLEAN & POTABLE.
   F. AIR ENTRAINING AGENT: ASTM C260. EXCEPT WHERE NOTED NON-AIR ENTRAINED.
   G. AGGREGATE: 0.75-INCH MAXIMUM AGGREGATE PER ASTM C33. UNLESS NOTED OTHERWISE.
   H. MIX PROPORTIONING: ACI 211.1 AND 350R.
3. CONCRETE ACCESSORIES:
   A. REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60; #3 BARS MAY BE GRADE 40.
   B. WELDED WIRE FABRIC: ASTM A185 OR A497.
   C. WIRE: PLAIN WIRE SHALL CONFORM TO ASTM A 82. DEFORMED WIRE SHALL CONFORM TO ASTM A 496, AND EPOXY COATED WIRE SHALL CONFORM TO ASTM A 884.
4. CONCRETE QUALITY AND DETAILS
   A. GENERAL. CONCRETE SHALL BE PROPORTIONED TO PROVIDE AN AVERAGE COMPRESSIVE STRENGTH, FC, AS PRESCRIBED IN ACI 318/350 SECTION 5.3.2 AND SHALL SATISFY THE DURABILITY CRITERIA OF ACI 318/350 CHAPTER 4.
   B. CONCRETE PROPORTIONS.
      a. CONCRETE MIX PROPORTIONING SHALL BE IN ACCORDANCE WITH ACI 211.1; STANDARD PRACTICE FOR SELECTING PROPORTIONS FOR NORMAL, HEAVYWEIGHT, AND MASS CONCRETE.
      b. CONCRETE MIX PROPORTIONING FOR LIGHTWEIGHT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 211.2; STANDARD PRACTICE FOR SELECTING PROPORTIONS FOR LIGHTWEIGHT CONCRETE.
   C. CONCRETE MIX VERIFICATION: CONCRETE MIX DESIGNS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39.
   D. EVALUATION AND ACCEPTANCE OF CONCRETE. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318/350 SECTION 5.6.
   E. MIXING & PLACING CONCRETE. CONCRETE SHALL BE PREPARED, MIXED, PLACED AND CONSOLIDATED IN ACCORDANCE WITH ACI 318/350 SECTIONS 5.7 THROUGH 5.10 AND AS FOLLOWS:
      a. ACI 304; GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.
      b. ACI 309; GUIDE FOR CONSOLIDATION OF CONCRETE.
   F. MINIMUM TIME BETWEEN ADJACENT PLACEMENTS:
      a. STRUCTURES:
         1. CONSTRUCTION JOINTS: FIVE (5) DAYS WET CURE, OR SEVEN (7) DAYS DRY CURE.
         2. CONTROL JOINTS: TWO (2) DAYS.
         3. EXPANSION JOINTS: ONE (1) DAY.
      b. FLOOR SLABS:
         1. CONSTRUCTION JOINTS: SEVEN (7) DAYS WET CURE, OR TEN (10) DAYS DRY CURE.
         2. CONTROL JOINTS: FOUR (4) DAYS.
         3. EXPANSION JOINTS: ONE (1) DAY.
   G. HORIZONTAL JOINTS IN REINFORCED CONCRETE WALLS:
      a. PROVIDE A LAYER OF SLURRY CONCRETE IN THE BOTTOM OF ALL HORIZONTAL WALL JOINTS, 1-INCH MINIMUM TO 2-INCH MAXIMUM THICKNESS. THOROUGHLY VIBRATE TO MIX CONCRETE & SLURRY TOGETHER.
   H. COLD WEATHER REQUIREMENTS. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING FREEZING OR NEAR-FREEZING WEATHER. THE RECOMMENDED PROCEDURES LISTED IN ACI 306; COLD WEATHER CONCRETING SHALL BE FOLLOWED.
      a. COLD WEATHER IS DEFINED AS A PERIOD WHEN, FOR MORE THAN 3 CONSECUTIVE DAYS, THE FOLLOWING CONDITIONS EXIST:
         1. THE AVERAGE DAILY AIR TEMPERATURE IS LESS THAN 40-DEGREES F AND
         2. THE AIR TEMPERATURE IS NOT GREATER THAN 50-DEGREES F FOR MORE THAN ONE-HALF OF ANY 24-HOUR PERIOD.
   I. HOT WEATHER REQUIREMENTS. DURING HOT WEATHER, PROPER ATTENTION SHALL BE GIVEN TO INGREDIENTS, PRODUCTION METHODS, HANDLING, PLACING, PROTECTION, AND CURING TO PREVENT EXCESSIVE CONCRETE TEMPERATURES OR WATER EVAPORATION THAT COULD IMPAIR REQUIRED STRENGTH OR SERVICEABILITY OF THE MEMBER OR STRUCTURE. THE RECOMMENDED PROCEDURES LISTED IN ACI 305; HOT WEATHER CONCRETING SHALL BE FOLLOWED.
      a. HOT WEATHER IS ANY COMBINATION OF THE FOLLOWING CONDITIONS THAT TENDS TO IMPAIR THE QUALITY OF FRESHLY MIXED OR HARDENED CONCRETE BY ACCELERATING THE RATE OF MOISTURE LOSS AND RATE OF CEMENT HYDRATION, OR OTHERWISE CAUSING DETRIMENTAL RESULTS:
         1. HIGH AMBIENT TEMPERATURE.
         2. HIGH CONCRETE TEMPERATURE.
         3. LOW RELATIVE HUMIDITY.
         4. WIND SPEED.
         5. SOLAR RADIATION.
5. FORMWORK
   A. FORMS SHALL RESULT IN A FINAL STRUCTURE THAT CONFORMS TO SHAPES, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE DESIGN DRAWINGS AND SPECIFICATIONS.
      a. DESIGN OF FORMWORK SHALL BE IN ACCORDANCE WITH ACI 318/350 SECTION 6.1.
      b. FORMWORK SHALL BE IN ACCORDANCE WITH ACI 347; GUIDE TO FORMWORK FOR CONCRETE.
   B. SPECIAL FORMWORK DESIGN. FORMWORK AS LISTED IN THIS SECTION SHALL BE DESIGNED PER CHAPTER 2 OF ACI 347 BY A PROFESSIONAL STRUCTURAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF *IDAHO*. DESIGN CALCULATIONS AND FORMWORK PLANS AND DETAILS, SEALED AND SIGNED BY THE FORMWORK ENGINEER OF RECORD SHALL BE SUBMITTED UNDER THE DEFERRED SUBMITTAL SECTION OF THE PROJECT SPECIFICATIONS. SUBMIT SPECIAL FORMWORK DESIGNS FOR THE FOLLOWING ITEMS:
   C. TOLERANCES FOR FINISHED CONCRETE SURFACES SHALL MEET THE FOLLOWING REQUIREMENTS, CLASS OF SURFACE IS PER ACI 347R-14 TABLE 5.3.1:
      a. FOOTINGS: CLASS C
      b. FOUNDATION WALLS: CLASS B
      c. ABOVE GRADE CONCRETE NOT VISIBLE TO SIGHT: CLASS B
      d. ABOVE-GRADE CONCRETE VISIBLE TO SIGHT: CLASS A
   D. REMOVAL OF FORMS.
      a. CONCRETE FORMS SHALL NOT BE REMOVED UNTIL THE RETAINED CONCRETE HAS REACHED THE FOLLOWING MINIMUM PERCENTAGE OF THE REQUIRED 28 DAY COMPRESSIVE STRENGTH:
         1. FOOTINGS AND BASE SLABS ON GRADE: 50% OF F'_c.
         2. FOUNDATION WALLS AND COLUMNS: 67% OF F'_c.
         3. ELEVATED STRUCTURAL SLABS, BEAMS AND JOISTS: 95% F'_c.
      b. WHERE CONCRETE CYLINDER TESTS ARE NOT AVAILABLE FOR STRENGTH VERIFICATION THE FOLLOWING GUIDE MAY BE USED WHEN PERMITTED BY THE PROJECT ENGINEER:
         1. FOOTINGS AND BASE SLABS ON GRADE: 12 HOURS.
         2. FOUNDATION WALLS AND COLUMNS: 24 HOURS.
         3. ELEVATED STRUCTURAL SLABS, BEAMS AND JOISTS:
            - SPANS UNDER 10-FEET: 4 DAYS
            - SPANS BETWEEN 10-FEET AND 15-FEET: 7 DAYS.
            - SPANS BETWEEN 15-FEET AND 20-FEET: 10 DAYS
            - SPANS GREATER THAN 20-FEET: BY CYLINDER STRENGTH VERIFICATION ONLY.
   E. EMBEDMENTS IN CONCRETE.
      a. CONDUITS, PIPES, AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE AND WITHIN LIMITATIONS OF ACI 318/350 SECTION 6.3 SHALL BE PERMITTED TO BE EMBEDDED IN CONCRETE WITH APPROVAL OF THE PROJECT ENGINEER, PROVIDED THEY ARE NOT CONSIDERED TO REPLACE STRUCTURALLY THE DISPLACED CONCRETE, EXCEPT AS PROVIDED IN SECTION 6.3.6.
      b. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNLESS EFFECTIVELY COATED OR COVERED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.
   F. CONSTRUCTION JOINTS.
      a. CONSTRUCTION JOINTS SHALL ONLY BE PLACED WHERE INDICATED ON THE PROJECT DRAWINGS OR AS APPROVED BY THE PROJECT ENGINEER.
      b. CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 318/350 SECTION 6.4

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BID

PROFESSIONAL ENGINEER — No. 7944020-2202 — BRANDON LEE COX — STATE OF UTAH

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NO.	DESCRIPTION	BY	APR.	DATE
	REVISION			

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B

AMERICAN FORK BOAT HARBOR, PARKING LOT RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
GENERAL STRUCTURAL NOTES

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:12/23/2022

DRAWING:
S-001

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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CAST-IN-PLACE CONCRETE

6. DETAILS OF REINFORCEMENT
   - A. PLACEMENT OF ALL REINFORCING STEEL WITHIN CONCRETE STRUCTURES SHALL BE IN CONFORMANCE WITH ACI 318 CHAPTER 20.
   - B. REINFORCING STEEL HOOKS, BENDS, TIES, SPLICES AND OTHER REINFORCEMENT DETAILS SHALL BE IN ACCORDANCE WITH ACI 315; DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.
   - C. SPACING LIMITS FOR REINFORCEMENT SHALL BE IN CONFORMANCE WITH ACI 318 SECTION 25.2.
   - D. CONCRETE PROTECTION FOR REINFORCEMENT. UNLESS NOTED ELSEWHERE ON THE DRAWINGS, ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER:
     - a. CONCRETE STRUCTURES; PER ACI 318 SECTION 20.6.1.3:
       1. CONCRETE CAST AGAINST EARTH: 3.00 INCH
       2. CONCRETE EXPOSED TO EARTH OR WEATHER;
          - A. NO. 5 OR SMALLER BARS: 1.50-INCH
          - B. NO. 6 OR LARGER BARS: 2.00-INCH
       3. CONCRETE NOT EXPOSED TO EARTH OR WEATHER;
          - A. NO. 11 OR SMALLER BARS: 0.75-INCH
          - B. NO. 14 OR LARGER BARS: 1.50-INCH
       4. BEAMS AND COLUMNS;
          - A. PRIMARY REINFORCEMENT, TIES, STIRRUPS OR SPIRALS: 1.50-INCH
   - E. CONCRETE BLOCKS OR PLASTIC-COATED BAR CHAIRS SHALL BE PROVIDED FOR SUPPORT OF ALL SLAB REINFORCING STEEL, SUFFICIENT IN NUMBER TO PREVENT SETTLEMENT OR SAGGING, BUT IN NO CASE SHALL SUCH SUPPORT BE CONTINUOUS. METAL CLIPS OR SUPPORTS SHALL NOT BE PLACED IN CONTACT WITH THE FORMS OR THE SUB-GRADE.
   - F. DOWELS AND ANCHOR BOLTS SHALL BE WIRED OR OTHERWISE HELD IN CORRECT POSITION PRIOR TO PLACING CONCRETE. CARE SHALL BE TAKEN TO INSURE THAT DOWELS AND ANCHOR BOLTS REMAIN PLUM AFTER CONCRETE IS POURED AND VIBRATED. IN NO CASE SHALL DOWELS OR ANCHOR BOLTS BE STABBED INTO FRESHLY POURED CONCRETE!
   - G. PROVIDE DOWELS IN FOOTINGS AND AT CONSTRUCTION JOINTS TO MATCH VERTICAL REINFORCING BAR SIZE AND SPACING, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
   - H. WHERE DRILLED IN ANCHORS ARE TO BE POST-INSTALLED INTO CONCRETE SURFACES TAKE CARE TO LOCATE REINFORCING STEEL SO THAT IT WILL NOT INTERFERE WITH THE DRILLING OPERATIONS. MOVE BARS PLUS OR MINUS 1 TO 2 INCHES IN ORDER TO AVOID DRILLING CONFLICTS.
   - I. ALL BAR BENDS, HOOKS, SPLICES AND OTHER REINFORCING STEEL DETAILS SHALL CONFORM TO THE REQUIREMENTS OF ACI 315.
   - J. UNLESS OTHERWISE NOTED ON THE PLANS ALL BARS SHALL BE SPLICED WITH A MINIMUM CLASS B LAP SPLICE; LAP SPLICES OF DEFORMED BARS AND DEFORMED WIRE IN COMPRESSION ZONES MAY BE CLASS A SPLICES.
   - K. AT ALL CORNERS AND WALL INTERSECTIONS PROVIDE BENT BARS TO MATCH THE HORIZONTAL REINFORCING STEEL AND IN ACCORDANCE WITH THE TYPICAL CORNER REINFORCING DETAILS.
   - L. CHAMFER ALL EXPOSED CORNERS AND FILLET ENTRANT ANGLES 3/4" UNLESS OTHERWISE NOTED ON THE DRAWINGS.
   - M. AT SLAB AND WALL OPENINGS PROVIDE A MINIMUM OF (4) #5 BARS; OVER, UNDER AND AT EITHER SIDE OF THE OPENINGS. EXTEND THESE BARS A MINIMUM OF 24" PAST THE OPENING EDGE. PROVIDE (1) MATT OF (4) #5 BARS FOR WALLS OR SLABS WITH SINGLE-LAYER REINFORCING AND (2) MATTS OF (4) #5 BARS FOR DOUBLE-LAYER REINFORCING WALLS OR SLABS. PROVIDE #4, 4'-0" LONG DIAGONAL BARS AT EACH RE-ENTRANT CORNER IN SLABS; (1) BAR FOR SLABS WITH SINGLE LAYER REINFORCING AND (2) BARS FOR SLABS WITH DOUBLE LAYER REINFORCING.
7. CONCRETE FINISHING. ALL CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ACI 301.
   - A. FORMED CONCRETE SURFACES. AFTER REMOVAL OF FORMS, GIVE EACH FORMED SURFACE ONE OR MORE OF THE FOLLOWING FINISHES IN CONFORMANCE WITH ACI 301 SECTION 5.3.3 FINISHING FORMED SURFACES.
     - a. CONCRETE STRUCTURES:
       1. CONCRETE FOOTINGS AND FOUNDATIONS NOT EXPOSED TO VIEW. PROVIDE AN AS-CAST FINISH.
       2. FOUNDATION WALL AND OTHER SURFACES BELOW GRADE AND NOT EXPOSED TO VIEW. PROVIDE A SURFACE FINISH TYPE SF-1.0.
       3. INTERIOR, EXTERIOR AND TOP SURFACES EXPOSED TO VIEW TO 6-INCHES BELOW GRADE. PROVIDE A SURFACE FINISH TYPE SF-2.0.
       4. COLUMN, BEAM AND JOIST SURFACES THAT ARE EXPOSED TO VIEW. PROVIDE A SURFACE FINISH TYPE SF-2.0.
       5. INTERIOR CONCRETE SURFACES TO BE PAINTED OR RECEIVE OTHER COATING SYSTEMS SHALL RECEIVE A SURFACE FINISH TYPE SF-3.0.
     - b. SPECIAL OR ARCHITECTURAL FINISHES: REFER TO THE ARCHITECTURAL SPECIFICATIONS FOR SPECIAL OR ARCHITECTURAL FINISH REQUIREMENTS.
   - B. UNFORMED CONCRETE SURFACES. UNFORMED CONCRETE SURFACES INCLUDING THE TOP SURFACE OF ALL CONCRETE ROOF AND FLOOR SLABS SHALL BE FINISHED IN ACCORDANCE WITH ACI 301 SECTION 5.3.4 AND ACI 302 CHAPTER 8.
     - a. FOR THE TOP SURFACES OF WALLS, PROVIDE A SCRATCHED FINISH.
     - b. INTERIOR OFFICES, LABORATORY SPACES AND OTHER AREAS RECEIVING ONLY LIGHT FOOT TRAFFIC SHALL RECEIVE A TROWELED FINISH.
     - c. INTERIOR GARAGE, INDUSTRIAL OR WORK AREAS SUBJECT TO EQUIPMENT OR TRAFFIC LOADS SHALL RECEIVE A BROOM FINISH.
     - d. PROVIDE A NONSLIP FINISH FOR EXTERIOR SURFACES AND WHERE INDICATED ON THE PLANS.
     - e. REFER TO THE ARCHITECTURAL PLANS FOR FINISH REQUIREMENTS FOR FLOORS TO RECEIVE ARCHITECTURAL COVERINGS.
   - C. SAWED CONTRACTION JOINTS. CONFORM TO ACI 301 SECTION 5.3.5.

CONCRETE FLOORS AND SLABS

1. CONCRETE FLOORS AND SLABS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 302; CONCRETE FLOOR AND SLAB CONSTRUCTION. PROVIDE THE FOLLOWING CLASS CONCRETE FLOOR SLABS IN ACCORDANCE WITH TABLE 2.1 UNLESS OTHERWISE NOTED ON THE DRAWINGS:
   - A. INTERIOR AREAS RECEIVING ONLY LIGHT FOOT TRAFFIC: CLASS 1 OR 2 FLOOR DEPENDING ON FINAL FLOOR COVERING.
2. PLACING, CONSOLIDATING, AND FINISHING. FOLLOW THE RECOMMENDATIONS GIVEN IN CHAPTER 8.

BOLTS AND ANCHOR RODS

1. ANCHOR RODS: ANCHOR RODS (BOLTS SET INTO CONCRETE) SHALL BE ASTM F1554, F_y: 55 KSI. NUTS FOR ANCHOR RODS SHALL CONFORM TO ASTM A563, GRADE A, HEAVY HEX.
2. THREADED STEEL RODS: THREADED STEEL RODS SHALL CONFORM TO ASTM A36, F_y: 36 KSI. NUTS FOR THREADED RODS SHALL CONFORM TO ASTM A563, GRADE A, HEAVY HEX.
3. WASHERS: ALL WASHERS SHALL CONFORM TO ASTM F436.

PRE-ENGINEERED/FABRICATED WOOD TRUSSES

1. ALL PRE-ENGINEERED/FABRICATED WOOD (P.E.W.) TRUSSES INDICATED ON THE DRAWINGS SHALL BE METAL PRESS-PLATE CONNECTED WOOD TRUSSES DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF IDAHO PER THESE NOTES AND THE SPECIFICATIONS.
   - A. DESIGN P.E.W. TRUSSES TO THE FOLLOWING DEFLECTION LIMITS:
   - B. ROOF DEAD + LIVE LOAD: SPAN/240 OR 1 IN MAXIMUM
   - C. ROOF LIVE LOAD ONLY: SPAN/360 OR 1/2-IN MAXIMUM
2. SHOP DRAWINGS AND DESIGN CALCULATIONS SIGNED AND STAMPED BY THE DESIGN ENGINEER SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION.
3. ALL NECESSARY BRIDGING, BLOCKING, PRE-NOTCHED OR BEVELED PLATES, HANGERS, ETC. SHALL BE DETAILED OR SPECIFIED ON THE SHOP DRAWINGS AND FURNISHED BY THE TRUSS MANUFACTURER.
4. TRUSS MANUFACTURER SHALL VERIFY ALL SETBACKS, DIMENSIONS, OVERHANGS, VERTICAL CONTROLS AND DIMENSIONS PRIOR TO FABRICATION.
5. ALTERATION OF THE TRUSS LAYOUT SHOWN ON THE PLANS MAY REQUIRE SUPPORTING STRUCTURAL AND FOUNDATION CHANGES, THEREFORE, PRIOR APPROVAL BY THE ARCHITECT/ENGINEER IS REQUIRED FOR ANY PROPOSED LAYOUT CHANGE.
6. TRUSSES SHALL NOT BE FIELD MODIFIED WITHOUT WRITTEN AUTHORIZATION FROM THE TRUSS MANUFACTURER'S ENGINEER OF RECORD.
7. TRUSSES SHALL BE HANDLED, ERECTED AND BRACED AS DIRECTED BY THE TRUSS MANUFACTURER AND PER THE REQUIREMENTS OF THE TRUSS PLATE INSTITUTE MANUAL HIB-91 OR CURRENT EDITION.

ADHESIVE ANCHORS

1. MATERIALS
   - A. THE ADHESIVE ANCHOR SYSTEM USED FOR POST-INSTALLED ANCHORAGE TO CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY PUBLISHED ACI 355.4, ACCEPTANCE CRITERIA FOR QUALIFICATION OF POST INSTALLED ADHESIVE ANCHORS IN CONCRETE AND COMMENTARY. THE ANCHOR SYSTEM SHALL BE ONE OF THE FOLLOWING:
     - a. SIMPSON SET-XP
     - b. HILTI HY 150 MAX-SD
     - c. APPROVED EQUAL MEETING ACI 355.4 AND THE FOLLOWING MINIMUM STRESS VALUES.
       1. CRACKED CONCRETE BOND STRESS, T_{cr}: 760 PSI FOR 0.75-INCH DIAMETER THREADED ROD ANCHOR.
       2. UNCRACKED CONCRETE BOND STRESS, T_{uncr}: 1,710 PSI FOR 0.75-INCH DIAMETER THREADED ROD ANCHOR.
   - B. ANCHOR ROD TYPE AND MATERIAL SHALL BE AS SPECIFIED.
   - C. NUTS, WASHERS, AND OTHER HARDWARE USED WITH AN ALL-THREADED BAR ADHESIVE ANCHOR SYSTEM SHALL HAVE A MATERIAL OR AN ALLOY DESIGNATION THAT MATCHES THE ALL-THREAD MATERIAL OR ALLOY. GALVANIZED ASSEMBLIES SHALL BE HOT-DIPPED IN ACCORDANCE WITH ASTM A153 CLASS C.
2. GENERAL INSTALLATION GUIDELINES.
   - A. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT THE TIME OF ADHESIVE ANCHOR INSTALLATION.
   - B. CONCRETE TEMPERATURE AT THE TIME OF ADHESIVE ANCHOR INSTALLATION SHALL BE AT LEAST 50-DEGREES F.
   - C. EMBEDMENT DEPTH AND ANCHOR PROJECTION FROM THE CONCRETE SURFACE SHALL BE AS SHOWN ON THE DRAWINGS OR DETAILS OR AS NECESSARY FOR THE PARTICULAR ANCHOR OR GROUP OF ANCHORS BEING INSTALLED.
3. INSTALLATION TECHNIQUES.
   - A. ADHESIVE ANCHORS SHALL BE INSTALLED BY QUALIFIED PERSONNEL TRAINED TO INSTALL ADHESIVE ANCHORS IN ACCORDANCE WITH THE SPECIFICATIONS. POST INSTALLED ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERES PRINTED INSTRUCTIONS (MPII).
   - B. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM. THE INSTALLERS QUALIFICATIONS SHALL BE SUBMITTED AND APPROVED IN BY THE LICENSED DESIGN PROFESSIONAL.
   - C. ANCHORS SHALL BE INSTALLED IN HOLES DRILED WITH A ROTARY IMPACT HAMMER DRILL OR ROCK DRILL.
   - D. ANCHOR HOLES SHALL BE THOROULY CLEANED PRIOR TO ADHESIVE INJECTION, AS REQURIED BY MPII.
   - E. ANCHORS TO BE INSTALLED IN ADHESIVE SHALL BE CLEAN, OIL-FREE AND FREE OF LOOSE RUST, PAINT OR OTHER COATING.
4. FIELD QUALITY CONTROL
   - A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION BY AN INSPECTOR SPECIFICALLY APPROVED FOR THE PURPOSE BY THE BUILDING OFFICIAL.
   - B. ADHESIVE ANCHORS SHALL BE PROOF TESTED AS FOLLOWS:
     - a. A MINIMUM OF 10 PERCENT OF THE HORIZONTALLY OR UPWARDLY INCLINED INSTALLED ADHESIVE ANCHORS SHALL BE PROOF TESTED IN TENSION BY AN INDEPENDENT TESTING LABORITORY.
     - b. TENSION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM E488
     - c. THE ADHESIVE ANCHORS SHALL BE TENSION PROOF TESTED TO THE FOLLOWING LOADS:
       1. 0.75-INCH DIAMETER ANCHOR WITH 9-INCH EMBEDMENT, P_t: 50 KIPS.
       2. 1.00-INCH DIAMTER ANCHOR WITH 12-INCH EMBEDMENT, P_t: 75 KIPS
   - C. ANCHORS SHALL HAVE NO VISIBLE INDICATIONS OF DISPLACEMENT OR DAMAGE DURING OR AFTER PROOF LOAD APPLICATION, CONCRETE CRACKING IN THE VICINITY OF THE ANCHOR AFTER LAODING SHALL BE CONSIDERED A FAILURE.
   - D. IF MORE THAN 15 PERCENT OF THE TESTED ADHESIVE ANCHORS FAIL TO ACHIEVE THE SPECIFEID PROOF LOAD WITHIN THE LIMITS DEFINED ON THESE DRAWINGS, 100 PERCENT OF THE SAME DIAMETER AND TYPE AS THE FAILED ANCHOR SHALL BE PROOF TESTED, UNLESS OTHERWISE DIRECTED BY THE LICENSED DESIGN PROFESSIONAL.

WOOD FRAMING

1. LUMBER: GRADING SHALL BE TO THE STANDARD GRADING RULES OF THE WWPA. TYPICAL STRUCTURAL LUMBER SHALL BE NUMBER 2 DOUGLAS-FIR/LARCH OR BETTER. MEMBERS NOTED AS WOOD BEAMS, POSTS OR COLUMNS SHALL BE NUMBER 1 DOUGLAS-FIR/LARCH OR BETTER. STUDS FOR INTERIOR NON-BEARING WALLS MAY BE STUD GRADE LUMBER. LUMBER TO BE LEFT EXPOSED, WITHOUT OTHER FINISH AND LUMBER IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED.
2. TREATED LUMBER: LUMBER, INCLUDING WOOD SHEATHING, TO BE LEFT EXPOSED WITHOUT OTHER FINISH, LOCATED WITHIN 8" OF FINISH GRADE, OR IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED MATERIAL. CONTRACTOR SHALL COORDINATE AND VERIFY THAT ALL STEEL ITEMS IN CONTACT WITH THE TREATED MATERIAL, INCLUDING STEEL HANGARS, CONNECTORS AND FASTENERS HAVE A GALVANIZED FINISH OF SUFFICIENT THICKNESS, OR OTHER TYPE OF PROTECTION, THAT IS COMPATIBLE WITH THE SPECIFIC TREATMENT TYPE SELECTED.
3. BOLTS & LAG SCREWS FOR WOOD CONSTRUCTION: CONFORM TO ANSI/ASME STANDARDS B18.2.1-1981 AND THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) 1991 EDITION PART VIII FOR BOLTS AND PART IX FOR SCREWS.
4. WOOD SCREWS: CONFORM TO ANSI/ASME STANDARDS B18.6.1-1981 AND THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) 1991 EDITION PART XI.
5. NAILS & SPIKES: CONFORM TO FEDERAL SPECIFICATION FF-N-105B AND THE NATIONAL DESIGN SPECIFICATION (NDS) 1991 EDITION PART XII.
6. NAILING: WHERE NOT OTHERWISE SPECIFIED ON THE PLANS, NAILING SHALL CONFORM TO IBC TABLE 2304.9.1, FASTENING SCHEDULE. ALL NAILS SHALL BE COMMON WIRE NAILS OR PNEUMATICALLY DRIVEN NAILS WITH AN EQUIVALENT CROSS-SECTION AND PENETRATION, UNLESS NOTED OTHERWISE.
7. LUMBER HARDWARE: WOOD CONSTRUCTION CONNECTORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY; CURRENT CATALOG, OR AN APPROVED EQUAL. HARDWARE EXPOSED TO WEATHER OR VIEW, IN UNHEATED PORTIONS OF THE STRUCTURE, OR AS INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS SHALL BE HOT-DIPPED GALVANIZED WITH GALVANIZED FASTENERS.
8. ROOF SHEATHING: ALL ROOF SHEATHING SHALL BE 5/8" NOMINAL, EXTERIOR APA RATED SHEATHING (32/16) INSTALLED WITH PLY-CLIPS UNLESS NOTED OTHERWISE ON PLANS.
9. EXTERIOR WALL SHEATHING: ALL EXTERIOR WALL SHEATHING SHALL BE 1/2" NOMINAL APA RATED EXTERIOR SHEATHING.
10. WOOD SHEATHED DIAPHRAGM CONSTRUCTION REQUIREMENTS
    - A. WOOD SHEATHED ROOF DIAPHRAGMS:
      - a. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ORIENT ROOF SHEATHING WITH FACE-GRAIN PERPENDICULAR TO SUPPORTING MEMBERS, WITH JOINTS IN ADJACENT ROWS STAGGERED 1/2 PANEL LENGTH.
      - b. PROVIDE 2X4 FLAT BLOCKING AT UNSUPPORTED PANEL EDGES IN AREAS NOTED AS "BLOCKED ROOF DIAPHRAGM".
      - c. NAIL ROOF SHEATHING TO ALL SUPPORTING MEMBERS AND BLOCKING AS FOLLOWS:
        1. 8D NAILS @ 4-IN. O.C. AT ALL DIAPHRAGM BOUNDARIES.
        2. 8D NAILS @ 4-IN. O.C. AT ALL PANEL EDGES.
        3. 8D NAILS @ 12-IN. O.C. TO INTERMEDIATE FRAMING MEMBERS.
    - B. WOOD SHEATHED SHEAR WALLS:
      - a. SHEAR WALL SHEATHING TO BE ORIENTED VERTICALLY.
      - b. ALL UNSUPPORTED EDGES TO BE BACKED WITH 2X SOLID BLOCKING.
      - c. NAIL SHEATHING PER SHEAR WALL SCHEDULES SHOWN ON DRAWINGS.
      - d. MINIMUM NAILING WHERE NOT NOTED OTHERWISE SHALL BE 8D NAILS @ 6-IN. O.C. TO ALL PANEL EDGES AND 12-IN. O.C. AT INTERMEDIATE SUPPORTING MEMBERS.

MECHANICAL OPENINGS

1. MECHANICAL OPENINGS ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS; REFER TO MECHANICAL PLANS FOR SIZE AND LOCATIONS.
2. OPENINGS THROUGH CONCRETE OR MASONRY WALLS GREATER THAN 6-INCH SQUARE OR 8-INCH ROUND SHALL BE REINFORCED WITH A MINIMUM OF 1-#5 BAR, EACH OF FOUR SIDES, EXTENDING 24" PAST THE OPENING EDGE. IN MASONRY WALLS THE BARS SHALL BE PLACED IN SOLID GROUTED CORES.
3. OPENINGS THROUGH FRAMED WALLS SHALL BE SOLIDLY BLOCKED ON ALL FOUR SIDES WITH FULL HEIGHT STUDS AND TOP AND BOTTOM BLOCKING. PROVIDE A HEADER MEMBER ACROSS THE OPENING PER THE TYPICAL DETAILS WHERE BEARING STUDS ARE INTERRUPTED BY THE OPENING.

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PROFESSIONAL ENGINEER
No. 7944020-2202
BRANDON LEE COX
STATE OF UTAH

JUL 01 2024
SET

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NO.	DESCRIPTION	BY	APR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR, PARKING LOT RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
GENERAL STRUCTURAL NOTES

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:12/23/2022
DRAWING:
S-002

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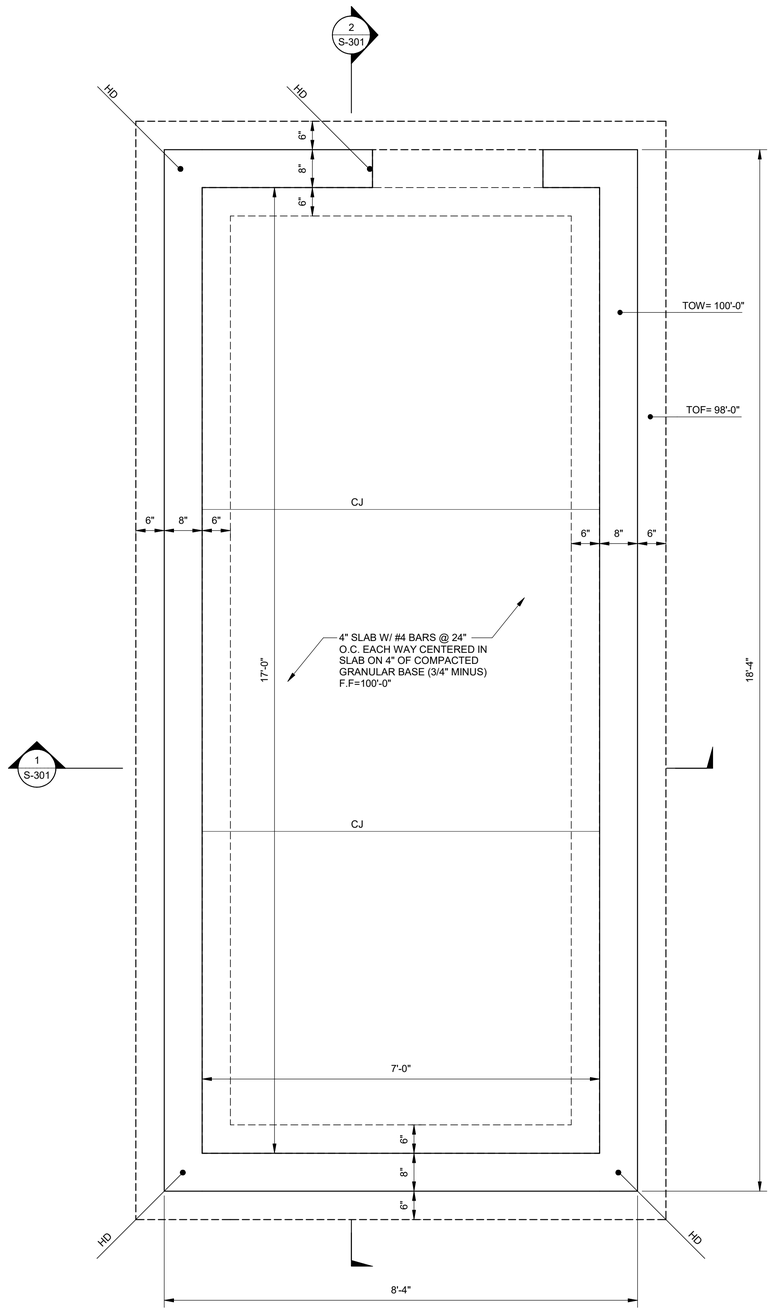
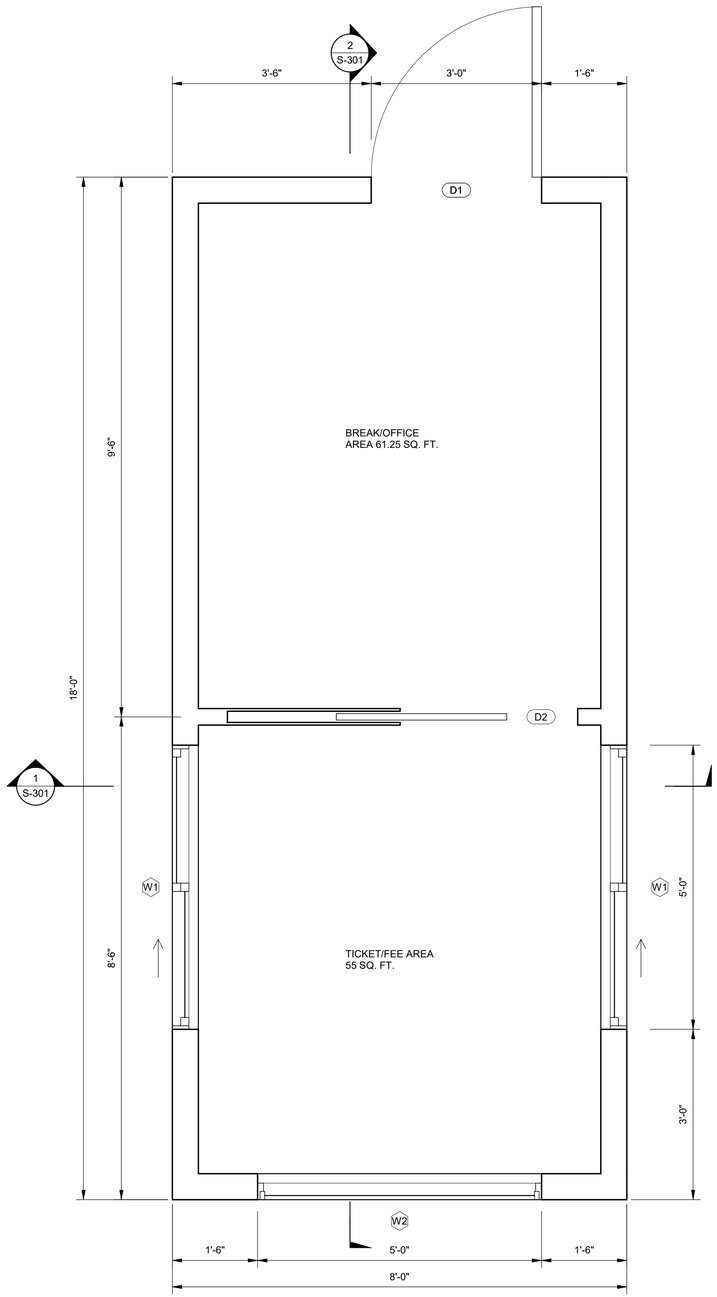
Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)



1 FOUNDATION PLAN
SCALE: 3/4" = 1'-0"



2 FLOOR PLAN
SCALE: 3/4" = 1'-0"

GENERAL NOTES

1. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS, AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICIATION IN A TIMELY MANNER PRIOR TO CONSTRUCTION.

FOUNDATION PLAN NOTES

1. CONTRACTOR TO COORDINATE & VERIFY ALL DIMENSIONS & ELEVATIONS WITH CIVIL SHEETS PRIOR TO CONSTRUCTION.
2. SEE SHEETS S-001 & S-002 FOR THE GENERAL STRUCTURAL NOTES REQUIRMENTS.
3. FINISH FLOOR REFERENCE ELEVATION (FFE) = 100'-0", SEE CIVIL FOR ACTUAL ELEVATION.
4. HD = SIMPSON HDU4-SDS2.5 WITH (10) 1/4" x 2 1/2" SDS SCREWS INTO (2) 2x6 STUDS, MINIMUM. SEE SIMPSON CATALOG FOR INSTALL REQUIREMENTS.
5. CJ = SLAB CONTROL JOINTS EITHER BY EARLY ENTRY SAW CUTTING OR HAND TROWEL. JOINT DEPTH EQUAL TO 1/4 DEPTH OF SLAB AND 1/8" MINIMUM WIDTH. EQUALLY SPACE CONTROL JOINTS IN DIRECTION SHOWN IN PLAN.
6. CONTRACTOR'S OPTION TO DRILL AND EPOXY ALL SLAB REINFORCEMENT BARS 3" MINIMUM INTO STEMWALL ON ALL SIDES.

FINISH MATERIAL SCHEDULE

1. WALLS:
   - EXTERIOR: PROVIDE WEATHER BARRIER OVER ENTIRETY OF EXTERIOR WALL SHEATHING WITH 3'-0" THIN STONE VENEER WAINSCOT AND CAP AT BOTTOM OF WALL. INSTALL LAP SIDING WITH TRIM AROUND WINDOWS, DOORS, AND AT CORNERS. COORINDATE SIDING, TRIM, AND WAINSCOT TYPE, SIZE, COLOR, AND PLACEMENT WITH OWNER PRIOR TO CONSTRUCTION.
   - FILL STUD CAVITIES WITH R-21 FIBERGLASS INSULATION.
   - INTERIOR: 5/8" THICK, TAPED, FINISHED, AND PAINTED DRYWALL. COORDINATE COLOR WITH OWNER.
2. FLOOR: STAINED CONCRETE FLOOR.
3. CEILING: R-30 INSULATION OVER 5/8" THICK, TAPED, FINISHED, AND PAINTED DRYWALL. COORDINATE COLOR WITH OWNER.

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PROFESSIONAL ENGINEER
No. 7944020-2202
BRANDON LEE COX
STATE OF UTAH

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NO.	DESCRIPTION	BY	APR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR, PARKING LOT RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
FLOOR & FOUNDATION PLAN

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:12/23/2022
DRAWING:
S-101

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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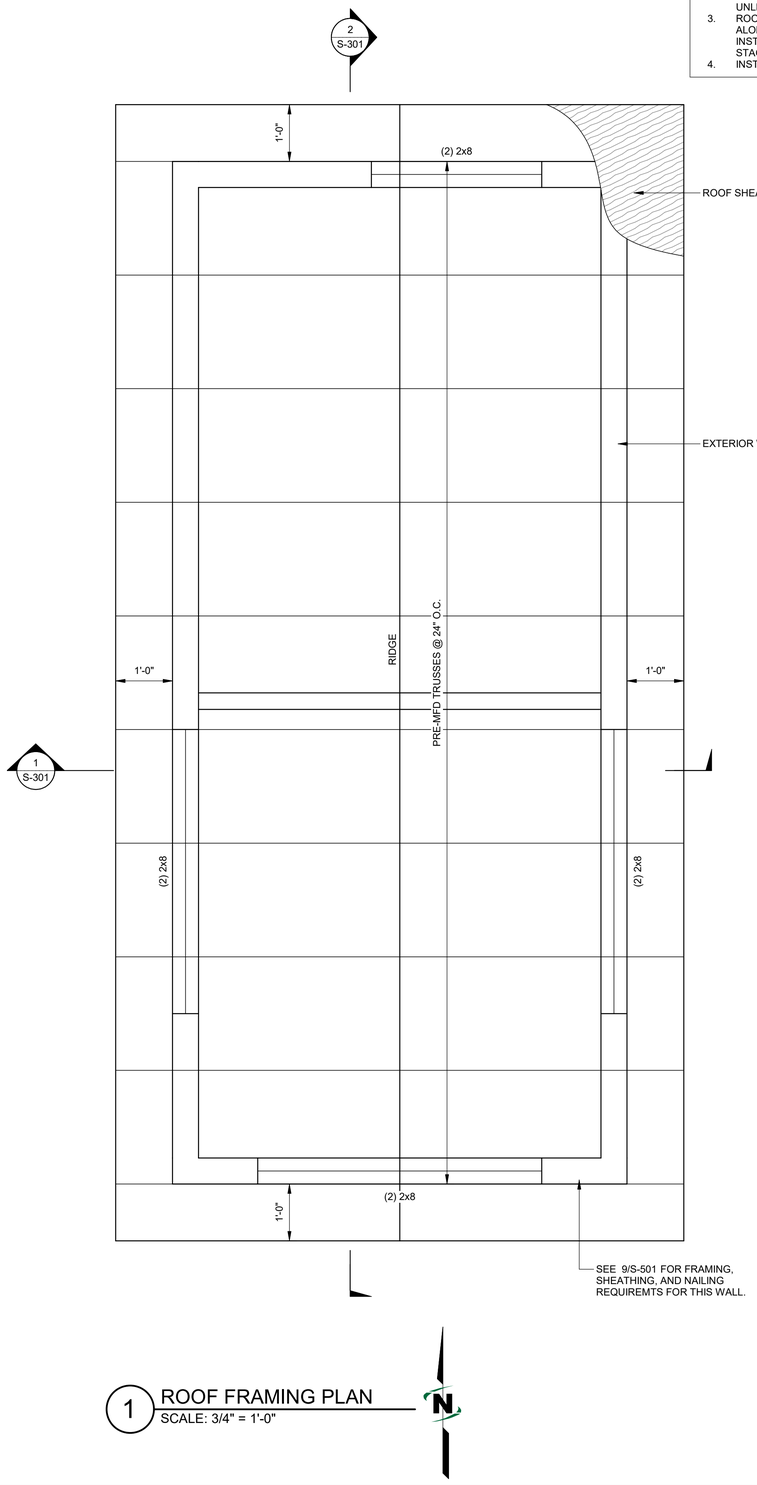
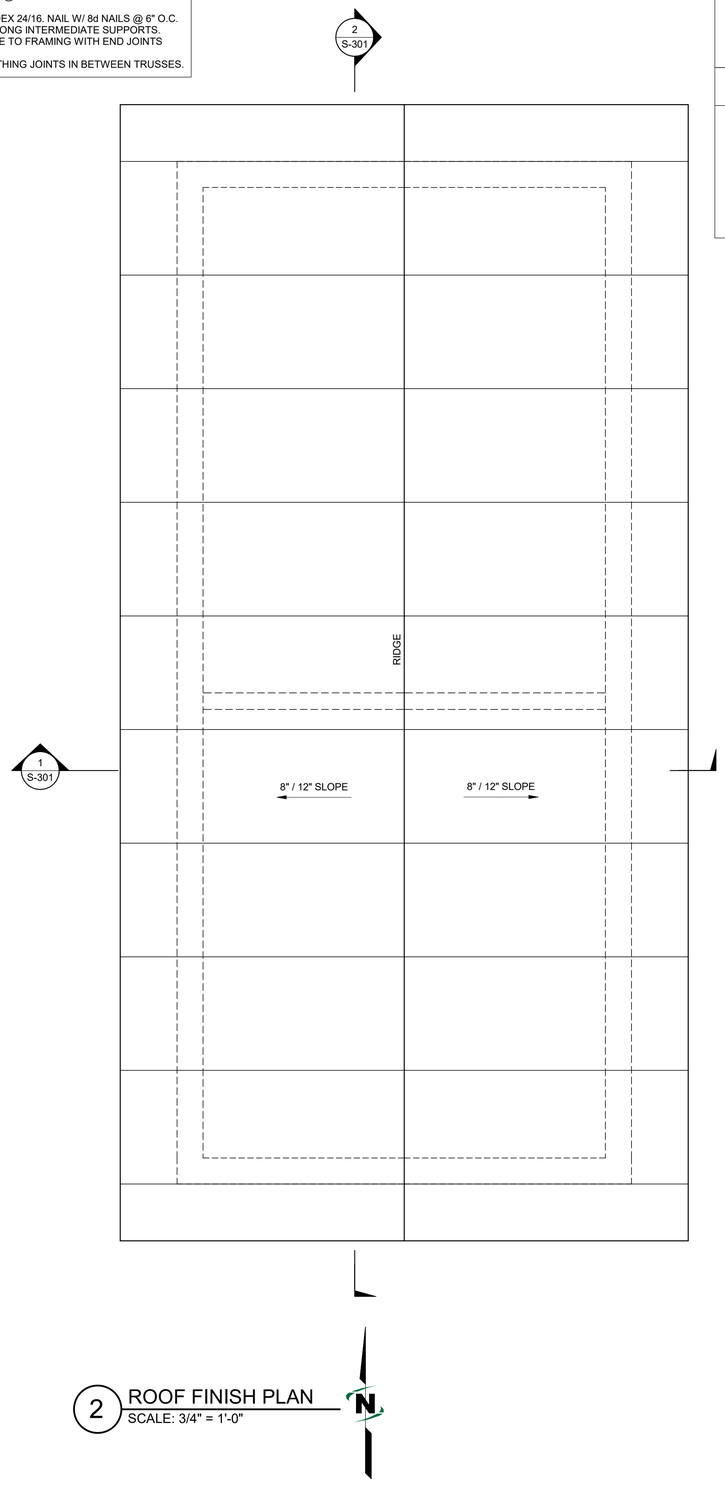
FRAMING NOTES

1. ALL HEADERS AND OPENING FRAMING SHALL BE (2) 2x8 WITH (1) TRIMMER & (1) KING (TYP. U.NO.)
2. ALL EXTERIOR WALL STUDS ARE 2x6 DF#2 STUDS @ 16" O.C. W/ 7/16" SHEATHING, APA INDEX 24/16. USE 8d NAILS @ 6" O.C. @ EDGES & 12" @ FIELD ON EXTERIOR WALLS UNLESS NOTED OTHERWISE.
3. ROOF SHEATHING TO BE 7/16" SHEATHING, APA INDEX 24/16. NAIL W/ 8d NAILS @ 6" O.C. ALONG SUPPORTED PANEL EDGES AND 12" O.C. ALONG INTERMEDIATE SUPPORTS. INSTALL PANELS WITH LONG EDGE AT RIGHT ANGLE TO FRAMING WITH END JOINTS STAGGERED.
4. INSTALL SIMPSON PSCA7/16 OR PSCL7/16 AT SHEATHING JOINTS IN BETWEEN TRUSSES.



1 ROOF FRAMING PLAN
SCALE: 3/4" = 1'-0"



2 ROOF FINISH PLAN
SCALE: 3/4" = 1'-0"

GENERAL NOTES

1. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS, AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICIATION IN A TIMELY MANNER PRIOR TO CONSTRUCTION.

ROOF FINISH NOTES

1. INSTALL ICE AND WATER SHIELD OVER ENTIRE AREA OF ROOF SHEATHING.
2. AT CONTRACTOR'S OPTION, ROOF FINISH SHALL BE EITHER EXPOSED FASTENER OR STANDING SEAM METAL ROOF PANELS. COORDINATE COLOR WITH OWNER PRIOR TO CONSTRUCTION.
3. INSTALL METAL VENTED SOFFIT AND FASCIA, AND METAL RAIN GUTTERS AND DOWNSPOUTS AS REQUIRED. COORDINATE COLOR WITH OWNER PIOR TO CONSTRUCTION.

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	REVISION			

AMERICAN FORK BOAT HARBOR, PARKING LOT
RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
ROOF FRAMING PLAN

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 12/23/2022

DRAWING:
S-102

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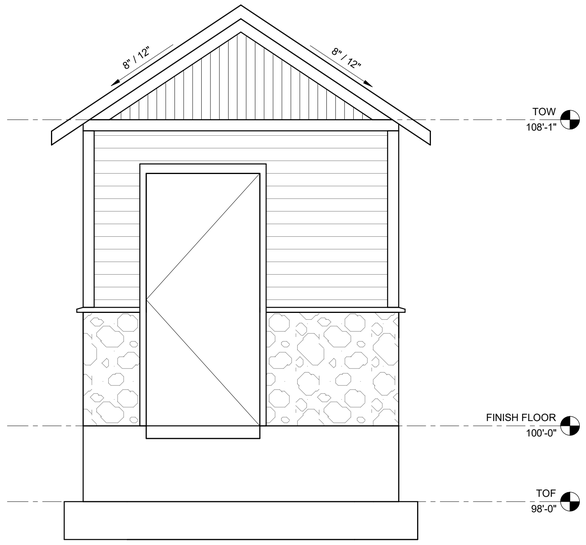
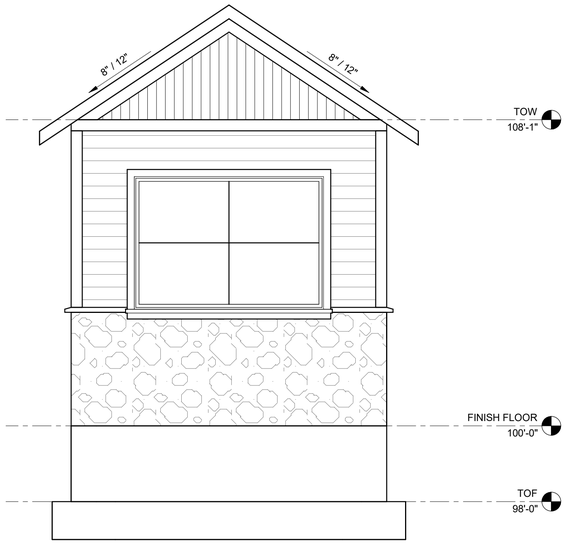
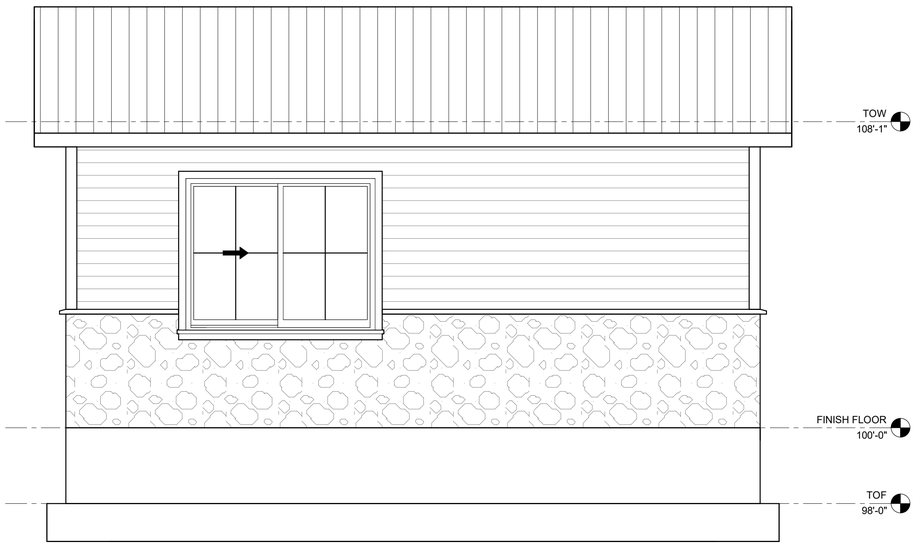


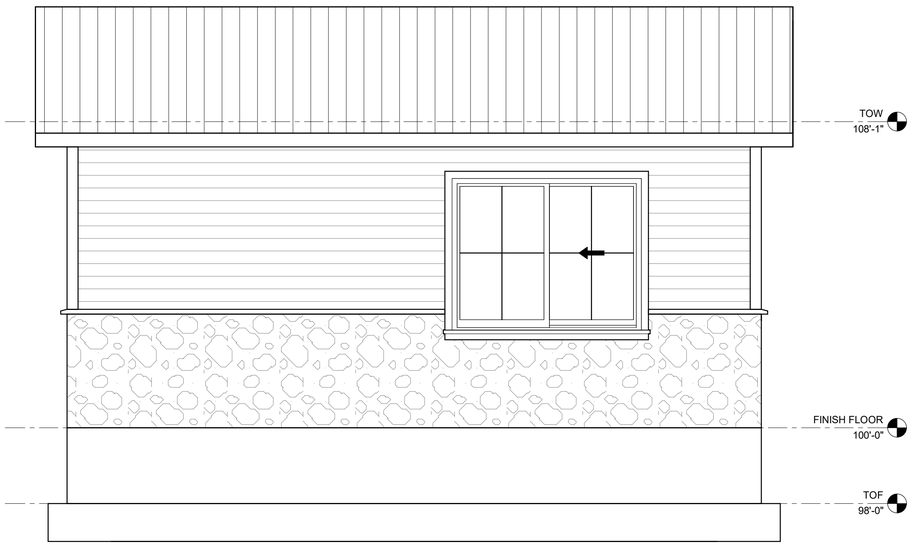
1 NORTH ELEVATION
SCALE: 1/2" = 1'-0"



2 SOUTH ELEVATION
SCALE: 1/2" = 1'-0"



3 EAST ELEVATION
SCALE: 1/2" = 1'-0"



4 WEST ELEVATION
SCALE: 1/2" = 1'-0"

FINISH MATERIAL SCHEDULE

1. WALLS:
   - EXTERIOR: PROVIDE WEATHER BARRIER OVER ENTIRETY OF EXTERIOR WALL SHEATHING WITH 3'-0" THIN STONE VENEER WAINSCOT AND CAP AT BOTTOM OF WALL. INSTALL LAP SIDING WITH TRIM AROUND WINDOWS, DOORS, AND AT CORNERS. COORINDATE SIDING, TRIM, AND WAINSCOT TYPE, SIZE, COLOR, AND PLACEMENT WITH OWNER PRIOR TO CONSTRUCTION.
   - FILL STUD CAVITIES WITH R-21 FIBERGLASS INSULATION.
   - INTERIOR: 5/8" THICK, TAPED, FINISHED, AND PAINTED DRYWALL. COORDINATE COLOR WITH OWNER.
2. FLOOR: STAINED CONCRETE FLOOR.
3. CEILING: R-30 INSULATION OVER 5/8" THICK, TAPED, FINISHED, AND PAINTED DRYWALL. COORDINATE COLOR WITH OWNER.

ROOF FINISH NOTES

1. INSTALL ICE AND WATER SHIELD OVER ENTIRE AREA OF ROOF SHEATHING.
2. AT CONTRACTOR'S OPTION, ROOF FINISH SHALL BE EITHER EXPOSED FASTENER OR STANDING SEAM METAL ROOF PANELS. COORDINATE COLOR WITH OWNER PRIOR TO CONSTRUCTION.
3. INSTALL METAL VENTED SOFFIT AND FASCIA, AND METAL RAIN GUTTERS AND DOWNSPOUTS AS REQUIRED. COORDINATE COLOR WITH OWNER PIOR TO CONSTRUCTION.

J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9052
www.jub.com

BID

PROFESSIONAL ENGINEER
No. 7944020-2202
BRANDON LEE COX
STATE OF UTAH

JUL 01 2024
SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL OWNERSHIP AND COPYRIGHT, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B

NO.	DESCRIPTION	BY	APR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR, PARKING LOT
RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
TOLL BOOTH ELEVATIONS

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 12/23/2022

DRAWING:
S-201

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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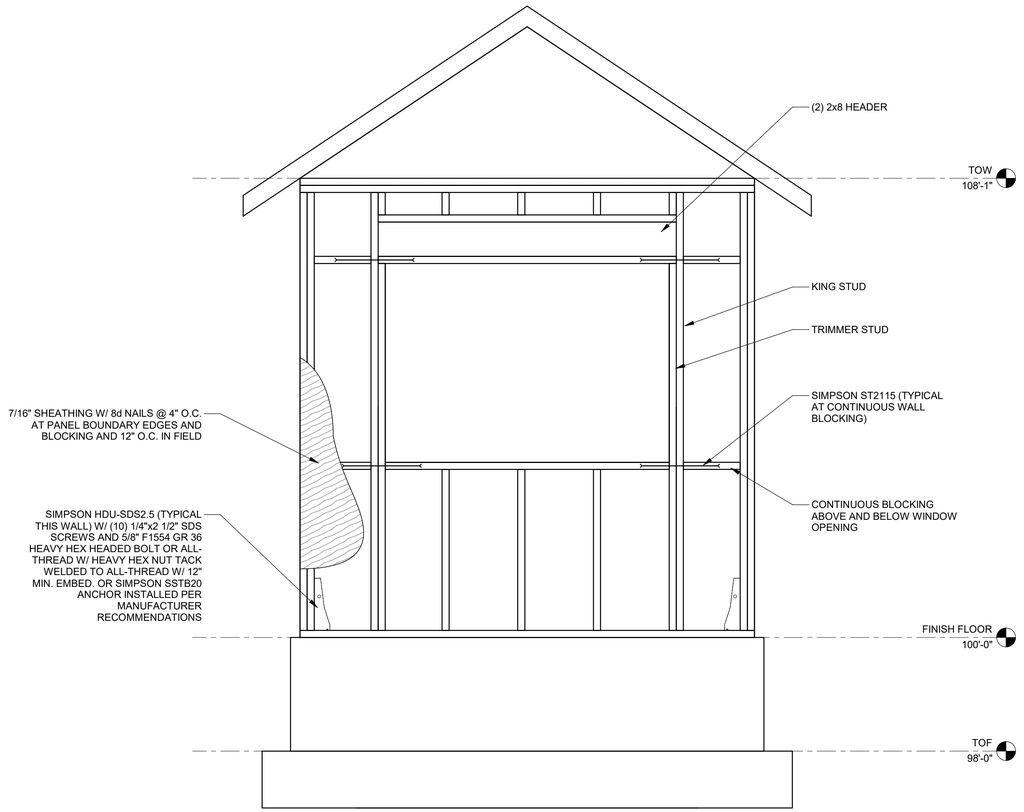

1 SOUTH ELEVATION SHEAR WALL FRAMING REQUIREMENTS
SCALE: 3/4" = 1'-0"

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NO.	DESCRIPTION	BY	APR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR, PARKING LOT
RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
TOLL BOOTH ELEVATIONS

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker

ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 12/23/2022

DRAWING:
S-202

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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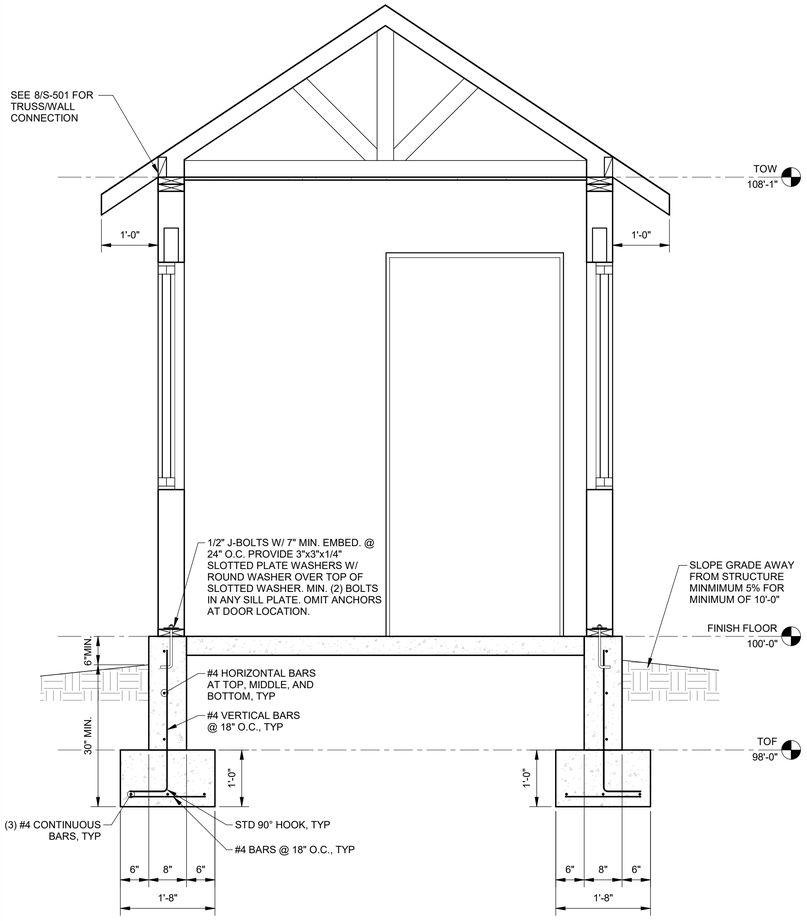
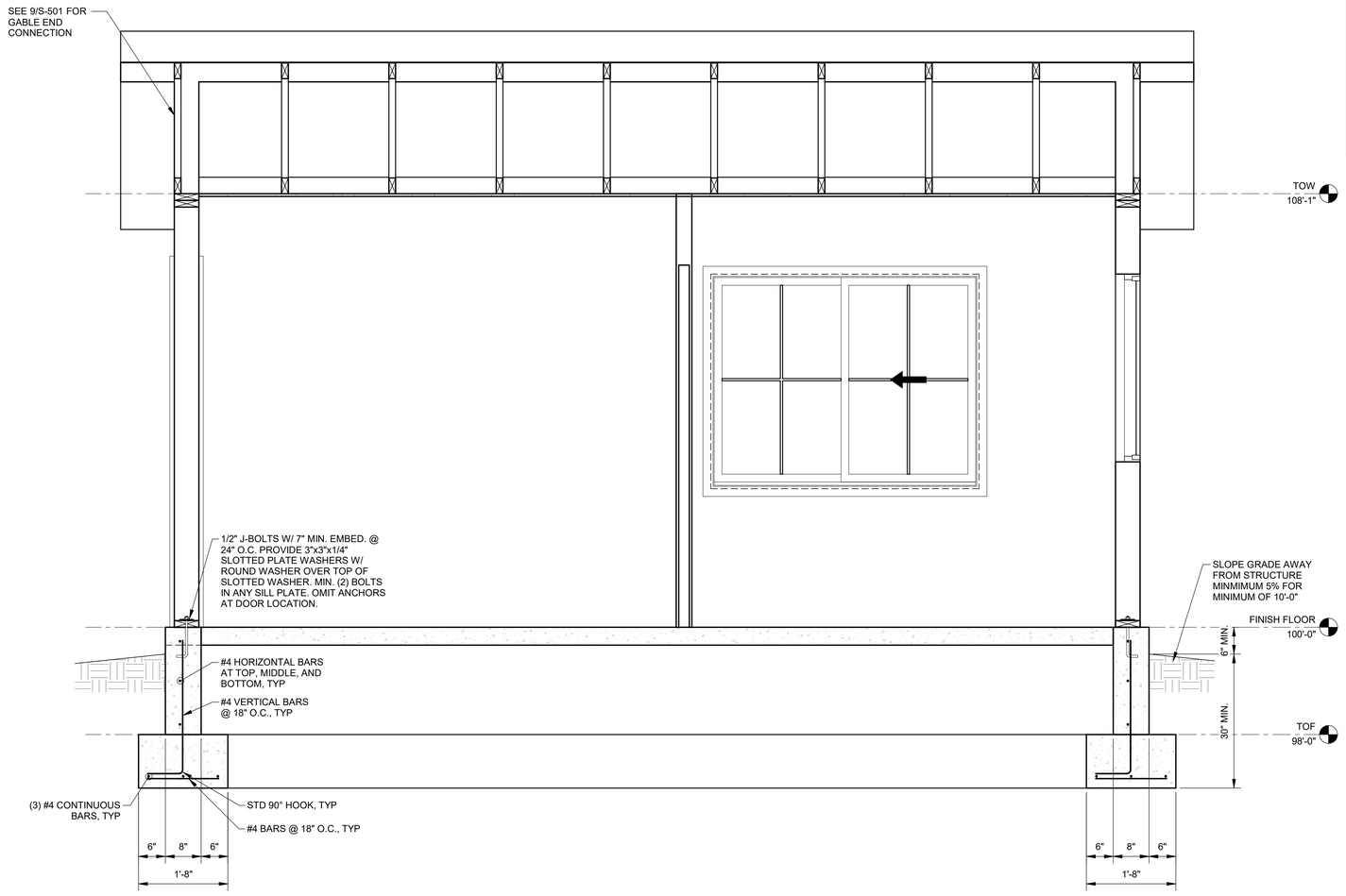


1 S-101 BUILDING SECTION
SCALE: 3/4" = 1'-0"



2 S-101 BUILDING SECTION
SCALE: 3/4" = 1'-0"

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JUL 01 2024
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NO.	DESCRIPTION	BY	APR.	DATE
REVISION				

AMERICAN FORK BOAT HARBOR, PARKING LOT
RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
TOLL BOOTH SECTIONS

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 12/23/2022

DRAWING:
S-301

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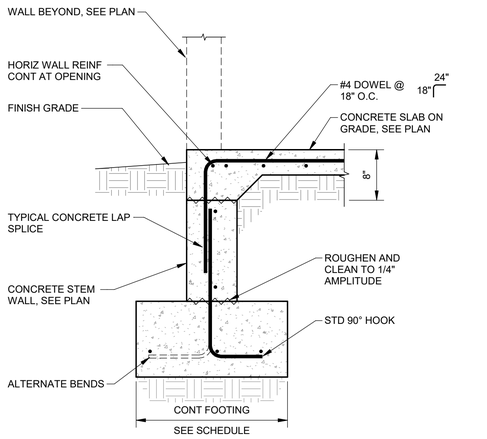
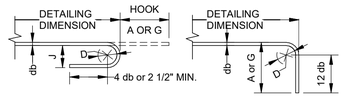
Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

TYPICAL LAP SPLICE LENGTHS IN INCHES, PER ACI 318									
BAR SIZE	LAP CLASS	f'c=3,000 psi		f'c=4,000 psi		f'c=4,500 psi		f'c=5,000 psi	
		CAT.1	CAT.2	CAT.1	CAT.2	CAT.1	CAT.2	CAT.1	CAT.2
#3	A	16	25	14	21	14	20	13	19
	B	21	32	19	28	18	27	17	25
#4	A	22	33	19	28	18	27	17	25
	B	(28)	43	25	37	24	35	22	33
#5	A	27	41	24	36	23	34	21	32
	B	36	53	31	46	30	44	28	41
#6	A	33	49	28	43	27	41	25	38
	B	43	64	37	55	36	53	33	50
#7	A	48	72	42	62	40	59	37	56
	B	62	93	54	81	51	77	48	72
#8	A	55	82	47	71	45	68	42	64
	B	71	106	61	92	58	88	55	83
#9	A	52	92	53	80	51	76	48	72
	B	80	120	69	104	66	99	62	93

NOTES:
1. FOR GRADE 60 REINFORCING STEEL BARS.
2. ALL LAP SPLICES SHALL BE CLASS B, UNLESS NOTED OTHERWISE.
3. CATEGOR 1: CLEAR COVER >= db & CLR. SPACING >= db, AND STIRRUPS OR TIES THORUGHOUT Ld ARE PROVIDED. CATEGORY 1: CLEAR COVER ≥ db & CLR. SPACING < 2db. CATEGORY 2: CLEAR COVER < db OR CLR. SPACING < 2db.
4. FOR TOP BARS MULITPLY LAP LENGTH LISTED BY 1.30 TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.

1 TYP CONCRETE REBAR LAP SPLICE SCHEDULE
SCALE: NTS





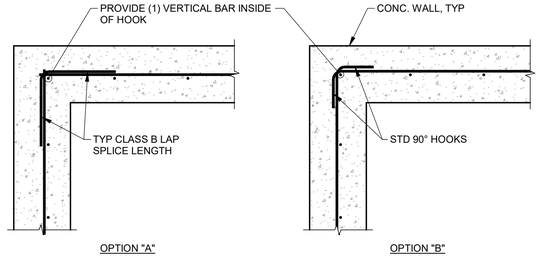
180° HOOKS 90° HOOKS

BAR SIZE	D	180° HOOKS		90° HOOKS
		A or G	J	A or G
#3	2 1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3 3/4"	7"	5"	10"
#6	4 1/2"	8"	6"	1'-0"
#7	5 1/4"	10"	7"	1'-2"
#8	6"	11"	8"	1'-4"

NOTES: db = NOMINAL BAR DIAMETER
D = FINISHED INSIDE BEND DIAMETER
MINIMUM D = 6 db FOR #3 TO #8 BARS
MINIMUM D = 8 db FOR #9 TO #11 BARS
MINIMUM D = 10 db FOR #14 TO #18 BARS
TYPICAL MINIMUM END HOOKS, ALL GRADES OF STEEL

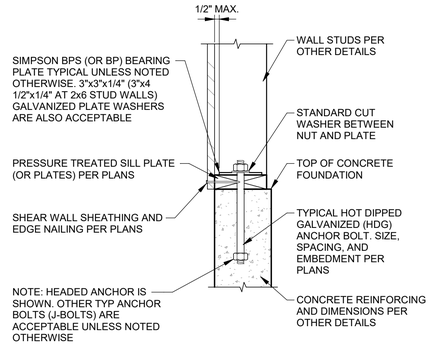
2 TYP REBAR HOOKS DETAIL
SCALE: NTS

3 TYP WALL INTERSECTION REBAR DETAILS
SCALE: NTS

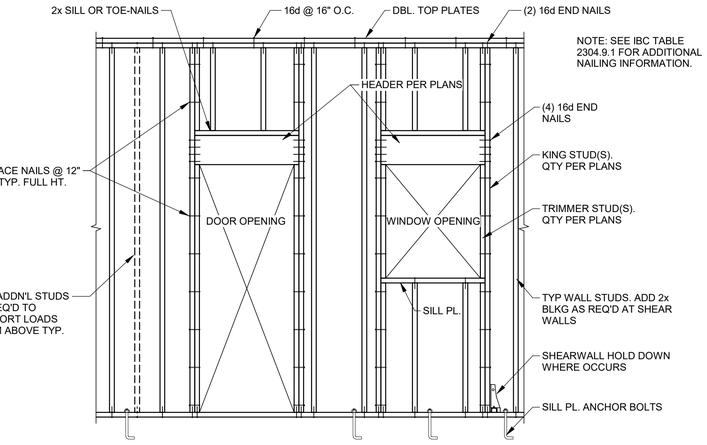


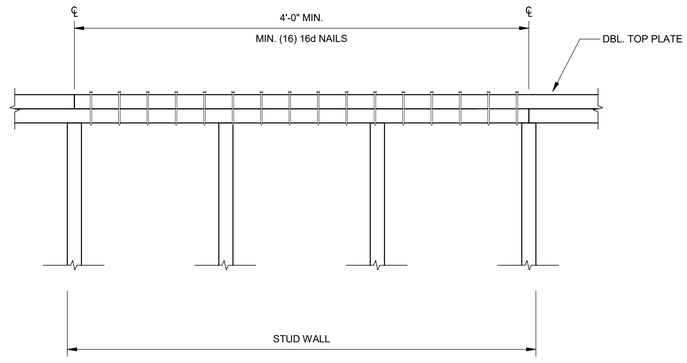
NOTES:
1. CORNER AND INTERSECTION BARS TO MATCH SIZE & SPACING OF HORIZ. BARS.
2. CENTER VERTICAL BARS IN WALL U.N.O.
3. REFER TO OTHER DETAILS FOR REQUIRED BAR SIZE AND SPACING.
4. THIS IS A TYPICAL DETAIL FOR WALLS IWTH (1) MATT OF REINFORCING.
5. THIS IS A TYPICAL DETAIL FOR NON-WATER RETAINING WALLS.

4 TYP ANCHOR BOLT TO SILL PLATE DETAIL
SCALE: NTS

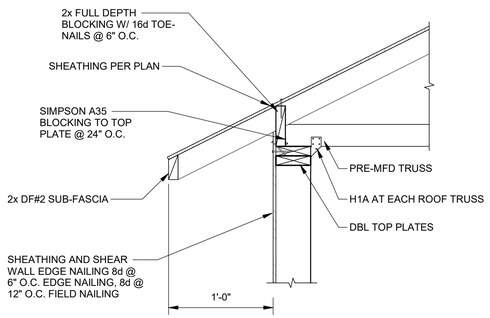


NOTE: ANCHOR BOLT MUST BE ACCURATELY LOCATED IN THE TOP OF CONCRETE FOUNDATION. DIAGONALLY SLOTTED HOLES IN THE STEEL BEARING PLATE ARE ALSO ACCEPTABLE TO ALLOW FIELD ADJUSTMENT OF PLATES. DIAGONAL SLOTS MUST MEET THE REQUIREMENTS OF AWC SDPWS SECTION 4.3.6.4.3



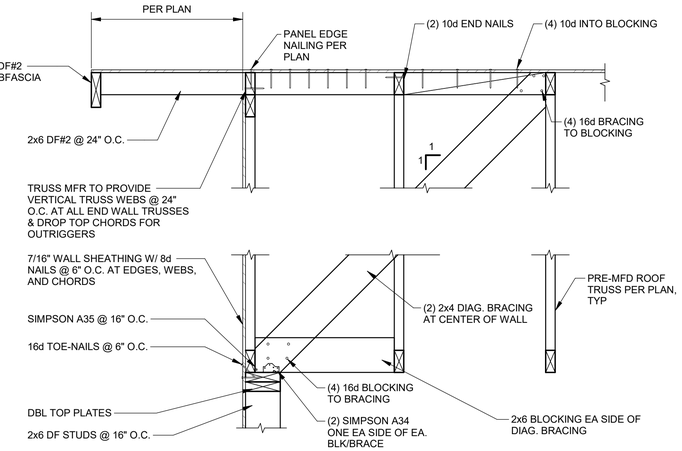


5 EXTERIOR FOOTING AT OPENING
SCALE: NTS

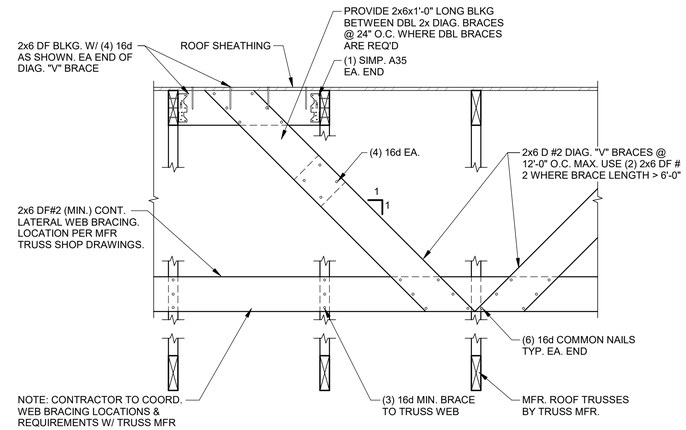


NOTES:
1. SEE ARCH OR CONTRACTOR FOR VENTING REQUIREMENTS. (DO NOT INTERRUPT NAILING.)

6 TYP WOOD FRAMED WALL DETAIL
SCALE: NTS



7 TYP DOUBLE TOP PLATE SPLICE DETAIL
SCALE: NTS



8 ROOF TRUSS AT BEARING WALL
SCALE: NTS

9 ROOF TRUSS AT GABLE END
SCALE: NTS

10 TYP PRE-ENGINEERED WOOD ROOF TRUSS PERMANENT BRACING
SCALE: NTS

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JUL 01 2024
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NO.	DESCRIPTION	BY	APR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR, PARKING LOT RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
STRUCTURAL DETAILS

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 12/23/2022

DRAWING:
S-501

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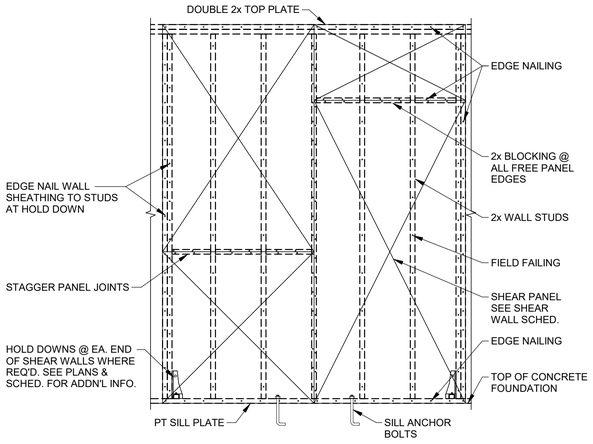
Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)



1 TYP WOOD FRAMED SHEAR WALL DETAIL

SCALE: NTS

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NO.	DESCRIPTION	BY	APP.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR, PARKING LOT
RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
STRUCTURAL DETAILS

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker

ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 12/23/2022

DRAWING:

S-502

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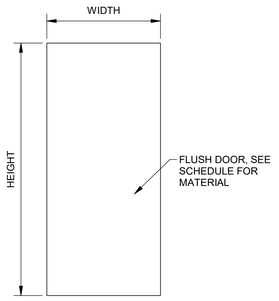
Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

DOOR SCHEDULE													
	DOOR							FRAME					
					SIZE								
DOOR TAG	TYPE	MATERIAL	FINISH	GLAZING	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	FIRE RATING	HARDWARE GROUP	COMMENTS
D1	G	METAL	PAINT	N/A	3'-0"	6'-8"	2"	M1	METAL	PAINT	20-MIN	01	
D2	G	WOOD	PAINT	N/A	3'-0"	6'-8"	1 3/8"	M2	WOOD	PAINT	20-MIN	02	POCKET DOOR

DOOR HARDWARE SCHEDULE				
	GROUP 01:	EXTERIOR ENTRANCE	FINISH	MANUFACTURER
3	HINGES	5BB1HW 4.5 x 4.5 NRP	US26D	IVES
1	DOOR LATCH PROTECTOR	DON-JO ALP 206 SL	US26D	DON-JO
1	CREDENTIAL ACCESS LOCK	5831IC PIN 201 CARD	US26D	E-PLEX
1	FSIC FORMAT CORE	PRIMUS	US26D	SCHLAGE
1	CLOSER	5100	ALUM	HAGER
1	SEALS	700SA	AL	NGP
1	DOOR SWEEP	C627A	AL	NGP
1	THRESHOLD	425HD	AL	NGP
1	FLOOR MOUNT DOOR STOP	FS444	US26D	IVES
	GROUP 02:	POCKET DOOR		
1	POCKET DOOR TRACK, GLIDES	200721DR	US26D	JOHNSONS DOOR HARDWARE
1	POCKET DOOR PULL	150US15	US15	JOHNSONS DOOR HARDWARE
1	BOTTOM GUIDE TRACK	1050: 36-INCH LENGTH	US15	JOHNSONS DOOR HARDWARE



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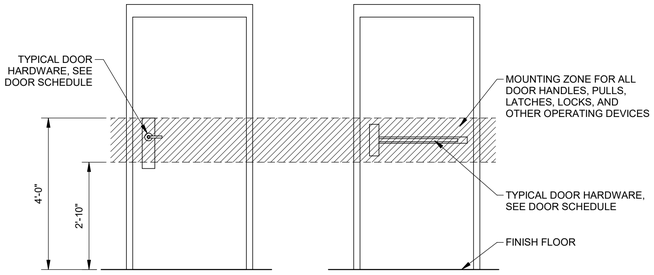
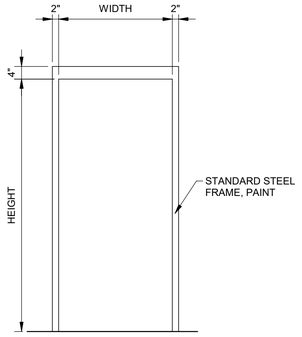


EXTERIOR SIDE

INTERIOR SIDE



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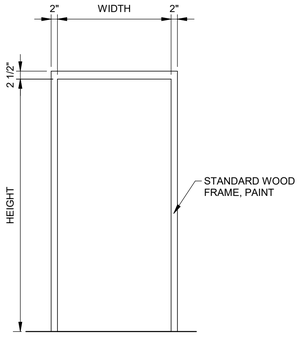
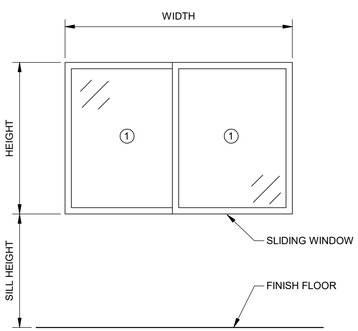
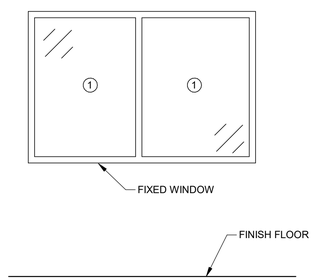


FRAME TYPE M2

WINDOW SCHEDULE								
Type Mark	WIDTH	HEIGHT	MATERIAL	FRAME TYPE	FINISH FLOOR	Sill Height	FINISH	Comments
W1	5'-0"	4'-0"	VINYL	A	100'-0"	2'-7"	WHITE	MED TINT
W2	5'-0"	3'-6"	VINYL	B	100'-0"	3'-1"	WHITE	DARK TINT



FRAME TYPE A



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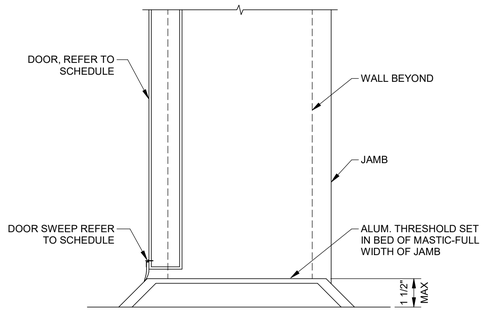
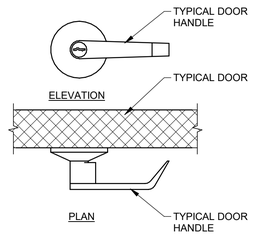
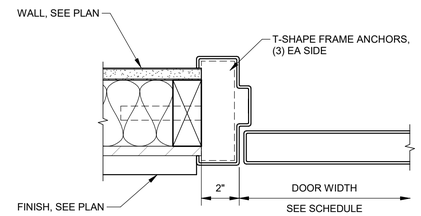


1 DOOR THRESHOLD
SCALE: NTS

NOTES:
1. CONTRACTOR TO PROVIDE LEVER TYPE ADA COMPLIANT DOOR HANDLES. FINISH AS SELCTED BY OWNER
2. SEE DOOR SCHEDULE FOR ADDITIONAL INFORMATION.



2 TYPICAL DOOR HANDLE PROFILE
SCALE: NTS



3 DOOR JAMB
SCALE: NTS

J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9052
www.jub.com

BID

PROFESSIONAL ENGINEER
No. 7944020-2202
BRANDON LEE COX
STATE OF UTAH

JUL 01 2024
SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS AND THE SAME SHALL NOT BE REUSED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT THE CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B

NO.	DESCRIPTION	BY	APR.	DATE
	REVISION			

AMERICAN FORK BOAT HARBOR, PARKING LOT RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

FEE BOOTH
DOOR/WINDOW SCHEDULE

FILE:
JUB PROJ. #:00-00-000
DRAWN BY:Author
DESIGN BY:Designer
CHECKED BY:Checker

ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 12/23/2022

DRAWING:
S-503

Attachment: AFBH_Bid_Plans_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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VOLUME I CONTRACT DOCUMENTS

FOR

AMERICAN FORK CITY

AMERICAN FORK BOAT HARBOR RECONSTRUCTION

August 2024
Bid Set

Project No. 83-23-013

392 East Winchester Street, Suite 300, Salt Lake City, UT 84107
p **801 886 9052** *w* **www.jub.com**

OTHER J-U-B COMPANIES

THE LANGDON GROUP

GATEWAY MAPPING INC.

JUL 01 2024

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AMERICAN FORK BOAT HARBOR RECONSTRUCTION

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Volume III: Drawings – See CC101 for Table of Contents

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ADVERTISEMENT FOR BIDS

AMERICAN FORK CITY
AMERICAN FORK, UTAH
AMERICAN FORK BOAT HARBOR RECONSTRUCTION

General Notice

American Fork City (Owner) is requesting Bids for the construction of the following Project:

American Fork Boat Harbor Reconstruction
83-23-013

Bids for the construction of the Project will be received at the **American Fork City Fitness Center Administration** located at **454 N Center St, AMERICAN FORK, UT 84003,** until **September 12, 2024**, at **3:00 pm** local time. At that time, the Bids received will be **privately** opened and read.

The Project includes the following Work:

The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

Bids are requested for the following Contract: **American Fork Boat Harbor Reconstruction / 83-23-013**

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be found at the following designated website:

https://bids.sciquest.com/apps/Router/PublicEvent?CustomerOrg=StateOfUtah

Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the designated website as a plan holder, even if Bidding Documents are obtained from a plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

Pre-bid Conference

A pre-bid conference for the Project will be held on **August 29, 2024,** at **2:00 pm** at the **American Fork City Fitness Center Administration Offices** located at **454 N Center St., AMERICAN FORK, UT 84003.** Attendance at the pre-bid conference is not required but is strongly encouraged.

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

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The selection process schedule is expected to proceed as outlined in Table 1.

Table 1. Selection Schedule

Date	Selection Process
Monday, August 26th, 2024	Issue Invitation to Bid.
Thursday, August 29th, 2024	Pre-bid meeting at 2 p.m. MST.
Friday, September 6th, 2024	End of inquiries, questions and interpretation period (5 p.m. MST).
Tuesday, September 10th, 2024	Final Addendum Issued (if required).
Thursday, September 12th, 2024	Bid submittal due (3:00 p.m. MST).

Table 2. Construction Schedule

Date	Selection Process
Monday, September 30th, 2024	Anticipated Start Date
Saturday, November 30th, 2024	Parking Lot is Completed
Thursday, May 1st, 2024	Substantial Completion
Thursday, May 22nd, 2024	Final Completion

This Advertisement is issued by:

Owner: **American Fork city**
By: Derric Rykert
Title: Project Manager
Date: August 26, 2024

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INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACT

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ARTICLE 1—DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.

ARTICLE 2—BIDDING DOCUMENTS

2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.

2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.

2.03 Owner has established a Bidding Documents Website as indicated in the Advertisement or invitation to bid. Owner recommends that Bidder register as a plan holder with the Issuing Office at such website, and obtain a complete set of the Bidding Documents from such website. Bidders may rely that sets of Bidding Documents obtained from the Bidding Documents Website are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

2.04 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.

2.05 *Electronic Documents*

A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.

1. Bidding Documents will be provided in PDF (Portable Document Format) (.pdf). It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents.

B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.05.A above. However, Bidder assumes all risks associated with differences

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arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.

ARTICLE 3—QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, the Owner is qualifying Bidders who may submit Bids and enter into Agreement with the Owner for the Work. Bidder shall submit the following information:

A. Evidence of Bidder's authority to do business in the state where the Project is located.

B. Bidder's state or other contractor license number, if applicable.

C. Subcontractor and Supplier qualification information; coordinate with provisions of Article 11 of these Instructions, "Subcontractors, Suppliers, and Others."

D. Personnel and Qualifications, as described in Paragraph 2.01.D of EJCDC C-410 Bid Form for Construction Contract.

E. Project Experience, as described in Paragraph 2.01.E of EJCDC C-410 Bid Form for Construction Contract.

F. Claims, Disputes, and Projects Competed by Sureties, as described in Paragraph 2.01.F of EJCDC C-410 Bid Form for Construction Contract.

3.02 *A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.*

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.04 Owner may at any time conduct further investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidder, and after the opening of Bids may require a Bidder to submit documentation of its qualifications, including but not limited to financial data and further documentation of previous experience providing goods and services comparable to the specified Goods and Special Services.

ARTICLE 4—PRE-BID CONFERENCE

4.01 A mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Proposals will not be accepted from Bidders who do not attend the conference. It is each Bidder's responsibility to sign in at the pre-bid conference to verify its participation. Bidders must sign in using the name of the organization that will be submitting a

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Bid. A list of qualified Bidders that attended the pre-bid conference and are eligible to submit a Bid for this Project will be issued in an Addendum.

ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:

a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.

b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.

c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

d. Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

4. *Geotechnical Baseline Report/Geotechnical Data Report:* The Bidding Documents contain a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR).

a. As set forth in the Supplementary Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.

b. The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on

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the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.

c. Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.

d. As set forth in the Supplementary Conditions, the GDR is a Contract Document containing data prepared by or for the Owner in support of the GBR.

B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

5.03 *Site Visit and Testing by Bidders*

A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.

B. Bidders visiting the Site are required to arrange their own transportation to the Site.

C. All access to the Site other than during a regularly scheduled Site visit must be coordinated through the Owner for visiting the Site. Bidder must conduct the Site visit during normal working hours.

D. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

E. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.

F. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

G. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

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5.04 *Owner's Safety Program*

A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.05 *Other Work at the Site*

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Express Representations and Certifications in Bid Form, Agreement*

A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.

B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

ARTICLE 7—INTERPRETATIONS AND ADDENDA

7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.

7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:

A. Questions are to be submitted only through the Utah Public Procurement Portal/ SciQuest website at: https://bids.sciquest.com/apps/Router/PublicEvent?CustomerOrg=StateOfUtah .

7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.

7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

ARTICLE 8—BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **5** percent of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the

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form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 days after the Effective Date of the Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

ARTICLE 9—CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.

9.02 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer within 10 days of the issuance of the Advertisement for Bids or invitation to Bidders. Each such request must comply with the requirements of Paragraphs 7.05 and 7.06 of the General Conditions, and the review of the request will be governed by the principles in those paragraphs. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner.

10.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as

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supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS

11.01 A Bidder must be prepared to retain specific Subcontractors and Suppliers for the performance of the Work if required to do so by the Bidding Documents or in the Specifications. If a prospective Bidder objects to retaining any such Subcontractor or Supplier and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the Work after Bid opening.

11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

ARTICLE 12—PREPARATION OF BID

12.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."

12.02 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.

12.03 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.

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12.04 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.

12.05 A Bid by an individual must show the Bidder's name and official address.

12.06 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.

12.07 All names must be printed in ink below the signatures.

12.08 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.

12.09 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.

12.10 The Bid must contain evidence of Bidder's authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

12.11 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

ARTICLE 13—BASIS OF BID

13.01 *Lump Sum*

A. Bidders must submit a Bid on a lump sum basis as set forth in the Bid Form.

13.02 *Unit Price*

A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity", which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

13.03 *Allowances*

A. For cash allowances the Bid price must include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

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ARTICLE 14—SUBMITTAL OF BID

14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form. One electronic copy of the bid shall be submitted on SciQuest.

14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.

14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID

15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.

15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.

15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid,

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and the Bid security will be returned. Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.

ARTICLE 16—OPENING OF BIDS

16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE

17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT

18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.

18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.

18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner may reject the Bid as nonresponsive.

18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.

18.05 *Evaluation of Bids*

A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, qualifications, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.

18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for

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those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

ARTICLE 19—BONDS AND INSURANCE

19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

ARTICLE 20—SIGNING OF AGREEMENT

20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

ARTICLE 21—SALES AND USE TAXES

21.01 Owner is not exempt from **Utah** state sales and use taxes on materials and equipment to be incorporated in the Work. Refer to Paragraph SC-7.10 of the Supplementary Conditions for additional information.

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BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

American Fork City

51 E Main St,

American Fork, UT, 84003

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;

C. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;

D. Personnel and Qualifications

1. Present information which will identify key personnel who will be assigned to the project, including project manager, and project superintendent(s).

2. Describe the background and experience of each of these individuals. Provide detailed resumes for the project manager, and project superintendent(s).

3. Describe the approach to scheduling and accomplishing the work; including paving the parking lot by Dec 1, 2024. Identify which major trade work (i.e. structural, mechanical, earthwork) will be completed by the contractor's forces and which will be performed by subcontractors.

E. Project Experience

1. The Contractor, or subcontractor, should have experience with work as shown in the Base Bid Table below. Proposals shall include project experience in four categories: concrete curb/sidewalk experience, asphalt pavement experience, shoreline or related experience, and landscape/playground experience. A single project example may be used to show qualifications in all four categories, however a minimum of three projects should be submitted to show the Contractor's experience. A reference should be

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submitted for each project including the Owner's name, organization, and contact information.

a. Concrete Curb/Sidewalk Experience

1) (3) projects completed in the last 5 years with at least 500 linear feet of curb and gutter replacement and 500 linear feet of sidewalk replacement.

b. Asphalt Pavement Experience

1) (3) projects completed in the last 5 years with at least 500 tons of hot-mix asphalt installed.

c. Shoreline or Related Experience

1) (2) projects completed in the last 10 years with shoreline or related experience, including weed management.

d. Landscape/Playground Equipment Experience

1) (3) projects similar in scope and fee completed in the last 5 years involving landscape/playground equipment

F. Claims, Disputes, and Projects Completed by Sureties

1. List all the Contractor's projects that are currently in a claims dispute or have been in a claims dispute in the last five years. Give the owner, owners contact information, and reason for dispute.

2. List all the Contractor's projects that have been completed by a surety in the last five years. Give owner and contact information for each project listed.

ARTICLE 3—BASIS OF BID—UNIT PRICES

3.01 *Unit Price Bids*

Bidder will perform the following work at the indicated unit prices:

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Base Bid					
Item No.	**Description**	**Estimated Quantity**	**Unit**	**Bid Unit Price**	**Bid Amount**
1	Mobilization/Demobilization	1	LS	$	$
2	As-Built/Record Drawings	1	LS	$	$
3	Storm Water Pollution Prevention Plan (SWPPP)	1	LS	$	$
4	Weed Removal and Management Plan - Jetty	1	LS	$	$
5	General Removal and Disposal	1	LS	$	$
6	Remove and Dispose Asphalt Pavement	15,614	SY	$	$
7	Clearing and Grubbing	1	LS	$	$
8	Remove and Dispose Tree	10	EA	$	$
9	Relocate Light Poles and Electric Junction Boxes	1	LS	$	$
10	Remove and Dispose Toll Booth	1	LS	$	$
11	Remove Chain and Post Fence and Chainlink Fence	957	LF	$	$
12	Remove Entrance Gate	1	LS	$	$
13	6” Thick Vehicular Concrete	1,259	SF	$	$
14	4” Thick Concrete Sidewalk	1,160	SF	$	$
15	Concrete Flatwork	2,296	SF	$	$
16	6” Thick Concrete Drive Approach	1	EA	$	$
17	HMA, PG-54-22, SP-1/2, 75ND, 3” Thick with Max 15% RAP – Asphalt Trail	304	TON	$	$
18	HMA, PG-54-22, SP-1/2, 75ND, 3” Thick with Max 15% RAP – Parking Lot	2,828	TON	$	$
19	Untreated Base Course	3,467	CY	$	$
20	Granular Borrow	5,617	CY	$	$
21	Excavation	6,500	CY	$	$
22	Borrow	1,300	CY	$	$
23	Handicap Ramp	7	EA	$	$
24	4’ Concrete Valley Gutter	1,433	LF	$	$
25	Open 24” Curb and Gutter	3,320	LF	$	$

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26	Vehicular Gate at Entrance (36'-Wide Manual Double Swing Gate)	1	LS	$	$
27	Relocated Vehicular Gate (12'-Wide Manual Slide Gate)	1	LS	$	$
28	General Relocation	1	LS	$	$
29	4' Chainlink Fence	18	LF	$	$
30	6' Chainlink Fence	68	LF	$	$
31	Dumpster Enclosure	1	LS	$	$
32	Concrete Wheel Stop	35	EA	$	$
33	Sign with 8" Dia. Bollard	22	EA	$	$
34	Stationary 6" Dia. Bollard	6	EA	$	$
35	Striping	1	LS	$	$
36	Harbor Slope Protection	1699	SY	$	$
37	Lake Exposed Slope Protection	807	SY	$	$
38	Inlet Basin, 3'x3', 5-7Ft Deep	5	EA	$	$
39	Storm Drain Manhole, 5-Ft, 6Ft Deep	1	EA		
40	Sand/Oil Separator – OSS-A1	1	EA	$	$
41	Sand/Oil Separator – OSS-B1	1	EA	$	$
42	Sand/Oil Separator – OSS-C1	1	EA	$	$
43	Sand/Oil Separator – OSS-D1	1	EA	$	$
44	18" Reinforced Concrete Pipe	472	LF	$	$
45	24" Reinforced Concrete Pipe	18	LF	$	$
46	18" Flared End Section Pipe Outlet	2	EA	$	$
47	24" Flared End Section Pipe Outlet	1	EA	$	$
48	CXT Tioga Restroom Building	1	LS	$	$
49	Fine Grading (Landscape Areas)	1	LS	$	$
50	Washed Beach Sand	762	CY	$	$
51	Engineered Wood Fiber (Playground)	2,785	SF	$	$
52	Steel Edging (1/8" Thick, 6" Tall- Corten/Borcon)	880	LF	$	$
53	Sod	1,064	SF	$	$
54	Shredded Bark Mulch	3,822	SF	$	$
55	1" Desert Rose Stone Mulch (3" Depth)	11,402	SF	$	$
56	3"-6" Wasatch Grey Stone Mulch (4" Depth)	14,668	SF	$	$

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57	1/4" Minus Chat (Path Material)	1,386	SF	$	$
58	2" Caliper Deciduous Tree	15	EA	$	$
59	Preservation of Existing Trees	1	LS	$	$
60	Topsoil	406	CY	$	$
61	Weed Barrier Fabric	26,016	SF	$	$
62	Concrete Mow Curb (6" Wide)	5	LF	$	$
63	Cast-in-Place 8" Deep-Edge Concrete Curb Wal' (Playground)	93	LF	$	$
64	Cast-in-Place Concrete Seat Wall (12" Wide)	237	LF	$	$
65	Lodge Pole Fence	241	LF	$	$
66	Shade Umbrellas	6	EA	$	$
67	Modular Floating Dock, Gangway, and Kayak Launch	1	LS	$	$
68	Timber Hammock Posts	10	EA	$	$
69	Trash Receptacles (Powder Coated)	5	EA	$	$
70	Cornhole Board	2	EA	$	$
71	Playground Equipment	1	LS	$	$
72	Log Playground Barrier, Treated Logs	5	LF	$	$
73	Specialty, Treated Logs and Stumps	10	LF	$	$
74	Natural (Untreated) Logs and Stumps	201	LF	$	$
75	6' Bench (With Back)	6	EA	$	$
76	6' Aluminum Picnic Tables (Powder-Coated)	6	EA	$	$
77	Collapsible Access Control Bollard	2	EA	$	$
78	Pavilion	2	EA	$	$
79	Bike Rack	2	EA	$	$
80	Import Building Foundation	1	LS	$	$
81	Building Concrete and Reinforcing	1	LS	$	$
82	Rough Carpentry	1	LS	$	$
83	Shop Fabricated Roof Trusses	1	LS	$	$
84	Siding	1	LS	$	$
85	Stone Veneer and Associated Items	1	LS	$	$
86	Metal Fabrications	1	LS	$	$
87	Thermal and Moisture Protection	1	LS	$	$

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88	Batt/Blown-In/Sprayed-In Insulation	1	LS	$	$
89	Roofing	1	LS	$	$
90	Interior Finish	1	LS	$	$
91	Doors, Frames, and Hardware	1	LS	$	$
92	Glazing	1	LS	$	$
93	Miscellaneous Building Item	1	LS	$	$
94	Building Electrical	1	LS	$	$
Total of All Unit Price Bid Items:					$

A. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder agrees that the Work will be substantially complete on or before **May 1, 2025,** and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **May 22, 2025.**

4.03 The parking lot is the first priority and must be completed by **November 30, 2024**.

4.04 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

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ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

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11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

(typed or printed name of organization)

By: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

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BID BOND (PENAL SUM FORM)

Bidder Name: Address *(principal place of business)*:	**Surety** Name: Address *(principal place of business)*:
Owner Name: **American Fork City** Address *(principal place of business)*: **51 E Main St** **American Fork, UT 84003**	**Bid** Project *(name and location)*: **American Fork Boat Harbor Reconstruction** **End of S 100 W** **American Fork, UT 84003** Bid Due Date: **Sept 12, 2024**
Bond Penal Sum: Date of Bond:	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ *(Full formal name of Bidder)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title:	Title:
Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.	

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EJCDC® C-430, Bid Bond (Penal Sum Form).
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1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
   3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
   3.2. All Bids are rejected by Owner, or
   3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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NOTICE OF AWARD

Date of Issuance:			
Owner:	American Fork City	Owner's Project No.:	
Engineer:	J-U-B ENGINEERS, Inc.	Engineer's Project No.:	83-23-013
Project:	American Fork Boat Harbor Reconstruction		
Contract Name:	American Fork Boat Harbor Reconstruction		
Bidder:			
Bidder's Address:			

You are notified that Owner has accepted your Bid dated **xx/xx/2024** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

American Fork Boat Harbor

The Contract Price of the awarded Contract is **$X,XXX,XXX.XX**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

[1] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **[1]** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **American Fork City**

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

EJCDC® C-510, Notice of Award.
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Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **American Fork City** ("Owner") and ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **American Fork Boat Harbor Reconstruction**

ARTICLE 3—ENGINEER

3.01 The Owner has retained **J-U-B ENGINEERS, Inc.** ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by **J-U-B ENGINEERS, Inc.**

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before **May 1, 2025**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **May 22, 2025**.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration

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proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner $**1,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $**1,000.00** for each day that expires after such time until the Work is completed and ready for final payment.

4. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Work **$X,XXX,XXX,XX**.

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **25th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions

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(and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

    a. **95** percent of the value of the Work completed (with the balance being retainage).

        1) If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

    b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Interest*

A. All amounts not paid when due will bear interest at the maximum legal rate percent per annum.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement.
2. Bonds:
    a. Performance bond (together with power of attorney).
    b. Payment bond (together with power of attorney).
3. General Conditions.
4. Supplementary Conditions.
5. Specifications as listed in the table of contents of the project manual (copy of list attached).
6. Drawings (not attached but incorporated by reference) consisting of **39** sheets with each sheet bearing the following general title: **American Fork Boat Harbor Reconstruction**

EJCDC® C-520, Agreement between Owner and Contractor for Construction Contract (Stipulated Price).
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8. Addenda (numbers **[0]** to **[0]**, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
    a. **None**
10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical

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Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has

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furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Owner:	Contractor:
American Fork City *(typed or printed name of organization)*	_____ *(typed or printed name of organization)*
By: _____ *(individual's signature)*	By: _____ *(individual's signature)*
Date: _____ *(date signed)*	Date: _____ *(date signed)*
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)* *(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
Attest: _____ *(individual's signature)*	Attest: _____ *(individual's signature)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address for giving notices: American Fork City 51 E Main St. American Fork, UT 84003	Address for giving notices:
Designated Representative: Name: _____ *(typed or printed)* Title: _____ *(typed or printed)* Address:	Designated Representative: Name: _____ *(typed or printed)* Title: _____ *(typed or printed)* Address:
Phone: _____ Email: _____ *(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*	Phone: _____ Email: _____ License No.: _____ *(where applicable)* State: _____

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NOTICE TO PROCEED

Owner:	American Fork City	Owner's Project No.:	
Engineer:	J-U-B ENGINEERS, Inc.	Engineer's Project No.:	83-23-013
Contractor:		Contractor's Project No.:	
Project:	American Fork Boat Harbor Reconstruction		
Contract Name:	American Fork Boat Harbor Reconstruction		
Effective Date of Contract:			

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **May 1, 2025**, and the date by which readiness for final payment must be achieved is **May 22, 2025.**

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner:	**American Fork City**
By *(signature)*:	
Name *(printed)*:	
Title:	
Date Issued:	

Copy: Engineer

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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PERFORMANCE BOND

Contractor Name: Address *(principal place of business)*:	**Surety** Name: Address *(principal place of business)*:
Owner Name: **American Fork City** Mailing address *(principal place of business)*: **51 E Main St.** **American Fork, UT 84003**	**Contract** Description *(name and location)*: **American Fork Boat Harbor Reconstruction** **End of S 100 W** **American Fork, UT 84003** Contract Price: Effective Date of Contract:
Bond Bond Amount: Date of Bond: *(Date of Bond cannot be earlier than Effective Date of Contract)* Modifications to this Bond form: ☐ None ☐ See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal _____ *(Full formal name of Contractor)* By: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____ Attest: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____	Surety _____ *(Full formal name of Surety) (corporate seal)* By: _____ *(Signature)(Attach Power of Attorney)* Name: _____ *(Printed or typed)* Title: _____ Attest: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____
Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.	

EJCDC® C-610, Performance Bond.
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1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

   3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

   3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

   3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

   5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

   5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

   5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

   5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

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5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

   7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

   7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

   7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

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statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: **None**

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PAYMENT BOND

Contractor	**Surety**
Name:	Name:
Address *(principal place of business)*:	Address *(principal place of business)*:
Owner	**Contract**
Name: **American Fork City**	Description *(name and location)*: **American Fork Boat Harbor Reconstruction End of S 100 W American Fork, UT 84003**
Mailing address *(principal place of business)*: **51 E Main St. American Fork, UT 84003**	Contract Price:
	Effective Date of Contract:

Bond

Bond Amount:

Date of Bond:

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

EJCDC® C-615, Payment Bond.
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Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
    5.1. Claimants who do not have a direct contract with the Contractor
        5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
        5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
    5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
    7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
    7.2. Pay or arrange for payment of any undisputed amounts.
    7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

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Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. *Claim*—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

        16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

        16.1.4. A brief description of the labor, materials, or equipment furnished;

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

16.1.7. The total amount of previous payments received by the Claimant; and

16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: **None**

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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Contractor's Application for Payment

Owner:	American Fork City	**Owner's Project No.:**	
Engineer:	J-U-B Engineers, Inc.	**Engineer's Project No.:**	83-23-013
Contractor:		**Contractor's Project No.:**	
Project:	American Fork Boat Harbor Reconstruction		
Contract:	American Fork Boat Harbor Reconstruction		
Application No.:		**Application Date:**	
Application Period:	**From**	**to**	

1. Original Contract Price			$ -
2. Net change by Change Orders			$ -
3. Current Contract Price (Line 1 + Line 2)			$ -
4. Total Work completed and materials stored to date (Sum of Column G Lump Sum Total and Column J Unit Price Total)			$ -
5. Retainage			
a. _____	X $ -	Work Completed	$ -
b. _____	X $ -	Stored Materials	$ -
c. Total Retainage (Line 5.a + Line 5.b)			$ -
6. Amount eligible to date (Line 4 - Line 5.c)			$ -
7. Less previous payments (Line 6 from prior application)			
8. Amount due this application			$ -
9. Balance to finish, including retainage (Line 3 - Line 4)			$ -

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:
(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;
(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and
(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor: _____

Signature: _____ **Date:** _____

Recommended by Engineer		**Approved by Owner**	
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	
Approved by Funding Agency			
By:		**By:**	
Title:		**Title:**	
Date:		**Date:**	

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner:	American Fork City	**Owner's Project No.:**	
Engineer:	J-U-B Engineers, Inc.	**Engineer's Project No.:**	83-23-013
Contractor:		**Contractor's Project No.:**	
Project:	American Fork Boat Harbor Reconstruction		
Contract:	American Fork Boat Harbor Reconstruction		

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I
			Work Completed					
Item No.	Description	Scheduled Value ($)	(D + E) From Previous Application ($)	This Period ($)	Materials Currently Stored (not in D or E) ($)	Work Completed and Materials Stored to Date (D + E + F) ($)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) ($)
Original Contract								
			-			-		-
						-		-
						-		-
						-		-
						-		-
						-		-
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						-		-
						-		-
						-		-
	Original Contract Totals	$ -	$ -	$ -	$ -	$ -		$ -

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

EJCDC C-620 Contractor's Application for Payment
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Progress Estimate - Lump Sum Work

Contractor's Application for Payment

Owner:	American Fork City	**Owner's Project No.:**	
Engineer:	J-U-B Engineers, Inc.	**Engineer's Project No.:**	83-23-013
Contractor:		**Contractor's Project No.:**	
Project:	American Fork Boat Harbor Reconstruction		
Contract:	American Fork Boat Harbor Reconstruction		

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I
			Work Completed					
Item No.	Description	Scheduled Value ($)	(D + E) From Previous Application ($)	This Period ($)	Materials Currently Stored (not in D or E) ($)	Work Completed and Materials Stored to Date (D + E + F) ($)	% of Scheduled Value (G / C) (%)	Balance to Finish (C - G) ($)
Change Orders								
						-		-
						-		-
						-		-
						-		-
						-		-
						-		-
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						-		-
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						-		-
						-		-
	Change Order Totals	$ -	$ -	$ -	$ -	$ -		$ -
Original Contract and Change Orders								
	Project Totals	$ -	$ -	$ -	$ -	$ -		$ -

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: American Fork City
Engineer: J-U-B Engineers, Inc.
Contractor:
Project: American Fork Boat Harbor Reconstruction
Contract: American Fork Boat Harbor Reconstruction

Owner's Project No.:
Engineer's Project No.: 83-23-013
Contractor's Project No.:

Application No.: **Application Period:** From to **Application Date:**

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Original Contract											
					-		-		-		-
					-		-		-		-
					-		-		-		-

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: American Fork City
Engineer: J-U-B Engineers, Inc.
Contractor:
Project: American Fork Boat Harbor Reconstruction
Contract: American Fork Boat Harbor Reconstruction

Owner's Project No.:
Engineer's Project No.: 83-23-013
Contractor's Project No.:

Application No.: **Application Period:** From to **Application Date:**

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
					-		-		-		-
					-		-		-		-
					-		-		-		-

Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: American Fork City
Engineer: J-U-B Engineers, Inc.
Contractor:
Project: American Fork Boat Harbor Reconstruction
Contract: American Fork Boat Harbor Reconstruction

Owner's Project No.:
Engineer's Project No.: 83-23-013
Contractor's Project No.:

Application No.: _____ **Application Period:** From _____ to _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
					-		-		-		-
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					-		-		-		-
				Original Contract Totals	$ -		$ -	$ -	$ -		$ -

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Progress Estimate - Unit Price Work

Contractor's Application for Payment

Owner: American Fork City
Engineer: J-U-B Engineers, Inc.
Contractor:
Project: American Fork Boat Harbor Reconstruction
Contract: American Fork Boat Harbor Reconstruction

Owner's Project No.:
Engineer's Project No.: 83-23-013
Contractor's Project No.:

Application No.: **Application Period:** From to **Application Date:**

A	B	C	D	E	F	G	H	I	J	K	L
		Contract Information				Work Completed					
Bid Item No.	Description	Item Quantity	Units	Unit Price ($)	Value of Bid Item (C X E) ($)	Estimated Quantity Incorporated in the Work	Value of Work Completed to Date (E X G) ($)	Materials Currently Stored (not in G) ($)	Work Completed and Materials Stored to Date (H + I) ($)	% of Value of Item (J / F) (%)	Balance to Finish (F - J) ($)
Change Orders											
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				Change Order Totals	$ -		$ -	$ -	$ -		$ -
Original Contract and Change Orders											
				Project Totals	$ -		$ -	$ -	$ -		$ -

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Stored Materials Summary

Contractor's Application for Payment

Owner:	American Fork City	**Owner's Project No.:**	
Engineer:	J-U-B Engineers, Inc.	**Engineer's Project No.:**	83-23-013
Contractor:		**Contractor's Project No.:**	
Project:	American Fork Boat Harbor Reconstruction		
Contract:	American Fork Boat Harbor Reconstruction		

Application No.: _____ **Application Period:** **From** _____ **to** _____ **Application Date:** _____

A	B	C	D	E	F	G	H	I	J	K	L	M
						Materials Stored			Incorporated in Work			
Item No. (Lump Sum Tab) or Bid Item No. (Unit Price Tab)	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Description of Materials or Equipment Stored	Storage Location	Application No. When Materials Placed in Storage	Previous Amount Stored ($)	Amount Stored this Period ($)	Amount Stored to Date (G+H) ($)	Amount Previously Incorporated in the Work ($)	Amount Incorporated in the Work this Period ($)	Total Amount Incorporated in the Work (J+K) ($)	Materials Remaining in Storage (I-L) ($)
								-			-	-
								-			-	-
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								-			-	-
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								-			-	-
					Totals	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner:	American Fork City	Owner's Project No.:	
Engineer:	J-U-B ENGINEERS, Inc.	Engineer's Project No.:	83-23-013
Contractor:		Contractor's Project No.:	
Project:	American Fork Boat Harbor Reconstruction		
Contract Name:	American Fork Boat Harbor Reconstruction		

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

[Describe the portion of the work for which Certificate of Substantial Completion is issued]

Date of Substantial Completion: **May 1, 2025**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

[List amendments to Owner's Responsibilities]

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

[List amendments to Contractor's Responsibilities]

The following documents are attached to and made a part of this Certificate:

[List attachments such as punch list; other documents]

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

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requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

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recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

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33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

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43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

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1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

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F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

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into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

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ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

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inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

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B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

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established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

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D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

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B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

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and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

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5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

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Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

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3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

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or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

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of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

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conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

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Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

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Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

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L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

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4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

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Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

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6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

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B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

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2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

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3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

   a. will certify that the proposed substitute item will:

      1) perform adequately the functions and achieve the results called for by the general design;

      2) be similar in substance to the item specified; and

      3) be suited to the same use as the item specified.

   b. will state:

      1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

      2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

      3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

   c. will identify:

      1) all variations of the proposed substitute item from the item specified; and

      2) available engineering, sales, maintenance, repair, and replacement services.

   d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

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E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

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H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

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7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

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7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

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I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

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3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

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document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

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d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

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9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

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D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

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E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

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B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

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9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

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ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

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E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

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ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

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B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

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1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or
2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
   a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
   b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
   c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
   d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
   e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
   f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

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11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

   a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

   b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

   The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

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Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

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and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

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2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

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consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

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g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

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Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

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thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

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D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

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losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

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or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

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establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

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4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

   a. to supervise, direct, or control the Work;

   b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

   c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

   d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

   e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

   a. the Work is defective, requiring correction or replacement;

   b. the Contract Price has been reduced by Change Orders;

   c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

   d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

   e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

   a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

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b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

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submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

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significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

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d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

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appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

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attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

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provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

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18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, “Paragraph SC-4.05.”

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **[1]** printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and **one copy** in electronic portable document format (PDF).

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03 Delete Paragraphs 5.03.A and 5.03.B in their entirety and insert the following:

A. No reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.

SC 5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Insurance – General Provisions*

SC-6.02 Add the following subparagraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker’s compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as a worker’s compensation insurance provider by the appropriate state agency, and (c) has been

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accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

SC 6.03 Add the following new paragraph immediately after Paragraph 6.02.J:

K. The limits of liability for the insurance required by Paragraphs 6.02 and 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 6.03.B.1 and B.2 of the General Conditions:

State:		Statutory
Federal, if applicable (e.g., Longshoreman's):		Statutory
Jones Act coverage, if applicable:		N.A.
Bodily injury by accident, each accident	$	1,000,000
Bodily injury by disease, aggregate	$	1,000,000
Employer's Liability:		
Bodily injury, each accident	$	1,000,000
Bodily injury by disease, each employee	$	1,000,000
Bodily injury/disease aggregate	$	1,000,000
For work performed in monopolistic states, stop-gap liability coverage shall be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	$	1,000,000
Foreign voluntary worker compensation		Statutory

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	$	2,000,000

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Products - Completed Operations Aggregate	$	5,000,000
Personal and Advertising Injury	$	2,000,000
Each Occurrence (Bodily Injury and Property Damage)	$	2,000,000

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:		
Each person	$	2,000,000
Each accident	$	2,000,000
Property Damage:		
Each accident	$	1,000,000
[or]		
Combined Single Limit of	$	2,000,000

4. Excess or Umbrella Liability:

Per Occurrence	$	5,000,000
General Aggregate	$	5,000,000

5. Contractor's Pollution Liability:

Each Occurrence	$	2,000,000

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General Aggregate	$	1,000,000

☐ If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following: Subcontractors.

7. Contractor's Professional Liability:

Each Claim	$	N.A.
Annual Aggregate	$	N.A.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

SC-7.03 Add the following new paragraph immediately after Paragraph 7.03.C:

D. Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

Add the following new paragraph immediately after Paragraph 7.06.O:

P. Contractor shall not be permitted to, without the express written authorization of Owner:

1. Subcontract more the 50% of the Contractor's work.
2. Subcontract more than 30% of the Contractor's work to any one subcontractor.
3. Percentages of subcontracted work described in the preceding paragraphs shall be computed by dividing the summation of total cost for all subcontracted work by the Contractor's price or the summation of all total man hours required for all subcontracted work by the summation of all total man hours required for Contractor's work, whichever is less.

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ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:

1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.

2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

3. *Liaison*

   a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.

   b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

   c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.

4. *Review of Work; Defective Work*

   a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.

   b. Observe whether any Work in place appears to be defective.

   c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

5. *Inspections and Tests*

   a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.

   b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.

6. *Payment Requests:* Review Applications for Payment with Contractor.

7. *Completion*

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a. Participate in Engineer's visits regarding Substantial Completion.

b. Assist in the preparation of a punch list of items to be completed or corrected.

c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.

d. Observe whether items on the final punch list have been completed or corrected.

D. The RPR will not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).

2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.

3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.

5 Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.

6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.

7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.01 *Cost of the Work*

SC-13.01 Add the following paragraph immediately after Paragraph 13.01.E

F. Contractor shall only markup change orders on their subcontractors by 5% maximum.

13.03 *Unit Price Work*

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the extended price of a particular item of Unit Price Work amounts to 10 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

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2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET-OFFS; COMPLETION; CORRECTION PERIOD

15.03 *Substantial Completion*

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

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WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]

Owner:	American Fork City	Owner's Project No.:	
Engineer:	J-U-B ENGINEERS, Inc.	Engineer's Project No.:	83-23-013
Contractor:		Contractor's Project No.:	
Project:	American Fork Boat Harbor Reconstruction		
Contract Name:	American Fork Boat Harbor Reconstruction		
Date Issued:	Effective Date of Work Change Directive:		

Contractor is directed to proceed promptly with the following change(s):

Description:

[Description of the change to the Work]

Attachments:

[List documents related to the change to the Work]

Purpose for the Work Change Directive:

[Describe the purpose for the change to the Work]

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: $ _____ **[increase] [decrease] [not yet estimated]**.

Contract Time: _____ days **[increase] [decrease] [not yet estimated]**.

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

	Recommended by Engineer	Authorized by Owner
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

EJCDC® C-940, Work Change Directive.
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CHANGE ORDER NO.: [Number of Change Order]

Owner:	American Fork City	Owner's Project No.:	
Engineer:	J-U-B ENGINEERS, Inc.	Engineer's Project No.:	83-23-013
Contractor:		Contractor's Project No.:	
Project:	American Fork Boat Harbor Reconstruction		
Contract Name:	American Fork Boat Harbor Reconstruction		
Date Issued:		Effective Date of Change Order:	

The Contract is modified as follows upon execution of this Change Order:

Description:

[Description of the change]

Attachments:

[List documents related to the change]

Change in Contract Price	**Change in Contract Times [State Contract Times as either a specific date or a number of days]**
Original Contract Price: $ _____	Original Contract Times: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. **[Number of previous Change Order]**: $ _____	**[Increase] [Decrease]** from previously approved Change Orders No.1 to No. **[Number of previous Change Order]**: Substantial Completion: _____ Ready for final payment: _____
Contract Price prior to this Change Order: $ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for final payment: _____
[Increase] [Decrease] this Change Order: $ _____	**[Increase] [Decrease]** this Change Order: Substantial Completion: _____ Ready for final payment: _____
Contract Price incorporating this Change Order: $ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for final payment: _____

	Recommended by Engineer (if required)	Authorized by Owner
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

	Authorized by Owner	Approved by Funding Agency (if applicable)
By:	_____	_____
Title:	_____	_____
Date:	_____	_____

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FIELD ORDER NO.: [Number of Field Order]

Owner:	American Fork City	Owner's Project No.:	
Engineer:	J-U-B ENGINEERS, Inc.	Engineer's Project No.:	83-23-013
Contractor:		Contractor's Project No.:	
Project:	American Fork Boat Harbor Reconstruction		
Contract Name:	American Fork Boat Harbor Reconstruction		
Date Issued:		Effective Date of Field Order:	

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:

Specification Section(s):

Drawing(s) / Details (s):

Description:

[Description of the change to the Work]

Attachments:

[List documents supporting change]

Issued by Engineer

By: _____

Title: _____

Date: _____

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VOLUME II TECHNICAL SPECIFICATIONS

FOR

AMERICAN FORK CITY

AMERICAN FORK BOAT HARBOR RECONSTRUCTION

August 2024
Bid Set

Project No. 83-23-013

392 East Winchester Street, Suite 300, Salt Lake City, UT 84107
p **801 886 9052** *w* **www.jub.com**

OTHER J-U-B COMPANIES

THE LANGDON GROUP

GATEWAY MAPPING INC.

JUL 01 2024

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AMERICAN FORK CITY

AMERICAN FORK BOAT HARBOR RECONSTRUCTION

VOLUME II TECHNICAL SPECIFICATIONS

LIST OF SPECIFICATION PRIORITIES

1. Project Specifications listed above
2. American Fork Standards, Specifications, and Code
3. American Public Works Association (APWA) 2017 Specifications

If there is any discrepancy, conflict or inconsistency within the Technical Specifications themselves, the Contractor shall provide the better quality or greater quality of Work or materials, as applicable, unless Owner directs otherwise in writing.

The following are modifications, special provisions, or additions to the APWA specifications:

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SECTION 01 22 00
MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Authority

B. Payment

C. Defect Assessment

D. Non-Payment for Rejected Products

E. General Description of Measurement and Payment

F. Alternates

G. Schedule of Bid Items

1.2 DESCRIPTION OF WORK

A. The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

1.3 AUTHORITY

A. See EJCDC C-700 General Conditions 10.07 and 10.08

B. Take all measurements and compute quantities to estimate percent complete of each item listed in the schedule of values. The Engineer will verify measurements and quantities and percent complete.

1.4 PAYMENT

A. See EJCDC C-700 General Conditions 15.01

B. Payment Includes: Full compensation for all required labor, products, tools, equipment, plant, transportation, services, and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.5 DEFECT ASSESSMENT

A. EJCDC C-700 General Conditions 10.04 – Rejecting Defective Work
   1. See EJCDC C-700 General Conditions and Article 14

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B. Replace the Work, or portions of the Work, not conforming to specified requirements.

C. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Owner will direct one of the following remedies:
   1. The defective Work may remain, but the unit sum will be adjusted to a new sum at the discretion of the Engineer.
   2. The defective Work will be partially repaired to the instructions of the Owner, and the unit sum will be adjusted to a new sum at the discretion of the Engineer.

D. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.

E. The authority of the Engineer to assess the defect and identify payment adjustment is final.

1.6 NON-PAYMENT FOR REJECTED PRODUCTS

A. Payment will not be made for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from the transporting vehicle.
   4. Products placed beyond the lines and levels of the required Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling, and disposing of rejected Products.
   7. Removing rejected materials and/or work and replacing with materials and/or work in compliance with these specifications.

1.7 GENERAL DESCRIPTION OF MEASUREMENT AND PAYMENT

A. Measurement and Payment for the bid items listed in Base Bid shall be based on the description in the Technical Specifications and Drawings. Unless the work to be done is so specifically called out to be measured and paid for in Base Form, payment for such work shall be included in other applicable items, and there shall be no separate measurement and payment for the work.

B. Items listed in EJCDC C-410 – Bid Form as lump sum (L.S.) shall include all work for the complete installation as generally described in the Drawings and the Technical Specifications.

C. Payment shall be made at the contract bid price listed in the Bid Form.

D. Partial payment for unit price bid items and lump sum bid items only partially completed at the end of monthly pay periods shall be made based upon the Engineers interpretation of the percentage of work completed. Partial payment for materials delivered and stored will be considered, if said materials have been submitted to the Engineer for review per Section 01 33 00 – Submittal Procedures and supporting invoices and documentation have been provided.

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E. Quantities indicated in the Bid Form are for bidding and contract purposes only, unless specified otherwise in the Technical Specifications.

F. If the actual work requires more or fewer quantities than those quantities indicated in the Bid Form, the Contractor shall provide the required quantities.

G. Payment Includes: Full compensation for all required labor, products, tools, equipment, materials, transportation, services and incidentals, erection, application, or installation of an item of the Work, including mobilization, demobilization, supervision, overhead and profit.

H. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit price for work which is incorporated in or made necessary by the Work unless specified otherwise.

I. Material the Contractor removes from the site will be returned to the Owner if requested by the Owner.

J. Construction Staking will be performed by the OWNER's Representative.

1.8 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement

B. Coordinate related work and modify surrounding work.

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SCHEDULE OF BID ITEMS – BASE BID

1.9 MOBILIZATION/DEMOBLIZATION – BID ITEM #1

A. Measurement shall be lump sum for the job, complete. Payment shall be as outline below:

PAY FACTORS FOR MOBILIZATION/DEMOBILIZATION AND TEMPORARY FACILITIES	
Percent of Original Contract Amount Earned Not Including Materials Purchased	Percent of Amount Bid for Mobilization to be Paid
5	40
15	20
40	30
50	10

B. This includes, but not limited to, all labor and equipment and materials for, safely moving equipment and related materials to and from the site, sanitation facilities, traffic control required permitting, temporary utilities and controls, project related documentation and coordination with State and Local authorities. Payment for the performance of the mobilization/demobilization work as specified herein will be made at the contract lump sum price for "Mobilization/Demobilization" as listed in the Bid Schedule.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.10 AS-BUILT/RECORD DRAWINGS – BID ITEM #2

A. Measurement shall be lump sum for the job, complete.

B. This includes, but not limited to, all labor and equipment and materials to provide as-built/record drawings as specified in these Specifications and elsewhere in these Contract Documents.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.11 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) – BID ITEM #3

A. Measurement shall be lump sum for the job, complete. Payment shall be as outline below:

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PAY FACTORS FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	
Amount Paid	When Paid
25% of bid item amount	With first estimate
Remaining portion of bid item paid as percentage of the contract completed	With each subsequent estimate

B. Payment for this bid item shall include all costs associated with preparation and implementation of a (SWPPP) and obtaining the Utah Pollutant Discharge Elimination (UPDES) Storm Water permit.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.12 WEED REMOVAL AND MANAGEMENT PLAN – JETTY – BID ITEM #4

A. No direct measurement will be made for weed removal and management plan. This item shall include all equipment, labor, and materials to provide weed removal and management plan for the jetty, including the implementation of the plan for the removal of vegetation. Plan shall include the application of herbicides by Commercial Pesticide Applicator registered in Utah. The plan should be created and executed for the site for construction as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.13 GENERAL REMOVAL AND DISPOSAL – BID ITEM #5

A. Measurement for this item shall be per lump sum. Payment shall include all items not accounted for in the removal bid items, Bid Items 6-13, required to prepare and maintain the site for construction as specified in these Specifications, Plans, and elsewhere in these Contract Documents. Included in this item is coordination with Owner for removal of any other items found in project limits.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.14 REMOVE AND DISPOSE ASPHALT PAVEMENT – BID ITEM #6

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to remove and dispose existing asphalt from the site

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and roadway as called out on the plans. Work includes demolition, sawcutting, hauling, and disposing of asphalt material from the work site to a location chosen by the Owner and Contractor. Subgrade removal will be paid for in Excavation bid item. Asphalt is to be sawcut to full depth. No additional payment will be made for sawcutting to provide a clean edge immediately before placing asphalt.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.15 CLEARING AND GRUBBING – BID ITEM #7

A. Measurement shall be lump sum of clearing and grubbing. This includes, but is not limited to, all labor, equipment and materials required for stripping and disposing of vegetation, including but not limited to stumps, roots, shrubs, vegetation, and vegetative debris within the construction limits to cut, remove, haul, and properly dispose of. Trees greater than 4" at 2' from top of existing ground shall be paid out in Remove and Dispose Tree bid item. The price also includes disposal fees. Work on the jetty will be paid under a different bid item.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.16 REMOVE AND DISPOSE TREE– BID ITEM #8

A. Measurement shall be per each tree removed with a diameter of 4 inches or larger measured at a point 2 feet above the existing ground, anything smaller shall be paid for in the Clearing and Grubbing bid item. CONTRACTOR is to verify size with OWNER prior to removal. This includes, but is not limited to, all labor, equipment and materials required for removal of trees called out in the plans to remove, including stumps and roots to cut, wood chip, remove, haul, and properly dispose of to 18" below grade. The price also includes disposal fees.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.17 RELOCATE LIGHT POLES AND ELECTRIC JUNCTION BOXES– BID ITEM #9

A. No direct measurement will be made for relocation of light poles and electric junction boxes. This item shall include all equipment, labor, and materials to remove and coordinate the relocation of light poles and electric junction boxes as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.18 REMOVE AND DISPOSE TOLL BOOTH– BID ITEM #10

A. Measurement for this item shall be lump sum. This item shall include all equipment, labor, and materials to remove and dispose of the complete toll booth station, foundation, and all contents. Contractor is to verify with Owner of all items to be returned located inside the building. Also included is the coordination and removal/abandoning of the existing power lateral.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.19 REMOVE CHAIN AND POST FENCE AND CHAINLINK FENCE– BID ITEM #11

A. Measurement for this item shall be by the linear foot. Payment shall be full compensation for labor, materials, equipment, and appurtenances required to remove and dispose of existing fence per project plans and specifications. If a portion of the existing fence remains, and the fence will not be continued under this project, this item includes furnishing and installing an end post matching the existing fence end posts in size, shape, material, construction, color, and mounting method. This item includes removing and disposing of the fence materials and any concrete foundations and furnishing, placing, backfilling and compacting holes of removed posts.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.20 REMOVE ENTRANCE GATE– BID ITEM #12

A. Measurement for this item shall be lump sum. Payment shall be full compensation for labor, materials, equipment, and appurtenances required to remove and dispose of existing entrance gate per project plans and specifications. If a portion of the existing fence remains, and the fence will not be continued under this project, this item includes furnishing and installing an end post matching the existing fence end posts in size, shape, material, construction, color, and mounting method. This item includes removing and disposing of the gate materials and any concrete foundations and furnishing, placing, backfilling and compacting holes of removed posts.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.21 6” THICK VEHICULAR CONCRETE– BID ITEM #13

A. Measurement shall be by the square foot of vehicular concrete furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the concrete, including expansion joints and rebar. This also includes all necessary forms, expansion/contraction material, curing material, and all other

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necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.22 4" THICK CONCRETE SIDEWALK– BID ITEM #14

A. Measurement shall be by the square foot of 4" thick sidewalk furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the sidewalk, including expansion joints. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.23 CONCRETE FLATWORK– BID ITEM #15

A. Measurement shall be by the square foot of 4" thick sidewalk furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the concrete flatwork, including expansion joints and rebar. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.24 6" THICK CONCRETE DRIVE APPROACH – BID ITEM #16

A. Measurement shall be per concrete drive approach furnished and installed. The area in which concrete drive approaches and sidewalks cross are measured under this this item, as will driveway flares. Areas in which concrete drive approaches and curb and gutter cross are not measured under this item - measurement of concrete drive approaches will begin at the back of curb line. Payment shall be full compensation for all labor, equipment, and materials for excavating, preparing grade, and furnishing, forming, placing, and finishing concrete drive approach. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.25 HMA, PG-64-22, SP-1/2, 75ND, 3" THICK WITH MAX 15% RAP - ASPHALT TRAIL – BID ITEM #17

A. Measurement for the asphalt shall be per ton based upon weigh tickets obtained in the field by the inspector. Included in this item is all labor, equipment and materials required to furnish and install asphalt to required thickness. This includes, but is not limited to, tackifier, compaction, preparing and verifying final base grade, material testing, ensuring positive drainage in all locations, and other related appurtenances as shown on the drawings and described in the specifications and contract documents. Eligible payment will be for measured/weighed tons of asphalt material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract ton (TON) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.26 HMA, PG-64-22, SP-1/2, 75ND, 3" THICK WITH MAX 15% RAP – PARKING LOT – BID ITEM #18

A. Measurement for the asphalt shall be per ton based upon weigh tickets obtained in the field by the inspector. Included in this item is all labor, equipment and materials required to furnish and install asphalt to required thickness. This includes, but is not limited to, tackifier, compaction, preparing and verifying final base grade, material testing, ensuring positive drainage in all locations, and other related appurtenances as shown on the drawings and described in the specifications and contract documents. Eligible payment will be for measured/weighed tons of asphalt material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract ton (TON) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.27 UNTREATED BASE COURSE – BID ITEM #19

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to import, place, and compact untreated base course under all asphalt, pedestrian concrete, vehicular concrete, concrete flatwork, concrete drive approach, sidewalk, valley gutter, curb and gutter, handicap ramp, and dumpster enclosure, except as noted in other bid items. Eligible payment will be for placed and compacted cubic yards of untreated base course material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.28 GRANULAR BORROW – BID ITEM #20

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to import, place, and compact granular borrow as shown on the plans. Borrow used for locations other than under pavement as shown in the plans will

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be paid for under a separate item. Eligible payment will be placed and compacted cubic yards of granular borrow material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.29 EXCAVATION – BID ITEM #21

A. Measurement for this item shall be cubic yard. This item shall include all equipment, labor, and materials to excavate as shown in the drawings within the limit of construction including, but not limited to, soil and rock. This includes hauling and disposal fees. No additional payment will be made for over-excavation, unless as written approval by Engineer.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.30 BORROW – BID ITEM #22

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to furnish and install the borrow as shown in the drawings within the limit of construction. Eligible payment will be for measured/weighed cubic yards of borrow material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.31 HANDICAP RAMP– BID ITEM #23

A. Measurement shall be per ramp furnished and installed. This includes, but is not limited to, all labor, equipment, and materials necessary to form, pour, and finish the American Disabilities Act (ADA) Ramp, including expansion joints, curb wall (if needed), and raised truncated domes. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. The ADA Ramp is to be built in accordance with the 2010 ADA Standards for Accessible Design and Manual on Uniform Traffic Control Devices (MUTCD). Excluded from this item but included in another is: untreated base course material, sign(s), and signpost(s).

B. Payment shall be made at the contract each (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.32 4’ CONCRETE VALLEY GUTTER– BID ITEM #24

A. Measurement for this item shall be per linear foot. This item includes all labor, equipment, materials necessary to haul, form, pour, and finish the 4’ concrete valley gutter as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents. Included are expansion joints and sealant. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.33 OPEN 24” CURB AND GUTTER– BID ITEM #25

A. Measurement for this item shall be per linear foot. This item includes all labor, equipment, materials necessary to haul, form, pour, and finish the open 24” curb and gutter as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents. Included are expansion joints and sealant. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.34 VEHICULAR GATE AT ENTRANCE (36’-WIDE MANUAL DOUBLE SWING GATE) – BID ITEM #26

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the swing gates per manufactures instructions and as shown on the drawings, including but not limited to, caps, couplings, fittings and hardware, and other appurtenances required for complete and operational swing gates. Also included is excavation, post foundations, compaction, and backfill material. Gate shall feature a locking mechanism with three (3) functioning keys approved by Owner. The static fencing is paid for under other pay items.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.35 RELOCATED VEHICULAR GATE (12’-WIDE MANUAL SLIDE GATE) – BID ITEM #27

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the reinstallation of the existing slide gate per manufactures instructions and as shown on the drawings, including but not limited to, caps, couplings, fittings and hardware, and other appurtenances required for complete and operational slide gate. Also included is excavation, post foundations, compaction, and backfill material. Gate shall feature a locking mechanism with three (3) functioning keys approved by Owner. The static fencing is paid for under other pay items.

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B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.36 GENERAL RELOCATION– BID ITEM #28

A. Measurement for this item shall be per lump sum. Payment shall include all items not accounted for relocation, including shed and flagpole as specified in these Specifications, Plans, and elsewhere in these Contract Documents. Shed is to be installed on a concrete foundation, included in this pay item. Also included is the flagpole foundation. Included in this item is coordination with Owner for relocation of any other items found in project limits.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.37 4’ CHAINLINK FENCE – BID ITEM #29

A. Measurement for this item shall be per linear foot. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the fencing per manufactures instructions (matching existing fence type) and as shown on the drawings, including but not limited to, line posts, caps, couplings, fittings, hardware, and other appurtenances required for a complete fence installation. Also included is excavation, post foundations, compaction, and backfill material.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.38 6’ CHAINLINK FENCE – BID ITEM #30

A. Measurement for this item shall be per linear foot. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the fencing per manufactures instructions (matching existing fence) and as shown on the drawings, including but not limited to, line posts, caps, couplings, fittings, hardware, and other appurtenances required for a complete fence installation. Also included is excavation, post foundations, compaction, and backfill material. The enclosure gate is paid for under another pay item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.39 DUMPSTER ENCLOSURE– BID ITEM #31

A. Measurement shall be lump sum for furnishing and installing dumpster enclosure. This includes but is not limited to all costs to complete the dumpster enclosure, including concrete slab, concrete curb, concrete foundation, CMU wall, relocation of dumpster,

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and double swing gate as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.40 CONCRETE WHEEL STOP– BID ITEM #32

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install concrete wheel stop as specified in these Specifications and elsewhere in these Contract Documents. Included is drilling holes through pavement for the installation of the wheel stop. Wheel stops that are cracked during construction will be replaced at Contractor's expense.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.41 SIGN WITH 8" DIA. BOLLARD– BID ITEM #33

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install sign with bollard as specified in these Specifications and elsewhere in these Contract Documents. Included is the furnishing and installing steel pipe, sign, steel tube, concrete foundation, as well as paint. Also included is 1 foot of over excavation and placement of compacted (95%) granular borrow subgrade.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.42 STATIONARY 6" DIA. BOLLARD– BID ITEM #34

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install stationary bollard as specified in these Specifications and elsewhere in these Contract Documents. Included is the furnishing and installing steel pipe and concrete foundation, as well as paint. Also included is 1 foot of over excavation and placement of compacted (95%) granular borrow subgrade.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.43 STRIPING– BID ITEM #35

A. Measurement shall be lump sum for furnishing and installing striping. This includes but is not limited to all costs to complete the markings, including arrows, stop bars, crosswalks, and curb painting. All material shall be installed in accordance with manufacturer specifications and shall be placed reflecting current conditions or as

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directed, also as directed in the 2010 ADA Standards for Accessible Design, MUTCD, and these drawings. Parking stalls and restricted striping are four inches (4") wide white lines. Also included is painted asphalt on the "Heavy Duty Asphalt Pavement Section"

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.44 HARBOR SLOPE PROTECTION – BID ITEM #36

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to import, place, and compact D50=6" riprap and 4" infill/bedding material as specified in these Specifications and elsewhere in these Contract Documents. Also included is the breaking and shaping of the existing concrete on the jetty slopes to receive the infill/bedding material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.45 LAKE EXPOSED SLOPE PROTECTION – BID ITEM #37

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to import, place, and compact D50=36" riprap and 6" infill/bedding material as specified in these Specifications and elsewhere in these Contract Documents. Also included is the breaking and shaping of the existing concrete on the jetty slopes to receive the infill/bedding material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.46 INLET BASIN, 3'X3', 5-7FT DEEP – BID ITEM #38

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install storm drain inlet box with grate and frame as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to inlet box, frame, grate, risers, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.47 STORM DRAIN MANHOLE, 5-FT, 6FT DEEP – BID ITEM #39

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install storm drain manhole with lid as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to manhole, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.48 SAND/OIL SEPERATOR – OSS-A1 – BID ITEM #40

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-A1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.49 SAND/OIL SEPERATOR – OSS-B1 – BID ITEM #41

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-B1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.50 SAND/OIL SEPERATOR – OSS-C1 – BID ITEM #42

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-C1 and D1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary,

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structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.51 SAND/OIL SEPERATOR – OSS-D1 – BID ITEM #43

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-D1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.52 18” REINFORCED CONCRETE PIPE – BID ITEM #44

A. Measurement for this item shall be per linear foot. This item shall include all equipment, labor, and materials to furnish and install 18” RCP storm drain as specified in these Specifications and elsewhere in these Contract Documents. This item also includes but is not limited to excavation, trenching, shoring, slope stabilization, personal protection as necessary, pipe fittings, pipe appurtenances, bedding material, foundation stabilization as required, zone backfill material (APWA 33 05 20, Plan 381) placed, compacted, complete, and in place.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.53 24” REINFORCED CONCRETE PIPE – BID ITEM #45

A. Measurement for this item shall be per linear foot. This item shall include all equipment, labor, and materials to furnish and install 24” RCP storm drain as specified in these Specifications and elsewhere in these Contract Documents. This item also includes but is not limited to excavation, trenching, shoring, slope stabilization, personal protection as necessary, pipe fittings, pipe appurtenances, bedding material, foundation stabilization as required, zone backfill material (APWA 33 05 20, Plan 381) placed, compacted, complete, and in place.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.54 18" FLARED END SECTION PIPE OUTLET – BID ITEM #46

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install flared end with Oldcastle FES trash guard (or approved equivalent), as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to furnishing and installing trash guard hardware, connecting pipe to flared end, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, energy dissipation apron rock, well graded backfill material, compacted and in place as shown on the plans. Also included is the nonwoven geotextile fabric that wraps the riprap at the daylighting of pipe.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.55 24" FLARED END SECTION PIPE OUTLET – BID ITEM #47

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install flared end with Oldcastle FES trash guard (or approved equivalent), as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to furnishing and installing trash guard hardware, connecting pipe to flared end, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, energy dissipation apron rock, well graded backfill material, compacted and in place as shown on the plans. Also included is the nonwoven geotextile fabric that wraps the riprap at the daylighting of pipe.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.56 CXT TIOGA RESTROOM BUILDING– BID ITEM #48

A. Measurement shall be lump sum for coordination for installation of CXT Tioga Double Vault Toilet. Owner will purchase restroom. Included is coordination with CXT, who will be delivering, unloading, excavating, and backfilling for building, and all else as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.57 FINE GRADING (LANDSCAPE AREAS)– BID ITEM #49

A. Measurement for this item shall be based on the square footage of fine grading in all softscape areas including final grade preparation in all areas to receive mulches and turf. Also included are other labor, equipment, materials, cleaning, and related

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appurtenances as shown on the drawings and specifications required to provide fine grading.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.58 WASHED BEACH SAND – BID ITEM #50

A. Measurement for this item shall be based on the cubic yards of sand installed at 10" depth in the beach area including final grade preparation in all areas to receive washed beach sand. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide washed beach sand. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.59 ENGINEERED WOOD FIBER (PLAYGROUND) – BID ITEM #51

A. Measurement for this item shall be based on the square foot of 14" depth engineered wood fiber installed inside of the playground wall. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide fine grading. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.60 STEEL EDGING (1/8" THICK, 6" TALL- CORTEN/BORCON) – BID ITEM #52

A. Measurement for this item shall be based on the linear foot of 1/8" thick, 6" tall corten/borcon steel edging installed, including cutting, securing, and placement. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install steel edging.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.61 SOD – BID ITEM #53

A. Measurement for this item shall be based on the square footage of area to receive sod including final grade preparation. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide sod installation.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.62 SHREDDED BARK MULCH – BID ITEM #54

A. Measurement for this item shall be based on the square foot of 3" depth of bark mulch installed along the backside of the log barrier at a width of approx. 15 feet, including final grade preparation in all areas to receive bark mulch. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide bark mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.63 1" DESERT ROSE STONE MULCH (3" DEPTH) – BID ITEM #55

A. Measurement for this item shall be based on the square foot of 3" depth of 1" Desert Rose stone mulch installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 1" stone mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.64 3"-6" WASATCH GREY STONE MULCH (4" DEPTH) – BID ITEM #56

A. Measurement for this item shall be based on the square foot of 6" depth of 3"-6" Wasatch Grey stone mulch installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 3"-6" Wasatch Grey stone mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.65 1/4" MINUS CHAT (PATH MATERIAL) – BID ITEM #57

A. Measurement for this item shall be based on the square foot of 3" depth of ¼" minus chat installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install ¼" minus chat. Contractor shall provide weight tickets or verification of quantity.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.66 2" CALIPER DECIDUOUS TREE – BID ITEM #58

A. Measurement for this item shall be based on each 2" caliper deciduous tree installed, including all digging, placement, backfill, watering, and staking. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 2" caliper deciduous tree.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.67 PRESERVATION OF EXISTING TREES – BID ITEM #59

A. Measurement for this item shall be lump sum. This item includes labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install tree preservation measures for each tree to be protected.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.68 TOPSOIL– BID ITEM #60

A. Measurement for this item shall be based on the cubic yard of topsoil installed at 4" depth for sod areas and 12" depth to the mature dripline of the individual trees, including all placement, final grade preparation, and backfilling of tree pits. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install topsoil for the sod and trees. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.69 WEED BARRIER FABRIC– BID ITEM #61

A. Measurement for this item shall be based on the square foot of weed barrier fabric installed, including all placement, staking, securing, and final grade preparation. Also included are other labor, equipment, materials, cleaning, and related appurtenances and connections as shown on the drawings and specifications required to provide and install weed barrier fabric.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.70 CONCRETE MOW CURB (6" WIDE) – BID ITEM #62

A. Measurement for this bid item shall be per linear foot of mow curb installed. This includes but is not limited to all labor, equipment, and materials to install the mow curb to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.71 CAST-IN-PLACE 8" DEEP-EDGE CONCRETE CURB WALL (PLAYGROUND) – BID ITEM #63

A. Measurement for this bid item shall be per linear foot of curb wall installed. This includes but is not limited to all labor, equipment, and materials to install the new curb wall to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material, untreated base course, fiber and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.72 CAST-IN-PLACE CONCRETE SEAT WALL (12" WIDE) – BID ITEM #64

A. Measurement for this bid item shall be per linear foot of concrete seat wall installed. This includes but is not limited to all labor, equipment, and materials to install the seat wall to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material, untreated base course, fiber and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.73 LODGE POLE FENCE – BID ITEM #65

A. Measurement for this item shall be based on the linear foot of wood lodge pole fencing installed per drawing details, including cutting, securing, and placement. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install lodge pole fencing.

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B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.74 SHADE UMBRELLAS – BID ITEM #66

A. Measurement for this item shall be per each. This item shall include all labor, equipment, hardware, materials, and related appurtenances as shown on the drawings and specifications required to install Owner provided shade umbrella per manufacturer's instructions and details.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.75 MODULAR FLOATING DOCK, GANGWAY, AND KAYAK LAUNCH – BID ITEM #67

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor and materials required for the installation of the Owner provided modular floating dock, gangway, and kayak launch per manufacturer's instructions and as shown on the drawings.

B. Payment shall be made at the contract lump sum (LS) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.76 TIMBER HAMMOCK POSTS – BID ITEM # 68

A. Measurement for this item shall be per each. This item shall include all labor, equipment, hardware, materials, and related appurtenances as shown on the drawings and specifications required to provide and install a single timber hammock post.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.77 TRASH RECEPTACLES (POWDER COATED) – BID ITEM #69

A. Measurement for this item shall be per each. This item shall include all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install an Owner provided trash receptacle. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.78 CORNHOLE BOARD – BID ITEM #70

A. Measurement for this item shall be per each. This item shall include all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install an Owner provided pre-cast concrete cornhole board.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.79 PLAYGROUND EQUIPMENT – BID ITEM #71

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the Owner provided playground equipment per manufacturer's instructions and as shown on the drawings. Also included is excavation, post foundations, and compaction. The engineered wood fiber is paid for under a separate pay item.

B. Payment shall be made at the contract lump sum (LS) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.80 LOG PLAYGROUND BARRIER, TREATED LOGS – BID ITEM #72

A. Measurement for this item shall be per linear foot of treated log/stump. This item includes all labor, equipment, materials necessary to cut and install natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.81 SPECIALTY, TREATED LOGS AND STUMPS – BID ITEM #73

A. Measurement for this item shall be per linear foot of treated log/stump. This item includes all labor, equipment, materials necessary to cut, treat, and install Owner provided natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.82 NATURAL (UNTREATED) LOGS AND STUMPS – BID ITEM #74

A. Measurement for this item shall be per linear foot of untreated log/stump. This item includes all labor, equipment, materials necessary to cut and install Owner provided

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natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.83 6' BENCH (WITH BACK) – BID ITEM #75

A. Measurement for this item shall be based on each Owner provided 6' bench with back installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 6' bench with back. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.84 6' ALUMINUM PICNIC TABLES (POWDER-COATED) – BID ITEM #76

A. Measurement for this item shall be based on each Owner provided 6' picnic table installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a picnic table.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.85 COLLAPSIBLE ACCESS CONTROL BOLLARD – BID ITEM #77

A. Measurement for this item shall be based on each Owner provided access control bollard installed. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install the bollard.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.86 PAVILION – BID ITEM #78

A. Measurement for this item shall be based on each Owner provided 9'x18' pavilion structure installed, including all structural footing requirements from the manufacturer. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 9'x18' pavilion. Concrete and UTBC will be paid under different bid items.

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B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.87 BIKE RACK – BID ITEM #79

A. Measurement for this item shall be based on each Owner provided 5-loop bike rack assembly installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 5-loop bike rack assembly.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.88 IMPORT BUILDING FOUNDATION MATERIAL – BID ITEM #80

A. No direct measurement will be made for this item. Included in this item are all equipment, materials, labor, and costs of work in the delivery, supplying, placing, and compacting material in place as described in the Specifications and Contract Documents.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.89 BUILDING CONCRETE AND REINFORCING – BID ITEM #81

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. This item includes all earthwork, formwork, and other related items required to place the building concrete and reinforcing. All concrete and reinforcing required for the building and the concrete slabs within the building and concrete entry pad outside of walk door are included in this item. Imported foundation material shall be paid for under a separate item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.90 ROUGH CARPENTRY – BID ITEM #82

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All woodwork not visible in the finished building is included in this item. All wall framing, temporary wall supports, blocking between trusses, permanent truss bracing, roof sheathing, wall blocking for cabinets and other wall mounted appurtenances, and other wood elements permanently or temporarily attached to the trusses or wall needed for construction are included in this item.

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B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.91 SHOP FABRICATED ROOF TRUSSES – BID ITEM #83

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct and install the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.92 SIDING – BID ITEM #84

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. This includes all non-stone siding, trim, accessories, and other items required for this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.93 STONE VENEER AND ASSOCIATED ITEMS – BID ITEM #85

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to install the item. All lathe, channels, trims, grout, waterproofing membrane, etc. required for the typical installation of finish are included in this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.94 METAL FABRICATIONS – BID ITEM #86

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All structural steel and miscellaneous fabrications from any metal used in any application for the construction of the building is included in this item. This item also includes all painting, galvanizing, coating, or other finishing of said fabrications.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.95 THERMAL AND MOISTURE PROTECTION – BID ITEM #87

A. No direct measurement will be made for this item. All waterproofing, water repellants, vapor retarders, joint sealants, weather barriers, and expansion joints are included in this item. Rigid, Batt, or Blown-in insulation shall be paid for under separate items. This item also includes all equipment, materials, labor, and costs of work required to construct the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.96 BATT/BLOWN-IN/SPRAYED-IN INSULATION – BID ITEM #88

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to install the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.97 ROOFING – BID ITEM #89

A. No direct measurement will be made for this item. All metal flashing, metal trim, rain gutters, downspouts, paint, and the standing seam roof system. This item includes all equipment, materials, labor, and costs of work required to construct the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.98 INTERIOR FINISH – BID ITEM #90

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All gypsum board, taping, plastering, texturing, paint, trim, flooring, sealant, hardware, and anchors required to install this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.99 DOORS, FRAMES, AND HARDWARE – BID ITEM #91

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All additional trim, sealant, hardware, paint, and anchors required to install the doors and frames are included in this item.

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B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.100 GLAZING – BID ITEM #92

A. No direct measurement will be made for this item. This item includes all windows, glass, equipment, materials, labor, and costs of work required to construct/install the item. Water proofing, flashing, and sealants are included in other bid items.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.101 MISCELLANEOUS BUILDING ITEMS – BID ITEM #93

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required for the construction of any item pertaining to the building that is not included in another bid item. This shall include all items within 5 ft of the building perimeter not specifically listed to complete the building systems to achieve a weather tight, structurally sound, secure, and safe building meeting Owner requirements. This shall also include applicable building permitting (fees paid by Owner).

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.102 BUILDING ELECTRICAL– BID ITEM #94

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All interior and exterior lighting, outlets, switches, panels, controls, wiring, conduits, labels, coordination with Rocky Mountain Power and other trades, and other items necessary for a complete job as shown in the Drawings and as described in the Specifications and elsewhere in the Contract Documents, and related components not covered under another bid item required for the construction of the building, is included in this item. Also included is stubbing a conduit to the west for future internet.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

PART 2 EXECUTION – NOT USED

END OF SECTION

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SECTION 01 56 39
TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

A. The work of this Section consists of providing all equipment and materials and doing all work necessary for protection of existing trees, shrubs, landscape, wetlands, and other plant materials from damage as a result of the Contractor's operations, as indicated on the Contract Documents and as specified. Tree and plant protection shall include, but not be limited to:
   1. Tree protection fencing.
   2. Boxing of tree trunks.
   3. Root pruning.
   4. All other tree and plant protection indicated.

1.2 REFERENCES

A. The following standards shall apply to the work of this Section.
   1. International Society of Arboriculture (ISA): Guide for Plant Appraisal

1.3 SUBMITTALS

A. Proposed methods, materials, and schedule for tree and plant protection shall be submitted for approval. This should include a plan showing points of access to and from the site and show a workable system of onsite haul routes that protect existing landscape and wetland areas designated for protection. This plan should be submitted to the Landscape Architect for review and comment prior to commencement of work.

B. Proposed methods, materials, and schedule for root pruning and tree fertilization shall be submitted for approval.

C. Certifications: Submit appropriate evidence of certification of all arborists to be employed on the Project.

D. Licenses: Submit appropriate evidence of licensing of all chemical applicators to be employed on the Project.

E. MSDS: Submit Material Safety Data Sheets (MSDS) of all chemicals to be applied on the Project.

F. Photo Documentation: Prior to beginning any site operations, Contractor shall photograph all existing trees and plant material inside the project work limit line, and within 15’ of the

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project work limit line.

G. At least 30 days prior to ordering materials, the Contractor shall submit to the Owner's Representative, representative samples, certifications, manufacturer's product data and certified test results for materials as specified below. No materials shall be ordered or delivered until the required submittals have been reviewed and approved by the Owner's Representative. Delivered materials shall closely match the approved samples. Approval shall not constitute final acceptance. The Owner's Representative reserves the right to reject, on or after delivery, any material that does not meet these Specifications.

1.4 QUALITY ASSURANCE

A. Work of root pruning, fertilizing, spraying, and similar activities shall be undertaken only by certified Arborists and chemical applicators, as pertinent to the work being performed.

1. Application of chemicals shall be performed by licensed chemical applicators.
2. Arborist shall be a professional Certified Arborist with a minimum five years' experience, who has successfully completed a certification program.

1.5 LIABILITY FOR DAMAGES

A. The Contractor shall be liable for all damage and/or disturbance to existing trees and shrubs not otherwise designated for removal. For bidding and general work guidelines prior to on- site tree protection conference, the Contractor shall assume all trees within the Limit of Work shall be saved unless specifically designated to be removed on the Plans. Actual charges for damage to plants shall be in accordance with the schedules defined herein, with assessed charges to be deducted from sums payable under the Construction Contract.

1. Damage which, in the Owner's Representative's opinion, can be remedied by corrective maintenance shall be repaired immediately.
2. Trees or shrubs which are damaged irreparably shall, at the Owner's Representative's discretion, be replaced by the Contractor with new trees or shrubs of the same size and type.
3. If replacement of damaged trees is not feasible as determined by the Owner's Representative, the full replacement costs will be assessed to the Contractor's account at values based upon the square inches of cross-sectional area of trunk (measured at 4 ft. above grade), in accordance with the Trunk Formula Method described in the ISA Guide described herein, and the following table:

   $75.00/square inch for trees less than or equal to 6-inch diameter
   $50.00/square inch for trees greater than 6 inch and less than 18-inch diameter
   $40.00/square inch for trees greater than or equal to 18-inch diameter

B. Damaged trees or shrubs which require removal and/or replacement shall be removed according to the Specification requirements for removals, including refilling and repair of ground surface, with such costs to be borne by the Contractor in addition to assessed

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charges described herein.

C. The Contractor shall be liable for all damage and/or disturbance to existing adjacent lands beyond the Limit of Work. Actual damage to these areas, caused by the Contractor, shall be repaired to the satisfaction of the Owner's Representative, at no additional cost to the Owner. Repairs may include pruning or removing damaged vegetation in accordance with current horticultural practices, replacement of damaged vegetation, restoration of the ground plane to its original condition, and any other work required to restore the area to its original condition as depicted in the site photographs taken at the beginning of construction. The project will not be accepted until all repair work is complete.

1.6 DAMAGE PENALTIES

A. A fine of $1,000 will be levied against the Contractor for each incident of construction damage inside tree protection areas.

B. Visible damage to the tree trunks or to tree roots within the protected areas will cause the Owner to withhold from the Contractor an amount in accordance with and as described under Paragraph titled, Liability for Damages, in this Section, for a period of two years. After that period the impact of the damage will be assessed by the Owner's Representative and Owner. If in the opinion of the Owner's Representative or Owner, the tree is in fair to good health the damage fine will be refunded; if the tree is in poor condition or lost the fine will not be refunded.

1.7 ON-SITE PRECONSTRUCTION CONFERENCE

A. Before the start of any work on the site, preceding the arrival of equipment, materials, or vehicles to the site, and prior to the commencement of any clearing on the site, the Contractor shall arrange a preconstruction conference on the site with the Owner's Representative to identify trees and shrubs that are to be protected or removed. The Contractor shall not commence with clearing and grubbing prior to having a clear understanding of existing conditions to be preserved. In addition to the responsibilities and penalties described in this part of the specification, the Contractor shall be held responsible for any and all clearing, damage or destruction to plant material that results from the Contractor's failure to schedule and attend the preconstruction conference on site. In the event of said clearing, damage, or destruction, the Contractor will be assessed the full penalties described in this Section.

PART 2 - PRODUCTS

2.1 TREE PROTECTION FENCING

A. Tree protection fencing shall be equal to the following:
   1. New high density polyethylene laminar netting. Mesh dimensions shall be 3-3/4 in. x 2 in. with 1/2 in. strands. Fabric color shall be safety orange.
   2. Stakes for fencing shall be 6 ft. long wood or metal drive stakes, commonly used

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to support fencing. Attachment shall be by staples to wood or wiring to metal.

3. Unless otherwise indicated, height of fencing shall be 6 ft.

B. Tree protection fence is not to be substituted for construction security fencing.

2.2 BOXING

A. Existing trees indicated to remain, and which may, in the Owner's Representative's opinion, be damaged by the Contractor's equipment and operations shall be protected by boxing.

B. Boxing shall be 4 in. x 4 in. with two 2 in. x 4 in. rails. Box shall be approximately 8 ft. x 8 ft. in size centered on the tree trunk, to a height of approximately 6 ft.

2.3 FERTILIZER

A. Fertilizer shall be a commercial product complying with State and Federal fertilizer laws. Deliver to the site in the original unopened containers that shall bear the manufacturer's certificate of compliance covering analysis. Liquid fertilizer for subsurface hydraulic injection to correct soil nutrient deficiencies shall be a product meeting the requirements of ANSI 300 and as modified by this paragraph. Liquid fertilizer shall include a slow-release form of nitrogen (50% of N to be water insoluble), phosphorus and potassium; shall be chloride free; shall have a low salt content; and shall have a wetting agent to aid with dispersion. Fertilizer shall contain required micro-nutrients established by soil test analysis.

PART 3 - EXECUTION

3.1 IDENTIFICATION OF TREES AND SHRUBS TO REMAIN

A. **Before any clearing is done, the Contractor shall arrange a conference on the site with the Landscape Architect and Owner's Representative to identify trees and shrubs that are to be protected or removed.** The Contractor shall not commence with clearing and grubbing prior to having a clear understanding of existing conditions to be preserved.

B. The Contractor shall be responsible for the protection of all existing trees and plants designated to remain for the length of the construction period, including liability for all damages as specified herein. The placement of protection devices additional to those specified shall, however, be at the Contractor's discretion and with no additional cost to the Owner.

3.2 PROTECTION OF EXISTING TREES AND SHRUBS

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

A. Trees to remain within work area shall have tree protection fencing, posts, and bracing erected.

1. Protection shall be maintained throughout the duration of the Project. Fencing does not relieve the Contractor of other protection responsibilities.
2. Repair or replace trees indicated to remain which are damaged by construction operations, in a manner acceptable to Owner's Representative. Employ licensed arborist to repair damage to trees.
3. Such trees which are injured due to the Contractor's operations to such a degree that, in the opinion of the Owner's Representative, their usefulness or appearance are significantly impaired, shall be replaced with equivalent items at the Contractor's expense.

B. Materials, debris, fill, or equipment shall not be stored or operated under the dripline of existing trees which are to remain, except as actually required to construct the proposed work in those areas.

C. Tree protection fencing, posts, and bracing shall be provided at the tree's drip line to protect existing trees from damage during construction. In the case of trees with a small dripline, the fencing shall be a minimum of 6' from the tree trunk.

D. Where construction activities must occur within the dripline of an existing tree to remain, the contractor shall protect said trees by the following method:
1. Boxing of Tree with Wood: Boxing shall be 4 in. x 4 in. posts with two 2 in. x 4 in. rails. Box shall be approximately 8 ft. x 8 ft. in size centered on the tree trunk, to a height of approximately 6 ft. Provide bracing so as to avoid driving posts/rods/stakes into the ground within the tree drip line.

E. Water trees and other vegetation to remain within Limits of Contract work as required to maintain their health during course of construction operations. Hand water plant material if necessary.

3.3 TREE CUTTING, PRUNING AND REMOVAL

A. Pruning shall be performed in accordance with current horticultural practices.

B. Tree removal shall be performed in accordance with the requirements of current horticultural practices.

C. Trees and plants designated to be saved shall be protected during pruning operations and all subsequent construction. The Contractor shall provide the handwork necessary to complete pruning operations without damage to adjacent trees in accordance with current horticultural practices, of this Contract. The Contractor shall provide the means necessary to prevent scrapes and scars to trunks and branches, and such damage shall require the Contractor to be assessed as previously specified above, or to replace damaged material to the satisfaction of the Owner's Representative.

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3.4 ROOT PRUNING

A. Where construction will be in close proximity to existing trees designated to remain, roots shall be pruned prior to trenching and tunneling operations. Root pruning shall be performed as early as possible before trenching or tunneling operations. Proximity shall be as determined in the field by the Owner's Representative.

B. Root pruning is the physical cutting of tree roots to minimize root damage and promote healing. Root prune using a sharpened spade for all roots smaller than one inch diameter. Root prune using an ax or chainsaw for all roots greater than one inch diameter. Any method which tears roots or disturbs the soil beyond the grading limit is unacceptable. Backhoe buckets or any other excavating machine to root prune is not allowed.

C. Backfill root pruning trench with existing soil mixed with peat moss to a mixture of approximately 75% loam and 25% humus by volume. Tamp soil in six-inch lifts. Each lift shall be compacted to a point at which a footprint makes only a 1/16-inch impression.

D. Apply mulch to a depth of 4 inches at minimum 10 ft. to 15 ft. radius around tree to reduce compaction and increase moisture retention. Pull mulch 6-inches away from tree trunk.

3.5 FERTILIZING

A. Fertilization of designated trees shall be by soil injection of liquid fertilizer. The fertilizer shall be mixed with water and injected into the soil under pressure using a hydraulic sprayer and a feeding needle.

B. Sprayer pressure shall be set to 100-200 psi.

C. Injection points shall be spaced 3 feet on center beneath the dripline of the tree. Place the first band of injections approximately 1/4 the distance from the trunk to the edge of the dripline. Successive bands shall be spaced 3 feet apart out to one to three feet beyond the edge of the dripline.

D. The feeding needle shall be inserted twelve to eighteen inches into the soil. Rotate the feeding needle by 90 degrees during the injection process to ensure distribution of the fertilizer in all directions.

E. The liquid fertilizer shall be a suspension grade fertilizer design to be mixed and applied in water using a high-volume hydraulic sprayer.

F. Mixing and application rates shall be in accordance with the soil test report recommendations to an approved area under the dripline. Strong mechanical agitation shall be applied to maintain suspension. Use a 3 foot by 3 foot injection spacing.

G. Fertilizing of all trees shall occur at the completion of the Work. But under no circumstances shall fertilization be delayed more than one planting season. Should

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construction be delayed for any reason, the Contractor shall be required to fertilize all designated trees disturbed up to the time of the construction delay.

3.6 REMOVAL OF TREE AND SHRUB PROTECTION MATERIAL

A. Contractor shall remove and discard in a legal manner all tree protection material, excavated soil, pruned vegetation and all debris and trash from the site at the completion of the Contract.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 01 78 50M
CLOSEOUT PROCEDURES

ADD

PART 2 - PRODUCTS

2.1 PROJECT RECORD DOCUMENTS

A. "As-built" shall be submitted electronically. One set of SHAPE files (.shp) which shall include separate SHAPE files for each utility, including culinary water, pressurized irrigation (PI), storm drain, sewer, ground water, and roads that are compatible with ArcMap version 10.8. SHAPE files shall be in State Plane Coordinates (Utah Central Zone - NAD 1983 – US Survey Feet). A PDF of the final "Record Drawings" also needs to be included. All rim and invert elevations need to be shown on this drawing, as well as all pipe material and diameter.

B. "As built" drawings shall be based on survey information provided by the design engineer or surveyor. The SHAPE files shall include detailed information based upon survey points for:

1. Fire Hydrants (make & model)
2. Water Lines (diameter & material)
3. Water Valves (type & diameter)
4. Water meter (diameter)
5. Pressurized Irrigation Lines (diameter & material)
6. Pressurized Irrigation Valves (type & diameter)
7. Pressurized Irrigation meter (diameter)
8. Water blowoffs/drain structures (diameter)
9. Air release structures (diameter)
10. Roadway centerline
11. Storm Drain Lines (diameter, material, upstream & downstream elevation)
12. Storm drain manholes (rim & flow line elevations)
13. Storm drain inlets (rim/grate & flow line elevations)
14. Storm drain detention/retention structures (bed material, bank material, inlet elevation, outflow elevation, bottom elevation & rim elevation
15. Storm drain/Irrigation structures (rim/grate elevations & flow line elevations)
16. Groundwater monitoring station (rim elevation)
17. Groundwater drain lines (diameter & material)
18. Groundwater manholes (rim & flow line elevations)
19. Sewer Lines (diameter, material, upstream & downstream elevation)

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20. Sewer manholes (Rim and flow line elevations)

C. Maintain on site, one set of the following record documents; record actual revisions to the Work:
1. Contract Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other Modifications to the Contract.
5. Reviewed shop drawings, product data, and samples.
6. Manufacturer's instructions for assembly, installation and adjusting.

D. Store Record Documents separate from documents used for construction.

E. Ensure entries are complete and accurate, enabling future references by Owner.

F. Record information concurrent with construction progress.

G. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and Modifications.

H. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
2. Measured locations of utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
3. Field changes of dimension and detail.
4. Details not on original Contract Drawings.

I. Draw a line through the Engineer title block and seal on all documents submitted as Record Drawings. Make sure that each of these documents contains the names and dates of the people recording the record information.

J. Submit documents to Engineer with claim for final Application for Payment.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 02 41 19
SELECTIVE STRUCTURE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. Demolishing designated building equipment and fixtures.
2. Demolishing designated construction.
3. Cutting and alterations for completion of the Work.
4. Removing designated items for reuse and Owner's retention.
5. Protecting items designated to remain.
6. Removing demolished materials.

1.2 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

B. Demolition Schedule: Indicate overall schedule and interruptions required for utility and building services.

C. Shop Drawings:
1. Indicate demolition and removal sequence.
2. Indicate location of items designated for reuse and Owner's retention.
3. Indicate location and construction of temporary work.

D. Permits: Provide permits before beginning demolition.

1.3 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

B. Project Record Documents: Accurately record actual locations of capped utilities, concealed utilities discovered during demolition, subsurface obstructions.

C. Operation and Maintenance Data: Submit description of system, inspection data, and parts lists.

D. Permits: Close permits as necessary by agencies.

1.4 QUALITY ASSURANCE

A. Conform to applicable code for demolition work, dust control, products requiring electrical disconnection and re-connection.

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B. Conform to applicable code for procedures when hazardous or contaminated materials are discovered.

C. Obtain required permits from authorities having jurisdiction.

D. Perform Work in accordance with State of Utah standard.

1.5 PRE-INSTALLATION MEETINGS

A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.

B. Convene minimum one week prior to commencing work of this section.

1.6 SEQUENCING

A. Section 01 10 00 - Summary: Requirements for sequencing.

B. Owner will conduct salvage operations before demolition begins to remove materials Owner chooses to retain, unless indicated that contractor shall salvage to Owner.

1.7 SCHEDULING

A. Section 01 30 00 - Administrative Requirements: Requirements for scheduling.

B. Schedule Work to coincide with new construction.

C. Cooperate with Owner in scheduling noisy operations and waste removal that may impact Owners operation and in adjoining spaces.

D. Perform noisy, malodorous, dusty work:
   1. Between hours of 7am and 7pm.

E. Coordinate utility and building service interruptions with Owner.
   1. Do not disable or disrupt building fire or life safety systems without three days prior written notice to Owner.
   2. Schedule tie-ins to existing systems to minimize disruption.
   3. Coordinate Work to ensure fire sprinklers, fire alarms, smoke detectors, emergency lighting, exit signs and other life safety systems remain in full operation in occupied areas.

1.8 PROJECT CONDITIONS

A. Conduct demolition to minimize interference with adjacent and occupied building areas.

B. Cease operations immediately if structure appears to be in danger and notify Architect/Engineer. Do not resume operations until directed.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 PREPARATION

A. Notify affected utility companies before starting work and comply with their requirements.

B. Mark location and termination of utilities.

C. Erect, and maintain temporary barriers and security devices at locations indicated, including warning signs and lights, and similar measures, for protection of the public, Owner, and existing improvements indicated to remain.

D. Prevent movement of structure; provide temporary bracing and shoring required to ensure safety of existing structure.

3.2 SALVAGE REQUIREMENTS

A. Coordinate with Owner to identify building components and equipment required to be removed and delivered to Owner.

B. Tag components and equipment Owner designates for salvage.

C. Protect designated salvage items from demolition operations until items can be removed.

D. Carefully remove building components and equipment indicated to be salvaged.

E. Disassemble as required to permit removal from building.

F. Package small and loose parts to avoid loss.

G. Mark equipment and packaged parts to permit identification and consolidation of components of each salvaged item.

H. Prepare assembly instructions consistent with disassembled parts. Package assembly instructions in protective envelope and securely attach to each disassembled salvaged item.

I. Deliver salvaged items to Owner. Obtain signed receipt from Owner.

3.3 DEMOLITION

A. Conduct demolition to minimize interference with adjacent and occupied building areas.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Maintain protected egress from and access to adjacent existing buildings at all times.

C. Do not close or obstruct roadways and sidewalks without permits.

D. Cease operations immediately when structure appears to be in danger and notify Engineer.

E. Disconnect and remove designated utilities within demolition areas.

F. Cap and identify abandoned utilities at termination points when utility is not completely removed. Annotate Record Drawings indicating location and type of service for capped utilities remaining after demolition.

G. Demolish in orderly and careful manner. Protect existing improvements, supporting structural members.

H. Carefully remove building components indicated to be reused.
   1. Disassemble components as required to permit removal.
   2. Package small and loose parts to avoid loss.
   3. Mark components and packaged parts to permit reinstallation.
   4. Store components, protected from construction operations, until reinstalled.

I. Remove demolished materials from site except where specifically noted otherwise. Do not burn or bury materials on site.

J. Remove materials as Work progresses. Upon completion of Work, leave areas in clean condition.

K. Remove temporary Work.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 02 42 00
DEWATERING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Dewatering Erosion and Siltation Control.

1.2 PERMITTED DEWATERING PLAN

A. Dewatering procedures used on this project shall be consistent with the requirements of the permits obtained for the project and per the APWA standards and specifications.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00.
B. Submit dewatering plan including a statement of the method, installation, size, and details of the dewatering system.
C. Submit dewatering pipeline routes, size, material, valving, and connections.
D. Provide the seal of a Professional Engineer (PE) licensed in the State of Utah on the dewatering plan drawings and supporting engineering calculations.

PART 2 - PRODUCTS

2.1 DEWATERING SYSTEM

A. Dewatering System shall be designed to operate continually (24 hours per day).
B. The Contractor shall design, furnish, install, and operate all necessary machinery appliances and equipment to keep excavations free from water during construction.
C. Contractor shall dewater and dispose of the water so as not to cause injury to public or private property or to cause a nuisance or a menace to the public.
D. Contractor shall at all times have on hand sufficient pumping equipment and machinery in good working condition for all ordinary emergencies, including power outages; and shall have available at all times competent workmen for the operation of the pumping equipment.
E. The dewatering system shall be designed to operate continually (24 hours per day) until construction is complete and operational. The dewatering system shall not be shut down between shifts, on holidays or weekends, or during work stoppages without written permission from the Engineer.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PART 3 - EXECUTION

3.1 PREPARATION – DEWATERING SYSTEM

A. Design and operate dewatering systems
   1. To prevent loss of soil as water is removed.
   2. To avoid inducing settlement or damage to existing facilities, completed work, or adjacent property.
   3. To relieve artesian pressures and resultant uplift of excavation bottom.

B. Provide sufficient redundancy in each system to keep excavation free of water in event of component failure.

C. Provide 100 percent emergency power backup with automatic startup and switchover in event of electrical power failure.

D. Furnish, install, and operate all necessary machinery, appliances, and equipment to maintain all excavations and trenches free from water during construction.

E. Prepare contingency plans for equipment or power failure, and unexpected flow conditions.

F. Before dewatering is started, the Contractor shall obtain review by the Engineer for the method, installation, and details of the dewatering system being proposed.

3.2 DEWATERING FOR UTILITY LINE INSTALLATION

A. Dewater and dispose of water to minimize environmental impacts and in such a manner that it does not cause injury to public or private property or cause a nuisance or a menace to the general public.

B. Draw static water level to at least six inches (6”) below the bottom of the excavation to maintain the undisturbed state of the foundation soils and allow placement of bedding material and backfill to the required density.

C. Prevent softening of the bottom of excavations and the formation of "quick" conditions or "boils" during excavation.

D. Additional cost for trench bottom stabilization, due to inadequate dewatering system, will be incidental to the work.

E. Control surface runoff to prevent entry or collection of water in excavations.

3.3 PROTECTION

A. Dewater and dispose of water in a manner which complies with applicable governing agencies.

B. Comply with all requirements for discharge rates, points of discharge, water quality, etc.

C. Control surface runoff to prevent entry or collection of water in excavations.

D. Continue dewatering activities until final backfill of trenches.

3.4 TERMINATION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

A. Allow groundwater to return to static level to maintain the undisturbed state of natural foundation soils.
B. Prevent disturbance of the compacted backfill and prevent flotation or movement of installed pipelines.

3.5 TESTING

A. Monitor return water from dewatering operations for changes in visual or odor components indicating the presence of contaminants including, but not limited to, gasoline and pesticides and other hazardous materials and toxins.
B. Cease dewatering operations and notify Engineer and regulatory agencies immediately upon encountering contaminants in water.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

July 24, 2024

SECTION 03 01 00
MAINTENANCE OF CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES:

1. Concrete reinforcement repair.
2. Concrete surface repair.
3. Concrete crack repair.

1.2 MEASUREMENT AND PAYMENT

A. No separate measurement and payment will be made for surface repairs, crack repairs, or other defect repair required under this section. No separate or additional measurement and payment shall be made for wall and floor surface coating required under this section.

1.3 REFERENCES

A. ASTM International:

1. ASTM A82 - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
2. ASTM A615/A615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
3. ASTM C33 - Standard Specification for Concrete Aggregates.
4. ASTM C109/C109M - Standard Test Method for Compressive strength of Hydraulic Cement Mortars (Using 2-in. or (50 mm) Cube Specimens).
5. ASTM C150 - Standard Specification for Portland Cement.
6. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
7. ASTM C293 - Standard Test Method for Flexural Strength of Concrete (Using Simple Beam With Center-Point Loading).
8. ASTM C404 - Standard Specification for Aggregates for Masonry Grout.
9. ASTM C882 - Standard Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear.
10. ASTM C1042 - Standard Test Method for Bond Strength of Latex Systems Used With Concrete By Slant Shear.
11. ASTM D638 - Standard Test Method for Tensile Properties of Plastics.
12. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics.
13. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Product Data: Submit product standards, physical and chemical characteristics, technical specifications, limitations, maintenance instructions, and general recommendations regarding each material.

C. Manufacturer's Instructions: Submit mixing instructions.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 77 00 - Closeout Procedures.

B. Project Record Documents: Accurately record actual locations of structural repairs, type of repair, and products used.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years' experience.

B. Applicator: Company specializing in concrete repair with minimum three years' experience and approved by manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Comply with instructions for storage, shelf life limitations, and handling.

PART 2 PRODUCTS

2.1 EPOXY ADHESIVE INJECTION MATERIALS

A. Manufacturers:
1. The Euclid Chemical Company.
2. L & M Construction Chemicals Inc.
3. Sika Corporation
4. Substitutions: Section 01 60 00 - Product Requirements.

B. Epoxy Adhesive: Two-part epoxy adhesive containing 100 percent solids, meeting the following minimum characteristics:

	Characteristic	Test Method	Results
1.	Bond Strength	ASTM C882	2,700 psi
2.	Tensile Strength	ASTM D638	6,600 psi
3.	Elongation	ASTM D638	2 percent at 7 days 70 degrees F
4.	Flexural Strength	ASTM D790	8,000 psi
5.	Compressive Strength	ASTM D695	6,500 psi

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.2 EPOXY MORTAR MATERIALS

A. Manufacturers:
1. The Euclid Chemical Company.
2. L & M Construction Chemicals Inc.
3. Sika Corporation
4. Substitutions: Section 01 60 00 - Product Requirements.

B. Epoxy Mortar: Three-part epoxy binding resin and aggregate mortar mixture.

C. Epoxy Binding Resin: Two-part epoxy resin containing 100 percent solids, meeting the following minimum characteristics:

	Characteristic	Test Method	Results
1.	Bond Strength	ASTM C882	2,700 psi
2.	Tensile Strength	ASTM D638	6,600 psi
3.	Elongation	ASTM D638	2 percent at 7 days 70 degrees F
4.	Flexural Strength	ASTM D790	8,000 psi
5.	Compressive Strength	ASTM D695	6,500 psi

D. Aggregate: Type recommended by mortar manufacturer.

2.3 CEMENTITIOUS MORTAR MATERIALS

A. Manufacturers:
1. The Euclid Chemical Company.
2. L & M Construction Chemicals Inc.
3. Sika Corporation
4. Substitutions: Section 01 60 00 - Product Requirements.

B. Cementitious Mortar: Packaged latex modified, silica fume enhanced, or portland cement patching mortar with the following properties:
1. Compressive Strength: ASTM C109/C109M; minimum 2,000 psi after one day and 5,000 psi after 28 days.
2. Bond Strength: ASTM C882 or ASTM C1042; minimum 2,500 psi after 28 days.
3. Flexural Strength; ASTM C293; minimum 1,500 psi after 28 days.

C. Bonding Agent: Polyvinyl acetate emulsion, dispersed in water while mixing, non-coagulant in mix, water resistant when cured.

D. Cleaning Agent: Commercial muriatic acid.

2.4 MIXING EPOXY MORTAR

A. Mix epoxy mortars to consistency for purpose intended.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Mix components in clean equipment or containers. Conform to pot life and workability limits.

2.5 MIXING CEMENTITIOUS MORTAR

A. Mix cementitious mortar to consistency required for purpose intended.

B. Include bonding agent as additive to mix.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify surfaces are ready to receive work.

B. Beginning of installation means acceptance of substrate.

3.2 PREPARATION

A. Clean concrete surfaces of dirt, laitance, corrosion, or other contamination; wire brush using acid; rinse surface and allow to dry.

B. Flush out cracks and voids with chemical solvent or muriatic acid to remove laitance and dirt. Chemically neutralize by rinsing with water.

C. Sandblast clean exposed reinforcement steel surfaces.

D. Repair exposed structural, shrinkage, and settlement cracks of concrete by epoxy injection, epoxy application, bonding agent and cementitious paste method as appropriate or as directed by the Project Engineer.

E. Repair spalling. Fill voids flush with surface. Apply surface finish.

3.3 INJECTION - EPOXY RESIN

A. Provide temporary entry ports spaced to accomplish movement of fluids between ports; no deeper than depth of crack to be filled or port size diameter no greater than thickness of crack. Provide temporary seal at concrete surface to prevent leakage of adhesive.

B. Inject epoxy resin adhesive into prepared ports under pressure using equipment appropriate for particular application.

C. Begin injection at lower entry port and continue until adhesive appears in adjacent entry port. Continue from port to port until entire crack is filled.

D. Remove temporary seal and excess adhesive.

E. Clean surfaces adjacent to repair and blend finish.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

3.4 APPLICATION - EPOXY MORTAR

A. Remove broken and soft concrete 1/4 inch deep. Remove corrosion from steel. Clean surfaces mechanically; wash with acid; rinse with water.

B. Trowel apply mortar mix to average thickness as recommended by the product manufacturer. Tamp into place filling voids at spalled or voided areas.

C. For patching honeycomb, trowel mortar onto surface, work mortar into honeycomb to bring surface flush with surrounding area. Finish trowel surface to match surrounding area.

D. Cover exposed steel reinforcement with epoxy mortar, feather edges to flush surface.

3.5 APPLICATION - CEMENTITIOUS MORTAR

A. Apply by spray, brush or roller coating of bonding agent to damp concrete surfaces. Provide full surface coverage.

B. Apply cementitious mortar by steel trowel to average thickness as recommended by the product manufacturer. Tamp into place filling voids at spalled or voided areas. Work mix into honeycomb.

C. Damp cure cementitious mortar for four days.

3.6 FIELD QUALITY CONTROL

A. Section 01 45 00 - Quality Requirements: Testing, inspection and analysis requirements.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 03 10 00
CONCRETE FORMING AND ACCESSORIES

PART 1 GENERAL

1.1 WORK INCLUDED

A. This item of work includes the formwork and shoring for cast-in-place concrete and the installation into formwork of items such as anchor bolts, pipe and pipe fittings, and other items to be embedded in concrete (but not including reinforcing steel - see Section 03 20 00 - Concrete Reinforcing).

1.2 QUALITY ASSURANCE

A. Codes and Standards

1. The Contractor shall design, construct, erect, maintain, and remove forms and related structures for cast-in-place concrete work in compliance with the American Concrete Institute Standard ACI 347, "Recommended Practice for Concrete Formwork."

B. Allowable Tolerances

1. The Contractor shall construct formwork to provide complete cast-in-place concrete work as follows:

   a. Variation from plumb lines and surfaces: 1/4 inch per 10 feet, but not more than 1 inch. For exposed corners, control joints grooves and other conspicuous lines: 1/4 inch in 20 feet maximum; ½ inch maximum in 40 feet or more. Depressions In Wall Surface: Maximum ¼ inch when 10-foot straightedge is placed on high points in any direction or at any location. Wall Thicknesses: Maximum ¼ inch minus or ½ inch plus from dimension shown.

   b. Variation from level or grade in slabs, and in arises: 1/4 inch in 10 feet, 3/8 inch in 40 feet or more. For exposed horizontal grooves and other conspicuous lines: 1/4 inch in 20 feet maximum and ½ inch in 40 feet or more. Slab Finish Tolerances and Slope Tolerances: Floor surface shall not have crowns so high as to prevent 10-foot straightedge from resting on ¼-inch end blocks, nor low spots that allow a block of twice the tolerance in thickness to pass under the supported 10-foot straightedge. Finish Slab Elevation: Within ½ inch of elevation specified except slabs which are designed and detailed to drain to floor drain or gutter shall adequately drain regardless of tolerances. Repair floor slopes in an approved manner if necessary to provide complete drainage. Thickness: Maximum ¼ inch minus or ½ inch plus from thickness shown.

   c. For beams and columns physical dimensions: Maximum ¼ inch minus or ½ inch plus from dimension shown. Elevations: Within ½ inch plus or minus except where tops of beams become part of finished slab. In this

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

case refer to slab tolerances. Columns shall be plumb within ¼ inch in any 10 feet with maximum ½ inch out-of-plumb at top with respect to bottom.

d. Forms for sidewalks and driveways shall be standard steel forms or wood forms constructed and fastened to prevent movement. Set forms to true lines and grades, and securely stake in position.

2. Before concrete placement, the Contractor must check the lines and levels of erected formwork. The Contractor shall make corrections and adjustments to ensure proper size and locations of concrete members and stability of forming systems.

3. During concrete placement, the Contractor must check formwork and related supports to ensure that forms are not displaced and that completed work will be within the specified tolerances.

1.3 SUBMITTALS

A. Samples: Prior to start of work, submit one sample each as follows:
   1. Form ties.

1.4 SEQUENCING AND SCHEDULING

A. Schedule work for embedded, buried, or other items of work that affects form layout before completing concrete formwork.

PART 2 PRODUCTS

2.1 FORMS FOR EXPOSED FINISH CONCRETE

A. Unless otherwise shown or specified, the Contractor shall construct formwork for exposed concrete surfaces with plywood, plywood faced metal frames, steel or other panel type materials to provide continuous, straight and smooth as-cast surfaces. The Contractor shall furnish the forms in the largest practicable sizes to minimize the number of joints and to conform to the joint system shown on the construction documents. The Contractor shall provide form material with sufficient thickness to withstand the pressure of the newly placed concrete without bow or deflection.

2.2 FORM TIES

A. The Contractor shall provide factory fabricated, adjustable length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent spalling concrete surfaces upon removal. Do not use wire ties.

B. Form ties and wire ties fabricated on the project site are not acceptable. Do not use wire ties of any kind. Ties shall withstand form pressures and limit form deflection to specified tolerances.

C. Water Stop Ties:

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

1. Provide for water-holding structures or dry structures with access such as basements, pipe galleries, etc., that are below finish grade.
2. Ties shall have either an integral steel water stop 0.103-inch thick and 0.625 inch in diameter tightly and continuously welded to tie, or neoprene water stop 3/16-inch thick and 15/16 inch in diameter whose center hole is ½ diameter of snap tie, or a molded plastic water stop of comparable size.
3. Flat snap ties are not permitted.
4. Water Stop shall be considerably larger in area than tie cross-sectional area, oriented perpendicular to tie and symmetrical about center of tie.
5. Construct ties to provide positive means of preventing rotation or disturbance of center portion of tie during removal of ends and prevent water leaking along tie.

2.3 FORM COATING

A. The Contractor shall provide commercial formulation form-coating compounds that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatment of concrete surfaces requiring bond or adhesion, or impede the wetting of surfaces to be cured with water or curing compounds.

B. Form coating (nonstaining form oil) shall be equal to:
1. Nox-Crete Company, Omaha, Nebraska.
2. "Form-Guard," W.R. Grace and Company, Cambridge, Massachusetts.
3. "Rheofinish," Master Builders, Inc.
4. "Formcel," Lambert Corporation, Houston, Texas.

2.4 DESIGN OF FORMWORK

A. The design of forms, shores, and bracing is the responsibility of the Contractor.

B. The Contractor shall design, erect, support, brace, and maintain formwork so that it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure. Formwork shall be constructed so that concrete members and structures are of correct size, shape, alignment, elevation, and position.

C. The Contractor shall provide shores and struts with positive means of adjustment capable of taking up formwork settlement during concrete placing operations, using wedges or jacks or a combination thereof. Trussed supports shall be provided when adequate foundations for shores and struts cannot be secured.

D. The Contractor shall support form facing materials by structural members spaced sufficiently close to prevent deflection. Forms placed in successive units for continuous surfaces shall be fitted to accurate alignment, free from irregularities, and within allowable tolerances.

E. Design joints in forms to remain watertight and withstand placing pressures without bulging outward or creating surface patterns. Do not use formwork that leaks mortar.

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F. Where poor formwork is used and finish obtained is less than specified, upgrade finish to an acceptable finish at no additional cost.

G. Panel Deflections: Limit as required to achieve tolerances specified herein.

H. For circular structures, forms shall conform to circular shape of structure. Straight panels may be substituted for circular forms if they do not exceed 2 feet in width and in addition to the requirement each panel does not provide an angular deflection more than 3½ degrees per joint, and do not conflict otherwise with these Specifications and/or Drawings.

I. Design shall account for tolerances, form ties, finishes, architectural features, rebar supports, construction joint locations, and other nonstructural formwork requirements specified.

J. Design formwork strong enough to hold high liquid heads without form distortion and to meet tolerances as specified herein. Coordinate form design with admixture company information and concrete slump.

K. Structurally design forms, falsework, shoring, and other structural formwork and meet applicable safety regulations, current OSHA regulations, and other codes.

L. A licensed engineer shall prepare formwork, falsework, and shoring designs to meet these Specifications and to meet all federal and state requirements.

M. Meet applicable portions of ACI 347, ACI 318 current edition, and these Specifications.

2.5 REINFORCING SPACERS AND REBAR SUPPORTS

A. Columns:
1. Provide a positive spacer between column reinforcing and column forms to ensure adequate cover.
2. Remove spacer as concrete is placed, consolidated, and proper support and spacing is achieved.

B. Walls:
1. Provide positive spacers or chairs specifically designed for wall forms to hold forms and reinforcing at correct dimensions and clearances.
2. Remove spacer or chair if not designed to remain in place as concrete is placed, consolidated, and proper support and spacing is achieved.

C. Slabs:
1. Provide positive spacers, chairs or concrete dobies to support reinforcing steel to the height noted on the plans. Place support sufficient to maintain rebar spacing to the bottom of the slab.
2. Use concrete dobies to support reinforcement when forming is not used at the bottom of the slab.
3. Rocks or masonry bricks are not allowed as rebar support.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PART 3 EXECUTION

3.1 FORM CONSTRUCTION

A. General: The Contractor shall construct forms complying with ACI Standards 318 and 347, to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, level and plumb work in finish structures. All necessary detail work, construction aids, and embedded items shall be provided as required.

B. The Contractor shall fabricate forms for easy removal without hammering or prying against concrete surfaces. Crush plates or wrecking plates shall be provided where stripping may damage cast concrete surfaces. Kerf wood inserts shall be provided for forming keyways, reglets, recesses, chamfers and the like, to prevent swelling and assure ease of removal.

C. Forms for Exposed Concrete:

1. The Contractor shall drill forms to suit the ties used and to prevent leakage of concrete mortar around the tie holes. The Contractor shall not splinter forms by driving ties through improperly prepared holes.
2. The Contractor shall not use metal cover slates for patching holes or defects in forms.
3. The Contractor shall provide sharp, clean corners at intersecting planes, without visible edges or offsets. Back joints with extra studs or girts to maintain true, square intersections shall be provided.
4. The Contractor shall use extra studs, walers, and bracing to prevent bowing of forms between studs and to avoid bowed appearance in concrete. Narrow strips of form material which will allow the forms to bow shall not be used.
5. The Contractor shall assemble forms so that they may be readily removed without damage to exposed concrete surfaces.
6. The Contractor shall place carefully and accurately all bracing to prevent sagging or misalignment.
7. All forms shall be new or in first class condition free from holes, indentations, or irregular surfaces.
8. The exposed concrete joints shall be formed with special care to assure proper alignment and uniform cross section.
9. The Contractor shall form molding shapes, recesses and projections with smooth finish materials, and install these in the forms with sealed joints to prevent displacement.

D. Cleaning and Tightening:

1. The Contractor shall thoroughly clean forms and adjacent surfaces to receive concrete. All chips, wood sawdust, dirt, or other debris shall be removed just before concrete is to be placed. All forms shall be re-tightened immediately after concrete placement as required to eliminate leaks.

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3.2 FORM COATINGS

A. The Contractor shall coat the contact surfaces of forms with form-coating compound before steel reinforcement is placed. No form coating shall be allowed on steel reinforcement or on previously cast concrete sections which abut the new concrete pour.

B. The Contractor shall thin form-coating compounds only with the thinning agent of type and in amount and under the conditions recommended by the coating compound manufacturer. Excess form-coating material shall not be allowed to accumulate in the forms or to come into contact with concrete surfaces against which fresh concrete will be placed. All form coatings shall be applied in compliance with the manufacturer's instructions.

C. Steel forms shall be coated with a non-staining, rust-preventative form oil or otherwise to protect against rusting. Rust-stained steel formwork will not be accepted. Coat contact surfaces of forms with a light uniform film (a coverage rate of 1,200 square feet per gallon or higher) of the surface consolidation agent. Apply to steel forms as soon as they are cleaned to prevent discoloration of concrete form rust. Do not get surface consolidation agent on concrete surfaces or reinforcing steel against which fresh concrete will be placed.

3.3 INSTALLATION OF EMBEDDED ITEMS

A. General: Set and build into the work anchorage devices and other embedded items required for other work that is attached to, or supported by, cast-in-place concrete. Use setting drawings, diagrams, instructions, and directions provided by suppliers of the items to be attached thereto. Securely anchor embedded items to prevent displacement during placement of concrete.

B. Edge Forms and Screed Strips for Slabs:
   1. The edge forms or bulkheads and intermediate screed strips for slabs shall be set to obtain the required elevations and contours in the finished slab surface. The Contractor shall provide and secure units to support the types of screeds required.

C. Prevent metals of dissimilar types from coming in contact with reinforcement.

3.4 BEVELED EDGES (CHAMFER)

A. Form 3/4-inch bevels at concrete edges, unless otherwise shown.

B. Where beveled edges on existing adjacent structures are other than 3/4 inch, obtain Engineer's approval of size prior to placement of bevel form strip.

3.5 REMOVAL OF FORMS

A. General: Formwork not supporting concrete, such as sides of walls, and similar parts of the work, may be removed after cumulatively curing at not less than 50 degrees

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Fahrenheit for 24 hours after placing concrete, provided; (1) concrete strength is sufficient to withstand damage by form removal operation and the forces acting on it, and (2) that curing and protection operations are maintained.

B. Formwork supporting the weight of concrete, such as slabs and other structural elements, may not be removed in less than 14 days, and not until the concrete has attained the minimum 28-day compressive strength as indicated by field cured test cylinders taken from that placement.

C. Contractor shall assume responsibility for damage resulting from improper and premature removal of forms.

D. Satisfy applicable OSHA requirements with regard to safety of personnel and property.

E. Do no remove supports and reshore prior to obtaining adequate field cured cylinder results.

3.6 CONCRETE FINISHES

A. As specified in Section 03 30 00 - Cast-in-Place Concrete.

3.7 BACKFILL AGAINST WALLS

A. Do not backfill against walls until concrete has obtained compressive strength equal to specified 28-day compressive strength.

B. Place backfill simultaneously on both sides of wall where required to prevent differential pressures.

3.8 FIELD TESTS

A. Wall Finish Tolerances: Test for compliance with tolerances as specified.

B. Slab Finish Tolerances and Slope Tolerances:
1. Floor flatness measurements will be made the day after floor is finished and before shoring is removed, to eliminate effect of shrinkage, curling, and deflection.
2. Support 10-foot long straightedge at each end with steel gauge blocks of thicknesses equal to specified tolerance.
3. Compliance with designated limits in four of five consecutive measurements is satisfactory unless obvious faults are observed.
4. A check for adequate slope and drainage will also be made to confirm compliance with these Specifications.

C. Finish Tolerance Failures: Repair or replace concrete as specified in Section 03 30 00 - Cast-in-Place Concrete.

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3.9 REUSE OF FORMS

A. All forms to be reused shall be clean and surfaces repaired to be reused in following work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable. The Contractor shall apply new form-coating compound material to concrete contact surfaces as specified for new formwork.

B. When forms are extended for successive concrete placement, the Contractor shall thoroughly clean all surfaces, remove fins and laitance, and tighten forms to close all joints. All joints shall be secured and tightened to avoid offsets.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 03 15 16
CONCRETE EXPANSION AND CONSTRUCTION JOINTS

PART 1 GENERAL

1.1 WORK INCLUDED

A. Concrete expansion, construction, and control joints.

B. Concrete joint fillers.

1.2 SUBMITTALS

A. Product Data: Furnish for the following:
   1. Joint fillers for horizontal and sloped joints.
   2. Preformed control joints.
   3. Water stop.
   4. Adhered strip seal.
   5. Sealants.

B. Shop Drawings: Furnish information listed below:
   1. Plastic Type Water Stops: Details of construction joint types; show in sufficient detail water stop support used in both concrete pours to demonstrate water stop will remain secure until complete encasement.
   2. Construction Joints: Layout and location indicating type to be used.

C. Quality Control submittals: Furnish the following documents:
   1. Water stop manufacturer's written instructions for product shipment, storage, handling, installation and repair.
   2. Joint Filler and Primer: Manufacturer's written instructions for product shipment, storage, handling, application, and repair.
   3. Adhered strip seal manufacturer’s written instructions for product shipment, storage, handling, application, and repair.

D. Samples: Submit two 1 inch long samples of joint filler.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Prepare and protect materials for shipment in accordance with manufacturer's recommendations.

B. Acceptance at Site: Verify that water stops delivered meet the cross-section dimensions shown and manufacturer's reviewed product data prior to unloading and storage at the site.

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C. Protect hydrophilic waterstop from premature exposure to moisture which may cause premature swelling of waterstop. Protect from oil, dirt, and sunlight.

PART 2 PRODUCTS

2.1 PLASTIC WATER STOP

A. Extruded from an elastomeric plastic compound of which the basic resin shall be polyvinyl chloride (PVC). Reclaimed PVC in the compound is not acceptable.

B. Specific Gravity: Approximately 1.37.

C. Shore Durometer Type A Hardness: Approximately 80.

D. Performance Requirements: Corps of Engineers' Specification CRD-D-572.

E. Type: Center bulb with a number of parallel ribs or protrusions on each side of strip center.
1. Corrugated or tapered type water stops are not acceptable.

F. Size: 6-inch 3/8-inch web.

G. Thickness: Constant from bulb edge to the outside stop edge.

H. Minimum Weight per Foot of Water Stop:
1. 1.60 pounds for 3/8-inch by 6-inch.

I. Factory fabrications: Use only factory fabrications for intersections, transitions, and changes of direction.

J. Provide for at all construction, expansion and control joints indicated on the Drawings.

K. Manufacturers and Catalog Numbers:
1. Greenstreak Plastic Products, St. Louis, MO; Catalog No. 03150/GRD: Style 732 (6-inch by 3/8-inch).
2. Vinylex Corp., Knoxville, TN; Catalog No. 03250/ VIN: No. RB6-38H (6-inch by 3/8-inch).
3. Four Seasons Industries Durajoint, Garrettsville, OH; Catalog No. CSP-162: Type 9 (6 inches by 3/8 inch)

2.2 WIRE LOOPED PLASTIC WATER STOP

A. May be provided as an alternative to specified plastic water stops without wire loops.

B. Comply with hereinbefore specified material and geometry requirements of Article PLASTIC WATER STOP, except as follows:

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1. Add continuous galvanized wire looping at plastic water stop edge for convenience in positioning and securing stop in-place in the forms.

C. Manufacturer and Catalog Numbers:
1. The Schlegel Corp., Rochester, New York; "Wire Stop Water Stop"; geometry numbers 05-151-YACR-4361, 05-151-ACR-6380, 05-151-ACR-9380 as shown on Schlegel Corp., Drawing No. 05-151-ACR dated 11-30-82.
2. Or equal.

2.3 HYDROPHILIC WATER STOP

A. For use at construction joints only, where new concrete is place against existing concrete and as shown on the Drawings

B. Material shall be a nonbentonite hydrophilic compound.

C. Manufacturers and Products:
1. Greenstreak Plastic Products, St. Louis, MO; Hydrotite CJ-1020-2K with Leakmaster LV-1 adhesive and sealant.
2. Adeka Ultra Seal, JLM Associates, Spearfish, SD; MC-2010M with 3M-2141 adhesive and P-121 sealant.

2.4 BOND BREAKER TAPE FOR EXPANSION JOINT

A. Adhesive-backed glazed butyl or polyethylene tape which will adhere to the premolded joint material or concrete surface.

B. Width: Same as the joint.

C. Location: As shown.

2.5 BOND BREAKER

A. Provide either bond breaker tape as hereinbefore specified or a bond prevention material, nonstaining type, as specified in Section 03 30 00 - Cast-in-Place Concrete, except where a tape is specifically called for.

2.6 PREMOLDED JOINT FILLER (PJF)

A. Bituminous Type: ASTM D994 or D1751.

B. Sponge Rubber: Neoprene, closed-cell, expanded; ASTM D1056, Type RE-45-E1, with a compression deflection, 25 percent deflection (limits), 119 to 168 kPa (17 to 24 psi) minimum.

C. Closed-Cell Neoprene: ASTM D1752, Type I; as manufactured by W.R. Meadows, Inc., Elgin, IL; or equal.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.7 PREFORMED CONTROL JOINT

A. One-piece, flexible, polyvinyl chloride joint former; Kold-Seal Zip-Per Strip KSF-150-50-50, manufactured by Vinylex Corp., Knoxville, TN; or equal.

B. One-piece steel strip with preformed groove; Keyed Kold Retained Kap, manufactured by Burke Concrete Accessories, Inc., San Mateo, CA; or equal.

C. Provide in full-length unspliced pieces.

D. Provide only where specifically permitted by Drawings.

2.8 POURABLE JOINT FILLERS

A. Manufacturers and Products:
   1. Sikaflex 2C, Colonial White color only, as manufactured by Sika Chemical Company, Lyndhurst, NJ; or equal.
   2. On sloping joints, use Gun Grade material of the above products of Sikaflex 1A similar nonsag material; submit product information for review and acceptance.
   3. Or equal.

2.9 STEEL EXPANSION JOINT DOWELS

A. Dowels: Round smooth steel bars; ASTM A36.

B. Bar Coating: Two-coating system No. 29A, FUSION BONDED, STEEL DOWEL COATING, as specified under Section 09 90 00 – Painting and Coating.

2.10 ADHERED STRIP SEAL

A. Epoxy Adhesive: Two components, 100% solids, moisture-unsensitive, high-modulus, high-strength, structural epoxy paste adhesive, complying with ASTM C-881.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

Epoxy Adhesive Properties			
SHELF LIFE	2 years in original, unopened containers.		
STORAGE CONDITIONS	Store dry at 40-95F. Condition material to 65-85F before using.		
COLOR	Concrete gray.		
MIXING RATIO	Component 'A': Component 'B' = 2:1 by volume.		
CONSISTENCY	Non-sag paste.		
POT LIFE	Approximately 30 minutes @ 73F. (60 gram mass)		
TACK-FREE TIME	2-3 hours.		
TENSILE PROPERTIES (ASTM D-638)			
14 day Tensile Strength		3,600 psi	
Elongation at Break		0.4 %	
Modulus of Elasticity		7.5×10^5 psi	
FLEXURAL PROPERTIES (ASTM D-790)			
14 day Flexural Strength (Modulus of Rupture)		4,400 psi	
Tangent Modulus of Elasticity in Bending		1.0×10^5 psi	
SHEAR STRENGTH (ASTM D-732)			
14 day Shear Strength		3,400 psi	
BOND STRENGTH (ASTM C-882): Hardened Concrete to Hardened Concrete			
2 day (moist cure)	Bond Strength	2,300 psi	
14 day (moist cure)	Bond Strength	2,400 psi	
2 day (dry cure)	Bond Strength	3,300 psi	
DEFLECTION TEMPERATURE (ASTM D-648)			
7 day Deflection Temperature (fiber stress loading = 264 psi)		128F	
WATER ABSORPTION (ASTM D-570)			
24 hour Total Water Absorption		0.79%	
COMPRESSIVE PROPERTIES (ASTM D-695)			
Compressive Strength, psi	40F	73F	90F
2 hour	--	--	900
4 hour	--	140	5,400
8 hour	--	6,800	8,800
16 hour	400	9,600	10,100
1 day	3,900	9,800	11,700
3 day	6,700	11,300	11,900
7 day	9,100	12,000	13,000
14 day	10,400	12,000	13,000
28 day	11,200	12,000	13,000
MODULUS OF ELASTICITY, PSI			
7 day		3.9×10^5	

B. Hypalon Strips: Provide hypalon strips of width indicated by drawings and minimum 20 foot lengths. Minimum hypalon thickness shall be 40 mils. Minimum physical properties as follows:

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SIKA HYPALON STRIP
TENSILE PROPERTIES (ASTM D-412) *Elongate at Break: 800 %* *Tensile Strength: 1300 psi*
TEAR RESISTANCE (ASTM D-624) *250 lbs/in.*
LOW TEMPERATURE PERFORMANCE MAINTAINED TO -40N F. (-40N C.)

C. Provide product equal to: “Sikadur Combi-flex”, Sika, Aurora, CO.

2.11 ACCESSORIES

A. Joint Sealant: Joint sealant shall be two-part polysulfide or urethane conforming to FS TT-S-00227. The type used shall be specifically intended for exterior, submerged control joint applications. A non-sag joint sealant shall be used for vertical joints and self-leveling for horizontal joints.

B. Nonshrink Grout:
1. As specified in Section 03 30 00 - Cast-in-Place Concrete.
2. Compatible with joint sealant.

C. Roofing Felt: 30-pound asphalt-saturated; ASTM D226, Type II; or a tar-saturated roofing felt of equal quality.

D. Reinforcing Steel: As specified in Section 03 20 00 - Concrete Reinforcing.

E. Nails: Provide for securing bituminous type premolded joint filler.

PART 3 EXECUTION

3.1 GENERAL

A. Locate joints as shown, or noted on the Drawings.

B. Verify conformance of water stops with dimensions shown and with reviewed product data prior to embedding water stops in concrete.

C. Construct straight joints; make vertical or horizontal, except where walls intersect sloping floors.

D. Commence concrete placement after the joint preparation is complete.

E. Time Between Concrete Pours:
1. At least 2 hours must elapse after depositing concrete in long or high columns and/or heavy walls before depositing concrete in beams, girders, or slabs supported thereon.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2. For short columns and low height walls, 10 feet or less, wait at least 45 minutes prior to depositing concrete in beams, girders, brackets, column capitals, or slabs supported thereon.
3. Consider beams, girders, brackets, column capitals, and haunches as part of the floor or roof system and place monolithically with the floor or roof system.
4. Should concrete placement sequence result in cold joint located below ground water surface, install water stop in joint prior to additional concrete placement. Notify Engineer prior to installing waterstop. Engineer shall approve preparations prior to concrete placement.

3.2 SURFACE PREPARATION

A. Construction Joints: Prior to placement of abutting concrete, clean contact surface:
   1. Remove laitance and spillage from reinforcing steel and dowels.
   2. Roughen surface to a minimum of ¼-inch amplitude:
      a. Sandblast after the concrete has fully cured.
      b. Water blast after the concrete has partially cured.
      c. Green cut fresh concrete with high pressure water and hand tools.
   3. Perform cleaning so as not to damage water stop, if one is present.

B. Expansion Joint with Pourable Filler:
   1. Use motorized wire brush or other motorized device to mechanically roughen and thoroughly clean concrete surfaces on each side of joint from plastic water stop to the top of the joint.
   2. Use clean and dry high pressure air to remove dust and foreign material, and dry joint.
   3. Prime surfaces before placing joint filler.
   4. Avoid damage to water stop, if one is present.

C. Control Joint:
   1. Verify that proper type and size of reinforcing and dowels are provided.
   2. When water stop is present:
      a. Coat concrete surfaces above and below plastic water stop with bond breaker. Do not get bond breaker on water stop.
      b. Avoid damage to water stop.

3.3 INSTALLATION OF WATER STOPS

A. General:
   1. Join water stops at intersections to provide continuous seal.
   2. Center water stop on joint.
   3. Secure waterstop in correct position to avoid displacement during concrete placement.
   4. Repair or replace damaged waterstop.
   5. Vibrate concrete to obtain impervious concrete in the vicinity of all joints.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

6. Joints in Footings and Slabs:

   a. Ensure that space beneath plastic water stop is completely filled with concrete.
   b. During concrete placement make a visual inspection of the entire water stop area as shown.
   c. Limit concrete placement to elevation of water stop in first pass, vibrate the concrete under the water stop, lift the water stop to confirm full consolidation without voids, then place remaining concrete to full height of slab as shown.
   d. Apply procedure to full length of plastic water stops.

B. Plastic Water Stop: Install in accordance with details shown and manufacturer's written instructions.

C. Hydrophilic Waterstop:
   1. Inspect waterstop for premature swelling, discontinuity, and debris contamination prior to concrete placement. Replace unacceptable waterstop.
   2. Adhere waterstop to concrete or other surfaces utilizing proper primer adhesive. For vertical applications, use nails in addition to the primer adhesive to secure waterstop to concrete.
   3. Primer shall be allowed to dry for two hours prior to application of waterstop.
   4. Apply waterstop the same day as primer adhesive.
   5. Protect waterstop from moisture, dirt, oil, and sunlight during the progress of work.
   6. Install waterstop with 2 inches minimum clear cover to concrete face.
   7. Waterstop shall be butt spliced, pressing ends together ensuring no separation or air pockets.

D. Splices and Joints: In accordance with the water stop manufacturer's written instructions using a thermostatically controlled heating iron. Butt splice unless specifically detailed otherwise.
   1. Allow at least 10 minutes before the new splice is pulled or strained in any way.
   2. Finished splices shall provide a cross-section that is dense and free of porosity with tensile strength of not less than 80 percent of the unspliced material.

3.4 EXPANSION JOINT INSTALLATION

A. General:
   1. Place bond breaker above and below water stop when premolded joint filler and pourable joint filler is not used.
   2. Premolded Joint Filler:

      a. Sufficient in width to completely fill the joint space where shown.
      b. If a water stop is in the joint, cut premolded joint filler to butt tightly against the water stop and the side forms.

   3. Precut premolded joint filler to the required depth, as detailed, at locations were joint filler or sealant is to be applied.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

4. Form cavities for joint filler with either precut, premolded joint filler, or smooth removable accurately-shaped material.
5. Vibrate concrete thoroughly along the joint form to produce a dense, smooth surface.

B. Bituminous Type Premolded Joint Filler:
1. Drive nails approximately 1 foot 6 inches on center through the filler to provide anchorage embedment into concrete prior to concrete placement.
2. Secure premolded joint filler in forms before concrete is placed.
3. Install in walks, at changes in direction at intersections, and at each side of driveway entrances.

C. Pourable Joint Filler:
1. General: Install in accordance with the manufacturer's written instructions, except as specified below:
   a. Apply primer prior to pouring joint filler.
   b. Fill entire joint above the water stop with joint filler as shown.
   c. Use masking tape on top of slabs at sides of joints; clean all spillage.
2. Place cold-applied, two-component fillers in accordance with manufacturer's written instructions.

D. Steel Expansion Joint Dowels:
1. Install coated bars parallel to wall or slab surface and in true horizontal position perpendicular to the joint in both plan and section views so as to permit joint to expand or contract without bending the dowels.
2. Secure dowels tightly in forms with rigid ties.
3. Install reinforcing steel in the concrete as shown to protect the concrete on each side of the dowels and to resist any forces created by joint movement.

3.5 CONTROL JOINT INSTALLATION

A. Locate reinforcing and/or dowels as shown.

B. Install PVC water stop or hydrophilic water stop as shown on the Drawings.

C. Concrete surface to be dense and smooth.

D. Install bond breaker to concrete surfaces above and below water stop, if one is present.

3.6 PREFORMED CONTROL JOINTS

A. Use only where specifically shown.

B. Locate flush, or slightly below the top of slab.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

C. Install in accordance with manufacturer's written instructions in straight, full-length unspliced pieces.

D. Steel Strip Type with Preformed Groove: Brace to with-stand pressure of concrete during and after placement.

3.7 ADHERED STRIP SEAL

A. Clean surfaces, place adhesive, and install hypalon strip in accordance with manufacturer’s instructions.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 03 20 00
CONCRETE REINFORCING

PART 1 GENERAL

1.1 WORK INCLUDED

A. Fabrication of steel reinforcement for cast-in-place concrete structures, including bars, ties, supports, and welded wire fabric.

B. Placement of steel reinforcement for cast-in-place concrete structures.

1.2 QUALITY ASSURANCE

A. Codes and Standards: The Contractor shall comply with all requirements of the following codes and standards (most recent edition), except as modified herein:

1. American Welding Society, AWS D12.1 "Recommended Practices for Welding Reinforcing Steel, Metal Inserts and Connections in Reinforced Concrete Construction."
2. Concrete Reinforcing Steel Institute, "Manual of Standard Practice."
3. American Concrete Institute, ACI 318 "Building Code Requirements for Reinforced Concrete."
4. American Concrete Institute, ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structure."
5. Other References:

a. ASTM A82 - Specification for Steel Wire, Plain, for Concrete Reinforcement.
b. ASTM A185 - Specification for Welded Wire, Fabric, Plain for Concrete Reinforcement.
c. ASTM A615 - Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
d. AASHTO M31- Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
e. AASHTO M32- Cold Drawn Steel Wire for Concrete.
f. AASHTO M54- Fabricated Steel Bar or Rod Mats for Concrete Reinforcement.
g. AASHTO M55- Welded Steel Wire Fabric for Rein- forced Concrete.

1.3 SUBMITTALS

A. Manufacturer's Data:

1. The Contractor shall submit the Manufacturer's specifications and installation instructions for all proprietary materials and reinforcement accessories.

B. Shop Drawings:

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

1. The Contractor shall submit shop drawings for the fabrication, bending, and placement of concrete reinforcement. All work shall comply with the ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures." Submittals shall show bar schedules, stirrup spacing, diagrams of bent bars, arrangements and assemblies.
2. The Contractor shall submit certification of grade, chemical analysis and tensile properties of the steel furnished.
3. Also see Section 01 33 00 – Submittals Procedures.

1.4 DELIVERY, HANDLING, AND STORAGE

A. All steel reinforcement delivered to the project site shall be bundled, tagged, and marked. Metal tags shall be used indicating the bar size, lengths, and other information corresponding to markings shown on placement diagrams in accordance with ACI 315.

B. The Contractor shall store concrete reinforcement materials at the site in a manner that will prevent damage and accumulation of dirt or excessive rust. Store to prevent contact with the ground. Protect all reinforcement from any contact with oil, grease, or petroleum based products of any kind.

PART 2 PRODUCTS

2.1 REINFORCING STEEL GRADE

A. Unless otherwise called for on the Drawings, all reinforcing steel for this project shall conform to ASTM A615 Grade 60, except for #3 stirrups or column ties which shall be Grade 40. Epoxy coating, when called for, shall be in accordance with ASTM D 3963; A775.

B. Bar mats shall conform to the requirements of AASHTO M54 (ASTM A82).

2.2 ACCESSORIES

A. Chairs and spacers shall be metal stock, designed for the purpose intended.

B. All accessories shall comply with CRSI "Recommended Practice for Placing Bar Supports, Specifications and Nomenclature."

C. The Contractor shall provide stainless steel accessories for sight-exposed concrete (exterior), and concrete surfaces exposed to moisture or containing water.

D. Slabs on grade where the base material will not support chairs, shall use supports with sand plates, horizontal runners or dobies to properly locate steel reinforcing in the slab.

E. Wire-bar type supports shall complying with CRSI recommendations. Wood, brick, or other materials will not be accepted.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

F. Tie wire shall be 16-gauge, black, soft-annealed wire. Tie wire shall not be closer than 1-inch from surface of wall or slab after tying in place.

G. In epoxy coated applications, tie wire shall be epoxy coated.

2.3 WELDED WIRE FABRIC

A. Welded-wire fabric shall be electrically welded, 65,000 psi yield strength minimum, and shall conform to ASTM A185 or A 497 (AASHTO M55) and ACI 318, latest edition.

2.4 SPIRAL REINFORCING FOR COLUMNS

A. Spiral reinforcement shall meet ASTM A615, Grade 60.

2.5 SPLICES AND MECHANICAL CONNECTIONS

A. Metal Sleeve: If used for splice, provide with cast filler metal, capable of developing in tension or compression 125 percent of specified yield strength of the bar, as manufactured by:
1. Erico Products, Inc., Cleveland, OH, Cadweld C-Series.
2. Or equal.

B. Mechanical Threaded Connections: Metal coupling sleeve with internal threads which engage threaded ends of bars to be spliced, and develops in tension or compression 125 percent of the specified yield strength of the bar, as manufactured by:
1. Erico Products, Inc., Cleveland, OH, Lenton Reinforcing Steel Couplers.
2. Richmond Screw Anchor Co., Inc., Fort Worth, TX, Richmond DB-SAE Dowel Bar Splicers.

PART 3 EXECUTION

3.1 FABRICATION

A. General: The Contractor shall fabricate reinforcing bars to conform to required shapes and dimensions, with fabrication tolerances complying with CRSI "Manual of Standard Practice" and ACI 301. In case of fabricating errors, the heating, rebending or straightening of reinforcement will not be permitted.

3.2 GENERAL

A. Meet requirements in the manual titled, "Placing Reinforcing Bars", published by Concrete Reinforcing Steel Institute (CRSI).

B. Steel reinforcement shall be protected at all times from injury. When placed in the work, it shall be free from dirt, detrimental scale, paint, oil and other foreign substance. When steel reinforcement has detrimental rust, loose scale and dust which is easily removable, it shall be cleaned by a satisfactory method, if approved.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

C. All bars shall be bent cold, unless otherwise permitted. No bars partially embedded in concrete shall be field bent except as shown on the Drawings or otherwise permitted.

D. Details of concrete reinforcement and accessories not covered herein or on the Drawings shall be in accordance with ACI 315.

E. Notify Engineer when reinforcing is ready for inspection and allow sufficient time for this inspection prior to close-up of the forming system or placing concrete.

3.3 INSTALLATION

A. The Contractor shall clean reinforcement to remove all loose rust and mill scale, earth, ice, oil or grease, and other materials which reduce or destroy the bond between the concrete and reinforcing steel.

B. The Contractor shall position, support, and secure all reinforcement to prevent displacement by formwork, construction loadings, or concrete placement operations. Steel reinforcing shall be located and supported by metal chairs, runners, bolsters, spacers and hangers, as required. The reinforcement shall be placed to obtain the coverage for concrete protection noted on the Drawings. Where the coverage is not shown, the reinforcement shall be placed to obtain at least the minimum coverage specified hereinafter. The Contractor shall arrange, space, and securely tie bars and bar supports together with 16-gauge wire to hold reinforcement accurately and solidly in position during concrete placement operations. Wire ties shall be set so that the twisted ends are directed away from the exposed concrete surfaces. All reinforcement will be tied and secured in the correct position in the forms before placing concrete. Do not stab reinforcing into fresh placed concrete.

C. The Contractor shall provide a sufficient number of supports of adequate strength to carry the reinforcement. Reinforcing bars shall not be placed more than 2 inches beyond the last leg of any continuous bar support. Supports shall not be used as bases for runways for concrete conveying equipment and similar construction loads.

D. Supports or spacers of pebbles, pieces of broken stone, concrete rubble, broken brick or building blocks, metal pipe or wooden blocks will not be permitted.

E. Splices:

1. Standard reinforcement splices shall be done by lapping the ends, placing the bars in contact, and tightly wiring the splice together. The requirements of ACI 318 for minimum lap of spliced bars shall be provided. Use lap splices unless otherwise shown on the Drawings or permitted in writing by the Engineer. Stagger splices minimum of 48 bar diameters in adjacent bars unless otherwise shown on the Drawings or permitted in writing by the Engineer.
2. No field welding or tacking of reinforcement will be permitted.
3. Vertical bars in columns shall be offset at least one bar diameter at lapped splices. To ensure proper placement, templates shall be furnished for all column dowels.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

F. Unless otherwise shown on the Drawings, the Contractor shall provide cover as follows:
   1. Not less than 3 inches where the concrete is placed against the ground and without use of forms.
   2. Not less than 1 1/2-inches for bars smaller than No. 6 and not less than 2-inches for No. 6 bars and larger where concrete is exposed to the weather, water, or in contact with earth, but placed in forms.
   3. Not less than 1 1/2-inches for interior slabs, walls, beams, and columns.

G. The Contractor shall provide a minimum of two No. 4 bars in the top and bottom of a slab or wall face at 45 degrees on all four corners at all openings in structural slabs and walls, unless otherwise shown on the Drawings. Bars shall extend on each side sufficiently to develop bond in each bar.

H. The Contractor shall notify the Engineer when reinforcing is in place so that an inspection of reinforcement placement can be made prior to the close-up of formwork or the placement of concrete.

I. Conform to ACI 301 for all placing tolerances.

J. Bars may be moved to avoid interference with other reinforcing steel, conduits, or embedded items. If moved more than one bar diameter or the stipulated tolerance, the Contractor shall consult with the Engineer to determine final placement.

K. At construction joints and before constructing concrete form work for next stage of construction, the Contractor shall clean all dowels, reinforcing bars and concrete surfaces. All loose material and foreign objects shall be cleaned out of forming before placement of concrete.

L. Placing Welded Wire Fabric:
   1. Extend fabric to within 2-inches of edges of slab, and slab control joints and lap splices at least 1½ courses of fabric or minimum 8-inches.
   2. Tie laps and splices securely at ends and at least every 24-inches with 16-gauge black annealed steel wire.
   3. Place welded wire fabric on #4 continuous bars at 4'-0" at proper distance above bottom of slab. All slab reinforcing is to be discontinuous at slab control joints.
   4. Meet current ACI 318 and current Manual of Standard Practice, Welded Wire Fabric, by the Wire Reinforcement Institute regarding placement, bends, laps, and other requirements.
   5. All welded wire fabric shall be provided in flat sheets. Rolled fabric will not be permitted.

M. Field Bending:
   1. Straightening and Rebending: Do not straighten or rebend metal reinforcement. Field bending of reinforcing steel bars is not permitted.
   2. Unless permitted by Engineer, do not cut reinforcing bars in the field.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

3.4 MECHANICAL SPLICES AND CONNECTIONS

A. Install as required by manufacturer with threads tightened as required by referenced ICC Report.

B. Carefully inspect each splice and verify that each component meets manufacturer's and ICC requirements.

C. Maintain minimum edge distance and concrete cover

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

A. Section includes cast-in-place concrete for the following:
1. Building frame members.
2. Shear walls.
3. Elevator shaft walls.
4. Foundation walls.
5. Supported slabs.
6. Slabs on grade.
7. Control, expansion and contraction joint devices.
8. Equipment pads.
9. Light pole base.
10. Flagpole base.
11. Thrust blocks.
12. Manholes.

1.2 REFERENCES

A. American Concrete Institute:
1. ACI 301 - Specifications for Structural Concrete.
2. ACI 302.1 - Guide for Concrete Floor and Slab Construction.
3. ACI 305 - Hot Weather Concreting.
4. ACI 306.1 - Standard Specification for Cold Weather Concreting.
5. ACI 308.1 - Standard Specification for Curing Concrete.
6. ACI 318 - Building Code Requirements for Structural Concrete.

B. ASTM International:
1. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
2. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
3. ASTM C33 - Standard Specification for Concrete Aggregates.
4. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
5. ASTM C42 - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
6. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
7. ASTM C143 - Standard Test Method for Slump of Hydraulic Cement Concrete.
8. ASTM C150 - Standard Specification for Portland Cement.
9. ASTM C171 - Standard Specification for Sheet Materials for Curing Concrete.
10. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete.

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11. ASTM C173 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
12. ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
13. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
14. ASTM C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
15. ASTM C330 - Standard Specification for Lightweight Aggregates for Structural Concrete.
16. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.
17. ASTM C595 - Standard Specification for Blended Hydraulic Cements.
18. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.
19. ASTM C685 - Standard Specification for Concrete Made By Volumetric Batching and Continuous Mixing.
20. ASTM C845 - Standard Specification for Expansive Hydraulic Cement.
21. ASTM C989 - Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars.
22. ASTM C1017 - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
23. ASTM C1064 - Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.
24. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
25. ASTM C1116 - Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
26. ASTM C1157 - Standard Performance Specification for Hydraulic Cement.
27. ASTM C1218 - Standard Test Method for Water-Soluble Chloride in Mortar and Concrete.
28. ASTM C1240 - Standard Specification for Silica Fume Used in Cementitious Mixtures.
29. ASTM C1315 - Standard Specification for Liquid Membrane-Forming Compounds Having Special Properties for Curing and Sealing Concrete.
30. ASTM D994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
31. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
32. ASTM D1752 - Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
33. ASTM D2103 - Standard Specification for Polyethylene Film and Sheeting.
34. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
35. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
36. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
37. ASTM E1155 - Standard Test Method for Determining Floor Flatness and of Levelness Using the F-number System.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

38. ASTM E1643 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.
39. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.

C. South Coast Air Quality Management District:
1. SCAQMD Rule 1168 - Adhesive and Sealant Applications.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Product Data: Submit data on admixtures, joint devices, attachment accessories, concrete hardener, sealer, and curing compounds, mats, paper, film, compatibilities, and limitations.

C. Design Data:
1. Submit concrete mix design for each concrete strength. Submit separate mix designs when admixtures are required for the following:
a. Hot and cold weather concrete work.
b. Air entrained concrete work.
2. Identify mix ingredients and proportions, including admixtures.

D. Manufacturer's Installation Instructions: Submit installation procedures and interface required with adjacent Work.

1.4 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.

B. Project Record Documents: Accurately record actual locations of embedded utilities and components concealed from view in finished construction.

C. Operation and Maintenance Data: Submit data on maintenance renewal of applied coatings.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with ACI 301.

B. Conform to ACI 305 when concreting during hot weather.

C. Conform to ACI 306.1 when concreting during cold weather.

D. Acquire cement and aggregate from one source for Work.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

B. Applicator or Installer: Company specializing in performing work of this section with minimum three years documented experience.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.

B. Maintain concrete temperature after installation at minimum 50 degrees F for minimum 7 days.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 – Product Requirements: Product storage and handling requirements.

B. Deliver materials in manufacturer's packaging including application instructions.

1.9 COORDINATION

A. Section 01 30 00 - Project Management and Coordination.

B. Coordinate placement of joint devices, concrete curing, and concrete finishing with erection of concrete formwork and placement of form accessories.

PART 2 PRODUCTS

2.1 CONCRETE MATERIALS

A. Cement: ASTM C150, Type I or II.

B. Fine and Coarse Aggregates: ASTM C33.

C. Water: Clean and not detrimental to concrete.

2.2 ADMIXTURES

A. Air Entrainment: ASTM C260.

B. Chemical: ASTM C494 Type A - Water Reducing.

C. Fly Ash: ASTM C618 Class F.

D. Plasticizing: ASTM C1017 Type I, plasticizing

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

E. Substitutions: Section 01 60 00 - Product Requirements.

2.3 ACCESSORIES

A. Non-Shrink Grout: ASTM C1107, Grade A; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi in 48 hours and 7,000 psi in 28 days.

B. Concrete Reinforcing Fibers: ASTM C1116, high strength industrial-grade fibers specifically engineered for secondary reinforcement of concrete. Tensile strength -130 ksi toughness 15 ksi; ¾ inch long fibers, 34 million/lb. fiber count.

1. Manufacturers:

   a. Nycon.

   b. Substitutions: Section 01 60 00 - Product Requirements

2.4 JOINT DEVICES AND FILLER MATERIALS

A. Joint Filler: See Section 03 15 16 – Concrete Expansion and Construction Joints.

2.5 CONCRETE MIX

A. Provide concrete to the following criteria unless otherwise specified on the drawings:

Concrete Thrust Blocking:

Strength @ 7 days	1300 psi
Strength @ 28 days	2500 psi
Maximum water/cement plus fly ash ratio	0.44 by weight
Slump @ point of placement	3-5 inches
Maximum Aggregate Size	¾ inch, ASTM C33 unless otherwise shown on the Drawings.

Interior Concrete Floor Slabs:

Strength @ 7 days	2680 psi
Strength @ 28 days	4000 psi
Minimum Cement plus fly ash content	560 lbs/CY
Maximum water/cement plus fly ash ratio	0.50 by weight
Slump @ point of placement (for machine placed curb & gutter use a maximum slump of 2.5 inches)	2-4 inches
Entrained Air	0%-2% Non-Entrained
Maximum Aggregate Size	¾ inch, ASTM C33 unless otherwise shown on the Drawings

All Other Concrete:

Strength @ 7 days	2680 psi
Strength @ 28 days	4000 psi

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Minimum Cement plus fly ash content	560 lbs/CY
Maximum water/cement plus fly ash ratio	0.42 by weight
Slump @ point of placement (for machine placed curb & gutter use a maximum slump of 2.5 inches)	2-4 inches
Entrained Air	6 ±1%
Maximum Aggregate Size	¾ inch, ASTM C33 unless otherwise shown on the Drawings

1. Design shall be by an approved independent testing laboratory and a trial mix batch shall be made and tested by that laboratory. Average strength of cylinders in trial batch must exceed specified strength by 15%.
2. A previously used mix design may be used provided aggregate source is the same, the mixing equipment is the same, and provided at least 10 tests were made by an independent laboratory with results meeting these specifications.
3. Adjustment to Concrete Mixes: Mix design adjustments may be requested by the Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, at no additional cost to the Owner. Test data for revised mix designs and strength results must be submitted and accepted before using the mix adjustments.

B. Use accelerating admixtures in cold weather only when approved by Engineer. Use of admixtures will not relax cold weather placement requirements.

C. Use of calcium chloride will not be permitted.

D. Use set retarding admixtures during hot weather only when approved by Engineer.

E. Average Compressive Strength Reduction: Permitted in accordance with ACI 318

F. Ready Mixed Concrete: Mix in accordance with ACI 301 and deliver concrete in accordance with ASTM C94.

G. Site Mixed Concrete: Mix concrete in accordance with ACI 301.

2.6 CONCRETE SEALER

A. Manufacturers:
1. Sonneborn Building Products, Kure-N-Seal.
2. Dayton Superior Corp., Safe Cure & Seal.
3. ChemMasters, Cure & Seal.

2.7 CURING MATERIALS

A. Membrane Curing Compound: Resin based compound conforming to ASTM C309 or ASTM C1315 Type I, Class A, with additional requirement that the moisture loss shall not exceed 0.030 gm/square cm/72 hours.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

1. Provide manufacturer's certification that curing compound is acceptable to the appropriate state agency or health department.

B. Absorptive Mats: ASTM C171 Type C or AASHTO M 182 Class 2, cotton fabric, burlap-polyethylene, minimum 8 oz./sq. yd. bonded to prevent separation during handling and placing.

C. Polyethylene Film Type E: ASTM C171, 6 mil thick, clear, white, or opaque color.

D. Waterproof paper: ASTM C 171 or AASHTO M 171

E. Water: Potable, not detrimental to concrete.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 – Project Management and Coordination.

B. Verify requirements for concrete cover over reinforcement.

C. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.2 PREPARATION

A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Remove laitance, coatings, and unsound materials.

B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with non-shrink grout.

C. Remove debris and ice from formwork, reinforcement, and concrete substrates.

D. Remove water from areas receiving concrete before concrete is placed.

3.3 PLACING CONCRETE

A. Place concrete in accordance with ACI 301.

B. Notify testing laboratory and Engineer minimum 24 hours prior to commencement of operations.

C. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints, and are not disturbed during concrete placement.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

D. Install vapor retarder under interior slabs on grade in accordance with ASTM E1643. Lap joints minimum 6 inches and seal watertight by adhesive applied between overlapping edges and ends.

E. Repair vapor retarder damaged during placement of concrete reinforcing. Repair with vapor retarder material; lap over damaged areas minimum 6 inches and seal watertight.

F. Separate slabs on grade from vertical surfaces with ½ inch thick joint filler.

G. Place joint filler in floor slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.

H. Extend joint filler from bottom of slab to within ½ inch of finished slab surface.

I. Install construction joint devices in coordination with floor slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.

J. Install joint device anchors. Maintain correct position to allow joint cover to be flush with floor finish.

K. Install joint covers in longest practical length when adjacent construction activity is complete.

L. Apply sealants in joint devices in accordance with manufacturer's instructions.

M. Deposit concrete at final position. Prevent segregation of mix.

N. Place concrete in continuous operation for each panel or section determined by predetermined joints.

O. Consolidate concrete.

P. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

Q. Place concrete continuously between predetermined expansion, control, and construction joints.

R. Do not interrupt successive placement; do not permit cold joints to occur.

S. Place floor slabs in checkerboard or saw cut pattern indicated.

T. Saw cut joints within 12 hours after placing.

U. Screed floors and slabs on grade level, maintaining surface flatness of maximum 1/4 inch in 10 ft.

3.4 CONCRETE FINISHING

A. Verify floor surfaces are acceptable to receive the Work of this section.

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B. Provide formed concrete surfaces to be left exposed concrete with smooth rubbed finish.

C. Finish concrete floor surfaces in accordance with ACI 301.

D. Steel trowel surfaces which are indicated to be exposed.

E. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1/4 inch per foot nominal or as indicated on drawings.

F. Maximum Variation of Surface Flatness For Exposed Concrete Floors: 1/8 inch in 10 ft.

G. Correct defects in defined traffic floor by grinding or removal and replacement of defective Work. Areas requiring corrective Work will be identified. Re-measure corrected areas by same process.

H. Apply sealer on floor surfaces.

3.5 CURING AND PROTECTION

A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

C. Cure concrete in accordance with ACI 308.

D. Ponding: Maintain 100 percent coverage of water over floor slab areas continuously for 5 days.

E. Spraying: Spray water over floor slab areas and maintain wet for 7 days.

F. Do not use curing compound where additional finishes such as hardeners, paintings, and other special coatings are required. Use water curing as specified instead.

G. Spread absorptive mat over floor slab areas. Spray with water until mats are saturated, and maintain in saturated condition for 7 days.

H. Apply curing compound. Manufacturer's certification shall state that curing compound can be applied in one or two coats and shall show the quantity or coverage required to meet or exceed that above moisture retention. If two coats of curing compound are required, apply curing compound with second coat applied at right angles to first.

I. Concrete surfaces protected by formwork require no special curing treatment as long as the formwork remains in place a minimum of 7 days or until the concrete has reached the specified strength.

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J. If forms are removed prior to 7 days or the concrete attaining the specified strength, then all surfaces shall be cured as specified in this section for the remainder of the required curing period.

K. Top or other exposed portions of walls and other concrete elements covered with protecting formwork require curing as specified in this section.

L. In hot weather, wall forms shall be hosed down with water and covered with protective polyethylene film to prevent excessive moisture loss.

M. Do not permit traffic over unprotected floor surface.

3.6 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed in accordance with ACI 301 and under provisions of Section 01 45 00 – Quality Control.

B. Provide free access to Work and cooperate with appointed testing firm(s).

C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of Work.

D. Tests of cement and aggregates may be performed to ensure conformance with specified requirements.

E. Three concrete test cylinders will be taken for every 30 or less cu yds of concrete placed.

F. One additional test cylinder will be taken during cold weather concreting, cured on job site under same conditions as concrete it represents.

G. One slump test will be taken for each set of test cylinders taken.

H. Air Entrainment Test: Accurately measure the amount of entrained air using ASTM C-173 or ASTM C-231 testing method for all concrete pours. One air content test will be made for each set of test cylinders taken.

3.7 CONCRETE REPAIRS

A. All concrete repairs are to be done in conformance with Section 03 01 00 – Maintenance of Concrete.

3.8 PATCHING

A. Allow Engineer to inspect concrete surfaces immediately upon removal of forms.

B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery.

C. Patch imperfections as directed in accordance with ACI 301.

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3.9 DEFECTIVE CONCRETE

A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.

B. Repair or replacement of defective concrete will be determined by Engineer.

C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

3.10 REJECTIONS

A. Concrete Strength: Concrete strength shall be considered satisfactory if the average test of the two 28-day specimens exceeds the specified strength and neither specimen test falls below 95% of the specified strength. If the average strength of the two test specimens is less than specified and either specimen test is less than 95% of the specified strength, the concrete represented by the tests is rejected and must be removed and replaced at the Contractor's expense.

1. For concrete that is rejected but does not pose a life safety factor or is detrimental to any part of the Work as determined by the Engineer, the Owner may accept the concrete at a reduced price according to the following pay factors:

Price Reduction Factors for 28 Day Compressive Strength	
Percent of Specified Strength Achieved	Pay Factor
95%	0.86
90%	0.72
85%	0.60
80%	0.48
75%	0.38
70%	0.28
65%	0.20
60%	0.12
<60%	0

2. The pay factor for percentages not specified shall be interpolated based on the given values.
3. The pay factor will be applied to the quantity of the concrete that is represented by the strength tests that fall below a specified strength.

B. Alignment: Where concrete slabs or walls do not meet the alignment requirements, the Contractor must grind off irregularities until they comply. However, if such removal

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leaves less concrete section than indicated, the Engineer may reject concrete if he feels the remaining section would not be adequate.

C. Flatwork: Finished flatwork exceeding the tolerances of these specifications shall be repaired or replaced so that strength or appearance is not adversely affected. Follow paragraph 3.07 for repair work or as directed by Engineer.

D. Appearance: Concrete exposed to view with defects which adversely affect the appearance of the specified finish may be repaired, if possible in accordance with paragraph 3.07. If, in the opinion of the Engineer, the defects cannot be repaired to equal the specified finish, the concrete shall be rejected.

E. Misplaced Members: Concrete members cast in the wrong location may be rejected if the strength, appearance, or function of the structure is adversely affected or misplaced items interfere with other construction.

F. Rejected Concrete: Rejected concrete shall be removed and replaced. Limits of removal shall be as directed by the Engineer to accomplish a structure equal in strength, serviceability, and appearance, to that which would have been achieved by acceptable concrete.

G. Expense of Repairs: The cost of all repairs, removal, replacement, etc., required by the provisions of this Article shall be borne by the Contractor.

3.11 SAWCUTTING AND CORE DRILLING

A. Demonstrate to the Engineer, prior to commencing Work, that sawcutting/core drilling machinery and personnel are capable of completing this Work in accordance with the Contract Documents to the satisfaction of the Engineer.

B. Utilize industry standard core-drilling machines and sawing machines to create or enlarge openings. Openings shall be smooth and properly located.

C. Minimize overrun at corners when saw cutting. Fill slots with epoxy adhesive.

D. Coat cut faces with Carboline Bitumastic 300M to protect exposed rebar.

E. Cuttings and wastewater must be disposed of off-site.

F. Tolerances:
1. Circular openings: Concentric + 1/16inch out-of-round or less as required by piping connector or slide gate manufacturer. Invert location + 1/8 inch.
2. Square or rectangular openings: + 1/16 inch or less as required by slide gate manufacturer. Invert location + 1/8 inch.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 05 50 00
METAL FABRICATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Shop fabricated metal items.

1.2 PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION

A. Section 03 30 00 - Cast-In-Place Concrete: Placement of metal fabrications in concrete.

B. Section 03 10 00 – Concrete Forming and Accessories: Anchor for casting into concrete.

1.3 REFERENCES

A. Aluminum Association:
   1. AA DAF-45 - Designation System for Aluminum Finishes.

B. American Architectural Manufacturers Association:
   1. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
   2. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
   3. AAMA 2604 - Voluntary specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
   4. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

C. ASTM International:
   1. ASTM A36 - Standard Specification for Carbon Structural Steel.
   2. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
   3. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
   4. ASTM A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
   5. ASTM A240 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
   6. ASTM A269 - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.

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7. ASTM A276 – Standard Specifications for Stainless Steel Bars and Shapes.
8. ASTM A283 - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.
9. ASTM A297 - Standard Specification for Steel Castings, Iron-Chromium and Iron-Chromium-Nickel, Heat Resistant, for General Application.
10. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
11. ASTM A312 - Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes.
12. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
13. ASTM A354 - Standard Specification for Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners.
14. ASTM A386 - Zinc-Coating (Hot-Dip) on Assembled Steel Products.
15. ASTM A479 - Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels.
16. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
17. ASTM A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
18. ASTM A554 - Standard Specification for Welded Stainless Steel Mechanical Tubing.
19. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts.
20. ASTM A572 - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel.
21. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
22. ASTM A992 - Standard Specification for Structural Steel Shapes.
23. ASTM B26 - Standard Specification for Aluminum-Alloy Sand Castings.
24. ASTM B85 - Standard Specification for Aluminum-Alloy Die Castings.
25. ASTM B177 - Standard Guide for Chromium Electroplating on Steel for Engineering Use.
26. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
27. ASTM B210 - Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes.
28. ASTM B211 - Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire.
29. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
30. ASTM B695 - Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel.
31. ASTM F436 - Standard Specification for Hardened Steel Washers Inch Dimensions.
32. ASTM F593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
33. ASTM F594 - Standard Specification for Stainless Steel Nuts.

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34. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.
35. ASTM F3125 - Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions.

D. American Welding Society:
1. AWS A2.0 - Standard Welding Symbols.
2. AWS D1.1 - Structural Welding Code - Steel.
3. AWS D1.6 - Structural Welding Code - Stainless Steel.

E. Green Seal:
1. GC-03 - Anti-Corrosive Paints.

F. National Ornamental & Miscellaneous Metals Association:
1. NOMMA Guideline 1 - Joint Finishes.

G. SSPC: The Society for Protective Coatings:
1. SSPC - Steel Structures Painting Manual.
2. SSPC SP 1 - Solvent Cleaning.
3. SSPC SP 10 - Near-White Blast Cleaning.
4. SSPC Paint 15 - Steel Joist Shop Paint.
5. SSPC Paint 20 - Zinc-Rich Primers (Type I - Inorganic and Type II - Organic).

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal requirements.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable. Indicate welded connections using standard AWS A2.0 welding symbols. Indicate net weld lengths.

1.5 QUALIFICATIONS

A. Welders Certificates: Prior to start of work, submit to Engineer under provisions of Section 01 33 00 – Submittal Procedures, certifying welders employed on the Work, verifying AWS qualification within the previous 12 months.

1.6 QUALITY ASSURANCE

A. Finish joints in accordance with NOMMA Guideline 1.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

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B. Accept metal fabrications on site in labeled shipments. Inspect for damage.

C. Protect metal fabrications from damage by exposure to weather.

1.8 FIELD MEASUREMENTS

A. Verify that field measurements are as indicated on Drawings.

PART 2 PRODUCTS

2.1 MATERIALS

A. CARBON STRUCTURAL STEEL
1. Structural W-Shapes: ASTM A992.
2. Structural Plates, Bars, Channels & Angles: ASTM A36.
3. Structural Tubing: ASTM A500, Grade B.
4. Plates: ASTM A283 or A36.
5. Pipe: ASTM A501 or A53 Type E or S Grade B Fy= 35 ksi.
6. Bolts: ASTM A307; Grade A or B.
   a. Finish: Hot dipped galvanized
7. High Strength Bolts: ASTM F3125 (formerly A325); Type 1
   a. Finish: Hot dipped galvanized
8. Nuts: ASTM A563 heavy hex type.
   a. Finish: Hot dipped galvanized
9. Washers: ASTM F436
   a. Finish: Hot dipped galvanized
10. Anchor Rods: ASTM F1554; Grade 36.
11. Threaded Rods: ASTM A36
    a. Finish: Hot dipped galvanized
12. Welding Materials: AWS D1.1; type required for materials being welded.
13. Shop and Touch-Up Primer: SSPC 15, Type 1, red oxide.
14. Touch-Up Primer for Galvanized Surfaces: Zinc rich type.

B. STAINLESS STEEL
1. Bars and Shapes: ASTM A276; Type 316.
2. Tubing: ASTM A269; Type 316.
3. Pipe: ASTM A312, seamless; Type 316.
4. Plate, Sheet and Strip: ASTM A240 or ASTM A666; Type 316.
5. Bolts: ASTM F593, Type 316
6. Nuts: ASTM F594, Type 316
7. Washers: ASTM A240, Type 316
8. Welding Materials: AWS D1.6; type required for materials being welded.

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C. ALUMINUM
1. Extruded Aluminum: ASTM B221 Alloy 6063, Temper T5
2. Sheet Aluminum: ASTM B209, Alloy 6063, Temper T5
3. Aluminum-Alloy Drawn Seamless Tubes: ASTM B210 Alloy 6063, Temper T6.
4. Aluminum-Alloy Bars: ASTM B211, Alloy 6063, Temper T6.
5. Aluminum-Alloy Sand Castings: ASTM B26/B26M.
6. Aluminum-Alloy Die Castings: ASTM B85, Alloy as required to suit application.
7. Bolts, Nuts, and Washers: Stainless steel.
8. Welding Materials: AWS D1.1; type required for materials being welded.
9. Factory Finish coatings to conform to AAMA 2603. Comply with AA DAF-45.

2.2 FABRICATION

A. Fit and shop assemble in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Continuously seal joined members by continuous welds.

D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

E. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.3 FINISHES

A. Refer to Section 09 90 00, Painting and Coating

2.4 FABRICATION TOLERANCES

A. Squareness: 1/8 inch maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch.

C. Maximum Misalignment of Adjacent Members: 1/16inch.

D. Maximum Bow: 1/8 inch in 48 inches.

E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

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B. Beginning of installation means erector accepts existing conditions.

3.2 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Supply items required to be cast into concrete or embedded in masonry with setting templates, to appropriate sections.

3.3 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components indicated on drawings.

D. Perform field welding in accordance with AWS D1.1, D1.2 or D1.6 as required.

E. Obtain Engineer approval prior to site cutting or making adjustments not scheduled.

F. After erection, touch up welds, abrasions, and damaged finishes with prime paint or galvanizing repair paint to match shop finishes.

G. Grind exposed joints on handrails flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

3.4 ERECTION TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/8 inch.

3.5 FIELD QUALITY CONTROL

A. Welding: Inspect welds in accordance with AWS D1.1, D1.2 or D1.6 as required.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

July 24, 2024

SECTION 06 10 53
MISCELLANEOUS ROUGH CARPENTRY

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Wood blocking, furring, grounds, and nailers.
      a. Provide solid wood blocking at the following locations including, but not limited to, door stops, grab bars, coat racks, 2 rows each at base and upper cabinets and casework, TV brackets, markerboards, and other wall mounted fixtures.
   2. Plywood backing panels.

B. Related Sections include the following:
   1. Division 6 Section "Interior Architectural Woodwork" for nonstructural carpentry items exposed to view and not specified in another Section.

1.3 DEFINITIONS

A. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.

B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
   1. NHLA: National Hardwood Lumber Association.
   2. NLGA: National Lumber Grades Authority.
   3. SPIB: The Southern Pine Inspection Bureau.
   4. WCLIB: West Coast Lumber Inspection Bureau.
   5. WWPA: Western Wood Products Association.

1.4 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
   1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

B. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
1. Preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.
4. Powder-actuated fasteners.
5. Expansion anchors.
6. Metal framing anchors.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

B. Deliver interior wood materials that are to be exposed to view only after building is enclosed and weatherproof, wet work other than painting is dry, and HVAC system is operating and maintaining temperature and humidity at occupancy levels.

PART 2 PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

A. Preservative Treatment by Pressure Process: AWPA C2, except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).
   1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat all miscellaneous carpentry, unless otherwise indicated.

2.3 FIRE-RETARDANT-TREATED MATERIALS

A. General: Comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood).
   1. Use treatment that does not promote corrosion of metal fasteners.
   2. Use Interior Type A, unless otherwise indicated.

B. Identify fire-retardant-treated wood with appropriate classification marking of testing and inspecting agency acceptable to authorities having jurisdiction.

C. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not bleed through, contain colorants, or otherwise adversely affect finishes.

D. Application: Treat all miscellaneous carpentry, unless otherwise indicated.

2.4 DIMENSION LUMBER FRAMING

A. Maximum Moisture Content: 19 percent.

B. Framing: Construction, Stud, or No. 3 grade and the following species:
   1. Hem-fir; WCLIB or WWPA.

2.5 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
   1. Blocking.

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2. Nailers.
3. Furring.
4. Grounds.

B. For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber with 19 percent maximum moisture content and the following species:
1. Hem-fir; WCLIB, or WWPA.

C. For exposed boards, provide lumber with 19 percent maximum moisture content and the following species and grades:
1. Hem-fir or hem-fir (north), Construction or No. 2 Common grade; NLGA, WCLIB, or WWPA.

D. For concealed boards, provide lumber with 19 percent maximum moisture content and the following species and grades:
1. Hem-fir or hem-fir (north), Standard or 3 Common grade; NLGA, WCLIB, or WWPA.

E. For blocking not used for attachment of other construction Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

F. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

G. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.6 PLYWOOD BACKING PANELS

A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2-inch (13-mm) nominal thickness.

2.7 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
1. Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

B. Nails, Brads, and Staples: ASTM F 1667.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.

F. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).

G. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
   1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

2.8 METAL FRAMING ANCHORS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   1. Simpson Strong-Tie Co., Inc.

B. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.

2.9 MISCELLANEOUS MATERIALS

A. Adhesives for Gluing Furring to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.

PART 3 EXECUTION

3.1 INSTALLATION, GENERAL

A. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Metal Framing Anchors: Install metal framing to comply with manufacturer's written instructions.

D. Do not splice structural members between supports, unless otherwise indicated.

E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
   1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches (406 mm) o.c.

F. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
   1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches (2438 mm) o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
   2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches (2438 mm) o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal- (38-mm actual-) thickness.
   3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. (9.3 sq. m) and to solidly fill space below partitions.
   4. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet (6 m) o.c.

G. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

H. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
   1. Use inorganic boron for items that are continuously protected from liquid water.
   2. Use copper naphthenate for items not continuously protected from liquid water.

I. Securely attach carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
   1. NES NER-272 for power-driven fasteners.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.

J. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.

3.2 WOOD GROUND, BLOCKING, AND NAILER INSTALLATION

A. Install where indicated and where required for screeding or attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.

B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

3.3 WOOD FURRING INSTALLATION

A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

B. Furring to Receive Plywood or Hardboard Paneling: Install 1-by-3-inch nominal-(19-by-63-mm actual-) size furring horizontally at 24 inches (610 mm) o.c.

3.4 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

July 24, 2024

SECTION 06 16 00
FRAMING AND SHEATHING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Framing, plates, and sheathing for all construction project.

B. Roof and ceiling framing.

C. Roof sheathing.

D. Preservative treatment of wood.

E. Miscellaneous framing, plates, blocking and sheathing.

1.2 REFERENCES

A. ALSC - American Lumber Standards Committee: Softwood Lumber Standards.

B. APA: American Plywood Association.

C. AWPA (American Wood Preservers Association) C1 - All Timber Products Preservative Treatment by Pressure Process.

D. NFPA: National Forest Products Association.

E. WCLIB:West Coast Lumber Inspection Bureau.

F. WWPA: Western Wood Products Association.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00 – Submittal Procedures.

B. Product Data: Provide technical data on wood preservative treated materials.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with the following agencies:
   1. Lumber Grading Agency: Certified by ALSC.
   2. Plywood Grading Agency: Certified by APA.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PART 2 PRODUCTS

2.1 LUMBER MATERIALS

A. Lumber Grading Rules: WWPA, WCLIB.

B. Miscellaneous Plates and Framing: Douglas Fir-Larch species, No. 2 or better, 19 percent maximum moisture content, pressure preservative treat all wood members in contact with concrete or masonry.

2.2 SHEATHING MATERIALS

A. Roof Sheathing: APA Rated Sheathing; Veneer C-D; Exposure Durability 1; unsanded.

B. Wall Sheathing: APA Rated Sheathing; Veneer C-D; Exposure Durability 1; Unsanded

C. Ceiling Sheathing: Veneer A-C; Exposure Durability 1; Sanded

2.3 ACCESSORIES

A. Fasteners and Anchors:
1. Fasteners: ASTM A153/A153M, Hot-dipped galvanized steel.
2. Nails and Stables: ASTM F1667.
3. Adhesives: ASTM 3498, APA-AFG-01 for plywood to wood framing connections.
4. Drywall Screws: Bugle head, hardened steel, power driven, length 2.5 times thickness of sheathing.

B. Structural Framing Connectors: Hot dipped galvanized steel, sized to suit framing conditions, as shown on drawings.

C. Building Paper: ASTM D226; Type I, No. 15 unperforated asphalt felt.

2.4 FACTORY WOOD TREATMENT

A. Wood Preservative (Pressure Treatment): American Wood Preservers Bureau Standard LP-2 using Wohman CCA preservative with 25 lbs. per cubic foot retainage.

PART 3 EXECUTION

3.1 FRAMING

A. Set members level and plumb, in correct position.

B. Fasten framing in accordance with current IBC code.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

C. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.

D. Place horizontal members, crown side up.

E. Construct framing members full length without splices.

F. Coordinate installation of roof trusses.

3.2 SHEATHING

A. Fasten sheathing in accordance with current IBC code and as indicated in the drawings.

B. Secure roof and floor sheathing perpendicular to framing members with ends staggered and sheet ends over firm bearing.

C. Use sheathing clips between sheets between roof framing members. Offset end joints 4'-0" in alternate rows. Install solid edge blocking between sheets where indicated in the drawings.

D. Secure wall sheathing with long dimension parallel to wall studs, with ends over firm bearing.

E. Secure ceiling sheathing to trusses with adhesive and galvanized nails at 12 inches O.C. along framing members. Set nails flush with sheathing.

F. Place building paper horizontally over wall sheathing; weather lap edges and ends.

3.3 TOLERANCES

A. Framing Members: 1/8 inch from true position, maximum.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 06 17 53
SHOP-FABRICATED WOOD TRUSSES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Shop fabricated wood trusses for roof framing.

B. Bridging, bracing, and anchorage.

1.2 REFERENCES

A. ALSC - American Lumber Standards Committee: Softwood Lumber Standards.

B. ASTM A446 - Steel Sheet, Zinc Coated (Galvanized) by the Hot-Dip Process, Structural Quality.

C. NFPA: National Forest Products Association.

D. TPI (Truss Plate Institute) HIB-91 - Handling, Installing and Bracing Wood Trusses.

E. TPI (Truss Plate Institute) TPI-85 - Metal Plate Connected Wood Trusses.

F. TPI (Truss Plate Institute) QST-88 - Metal Plate Connected Wood Trusses.

G. WCLIB: West Coast Lumber Inspection Bureau.

H. WWPA: Western Wood Products Association.

1.3 SYSTEM DESCRIPTION

A. Design roof snow load: As specified in the structural Drawings design criteria with deflection limited to 1/360.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00 – Submittal Procedures.

B. Shop Drawings: Indicate sizes and spacing of trusses, loads and truss cambers, and framed openings.

C. Design Calculations: Stamped by Licensed Structural Engineer.

D. Product Data: Provide truss configurations, bearing and anchor details, bridging and bracing, and certifications.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with the following agencies:
   1. Lumber Grading Agency: Certified by ALSC.
   2. Plywood Grading Agency: Certified by APA.

B. Truss Design, Fabrication, and Installation: In accordance with Truss Plate Institute HIB-91, including Supplement, TPI-85 including Supplement, QST-88.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

B. Design trusses under direct supervision of a Professional Structural Engineer experienced in design of this Work.

1.7 REGULATORY REQUIREMENTS

A. Conform to applicable code for loads, seismic zoning, and other governing load criteria.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect, and handle products to site under provisions of Section 01 60 00 – Product Requirements.

B. Handle and erect trusses in accordance with TPI HET-80.

C. Store trusses in vertical position resting on bearing ends.

1.9 FIELD MEASUREMENTS

A. Verify that field measurements are as indicated.

PART 2 PRODUCTS

2.1 WOOD TRUSSES

A. All press plate wood trusses shall be manufactured in accordance with the requirements of the Truss Plate Institute.

2.2 MATERIALS

A. Lumber Grading Rules: WCLIB or WWPA.

B. Wood Members: Single top and bottom chord, Douglas Fir-Larch species, No. 2 or better, 19 percent maximum and 7 percent minimum moisture content. Finger scarfing not permitted.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

C. Steel Connectors: ASTM A446 steel, Grade B galvanized; die stamped with integral teeth.

D. Truss Bridging: 1/2" X 24" Structural I Plywood. Ends shall be overlapped 12" minimum.

2.3 ACCESSORIES

A. Wood Blocking, Plating, Support Members, Framing for Openings: Douglas Fir-Larch species, No. 2 or better, 19 percent maximum and 7 percent minimum moisture content.

B. Fasteners: Electro-galvanized, Hot dip galvanized, unfinished steel, type to suit application.

C. Bearing Plates: Hot dip galvanized.

2.4 FABRICATION

A. Fabricate trusses to achieve structural requirements specified.

B. Brace wood trusses in accordance with TPI BWT-76.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that supports and openings are ready to receive trusses.

3.2 PREPARATION

A. Coordinate placement of bearing items.

3.3 ERECTION

A. Erect press plate wood trusses in accordance with the requirements of the Truss Plate Institute.

B. Install trusses in accordance with manufacturer's instructions.

C. Set members level and plumb, in correct position.

D. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure plumb, and in true alignment until completion of erection and installation of permanent bracing.

E. Do not field cut or alter structural members without approval of a Licensed Structural Engineer in the state where the project is located.

F. Place headers and supports to frame openings required.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

G. Coordinate placement of decking with work of this section.

H. After erection, touch-up primed or galvanized surfaces with primer consistent with shop coat or zinc primer.

3.4 TOLERANCES

A. Framing Members: 1/2 inch maximum, from true position.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 07 11 13
BITUMINOUS DAMP PROOFING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes cold-applied, emulsified asphalt damp proofing applied to the following surfaces:
   1. Exterior, below-grade surfaces of concrete foundation walls.
   2. Back side of concrete and masonry retaining walls, below grade. List below only products that the reader might expect to find in this Section but are specified elsewhere.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include recommendations for method of application, primer, number of coats, coverage or thickness, and protection course.

B. Material Certificates: For each product, signed by manufacturers.

1.4 QUALITY ASSURANCE

A. Source Limitations: Obtain primary damp proofing materials and primers through one source from a single manufacturer. Provide secondary materials recommended by manufacturer of primary materials.

1.5 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit asphalt damp proofing to be performed according to manufacturers' written instructions.

B. Delete below if no enclosed or interior applications are included in Project.

C. Ventilation: Provide adequate ventilation during application of damp proofing in enclosed spaces. Maintain ventilation until damp proofing has thoroughly cured.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following: Retain above for nonproprietary or below for semi proprietary specification. Refer to Division 1 Section "Product Requirements."

1. Cold-Applied, Emulsified-Asphalt Damp proofing:
    a. Karnak Corporation.
    b. Koppers Industries, Inc.
    c. Meadows, W. R., Inc.
    d. Sonneborn, Div. of ChemRex, Inc.
    e. Tamms Industries.
2. Protection Course, Asphalt-Board Type:
    a. Grace, W. R. & Co.; Construction Products Div.
    b. Meadows, W. R., Inc.
    c. Sonneborn, Div. of ChemRex, Inc.

2.2 BITUMINOUS DAMPPROOFING

A. Odor Elimination: For interior and concealed-in-wall uses other than exterior face of inner wythe of cavity walls, provide damp proofing material warranted by manufacturer to be substantially odor free after drying for 24 hours under normal conditions.

B. Cold-Applied, Emulsified-Asphalt Damp proofing:
1. Trowel Coats: ASTM D 1227, Type II, Class 1.
2. Fibered Brush and Spray Coats: ASTM D 1227, Type II, Class 1.
3. Brush and Spray Coats: ASTM D 1227, Type III, Class 1.

2.3 MISCELLANEOUS MATERIALS

A. Emulsified-Asphalt Primer: ASTM D 1227, Type III, Class 1, except diluted with water as recommended by manufacturer.

B. Asphalt-Coated Glass Fabric: ASTM D 1668, Type I.

C. Protection Course, Asphalt-Board Type: Premolded, 1/8-inch- (3-mm-) thick, multi-ply, semirigid board consisting of a mineral-stabilized asphalt core sandwiched between layers of asphalt-saturated felt and faced on 1 side with polyethylene film. Paragraph below describes Dow Chemical Company's "Protection Board" and "Protection Board II," Owens Corning's "Fan Fold," and Tenneco Building Products' "Amocor-PB4."

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Applicator present, for compliance with requirements for surface smoothness and other conditions affecting performance of work.
   1. Begin damp proofing application only after substrate construction and penetrating work have been completed and unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protection of Other Work: Mask or otherwise protect adjoining exposed surfaces from being stained, spotted, or coated with damp proofing. Prevent damp proofing materials from entering and clogging weep holes and drains.

B. Clean substrates of projections and substances detrimental to work; fill voids, seal joints, and apply bond breakers if any, as recommended by prime material manufacturer.

3.3 APPLICATION, GENERAL

A. Comply with manufacturer's written recommendations unless more stringent requirements are indicated or required by Project conditions to ensure satisfactory performance of damp proofing.
   1. Apply additional coats if recommended by manufacturer or required to achieve coverages indicated.
   2. Allow each coat of damp proofing to cure 24 hours before applying subsequent coats.

B. Apply damp proofing to footings and foundation walls whether indicated or not.
   1. Apply from finished-grade line to top of footing, extend over top of footing, and down a minimum of 6 inches (150 mm) over outside face of footing.
   2. Extend 12 inches (300 mm) onto intersecting walls and footings, but do not extend onto surfaces exposed to view when Project is completed.
   3. Normally retain subparagraph below. Corners are generally the weakest link in damp proofing protection.
   4. Install flashings and corner protection stripping at internal and external corners, changes in plane, construction joints, cracks, and where shown as "reinforced," by embedding an 8-inch- (200-mm-) wide strip of asphalt-coated glass fabric in a heavy coat of damp proofing. Damp proofing coat required for embedding fabric is in addition to other coats required.

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3.4 COLD-APPLIED, EMULSIFIED-ASPHALT DAMPPROOFING

A. On Concrete Foundations: Apply two brush or spray coats at not less than 1.5 gal./100 sq. ft. (0.6 L/sq. m) for first coat and 1 gal./100 sq. ft. (0.4 L/sq. m) for second coat, one fibered brush or spray coat at not less than 3 gal./100 sq. ft. (1.2 L/sq. m), or one trowel coat at not less than 4 gal./100 sq. ft. (1.6 L/sq. m).

B. On Backs of Concrete Retaining Walls: Apply one brush or spray coat at not less than 1.25 gal./100 sq. ft. (0.5 L/sq. m).

C. On Backs of Masonry Retaining Walls: Apply primer and one brush or spray coat at not less than 1.25 gal./100 sq. ft. (0.5 L/sq. m).

D. On Exterior Face of Inner Wythe of Cavity Walls: Apply primer and one brush or spray coat at not less than 1 gal./100 sq. ft. (0.4 L/sq. m).

3.5 INSTALLATION OF PROTECTION COURSE

A. Where indicated, install protection course over completed-and-cured damp proofing. Comply with damp proofing material manufacturer's written recommendations for attaching protection course. Support protection course with spot application of trowel-grade mastic where not otherwise indicated.

3.6 CLEANING

A. Remove damp proofing materials from surfaces not intended to receive damp proofing.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 07 21 00
THERMAL INSULATION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. The work included in this section consists of furnishing and installing insulation in building interior and exterior walls and ceilings as shown on the Drawings and as specified herein.

B. Thermal resistivity or "R-value" represents the rate of heat flow through a homogeneous material exactly V thick and is expressed by the temperature difference in degrees F between the two exposed faces required to cause 1 BTU to flow through 1 square foot per hour at mean temperatures indicated.

C. Fire Performance Characteristics. Provide insulation with fire performance characteristics indicated per ASTM E 119, ASTM E84 and E136, as applicable, and which correspond to products listed in UL "Fire Resistance Directory" or "Building Materials Directory."

D. Masonry insulation is specified in Section 07 21 23 – Loose-Fill Insulation.

1.2 STANDARD

A. R-value definition shall be in accordance with ASTM C 177 or C 653.

1.3 SUBMITTALS

A. Submittals shall conform to the provisions of Section 01 33 00 – Submittal Procedures. Submit catalog cuts of materials proposed to be used.

1.4 DELIVERY, STORAGE AND HANDLING

A. Protect insulation during delivery and storage against moisture 0absorption or other damage. Material with broken wrappers or cartons will be rejected. Store above ground or floor in protected area under roof or tarps.

PART 2 PRODUCTS

2.1 INSULATION

A. GENERAL

1. Provide preformed units in sizes to fit applications indicated, selected from manufacturer's standard thicknesses, widths, and lengths.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2. Ceiling insulation shall be fiberglass or rockwool conforming to Federal Specification HH-I-1030B and ASTM C764. Insulation thickness shall be sufficient to provide an R-value of 39. Wall insulation shall be R-19.
3. Expanded Polystyrene Board Insulation: ASTM C578, type as indicated blow; with 5-year aged R-values of 5.,4 and 5.0 and 40° F and 75° F (4.4° C and 23.9° C), respectively, and as follows:
    a. Dow Chemical or equal expanded polystyrene insulation boards; Styrofoam SM shall be 2" thick and shall extend 2'-0" (minimum) below the bottom of the floor slab where adjacent grade is at or below finish floor, 4-0" high in earth berms at all other locations. Perimeter insulation shall have Thermal resistance "R" of 5.00 per 1" of thickness.
4. Polyisocyanurate Board Insulation: Glass-fiber-reinforced polyisocyanurate closed-cell foam core and aluminum foil facing laminated to both sides; FS HH-I-1972/1, Class 2; aged R-values of 7.2 and 8.0 at 40° F and 75° F (4.4° C and 23.9° C), respectively, and as follows:
    a. Combustion Characteristics: Passes ASTM E136 test.
5. Loose Glass Fiber Insulation: Glass fibers processed to comply with ASTM C764 for type (method of application) indicated below; passing ASTM E136 for combustion characteristics; maximum flame spread and smoke developed values of 5 and 5, respectively and as follows:
    a. Type 1 for pneumatic application.
6. Combustion Characteristics: Unfaced materials passes ASTM E136 test.
    a. Surface Burning Characteristics: Maximum flame spread and smoke developed values of 25 and 50 respectively.
7. Polyethylene Vapor Retarder: 6-mil polyethylene film, with laboratory-tested vapor transmission rating of 0.2 perms, natural color. Provide at all exterior framed walls.
8. Adhesive for Bonding Insulation: Type as recommended by manufacturer.
9. Mechanical Anchors: Type and size recommended by insulation manufacturer.

PART 3 EXECUTION

3.1 INSTALLATION

A. GENERAL

1. Comply with insulation manufacturer's instructions for installation of insulation.
2. Support insulation units by adhesive or mechanical anchorage or both as applicable to location and conditions indicated.
    a. For cavity insulation supplement adhesive attachment of insulation by securing boards with two-piece wall ties designed for this purpose and specified under Division 4, "Unit Masonry".

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

3. Ceiling Insulation. All ceilings shall be insulated with fiberglass batt ceiling insulation or blown-in ceiling insulation in accordance with the manufacturer's instructions to the depth required to give an R-value of 38. Care shall be taken during insulation to provide space for ventilation requirements along eaves of building.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

July 24, 2024

SECTION 07 21 23
LOOSE-FILL INSULATION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes granular insulation in cells of concrete masonry unit walls.

1.2 REFERENCES

A. ASTM International:
1. ASTM C516 - Standard Specification for Vermiculite Loose Fill Thermal Insulation.
2. ASTM C549 - Standard Specification for Perlite Loose Fill Insulation.
3. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
4. ASTM E970 - Standard Test Method for Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source.

1.3 SUBMITTALS

A. Submittals shall conform to the provisions of Section 01 33 00 – Submittal Procedures.

B. Product Data: Submit data on product characteristics, performance criteria, and limitations.

C. Manufacturer's Installation Instructions: Submit procedure for preparation and installation.

PART 2 PRODUCTS

2.1 LOOSE-FILL INSULATION

A. MATERIALS
1. Granular Insulation: ASTM C516, Type II; vermiculite type, water repellent, fire resistant, flame/smoke contribution of 0/0 in accordance with ASTM E84.
2. Granular Insulation: ASTM C549, perlite type, water repellent, fire resistant, flame/smoke contribution of 0/0 in accordance with ASTM E84.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify substrate, adjacent materials, and insulation are dry and ready to receive insulation.

B. Verify spaces are free of mortar to allow free flow of insulation.

3.2 PREPARATION

A. Verify holes and openings have been sealed to prevent escape of insulation.

3.3 INSTALLATION

A. Place after masonry wall has sufficiently dried and attained optimum moisture content. Place prior to covering cores with bond beams or lintels.

B. Place as wall is erected. Completely fill spaces.

C. Place in lifts. Do not exceed 4 feet pouring height.

3.4 PROTECTION OF INSTALLED CONSTRUCTION

A. Place temporary signs in rooms facing insulated walls warning workers to use caution to prevent loss of insulation when cutting into walls.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

July 24, 2024

SECTION 07 42 93
SOFFIT PANELS

PART 1 GENERAL

1.1 SUMMARY

A. Scope of Work
   1. Furnish and Install Performed Metal Soffit System with continuous interlocking panels connections.
   2. Provide all necessary accessories, edge trim, moldings, corners, and attachment clips as required.

1.2 SECTION INCLUDES

A. Performed aluminum soffit system.

1.3 REFERENCES

A. ASTM D -1400-87, D -1005-84 - Kynar 500 ® or Hylar 5000 ® Finish tested by PPG Industries for: Dry Film Thickness (Nominal):

B. ASTM B 209 – Standard Specification for Aluminum and Aluminum – Alloy Sheet and Plate.

1.4 PERFORMANCE REQUIREMENTS:

A. Design Requirements:
   1. System shall meet performance criteria per manufacture.

B. Wind Loading: Design and size components to withstand dead and live loads cause by wind pressures as follows:
   1. Positive pressure: 120 psf normal to panel.
   2. Negative pressure: 120 psf normal to panel.

C. All panels shall be fastened to the framing members with concealed anchor clips designed to allow for thermal movement of the panels.

D. All trim and flashing components shall be fabricated in lengths of 12’-0” to minimize joint details.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00 – Submittal Procedures. Alternates to this specification must be submitted ten (10) days prior to bid date.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Product Data: Submit manufacturer's current product specifications and installation instructions.

C. Samples: Submit two samples of each type of metal panel required, not less than 12 inches, and illustrating finished panel profile, color, sheen, and texture.

1.6 QUALITY ASSURANCE

A. Manufacturer's Qualifications:
   1. All panels are to factory formed and packaged per job requirements.
   2. Manufacturer shall have a minimum of five (5) years experience in the factory fabrication of metal soffit panels.

B. Installer: Company specializing in the type of work requires for this project, with not less than 2 years of documented experience.

1.7 DELIVERY, STORAGE AND HANDLING

A. Comply with provisions of Section 01 60 00 – Product Requirements.

B. Do not deliver materials of this section to project site until suitable facilities for storage and protection are available.

C. Protect materials from damage during transit and at project site. Store under cover but sloped to provide positive drainage. Do not expose materials with strippable protective film to direct sunlight or extreme heat.

1.8 WARRANTY

A. Comply with provisions of Section 01 77 00 – Closeout Procedures.

B. Submit manufacturer's standard warranty. The fluoropolymer Kyner 500® and Hylar 5000® finishes carry a twenty (20) year limited warranty against chipping, cracking, peeling, chalking, and fading.

PART 2 PRODUCTS

2.1 MATERIALS

A. Aluminum Sheet: ASTM B 209 Prefinish as specified under panel type.

2.2 FINISHES

A. Corrosion inhibiting primer and baked on acrylic top coat.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.3 PANEL SYSTEMS

A. Preformed metal soffits shall be fabricated with .032 Aluminum. Panels shall be smooth, 18" wide and standard length of 12'-0" or as required for job conditions.

B. Provide panels with ventilated panel at every third panel installed for positive ventilation unless noted otherwise on the Drawings.

PART 3 EXECUTION

3.1 EXAMINATION

A. Installer shall examine all substrates on which panel system and accessories are to applied.
   1. If surfaces are not suitable for application of panel system, installer shall notify the engineer in writing.
   2. Installation shall not proceed until surface is acceptable to all parties.

3.2 PREPARATION

A. Confirm all furring and support framing is in place and plumb or level prior to installation.

3.3 INSTALLATION

A. Install metal panels and accessories in strict accordance with manufacturer instructions.

B. Protect surfaces from contact with cementitious materials and other dissimilar metals with bituminous paint or other coatings.

C. Fasten panels to structural support with fasteners provided or approved by panel manufacturer. Install panels plumb, level, and true to line.

D. Fully interlock panels or nest with adjacent panels.

E. Remove protective masking from panels immediately after each panel is installed.

F. Care should be taken during handling of panels to prevent bending, twisting, abrasion, scratching, denting, etc.

G. Workmanship to comply with standards established by the Architectural Sheet Metal Community.

3.4 ADJUSTING AND CLEANING

A. Touch up minor abrasions and exposed fasteners with matching paint provided by panel manufacturer. Remove and replace panels that cannot be satisfactorily touched up.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Leave installed work clean, free from grease, finger marks, and stains. Remove all protective masking from material immediately after installation of product.

C. Upon completion of installation, remove scraps and debris from project site.

3.5 PROTECTION

A. Provide protection as required to assure that completed work of this section will be without damage or deterioration at date of substantial completion.

B. Safety clothing, equipment and precautions must be utilized according to safety standards.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 07 61 00
SHEET METAL ROOFING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
1. Architectural standing seam metal roofing.
2. Structural supports.
3. Underlayment.
4. Eave protection.
5. Metal facias, flashings, and trim.
6. Snow guards.

1.2 REFERENCES

A. American Iron and Steel Institute:
1. AISI SG-973 - Cold-Formed Steel Design Manual.

B. ASTM International:
1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
2. ASTM A755/A755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
3. ASTM D226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
4. ASTM D4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
5. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
6. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors By Uniform Static Air Pressure Difference.
7. FS TT-C-494 - Coating Compound, Bituminous, Solvent Type, Acid Resistant.

C. National Roofing Contractors Association:
1. NRCA - The NRCA Roofing and Waterproofing Manual.

D. Sheet Metal and Air Conditioning Contractors:
1. SMACNA - Architectural Sheet Metal Manual.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

E. Underwriters Laboratories Inc.:
   1. UL 580 - Tests for Uplift Resistance of Roof Assemblies.

1.3 SUBMITTALS

A. Section 01 33 00 – Submittal Procedures.

B. Product Data:
   1. Submit data on metal types, finishes, and characteristics.
   2. Submit color charts for finish selection.

C. Samples:
   1. Submit two samples 3" x 3" inch in size illustrating metal finish color.

D. Manufacturer's Certificate: Certify Products meet or exceed specified requirements.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with SMACNA Architectural Sheet Metal Manual and The NRCA Roofing and Waterproofing Manual.

1.5 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.

B. Installer: Company specializing in performing work of this section with minimum 3 years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 – Product Requirements: Requirements for transporting, handling, storing, and protecting products.

B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.

C. Prevent contact with materials causing discoloration or staining.

1.7 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.8 COORDINATION

A. Section 01 31 00 – Project Management and Coordination.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Coordinate with Work of Section 03 10 00 – Concrete Forming and Accessories and Section 04 22 00 - Concrete Unit Masonry for installing recessed flashing reglets.

C. Coordinate with Work of Section 06 16 00 – Framing and Sheathing for connecting structural supports to building structural frame.

1.9 WARRANTY

A. Section 01 77 00 – Closeout Procedures: Requirements for warranties.

B. Provide two-year warranty under provisions of Section 01 77 00 – Closeout Procedures.

C. Warranty: Include coverage for degradation of metal finish, water tightness, and integrity of seals.

D. Furnish 20 year manufacturer warranty for sheet metal roofing against corrosion, and water penetration.

E. Furnish 20 year manufacturer warranty for metal finish against fading, chipping, chalking, and blistering.

PART 2 PRODUCTS

2.1 MANUFACTURED SHEET METAL ROOFING

A. Manufacturers:
1. Fabral
2. Substitutions: Section 01 60 00 – Product Requirements.

B. Standing Seam Metal Roofing: Factory formed metal roofing panel system with concealed fasteners.
1. Panel Materials: Pre-finished steel sheet, ASTM A924, G90; 24 gage core steel.
2. Panel Width: Nominal 12-18 inches.
3. Panel Profile: Flat.
4. Seam Type: Sanding seam snap interlocked.
5. Seam Height: 1 inches.
6. Color: As selected.

2.2 SHEET METAL MATERIALS

A. Pre-Finished Galvanized Steel Sheet: ASTM A755/A755M coil coated.
1. Base Metal: ASTM A653/A653M; G90 zinc coating.
2. Exposed Finish: Acrylic coating.
3. Unexposed Finish: Manufacturer's standard coating.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.3 ACCESSORIES

A. Fasteners: Same material and finish as roofing metal, with soft neoprene washers where exposed.

B. Underlayment: ASTM D226, organic roofing felt, Type II, Number 30.

C. Sealant: Polyurethane type, 2 manufactured by Sika Corporation.

D. Eave Protection Sheet: Rubberized asphalt bonded to sheet polyethylene, 40 mil total thickness, with strippable treated release paper; Ice and Water Shield manufactured by Grace.

E. Snow Guard: Per Manufacturer's recommendation of same color as roofing material and approved by engineer.

2.4 FABRICATION

A. Form sections shape as indicated on Drawings, accurate in size, square, and free from distortion or defects.

B. Fabricate facia, trim, flashing, and other metal components from same material as metal roof panels. Provide exposed metal surfaces with same finish as exposed face of metal roof panels.

C. Fabricate starter strips of same material as sheet, continuous, to interlock with sheet.

D. Form pieces in longest practical lengths.

E. Hem exposed edges on underside 1/2 inch; miter and seam corners.

F. Fabricate corners from one piece with minimum 18 inch long legs; seam for rigidity, seal with sealant.

G. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.

H. Fabricate flashings to allow toe to extend 4 inches over roofing. Return and brake edges.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 31 00 – Project Management and Coordination: Verification of existing conditions before starting work.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Wood and Metal Deck Substrate:
   1. Inspect roof deck to verify deck is clean and smooth, free of depressions, waves, or projections, and properly sloped to drains valleys eaves.
   2. Verify deck is dry and free of snow and ice. Verify substrate joints are solidly supported and fastened.

C. Structural Framing Substrate:
   1. Verify primary and secondary framing members are installed and fastened, properly aligned and sloped to eaves.
   2. Verify damaged shop coatings are repaired with touch up paint.

D. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, reglets are in place, and nailing strips located.

E. Verify roofing termination and base flashings are in place, sealed, and secure.

F. Verify insulation is installed and ready for roof application.

3.2 PREPARATION

A. Wood and Metal Deck Substrate:
   1. Broom clean deck surfaces under eave protection and underlayment.

3.3 INSTALLATION - EAVE PROTECTION

A. Apply eave protection sheet over deck flange of eave edge flashings.

B. Extend eave protection sheet minimum 2 feet upslope beyond interior face of exterior wall.

3.4 INSTALLATION - UNDERLAYMENT

A. Apply underlayment over entire roof area in single layer fastened to substrate.
   1. Install underlayment laid perpendicular to slope.
   2. Weather lap edges 2 inches and nail in place.
   3. Stagger end joints minimum 24 inches.

3.5 INSTALLATION - LAPPED SEAM METAL ROOFING

A. Conform to NRCA details.

B. Install roofing panels with long dimension perpendicular to eaves.

C. Install roofing panels beginning at eaves. Weather lap ends minimum 6 inches.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

D. Align transverse lapped joints of roofing sheets.

E. Terminate roofing panels with sheet metal trim and flashing for watertight installation. Close and conceal openings between roofing panels, panel seams, and roof substrate.

F. Seal metal joints watertight.

3.6 INSTALLATION - SOFFIT PANELS

A. Install perimeter trim, level and aligned perpendicular with facia.

B. Install soffit panels to form flat, flush surface.

C. Fit soffit panels in single length between perimeter trim. Secure panels to soffit framing.

D. Install perforated soffit panels alternating with solid panels.

E. Adjust panels for uniform joints.

3.7 INSTALLATION - FLASHING

A. Install reglets in accordance with Section 04 22 00 – Concrete Unit Masonry.

B. Conform to NRCA details.

C. Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.

D. Secure flashing exposed edges with continuous cleats maximum 24 inches on center.

E. Apply plastic cement compound between metal flashings and felt flashings.

F. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

G. Seal metal joints watertight.

3.8 INSTALLATION - SNOW GUARDS

A. Install snow guards in accordance with manufacturer's instructions.

B. Install snow guards in continuous line, 12 inches up slope of exterior wall.

C. Install one additional line of snow guards for every 15 feet measured along roof slope.

3.9 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 77 00 – Closeout Procedures: Protecting installed construction.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Do not permit traffic over unprotected roof surface.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

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SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Prefinished Metal Flashing and Trim.

1.2 WORK INCLUDED

A. Coping and cap flashings.

B. Fascia and roof flashings.

1.3 REFERENCES

A. ASTM A924 – Prefinished Steel Sheet.

B. NAAMM - Metal Finishes Handbook.

C. NRCA (National Roofing Contractors Association) - Roofing Manual.

D. SMACNA - Architectural Sheet Metal Manual.

1.4 SYSTEM DESCRIPTION

A. Work of this Section is to physically protect base flashings, from damage that would permit water leakage to building interior.

1.5 QUALITY ASSURANCE

A. Applicator: Company specializing in sheet metal flashing work with three years' minimum experience.

1.6 SUBMITTALS

A. Submit shop drawings and product data under provisions of Section 01 33 00 – Submittal Procedures.

B. Submit manufacturer's installation instructions under provisions of Section 01 33 00 – Submittal Procedures.

C. Submit color samples 15 days prior to ordering material to allow Owner and/or Engineer to select color.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

1.7 STORAGE AND HANDLING

A. Stack preformed and prefinished material to prevent twisting, bending, or abrasion, and to provide ventilation.

B. Prevent contact with materials during storage which may cause discoloration, staining, or damage.

PART 2 PRODUCTS

2.1 SHEET MATERIALS

A. Prefinished sheet Steel: ASTM A924, G90; 26 gage core steel, color to match roof or siding.

2.2 ACCESSORIES

A. Fastener: Prefinished steel with soft neoprene washers at exposed fasteners. Finish exposed fasteners same as flashing metal.

B. Underlayment: ASTM D266; No. 30 asphalt saturated roofing felt.

C. Protective Backing Paint: Zinc chromate alkyd.

D. Sealants:
1. Acrylic Sealant: FS TT-S-00230, Type II, Class B.
2. Butyl Tape Sealant: TT-C-1769A.
3. Polyurethane Sealant: FS TT-S00230C, Type II-nonsag, Class A.

2.3 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.

B. Fabricate cleats and starter strips of same material as sheet.

C. Form pieces in longest practical lengths.

D. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.

E. Form material with flat lock seam.

F. Fabricate corners from one piece with minimum 18 inch (450 mm long legs; seam for rigidity, seal with sealant.

G. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

PART 3 EXECUTION

3.1 INSPECTION

A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.

B. Verify membrane termination and base flashings are in place, sealed, and secure.

C. Beginning of installation means acceptance of existing conditions.

3.2 PREPARATION

A. Field measure site conditions prior to fabricating work.

B. Install starter and edge strips, and cleats before starting installation.

C. Secure flashings in place using concealed fasteners.

D. Lock and seal all joints.

E. Apply plastic cement compound between metal flashings and felt flashings.

F. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 07 84 13
PENETRATION FIRESTOPPING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes through-penetration firestop systems for penetrations through fire-resistance-rated constructions, including both empty openings and openings containing penetrating items.
   1. The work of this section shall include, but not be limited to, all clips and other restraining devices necessary for holding fire protection material in place and other items necessary for a complete and integral installation thru out the entire perimeter and other penetrations.

B. Related Sections include the following:
   1. Division 7 Section "Fire-Resistive Joint Systems."
   2. Division 15 Sections specifying duct and piping penetrations.
   3. Division 16 Sections specifying cable and conduit penetrations.

1.3 PERFORMANCE REQUIREMENTS

A. General: For penetrations through the following fire-resistance-rated constructions, including both empty openings and openings containing penetrating items, provide through-penetration firestop systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated.
   1. Fire-resistance-rated walls including fire walls, fire partitions, fire barriers, and smoke barriers.
   2. Fire-resistance-rated horizontal assemblies including floor/ceiling assemblies and ceiling membranes of roof/ceiling assemblies.

B. Rated Systems: Provide through-penetration firestop systems with the following ratings determined per ASTM E 814 or UL 1479:
   1. F-Rated Systems: Provide through-penetration firestop systems with F-ratings indicated, but not less than that equaling or exceeding fire-resistance rating of constructions penetrated.
   2. T-Rated Systems: For the following conditions, provide through-penetration firestop systems with T-ratings indicated, as well as F-ratings, where systems

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

protect penetrating items exposed to potential contact with adjacent materials in occupiable floor areas:

a. Penetrations located outside wall cavities.
b. Penetrations located outside fire-resistance-rated shaft enclosures.

3. L-Rated Systems: Where through-penetration firestop systems are indicated in smoke barriers, provide through-penetration firestop systems with L-ratings of not more than 3.0 cfm/sq. ft (0.01524cu. m/s x sq. m) at both ambient temperatures and 400 deg F (204 deg C).

C. For through-penetration firestop systems exposed to view, traffic, moisture, and physical damage, provide products that, after curing, do not deteriorate when exposed to these conditions both during and after construction.
1. For piping penetrations for plumbing and wet-pipe sprinkler systems, provide moisture-resistant through-penetration firestop systems.
2. For floor penetrations with annular spaces exceeding 4 inches (100 mm) in width and exposed to possible loading and traffic, provide firestop systems capable of supporting floor loads involved, either by installing floor plates or by other means.
3. For penetrations involving insulated piping, provide through-penetration firestop systems not requiring removal of insulation.

D. For through-penetration firestop systems exposed to view, provide products with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, as determined per ASTM E 84.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For each through-penetration firestop system, show each type of construction condition penetrated, relationships to adjoining construction, and type of penetrating item. Include firestop design designation of qualified testing and inspecting agency that evidences compliance with requirements for each condition indicated.
1. Submit documentation, including illustrations, from a qualified testing and inspecting agency that is applicable to each through-penetration firestop system configuration for construction and penetrating items.Retain subparagraph below only after verifying that authorities having jurisdiction will accept modifications handled by method in subparagraph.

C. Through-Penetration Firestop System Schedule: Indicate locations of each through-penetration firestop system, along with the following information:
1. Types of penetrating items.
2. Types of constructions penetrated, including fire-resistance ratings and, where applicable, thicknesses of construction penetrated.
3. Through-penetration firestop systems for each location identified by firestop design designation of qualified testing and inspecting agency.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

D. Qualification Data: For Installer.

E. Product Test Reports: From a qualified testing agency indicating through-penetration firestop system complies with requirements, based on comprehensive testing of current products.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A firm that has been approved by FMG according to FMG 4991, "Approval of Firestop Contractors."

B. Installation Responsibility: Assign installation of through-penetration firestop systems and fire-resistive joint systems in Project to a single qualified installer.

C. Source Limitations: Obtain through-penetration firestop systems, for each kind of penetration and construction condition indicated, through one source from a single manufacturer.

D. Fire-Test-Response Characteristics: Provide through-penetration firestop systems that comply with the following requirements and those specified in Part 1 "Performance Requirements" Article:

1. Firestopping tests are performed by a qualified testing and inspecting agency. A qualified testing and inspecting agency is UL or another agency performing testing and follow-up inspection services for firestop systems acceptable to authorities having jurisdiction.
2. Through-penetration firestop systems are identical to those tested per testing standard referenced in "Part 1 Performance Requirements" Article. Provide rated systems complying with the following requirements:
    a. Through-penetration firestop system products bear classification marking of qualified testing and inspecting agency.
    b. Through-penetration firestop systems correspond to those indicated by reference to through-penetration firestop system designations listed by the following:
        1) UL in its "Fire Resistance Directory."

E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver through-penetration firestop system products to Project site in original, unopened containers or packages with intact and legible manufacturers' labels identifying product and manufacturer, date of manufacture, lot number, shelf life if applicable, qualified testing and inspecting agency's classification marking applicable to Project, curing time, and mixing instructions for multicomponent materials.

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B. Store and handle materials for through-penetration firestop systems to prevent their deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not install through-penetration firestop systems when ambient or substrate temperatures are outside limits permitted by through-penetration firestop system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.

B. Ventilate through-penetration firestop systems per manufacturer's written instructions by natural means or, where this is inadequate, forced-air circulation.

1.8 COORDINATION

A. Coordinate construction of openings and penetrating items to ensure that through-penetration firestop systems are installed according to specified requirements.

B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate through-penetration firestop systems.

C. Notify Owner's inspecting agency at least seven days in advance of through-penetration firestop system installations; confirm dates and times on days preceding each series of installations.

D. Do not cover up through-penetration firestop system installations that will become concealed behind other construction until each installation has been examined by Owner's inspecting agency and building inspector, if required by authorities having jurisdiction.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Available Products: Subject to compliance with requirements, through-penetration firestop systems that may be incorporated into the Work include, but are not limited to, those systems indicated that are produced by one of the following manufacturers:

1. Grace, W. R. & Co. - Conn.
2. Hilti, Inc.
3. Nelson Firestop Products.
4. 3M; Fire Protection Products Division.
5. Tremco; Sealant/Weatherproofing Division.

2.2 FIRESTOPPING, GENERAL

A. Compatibility: Provide through-penetration firestop systems that are compatible with one another; with the substrates forming openings; and with the items, if any,

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penetrating through-penetration firestop systems, under conditions of service and application, as demonstrated by through-penetration firestop system manufacturer based on testing and field experience.

B. Accessories: Provide components for each through-penetration firestop system that are needed to install fill materials and to comply with Part 1 "Performance Requirements" Article. Use only components specified by through-penetration firestop system manufacturer and approved by qualified testing and inspecting agency for firestop systems indicated. Accessories include, but are not limited to, the following items:

1. Permanent forming/damming/backing materials, including the following:
   a. Slag-/rock-wool-fiber insulation.
   b. Sealants used in combination with other forming/damming/backing materials to prevent leakage of fill materials in liquid state.
   c. Fire-rated form board.
   d. Fillers for sealants.
2. Temporary forming materials.
3. Substrate primers.
4. Collars.
5. Steel sleeves.

2.3 FILL MATERIALS

A. General: Provide through-penetration firestop systems containing the types of fill materials indicated. Fill materials are those referred to in directories of referenced testing and inspecting agencies as "fill," "void," or "cavity" materials.

B. Cast-in-Place Firestop Devices: Factory-assembled devices for use in cast-in-place concrete floors and consisting of an outer metallic sleeve lined with an intumescent strip, a radial extended flange attached to one end of the sleeve for fastening to concrete formwork, and a neoprene gasket.

C. Latex Sealants: Single-component latex formulations that after cure do not re-emulsify during exposure to moisture.

D. Firestop Devices: Factory-assembled collars formed from galvanized steel and lined with intumescent material sized to fit specific diameter of penetrant.

E. Mortars: Prepackaged dry mixes consisting of a blend of inorganic binders, hydraulic cement, fillers, and lightweight aggregate formulated for mixing with water at Project site to form a nonshrinking, homogeneous mortar.

F. Pillows/Bags: Reusable heat-expanding pillows/bags consisting of glass-fiber cloth cases filled with a combination of mineral-fiber, water-insoluble expansion agents, and fire-retardant additives.

G. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

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H. Silicone Sealants: Single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated below:
   1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces, and nonsag formulation for openings in vertical and other surfaces requiring a nonslumping, gunnable sealant, unless indicated firestop system limits use to nonsag grade for both opening conditions.

2.4 MIXING

A. For those products requiring mixing before application, comply with through-penetration firestop system manufacturer's written instructions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of work.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning: Clean out openings immediately before installing through-penetration firestop systems to comply with firestop system manufacturer's written instructions and with the following requirements:
   1. Remove from surfaces of opening substrates and from penetrating items foreign materials that could interfere with adhesion of through-penetration firestop systems.
   2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with through-penetration firestop systems. Remove loose particles remaining from cleaning operation.
   3. Remove laitance and form-release agents from concrete.

B. Priming: Prime substrates where recommended in writing by through-penetration firestop system manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

C. Masking Tape: Use masking tape to prevent through-penetration firestop systems from contacting adjoining surfaces that will remain exposed on completion of Work and that

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would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestop system materials. Remove tape as soon as possible without disturbing firestop system's seal with substrates.

3.3 THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATION

A. General: Install through-penetration firestop systems to comply with Part 1 "Performance Requirements" Article and with firestop system manufacturer's written installation instructions and published drawings for products and applications indicated.

B. Install forming/damming/backing materials and other accessories of types required to support fill materials during their application and in the position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.
   1. After installing fill materials and allowing them to fully cure, remove combustible forming materials and other accessories not indicated as permanent components of firestop systems.

C. Install fill materials for firestop systems by proven techniques to produce the following results:
   1. Fill voids and cavities formed by openings, forming materials, accessories, and penetrating items as required to achieve fire-resistance ratings indicated.
   2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
   3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 IDENTIFICATION

A. Identify through-penetration firestop systems with preprinted metal or plastic labels. Attach labels permanently to surfaces adjacent to and within 6 inches (150 mm) of edge of the firestop systems so that labels will be visible to anyone seeking to remove penetrating items or firestop systems. Use mechanical fasteners for metal labels. For plastic labels, use self-adhering type with adhesives capable of permanently bonding labels to surfaces on which labels are placed and, in combination with label material, will result in partial destruction of label if removal is attempted. Include the following information on labels:
   1. The words "Warning - Through-Penetration Firestop System - Do Not Disturb. Notify Building Management of Any Damage."
   2. Contractor's name, address, and phone number.
   3. Through-penetration firestop system designation of applicable testing and inspecting agency.
   4. Date of installation.
   5. Through-penetration firestop system manufacturer's name.
   6. Installer's name.

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3.5 FIELD QUALITY CONTROL

A. Inspecting Agency: Owner will engage a qualified, independent inspecting agency to inspect through-penetration firestops. Independent inspecting agency shall comply with ASTM E 2174 requirements including those related to qualifications, conducting inspections, and preparing test reports.

B. Where deficiencies are found, repair or replace through-penetration firestop systems so they comply with requirements.

C. Proceed with enclosing through-penetration firestop systems with other construction only after inspection reports are issued and firestop installations comply with requirements.

3.6 CLEANING AND PROTECTING

A. Clean off excess fill materials adjacent to openings as Work progresses by methods and with cleaning materials that are approved in writing by through-penetration firestop system manufacturers and that do not damage materials in which openings occur.

B. Provide final protection and maintain conditions during and after installation that ensure that through-penetration firestop systems are without damage or deterioration at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated through-penetration firestop systems immediately and install new materials to produce systems complying with specified requirements.

END OF SECTION

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SECTION 07 90 00
JOINT PROTECTION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes sealants and joint backing, precompressed foam sealers, and accessories.

1.2 REFERENCES

A. ASTM International:
1. ASTM C834 - Standard Specification for Latex Sealants.
2. ASTM C919 - Standard Practice for Use of Sealants in Acoustical Applications.
3. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
4. ASTM C1193 - Standard Guide for Use of Joint Sealants.
5. ASTM D1056 - Standard Specification for Flexible Cellular Materials-Sponge or Expanded Rubber.
6. ASTM D1667 - Standard Specification for Flexible Cellular Materials-Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).
7. ASTM D2628 - Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements.

1.3 SUBMITTALS

A. Section 01 33 00 – Submittal Procedures.

B. Products Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.

C. Manufacturer's Installation Instructions: Submit special procedures, surface preparation, and perimeter conditions requiring special attention.

D. Warranty:
1. Include coverage for installed sealants and accessories failing to achieve airtight seal and watertight seal, exhibit loss of adhesion or cohesion, and sealants which do not cure.
2. Provide a 3-year written guarantee of the entire sealant installation against defects in materials and workmanship, together with a statement that the Contractor agrees to repair or replace, to the satisfaction of the Owner, at no additional cost to the Owner, any such defective areas which become evident within said 3-year guarantee period.

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1.4 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Applicator: Company specializing in performing Work of this section with minimum three years documented experience.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Section 01 60 00 – Product Requirements.

B. Maintain temperature and humidity recommended by sealant manufacturer during and after installation.

1.6 COORDINATION

A. Section 01 31 00 – Project Management and Coordination.

B. Coordinate Work with sections referencing this section.

PART 2 PRODUCTS

2.1 JOINT SEALERS

A. Manufacturers:
1. Dow Corning Corp. Model.
2. GE Silicones Model.
3. Mameco International Inc. Model.
4. Pecora Corp. Model.
5. Sika Corp. Model
6. Substitutions: Section 01 60 00 – Product Requirements.

B. Products Description:
1. High Performance General Purpose Exterior (Nontraffic) Sealant: Polyurethane; ASTM C920, Grade NS, Class 25, Uses M, G, and A; single or multi- component.
    a. Type: Sikaflex-1a manufactured by Sika.
    b. Color: Standard colors matching finished surfaces.
    c. Applications: Use for:
        i. Control, expansion, and soft joints in masonry.
        ii. Joints between concrete and other materials.
        iii. Joints between metal frames and other materials.
        iv. Other exterior non-traffic joints for which no other sealant is indicated.
2. General Purpose Traffic Bearing Sealant: Polyurethane; ASTM C920, Grade P, Class 25, Use T; single or multi- component.

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a. Type: SikaFlex 1C-SL manufactured by Sika.
b. Color: Standard colors matching finished surfaces.
c. Applications: Use for exterior and interior pedestrian and vehicular traffic bearing joints.

3. Exterior Foam Expansion Joint Sealer: Precompressed foam sealer; Polyurethane with water-repellent; products recommended by manufacturer for traffic-bearing use.

a. Color: Black color.
b. Size: As required to provide weathertight seal when installed.
c. Applications: Use for exterior wall expansion joints.

4. General Purpose Interior Sealant: Acrylic emulsion latex; ASTM C834, single component, paintable.

a. Color: Standard colors matching finished surfaces.
b. Applications: Use for interior wall and ceiling control joints, joints between door and window frames and wall surfaces, and other interior joints for which no other type of sealant is indicated.:

5. Bathtub/Tile Sealant: White silicone; ASTM C920, Uses M and A; single component, mildew resistant.

a. Applications: Use for joints between plumbing fixtures and floor and wall surfaces, and joints between kitchen and bathroom toilet room counter tops and wall surfaces.

6. Sealant for Continuous Water Immersion: Polyurethane; NSF 61 Approved; ASTM C920, Grade NS, Class 25, Uses M and A; approved by manufacturer for continuous water immersion; single or multi- component.

a. Type: Sikaflex 1a manufactured by Sika.
b. Color: Standard colors matching finished surfaces.
c. Applications: Use for improved tank access.

2.2 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: Round foam rod compatible with sealant; ASTM D1056, sponge or expanded rubber; oversized 30 to 50 percent larger than joint width.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

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PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 31 00 – Project Management and Coordination.

B. Verify substrate surfaces and joint openings are ready to receive work.

C. Verify joint backing and release tapes are compatible with sealant.

3.2 PREPARATION

A. Remove loose materials and foreign matter impairing adhesion of sealant.

B. Clean and prime joints.

C. Perform preparation in accordance with ASTM C1193.

D. Protect elements surrounding Work of this section from damage or disfiguration.

3.3 INSTALLATION

A. Perform installation in accordance with ASTM C1193.

B. Perform acoustical sealant application work in accordance with ASTM C919.

C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions are indicated.

D. Install bond breaker where joint backing is not used.

E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

F. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

G. Tool joints concave.

H. Precompressed Foam Sealant: Do not stretch; avoid joints except at corners, ends, and intersections; install with face 1/8 to 1/4 inch below adjoining surface.

3.4 CLEANING

A. Section 01 77 00 – Closeout Procedures: Final cleaning.

B. Clean all adjoining surfaces of excess sealants and caulking, smears or markings due to application and leave joint with neat, uniformly-filled surface.

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3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 77 00 – Closeout Procedures: Protecting installed construction.

B. Protect sealants until cured.

END OF SECTION

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SECTION 08 11 00
METAL DOORS AND FRAMES

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
1. Steel doors.
2. Steel door frames.
3. Sidelight frames
4. Borrowed-light frames.

B. Related Sections include the following:
1. Division 4 Section "Unit Masonry Assemblies" for installing anchors and grouting frames in masonry construction.
2. Division 8 Section "Flush Wood Doors" for wood doors installed in steel frames.
3. Division 8 Section "Door Hardware" for door hardware and weather stripping.
4. Division 8 Section "Glazing" for glass in glazed openings.
5. Division 9 Section "Gypsum Board Assemblies" for spot-grouting frames installed in steel-framed gypsum board partitions.
6. Division 9 Section "Painting" for field painting factory-primed doors and frames.

1.3 DEFINITIONS

A. Steel Sheet Thicknesses: Thickness dimensions, including those referenced in ANSI A250.8, are minimums as defined in referenced ASTM standards for both uncoated steel sheet and the uncoated base metal of metallic-coated steel sheets.

1.4 SUBMITTALS

A. Product Data: For each type of door and frame indicated, include door designation, type, level and model, material description, core description, construction details, label compliance, sound and fire-resistance ratings, and finishes.

B. Shop Drawings: Show the following:
1. Elevations of each door design.
2. Details of doors including vertical and horizontal edge details.
3. Frame details for each frame type including dimensioned profiles.
4. Details and locations of reinforcement and preparations for hardware.
5. Details of each different wall opening condition.

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6. Details of anchorages, accessories, joints, and connections.
7. Coordination of glazing frames and stops with glass and glazing requirements.

C. Door Schedule: Use same reference designations indicated on Drawings in preparing schedule for doors and frames.

D. Oversize Construction Certificates: For door assemblies required to be fire-protection rated and exceeding size limitations of labeled assemblies.

E. Metallic Construction Certificates: For door assemblies (doors and frames) required to be of metallic coated steel for compliance with this specification section.

1.5 QUALITY ASSURANCE

A. Steel Door and Frame Standard: Comply with ANSI A 250.8, unless more stringent requirements are indicated.

B. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 252.
1. Test Pressure: Test at atmospheric pressure.
2. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a testing agency acceptable to authorities having jurisdiction that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.

B. Inspect doors and frames on delivery for damage, and notify shipper and supplier if damage is found. Minor damages may be repaired provided refinished items match new work and are acceptable to Architect. Remove and replace damaged items that cannot be repaired as directed.

C. Store doors and frames at building site under cover. Place units on minimum 4-inch-high wood blocking. Avoid using nonvented plastic or canvas shelters that could create a humidity chamber. If door packaging becomes wet, remove cartons immediately. Provide minimum 1/4-inch spaces between stacked doors to permit air circulation.

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PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Steel Doors and Frames:

   a. Amweld Building Products, Inc.
   b. Ceco Door Products; a United Dominion Company.
   c. Curries Company.
   d. Kewanee Corporation (The).
   e. Pioneer Industries Inc.
   f. Republic Builders Products.
   g. Steelcraft; a division of Ingersoll-Rand.

2.2 MATERIALS

A. Hot-Rolled Steel Sheets: ASTM A 569/A 569M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

B. Cold-Rolled Steel Sheets: ASTM A 366/A 366M, Commercial Steel (CS), or ASTM A 620/A 620M, Drawing Steel (DS), Type B; stretcher-leveled standard of flatness.

C. Metallic-Coated Steel Sheets: ASTM A 653/A 653M, Commercial Steel (CS), Type B, with an A40 zinc-iron-alloy (galvannealed) coating; stretcher-leveled standard of flatness.

D. Electrolytic Zinc-Coated Steel Sheet: ASTM A 591/A 591M, Commercial Steel (CS), Class B coating; mill phosphatized; suitable for unexposed applications; stretcher-leveled standard of flatness where used for face sheets.

2.3 DOORS

A. General: Provide doors of sizes, thicknesses, and designs indicated.

B. Interior Doors: Provide doors complying with requirements indicated below by referencing ANSI 250.8 for level and model and ANSI A250.4 for physical-endurance level:

1. Level 2 and Physical Performance Level A (Heavy Duty), Model 2 (Seamless) (18 gauge face).

C. Exterior Doors: Provide doors complying with requirements indicated below by referencing ANSI A250.8 for level and model and ANSI A250.4 for physical-endurance level:

1. Level 4 and Physical Performance Level A (Maximum Duty), Model 2 (Seamless) (14 gauge face).

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D. Vision Lite Systems: Manufacturer's standard kits consisting of glass lite moldings to accommodate glass thickness and size of vision lite indicated.

2.4 FRAMES

A. General: Provide steel frames for doors, transoms, sidelights, borrowed lights, and other openings that comply with ANSI A250.8 and with details indicated for type and profile. Conceal fastenings, unless otherwise indicated.

B. Exterior Frames: Fabricated from metallic-coated steel sheet.
1. Fabricate frames with mitered or coped and welded face corners and seamless face joints.
2. Frames for Level 4 Steel Doors: 0.067-inch- (1.7-mm-) (16 gauge) thick steel sheet.

C. Interior Frames: Fabricated from cold-rolled steel sheet, unless otherwise indicated to comply with exterior frame requirements.
1. Fabricate frames with mitered or coped and welded face corners and seamless face joints.
2. Frames for Level 2 Steel Doors: 0.067-inch- (1.7-mm-) (16 gauge) thick steel sheet.
3. Frames for Wood Doors: 0.067-inch- (1.7-mm-) (16 gauge) thick steel sheet.
4. Frames for Borrowed Lights: 0.067-inch- (1.7-mm-) (16 gauge) thick steel sheet.

D. Door Silencers: Except on weather-stripped frames, fabricate stops to receive three silencers on strike jambs of single-door frames and two silencers on heads of double-door frames.

E. Plaster Guards: Provide 0.016-inch-thick, steel sheet plaster guards or mortar boxes to close off interior of openings; place at back of hardware cutouts where mortar or other materials might obstruct hardware operation.

F. Supports and Anchors: Fabricated from not less than 0.042-inch-thick, electrolytic zinc-coated or metallic-coated steel sheet.
1. Wall Anchors in Masonry Construction: 0.177-inch-diameter, steel wire complying with ASTM A 510 may be used in place of steel sheet.

G. Inserts, Bolts, and Fasteners: Manufacturer's standard units. Where zinc-coated items are to be built into exterior walls, comply with ASTM A 153/A 153M, Class C or D as applicable.

2.5 FABRICATION

A. General: Fabricate steel door and frame units to comply with ANSI A250.8 and to be rigid, neat in appearance, and free from defects including warp and buckle. Where practical, fit and assemble units in manufacturer's plant. Clearly identify work that

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cannot be permanently factory assembled before shipment, to assure proper assembly at Project site.

B. Exterior Door Construction: For exterior locations and elsewhere as indicated, fabricate doors, panels, and frames from metallic-coated steel sheet. Close top and bottom edges of doors flush as an integral part of door construction or by addition of 0.053-inch- (1.3-mm-) thick, metallic-coated steel channels with channel webs placed even with top and bottom edges.

C. Interior Door and Panel Faces: Fabricate exposed faces of doors and panels, including stiles and rails of nonflush units, from the following material:
1. Cold-rolled steel sheet.
2. Metallic-coated steel sheet at all wet areas.

D. Core Construction: Manufacturer's standard core construction that produces a door complying with SDI standards.

E. Clearances for Non-Fire-Rated Doors: Not more than 1/8 inch at jambs and heads, except not more than 1/4 inch between pairs of doors. Not more than 3/4 inch at bottom.

F. Clearances for Fire-Rated Doors: As required by NFPA 80.

G. Single-Acting, Door-Edge Profile: Beveled edge.

H. Tolerances: Comply with SDI 117, "Manufacturing Tolerances for Standard Steel Doors and Frames."

I. Fabricate concealed stiffeners, reinforcement, edge channels, louvers, and moldings from either cold- or hot-rolled steel sheet.

J. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat or oval heads for exposed screws and bolts.

K. Thermal-Rated (Insulating) Assemblies: At exterior locations and elsewhere as shown or scheduled, provide doors fabricated as thermal-insulating door and frame assemblies and tested according to ASTM C 236 or ASTM C 976 on fully operable door assemblies.
1. Unless otherwise indicated, provide thermal-rated assemblies with U-value of 0.37 Btu/sq. ft. x h x deg F or better.

L. Hardware Preparation: Prepare doors and frames to receive mortised and concealed hardware according to final door hardware schedule and templates provided by hardware supplier. Comply with applicable requirements in ANSI A250.6 and ANSI A115 Series specifications for door and frame preparation for hardware.
1. For concealed overhead door closers, provide space, cutouts, reinforcement, and provisions for fastening in top rail of doors or head of frames, as applicable.

M. Frame Construction: Fabricate frames to shape shown.

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1. Fabricate frames with mitered or coped and continuously welded corners and seamless face joints.
2. For exterior applications, fabricate frames with mitered or coped and continuously welded corners and seamless face joints.
3. Provide welded frames with temporary spreader bars.
4. Provide terminated stops where indicated.
5. Provide metallic-coated steel sheet at all exterior locations and at all wet areas.

N. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at Project site.
1. Provide auxiliary hinge reinforcement at all hinge locations on every frame.

O. Locate hardware as indicated on Shop Drawings or, if not indicated, according to ANSI A250.8.

P. Glazing Stops: Manufacturer's standard, formed from 0.032-inch-thick steel sheet.
1. Provide nonremovable stops on outside of exterior doors and on secure side of interior doors for glass, louvers, and other panels in doors.
2. Provide screw-applied, removable, glazing stops on inside of glass, louvers, and other panels in doors.

Q. Astragals: As required by NFPA 80 to provide fire ratings indicated.

2.6 FINISHES

A. Prime Finish: Manufacturer's standard, factory-applied coat of rust-inhibiting primer complying with ANSI A250.10 for acceptance criteria.

PART 3 EXECUTION

3.1 INSTALLATION

A. General: Install steel doors, frames, and accessories according to Shop Drawings, manufacturer's data, and as specified.

B. Placing Frames: Comply with provisions in SDI 105, unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
1. Except for frames located in existing walls or partitions, place frames before construction of enclosing walls and ceilings.
2. In masonry construction, provide at least three wall anchors per jamb; install adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Acceptable anchors include masonry wire anchors and masonry T-shaped anchors.

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3. In existing concrete or masonry construction, provide at least three completed opening anchors per jamb; install adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Set frames and secure to adjacent construction with bolts and masonry anchorage devices. Counter sink bolt head in door frame, cover with auto body Bondo sand smooth and paint.
4. In metal-stud partitions, provide at least three wall anchors per jamb; install adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Attach wall anchors to studs with screws.
5. Install fire-rated frames according to NFPA 80.
6. For openings 90 inches or more in height, install an additional anchor at hinge and strike jambs.

C. Door Installation: Comply with ANSI A250.8. Fit hollow-metal doors accurately in frames, within clearances specified in ANSI A250.8. Shim as necessary to comply with SDI 122 and ANSI/DHI A115.1G.
1. Fire-Rated Doors: Install within clearances specified in NFPA 80.
2. Smoke-Control Doors: Install to comply with NFPA 105.

3.2 ADJUSTING AND CLEANING

A. Prime-Coat Touchup: Immediately after installation, sand smooth any rusted or damaged areas of prime coat and apply touch up of compatible air-drying primer.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 08 71 00
DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

A. Section includes hardware for wood, steel, aluminum doors.
   1. Provide door gaskets, including weather stripping and seals, and thresholds.

1.2 REFERENCES

A. American National Standards Institute:
   1. ANSI A156.1 - Butts and Hinges.
   2. ANSI A156.2 - Bored and Preassembled Locks and Latches.
   3. ANSI A156.3 - Exit Devices.
   4. ANSI A156.4 - Door Controls - Closures.
   5. ANSI A156.5 - Auxiliary Locks and Associated Products.
   6. ANSI A156.6 - Architectural Door Trim.
   7. ANSI A156.7 - Template Hinge Dimensions.
   8. ANSI A156.8 - Door Controls - Overhead Holders.
   9. ANSI A156.12 - Interconnected Locks and Latches.
   10. ANSI A156.13 - Mortise Locks and Latches.
   11. ANSI A156.14 - Sliding and Folding Door Hardware.
   12. ANSI A156.15 - Closer Holder Release Devices.
   13. ANSI A156.16 - Auxiliary Hardware.
   14. ANSI A156.18 - Materials and Finishes
   15. ANSI A156.19 - Power Assist and Low Energy Power Operated Doors.
   16. ANSI A156.23 - Electromagnetic Locks.
   17. ANSI A156.24 - Delayed Egress Locks.
   18. ANSI A156 - Complete Set of 24 BHMA Standards (A156 Series) with Binder.

B. Builders Hardware Manufacturers Association:
   1. BHMA Directory of Certified Products.

C. National Fire Protection Association:
   1. NFPA 80 - Standard for Fire Doors, Fire Windows.
   2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.

D. Underwriters Laboratories Inc.:
   1. UL 10B - Fire Tests of Door Assemblies.
   2. UL 305 - Panic Hardware.
   3. UL - Building Materials Directory.

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E. Intertek Testing Services (Warnock Hersey Listed):
   1. WH - Certification Listings.

1.3 PERFORMANCE REQUIREMENTS

A. Fire Rated Openings: Provide door hardware listed by UL or Intertek Testing Services (Warnock Hersey Listed), or other testing laboratory approved by applicable authorities.
   1. Hardware: Tested in accordance with NFPA 252.

1.4 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

B. Shop Drawings:
   1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts, electrical characteristics and connection requirements.
   2. Submit manufacturer's parts lists, and templates. Coordinate with security gate manufacturer for installation and proper fit.

C. Manufacturer's Installation Instructions: Submit special procedures, and perimeter conditions requiring special attention.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.

B. Project Record Documents: Record actual locations of installed cylinders and their master key code.

C. Operation and Maintenance Data: Submit data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

D. Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.

1.6 QUALITY ASSURANCE

A. Perform Work in accordance with the following requirements:
   1. ANSI A156 series.
   2. NFPA 80.
   3. UL 305.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

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B. Hardware Supplier: Company specializing in supplying commercial door hardware with minimum three years documented experience.

C. Products Requiring Electrical Connection: Listed and classified by [Underwriters' Laboratories, Inc., as suitable for purpose specified and indicated.

1.8 PRE-INSTALLATION MEETINGS

A. Section 01 30 00 - Administrative Requirements: Pre-installation meeting.

B. Convene minimum one week prior to commencing work of this section.

C. Include persons involved with installation of doors, frames, and hardware.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Package hardware items individually with necessary fasteners, instructions, and installation templates, when necessary; label and identify each package with door opening code to match hardware schedule.

1.10 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Coordinate Work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware and recessed items.
   1. Provide templates or actual hardware as required to ensure proper preparation of doors and frames.

C. Sequence installation to accommodate required utility connections.

D. Coordinate Owner's keying requirements during course of Work.

1.11 WARRANTY

A. Section 01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.

B. Furnish five-year manufacturer warranty for locksets and door closers.

1.12 MAINTENANCE MATERIALS

A. Section 01 70 00 - Execution and Closeout Requirements: Maintenance materials.

B. Furnish maintenance tools and accessories supplied by hardware component manufacturer.

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C. Furnish special wrenches and tools applicable for each different and for each special hardware component.

1.13 EXTRA MATERIALS

A. Section 01 70 00 - Execution and Closeout Requirements: Spare parts and maintenance products.

B. Furnish ten extra keys for each master keyed group.

PART 2 PRODUCTS

2.1 DOOR HARDWARE

A. Manufacturers:
1. Accurate Metal Weather Strip Co. Inc.
2. American Device Manufacturing Co.
3. Arrow Architectural Hardware
4. Bommer Industries, Inc.
5. Clipenglyde, Inc.
6. Dorma Door Controls, Inc.
7. NT Falcon Lock
8. Glynn-Johnson
9. Hager Companies
10. Holmes-Hally Industries, Inc.
11. LCN Closers
12. Markar Products, Inc.
13. NT Monarch Hardware
14. Precision Hardware Mfg Co Inc.
15. Reese Industries
16. Sash Controls Inc.
17. Schlage Lock Co.
18. Stanley Hardware
19. Von Duprin, Inc.

B. Hinge Manufacturers:
1. Bommer Industries, Inc.
2. Hager Companies
3. Stanley Hardware

C. Lockset, Latch Set, and Cylinder Manufacturers:
1. Schlage Lock Co.
2. Yale
3. Wieser

D. Closers Manufacturers:

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1. Arrow Architectural Hardware
2. Dorma Door Controls, Inc
3. LCN Closers
4. Yale

E. Push/Pulls Manual Bolts, Thresholds, and Trim Manufacturers:
1. Schlage Lock Co
2. Reese Industries
3. Pemko

F. Substitutions: Section 01 60 00 – Product Requirements.

2.2 COMPONENTS

A. General Hardware Requirements: Where not specifically indicated, comply with applicable ANSI A156 standard for type of hardware required. Furnish each type of hardware with accessories as required for applications indicated and for complete, finished, operational doors.
1. Templates: Furnish templates or physical hardware items to door and frame manufacturers sufficiently in advance to avoid delay in Work.
2. Reinforcing Units: Furnished by door and frame manufacturers; coordinated by hardware supplier or hardware manufacturer.
3. Fasteners: Furnish as recommended by hardware manufacturer and as required to secure hardware.
    a. Finish: Match hardware item being fastened.
4. Fire Ratings: Provide hardware with UL or Intertek Testing Services (Warnock Hersey Listed) listings for type of application involved.
5. Electrical Devices: Make provisions and coordinate requirements for electrical devices and connections for hardware.

B. Hinges: ANSI A156.1, full mortise type complying with following general requirements unless otherwise noted on drawings.
1. Widths: Sufficient to clear trim projection when door swings 180 degrees.
2. Number: Furnish minimum three hinges to 90 inches high, four hinges to 120 inches high for each door leaf.
    a. Fire Rated Doors To 86 inches High: Minimum three hinges.
    b. Residential Wood Doors: Furnish minimum three hinges.
3. Size and Weight: 4-1/2 inch heavy weight typical for 1-3/4 inch doors.
    a. Doors Over 40 inches Wide: Extra heavy weight ball or oilite bearing hinges.
    b. Doors 1-3/8 inch Thick: 3-1/2 inch size.
    c. Doors 2 inch Thick: 5 inch extra heavy weight ball or oilite bearing.
    d. Doors Over 48 inches Wide: 5 inch extra heavy weight ball or oilite bearing.

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4. Pins: Furnish nonferrous hinges with non-removable pins (NRP) at exterior and locked outswinging doors, non-rising pins at interior doors.
5. Tips: Flush tips

C. Pivots: ANSI A156.1 and A156.4, center ~~[offset full mortise]~~ pivots.
1. Size: As recommended by pivot manufacturer for size and weight of door.

D. Locksets: Furnish locksets compatible with specified cylinders. Typical 2-3/4 inch (70 mm) backset. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt [verify type of cutouts provided in metal frames].
1. Mortise Locksets: ANSI A156.13, Series 1000, Grade 1 unless otherwise indicated.
2. Bored (Cylindrical) Locksets: ANSI A156.2, Series 4000, Grade 1 unless otherwise indicated.
3. Preassembled (Unit) Locksets: ANSI A156.12, Series 2000, Grade 1 unless otherwise indicated.
4. Interconnected Locksets: ANSI A156.12, Series 5000, Grade 1 unless otherwise indicated.
5. Auxiliary Locksets: ANSI A156.5, Grade 1, ~~[mortise dead locks]~~ [bored dead locks] ~~[rim locks] [narrow stile locks]~~ unless otherwise indicated.

E. Latch Sets: Match locksets. Typical 2-3/4 inch backset. Furnish standard strikes with extended lips to protect trim from being marred by latch bolt verify type of cutouts provided in metal frames.
1. Mortise Latch Sets: ANSI A156.13, Series 1000, Grade 3 unless otherwise indicated.
2. Bored (Cylindrical) Latch Sets: ANSI A156.2, Series 4000, Grade 3 unless otherwise indicated.

F. Cylinders: ANSI A156.5, Grade 1, pin type.
1. Keying: Keyed as directed by Owner. Keyed in like-groups. Master keyed.
2. Include construction keying.
3. Keys: Nickel silver. Stamp keys with “DO NOT DUPLICATE”.
4. Supply keys in the following minimum quantities:
    a. 10 master keys.

G. Closers: ANSI A156.4 closers; full rack and pinion type with steel spring and non-freezing hydraulic fluid; closers required for fire rated doors unless otherwise indicated.
1. Adjustability: Furnish controls for regulating closing, latching, speeds, and back checking.
2. Arms: Type to suit individual condition; parallel-arm closers at reverse bevel doors and where doors swing full 180 degrees.
3. Location: Mount closers on inside of exterior doors, room side of interior doors typical; mount on pull side of other doors.
4. Operating Pressure: Maximum operating pressure as follows.

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a. Interior Doors: Maximum 5 pounds.
b. Exterior Doors: Maximum 8.5 pound.
c. Fire Rated Doors: As required for fire rating, maximum 15 pounds.

H. Door Controls and Overhead Holders: Furnish with accessories as required for complete operational installation.
1. Manual Door Holders and Overhead Stops: ANSI A156.8, Grade 1 types as specified
2. Closer Holder Release Devices: ANSI A156.15 closers.
3. Electro-Magnetic Door Holder: ANSI A156.15.
4. Power Assist Door Operators: ANSI A156.19 power mechanism which reduces opening resistance of self-closing door.
5. Low Energy Power Door Operators: ANSI A156.19 power mechanism which opens and closes door upon receipt of signal.
6. Low Energy Power Open Door Operators: ANSI A156.19 power mechanism which opens self-closing door; closing of door independent of power operator.
7. Key pad entry system: AlarmLock DL2800 or approved equal.

I. Push/Pulls, Manual Bolts, Thresholds, and Trim: Furnish as indicated in Schedule, with accessories as required for complete operational door installations.
1. Push/Pulls: ANSI A156.6; push plates minimum 0.050 inch thick. Furnish [push-pull plate] type pulls with bolts to secure from opposite door face; furnish with minimum 0.050 inch pull plates unless otherwise indicated.
2. Manual Bolts: ANSI A156.16 Grade 1 top and bottom flush bolts, with dust-proof floor strike, unless otherwise indicated. For doors taller than 7 feet, an extension will need to be provided for the top flush bolt.
3. Kickplates: ANSI A156.6, metal; height indicated in Schedule by 1 inch less than door width; minimum 0.050 inch thick stainless steel.
4. Weatherstripping: Furnish continuous weatherstripping at top and sides of exterior doors.
5. Thresholds: Maximum 1/2 inch height.
6. Floor Stops: With door holder.
7. Wall Stops: ANSI A156.1, Grade 1, 2-1/2 inch wall stop concave pad wall stop with visible screws.

2.3 ACCESSORIES

A. Lock Trim: Furnish levers with escutcheon plate as selected from manufacturer's full range of levers.
1. Do not permit through bolts on solid wood core doors.

B. Through Bolts: Do not permit through bolts and grommet nuts on door faces in occupied areas unless no alternative is possible.
1. Do not use through bolts on solid wood core doors.

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2.4 FINISHING

A. Finishes: ANSI A156.18; furnish following finishes except where otherwise indicated in Schedule at end of section.
   1. Hinges:
      a. BHMA 630 and 626, satin finish.
   2. Typical Exterior Exposed and High Use Interior Door Hardware:
      a. BHMA 630, satin finished stainless steel.
   3. Typical Interior Door Hardware:
      a. BHMA 630, satin finished stainless steel.
   4. Closers: Finish appearance to match door hardware on same face of door.
      a. BHMA 628, satin aluminum, clear anodized.
   5. Thresholds: Finish appearance to match door hardware on exterior face of door.
      a. BHMA 628, satin aluminum, clear anodized.
   6. Other Items: Furnish manufacturer's standard finishes to match similar hardware types on same door, and maintain acceptable finish considering anticipated use and BHMA category of finish.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify doors and frames are ready to receive door hardware and dimensions are as indicated on shop drawings and/or as instructed by manufacturer.

C. Verify electric power is available to power operated devices and is of correct characteristics.

3.2 INSTALLATION

A. Coordinate mounting heights with door and frame manufacturers. Use templates provided by hardware item manufacturer.

B. Mounting Heights from Finished Floor to Center Line of Hardware Item: Comply with manufacturer recommendations and applicable codes where not otherwise indicated.
   1. Locksets: 38 inch
   2. Push/Pulls: 42 inch
   3. Dead Locks: 48 inch
   4. Push Pad Type Exit Devices: 42 inch
   5. Cross Bar Type Exit Devices: 38 inch

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6. Top Hinge: Jamb manufacturer's standard, but not greater than 10 inches from head of frame to center line of hinge.
7. Bottom Hinge: Jamb manufacturer's standard, but not greater than 12-1/2 inches from floor to center line of hinge.
8. Intermediate Hinges: Equally spaced between top and bottom hinges and from each other.
9. Hinge Mortise on Door Leaf: 1/4 inch. to 5/16 inch from stop side of door.

3.3 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.

3.4 ADJUSTING

A. Section 01 70 00 - Execution and Closeout Requirements: Testing, adjusting, and balancing.

B. Adjust hardware for smooth operation.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 70 00 - Execution and Closeout Requirements: Protecting installed construction.

B. Do not permit adjacent work to damage hardware or hardware finish.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 08 80 00
GLAZING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:
   1. Windows.
   2. Doors.
   3. Glazed entrances.
   4. Interior borrowed lites.
   5. Storefront framing.

1.3 DEFINITIONS

A. Manufacturers of Glass Products: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.

B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.

C. Interspace: Space between lites of an insulating-glass unit that contains dehydrated air or a specified gas.

D. Deterioration of Coated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in metallic coating.

E. Deterioration of Insulating Glass: Failure of hermetic seal under normal use that is attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.

F. Deterioration of Laminated Glass: Defects developed from normal use that are attributed to the manufacturing process and not to causes other than glass breakage and practices for maintaining and cleaning laminated glass contrary to manufacturer's written instructions.

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Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.

1.4 PERFORMANCE REQUIREMENTS

A. General: Provide glazing systems capable of withstanding normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, and installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.

B. Glass Design: Glass thickness designations indicated are minimums and are for detailing only. Confirm glass thicknesses by analyzing Project loads and in-service conditions. Provide glass lites in the thickness designations indicated for various size openings, but not less than thicknesses and in strengths (annealed or heat treated) required to meet or exceed the following criteria:

1. Glass Thicknesses: Select minimum glass thicknesses to comply with ASTM E 1300, according to the following requirements:

   a. Design Wind Loads: Determine design wind loads applicable to Project from basic wind speed indicated in miles per hour (meters per second) at 33 feet (10 m) above grade, according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 6.5, "Method 2-Analytical Procedure," based on mean roof heights above grade indicated on Drawings. Design wind load shall be minimum 50 mph.

   b. Specified Design Snow Loads: As indicated, but not less than snow loads applicable to Project as required by ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 7.0, "Snow Loads."

   c. Probability of Breakage for Vertical Glazing: 8 lites per 1000 for lites set vertically or not more than 15 degrees off vertical and under wind action.

      1) Load Duration: 60 seconds or less.

   d. Probability of Breakage for Sloped Glazing: 1 lite per 1000 for lites set more than 15 degrees off vertical and under wind and snow action.

      1) Load Duration: 30 days.

   e. Maximum Lateral Deflection: For the following types of glass supported on all 4 edges, provide thickness required that limits center deflection at design wind pressure to 1/50 times the short side length or 1 inch (25 mm), whichever is less.

      1) For monolithic-glass lites heat treated to resist wind loads.
      2) For insulating glass.
      3) For laminated-glass lites.

   f. Minimum Glass Thickness for Exterior Lites: Not less than 6.0 mm.

   g. Thickness of Tinted and Heat-Absorbing Glass: Provide the same thickness for each tint color indicated throughout Project.

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C. Thermal Movements: Provide glazing that allows for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures acting on glass framing members and glazing components. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
   1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

D. Thermal and Optical Performance Properties: Provide glass with performance properties specified based on manufacturer's published test data, as determined according to procedures indicated below:
   1. For monolithic-glass lites, properties are based on units with lites 6.0 mm thick.
   2. For laminated-glass lites, properties are based on products of construction indicated.
   3. For insulating-glass units, properties are based on units with lites 6.0 mm thick and a nominal 1/2-inch- (12.7-mm-) wide interspace.
   4. Center-of-Glass Values: Based on using LBL-44789 WINDOW 5.0 computer program for the following methodologies:
      a. U-Factors: NFRC 100 expressed as Btu/ sq. ft. x h x deg F (W/sq. m x K).
      b. Solar Heat Gain Coefficient: NFRC 200.
      c. Solar Optical Properties: NFRC 300.

1.5 SUBMITTALS

A. Product Data: For each glass product and glazing material indicated.

B. Samples: For the following products, in the form of 12-inch- (300-mm-) square Samples for glass.
   1. Each color of tinted float glass.
   2. Each type of patterned glass.
   3. Coated vision glass.
   4. Ceramic-coated spandrel glass.
   5. Each pattern and color of ceramic-coated vision glass.
   6. Fire-resistive glazing products.
   7. Each type of laminated glass with colored interlayer.
   8. Insulating glass for each designation indicated.
   9. For each color (except black) of exposed glazing sealant indicated.

C. Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.

D. Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.
   1. For solar-control low-e-coated glass, provide documentation demonstrating that manufacturer of coated glass is certified by coating manufacturer.

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E. Qualification Data: For installers.

F. Preconstruction Adhesion and Compatibility Test Report: From glazing sealant manufacturer indicating glazing sealants were tested for adhesion to glass and glazing channel substrates and for compatibility with glass and other glazing materials.

G. Product Test Reports: For each of the following types of glazing products:
1. Tinted float glass.
2. Coated float glass.
3. Insulating glass.
4. Glazing sealants.
5. Glazing gaskets.

H. Warranties: Special warranties specified in this Section.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for this Project; whose work has resulted in glass installations with a record of successful in-service performance; and who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.

B. Source Limitations for Glass: Obtain the following through one source from a single manufacturer for each glass type: clear float glass, coated float glass, laminated glass, and insulating glass.

C. Source Limitations for Glass Sputter-Coated with Solar-Control Low-E Coatings: Where solar-control low-e coatings of a primary glass manufacturer that has established a certified fabricator program is specified, obtain sputter-coated solar-control low-e-coated glass in fabricated units from a manufacturer that is certified by coated-glass manufacturer.

D. Source Limitations for Glazing Accessories: Obtain glazing accessories through one source from a single manufacturer for each product and installation method indicated.

E. Glass Product Testing: Obtain glass test results for product test reports in "Submittals" Article from a qualified testing agency based on testing glass products.
1. Glass Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.

F. Elastomeric Glazing Sealant Product Testing: Obtain sealant test results for product test reports in "Submittals" Article from a qualified testing agency based on testing current sealant formulations within a 36-month period.
1. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated, as documented according to ASTM E 548.

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2. Test elastomeric glazing sealants for compliance with requirements specified by reference to ASTM C 920, and where applicable, to other standard test methods.

G. Preconstruction Adhesion and Compatibility Testing: Submit to elastomeric glazing sealant manufacturers, for testing indicated below, samples of each glazing material type, tape sealant, gasket, glazing accessory, and glass-framing member that will contact or affect elastomeric glazing sealants:
1. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of glazing sealants to glass, tape sealants, gaskets, and glazing channel substrates.
2. Submit not fewer than eight pieces of each type of material, including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
4. For materials failing tests, obtain sealant manufacturer's written instructions for corrective measures, including the use of specially formulated primers.
5. Testing will not be required if elastomeric glazing sealant manufacturers submit data based on previous testing of current sealant products for adhesion to, and compatibility with, glazing materials matching those submitted.

H. Glazing for Fire-Rated Door Assemblies: Glazing for assemblies that comply with NFPA 80 and that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 252.

I. Glazing for Fire-Rated Window Assemblies: Glazing for assemblies that comply with NFPA 80 and that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 257.

J. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201.
1. Subject to compliance with requirements, obtain safety glazing products permanently marked with certification label of the Safety Glazing Certification Council or another certification agency acceptable to authorities having jurisdiction.
2. Where glazing units, including Kind FT glass and laminated glass, are specified in Part 2 articles for glazing lites more than 9 sq. ft. (0.84 sq. m) in exposed surface area of one side, provide glazing products that comply with Category II materials, for lites 9 sq. ft. (0.84 sq. m) or less in exposed surface area of one side, provide glazing products that comply with Category I or II materials, except for hazardous locations where Category II materials are required by 16 CFR 1201 and regulations of authorities having jurisdiction.

K. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are

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indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. GANA Publications: GANA Laminated Division's "Laminated Glass Design Guide" and GANA's "Glazing Manual."
2. AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR-A7, "Sloped Glazing Guidelines."
3. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Sloped Glazing Guidelines."
4. IGMA Publication for Insulating Glass: SIGMA TM-3000, "Glazing Guidelines for Sealed Insulating Glass Units."

L. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of the following testing and inspecting agency:

1. Insulating Glass Certification Council.

M. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockups in the location and of the size indicated or, if not indicated, as directed by Architect.
2. Build glass mockups by installing the following kinds of glass in mockups specified in Division 8 Section "Aluminum-Framed Entrances and Storefronts and Glazed Aluminum Curtain Walls" to match glazing systems required for Project, including glazing methods:
   a. Heat-strengthened coated glass.
   b. Fully tempered glass.
   c. Spandrel glass.
   d. Laminated glass.
   e. Coated insulating glass.
3. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

N. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect glazing materials according to manufacturer's written instructions and as needed to prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

B. For insulating-glass units that will be exposed to substantial altitude changes, comply with insulating-glass manufacturer's written recommendations for venting and sealing to avoid hermetic seal ruptures.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

1.8 PROJECT CONDITIONS

A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
   1. Do not install liquid glazing sealants when ambient and substrate temperature conditions are outside limits permitted by glazing sealant manufacturer or below 40 deg F (4.4 deg C).

1.9 WARRANTY

A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer's standard form, made out to Owner and signed by coated-glass manufacturer agreeing to replace coated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
   1. Warranty Period: 10 years from date of Substantial Completion.

B. Manufacturer's Special Warranty on Laminated Glass: Manufacturer's standard form, made out to Owner and signed by laminated-glass manufacturer agreeing to replace laminated-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
   1. Warranty Period: Five years from date of Substantial Completion.

C. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form, made out to Owner and signed by insulating-glass manufacturer agreeing to replace insulating-glass units that deteriorate as defined in "Definitions" Article, f.o.b. the nearest shipping point to Project site, within specified warranty period indicated below.
   1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
   1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
   2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.2 GLASS PRODUCTS

A. Annealed Float Glass: ASTM C 1036, Type I (transparent flat glass), Quality-Q3; of class indicated.

B. Heat-Treated Float Glass: ASTM C 1048; Type I (transparent flat glass); Quality-Q3; of class, kind, and condition indicated.
   1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.
   2. Provide Kind HS (heat-strengthened) float glass in place of annealed float glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" Article.
   3. For uncoated glass, comply with requirements for Condition A.
   4. For coated vision glass, comply with requirements for Condition C (other uncoated glass).
   5. Provide Kind FT (fully tempered) float glass in place of annealed or Kind HS (heat-strengthened) float glass where safety glass is indicated.

C. Ceramic-Coated Vision Glass: Float glass with ceramic enamel applied by silk-screened process and complying with ASTM C 1048, Condition C (other coated glass), Type I (transparent flat glass), Quality-Q3, Specification No. 95-1-31 in GANA Tempering Division's "Engineering Standards Manual," and other requirements specified.

D. Sputter-Coated Float Glass: ASTM C 1376, float glass with metallic-oxide or -nitride coating deposited by vacuum deposition process after manufacture and heat treatment (if any), and complying with other requirements specified.

E. Coated Spandrel Float Glass: Float glass complying with other requirements specified and with the following:
   1. Fallout Resistance: Provide spandrel units identical to those passing the fallout-resistance test for spandrel glass specified in ASTM C 1048.
   2. Factory apply manufacturer's standard opacifier of the following material to coated second surface of lites, with resulting products complying with Specification No. 89-1-6 in GANA Tempering Division's "Engineering Standards Manual."
      a. Manufacturer's standard opacifier material.

F. Laminated Glass: ASTM C 1172, and complying with other requirements specified and with the following:
   1. Interlayer: Polyvinyl butyral of thickness indicated with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after laminating glass lites and installation.
      a. For polyvinyl butyral interlayers, laminate lites in autoclave with heat plus pressure.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2. Laminating Process: Fabricate laminated glass to produce glass free of foreign substances and air or glass pockets.

G. Insulating-Glass Units, General: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, and complying with ASTM E 774 for Class CBA units and with requirements specified in this Article and in Part 2 "Insulating-Glass Units" Article.
1. Provide Kind HS (heat-strengthened) float glass in place of annealed glass where needed to resist thermal stresses induced by differential shading of individual glass lites and to comply with glass design requirements specified in Part 1 "Performance Requirements" Article.
2. Provide Kind FT (fully tempered) glass lites where safety glass is indicated.
3. Overall Unit Thickness and Thickness of Each Lite: Dimensions indicated for insulating-glass units are nominal and the overall thicknesses of units are measured perpendicularly from outer surfaces of glass lites at unit's edge.
4. Sealing System: Dual seal, with primary and secondary sealants as follows:
   a. Polyisobutylene and hot-melt butyl.
5. Spacer Specifications: Manufacturer's standard spacer material and construction complying with the following requirements:
   a. Spacer Material: Aluminum with mill or clear anodic finish.
   b. Desiccant: Molecular sieve or silica gel, or blend of both.
   c. Corner Construction: Manufacturer's standard corner construction.

2.3 GLAZING GASKETS

A. Dense Compression Gaskets: Molded or extruded gaskets of material indicated below, complying with standards referenced with name of elastomer indicated below, and of profile and hardness required to maintain watertight seal:
1. EPDM, ASTM C 864.
2. Silicone, ASTM C 1115.
3. Thermoplastic polyolefin rubber, ASTM C 1115.
4. Any material indicated above.

B. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned gaskets of material indicated below; complying with ASTM C 509, Type II, black; and of profile and hardness required to maintain watertight seal:
1. EPDM.
2. Silicone.
3. Thermoplastic polyolefin rubber.
4. Any material indicated above.

C. Lock-Strip Gaskets: Neoprene extrusions in size and shape indicated, fabricated into frames with molded corner units and zipper lock-strips, complying with ASTM C 542, black.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.4 GLAZING SEALANTS

A. General: Provide products of type indicated, complying with the following requirements:
   1. Compatibility: Select glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
   2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
   3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

B. Elastomeric Glazing Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
   1. Single-Component Neutral- and Basic-Curing Silicone Glazing Sealants:
      a. Available Products:
         1) Dow Corning Corporation; 790.
         2) GE Silicones; SilPruf LM SCS2700.
         3) Tremco; Spectrem 1 (Basic).
      b. Type and Grade: S (single component) and NS (nonsag).
      c. Class: 100/50.
      d. Use Related to Exposure: NT (nontraffic).
      e. Uses Related to Glazing Substrates: M, G, A, and, as applicable to glazing substrates indicated, O.
         1) Use O Glazing Substrates: Coated glass, color anodic aluminum, aluminum coated with a high-performance coating, galvanized steel, and wood.

2.5 GLAZING TAPES

A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based elastomeric tape with a solids content of 100 percent; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
   1. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; packaged on rolls with release liner protecting adhesive; and complying with AAMA 800 for the following types:
   1. Type 1, for glazing applications in which tape acts as the primary sealant.
   2. Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.6 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.

B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

D. Spacers: Elastomeric blocks or continuous extrusions with a Shore, Type A durometer hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

2.7 FABRICATION OF GLAZING UNITS

A. Fabricate glazing units in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.

B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites in a manner that produces square edges with slight kerfs at junctions with outdoor and indoor faces.

C. Grind smooth and polish exposed glass edges and corners.

2.8 MONOLITHIC FLOAT-GLASS UNITS

A. Uncoated Clear Float-Glass Units: Class 1 (clear) annealed or Kind HS (heat-strengthened) float glass where heat strengthening is required to resist thermal stresses induced by differential shading of individual glass lites and to comply with system performance requirements and Kind FT (fully tempered) float glass.
   1. Thickness: Not less than 6.0 mm.
   2. Uncoated Clear Fully Tempered Float Glass: Kind FT (fully tempered).

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.9 LAMINATED-GLASS UNITS

A. Heat-Treated Laminated-Glass Units:
1. Kind LHS, consisting of two lites of heat-strengthened float glass.
2. Outer Lite: Class 1 clear float glass.
   a. Kind HS (heat strengthened).
   b. Thickness: 3.0 mm.
3. Inner Lite: Class 1 (clear) float glass.
   a. Kind HS (heat strengthened).
   b. Thickness: 3.0 mm.
4. Plastic Interlayer:
   a. Thickness: 0.060 inch (1.52 mm), but not less than that required to comply as a Type II safety glass material.
   b. Interlayer Color: Clear.

2.10 INSULATING-GLASS UNITS

A. Solar Control Low-E Insulating Glass: Where glass of this designation is indicated, provide low-emissivity insulating-glass units complying with the following:
1. Products: Available products include the following:
   a. PPG SOLARBAN 60 (2) SOLARGRAY.
2. Overall Unit Thickness and Thickness of Each Lite: 25 and 6 mm.
3. Interspace Content: Air.
4. Indoor Lite: Type I (transparent glass, flat), Class 1 (clear) float glass.
   a. Kind HS (heat strengthened), Condition C (other coated glass).
5. Outdoor Lite: Type I (transparent glass, flat) float glass.
   a. Class 2 (tinted) float glass.
   1) Tint Color: SOLARGRAY
   b. Kind HS (heat strengthened), Condition A (uncoated surfaces) or Kind FT (fully tempered), Condition A (uncoated surfaces).
6. Low-Emissivity Coating: Sputter on third surface.
7. Visible Light Transmittance: 60%
8. Winter Nighttime U-Value: 0.29
9. Summer Daytime U-Value: 0.30
10. Solar Heat Gain Coefficient: 0.36
11. Outdoor Visible Reflectance: 11%
12. Shading Coefficient: 0.41.

B. Ceramic-Coated Spandrel Insulating Glass: Where glass of this designation is indicated, provide insulating-glass units complying with the following:
1. Products: Available products include the following:

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

a. Match adjacent glazing panels.

2. Construction: Provide units that comply with requirements specified for insulating-glass units except for indoor lite.
3. Indoor Lite: Ceramic-coated spandrel glass.

a. Kind HS (heat strengthened) or Kind FT (fully tempered).
b. Ceramic Coating Location: Fourth surface.
c. Color: As selected by Architect from manufacturer's full range.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine framing glazing, with Installer present, for compliance with the following:
1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
2. Presence and functioning of weep system.
3. Minimum required face or edge clearances.
4. Effective sealing between joints of glass-framing members.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.

3.3 GLAZING, GENERAL

A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.

B. Glazing channel dimensions, as indicated on Drawings, provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.

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E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass lites where length plus width is larger than 50 inches (1270 mm) as follows:
   1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
   2. Provide 1/8-inch (3-mm) minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.4 TAPE GLAZING

A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.

B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.

C. Cover vertical framing joints by applying tapes to heads and sills first and then to jambs. Cover horizontal framing joints by applying tapes to jambs and then to heads and sills.

D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.

E. Do not remove release paper from tape until just before each glazing unit is installed.

F. Apply heel bead of elastomeric sealant where indicated.

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G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.

H. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.5 GASKET GLAZING (DRY)

A. Fabricate compression gaskets in lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.

B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.

C. Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

D. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.

C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.7 LOCK-STRIP GASKET GLAZING

A. Comply with ASTM C 716 and gasket manufacturer's written instructions. Provide supplementary wet seal and weep system, unless otherwise indicated.

3.8 CLEANING AND PROTECTION

A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels, and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations, including weld splatter. If, despite such protection, contaminating substances

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do come into contact with glass, remove substances immediately as recommended by glass manufacturer.

C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.

D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

E. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

SECTION 09 20 00
PLASTER AND GYPSUM BOARD

PART 1 GENERAL

1.1 SUMMARY

A. This Section includes the following:
   1. Interior gypsum board.

1.2 REFERENCE STANDARDS

A. American National Standards Institute (ANSI)
   1. ANSI A 108.11 - Interior Installation of Cementitious Backer Units
   2. ANSI A 118.9 - American National Standard Specification for Test Methods and Specifications for Cementitious Backer Units

B. ASTM International
   1. ASTM C 473 - Standard Test Methods for Physical Testing of Gypsum Panel Products
   2. ASTM C 840 - Standard Specification for Application and Finishing of Gypsum Board
   3. ASTM C 919 - Standard Practice for Use of Sealants in Acoustical Applications
   4. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.
   5. ASTM C 1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
   6. ASTM C 1177 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
   7. ASTM C 1178 - Standard Specification for Coated Glass Mat Water Resistant Gypsum Backing Panel
   8. ASTM C 1280 - Standard Specification for Application of Gypsum Sheathing
   9. ASTM C 1325 - Standard Specification for Non-Asbestos Fiber-Mat Reinforced Cementitious Backer Units
   10. ASTM C 1396 - Standard Specification for Gypsum Board
   11. ASTM C 1629 - Standard Classification for Abuse Resistant Nondecorated Interior Gypsum Panel Products and Fiber reinforced Cement Panels
   12. ASTM C 1658 - Standard Specification for Glass Mat Gypsum Panels
   13. ASTM D 3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
   14. ASTM E 72 - Standard Test Methods of Conducting Strength Tests of Panels for Building Construction
   15. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials
   16. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements

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17. ASTM E 96 - Standard Test Methods for Water Vapor Transmission of Materials
18. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials
19. ASTM E 136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 176; C.
20. ASTM G 21 - Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

C. Gypsum Association (GA)
1. GA-214 - Recommended Levels of Gypsum Board Finish
2. GA-216 - Application and Finishing of Gypsum Panel Products
3. GA-253 - Application of Gypsum Sheathing

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples: For the following products:
1. Trim Accessories: Full-size Sample in 12-inch- (300-mm-) long length for each trim accessory indicated.

1.4 QUALITY ASSURANCE

A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

1.5 STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to prevent sagging.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install interior products until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.

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2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 PRODUCTS

2.1 PANELS, GENERAL

A. Size: Provide in maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.2 GYPSUM BOARD

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. American Gypsum Co.
   b. BPB America Inc.
   c. G-P Gypsum.
   d. National Gypsum Company.
   e. PABCO Gypsum.
   f. USG Corporation.
   g. CertainTeed

B. General:
   1. Core: Regular.
   2. Complying with ASTM C 1396.
   3. Thickness: 5/8 inch (15.9 mm).
   4. Long Edges: Tapered.

C. Type X:
   1. Core: Fire-resistance rated gypsum core.
   2. Complying with ASTM C 1396.
   3. Thickness: 5/8 inch (15.9 mm).
   4. Long Edges: Tapered.

D. Type C (Special or Enhanced Type X): Having improved fire resistance over standard Type X, and complying with requirements of fire-resistance-rated assemblies indicated on Drawings.
   1. Core: Solid set, fire-resistance rated gypsum core.
   2. Complying with ASTM C 1396.
   3. Thickness: 5/8 inch (15.9 mm).
   4. Long Edges: Tapered.

E. High Impact gypsum board
   1. Performance Criteria - Wall Assembly STC: 40

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2. Core: Fire-resistance rated gypsum core, with additives to enhance mold/mildew resistance, surface indentation resistance, impact resistance and moisture and mold resistant
3. Surface paper: Abrasion resistant, 100 percent recycled content moisture/mold/mildew resistant paper on front, back and long edges
4. Embedded fiberglass mesh
5. Long Edges: Tapered
6. Overall thickness: 5/8 inch
7. Panel complies with Type X requirements of ASTM C 1396
8. Surface Abrasion Resistance: Classification Level 3 in accordance with ASTM C 1629
9. Indentation Resistance: Classification Level 1 in accordance with ASTM C 1629.
10. Soft Body Impact Resistance: Classification Level 3 in accordance with ASTM C 1629
11. Hard Body Impact Resistance: Classification Level 3 in accordance with ASTM C 1629.
12. Mold/Mildew Resistance: 10 when tested in accordance with ASTM D 3273.
13. Environmental Requirements: Provide products that comply with testing and product requirements for low emitting materials

2.3 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.
1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
2. Shapes:
   a. Cornerbead.
   b. Bullnose bead.
   c. LC-Bead: J-shaped; exposed long flange receives joint compound.
   d. L-Bead: L-shaped; exposed long flange receives joint compound.
   e. U-Bead: J-shaped; exposed short flange does not receive joint compound.
   f. Expansion (control) joint.
   g. Curved-Edge Cornerbead: With notched or flexible flanges.

B. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.
1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   a. Fry Reglet Corp.
   b. Gordon, Inc.
   c. Pittcon Industries.
2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221 (ASTM B 221M), Alloy 6063-T5.
3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified.

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

2.4 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:
1. Fiberglass Tape: Nominal 2 inches wide self-adhering tape.

C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.

D. Joint Sealant:
1. Conform to ASTM C 920
2. VOC content less than 2 g/L

2.5 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
1. Use screws complying with ASTM C 954 for fastening panels to wood members.

D. Acoustical Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.
1. Conform to ASTM C 919
2. VOC content less than 2 g/L
3. Products/Manufacturer
   a. Grabber Acoustical Sealant GSC
   b. STI SpecSeal Smoke N Sound Caulk
   c. BOSS 824 Acoustical Sound Sealant

E. Firestopping
1. Conform to ASTM E 90
2. Products/Manufacturer
   a. STI SpecSeal SSP Putty Pads
   b. BOSS 818 Fire Rated Putty Pads

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

F. Thermal Insulation: Section 07 21 00 – Thermal Insulation

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Form control and expansion joints with space between edges of adjoining gypsum panels.

F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
2. Fit gypsum panels around ducts, pipes, and conduits.
3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- (6.4- to 9.5-mm-) wide joints to install sealant.

G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at

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these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

I. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members, or provide control joints to counteract wood shrinkage.

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Install interior gypsum board in the following locations:
   1. Type X: Vertical surfaces, unless otherwise indicated.
   2. Type C (Special Type X): Where required for specific fire-resistance-rated assembly indicated.

B. Single-Layer Application:
   1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing, unless otherwise indicated.
   2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
      a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
      b. At stairwells and other high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated assembly.
   3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
   4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

C. Multilayer Application:
   1. On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints 1 framing member, 16 inches (400 mm) minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly.
   2. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
   3. On Z-furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to

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framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.

4. Fastening Methods: Fasten base layers with screws; fasten face layers with adhesive and supplementary fasteners.

D. Laminating to Substrate: Where gypsum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members, or base layer of gypsum board), comply with gypsum board manufacturer's written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has set.

3.4 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Engineer for visual effect.

C. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners, unless otherwise indicated.
2. Bullnose Bead: Use where indicated.
3. LC-Bead: Use at exposed panel edges.
4. L-Bead: Use where indicated.
5. U-Bead: Use at exposed panel edges.
6. Curved-Edge Cornerbead: Use at curved openings.

D. Aluminum Trim: Install in locations indicated on Drawings.

E. Install corner beads at external corners. Provide metal trim to protect edge of gypsum board wherever gypsum board intersects a dissimilar material. Hold channel and □L□ trim back from metal window and door frames 1/8 inch to allow for caulking.

3.5 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.

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3. Level 3: Panels that are substrates for wall coverings and wall panels.
4. Level 4: At panel surfaces that will be exposed to view, unless otherwise indicated.

    a. Primer and its application to surfaces are specified in other Division 9 Sections.

E. Glass-Mat, Water-Resistant Backing Panels: Finish according to manufacturer's written instructions.

3.6 PROTECTION

A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

B. Remove and replace panels that are wet, moisture damaged, and mold damaged.
1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

3.7 FIELD QUALITY CONTROL

A. Above-Ceiling Observation: Architect will conduct an above-ceiling observation before installing gypsum board ceilings and report deficiencies in the Work observed. Do not proceed with installation of gypsum board to ceiling support framing until deficiencies have been corrected.
1. Notify Architect seven days in advance of date and time when Project, or part of Project, will be ready for above-ceiling observation.
2. Before notifying Architect, complete the following in areas to receive gypsum board ceilings:

    a. Installation of 80 percent of lighting fixtures, powered for operation.
    b. Installation, insulation, and leak and pressure testing of water piping systems.
    c. Installation of air-duct systems.
    d. Installation of air devices.
    e. Installation of mechanical system control-air tubing.
    f. Installation of ceiling support framing.

END OF SECTION

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July 24, 2024

SECTION 09 90 00
PAINTING AND COATING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Surface preparation and field application of paints and coatings.

1.2 REFERENCES

A. ASTM D16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products.

B. NACE (National Association of Corrosion Engineers) - Industrial Maintenance Painting.

C. SSPC (Steel Structures Painting Council) - Steel Structures Painting Manual.

D. NPCA (National Paint and Coatings Association) – Guide to U.S. Government Paint Specifications.

E. PDCA (Painting and Decorating Contractors of America) Painting - Architectural Specifications Manual.

1.3 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this Section.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00 – Submittal Procedures.

B. The Contractor shall submit a written copy of the coating manufacturer's recommendations for the shipping, handling, storage, application, curing, recoating and disposal of all products used for this project.

C. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

D. The Contractor shall supply color chips for available colors. Owner will make color selection.

1.5 CLOSEOUT SUBMITTALS

A. Section 01 77 00 – Closeout Procedures.

B. Operation and Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.

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1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years experience.

1.7 REGULATORY REQUIREMENTS

A. Conform to applicable code for flame and smoke rating requirements for finishes.

B. All pertinent safety regulations shall be adhered to strictly. All OSHA, federal, state regulations will be observed and conformed to. Material safety data sheets shall be submitted by the product manufacturer and such precautions enforced.

C. Contractor shall be fully responsible for the generation, management, and disposal of hazardous waste materials which are generated by the Work. Contractor shall comply with all local, state, and federal regulations regarding removal, containment, and disposal of the cleaning and painting debris.

1.8 FIELD SAMPLES

A. Provide field sample of paint under provisions of Section 01 45 00 – Quality Control.

B. Provide field sample panel, 2 feet long by 1 foot wide, illustrating special coating color, texture, and finish.

C. Locate where directed.

D. Accepted sample may remain as part of the Work.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products to site under provisions of Section 01 60 00 – Product Requirements.

B. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

C. Container label to include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

D. Store paint materials at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

E. Take all necessary precautionary measures to prevent fire hazards and spontaneous combustion. Open containers of materials only as needed for use; keep closed when not in use. Keep oily/finish material and soaked rags in tightly closed containers. Dispose of used rags off the site daily; remove empty containers from the site daily.

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1.10 ENVIRONMENTAL REQUIREMENTS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.

C. Minimum Application Temperatures for Latex Paints: 45 degrees F (7 degrees C) for interiors; 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.

D. Minimum Application Temperature for Alkyd Finishes: 65 degrees F (18 degrees C) for interior exterior, unless required otherwise my manufacturer's instructions.

E. Provide lighting level of 80 ft. candles measured mid-height at substrate surface.

F. Dispose of all sand blasting and cleaning materials off-site, and in conformance with applicable local, state, and federal regulations.

1.11 EXTRA MATERIALS

A. Furnish under provisions of Section 01 77 00 – Closeout Procedures.

B. Provide 1 gallon of each color, type, and surface texture to Owner.

C. Label each container with color, type, texture, and locations, in addition to the manufacturers' label.

D. Supply the Owner with one copy of the color schedule.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers - Paint
1. Benjamin Moore.
2. Sherwin Williams.
3. Tnemec Company
4. Pittsburg Paint.
5. Mobile Chemical Company.
6. Ponderosa Paint.
7. Ameron International.

B. Paint and coating materials shall be highest quality material Trade names used herein refer to materials manufactured and are used to establish a basis of quality for bidding. The Engineer or Architect is not bound to approve all types of paint from any one manufacturer. Material for each general purpose shall be of the same manufacturer

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and materials of different manufacturer shall not be used over one another, except for shop prime coats applied under Sections of the Project Manual.

C. Special systems as specified for surface conditions by the manufacturer specified; substitution only upon affidavit of alternate manufacturer that product will meet conditions and label for surface use.

2.2 MATERIALS

A. Coatings: Ready mixed, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating; good flow and brushing properties; capable of drying or curing free of streaks or sags.

B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, and of commercial quality.

C. Patching Materials: Latex filler.

D. Fastener Head Cover Materials: Latex filler.

2.3 FINISHES

A. Refer to schedule at end of section for surface finish schedule.

2.4 COLORS

A. Paint colors shall be approved by the owner submit color patches.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify site conditions under provisions of Section 01 31 00 – Project Management and Coordination.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application. The Painting Contractor shall be responsible for examination and acceptance of all surfaces and conditions affecting proper application of the materials, and shall not proceed until unsatisfactory conditions have been corrected; the application of the first coat a finish system to any surface shall constitute acceptance of that surface.

D. Test shop applied primer for compatibility with subsequent cover materials.

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E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Plaster and Gypsum Wallboard: 12 percent.
   2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
   3. Interior Wood: 15 percent, measured in accordance with ASTM D-2016.
   4. Exterior Wood: 15 percent, measured in accordance with ASTM D-2016.

3.2 PREPARATION

A. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

B. Correct defects and clean surfaces which affect work of this section. Remove existing coatings that exhibit loose surface defects.

C. Seal with shellac and seal marks which may bleed through surface finishes.

D. Gypsum Board Surfaces: Fill minor defects with filler compound. Remove spackle drops, mortar, dust, and dirt. Spot prime defects after repair. Surface to be crack fee, properly finished and clean.

E. Concrete and Unit Masonry Surfaces Scheduled to Receive Stain or Paint Finish: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry. Repair surfaces in concrete and masonry in accordance with Section 03 30 00 – Cast-In-Place Concrete and 04 22 00 – Concrete Unit Masonry, respectively.

F. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

G. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

H. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

I. Hot Dip Galvanized Surfaces Touch Up: Sand and scrape to remove loose surface.

J. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

K. Metal Doors and Frames Scheduled for Painting: Seal top and bottom edges with primer.

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L. Wood: Remove grade marks; seal knots with suitable sealer. Hand sand woodwork and trim; dust clean. All nail holes to be filled with suitable interior or exterior grade filler compound.

3.3 APPLICATION

A. Apply products in accordance with manufacturer's instructions.

B. Do not apply finishes to surfaces that are not dry.

C. Apply each coat to uniform finish. Each coat of paint or finish shall be applied at proper consistency according to the manufacturer's directions; brushed evenly, and free of brush marks, sags, and runs, with no evidence of poor workmanship. Care shall be exercised to avoid lapping; paint to be sharply cut to lines. Finished surfaces shall be free from defects or blemishes. Pores of CMU block shall be filled with no air pockets.

D. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.

E. Sand metal lightly between coats to achieve required finish.

F. Vacuum clean surfaces free of loose particles. Use tack cloth just prior to applying next coat.

G. Allow applied coat to dry before next coat is applied.

3.4 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

A. Paint shop primed equipment.

B. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

C. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, and equipment except where items are prefinished.

D. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.5 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Section 01 45 00 – Quality Control.

B. Test questionable coated areas in accordance with Engineers Instructions.

3.6 CLEANING

A. Clean work under provisions of Section 01 77 00 – Closeout Procedures.

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B. Collect waste material, which may constitute a fire hazard, place in closed metal containers and remove daily from site.

3.7 SCHEDULE - EXTERIOR SURFACES

A. Wood Trim:
1. One coat wood primer. No. 03-721PP
2. Two coats alkyd semi-gloss enamel. No. 03-241WB

B. Steel/Miscellaneous Metals - Shop Primed:
1. Touch-up with compatible primer. No. 04-022PP
2. Two coats of polyurethane enamel, gloss. No. 04-400WB

C. Steel/Miscellaneous Metals – Unprimed:
1. One coat of primer/neutralizer. No. 04-022PP
2. Two coats of alkyd gloss enamel. No. 03-241WB

D. Steel - Galvanized:
1. One coat galvanize primer.
2. Two coats of alkyd gloss enamel. No. 03-241WB

E. Roof and Ground Mounted Electrical/Mechanical Equipment, Duct Work, and Piping:
1. Factory primed or painted - two coats alkyd low gloss enamel, No. 03-241WB (including electrical transformers and gas meters).

F. Concrete Masonry Units (Clear, No Color):
1. PROSOCO Blok-Guard & Graffiti Control II. Anti-Graffiti coverage per manufacturer's recommendations.

3.8 SCHEDULE - INTERIOR SURFACES

A. Steel/Miscellaneous Metals – Unprimed:
1. One coat of alkyd primer. No. 04-022PP
2. Two coats of polyurethane enamel, gloss. No. 04-400WB

B. Steel/Miscellaneous Metals – Primed:
1. Touch-up with alkyd primer. No. 04-022PP
2. Two coats of polyurethane enamel, gloss. No. 04-400WB

C. Steel - Galvanized:
1. One coat galvanize primer.
2. Two coats of alkyd enamel, gloss. No. 03-241WB

D. Ducts and Uncovered Piping of Heating System in Finished Spaces

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1. Prime. Two coats alkyd satin industrial enamel, first coat thinned 8/1 with mineral spirits.

E. Wood Trim – Painted:
1. One coat primer. No. 05-200PP
2. One coat semi-gloss latex. No. 03-241WB

F. Metal Doors and Frames:
1. Touch up abraded prime coat. No. 04-022PP
2. Two coats of alkyd semi-gloss enamel. No. 03-241WB

G. Concrete Masonry Units
1. One coat 100% Acrylic Laytex Block Filler. No. 05-055PP.
2. Two coats Acry-Plus semi-gloss. No. 02-252WB

H. Gypsum Board
1. One coat latex vapor shield wall primer. No. 02-725PP
2. Two coats semi-gloss latex enamel. No. 02-252WB
3.

3.9 SCHEDULE - COLORS

A. As approved by Owner, and accepted by Engineer. Submit color patches as required in Section 01 33 00 – Submittal Procedures.

3.10 CLEANING AND REPAIRING

A. Painter responsible for all defective work no matter what the cause, including unsuitable and improperly prepared surfaces; refinish at Painter's expense. Painted surfaces shall be free from defects in workmanship or materials. Repair work damaged during construction before time of final project acceptance; touch-up or refinish as necessary abraded, stained or otherwise disfigured surfaces.

3.11 CLEAN UP

A. During painting, clean up, remove from project, containers and cartons, rubbish, and rags resulting from work of this section. Maintain premises in clean, orderly condition at all times. Upon completion remove rubbish, tools, equipment, unused products from project.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

July 17, 2024

SECTION 32 91 19
LANDSCAPE GRADING

This specification replaces in its entirety Section 32 91 19 - Landscape Grading currently found in the Utah Chapter APWA Manual of Standard Specifications - 2017 Edition.

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Final grade topsoil for finish landscaping.

B. Related Sections:
   1. Section 31 05 05 - Earthwork.
   2. Section 32 94 23 - Planting.

1.2 SUBMITTALS

A. Submit maximum laboratory dry density and optimum laboratory moisture content for:
   1. Subgrade material
   2. Each type of fill material to be used.

1.3 QUALITY ASSURANCE

A. Do not change material sources or aggregate without Engineer's knowledge.

B. Reject backfill material that does not comply with requirements specified in this section.

C. Landscape grading is aesthetic by nature and subject to continual monitoring and modification during the backfilling process. Work closely with the Engineer, particularly when grading and constructing berms, channels, or other aesthetic considerations.

1.4 STORAGE

A. Safely stockpile backfill materials.

B. Separate differing materials, prevent mixing, and maintain optimum moisture content of back fill materials.

C. Avoid displacement of and injury to Work while compacting or operating equipment.

D. Movement of construction machinery over Work at any stage of construction is solely at the Contractor's own risk.

1.5 SITE CONDITIONS

A. Do not place, spread, or roll any backfill material over material that is damaged by water. Remove and replace damaged material at no additional cost to the Owner.

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B. Control traffic and erosion. Keep area free of trash and debris. Repair settled, eroded, and rutted areas.

C. Reshape and compact damaged structural section to required density.

1.6 WARRANTY

A. Any settlement noted in the landscaped surfaces will be considered to be caused by improper compaction methods and shall be corrected at no cost to the Owner.

B. Restore incidentals damaged by settlement at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 TOPSOIL

A. All planting areas shall receive either a minimum of four (4) inches of stockpiled or imported topsoil in turf areas and twelve (12) inches in planting beds.

B. All topsoil used on this project (stockpiled or import) shall meet the following criteria:

1. pH: .....5.5 - 8.0
2. EC (electrical conductivity): .....<2.0 mmhos per centimeter
3. SAR (sodium absorption ratio): .....<3.0
4. % OM (percent organic matter): .....≥2%
5. Texture (particle size per USDA classification):
   a. .....Sand: <70%
   b. .....Clay: <30%
   c. .....Silt: Balance
6. Stone Fragments (gravels or any soil particle greater than two (2) mm in size): .....<5% (by volume)
7. Rocks Present > 1.5" .....None

C. In addition, the topsoil shall be fertile, friable, natural loam and shall be capable of sustaining vigorous plant growth. It shall be free of stones, lumps, clods of hard earth, plants or their roots, sticks, and other extraneous matter. The topsoil shall contain neither noxious weeds nor their seeds. It shall not be used for planting operations while in a frozen or muddy condition.

2.2 BACKFILL MATERIALS

A. Earthwork, Section 31 05 05.

2.3 ACCESSORIES

A. Water. Make arrangements for sources of water during construction and plan for delivery of water to the site. Comply with local Laws and Regulations at no additional cost to the Owner when securing water from water utility company.

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PART 3 – EXECUTION

3.1 EXAMINATION

A. Administrative Requirements: Verification of existing conditions before starting work.

B. Verify trench backfilling has been inspected.

3.2 PREPARATION

A. Identify required line, levels, contours, and datum.

B. Stake and flag locations of underground utilities.

C. Upon discovery of unknown utility or concealed conditions, notify the Engineer.

D. Verify stockpiled fill meets gradation requirements, areas to be backfilled are free of debris, snow, ice or water, and ground surface is not frozen.

E. If subgrade is not readily compactable, secure written authorization for extra excavation and backfill. Refer to Section 31 23 16.

3.3 SUBSTRATE PREPARATION

A. Eliminate uneven areas and low spots.

B. Remove debris, roots, branches, and large stones. Remove contaminated subsoil.

3.4 PROTECTION

A. Protect existing trees, shrubs, lawns, existing structures, fences, reads, sidewalks, paving, curb and gutter, and other features.

B. Protect above or below grade utilities. Contact utility companies to repair damaged top utilities. Pay all costs of repairs.

C. Protect subgrade from desiccation, flooding, and freezing.

D. Do not fill adjacent to structures until excavation is checked by the Engineer.

E. Do not use compaction equipment adjacent to walls or retaining walls that may cause wall to become over-stressed or moved from alignment.

F. Do not disturb or damage foundation perimeter drainage, foundation, damp-proofing, foundation waterproofing and protective cover, or utilities in trenches.

G. Restore any damaged structures to its original strength and condition.

H. Prohibit construction traffic over topsoil.

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3.5 LAYOUT

A. Maintain all benchmarks, control monuments and stakes, whether newly established by surveyor or previously existing. Protect form damage and dislocation.

B. If discrepancy is found between Contract Documents and the site, the Engineer shall make such minor adjustments in the Work as necessary to accomplish the intent of the Contract Documents without increasing the cost of the Work to the Contractor or the Owner.

3.6. GRADING

A. Grading Intent: Spot elevations and contours indicated are based on the best available data. The intent is to maintain constant slopes between spot elevations. If a spot elevation is determined to be in error, or the difference in elevation between points change, then the minimum percentage of slope as a result of field adjustment of specific spot elevations is as follows:

1. Pavement Areas: .....1 percent.
2. Concrete or Brick Areas: .....0.30 percent
3. Lawn or Planted Areas: .....0.75 percent.

B. Conduct the Work in an orderly manner. Do not create a nuisance. Do not permit soil accumulation on streets or sidewalks. Do not allow soil to be washed into sewers and/or storm drains.

C. Grade slopes to provide adequate drainage after compaction. Do not create water pockets or ridges. Use all means necessary to prevent erosion of freshly graded areas during construction until surfaces have been constructed and landscaping areas have taken hold.

D. Remove surface stones greater than 1 inch from finished grading.

E. In planting areas, provide a finished grade that conforms to Section 32 94 23 Planting.

3.7 PLACING TOPSOIL

A. Place topsoil in areas where seeding is required to nominal depth of 4 inches. Place topsoil during dry weather.

B. Fine grade topsoil to eliminate rough or low areas. Maintain profiles and contour of subgrade.

C. Remove roots, weeds, rocks, and foreign material while spreading.

D. Manually spread topsoil close to trees and buildings to prevent damage.

E. Lightly compact placed topsoil.

F. Remove surplus subsoil and topsoil from site.

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3.8 TOLERANCES

A. Top of Topsoil: ±1/2 inch.

3.9 SCHEDULE

A. Compacted topsoil thickness: 4 inches under turf areas, 12 inches in planter bed areas (unless specifically otherwise stated).

3.10 SURFACE RESTROATION

A. Restore paved surfaces, Section 33 05 05.

B. Finished landscaped surfaces with grass, or with other groundcover shall comply with the following:
   1. Backfill areas to contours and elevations indicated. Do not use frozen materials.
   2. Make smooth changes in grade. Blend slopes into level areas.
   3. Remove surplus backfill materials from site and dispose of legally.
   4. Leave stockpile areas completely free of excess fill materials.
   5. Slope grade away from buildings at a minimum of 3 inches in 10 feet unless specified otherwise.

3.11 CLEANING

A. Remove stockpiles from the site. Grade site surface to prevent free standing surface water.

B. Leave borrow areas clean and neat.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

July 17, 2024

SECTION 32 94 23
PLANTING

This section replaces section 32 92 00, 32 93 13, 32 93 43 and 32 98 00 in the 2017 edition of the Utah Chapter of American Public Works Association Manual of Standard Specifications (APWA).

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:
   1. Trees, shrubs, perennials, vines, and groundcover requirements.
   2. Bedding, topsoil, and temporary support.

B. The work to be performed under this section shall consist of furnishing all materials, labor, and plants necessary for the proper planting or all trees, shrubs, perennials, vines, and groundcovers of the kind and sizes specified at the prescribed locations, and otherwise in accordance with the drawings and specifications or as directed by the Landscape Architect or Owner's Representative or Owner's Representative.

C. Related sections:
   1. Section 32 84 23 Underground Irrigation Systems

1.02 REFERENCES

A. AAN: American Associations of Nurserymen, Inc.
B. ANSI Z60.1-2004: American Standard for Nursery Stock.
C. FS O-F-241: Fertilizers, Mixed Commercial.
D. ICN: International Code of Nomenclature for algae, fungi, and plants.
E. City Standards/Ordinances relating to irrigation and planting.

1.03 QUALITY ASSURANCE

A. Perform work in conformity with applicable requirements of AAN.
B. Upon receiving Notice to Proceed, the Contractor shall provide written proof that the specified plant material is available and has been secured or reserved specifically for this project. Obtain nursery stock and other plant materials from reliable and stable sources prior to order and delivery.
C. Provide plants that are declared free of disease and insect pests.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Exercise care in digging, transporting, handling, and packing of all plants.
B. Handle plants so roots are protected at all times. If delivery is in open vehicles, cover entire load without causing over heating.
C. Deliver plant material immediately prior to placement. Keep plant material moist.
D. Protect root balls from sun and wind by covering with soil or other suitable material if not planted immediately on delivery.
E. Store fertilizer in a weatherproof location such that its effectiveness will not be impaired.

1.05 ACCEPTANCE

A. Plants shall not be accepted if the ball of earth surrounding roots (rootball) has been cracked or broken.

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B. Plants shall be accepted if burlap, staves, and ropes required in connection with transplanting are installed and still intact upon delivery.
C. Heeled in stock from cold storage shall not be accepted.

1.06 **SAMPLES**

A. Samples of the topsoil, bark and rock mulches, beach sand, fertilizer, and tree ties listed below shall be submitted to the Landscape Architect or Owner's Representative for inspection and approval prior to the beginning of work under this contract.
B. Delivery of materials may begin only after samples have been approved. All materials furnished for the work shall conform in every respect to the approved samples. Any non-conforming materials will be rejected.

PART 2 PRODUCTS

2.01 **GENERAL**

A. The planting plan is diagrammatic, and all plant locations are approximate. Plant symbols take precedence over plant quantities shown on the plans and in the plant material schedule. The Contractor shall verify all plant quantities and notify the Landscape Architect or Owner's Representative of any discrepancies between the quantities and the symbols shown.
B. Provide plants of normal growth and uniform height, according to species, with straight canes and well developed leaders, roots, and tops.
C. Provide plants of sizes indicated. The size stated in each case shall be interpreted to mean dimensions of plant as it stands in its mature position in the nursery without straightening of any branches or leaders.
D. Provide legible labels attached to all plants, specimens, bundles, boxes, bales, or other containers indicating botanical genus, species, and size of each.
E. Plants cut back from larger sizes to meet specifications shall be rejected.
F. Balled and burlapped deciduous shrubs may be acceptable in lieu of container growth deciduous shrubs only if there is a demonstrated significant shortage of container grown stock.

2.02 **PLANTS**

A. All plants shall comply with federal and state laws requiring inspection for plant disease and infestations.
B. Any inspection certificates required by law shall accompany each delivery of plants and such certificate shall be given to the Landscape Architect or Owner's Representative. All plants shall be subject to inspection and approval at the place of growth or upon delivery to the site for their quality, size, species, and variety. Such approval shall not impair the right of inspection and rejection at the site or during progress of work for size and condition of the plants, latent defects, or injuries. Any and all rejected plants shall be removed immediately from the premises by the Contractor. The Contractor shall make all replacements at his expense should he fail to comply in full with any of the specifications. Necessary replacements will be made as soon as weather conditions permit, and all such plants replaced shall conform to all specifications herein.
C. Names and Grades:

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1. Plant names shall conform to the nomenclature of "Standardized Plant Names," "International Code of Nomenclature for algae, fungi, and plants (ICN)," or "International Code of Nomenclature for Cultivated Plants (ICNCP), 9th edition." When a name is not found in any of these references, consult the accepted name used in the nursery trade. All plants shall be tagged by the nursery with the proper identification labels to insure the correct varieties of plants.
2. Size and grading standards shall conform to those of the American Association of Nurserymen, Inc., as published in "American Standard for Nursery Stock", 2014 Edition, with all current revisions unless otherwise specified.
3. The caliper of trees shall be measured six (6) inches above the surface of the ground.
4. Measurements on all trees and shrubs shall be taken with the branches in a normal position. Height and spread dimensions specified refer to the main body of the plant and not from branch or root tip to tip. No trees which have had their leaders cut, or are so damaged that cutting is necessary, will be accepted.

D. No substitution of size, grade, variety or any species shall be permitted except by written permission of the Landscape Architect or Owner's Representative.

E. Plant Size:
1. All plants shall conform to the size, age, and condition as specified in the plant list shown on the drawings. Undersized plant material shall not be approved.
2. No additional compensation shall be due the Contractor if larger than specified plant material is provided.
3. Only balled and burlapped or container stock shall be accepted. No bare root stock shall be accepted.
4. Plants cut back from larger sizes to meet specifications shall be rejected.

F. Plant List:
1. Plants lists indicate minimum size requirements only. Plant materials shall be equal to or greater in size than those specified.
2. Any discrepancies between plant lists and plans shall be immediately brought to the attention of the Landscape Architect or Owner's Representative.
3. In all cases the Contractor shall be held responsible for all plant materials indicated on the plans unless otherwise directed in writing by the Landscape Architect or Owner's Representative.
4. Each bidder shall investigate sources of supply and satisfy himself that he can supply all of the plants mentioned in the planting lists in size, variety, and quantity noted and specified before submitted his bid. Failure to take this precaution will not relieve the successful bidder from his responsibility as Contractor to furnish and install all plant material in strict accordance with the contract requirements without additional expense to the owner.
5. If a shortage of the specified plant material truly exists and can be verified by the Contractor, the Contractor shall notify the Landscape Architect immediately and discuss what varieties and sizes are available as a suitable substitution. Last minute substitutions are not acceptable.

G. All plants shall be fresh and vigorous, of normal habit and growth, and free of disease, insects and insect eggs and insect larvae, weeds and weed seed. No heeled-in plants from cold storage shall be accepted except on approval by the Landscape Architect or Owner's Representative prior to installation.

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2.03 **SEED (NOT USED)**

A. All seed shall be accurately labeled and tested for purity and germination, using the procedure sanctioned by the Association of Official Seed Analysts.

B. The seed tag shall indicate the date of testing, along with the testing results showing purity (percentage of the labeled species by weight), the percentages of other crop, weed, inert material, dormant or hard seed, and also the percentage of seed that will germinate.

C. Seed labels or tags shall list the following:

1. Manufacturer's name and address.
2. Date and location of packaging.
3. Name of the species of seed or seeds being sold.
4. Variety of seed or seeds being sold.
5. Percent purity of the seed. (Purity is defined as the percent weight of the entire sample of each seed species or variety that is present in excess of 5% of the total.)
6. Percent other seed crop. (Other seed crop is defined as the percent weight of the entire sample of seed found in the sample that are less than 5% of the total seed weight and are generally recognized by the Association of Official Seed Analysts as seeds or plants grown as crops. If more than one crop species or cultivar is found in the sample, their weights are combined and reported.)
7. Percent weed seed. (Weed seeds are all other seed species that the Association of Official Seed Analysts does not classify as crop seeds.)
8. Percent inert matter. (Inert matter is defined as the percent weight of the sample that is not viable seed. It can include plant parts, broken seeds or other materials that are not viable seeds.)
9. Percent germination.
10. Percent hard and/or dormant seed. (Hard seed is the percent of the number of seeds that remain hard at the end of the testing period because they have not absorbed water because of an impermeable seed coat. Dormant seed is defined as the percent of the number of seeds, other than hard seed, that fail to germinate, but are determined to be viable by subjecting them to other seed testing techniques. Both of these seed types are generally considered to be seed that will germinate at a later date than seed reported in the percent germination calculation.)
11. Percent Total Viability.
12. Noxious weed seeds of the continental USA found in the seed mix.
13. Last date the seed was tested for germination.
14. Bulk pound quantity of seed contained in the bag.
15. Pure Live Seed (PLS) pound quantity contained in the bag.

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2.04 **SOD**

A. Sod shall be obtained only from approved sources. The sod shall have been mowed regularly and carefully maintained from planting to harvest.

B. The sod shall be free of grassy and broad-leaf weeds, contain no bare or burned spots, and be clean and strongly rooted. It shall be of the varieties noted on the plans and notes.

C. The sod shall be cut using approved methods and equipment. It shall be cut in pieces not exceeding one (1) square yard, with a minimum of three quarter (3/4) inch and maximum one and one half (1 ½) inch thickness. All sod for a particular contiguous area must have the same thickness.

D. For very large turf areas and all athletic fields, large roles of sod shall be used. All sod roles shall be of uniform and consistent thickness within the range described above.

2.05 **TREE STAKES & TIES**

A. Tree stakes shall be two by two (2x2) inch square or two (2) inch diameter round wood stakes ten (10) feet in length as indicated on the plans. Steel stakes may not be used.

B. Tree stake ties shall be manufactured of virgin flexible vinyl meeting ASTM-D-412 standards for tensile and elongation strength. The material shall be black in color for ultraviolet resistance. Hose and wire shall not be used.

2.06 **TOPSOIL**

A. All planting areas shall receive either a minimum of four (4) inches of stockpiled or imported topsoil in turf areas and twelve (12) inches in planting beds.

B. All topsoil used on this project (stockpiled or import) shall meet the following criteria:

1. pH: .....5.5 - 8.0
2. EC (electrical conductivity): .....<2.0 mmhos per centimeter
3. SAR (sodium absorption ratio):.....<3.0
4. % OM (percent organic matter):.....≥2%
5. Nitrogen (NO_3N).....48 ppm min.
6. Phosphorous (P).....11 ppm min.
7. Potash (K).....130 ppm min.
8. Iron (Fe) .....5.0 ppm min.
9. Texture (particle size per USDA classification):
   a. Sand:.....<70%
   b. Clay:.....<30%
   c. Silt: .....Balance
10. Stone Fragments (gravels or any soil particle greater than two (2) mm in size): .....<5% (by volume)
11. Rocks Present > 1.5” .....None

C. In addition, the topsoil shall be fertile, friable, natural loam and shall be capable of sustaining vigorous plant growth. It shall be free of stones, lumps, clods of hard earth, plants or their roots, sticks, and other extraneous matter. The topsoil shall contain neither noxious weeds nor their seeds. It shall not be used for planting operations while in a frozen or muddy condition.

2.07 **WEED BARRIER FABRIC**

A. If specified, a weed barrier fabric shall be placed in all planting beds to prevent the growth and spread of unwanted vegetation. The fabric shall be Typar #3301B or approved equal.

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2.08.1 **BARK MULCH**

A. Mulch shall be used as a top dressing for all planting beds unless specified otherwise. See plant material schedule for mulch types to be used.
B. Shredded bark mulch shall conform to the following criteria:
   1. Bark pieces shall not exceed two (2) inches when passed through a screen of that size.
   2. Large chunks of bark or wood shall not be mixed in with the mulch.
   3. The bark mulch shall be primarily from coniferous trees.
C. Where used, mulch shall be placed to a depth of three (3) inches on top of the topsoil. Do NOT install bark mulch over weed fabric.
D. Other mulches may be used only as specified on the drawings or in the planting notes and details.

2.08.2 **ROCK MULCH**

A. Rock mulch will be installed over weed barrier fabric in landscape areas per plans.
B. Where used, rock mulch shall be placed to a depth of three (3) inches on top of the weed barrier fabric.

2.09 **FERTILIZER**

A. Commercial fertilizer shall be uniform in composition, dry, and free flowing. Deliver fertilizer mixed as specified in bulk or bag, showing weight analysis, formula, and manufacturer's name.
B. A 16-16-16 balanced fertilizer shall be used. Any exceptions to this formula shall be based on horticultural recommendations resulting from a site-specific soils test and must be approved prior to application by the Landscape Architect or Owner's Representative.

2.10 **MOWSTRIP (NOT USED)**

A. Where turf areas are separated from planting beds, a concrete mowstrip shall be used. No other edging materials may be used unless specifically noted on the plans and approved by the Landscape Architect or Owner's Representative.
B. The mowstrip shall constructed using concrete having a compressive strength rating of two thousand five hundred pounds per square inch (2,500 psi) or greater, and a maximum slump of four (4) inches.
C. A three eighth (3/8) inch diameter rebar (#3) shall be placed continuously in the center of the mowstrip to provide support and help prevent differential settling of the mowstrip after cracking. Overlap joints a minimum of twelve (12) inches.
D. Include a concrete mowstrip at the base of all fences. Said mowstrip shall be six (6) inches deep and eighteen (18) inches wide, with the fence posts located in the center of the mowstrip.

2.11 **BEACH SAND**

A. Washed beach sand will be installed as a recreation feature for park users. Sand will be installed up to the edge of water and where shown on landscape plan.
B. Sand shall be installed at a depth of eight (8) to ten (10) inches over the existing soil where possible. Depth may decrease to four (4) to six (6) inches near the trunks of trees and adjacent to concrete curb walls.
C. Sand shall be a fine particle sand appropriate for walking barefoot and playing while being large enough to withstand typical winds for the area.

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D. A sample is to be provided to the landscape architect for approval prior to purchasing.

2.12 **LOG BARRIER**

A. **Natural, untreated log barrier**.

1. A log barrier to be installed as a landscape edging and transition between the beach sand and bark mulch.
2. Trunks/branches shall be a minimum length of 5' and a maximum length of 15', with a minimum diameter of 10".

B. **Specialty, treated log barrier**.

1. A treated log barrier to function as a playground wall and barrier between engineered wood fiber and shredded bark mulch, and also function as a play feature for playground and park users.

PART 3 EXECUTION

3.01 **GENERAL**

A. Site Visit: The Contractor shall visit and inspect the site. He shall take into consideration known and reasonably inferable conditions affecting work. Failure to visit the site will not relieve the Contractor of furnishing materials and performing the work required.

B. Prior to any planting operations, the irrigation system shall be fully operational and all planting areas shall be thoroughly moistened.

C. Where weeds or other undesirable vegetation are present in planting areas, the Contractor shall apply a contact herbicide a minimum of ten (10) days prior to commencement of any planting or irrigation work. Apply herbicide per manufacturer's recommendations. The poisoned vegetation shall be allowed to completely die back, including the roots, before proceeding with the work. Dead vegetation shall then be removed from the site and disposed of in a legal manner.

D. The Contractor shall conform to the following requirements with regard to existing vegetation:

1. The Contractor shall be fully responsible for any damage to existing trees or shrubs. He shall use all reasonable means to protect and preserve plants on the project not designated for demolition.
2. No pruning, thinning, or cutting of existing vegetation shall be allowed unless written permission is given by the Landscape Architect or Owner's Representative.
3. The Contractor shall replace any trees or existing shrubs damaged by him or his sub-contractors with like kind and size.

3.02 **PLANTING SEASONS**

A. All new plant installation shall be completed between April 15 and October 15. If planting must be done after October 15 or before April 15, the Contractor shall obtain specific approval to do so from the Landscape Architect or Owner's Representative prior to beginning any planting operations.

B. No planting shall be done in frozen soil or during unfavorable weather conditions, subject to the approval of the Landscape Architect or Owner's Representative.

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3.03 **TOPSOIL**

A. The Contractor shall obtain a soil analysis from any authorized soil testing agency of any existing stockpiled or imported topsoil to be used on the project to verify that it conforms to the topsoil specifications. Test results shall include horticultural recommendations. The soil samples shall be obtained per the testing agency directions. Allow ten (10) working days to obtain test results. The costs for such testing shall be the responsibility of the Contractor.

B. Prior to delivery of the imported topsoil to the site, the Contractor shall provide to the Landscape Architect or Owner's Representative the name and location of the topsoil source, along with the certified soil analysis of the topsoil to be used. The analysis shall verify that the proposed topsoil meets the topsoil specifications and is capable of supporting healthy plant growth.

C. After imported topsoil has been delivered to the site, a second soil test may be required to verify that it is indeed the same soil as previously tested and designated for use in this project. No substitution of topsoil shall be allowed without prior written authorization from the Landscape Architect.

D. The following procedure shall be followed in placing all topsoil:

1. All cut areas to receive topsoil which have a slope of less than ten (10) percent shall be cross-ripped to a depth of two (2) to four (4) inches.
2. The subgrade material shall be rough graded to plus or minus one tenth (±0.1) foot of the final rough grade, which will allow the Contractor to achieve final finished grade through the placement of the topsoil.
3. The surface of the subgrade shall be scarified to a depth of two (2) inches to provide a transition zone between the subgrade and the topsoil. Place the topsoil on the subgrade and fine grade to the final finished grade and topsoil depths as indicated on the drawings and in these specifications.
4. Any required soil amendments (i.e. mulch, organic matter, etc.) shall be placed directly on the topsoil at the required rates and spread evenly over the planting area. The amendments shall then be thoroughly blended into the topsoil to a depth of four (4) inches. Where only a dry, granular fertilizer is to be added, it may be applied to the surface and raked in during the fine grading procedures.

D. The Contractor shall maintain a minimum of two (2) percent drainage away from all buildings, structures, and walls. Finished grades shall be smoothed to eliminate puddling or standing water.

E. All finished grades shall be approved in writing by the Owner prior to installation of any plant materials.

3.04 **PLANT CONDITION**

A. All precautions customary in commercial landscape installation practice shall be taken in preparing plants for planting. Workmanship that fails to meet these minimum standards shall be rejected. All balled and burlapped plants shall have firm and natural balls of earth around their roots. No plant shall be planted if the rootball is cracked or broken, either before or during the process of planting. Loose, broken or manufactured root balls shall be rejected.

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B. All plants materials in five (5) gallon containers or larger shall have been established in that container for a period of not less than six (6) months and not more than two (2) years. Plant material shall not be root bound. They shall exhibit sound, healthy, and vigorous growth and be free from diseases and pests.

C. The Contractor shall have the Landscape Architect or Owner's Representative approve plant material size and quality prior to installation. Any plants which are not true to form, appear stressed or unhealthy, are infested with pests, infected with disease, or are undersized for their containers shall be rejected.

D. All plant material shall be planted as soon upon arrival on the premises as possible. If planting cannot be done immediately, the roots shall be protected from the sun and kept in a moist condition until the time of planting. Such protection may be provided by laying the plants on the north side of the building and covering the roots with wet straw.

E. If it is anticipated that planting will not be done for more than twenty-four (24) hours after the arrival of plants upon the premises, the balled and burlapped stock shall be heeled-in on the north side of a building and all roots completely covered with dirt which shall be wetted down frequently. Care will be taken in the handling of all ball and burlap materials so that the earth around the roots is disturbed as little as possible.

3.05 PLACEMENT OF PLANTS

A. Plants shall be generally located as indicated by the drawing. The Contractor shall stake out the location of all plants and planting areas with identified plant stakes, and no excavation shall commence until such locations have been approved by the Landscape Architect or Owner's Representative or Owner's Representative.

B. In the event that underground construction work or obstructions are encountered during excavation of the plant holes, alternate locations will be assigned and approved by the Landscape Architect or Owner's Representative or Owner's Representative.

C. Except for turf and groundcovers, plants shall not be placed within twenty-four (24) inches of sprinkler heads.

D. The Contractor must locate and stake any sprinkling head or valve box within the dripline of a proposed or existing tree location and must establish the direction of the lateral or main irrigation line that serves the staked sprinkler head or valve box. This procedure will help eliminate damage to existing or future tree roots.

3.06 PLANT INSTALLATION

A. All concrete work, sprinkling systems, and finished grading shall be completed and approved by the Landscape Architect or Owner's Representative before any planting of the specified plant materials is begun.

B. No tree planting shall be initiated until sprinkling system is complete and tested. However, tree planting shall precede lawn planting.

C. Each plant will be placed in an individual plant pit. The sharing of pits shall not be allowed.

D. All trees and shrubs shall be planted in pits as detailed in the planting details contained herein or as noted on the drawings. Tree and shrub pits shall be circular in outline, with a diameter at least two (2) times the diameter of the rootball of each plant to be installed. They shall be one to two and one half (1 - 2 ½) inches shallower than the rootball depth. When the plant is properly placed in the plant pit, the root collar shall be approximately one (1) inch above finished grade of the topsoil. For perennial plants (which have no root collar), the top of the rootball shall be even with the finished grade or the topsoil. The

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sides of the plant pit shall be roughened, and not smooth or sculpted.

E. Plant backfill mix shall be one hundred (100) percent native site soil.

F. For container grown plants, remove the container and place the plant vertically in the plant pit, directly on undisturbed soil. The root crown or collar shall be at or just above the finished grade. Perennial and ornamental grass plants shall be planted with the root collar at finished grade.

G. For balled and burlapped plants, place the plant vertically in the center of the pit, with the rootball resting on undisturbed soil. Cut and remove the wire basket and burlap or other wrapping material from the rootball. This may be done with the rootball in the pit. Any burlap or wire pieces underneath the rootball may be left in place if they cannot be removed. Do not fold the burlap over but cut away as much as possible without disturbing the rootball. No burlap shall be pulled from under the rootball. Backfill the bottom one third (1/3) of the pit as the wire and burlap are removed. In all cases, maintain the integrity of the rootball.

H. Specified backfill material shall be carefully and firmly worked and tamped under and around the rootball to fill all voids. When backfilled and compacted to two thirds (2/3) the depth of the pit, thoroughly water with a hose to completely soak the roots and remove any air pockets.

I. The plant pit shall then be completely backfilled with the specified backfill mix and tamped well. A shallow watering basin or rain cup shall be formed around each plant. This basin will be equal in diameter to that of the original planting pit.

J. Monitor all plants to ensure that no settling occurs. Pits which settle shall be immediately filled with additional soil mixture at no additional expense to the Owner.

K. After planting, the following operations shall be performed:
   1. Stake and mulch all trees per installation details.
   2. Remove all nursery stakes ties, and tags from all plants. Prune and remove any dead, damaged, or broken branches. Maintain side growth on all trees.

3.07 STAKING

A. All trees, including evergreen trees, shall be staked.

B. Staking shall be performed as follows:
   1. Two (2) 2"x 2" square or 2” diameter round wood stakes, ten (10) feet in length, shall be used to support each tree planted under this contract unless otherwise indicated.
   2. Tree ties shall conform to the staking detail shown on the planting detail sheet.
   3. Each stake will be located adjacent to the rootball, on opposing sides, to provide maximum support to the trunk. Do not penetrate the rootball with the stake.
   4. The stakes will be driven into the pit bottom after the tree has been placed in the pit, but before backfilling begins so as to avoid damage to the roots.

C. Stakes and ties shall be removed after one (1) full growing season from the time the tree was installed.

3.08 WATERING

A. All plants shall be thoroughly watered immediately after planting. This shall mean full and thorough saturation of all backfill in the pits and beds during the same day of planting. Water shall be applied only by open end hose at very low pressure to avoid creating air pockets, causing injury to the plant, or washing away of backfill. When installed, watered, and fully settled, the plants shall be vertical with the root collar at the appropriate level.

B. Subsequent watering shall be provided by the site’s irrigation system. The Contractor

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shall insure that all plants, especially trees, receive sufficient water to maintain healthy growth and vigor. Overwatering shall be avoided, and prolonged saturation of the soil around the trees shall be eliminated by appropriately controlling the irrigation circuit which provides water to that area.

3.09 **WEED BARRIER FABRIC**

A. Prepare final grade prior to placing fabric. Placement of fabric shall comply with the following:
   1. Place pre-emergent herbicide prior to installing fabric.
   2. Install fabric directly on topsoil. With drip tubing, install tubing on top of fabric.
   3. Overlap and secure per manufacturer's recommendations.
   4. Cut an "X" where plant will be located. Peel back corners to allow plant installation. Fold corners back in to place after plant is installed.

3.10 **MULCHING**

A. Shredded bark mulch shall be placed to a depth of three (3) inches on top of the topsoil in all planting beds and over tree planting pits.
B. The finished grade of the bark mulch shall be as follows:
   1. Two (2) inches below the surface or finished grade of any paving, mowstrips, or walks adjacent to the planting area.
   2. At adjacent finished grade of the turf surrounding tree planting pits.
C. In tree pits, the bark shall be kept six (6) inches away from the base of the tree.
D. Just prior to placement of the mulch, the Contractor shall treat the mulched areas with a pre-emergent herbicide according to the manufacturer's recommendations.

3.11 **SOD INSTALLATION**

A. The Contractor shall notify the Landscape Architect or Owner's Representative of the source of the sod prior to placement.
B. The sod shall be free of grassy and broad-leaf weeds, contain no bare or burned spots, and be clean and strongly rooted. It shall be of the varieties noted on the plans and plant materials schedule.
C. The sod shall be cut using approved methods and equipment. It shall be cut in pieces not exceeding one (1) square yard, with a uniform thickness on all pieces. Sod thickness may vary between a minimum of one (1) inch and maximum one and one half (1 ½) inches but must be consistent throughout this project. For very large turf areas and all athletic fields, large rolls of sod shall be used. Sod shall be placed using equipment specifically designed to lay large sod rolls.
D. The Contractor shall notify the Landscape Architect of the source of the sod prior to placement. The sod shall be stripped and delivered to the site not more than twenty-four (24) hours prior to laying. The sod shall be maintained in a moist and healthy condition to encourage immediate growth.
E. The following procedure shall be followed when installing the sod:
   1. Lay the sod on smooth, moist topsoil, working off planks if required.
   2. Rake the topsoil to loosen and level prior to placing each course of sod.
   3. Lay strips perpendicular to the direction of the slope. Strips shall be parallel to each other, with their end seams staggered. The sod shall be neither stretched nor overlapped, and all joints shall be butted tightly together.
   4. Roll the sod immediately after placing and thoroughly water with a fine spray to a

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depth sufficient that the underside of the new sod and the soil immediately below the sod are thoroughly wet.

5. On slopes two (2) horizontal to one (1) vertical or steeper, lay the sod perpendicular to the slope and secure every row with wooden pegs at two (2) feet maximum on center. Drive the pegs flush with the soil portion of the sod.
6. Sod pieces shall be laid tightly together. Sod areas with gaps caused by pieces not being laid tightly enough together or with ridges from overlapping pieces shall not be accepted and the Contractor will be required to re-lay the sod.

3.12 HYDROSEEDING (if used)

A. General:

1. Wood fiber mulch shall be virgin wood fiber, free of growth- or germination- inhibiting substances. The mulch shall be air dried with not more than fifteen (15) percent moisture by weight. The total organic weight shall be a minimum of ninety-eight (98) percent. Inorganic ash content shall be 0.7±0.2 percent. Water holding capacity shall be 1000G/100G (oven dried weight). The pH range shall be 4.0 - 6.0. The fiber length shall meet the following:
   a. Fifty (50) percent shall be at least 0.15 inches in length or longer.
   b. Fifty (50) percent shall be retained on the twenty-eight (28) mesh screen.

   It shall be Echofiber or Conwed or approved equal.
2. The seed mix shall be as specified on the plans. Provide written certification that the seed conforms to Utah seed law and is in compliance with Utah State Department of Agriculture regulations.
3. The tackifier shall be M-Binder or Plantego or equal.
4. The fertilizer shall be a chemically prepared, dry, homogenous pellet product with a balanced formula of 16-16-16.
5. Application rates shall be as follows:
   a. Wood fiber mulch.....50 pounds (min.)/1,000 SF
   b. Seed mix .....See plans (7 pounds/1,000 SF typ.)
   c. Tackifier.....100 pounds/Acre
   d. Fertilizer .....1 pound or actual nitorgen/1,000 SF
   d. Water .....92 gallons/1,000 SF

B. One-step preparation and application of hydroseed mulch shall be as follows:

1. The wood fiber mulch, seed, tackifier, fertilizer, and water shall be mixed together in a hydroseeding machine having a capacity of at least two thousand (2,000) gallons to allow for a homogeneous slurry which is thoroughly mixed and can be applied easily without clogging. The machine shall be mounted on a traveling unit which is either self-propelled or drawn by a separate unit. Equipment used in the hydroseeding process shall be thoroughly cleaned of all seed and other materials used in any previous hydroseeding process, prior to hydroseeding on this project.
2. The equipment shall have a built in agitation system and operating capacity sufficient to agitate, suspend, and homogeneously mix a slurry containing not less than fifty (50) pounds of organic mulching amendment plus chemical additives and solids for each one hundred (100) gallons of water.
3. The slurry shall be prepared at the site and its components shall be mixed to supply the rates of application as specified. The slurry preparation shall begin by adding

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water to the tank when the engine is at one half (½) throttle. The engine throttle shall be open to full speed when the tank is one half (½) filled with water. All organic amendments, fiber, and chemicals shall then be added by the time the tank is two thirds (2/3) to three fourths (3/4) full. At this time and not before, the seed mix shall also be added. Spraying shall commence immediately when the tank is full, and the slurry is mixed.

4. Apply the hydroseed to form even appearing cover over the required areas. The slurry shall be applied in a downward drilling motion via a fan stream nozzle. It is important to ensure that all of the components enter and mix with the soil. Use only qualified and trained personnel to insure uniformity of the hydroseed applications.
5. The hydroseeding slurry components shall not be left in the hydroseed machine for more than two (2) hours in order to avoid seed deterioration.

C. A two-step hydroseeding procedure may be used in lieu of the one-step method. The two-step procedure shall consist of first sowing the seed mix by broadcasting, and second, applying the hydromulch. Specifically, this procedure shall conform to the following:

1. The seed shall be broadcast over the planting bed at the rates noted in the plant schedule. The seed shall be sown in two (2) perpendicular directions with a cyclone seeder or other similar mechanical seeder. Lightly rake the seed into the soil.
2. Apply a fine spray watering immediately after each area has been sown.
3. Prepare and apply hydromulch slurry (minus the seed mix) according to the procedure outlined in 3.12 B, steps 1 through 5 above.

3.13 DRILL SEEDING (NOT USED)

If seeding operations are to be done using a drill seeding method, the following requirements shall apply:

A. All topsoil shall be placed, and the fine grading completed prior to any seeding operations.

B. The seed bed shall be prepared by loosening the surface of the soil and mixing the specified fertilizer into the top two (2) inches of the topsoil. The finished surface shall be smooth and even, with no high or low spots, no rocks, nor other deleterious materials. The use of a Rotodairon or similar piece of equipment to prepare the seed bed is encouraged.

C. The seed shall be drilled using a Brillion type seeder, specifically designed for drilling grass seed. An agricultural grain drill is not acceptable. A cultipacker, harrow, or similar apparatus shall be a part of the seeder or dragged behind to help ensure that the seed is covered by the soil and the surface is left smooth and even.

3.14 CLEAN UP

A. Throughout the course of planting, excess and waste materials as well as excavated subsoil shall be continuously and promptly removed. All areas shall be kept clear and all reasonable precautions taken to avoid damage to existing structures, plants, and grass.

B. When planting has been completed in an area, it shall be thoroughly cleaned of all debris, rubbish, subsoil, and waste materials. These shall be removed from the property and disposed of legally. All planting tools shall also be put away.

C. The ground surface shall be left in a condition satisfactory to the Landscape Architect or Owner's Representative.

3.15 AS-BUILT DOCUMENTS

A. The Contractor shall keep a record of all departures from the working drawings that occur

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during construction. These changes shall be shown on a clean set of prints, and the prints kept on the job site at all times for review.

B. As a part of his observation work, the Landscape Architect or Owner's Representative shall review the as-built drawings regularly to verify that changes are being recorded. At the conclusion of the work, the Contractor shall present to the Owner fresh, clean drawings of all the changes made and recorded previously and they shall become part of the permanent record of the project.

3.16 **MAINTENANCE**

A. Substantial Completion:

1. At Substantial Completion of all planting work outlined in these plans, the Contractor shall contact the City to arrange for a walk through to verify that all aspects of the work have been completed. Work must be fully completed (except for final clean-up) according to all plans, notes, and specifications and exhibit professional workmanship. Substantial completion shall be defined as the complete installation of all plant materials, staking, mulching, and other work on the project in its entirety. Substantial completion shall not be given on designated portions of the project.
2. Notice by the Contractor shall be given, in writing, at least three (3) days in advance to the Landscape Architect or Owner's Representative so that proper scheduling can be made for those who are to attend.
3. At the appointed time, an inspection of all plant materials, including staking and mulching, shall be made.
4. A list of uncompleted items (punch list) shall be generated by the Landscape Architect or Owner's Representative and distributed to the Contractor and other involved parties within three (3) days of the substantial completion inspection. Each item on the punch list shall be corrected before the project will be approved and accepted by the Landscape Architect or Owner's Representative. The Contractor will be back charged for time spent by the Owner and any consultants who have been brought to the site for a final inspection when the project is not ready for said inspection.

B. Maintenance/Establishment Period:

1. The maintenance/establishment period shall begin one (1) day after the substantial completion inspection. The Contractor shall complete all punch list items during this period, as well as maintain and operate the entire irrigation system.
2. In cases where the maintenance/establishment period runs beyond October 15 of any given year, the balance of the maintenance/establishment period days shall be extended into the spring of the following year. Counting of the balance of days shall begin no sooner than April 15, unless mutually agreed upon by both the Contractor and the City prior to that date. Early counting shall be based on weather conditions at the time.
3. The Contractor shall maintain all plantings until the turf is fully established. The turf shall be considered fully established when grass stands come in uniform and thick, with no bare or thin spots, and roots have begun to spread and knit together. No weeds shall be allowed in the grass. If the turf grass is hydroseeded, the Contractor must complete the hydroseeding by September 1. The maintenance/establishment period shall be a minimum period of sixty (60) days.
4. The maintenance work required shall include but not be limited to the following:
   a. Appropriate watering of all plant materials.
   b. Weeding and removal of all weeds from groundcover and planting areas.

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c. Replacement of any dead, dying, or damaged trees, shrubs, perennials, or groundcover.
d. Filling and replanting of any low areas which may cause standing water.
e. Adjusting or sprinkler head heights and watering patterns.
f. Filling and recompaction of eroded areas, along with any required reseeding and/or replanting.
g. The grass shall be mowed when the blades reach three (3) inches tall and maintained to a minimum height of two (2) inches. No more than one third (1/3) of the blade shall be removed per cutting. The cutting frequency shall be once every five (5) to seven (7) days depending upon grass height and growth rate.
h. Weekly removal of all trash, litter, clippings, and all foreign debris.
i. At thirty (30) days after planting, a balanced fertilizer (16-16-16) shall be applied to the grass areas at a rate of one half (½) pound of nitrogen per one thousand (1,000) square feet.
j. At intervals of thirty (30) days after the first application of fertilizer to the grass, apply a balanced fertilizer (16-16-16) at a rate of one half (½) pound of nitrogen per one thousand (1,000) square feet until the grass is established.

5. The maintenance period shall not end until Final Acceptance of the project.

C. Final Acceptance:
1. A final inspection shall be held prior to the end of the maintenance period to ensure that all punch list items have been completed and the entire project is ready for acceptance by the Owner.
2. Upon satisfaction that the Contractor has completed all punch list items, the irrigation system is fully and completely functional, and the required As-Built drawings, mylars and maintenance manuals have been submitted, the Owner shall accept the project.
3. An official letter of final acceptance shall be prepared and issued by the Owner to the Contractor, designer, and the Landscape Architect. Upon final acceptance of the project by the Landscape Architect or Owner's Representative, the Owner shall assume full responsibility for the project, and the guarantee period shall begin.

3.16 GUARANTEE

A. Upon final acceptance of the project as being properly installed, the Contractor shall guarantee the plant materials as follows:
1. All shrubs and groundcovers shall be guaranteed by the Contractor as to growth and health for a period of sixty (60) days after completion of the maintenance period and final acceptance.
2. All trees shall be guaranteed by the contractor to thrive and grow in an acceptable upright position for a period of one (1) year after completion of the maintenance period and final acceptance.

B. The Contractor shall, within fifteen (15) days after receiving written notification by the Landscape Architect or Owner's Representative, remove and replace all guaranteed plant materials which die or become unhealthy or appear to be in a badly impaired condition at any time during the guarantee period. Any plants that settle below or rise above the desired finished grade shall also be reset to the proper grade.

C. All replacements shall be plants of the same kind, size, and quality as originally specified in the "plant list" and they shall be furnished, planted, staked, and maintained as specified herein at no additional cost.

D. The Contractor will not be responsible for plants destroyed or lost due to occupancy of the

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project, vandalism on the part of others, or improper maintenance or lack thereof.

E. At the conclusion of the guarantee period and prior to final inspection of the plant materials by the Landscape Architect or Owner's Representative, the Contractor shall remove all tree stakes. This period of time shall be approximately 1 year after initial planting.
   1. Stakes shall be removed by first cutting the ties securing the tree to stakes and secondly pulling stakes or guys out of the ground.
   2. Stakes shall not be broken off above, at, or below ground levels but removed completely.

F. At the conclusion of the guarantee period a final inspection of all planting included in this contract shall be made by the Landscape Architect or Owner's Representative. At that time any plant found to be unhealthy, broken, damaged, or otherwise in an impaired condition shall be noted. Plants so noted shall be removed immediately from the site by the Contractor and replaced by him, as specified under this section, with plants of like kind and size in the manner previously specified for the original planting without extra compensation.

3.17 **LOG & STUMP BARRIER**

A. Natural, untreated log & stump barrier.
   1. Tree trunks and/or larger branches (10" min. dia.) shall have smaller branches removed to provide a single continuous main trunk.
   2. Trunks/branches to be placed lengthwise, end-to-end, with lower 1/3 buried beneath grade.
   3. Group stumps together in groups of four (4) to six (6) stumps every 30 to 40 feet along the log barrier, in-line with the logs. Stumps to have varying and staggered heights from 12" above grade to 24" above grade.

B. Specialty treated log barrier.
   1. Logs and stumps shall have all bark stripped, hard corners rounded off or chamfered to remove hard edge, and rough surfaces sanded smooth.
   2. Cabots Australian Timber oil shall be applied at installation prior to burying 1/3 below grade. Contractor is responsible to reapply oil to all exposed surfaces at 6 months, 12 months, 18 months, and 24 months after initial installation.
   3. Group stumps together in groups of three (3) to five (5) stumps to be placed in-line with horizontal logs every 15 to 20 feet along the length of the log barrier. Stumps to be directly adjacent to one another to contain the playground engineered wood fiber. Stumps to have varying and staggered heights between 12" above grade to 24" above grade.

END OF SECTION

Attachment: AFBH_Bid_Specs_08.22.24 (4) (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.

J-U-B COMPANIES | THE LANGDON GROUP | GATEWAY MAPPING INC.

ADDENDUM NO. 2

AMERICAN FORK CITY
AMERICAN FORK BOAR HARBOR RECONSTRUCTION

September 10, 2024

Addendum No. 2 to the Plans, Contract Documents, and Specifications prepared by J-U-B ENGINEERS, Inc. is hereby submitted for use in bid preparation and submittal. Contractor must acknowledge receipt of all Addenda on the Bid Form.

The following clarifications, additions, and/or deletions are hereby made part of the American Fork Boat Harbor Reconstruction as fully and completely as if the same were entirely set forth in the Contract Documents and Specifications.

The corrections, clarifications, changes, and approvals described herein shall become an integral part of any contract entered into between the Owner and Contractor.

CONTRACTOR QUESTIONS AND RESPONSES

Q: Will the manufacturer details and installation for the playground equipment be provided before the bid date?
A: The playground company – Sonntag Recreation – is providing the equipment and will do the assembly/install of the playground equipment. The playground equipment will be purchased by the city. Each bidding contractor should include playground installation costs from Sonntag as a sub-contractor in the bid. (Sonntag Recreation, 801-278-9797 or jwebb@sonntagrec.com)

Q: Can you provide additional details on the 9'x18' Pavilion?
A: As indicated on the drawings, the pavilion is the Sierra Model from Classic Recreation (available via Sonntag Recreation - 801-278-9797). Fully engineered drawings will be provided after the city has purchased the pavilions.

Q: Can you provide additional details on the Collapsible Access Control Bollard?
A: Additional information for the collapsible bollard can be found on the manufacturer's website: https://www.trafficguard.net/security-bollards/collapsible-bollards/single-post/single-post-lphdhb

Q: Can you provide additional details on the Bike Rack and how it connects to the ground/concrete?
A: The owner-provided bike racks are DuMor, inc. 292 series with the S-2 surface mount base. See detail 3 / sheet L-501 for more information on site furnishing surface mounting.

Q: Can you provide additional details on the Playground Equipment? Are we expected to put it all together, will this come pre-fabricated?
A: It is expected that the playground vendor (Sonntag Recreation) will be the sub-contractor who assembles and installs the playground equipment.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

Q: Can you provide additional details on the mounting hardware required for the owner supplied Cornhole Boards?
A: The cornhole boards will be precast concrete and will be owner installed. The revised plan sheet indicates as such.

Q: Can you provide additional details on the Modular Floating Dock, Gangway, and Kayak Launch supplied by the owner and installed by the contractor?
A: It is expected that the floating dock, gangway, and kayak launch come from the 1000 series from Connect-A-Dock. Minimum 90" wide float sections, 4'x12' gangway. (Justin Jones, SewLong Covers, South Salt Lake City, justin@sewlong.com, 801.262.4017)

Q: Can you provide additional details on the mounting hardware required for the owner supplied Trash Receptacles?
A: Trash receptacles should be mounted per detail 3 / L-501 (see keynote #1). Specifics related to mounting hardware should be requested by the manufacturer.

Q: Can you provide additional details on the Shade Umbrellas supplied by the owner and installed by the contractor?
A: The shade umbrellas are to be the SkyWays 10x10 #237668 model from Landscape Structures, inc. (available via Sonntag Recreation - 801-278-9797). Fully engineered drawings will be provided after the city has purchased the pavilions.

Q: Can you provide additional details on the 6' Aluminum Picnic Tables? Will these come prefabricated? Are they connected to the ground/concrete in some way?
A: The picnic tables will be the 8' Rectangular Portable Table from MyTcoat (available via Sonntag Recreation - 801-278-9797). Tables over concrete should be mounted per detail 3 / L-501 (see keynote #1). Tables over chat material/stone dust should be mounted with a 12" diameter and a minimum 24" deep concrete footing at each anchor point. Specifics related to mounting hardware should be requested by the manufacturer.

Q: Will all the owner provided materials be delivered to the project site? If not, where will this material be stored?
A: Yes, the owner provided materials will be delivered to the project site.

Q: During the pre-bid, it was discussed changing the low bid process to and RFP and provided with a page showing how things would be scored. Is an addendum forthcoming changing this process and providing any additional forms or are we to go off the pre-bid agenda?
A: The construction documents show the project as an RFP with the requirements of project understanding, project cost, experience, and a preliminary schedule. The Selection and Disqualification Process form shared during the prebid provides additional information on how the bidder will be judged. There will not be any additional forms provided.

Q: Per the details on sheet DD506, will you clarify what elevation the "Ex. Lake Bed" is expected to be? In looking at historical data on the lake, the lake levels are much higher than they have been in years

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

past and would like clarity if you are expecting the rip rap and broken concrete to only go to the water level, or if you are expecting us to place this under water? If we are expected to break this concrete underwater, are there any environmental laws with silica dust we won't be following by doing this?
A: It is not expected for the contractor to enter the lake. We are expecting the rock to only go to the water level, with expecting some to fall below as well. There is no expected remediation from breaking the concrete than compared to sawcutting existing concrete or the removal of existing concrete.

ADDITIONAL CLARIFICATION
In-ground Bench: Detail 3 / sheet L-501 does not apply to benches, as they are expected to be in-ground mount. Concrete footings shall be provided for each bench leg/post at 12" dia x minimum 24" below finish grade. The footings shall be installed below the finish concrete flatwork in such a way that the footing is not visible on surface of the flatwork.

VOLUME I FRONT ENDS

1. C-410 Bid Form for Construction Contract
   - Bid Item 13 6" Thick Vehicular Concrete – Updated bid name
   - Bid Item 15 Concrete Flatwork – Updated Estimate Quantity
   - Bid Item 16 6" Thick Concrete Drive Approach – Updated bid name
   - Bid Item 17 HMA, PG-54-22, SP-1/2, 75ND, 3" Thick with Max 15% RAP – Asphalt Trail – Updated Estimate Quantity
   - Bid Item 19 Untreated Base Course – Updated Estimate Quantity
   - Bid Item 58 2" Caliper Deciduous Tree – Updated Estimate Quantity
   - Bid Item 72 Log Playground Barrier, Treated Logs – Updated Estimate Quantity
   - Bid Item 73 Specialty, Treated Logs and Stumps – Updated Estimate Quantity
   - Bid Item 74 Natural (Untreated) Logs and Stumps – Updated Estimate Quantity
   - Bid Item 77 Collapsible Access Control Bollard – Updated Estimate Quantity

VOLUME II TECHNICAL SPECIFICATIONS

1. Specification 01 22 00 Measurement and Payment,
   - Section 1.21 Bid Item #13 6" Thick Vehicular Concrete was modified
   - Section 1.23 Bid Item #15 Concrete Flatwork was modified
   - Section 1.24 Bid Item #16 6" Thick Concrete Drive Approach was modified
   - Section 1.87 Bid Item #79 Bike Rack was modified

VOLUME III DRAWINGS
1. On Sheet CC101, added electrical sheets to the Sheet List Table
2. On Sheet CS101, modified the concrete north of the new restroom and the driveway approach. Removed two (2) collapsible bollards, see Sheet L-102 as well.
3. On Sheet DD503, Detail 1 Standard Drive Approach was modified to show thicker concrete and the additional concrete on the backside.
4. Sheets E-001 New sheet.
5. Sheets E-002 New sheet.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

6. Sheets E-003 New sheet.
7. Sheets E-004 New sheet.
8. Sheets E-101 New sheet.
9. On Sheet L-101, increased sod area to tie into existing grass better. Removed vehicle concrete hatch between restroom and playground. Added note for cornhole to be installed by owner/city.
10. On Sheet L-102, removed two (2) collapsible bollards, see CS101 as well.
11. On Sheet L-104, addition of 5 trees.
12. On Sheet L-501, modified notes on Detail 3.

Notice is hereby given that this Addendum must be signed and enclosed with a sealed bid for the American Fork Boat Harbor Reconstruction as evidence that the Bidder has familiarized himself/herself with all changes incorporated herein.

NAME OF BIDDER:_____

BY: _____ _____

Signature Date

_____

Name (Print) Title

Submitted By:
J-U-B Engineers, Inc.

Daniel Netzley, P.E.
Project Engineer

Attachments:

Volume I Front Ends: C-410 Bid Form
Volume II Technical Specifications: 01 22 00 Measurement and Payment and
Volume III Drawings: Sheet CC101, CS101, DD503, E-001, E-002, E-003, E-004, E-101, L-101, L-102, L-104, L-501.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

PREBID MEETING QUESTIONS AND RESPONSES

Questions are in black and the responses are in red.

1. Is this prebid meeting mandatory?
   The prebid meeting is mandatory and has been changed in Addendum 1 to note that.

2. Can you clarify the Bid Item 78 that talks about the concrete foundation and then it will be paid under a different bid item?
   Bid item has been changed to show that the concrete foundation will be included with the bid item.

3. Can you clarify on Bid Item 6 that reads the Owner and Contractor will choose the location of disposing of the asphalt removal material?
   Bid Item 6 has been changed to read that a portion will be laid on the overflow parking and the rest will be trucked to a location chosen by the Contractor.

4. It will be hard to finish paving by November 30th and follow Project Spec 01 56 39 requirement of at least 30 days in advance of submitting tree protection.
   Project Spec 01 56 39 was modified to ease the requirements to protect the existing trees. A majority of the funding for the project has an expenditure deadline by the end of 2024.

5. Can CAD files be shared?
   Yes, CAD files will be shared to the email addresses provided in the prebid metting attendance record. Note that the CAD files are not project documents and a discrepancy from between the CAD files and the plans will be awarded to the plans.

6. Can an Engineer's Estimate be given?
   The Engineer's Estimate will be sent on September 3.

7. Can the amount of asphalt that will need to be taken from the site that will not be used for the overflow parking be provided?
   The quantity will be sent on September 3.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

BID FORM FOR CONSTRUCTION CONTRACT

ADDENDUM 2

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

American Fork City

51 E Main St,

American Fork, UT, 84003

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security;

B. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;

C. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;

D. Personnel and Qualifications

1. Present information which will identify key personnel who will be assigned to the project, including project manager, and project superintendent(s).

2. Describe the background and experience of each of these individuals. Provide detailed resumes for the project manager, and project superintendent(s).

3. Describe the approach to scheduling and accomplishing the work; including paving the parking lot by Dec 1, 2024. Identify which major trade work (i.e. structural, mechanical, earthwork) will be completed by the contractor's forces and which will be performed by subcontractors.

E. Project Experience

1. The Contractor, or subcontractor, should have experience with work as shown in the Base Bid Table below. Proposals shall include project experience in four categories: concrete curb/sidewalk experience, asphalt pavement experience, shoreline or related experience, and landscape/playground experience. A single project example may be used to show qualifications in all four categories, however a minimum of three projects

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should be submitted to show the Contractor's experience. A reference should be submitted for each project including the Owner's name, organization, and contact information.

a. Concrete Curb/Sidewalk Experience

1) (3) projects completed in the last 5 years with at least 500 linear feet of curb and gutter replacement and 500 linear feet of sidewalk replacement.

b. Asphalt Pavement Experience

1) (3) projects completed in the last 5 years with at least 500 tons of hot-mix asphalt installed.

c. Shoreline or Related Experience

1) (2) projects completed in the last 10 years with shoreline or related experience, including weed management.

d. Landscape/Playground Equipment Experience

1) (3) projects similar in scope and fee completed in the last 5 years involving landscape/playground equipment

F. Claims, Disputes, and Projects Completed by Sureties

1. List all the Contractor's projects that are currently in a claims dispute or have been in a claims dispute in the last five years. Give the owner, owners contact information, and reason for dispute.

2. List all the Contractor's projects that have been completed by a surety in the last five years. Give owner and contact information for each project listed.

ARTICLE 3—BASIS OF BID—UNIT PRICES

3.01 *Unit Price Bids*

Bidder will perform the following work at the indicated unit prices:

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Base Bid					
Item No.	**Description**	**Estimated Quantity**	**Unit**	**Bid Unit Price**	**Bid Amount**
1	Mobilization/Demobilization	1	LS	$	$
2	As-Built/Record Drawings	1	LS	$	$
3	Storm Water Pollution Prevention Plan (SWPPP)	1	LS	$	$
4	Weed Removal and Management Plan - Jetty	1	LS	$	$
5	General Removal and Disposal	1	LS	$	$
6	Remove and Dispose Asphalt Pavement	15,614	SY	$	$
7	Clearing and Grubbing	1	LS	$	$
8	Remove and Dispose Tree	10	EA	$	$
9	Relocate Light Poles and Electric Junction Boxes	1	LS	$	$
10	Remove and Dispose Toll Booth	1	LS	$	$
11	Remove Chain and Post Fence and Chainlink Fence	1,127	LF	$	$
12	Remove Entrance Gate	1	LS	$	$
13	8” Thick Vehicular Concrete	1,259	SF	$	$
14	4” Thick Concrete Sidewalk	1,160	SF	$	$
15	Concrete Flatwork	1,565	SF	$	$
16	8” Thick Concrete Drive Approach	1	EA	$	$
17	HMA, PG-54-22, SP-1/2, 75ND, 3” Thick with Max 15% RAP – Asphalt Trail	305	TON	$	$
18	HMA, PG-54-22, SP-1/2, 75ND, 3” Thick with Max 15% RAP – Parking Lot	2,828	TON	$	$
19	Untreated Base Course	3,468	CY	$	$
20	Granular Borrow	5,617	CY	$	$
21	Excavation	19,300	CY	$	$
22	Borrow	1,950	CY	$	$
23	Handicap Ramp	7	EA	$	$
24	4’ Concrete Valley Gutter	1,433	LF	$	$
25	Open 24” Curb and Gutter	3,320	LF	$	$

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26	Vehicular Gate at Entrance (36'-Wide Manual Double Swing Gate)	1	LS	$	$
27	Relocated Vehicular Gate (12'-Wide Manual Slide Gate)	1	LS	$	$
28	General Relocation	1	LS	$	$
29	4' Chainlink Fence	18	LF	$	$
30	6' Chainlink Fence	908	LF	$	$
31	Dumpster Enclosure	1	LS	$	$
32	Concrete Wheel Stop	35	EA	$	$
33	Sign with 8" Dia. Bollard	22	EA	$	$
34	Stationary 6" Dia. Bollard	6	EA	$	$
35	Striping	1	LS	$	$
36	Harbor Slope Protection	1699	SY	$	$
37	Lake Exposed Slope Protection	807	SY	$	$
38	Inlet Basin, 3'x3', 5-7Ft Deep	5	EA	$	$
39	Storm Drain Manhole, 5-Ft, 6Ft Deep	1	EA		
40	Sand/Oil Separator – OSS-A1	1	EA	$	$
41	Sand/Oil Separator – OSS-B1	1	EA	$	$
42	Sand/Oil Separator – OSS-C1	1	EA	$	$
43	Sand/Oil Separator – OSS-D1	1	EA	$	$
44	18" Reinforced Concrete Pipe	472	LF	$	$
45	24" Reinforced Concrete Pipe	18	LF	$	$
46	18" Flared End Section Pipe Outlet	2	EA	$	$
47	24" Flared End Section Pipe Outlet	1	EA	$	$
48	CXT Tioga Restroom Building	1	LS	$	$
49	Fine Grading (Landscape Areas)	1	LS	$	$
50	Washed Beach Sand	762	CY	$	$
51	Engineered Wood Fiber (Playground)	2,785	SF	$	$
52	Steel Edging (1/8" Thick, 6" Tall- Corten/Borcon)	880	LF	$	$
53	Sod	1,064	SF	$	$
54	Shredded Bark Mulch	3,822	SF	$	$
55	1" Desert Rose Stone Mulch (3" Depth)	11,402	SF	$	$
56	3"-6" Wasatch Grey Stone Mulch (4" Depth)	14,668	SF	$	$

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57	1/4" Minus Chat (Path Material)	1,386	SF	$	$
58	2" Caliper Deciduous Tree	10	EA	$	$
59	NOT USED				
60	Topsoil	406	CY	$	$
61	Weed Barrier Fabric	26,016	SF	$	$
62	Concrete Mow Curb (6" Wide)	5	LF	$	$
63	Cast-in-Place 8" Deep-Edge Concrete Curb Wall (Playground)	93	LF	$	$
64	Cast-in-Place Concrete Seat Wall (12" Wide)	237	LF	$	$
65	Lodge Pole Fence	241	LF	$	$
66	Shade Umbrellas	6	EA	$	$
67	Modular Floating Dock, Gangway, and Kayak Launch	1	LS	$	$
68	Timber Hammock Posts	10	EA	$	$
69	Trash Receptacles (Powder Coated)	5	EA	$	$
70	Cornhole Board	2	EA	$	$
71	Playground Equipment	1	LS	$	$
72	Log Playground Barrier, Treated Logs	51	LF	$	$
73	Specialty, Treated Logs and Stumps	80	LF	$	$
74	Natural (Untreated) Logs and Stumps	200	LF	$	$
75	6' Bench (With Back)	6	EA	$	$
76	6' Aluminum Picnic Tables (Powder-Coated)	6	EA	$	$
77	Collapsible Access Control Bollard	1	EA	$	$
78	Pavilion	2	EA	$	$
79	Bike Rack	2	EA	$	$
80	Import Building Foundation	1	LS	$	$
81	Building Concrete and Reinforcing	1	LS	$	$
82	Rough Carpentry	1	LS	$	$
83	Shop Fabricated Roof Trusses	1	LS	$	$
84	Siding	1	LS	$	$
85	Stone Veneer and Associated Items	1	LS	$	$
86	Metal Fabrications	1	LS	$	$
87	Thermal and Moisture Protection	1	LS	$	$

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88	Batt/Blown-In/Sprayed-In Insulation	1	LS	$	$
89	Roofing	1	LS	$	$
90	Interior Finish	1	LS	$	$
91	Doors, Frames, and Hardware	1	LS	$	$
92	Glazing	1	LS	$	$
93	Miscellaneous Building Item	1	LS	$	$
94	Building Electrical	1	LS	$	$
Total of All Unit Price Bid Items:					$

A. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—TIME OF COMPLETION

4.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

4.02 Bidder agrees that the Work will be substantially complete on or before **May 1, 2025,** and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **May 22, 2025.**

4.03 The parking lot is the first priority and must be completed by **November 30, 2024**.

4.04 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 5—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

5.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

5.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

5.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

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ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

6.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

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11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

6.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.

2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.

3. Bidder has not solicited or induced any individual or entity to refrain from bidding.

4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:

a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.

b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.

c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.

d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

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BIDDER hereby submits this Bid as set forth above:

Bidder:

_____

(typed or printed name of organization)

By: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____

(individual's signature)

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Date: _____

(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____

(typed or printed)

Title: _____

(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

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September 10, 2024

SECTION 01 22 00
MEASUREMENT AND PAYMENT
ADDENDUM 2

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Authority

B. Payment

C. Defect Assessment

D. Non-Payment for Rejected Products

E. General Description of Measurement and Payment

F. Alternates

G. Schedule of Bid Items

1.2 DESCRIPTION OF WORK

A. The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

1.3 AUTHORITY

A. See EJCDC C-700 General Conditions 10.07 and 10.08

B. Take all measurements and compute quantities to estimate percent complete of each item listed in the schedule of values. The Engineer will verify measurements and quantities and percent complete.

1.4 PAYMENT

A. See EJCDC C-700 General Conditions 15.01

B. Payment Includes: Full compensation for all required labor, products, tools, equipment, plant, transportation, services, and incidentals; erection, application or installation of an item of the Work; overhead and profit.

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1.5 DEFECT ASSESSMENT

A. EJCDC C-700 General Conditions 10.04 – Rejecting Defective Work
   1. See EJCDC C-700 General Conditions and Article 14

B. Replace the Work, or portions of the Work, not conforming to specified requirements.

C. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Owner will direct one of the following remedies:
   1. The defective Work may remain, but the unit sum will be adjusted to a new sum at the discretion of the Engineer.
   2. The defective Work will be partially repaired to the instructions of the Owner, and the unit sum will be adjusted to a new sum at the discretion of the Engineer.

D. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.

E. The authority of the Engineer to assess the defect and identify payment adjustment is final.

1.6 NON-PAYMENT FOR REJECTED PRODUCTS

A. Payment will not be made for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from the transporting vehicle.
   4. Products placed beyond the lines and levels of the required Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling, and disposing of rejected Products.
   7. Removing rejected materials and/or work and replacing with materials and/or work in compliance with these specifications.

1.7 GENERAL DESCRIPTION OF MEASUREMENT AND PAYMENT

A. Measurement and Payment for the bid items listed in Base Bid shall be based on the description in the Technical Specifications and Drawings. Unless the work to be done is so specifically called out to be measured and paid for in Base Form, payment for such work shall be included in other applicable items, and there shall be no separate measurement and payment for the work.

B. Items listed in EJCDC C-410 – Bid Form as lump sum (L.S.) shall include all work for the complete installation as generally described in the Drawings and the Technical Specifications.

C. Payment shall be made at the contract bid price listed in the Bid Form.

D. Partial payment for unit price bid items and lump sum bid items only partially completed at the end of monthly pay periods shall be made based upon the Engineers

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interpretation of the percentage of work completed. Partial payment for materials delivered and stored will be considered, if said materials have been submitted to the Engineer for review per Section 01 33 00 – Submittal Procedures and supporting invoices and documentation have been provided.

E. Quantities indicated in the Bid Form are for bidding and contract purposes only, unless specified otherwise in the Technical Specifications.

F. If the actual work requires more or fewer quantities than those quantities indicated in the Bid Form, the Contractor shall provide the required quantities.

G. Payment Includes: Full compensation for all required labor, products, tools, equipment, materials, transportation, services and incidentals, erection, application, or installation of an item of the Work, including mobilization, demobilization, supervision, overhead and profit.

H. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit price for work which is incorporated in or made necessary by the Work unless specified otherwise.

I. Material the Contractor removes from the site will be returned to the Owner if requested by the Owner.

J. Construction Staking will be performed by the OWNER's Representative.

1.8 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement

B. Coordinate related work and modify surrounding work.

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SCHEDULE OF BID ITEMS – BASE BID

1.9 MOBILIZATION/DEMOBLIZATION – BID ITEM #1

A. Measurement shall be lump sum for the job, complete. Payment shall be as outline below:

PAY FACTORS FOR MOBILIZATION/DEMOBILIZATION AND TEMPORARY FACILITIES	
Percent of Original Contract Amount Earned Not Including Materials Purchased	Percent of Amount Bid for Mobilization to be Paid
5	40
15	20
40	30
50	10

B. This includes, but not limited to, all labor and equipment and materials for, safely moving equipment and related materials to and from the site, sanitation facilities, traffic control required permitting, temporary utilities and controls, project related documentation and coordination with State and Local authorities. Payment for the performance of the mobilization/demobilization work as specified herein will be made at the contract lump sum price for "Mobilization/Demobilization" as listed in the Bid Schedule.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.10 AS-BUILT/RECORD DRAWINGS – BID ITEM #2

A. Measurement shall be lump sum for the job, complete.

B. This includes, but not limited to, all labor and equipment and materials to provide as-built/record drawings as specified in these Specifications and elsewhere in these Contract Documents.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.11 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) – BID ITEM #3

A. Measurement shall be lump sum for the job, complete. Payment shall be as outline below:

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PAY FACTORS FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	
Amount Paid	When Paid
25% of bid item amount	With first estimate
Remaining portion of bid item paid as percentage of the contract completed	With each subsequent estimate

B. Payment for this bid item shall include all costs associated with preparation and implementation of a (SWPPP) and obtaining the Utah Pollutant Discharge Elimination (UPDES) Storm Water permit.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.12 WEED REMOVAL AND MANAGEMENT PLAN – JETTY – BID ITEM #4

A. No direct measurement will be made for weed removal and management plan. This item shall include all equipment, labor, and materials to provide weed removal and management plan for the jetty, including the implementation of the plan for the removal of vegetation. Plan shall include the application of herbicides by Commercial Pesticide Applicator registered in Utah. The plan should be created and executed for the site for construction as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.13 GENERAL REMOVAL AND DISPOSAL – BID ITEM #5

A. Measurement for this item shall be per lump sum. Payment shall include all items not accounted for in the removal bid items, Bid Items 6-13, required to prepare and maintain the site for construction as specified in these Specifications, Plans, and elsewhere in these Contract Documents. Included in this item is coordination with Owner for removal of any other items found in project limits.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.14 REMOVE AND DISPOSE ASPHALT PAVEMENT – BID ITEM #6

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to remove and dispose existing asphalt from the site

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and roadway as called out on the plans. Work includes demolition, sawcutting, hauling, and disposing of asphalt material from the work site to the overflow parking for a portion of the asphalt and the rest to a location chosen by the Contractor. Subgrade removal will be paid for in Excavation bid item. Asphalt is to be sawcut to full depth. No additional payment will be made for sawcutting to provide a clean edge immediately before placing asphalt.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.15 CLEARING AND GRUBBING – BID ITEM #7

A. Measurement shall be lump sum of clearing and grubbing. This includes, but is not limited to, all labor, equipment and materials required for stripping and disposing of vegetation, including but not limited to stumps, roots, shrubs, vegetation, and vegetative debris within the construction limits to cut, remove, haul, and properly dispose of. Trees greater than 4" at 2' from top of existing ground shall be paid out in Remove and Dispose Tree bid item. The price also includes disposal fees. Work on the jetty will be paid under a different bid item.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.16 REMOVE AND DISPOSE TREE– BID ITEM #8

A. Measurement shall be per each tree removed with a diameter of 4 inches or larger measured at a point 2 feet above the existing ground, anything smaller shall be paid for in the Clearing and Grubbing bid item. CONTRACTOR is to verify size with OWNER prior to removal. This includes, but is not limited to, all labor, equipment and materials required for removal of trees called out in the plans to remove, including stumps and roots to cut, wood chip, remove, haul, and properly dispose of to 18" below grade. The price also includes disposal fees.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.17 RELOCATE LIGHT POLES AND ELECTRIC JUNCTION BOXES– BID ITEM #9

A. No direct measurement will be made for relocation of light poles and electric junction boxes. This item shall include all equipment, labor, and materials to remove and coordinate the relocation of light poles and electric junction boxes as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.18 REMOVE AND DISPOSE TOLL BOOTH– BID ITEM #10

A. Measurement for this item shall be lump sum. This item shall include all equipment, labor, and materials to remove and dispose of the complete toll booth station, foundation, and all contents. Contractor is to verify with Owner of all items to be returned located inside the building. Also included is the coordination and removal/abandoning of the existing power lateral.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.19 REMOVE CHAIN AND POST FENCE AND CHAINLINK FENCE– BID ITEM #11

A. Measurement for this item shall be by the linear foot. Payment shall be full compensation for labor, materials, equipment, and appurtenances required to remove and dispose of existing fence per project plans and specifications. If a portion of the existing fence remains, and the fence will not be continued under this project, this item includes furnishing and installing an end post matching the existing fence end posts in size, shape, material, construction, color, and mounting method. This item includes removing and disposing of the fence materials and any concrete foundations and furnishing, placing, backfilling and compacting holes of removed posts.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.20 REMOVE ENTRANCE GATE– BID ITEM #12

A. Measurement for this item shall be lump sum. Payment shall be full compensation for labor, materials, equipment, and appurtenances required to remove and dispose of existing entrance gate per project plans and specifications. If a portion of the existing fence remains, and the fence will not be continued under this project, this item includes furnishing and installing an end post matching the existing fence end posts in size, shape, material, construction, color, and mounting method. This item includes removing and disposing of the gate materials and any concrete foundations and furnishing, placing, backfilling and compacting holes of removed posts.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.21 8” THICK VEHICULAR CONCRETE– BID ITEM #13

A. Measurement shall be by the square foot of vehicular concrete furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the concrete, including expansion joints and rebar. This also includes all necessary forms, expansion/contraction material, curing material, and all other

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necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.22 4" THICK CONCRETE SIDEWALK– BID ITEM #14

A. Measurement shall be by the square foot of 4" thick sidewalk furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the sidewalk, including expansion joints. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.23 CONCRETE FLATWORK– BID ITEM #15

A. Measurement shall be by the square foot of 4" thick minimum ~~sidewalk~~ flatwork furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the concrete flatwork, including expansion joints and rebar. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. This pay item also includes all concrete for the trash receptacles, benches, picnic tables, and bike racks. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.24 8" THICK CONCRETE DRIVE APPROACH – BID ITEM #16

A. Measurement shall be per concrete drive approach furnished and installed. The area in which concrete drive approaches and sidewalks cross are measured under this this item, as will driveway flares. Areas in which concrete drive approaches and curb and gutter cross are not measured under this item - measurement of concrete drive approaches will begin at the back of curb line. Payment shall be full compensation for all labor, equipment, and materials for excavating, preparing grade, and furnishing, forming, placing, and finishing concrete drive approach. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.25 HMA, PG-64-22, SP-1/2, 75ND, 3" THICK WITH MAX 15% RAP - ASPHALT TRAIL – BID ITEM #17

A. Measurement for the asphalt shall be per ton based upon weigh tickets obtained in the field by the inspector. Included in this item is all labor, equipment and materials required to furnish and install asphalt to required thickness. This includes, but is not limited to, tackifier, compaction, preparing and verifying final base grade, material testing, ensuring positive drainage in all locations, and other related appurtenances as shown on the drawings and described in the specifications and contract documents. Eligible payment will be for measured/weighed tons of asphalt material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract ton (TON) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.26 HMA, PG-64-22, SP-1/2, 75ND, 3" THICK WITH MAX 15% RAP – PARKING LOT – BID ITEM #18

A. Measurement for the asphalt shall be per ton based upon weigh tickets obtained in the field by the inspector. Included in this item is all labor, equipment and materials required to furnish and install asphalt to required thickness. This includes, but is not limited to, tackifier, compaction, preparing and verifying final base grade, material testing, ensuring positive drainage in all locations, and other related appurtenances as shown on the drawings and described in the specifications and contract documents. Eligible payment will be for measured/weighed tons of asphalt material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract ton (TON) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.27 UNTREATED BASE COURSE – BID ITEM #19

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to import, place, and compact untreated base course under all asphalt, pedestrian concrete, vehicular concrete, concrete flatwork, concrete drive approach, sidewalk, valley gutter, curb and gutter, handicap ramp, and dumpster enclosure, except as noted in other bid items. Eligible payment will be for placed and compacted cubic yards of untreated base course material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.28 GRANULAR BORROW – BID ITEM #20

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to import, place, and compact granular borrow as shown on the plans. Borrow used for locations other than under pavement as shown in the plans will

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be paid for under a separate item. Eligible payment will be placed and compacted cubic yards of granular borrow material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.29 EXCAVATION – BID ITEM #21

A. Measurement for this item shall be cubic yard. This item shall include all equipment, labor, and materials to excavate as shown in the drawings within the limit of construction including, but not limited to, soil and rock. This includes hauling and disposal fees. No additional payment will be made for over-excavation, unless as written approval by Engineer.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.30 BORROW – BID ITEM #22

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to furnish and install the borrow as shown in the drawings within the limit of construction. Eligible payment will be for measured/weighed cubic yards of borrow material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.31 HANDICAP RAMP– BID ITEM #23

A. Measurement shall be per ramp furnished and installed. This includes, but is not limited to, all labor, equipment, and materials necessary to form, pour, and finish the American Disabilities Act (ADA) Ramp, including expansion joints, curb wall (if needed), and raised truncated domes. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. The ADA Ramp is to be built in accordance with the 2010 ADA Standards for Accessible Design and Manual on Uniform Traffic Control Devices (MUTCD). Excluded from this item but included in another is: untreated base course material, sign(s), and signpost(s).

B. Payment shall be made at the contract each (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.32 4’ CONCRETE VALLEY GUTTER– BID ITEM #24

A. Measurement for this item shall be per linear foot. This item includes all labor, equipment, materials necessary to haul, form, pour, and finish the 4’ concrete valley gutter as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents. Included are expansion joints and sealant. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.33 OPEN 24” CURB AND GUTTER– BID ITEM #25

A. Measurement for this item shall be per linear foot. This item includes all labor, equipment, materials necessary to haul, form, pour, and finish the open 24” curb and gutter as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents. Included are expansion joints and sealant. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.34 VEHICULAR GATE AT ENTRANCE (36’-WIDE MANUAL DOUBLE SWING GATE) – BID ITEM #26

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the swing gates per manufactures instructions and as shown on the drawings, including but not limited to, caps, couplings, fittings and hardware, and other appurtenances required for complete and operational swing gates. Also included is excavation, post foundations, compaction, and backfill material. Gate shall feature a locking mechanism with three (3) functioning keys approved by Owner. The static fencing is paid for under other pay items.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.35 RELOCATED VEHICULAR GATE (12’-WIDE MANUAL SLIDE GATE) – BID ITEM #27

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the reinstallation of the existing slide gate per manufactures instructions and as shown on the drawings, including but not limited to, caps, couplings, fittings and hardware, and other appurtenances required for complete and operational slide gate. Also included is excavation, post foundations, compaction, and backfill material. Gate shall feature a locking mechanism with three (3) functioning keys approved by Owner. The static fencing is paid for under other pay items.

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B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.36 GENERAL RELOCATION– BID ITEM #28

A. Measurement for this item shall be per lump sum. Payment shall include all items not accounted for relocation, including shed and flagpole as specified in these Specifications, Plans, and elsewhere in these Contract Documents. Shed is to be installed on a concrete foundation, included in this pay item. Also included is the flagpole foundation. Included in this item is coordination with Owner for relocation of any other items found in project limits.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.37 4’ CHAINLINK FENCE – BID ITEM #29

A. Measurement for this item shall be per linear foot. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the fencing per manufactures instructions (matching existing fence type) and as shown on the drawings, including but not limited to, line posts, caps, couplings, fittings, hardware, and other appurtenances required for a complete fence installation. Also included is excavation, post foundations, compaction, and backfill material.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.38 6’ CHAINLINK FENCE – BID ITEM #30

A. Measurement for this item shall be per linear foot. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the fencing per manufactures instructions (matching existing fence) and as shown on the drawings, including but not limited to, line posts, caps, couplings, fittings, hardware, and other appurtenances required for a complete fence installation. Also included is excavation, post foundations, compaction, and backfill material. The enclosure gate is paid for under another pay item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.39 DUMPSTER ENCLOSURE– BID ITEM #31

A. Measurement shall be lump sum for furnishing and installing dumpster enclosure. This includes but is not limited to all costs to complete the dumpster enclosure, including concrete slab, concrete curb, concrete foundation, CMU wall, relocation of dumpster,

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and double swing gate as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.40 CONCRETE WHEEL STOP– BID ITEM #32

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install concrete wheel stop as specified in these Specifications and elsewhere in these Contract Documents. Included is drilling holes through pavement for the installation of the wheel stop. Wheel stops that are cracked during construction will be replaced at Contractor's expense.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.41 SIGN WITH 8" DIA. BOLLARD– BID ITEM #33

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install sign with bollard as specified in these Specifications and elsewhere in these Contract Documents. Included is the furnishing and installing steel pipe, sign, steel tube, concrete foundation, as well as paint. Also included is 1 foot of over excavation and placement of compacted (95%) granular borrow subgrade.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.42 STATIONARY 6" DIA. BOLLARD– BID ITEM #34

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install stationary bollard as specified in these Specifications and elsewhere in these Contract Documents. Included is the furnishing and installing steel pipe and concrete foundation, as well as paint. Also included is 1 foot of over excavation and placement of compacted (95%) granular borrow subgrade.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.43 STRIPING– BID ITEM #35

A. Measurement shall be lump sum for furnishing and installing striping. This includes but is not limited to all costs to complete the markings, including arrows, stop bars, crosswalks, and curb painting. All material shall be installed in accordance with manufacturer specifications and shall be placed reflecting current conditions or as

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directed, also as directed in the 2010 ADA Standards for Accessible Design, MUTCD, and these drawings. Parking stalls and restricted striping are four inches (4") wide white lines. Also included is painted asphalt on the "Heavy Duty Asphalt Pavement Section"

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.44 HARBOR SLOPE PROTECTION – BID ITEM #36

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to import, place, and compact D50=6" riprap and 4" infill/bedding material as specified in these Specifications and elsewhere in these Contract Documents. Also included is the breaking and shaping of the existing concrete on the jetty slopes to receive the infill/bedding material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.45 LAKE EXPOSED SLOPE PROTECTION – BID ITEM #37

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to import, place, and compact D50=36" riprap and 6" infill/bedding material as specified in these Specifications and elsewhere in these Contract Documents. Also included is the breaking and shaping of the existing concrete on the jetty slopes to receive the infill/bedding material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.46 INLET BASIN, 3'X3', 5-7FT DEEP – BID ITEM #38

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install storm drain inlet box with grate and frame as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to inlet box, frame, grate, risers, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.47 STORM DRAIN MANHOLE, 5-FT, 6FT DEEP – BID ITEM #39

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install storm drain manhole with lid as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to manhole, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.48 SAND/OIL SEPERATOR – OSS-A1 – BID ITEM #40

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-A1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.49 SAND/OIL SEPERATOR – OSS-B1 – BID ITEM #41

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-B1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.50 SAND/OIL SEPERATOR – OSS-C1 – BID ITEM #42

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-C1 and D1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary,

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structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.51 SAND/OIL SEPERATOR – OSS-D1 – BID ITEM #43

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-D1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.52 18” REINFORCED CONCRETE PIPE – BID ITEM #44

A. Measurement for this item shall be per linear foot. This item shall include all equipment, labor, and materials to furnish and install 18” RCP storm drain as specified in these Specifications and elsewhere in these Contract Documents. This item also includes but is not limited to excavation, trenching, shoring, slope stabilization, personal protection as necessary, pipe fittings, pipe appurtenances, bedding material, foundation stabilization as required, zone backfill material (APWA 33 05 20, Plan 381) placed, compacted, complete, and in place.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.53 24” REINFORCED CONCRETE PIPE – BID ITEM #45

A. Measurement for this item shall be per linear foot. This item shall include all equipment, labor, and materials to furnish and install 24” RCP storm drain as specified in these Specifications and elsewhere in these Contract Documents. This item also includes but is not limited to excavation, trenching, shoring, slope stabilization, personal protection as necessary, pipe fittings, pipe appurtenances, bedding material, foundation stabilization as required, zone backfill material (APWA 33 05 20, Plan 381) placed, compacted, complete, and in place.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.54 18" FLARED END SECTION PIPE OUTLET – BID ITEM #46

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install flared end with Oldcastle FES trash guard (or approved equivalent), as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to furnishing and installing trash guard hardware, connecting pipe to flared end, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, energy dissipation apron rock, well graded backfill material, compacted and in place as shown on the plans. Also included is the nonwoven geotextile fabric that wraps the riprap at the daylighting of pipe.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.55 24" FLARED END SECTION PIPE OUTLET – BID ITEM #47

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install flared end with Oldcastle FES trash guard (or approved equivalent), as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to furnishing and installing trash guard hardware, connecting pipe to flared end, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, energy dissipation apron rock, well graded backfill material, compacted and in place as shown on the plans. Also included is the nonwoven geotextile fabric that wraps the riprap at the daylighting of pipe.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.56 CXT TIOGA RESTROOM BUILDING– BID ITEM #48

A. Measurement shall be lump sum for coordination for installation of CXT Tioga Double Vault Toilet. Owner will purchase restroom. Included is coordination with CXT, who will be delivering, unloading, excavating, and backfilling for building, and all else as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.57 FINE GRADING (LANDSCAPE AREAS)– BID ITEM #49

A. Measurement for this item shall be based on the square footage of fine grading in all softscape areas including final grade preparation in all areas to receive mulches and turf. Also included are other labor, equipment, materials, cleaning, and related

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appurtenances as shown on the drawings and specifications required to provide fine grading.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.58 WASHED BEACH SAND – BID ITEM #50

A. Measurement for this item shall be based on the cubic yards of sand installed at 10" depth in the beach area including final grade preparation in all areas to receive washed beach sand. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide washed beach sand. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.59 ENGINEERED WOOD FIBER (PLAYGROUND) – BID ITEM #51

A. Measurement for this item shall be based on the square foot of 14" depth engineered wood fiber installed inside of the playground wall. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide fine grading. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.60 STEEL EDGING (1/8" THICK, 6" TALL- CORTEN/BORCON) – BID ITEM #52

A. Measurement for this item shall be based on the linear foot of 1/8" thick, 6" tall corten/borcon steel edging installed, including cutting, securing, and placement. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install steel edging.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.61 SOD – BID ITEM #53

A. Measurement for this item shall be based on the square footage of area to receive sod including final grade preparation. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide sod installation.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.62 SHREDDED BARK MULCH – BID ITEM #54

A. Measurement for this item shall be based on the square foot of 3" depth of bark mulch installed along the backside of the log barrier at a width of approx. 15 feet, including final grade preparation in all areas to receive bark mulch. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide bark mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.63 1" DESERT ROSE STONE MULCH (3" DEPTH) – BID ITEM #55

A. Measurement for this item shall be based on the square foot of 3" depth of 1" Desert Rose stone mulch installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 1" stone mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.64 3"-6" WASATCH GREY STONE MULCH (4" DEPTH) – BID ITEM #56

A. Measurement for this item shall be based on the square foot of 6" depth of 3"-6" Wasatch Grey stone mulch installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 3"-6" Wasatch Grey stone mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.65 1/4" MINUS CHAT (PATH MATERIAL) – BID ITEM #57

A. Measurement for this item shall be based on the square foot of 3" depth of ¼" minus chat installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install ¼" minus chat. Contractor shall provide weight tickets or verification of quantity.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.66 2" CALIPER DECIDUOUS TREE – BID ITEM #58

A. Measurement for this item shall be based on each 2" caliper deciduous tree installed, including all digging, placement, backfill, watering, and staking. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 2" caliper deciduous tree.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.67 NOT USED – BID ITEM #59

1.68 TOPSOIL– BID ITEM #60

A. Measurement for this item shall be based on the cubic yard of topsoil installed at 4" depth for sod areas and 12" depth to the mature dripline of the individual trees, including all placement, final grade preparation, and backfilling of tree pits. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install topsoil for the sod and trees. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.69 WEED BARRIER FABRIC– BID ITEM #61

A. Measurement for this item shall be based on the square foot of weed barrier fabric installed, including all placement, staking, securing, and final grade preparation. Also included are other labor, equipment, materials, cleaning, and related appurtenances and connections as shown on the drawings and specifications required to provide and install weed barrier fabric.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.70 CONCRETE MOW CURB (6" WIDE) – BID ITEM #62

A. Measurement for this bid item shall be per linear foot of mow curb installed. This includes but is not limited to all labor, equipment, and materials to install the mow curb to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material and all other items necessary.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.71 CAST-IN-PLACE 8" DEEP-EDGE CONCRETE CURB WALL (PLAYGROUND) – BID ITEM #63

A. Measurement for this bid item shall be per linear foot of curb wall installed. This includes but is not limited to all labor, equipment, and materials to install the new curb wall to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material, untreated base course, fiber and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.72 CAST-IN-PLACE CONCRETE SEAT WALL (12" WIDE) – BID ITEM #64

A. Measurement for this bid item shall be per linear foot of concrete seat wall installed. This includes but is not limited to all labor, equipment, and materials to install the seat wall to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material, untreated base course, fiber and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.73 LODGE POLE FENCE – BID ITEM #65

A. Measurement for this item shall be based on the linear foot of wood lodge pole fencing installed per drawing details, including cutting, securing, and placement. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install lodge pole fencing.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.74 SHADE UMBRELLAS – BID ITEM #66

A. Measurement for this item shall be per each. This item shall include all labor, equipment, hardware, materials, and related appurtenances as shown on the drawings and specifications required to install Owner provided shade umbrella per manufacturer's instructions and details.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

1.75 MODULAR FLOATING DOCK, GANGWAY, AND KAYAK LAUNCH – BID ITEM #67

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor and materials required for the installation of the Owner provided modular floating dock, gangway, and kayak launch per manufacturer's instructions and as shown on the drawings.

B. Payment shall be made at the contract lump sum (LS) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.76 TIMBER HAMMOCK POSTS – BID ITEM # 68

A. Measurement for this item shall be per each. This item shall include all labor, equipment, hardware, materials, and related appurtenances as shown on the drawings and specifications required to provide and install a single timber hammock post.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.77 TRASH RECEPTACLES (POWDER COATED) – BID ITEM #69

A. Measurement for this item shall be per each. This item shall include all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install an Owner provided trash receptacle. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.78 CORNHOLE BOARD – BID ITEM #70

A. Measurement for this item shall be per each. This item shall include all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install an Owner provided pre-cast concrete cornhole board.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.79 PLAYGROUND EQUIPMENT – BID ITEM #71

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the Owner provided playground equipment per manufacturer's instructions and as shown on the drawings.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

Also included is excavation, post foundations, and compaction. The engineered wood fiber is paid for under a separate pay item.

B. Payment shall be made at the contract lump sum (LS) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.80 LOG PLAYGROUND BARRIER, TREATED LOGS – BID ITEM #72

A. Measurement for this item shall be per linear foot of treated log/stump. This item includes all labor, equipment, materials necessary to cut and install natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.81 SPECIALTY, TREATED LOGS AND STUMPS – BID ITEM #73

A. Measurement for this item shall be per linear foot of treated log/stump. This item includes all labor, equipment, materials necessary to cut, treat, and install Owner provided natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.82 NATURAL (UNTREATED) LOGS AND STUMPS – BID ITEM #74

A. Measurement for this item shall be per linear foot of untreated log/stump. This item includes all labor, equipment, materials necessary to cut and install Owner provided natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.83 6’ BENCH (WITH BACK) – BID ITEM #75

A. Measurement for this item shall be based on each Owner provided 6’ bench with back installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 6’ bench with back. Concrete and UTBC will be paid under different bid items.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.84 6' ALUMINUM PICNIC TABLES (POWDER-COATED) – BID ITEM #76

A. Measurement for this item shall be based on each Owner provided 6' picnic table installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a picnic table.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.85 COLLAPSIBLE ACCESS CONTROL BOLLARD – BID ITEM #77

A. Measurement for this item shall be based on each Owner provided access control bollard installed. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install the bollard.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.86 PAVILION – BID ITEM #78

A. Measurement for this item shall be based on each Owner provided 9'x18' pavilion structure installed, including all structural footing requirements from the manufacturer. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 9'x18' pavilion. UTBC will be paid under a different bid item.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.87 BIKE RACK – BID ITEM #79

A. Measurement for this item shall be based on each Owner provided 5-loop bike rack assembly installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 5-loop bike rack assembly. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

1.88 IMPORT BUILDING FOUNDATION MATERIAL – BID ITEM #80

A. No direct measurement will be made for this item. Included in this item are all equipment, materials, labor, and costs of work in the delivery, supplying, placing, and compacting material in place as described in the Specifications and Contract Documents.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.89 BUILDING CONCRETE AND REINFORCING – BID ITEM #81

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. This item includes all earthwork, formwork, and other related items required to place the building concrete and reinforcing. All concrete and reinforcing required for the building and the concrete slabs within the building and concrete entry pad outside of walk door are included in this item. Imported foundation material shall be paid for under a separate item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.90 ROUGH CARPENTRY – BID ITEM #82

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All woodwork not visible in the finished building is included in this item. All wall framing, temporary wall supports, blocking between trusses, permanent truss bracing, roof sheathing, wall blocking for cabinets and other wall mounted appurtenances, and other wood elements permanently or temporarily attached to the trusses or wall needed for construction are included in this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.91 SHOP FABRICATED ROOF TRUSSES – BID ITEM #83

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct and install the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

1.92 SIDING – BID ITEM #84

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. This includes all non-stone siding, trim, accessories, and other items required for this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.93 STONE VENEER AND ASSOCIATED ITEMS – BID ITEM #85

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to install the item. All lathe, channels, trims, grout, waterproofing membrane, etc. required for the typical installation of finish are included in this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.94 METAL FABRICATIONS – BID ITEM #86

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All structural steel and miscellaneous fabrications from any metal used in any application for the construction of the building is included in this item. This item also includes all painting, galvanizing, coating, or other finishing of said fabrications.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.95 THERMAL AND MOISTURE PROTECTION – BID ITEM #87

A. No direct measurement will be made for this item. All waterproofing, water repellants, vapor retarders, joint sealants, weather barriers, and expansion joints are included in this item. Rigid, Batt, or Blown-in insulation shall be paid for under separate items. This item also includes all equipment, materials, labor, and costs of work required to construct the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.96 BATT/BLOWN-IN/SPRAYED-IN INSULATION – BID ITEM #88

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to install the item.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.97 ROOFING – BID ITEM #89

A. No direct measurement will be made for this item. All metal flashing, metal trim, rain gutters, downspouts, paint, and the standing seam roof system. This item includes all equipment, materials, labor, and costs of work required to construct the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.98 INTERIOR FINISH – BID ITEM #90

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All gypsum board, taping, plastering, texturing, paint, trim, flooring, sealant, hardware, and anchors required to install this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.99 DOORS, FRAMES, AND HARDWARE – BID ITEM #91

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All additional trim, sealant, hardware, paint, and anchors required to install the doors and frames are included in this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.100 GLAZING – BID ITEM #92

A. No direct measurement will be made for this item. This item includes all windows, glass, equipment, materials, labor, and costs of work required to construct/install the item. Water proofing, flashing, and sealants are included in other bid items.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

1.101 MISCELLANEOUS BUILDING ITEMS – BID ITEM #93

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required for the construction of any item pertaining to the building that is not included in another bid item. This shall include all items within 5 ft of the building perimeter not specifically listed to complete the building systems to achieve a weather tight, structurally sound, secure, and safe building meeting Owner requirements. This shall also include applicable building permitting (fees paid by Owner).

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.102 BUILDING ELECTRICAL– BID ITEM #94

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All interior and exterior lighting, outlets, switches, panels, controls, wiring, conduits, labels, coordination with Rocky Mountain Power and other trades, and other items necessary for a complete job as shown in the Drawings and as described in the Specifications and elsewhere in the Contract Documents, and related components not covered under another bid item required for the construction of the building, is included in this item. Also included is stubbing a conduit to the west for future internet.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

PART 2 EXECUTION – NOT USED

END OF SECTION

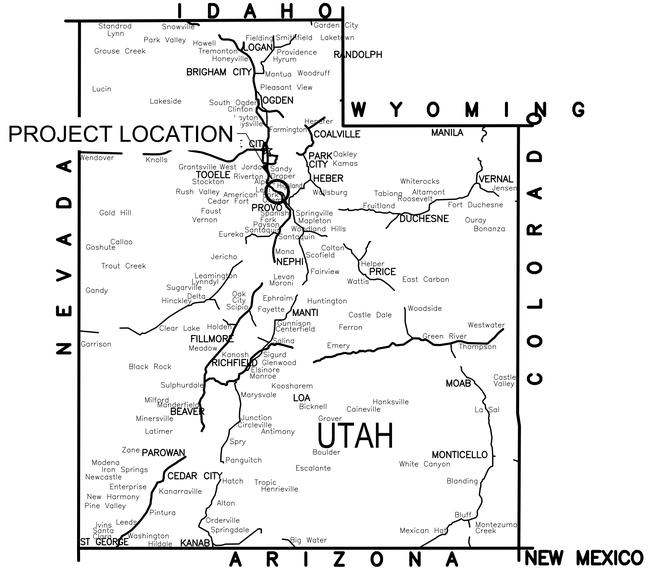
Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

AMERICAN FORK BOAT HARBOR RECONSTRUCTION

AMERICAN FORK CITY

AUGUST 2024

BID SET



AREA MAP

PROJECT VICINITY MAP

AMERICAN FORK 18 53

PROJECT NO. 83-23-013

J-U-B ENGINEERS, INC.

392 E. Winchester St., Suite 300, Salt Lake City, UT 84107
p 801 886 9052 *w* www.jub.com

THE LANGDON GROUP | GATEWAY MAPPING INC.

J-U-B FAMILY OF COMPANIES

811 Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

Sheet List Table	
Sheet Number	Sheet Title
CC101	TITLE SHEET
CN101	GENERAL NOTES
CN102	LINE LEGEND AND DETAIL KEY
CN103	SYMBOL LEGEND AND ABBREVIATIONS
CD101	DEMOLITION PLAN
CD102	DEMOLITION PLAN
CD103	DEMOLITION PLAN
CS101	SITE PLAN
CS102	SITE PLAN
CS103	SITE PLAN
CG101	GRADING PLAN
CG102	GRADING PLAN
CG103	GRADING PLAN
CU101	UTILITY PLAN
CU102	UTILITY PLAN
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DD502	DETAILS
DD503	DETAILS
DD504	DETAILS
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DD506	DETAILS
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L-101	LANDSCAPE AND AMENITIES PLAN
L-102	LANDSCAPE AND AMENITIES PLAN
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L-501	LANDSCAPE AND AMENITIES DETAILS
L-502	LANDSCAPE AND AMENITIES DETAILS
S-001	FEE BOOTH GENERAL STRUCTURAL NOTES
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S-102	FEE BOOTH ROOF FRAMING PLAN
S-201	FEE BOOTH TOLL BOOTH ELEVATIONS
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S-502	FEE BOOTH STRUCTURAL DETAILS
S-503	FEE BOOTH DOOR-WINDOW SCHEDULE

1

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LAST UPDATED: 8/22/2024

SHEET NUMBER: CC101

Plot Date: 9/9/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_G-00X.DWG

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

MATCHLINE PROJECT LIMITS

STILL SURFACE
13:075:0033

AMERICAN FORK CITY
13:075:0003

100 WEST STREET

AMERICAN FORK RIVER

TIMP MARINA CLUB
6186 N 6000 W
13:076:0033

PROPERTY LINE

LEASE LINE

Existing Dirt Parking Area

INSTALL 6' CHAINLINK FENCE (3/DD502)

INSTALL DUMPSTER ENCLOSURE AND RELOCATE GARBAGE DUMPSTER (7/DD502)

CONSTRUCT VEHICULAR CONCRETE WITH ADA RAMPS (6/DD502, 9/DD502)

CONST. 5' CONCRETE SIDEWALK (8/9/DD501)

4" SWL

4" SYL

FENCING/VEHICULAR GATE (8/DD502)

INSTALL 6' FENCE

CONST. 5' SIDEWALK (8/9/DD501)

BOAT CLEAN OFF AREA

CONST. CURB AND GUTTER (2/DD501)

Existing Shade

INSTALL 6' FENCE AND 12' MANUAL SLIDE GATE

CONSTRUCT VEHICULAR CONCRETE WITH PEDESTRIAN RAMPS (6/DD502, 9/DD502)

INSTALL DO NOT ENTER (R5-1) 30X30 (2/DD501)

INSTALL RELOCATED SHED

4" BWL

CONST. TOLL BOOTH AREA (3/DD502)

CONST. 4" VALLEY GUTTER

INSTALL CONCRETE WHEEL STOP (TYP) (1/DD501)

17' STALLS

18 STALLS

2' STALLS

CONST. CURB AND GUTTER (2/DD501)

INSTALL 6' CHAINLINK FENCE (3/DD502)

CONST. CURB AND GUTTER (2/DD501)

UTAH LAKE BOUNDARY

1 STALL

7 STALLS

8 STALLS

INSTALL SPEED LIMIT SIGN (15 MPH) 24X30 (R2-1) (2/DD501)

SEE LANDSCAPE SHEETS FOR BEACH AREA

CONCRETE SEAT WALL. SEE LANDSCAPE PLANS

CONCRETE PADS. SEE LANDSCAPE PLANS

INSTALL DO NOT ENTER (R5-1) 30X30 (WEST) AND STOP SIGN (R1-1) 30X30 (EAST) (2/DD501)

SB

4" SWL (TYP)

INSTALL DO NOT ENTER (R5-1) 30X30 (2/DD501)

CXT TIOGA DOUBLE VAULT TOILET TO BE INSTALLED BY CXT. CONTRACTOR TO COORDINATE INSTALLATION.

CONST. ACCESSIBLE PARKING AREA (5/DD501)

STORM DRAIN SYSTEM

INSTALL RELOCATED LIGHT POLE AND ELECTRIC BOX

INSTALL STOP SIGN (R1-1) 30X30 (2/DD501)

CONST. 10' ASPHALT TRAIL (10/DD501)

CONCRETE SEAT WALL SEE LANDSCAPE PLANS

CONST. CURB AND GUTTER (2/DD501)

INSTALL ADA RAMP (6/DD502)

COLLAPSIBLE BOLLARD. SEE LANDSCAPE SHEETS (5/DD501)

INSTALL DRIVEWAY APPROACH (1/DD501)

CONCRETE SEAT WALL SEE LANDSCAPE PLANS

CONST. 4" VALLEY GUTTER

CONSTRUCT CURB AND GUTTER (2/DD501)

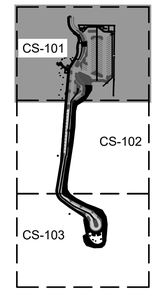
INSTALL RELOCATED LIGHT POLE AND ELECTRIC BOX

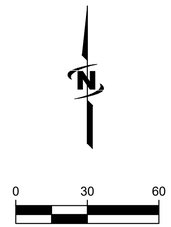
INSTALL STOP SIGN (R1-1) 30X30 (2) (2/DD501)

Existing Ramp

INSTALL STOP SIGN (R1-1) 30X30 (2/3/DD501)

INSTALL 6' CHAINLINK FENCE (3/DD502)





NOTES:

1. SEE CU SHEETS FOR INSTALLATION OF STORM DRAIN SYSTEM.
2. ALL RADIAL DIMENSIONS ON CURB AND GUTTER ARE FROM TBC

STRIPING (1/DD502)

SWL = SOLID WHITE LINE
SYL = SOLID YELLOW LINE
SB = STOP BAR, 12" SOLID WHITE LINE
BWL = BROKEN WHITE LINE

VEHICULAR CONCRETE PAVEMENT SECTION (9/DD502)

NORMAL ASPHALT PAVEMENT SECTION (11/DD501)

HEAVY DUTY ASPHALT PAVEMENT SECTION (12/DD501)

6" RIPRAP TO BE INSTALLED (1/DD506)

36" RIPRAP TO BE INSTALLED (2/DD506)

PEDESTRIAN FLAT CONCRETE TO BE INSTALLED (9/DD501)

811 UTAH LAKE

Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

SHEET CS-102

MATCHLINE PROJECT LIMITS

J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
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Phone: 801.886.9052
www.jub.com

BID SET

REGISTERED PROFESSIONAL ENGINEER
12717219-2202
DANIEL AARON NETZLEY
07/24/2024
STATE OF UTAH

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NO.	REVISION	DESCRIPTION	BY	DATE
2		ADDENDUM 2	DAN	9/10/24
1		ADDENDUM 1	JRA	8/30/24

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

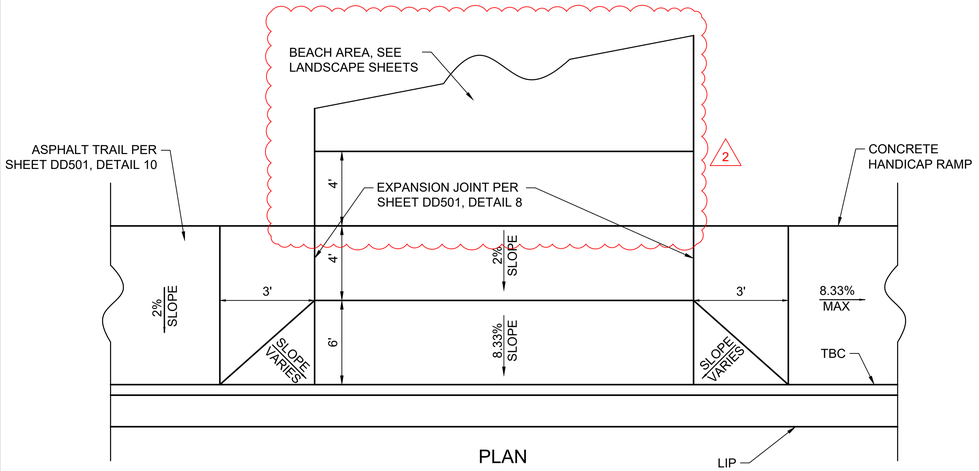
SITE PLAN

FILE:	83-23-013_CS-101
JUB PROJ. #	83-23-013
DRAWN BY:	DAN
DESIGN BY:	DAN
CHECKED BY:	JRA
ONE INCH	AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:	9/9/2024

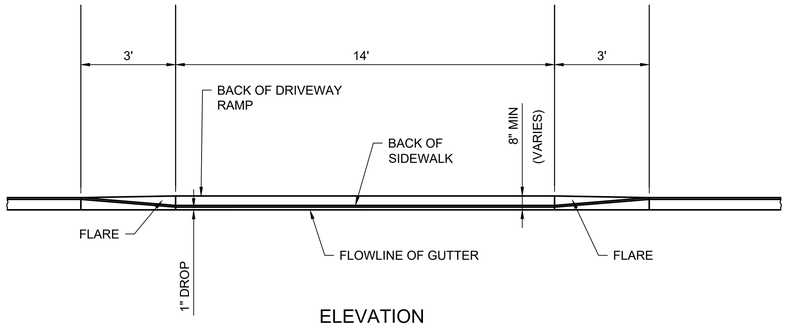
SHEET NUMBER:
CS101

Plot Date:9/10/2024 10:26 AM Plotted By: Daniel Netzley
Date Created:7/24/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORPARKINGLOT\DESIGN\CAD\SHEETS\83-23-013_CS-101.DWG

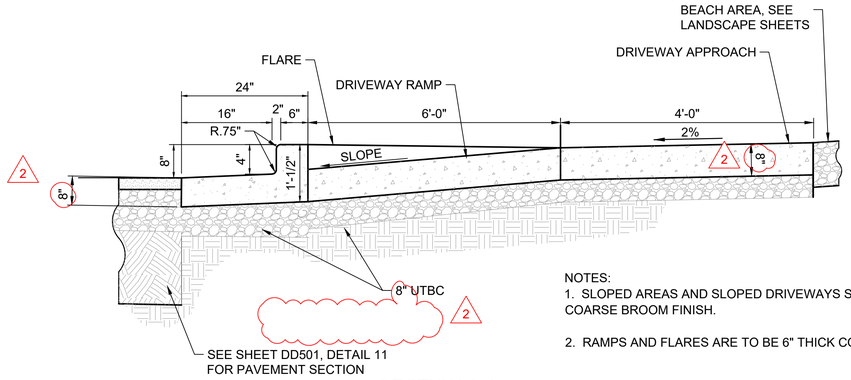
Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)



PLAN



ELEVATION

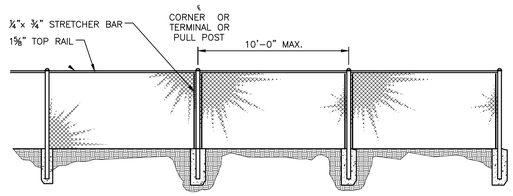


SECTION A-A
N.T.S.

NOTES:
1. SLOPED AREAS AND SLOPED DRIVEWAYS SHALL HAVE A COARSE BROOM FINISH.

2. RAMPS AND FLARES ARE TO BE 6" THICK CONCRETE.

1 STANDARD DRIVE APPROACH
SCALE: N.T.S.



HEIGHT OF FABRIC	DEPTH OF POST	LENGTH OF END, CORNER OR PULL POSTS	LENGTH OF LINE POSTS	SIZE OF POSTS	
				END, CORNER AND PULL PIPE OPTION	LINE POST (MIN. SIZE) PIPE OPTION
6'	3'+	11'+	10'-8"	2⅞"	2⅜"

NOTES:
1. ALL FABRIC, POSTS, CONNECTIONS, ETC. SHALL BE BLACK VINYL COATED.
2. ALL FABRIC SHALL BE 6 FEET HIGH CHAIN LINK OF 2" GALVANIZED MESH OF 9-GAUGE.
3. ALL STEEL PIPE MEMBER SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-120, SCHEDULE 40, HOT DIPPED ZINC COATED STEEL PIPE.
4. ALL POSTS SHALL BE SET IN CONCRETE AND SHALL BE TOPPED WITH BALL TYPE OR OTHER APPROVED ORNAMENT.
5. ALL END, CORNER OR PULL POST SHALL BE 11 FEET IN LENGTH WITH A MINIMUM DIAMETER OF 2 ⅜ INCHES. ALL LINE POSTS SHALL BE 10' 8" IN LENGTH WITH A MINIMUM DIAMETER OF 2 ⅜ INCHES.

3 6' CHAINLINK FENCE
SCALE: N.T.S.

1

1

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BID SET

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07/24/2024
STATE OF UTAH

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NO.	REVISION	BY	DATE
2	ADDENDUM 2	DAN/JRA	9/10/24
1	ADDENDUM 1	DAN/JRA	8/30/24

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DETAILS

FILE : 83-23-013_DD50X
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 9/10/2024

SHEET NUMBER:
DD503

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

Plot Date:9/10/2024 11:08 AM Plotted By: Daniel Netzley
Date Created:6/28/2024 \\JUBCENTRALCLIENTSUTTAMERICANFORKCITYPROJECTS\83-23-013_BOATHARBORPARKINGLOTDESIGN\CADSHEETS\83-23-013_DD50X.DWG

SYMBOL	DESCRIPTION
	LED LUMINAIRE, WITH EMERGENCY BATTERY PACK
	LED LUMINAIRE
	LED LUMINAIRE
	LED LUMINAIRE, WITH EMERGENCY BATTERY PACK
	EMERGENCY WALL PACK
	LED LUMINAIRE, POLE MOUNTED
	LIGHTED EXIT SIGN, BACK OR END MOUNTED. SHADED AREA INDICATES FACE. ARROW INDICATES DIRECTIONAL ARROW.
	LED LUMINAIRE, WALL MOUNTED
	LED LUMINAIRE, WALL MOUNTED WITH EMERGENCY BATTERY PACK
	SPECIAL PURPOSE RECEPTACLE – AS NOTED
Y	DUPLEX RECEPTACLE Y=NOTATIONS FOR ALL RECEPTACLE TYPES: GFI = GROUND FAULT CIRCUIT INTERRUPTER (GFCI) HT = HEAT TRACE RECEPTACLE W = WEATHER PROOF COVER I = ISOLATED GROUND C = CEILING MOUNTED RECEPTACLE SW= SPLIT CIRCUITING +X"= INDICATES CENTERLINE MOUNTING HEIGHT ABOVE FINISHED FLOOR OR GRADE
	QUAD RECEPTACLE
	SURFACE POWER/DATA RACEWAY.
	DATA OUTLET
T	THERMOSTAT
H	HUMIDISTAT
C	CABLE TV CONNECTION POINT
	PANELBOARD
	TERMINAL
	TERMINAL IN MCP
	TERMINAL REMOTE DEVICE OR PANEL

SYMBOL	DESCRIPTION
	CONDUIT EXPOSED
	CONDUIT UNDER FLOOR OR UNDERGROUND
	TYPE–SOOW CABLE
EX	EXISTING CONDUIT ROUTED UNDERGROUND
P	UNDERGROUND PRIMARY POWER
	MC–HL CABLE WITH XP SEAL FITTINGS
	CONDUIT FLEXIBLE
	HEAT TAPE ON PIPING
	MANUFACTURERS CORD/CABLE
	CONDUIT TURNED UP OR TOWARD
	CONDUIT TURNED DOWN OR AWAY
	CONDUIT CAPPED
	CONDUIT SEALS. CLASS 1. DIV.1 EXPLOSION PROOF
L–7	CONDUIT HOME RUN 3/4"C, 2#12 & 1#12 GND. TO PANEL L, CKT. 7 UNLESS SHOWN OTHERWISE
P1	CONDUIT HOME RUN – SEE SCHEDULE
VLT HH1	VAULT/HANDHOLE WITH DESIGNATION
J	JUNCTION BOX
ST 30AT 125AF 3P LSIG	CKT. BKR, RATING/NO. OF POLES WITH THERMAL MAGNETIC CIRCUIT BREAKER TRIP AT = AMPERAGE TRIP AF = AMPERAGE FRAME P = POLE LSIG = LONG, SHORT, INSTANTANEOUS GROUND ST = SHUNT TRIP
	TRANSFER SWITCH
	POWER CAPACITOR
FVNR 1	FULL VOLTAGE NON–REVERSING STARTER, NEMA SIZE 1 FVR = FULL VOLTAGE REVERSING
VFC	VARIABLE FREQUENCY CONTROLLER
SSS IC BP	SOLID STATE STARTER, REDUCED VOLTAGE WITH ISOLATION & BYPASS CONTACTORS IC = ISOLATION CONTACTOR BP = BYPASS CONTACTOR
	FUSE
AM	AMMETER (WHM–WATT HOUR METER)
VM	VOLTMETER
AM AS	METER & SWITCH: A = AMP, V = VOLT
CR	CONTROL RELAY
RTM ETM	RUN TIME METER/ELAPSED TIME METER
PE	PHOTO ELECTRIC CELL
	PANEL HEATER WITH FAN AND THERMOSTAT
	CONDUCTORS NOT CONNECTED
	CONDUCTORS CONNECTED
	PULL OUT SWITCH/PLUG–RECEPTACLE CONNECTION
	NORMALLY OPEN CONTACT. (WHEN DE–ENERGIZED)
	NORMALLY CLOSED CONTACT. (WHEN DE–ENERGIZED)
	THERMAL OVERLOAD RELAY
SS OL	SOLID STATE OVERLOAD
	EXHAUST FAN
	GRAVITY LOUVER
K	KURT KEY INTERLOCK

SYMBOL SCHEMATIC	SYMBOL PLAN	DESCRIPTION
		GROUND ROD IN GROUND ROD BOX
	T	TRANSFORMER, PLAN VIEW SHOWN TO SCALE
3	CT	CURRENT TRANSFORMER, NUMBER INDICATES NUMBER OF C.T.'S. PLAN VIEW SHOWN TO SCALE
10	M	MOTOR, NUMBER INDICATES HORSEPOWER
	OT	OVERTEMPERATURE CUTOUT
CP H	XXXX	LOCAL EQUIPMENT CONTROL PANEL – MCP, LCP, FACP
SV	SV	SOLENOID VALVE
SS	M	MAGNETIC MOTOR STARTER (SS–SOLID STATE)
	M	MAGNETIC MOTOR STARTER W/ DISCONNECT
MS 2	MS	FULL VOLTAGE STARTER/NEMA SIZE MS = MOTOR STARTER CONTACT BP = BYPASS CONTACTOR IC = ISOLATION CONTACTOR
	HS	MAINTAINED ON/OFF SWITCH
	60A	DISCONNECT SWITCH, NON FUSED (60A) INDICATES AMPERAGE RATING
100AF 200AS	F 200/100	DISCONNECT SWITCH, FUSED 200 = SWITCH RATING, 100 = FUSE RATING
		TIME DELAYED CONTACTS (TIME DELAY TO OPEN) (TIME DELAY TO CLOSE)
R	R	INDICATING LIGHT: A = AMBER G = GREEN W = WHITE B = BLUE R = RED
A	R	PUSH TO TEST INDICATING LIGHT TRANSFORMER TYPE
		LIGHTED PUSHBUTTON
OFF HAND AUTO	HOA	SELECTOR SWITCH: HOR = HAND/OFF/REMOTE AS = AMP SWITCH HOA = HAND/OFF/AUTO VS = VOLT SWITCH ROL = RMOTE/OFF/LOCAL RO = RUN/OFF
	EV	EV=ELECTRICAL VAULT, PV=POWER VAULT SV=SIGNAL VAULT
	HS	HAND SWITCH
	PB	PUSHBUTTON SWITCH. MOMENTARY ON
	ESS	EMERGENCY STOP SWITCH (PUSH/PULL)
	PS	PRESSURE SWITCH. NORMALLY CLOSED
	FS	FLOW SWITCH. NORMALLY CLOSED
	ZS	LIMIT SWITCH, NORMALLY OPEN
	LS	LEVEL SWITCH, CLOSES ON RISING LEVEL
	TS TC T	TS–TEMP. SWITCH, (SEE DWG. FOR OPERATION) TC–THERMOCOUPLE, T–THERMOSTAT
		POTENTIOMETER
LT	LT	LEVEL (T=TRANSMITTER, E=ELEMENT, S=SWITCH)
PT	PT	PRESSURE TRANSMITTER
SI	SI	SPEED INDICATOR
FT	FT	FLOW TRANSMITTER
	DS	DOOR SECURITY SWITCH
	WS	TORQUE SWITCH
VS	VS	VIBRATION SENSOR
	CS	CONTROL STATION, SINGLE OR MULTIPLE SWITCHES
	MS	MOISTURE SENSOR
	HTR	HEATER
	RTD	RESISTANCE TEMPERATURE DEVICE
		UNIT HEATER

ABBREVIATIONS	
A,AMP	AMPERE
AL	ALARM
AC	AIR COMPRESSOR
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFS	AMPERE FUSE
AI	ANALOG INPUT POINT (PLC)
AIC	AMPS INTERRUPTING CAPACITY
AIL	AMBER INDICATING LIGHT
ALT	ALTERNATOR
AO	ANALOG OUTPUT POINT (PLC)
AS	AMPERE SWITCH
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
BC	BATTERY CHARGER
BH	BLOCK HEATER
BIL	BLUE INDICATING LIGHT
BP	BYPASS CONTACTOR
C	CONDUIT (GRS)
CB	CIRCUIT BREAKER
CGD	COMBUSTIBLE GAS DETECTOR
CP	CONTROL PANEL
CPT	CONTROL POWER XFMR
CT	CURRENT TRANSFORMER
CTL	CONTROL
CV	CHECK VALVE
DB	DIRECT BURIED
DE	DOUBLE END
D.E.	DEAD END
DEM	DEMAND
DF	DEMAND FACTOR
DI	AC DIGITAL INPUT POINT (PLC)
DO	AC DIGITAL OUTPUT POINT (PLC)
EF	EXHAUST FAN
ESD	EMERGENCY SHUTDOWN
ESS	EMERGENCY STOP SWITCH
EXIST	EXISTING
GFI	GROUND FAULT INTERRUPT
GND	GROUND
GIL	GREEN INDICATING LIGHT
GRS	GALVANIZED RIGID STEEL
H	HOT, HIGH
HH	HAND HOLE
HMI	HUMAN MACHINE INTERFACE
HOA	HAND–OFF–AUTO
HS	HAND SWITCH
HTR	HEATER
I	INTRUSION SWITCH
IC	ISOLATION CONTACTOR
ISR	INTRINSICALLY SAFE RELAY
KS	KEY SWITCH
kVARH	KILOVAR HOUR
kWH	KILOWATT HOUR
L	LOW
LCP	LOCAL CONTROL PANEL
LS	LIMIT SWITCH
N	NEUTRAL
MCC	MOTOR CONTROL CENTER
MCP	MAIN CONTROL PANEL
MESR	MASTER EMERGENCY STOP RELAY
MFGR	MANUFACTURER
MOV	MOTOR OPERATED VALVE
MTR	MOTOR
OFE	OWNER FURNISHED EQUIPMENT
OIT	OPERATOR INTERFACE TERMINAL
ORD	OXIDATION REDUCTION POTENTIAL
P	PILOT LIGHT
PBL	PUSH BUTTON – LIGHTED
PB	PUSH BUTTON
PFR	PHASE FAILURE RELAY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PTZ	PAN, TILT, ZOOM
PVC	POLY VINYL CHLORIDE (CONDUIT)
PWR	POWER
RHP	RADIANT HEAT PANEL
RIL	RED INDICATING LIGHT
RR	REMOTE RACK
RTM	RUN TIME METER
SA	SURGE ARRESTOR
SIG	SIGNAL
SPC	SHIELDED POWER CABLE
SSOL	SOLID STATE OVERLOAD RELAY
SS	SOLID STATE OR STAINLESS STEEL
SV	SOLENOID VALVE
STP	SHIELDED TWISTED PAIR
STT	SHIELDED TWISTED THREE CONDUCTOR (TRIAD)
T	THERMOSTAT
TC	THERMOCOUPLE
TDOE	TIME DELAY ON ENERGIZATION
TDOD	TIME DELAY ON DE–ENERGIZATION
TR	TRIP RELAY
TNI	TELEPHONE NETWORK INTERFACE
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UH	UNIT HEATER
UTP	UNSHIELDED TWISTED PAIR
VFD	VARIABLE FREQUENCY DRIVE
WIL	WHITE INDICATING LIGHT
WP	WEATHER PROOF
WS	TORQUE SWITCH PROOF
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

REFERENCE SYMBOLS

PV–1 N — VAULT CALLOUT: N–NEW, E–EXISTING, F–FUTURE, R–REPLACE

P–355 N — EQUIPMENT CALLOUT: N–NEW, E–EXISTING, F–FUTURE, R–REPLACE

AA — DUCT BANK CALLOUT

DETAIL NUMBER OR SECTION LETTER — DETAIL/SECTION SCALE — SHEET WHERE DETAIL IS TAKEN FROM

SECTION LETTER — SHEET ON WHICH SECTION APPEARS

FIGURE OR PHOTO DETAIL NUMBER — SHEET WHERE DETAIL IS TAKEN FROM — IF PHOTO, ARROW DENOTES DIRECTION TAKEN

DETAIL NUMBER — DETAIL AREA — SHEET ON WHICH DETAIL APPEARS

CONDUIT IDENTIFICATION

F–1	POWER FEEDER CONDUIT & WIRE TAG, SEE SCHEDULE
P–1	POWER & CONTROL CONDUIT & WIRE TAG, SEE SCHEDULE
C–1	CONTROL CONDUIT & WIRE TAG SEE SCHEDULE
S–1	SIGNAL CONDUIT & WIRE TAG, SEE SCHEDULE
T–1	TELEPHONE CONDUIT & WIRE TAG
G–1	GROUND ELECTRODE SYSTEM
R–1	SPARE CONDUIT
XXXA	LETTER INDICATES CONTINUATION OF CONDUIT XXX. THE LETTER "N" SIGNIFIES MULTIPLE CONDUIT CONTINUATIONS.
N1	SHEET KEYED NOTE
XXXX	WIRING DIAGRAM DETAIL LOCATION
X	ADDENDUM NUMBER

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
$^x	WALL MOUNTED TOGGLE SWITCH, SINGLE POLE, SINGLE THROW, MOUNTED AT 48" TO TOP OF PLATE UNLESS OTHERWISE NOTED X=NOTATIONS FOR SWITCHES: 2 = DOUBLE POLE 3 = 3–WAY 4 = 4–WAY D = DIMMER K = KEY OPERATED P = SWITCH WITH PILOT LIGHT WP = WEATHER PROOF COVER OC = OCCUPANCY SENSOR SW = SPLIT CIRCUITING +X" = INDICATES MOUNTING HEIGHT TO TOP OF PLATE, ABOVE FINISHED FLOOR OR GRADE
$_a$_b	INDICATES SWITCHES a & b MOUNTED IN SEPARATE BOXES WITH SEPARATE COVER PLATES.
$_{a, b, c}	INDICATES MULTIPLE SWITCHES IN GANGED BOX WITH COMMON COVERPLATE. "a,b,c" INDICATES NUMBER OF INDIVIDUAL SWITCHES AND FIXTURES CONTROLLED.

GENERAL NOTES

1. THIS IS A STANDARD LEGEND SHEET. THEREFORE SOME ABBREVIATIONS OR SYMBOLS THAT APPEAR ON THIS SHEET MAY NOT BE USED ON THIS PROJECT.
2. THE ELECTRICAL PLAN DRAWINGS ARE GENERALLY DIAGRAMMATIC. THE LOCATION OF EQUIPMENT IS APPROXIMATE UNLESS DIMENSIONED. EXACT LOCATIONS AND ROUTING OF CONDUITS AND WIREWAYS SHALL BE GOVERNED BY STRUCTURAL CONDITIONS AND PHYSICAL INTERFERENCES AND BY LOCATIONS OF ELECTRICAL TERMINATIONS ON EQUIPMENT.
3. NOT ALL CONDUIT MAY BE SHOWN OR CALLED OUT FOR CLARITY. SEE CONDUIT AND WIRE SCHEDULE FOR ADDITIONAL CONDUIT.

SYMBOL	SECURITY
MD	MOTION DETECTOR
DC	DOOR CONTACTS
EOL	END OF LINE RESISTOR
KP	KEYPAD
	PTZ CAMERA

NEW SHEET 1

SYMBOL	FIRE PROTECTION
FACP	FIRE ALARM CONTROL PANEL
S	SMOKE DETECTOR, CEILING MOUNTED
R	ADDRESSABLE FIRE ALARM SYSTEM RELAY
	HEAT DETECTOR
C HS	XX CD XX dBA FIRE ALARM HORN STROBE, WALL MOUNTED C=CEILING MOUNTED
S	XX CD FIRE ALARM STROBE
F	FIRE ALARM PULL STATION
H	FIRE ALARM HORN

J-U-B ENGINEERS, I
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392 E. Winchester St. Suite 300
Salt Lake City, UT 84107

REGISTERED PROFESSIONAL ENGINEER No. 7542516–2202 RAYMOND J. WATKINS STATE OF UTAH
09/11/24

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REVISION

AMERICAN FORK BOAT HARBOR, PARKING LOT RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

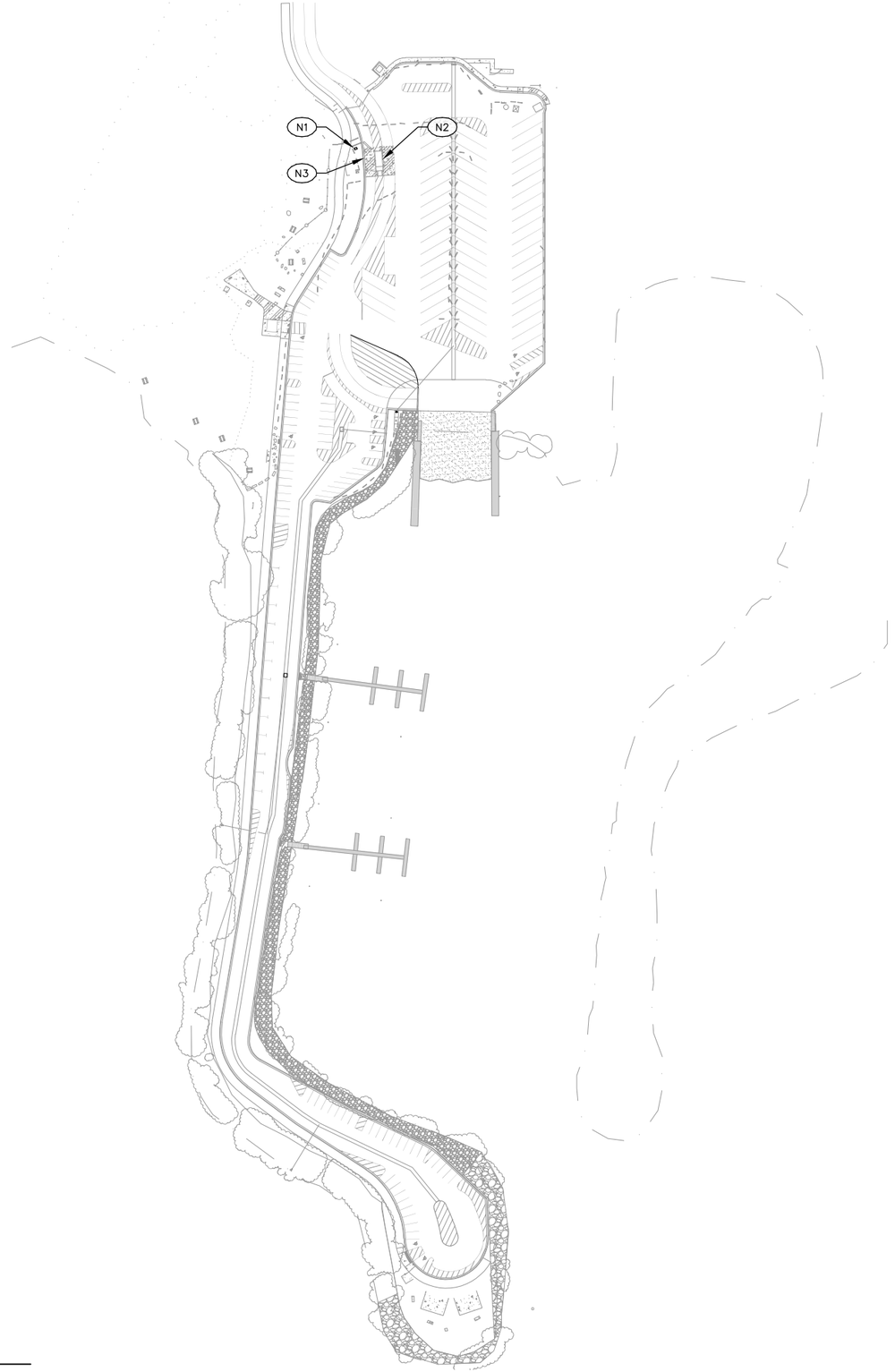
ELECTRICAL LEGEND

FILE : 83-23-013-E-001
JUB PROJ. # : 83-23-013
DRAWN BY: TLS
DESIGN BY: JWA
CHECKED BY: RJW
ONE INCH
AT FULL SIZE. IF NOT O INCH. SCALE ACCORDIN
LAST UPDATED: 09/11/24

SHEET NUMBER: E-001

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

Plot Date:9/9/2024 2:33 PM Plotted By: Ted Schlawecker
Date Created:7/18/2024 S:\2024\83-23-013 - JUB - BOAT HARBOR PARKING LOT\DRAWINGS\83-23-013-E-001.DWG



4.1 ELECTRICAL SITE PLAN
SCALE: 1"=80'

80 40 0 80 160
SCALE IN FEET

NOTES: (for this sheet)

(N1) EXISTING METER PEDESTAL.
(N2) FEE BOOTH.
(N3) PROVIDE CONDUCTORS AND CONDUIT PER ONE-LINE DIAGRAM.

NEW SHEET 1

J-U-B ENGINEERS, I
J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107

REGISTERED PROFESSIONAL
No. 7542516-2202
RAYMOND J. WATKINS
STATE OF UTAH
09/11/24

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REVISION

AMERICAN FORK BOAT HARBOR, PARKING LOT
RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

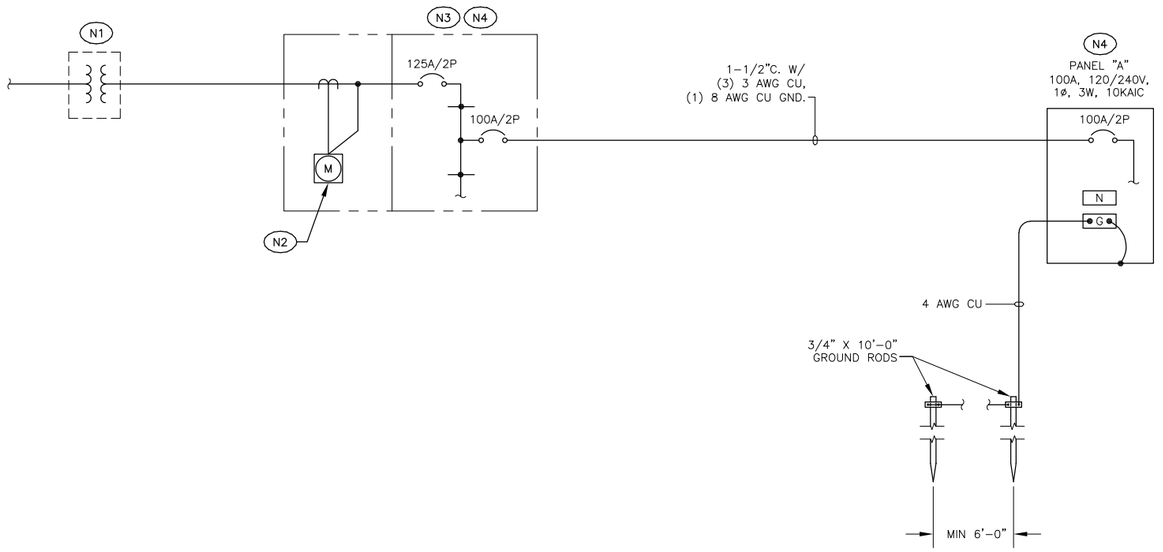
ELECTRICAL SITE PLAN

FILE : 83-23-013-E-002
JUB PROJ. #: 83-23-013
DRAWN BY: TLS
DESIGN BY: JWA
CHECKED BY: RJW
ONE INCH
AT FULL SIZE, IF NOT O
INCH, SCALE ACCORDI
LAST UPDATED: 09/11/24

SHEET NUMBER:
E-002

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

Plot Date:9/3/2024 2:34 PM Plotted By: Ted Schauwecker
Date Created:8/13/2024 S:\2024\83-23-013 - JUB - BOAT HARBOR PARKING LOT\DRAWINGS\83-23-013-E-002.DWG



NOTES: (for this sheet)

- (N1) EXISTING UTILITY TRANSFORMER.
- (N2) EXISTING UTILITY METER.
- (N3) EXISTING MAIN PANEL.
- (N4) REFERENCE PANEL SCHEDULE FOR ADDITIONAL INFORMATION.

4.1 ONE-LINE DIAGRAM
NOT TO SCALE

NEW SHEET 1

J-U-B ENGINEERS, I

J-U-B ENGINEERS, INC.
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Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9252

REGISTERED PROFESSIONAL ENGINEER
No. 7542516-2202
RAYMOND J. WATKINS
STATE OF UTAH
09/11/24

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REVISION

AMERICAN FORK BOAT HARBOR, PARKING LOT RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

ONE-LINE DIAGRAM

FILE : 83-23-013-E-003
JUB PROJ. # : 83-23-013
DRAWN BY: TLS
DESIGN BY: JWA
CHECKED BY: RJW
ONE INCH
AT FULL SIZE, IF NOT O
INCH, SCALE ACCORDI
LAST UPDATED: 09/11/24

SHEET NUMBER:
E-003

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

Plot Date:9/9/2024 2:39 PM Plotted By: Ted Schauwecker
Date Created:9/9/2024 S:\2024\83-23-013 - JUB - BOAT HARBOR PARKING LOT\DRAWINGS\83-23-013-E-003.DWG

Panel: MAIN			Mains: 125		Voltage: 120/240 VAC, 1ø, 3w		
Mounting: SURFACE	Poles: 16		Type: BOLT-ON		Min. A.I.C.: 10,000		
Use and/or Area Served	C/B	Cir. No.	Load Ø A	Load Ø C	Cir. No.	C/B	Use and/or Area Served
SPACE		1				100	FEE BOOTH PANEL A
			119		9		
SPACE		2					FEE BOOTH PANEL A
				720	10	2	
R 50 AMP PLUG	50	3	4800			20	CAMERA
			100		11		
R 50 AMP PLUG	2	4		4800			
					12		SPACE
SPACE	20	5					
					13		SPACE
SPACE	20	6					
					14		SPACE
SPACE	20	7					
					15		SPACE
SPACE	20	8					
					16		SPACE
Total Connected Load (VA):			5019	5520	NOTES:		
+ 25% of Continuous Load:			30				
- 50% General Receptacle Load over 10,000VA:			-75	-86			
Total Code Load (VA):			4974	5434			
Total Code Load (Amps):			42	46			

N1

Panel: A			Mains: 100		Voltage: 120/240 VAC, 1ø, 3w		
Mounting: SURFACE	Poles: 20		Type: BOLT-ON		Min. A.I.C.: 10,000		
Use and/or Area Served	C/B	Cir. No.	Load Ø A	Load Ø C	Cir. No.	C/B	Use and/or Area Served
L LIGHTS	20	1	119				
					2		SPACE
R RECEPTACLES	20	3		720			
					4		SPACE
SPARE	15	5					
					6		SPACE
SPARE	15	7					
					8		SPACE
SPARE	15	9					
					10		SPACE
SPARE	15	11					
					12		SPACE
SPACE		13					
					14		SPACE
SPACE		15					
					16		SPACE
SPACE		17					
					18		SPACE
SPACE		19					
					20		SPACE
Total Connected Load (VA):			119	720	NOTES:		
+ 25% of Continuous Load:			30		1.) PROVIDE INTEGRAL PANEL SPD PROTECTION.		
Total Code Load (VA):			149	720			
Total Code Load (Amps):			2	6			

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	VOLTS	LAMP QTY	WATTS / FIXTURE	MOUNTING	MANUFACTURE NUMBER BASIS OF DESIGN	MANUFACTURE NUMBER OR EQUAL BY	NOTES
F1/F1E	4' X 5.5" SURFACE MTD,LED WRAP, SMOOTH FROSTED RIBBED POLYCARBONATE LENS	120 VAC	LED 5170 LUMENS	37.8	CEILING SURFACE	METALUX: 4AWS-L3C3-UNV-MEDIUM-4000K-EL7W(WHERE INDICATED)	OR EQUAL	
F2/F2E	DIE CAST ALUMINUM HOUSING, FULL CUT OFF LED WALL PACK	120 VAC	LED 1806 LUMENS	14	WALL SURFACE	LUMARK: AXCS1A-BK-CBP(WHERE INDICATED)	OR EQUAL	
X1	LED EXIT SIGN	120 VAC	LED	1	CEILING/ WALL	SURE-LITES: SCX7R	OR EQUAL	

NOTES: (for this sheet)

(N1) REUSE EXISTING CIRCUIT BREAKER.

4.1 ELECTRICAL SCHEDULES
NOT TO SCALE

NEW SHEET 1

J-U-B ENGINEERS, I
J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107

REGISTERED PROFESSIONAL ENGINEER
No. 7542516-2202
RAYMOND J. WATKINS
STATE OF UTAH
09/11/24

REUSE OF DRAWINGS
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REVISION

AMERICAN FORK BOAT HARBOR, PARKING LOT RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

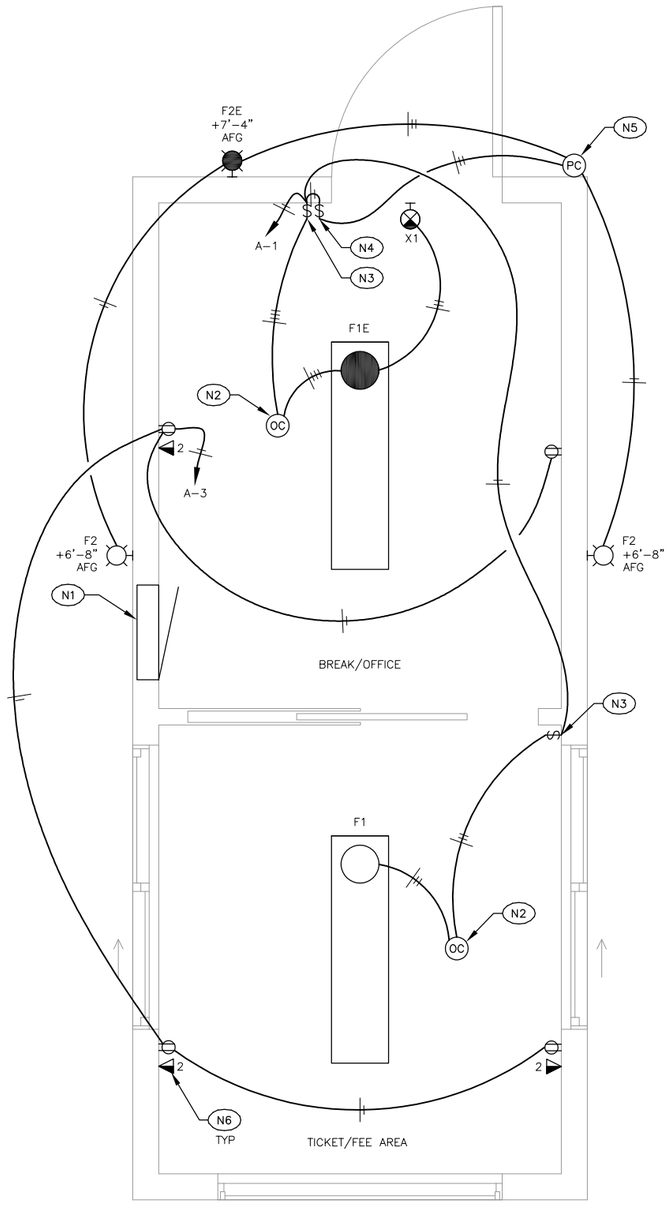
ELECTRICAL SCHEDULES

FILE : 83-23-013-E-004
JUB PROJ. # : 83-23-013
DRAWN BY: TLS
DESIGN BY: JWA
CHECKED BY: RJW
ONE INCH
AT FULL SIZE, IF NOT O
INCH, SCALE ACCORDIN
LAST UPDATED: 09/11/24

SHEET NUMBER:
E-004

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

Plot Date:9/9/2024 2:42 PM Plotted By: Ted Schauwecker
Date Created:9/9/2024 S:\2024\83-23-013 - JUB - BOAT HARBOR PARKING LOT\DRAWINGS\83-23-013-E-004.DWG



NOTES: (for this sheet)

- (N1) PANEL "A".
- (N2) GREENGATE CEILING OCCUPANCY SENSOR OAC-P-MICROSET PIR, OR EQUAL.
- (N3) GREENGATE G-10V PRESET SLIDE DIMMER WBSD-010M-01, WHITE, OR EQUAL.
- (N4) STANDARD 20A/1P TOGGLE SWITCH.
- (N5) PROVIDE PHOTOCELL AND MOUNT AT NORTHEAST CORNER OF EAVE.
- (N6) STUB 3/4"C. ABOVE CEILING FOR FUTURE COMMUNICATIONS.

0 1' 2' 3'

SCALE IN FEET

4.1 ELECTRICAL PLAN

SCALE: 3/4"=1'-0"

NEW SHEET 1

J-U-B ENGINEERS, I

J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107

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No. 7542516-2202
RAYMOND J. WATKINS
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REVISION

AMERICAN FORK BOAT HARBOR, PARKING LOT
RECONSTRUCTION, FEE BOOTH
AMERICAN FORK CITY

ELECTRICAL PLAN

FILE : 83-23-013-E-101
JUB PROJ. # : 83-23-013
DRAWN BY: TLS
DESIGN BY: JWA
CHECKED BY: RJW
ONE INCH
AT FULL SIZE, IF NOT O
INCH, SCALE ACCORDIN
LAST UPDATED: 09/11/24

SHEET NUMBER:

E-101

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

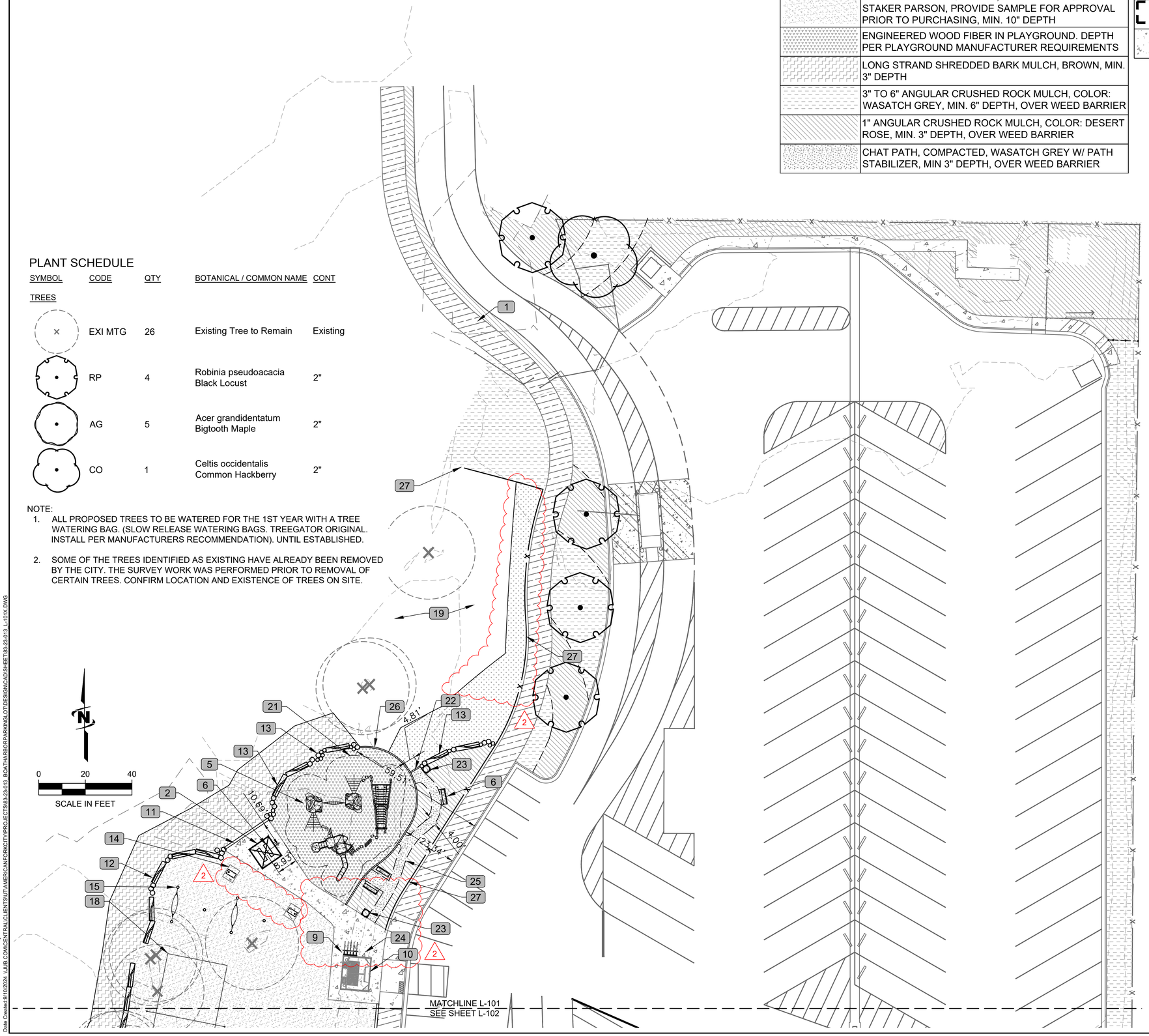
Plot Date:9/9/2024 2:44 PM Plotted By: Ted Schauwecker
Date Created:7/18/2024 S:\2024\83-23-013 - AJB - BOAT HARBOR PARKING LOT\DRAWINGS\83-23-013-E-101.DWG

LEGEND	
	WASHED FINE BEACH SAND, AVAILABLE FROM STAKER PARSON, PROVIDE SAMPLE FOR APPROVAL PRIOR TO PURCHASING, MIN. 10" DEPTH
	ENGINEERED WOOD FIBER IN PLAYGROUND. DEPTH PER PLAYGROUND MANUFACTURER REQUIREMENTS
	LONG STRAND SHREDDED BARK MULCH, BROWN, MIN. 3" DEPTH
	3" TO 6" ANGULAR CRUSHED ROCK MULCH, COLOR: WASATCH GREY, MIN. 6" DEPTH, OVER WEED BARRIER
	1" ANGULAR CRUSHED ROCK MULCH, COLOR: DESERT ROSE, MIN. 3" DEPTH, OVER WEED BARRIER
	CHAT PATH, COMPACTED, WASATCH GREY W/ PATH STABILIZER, MIN 3" DEPTH, OVER WEED BARRIER
	SOD. KENTUCKY BLUEGRASS BLEND, PATCH & REPAIR TO TIE INTO EXISTING TURF GRASS
	VEHICULAR CONCRETE, SEE CIVIL SITE PLAN & DETAIL
	CONCRETE FLATWORK, SEE CIVIL SITE PLAN

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
TREES				
×	EXI MTG	26	Existing Tree to Remain	Existing
	RP	4	Robinia pseudoacacia Black Locust	2"
	AG	5	Acer grandidentatum Bigtooth Maple	2"
	CO	1	Celtis occidentalis Common Hackberry	2"

NOTE:
1. ALL PROPOSED TREES TO BE WATERED FOR THE 1ST YEAR WITH A TREE WATERING BAG. (SLOW RELEASE WATERING BAGS. TREEGATOR ORIGINAL. INSTALL PER MANUFACTURERS RECOMMENDATION). UNTIL ESTABLISHED.
2. SOME OF THE TREES IDENTIFIED AS EXISTING HAVE ALREADY BEEN REMOVED BY THE CITY. THE SURVEY WORK WAS PERFORMED PRIOR TO REMOVAL OF CERTAIN TREES. CONFIRM LOCATION AND EXISTENCE OF TREES ON SITE.



NOTE: ITEMS LISTED IN SCHEDULE MAY NOT APPEAR ON EVERY SHEET.

REFERENCE NOTES SCHEDULE

CODE	DESCRIPTION
1	10' WIDE ASPHALT TRAIL, SEE CIVIL SITE PLAN
2	10'X10' SHADE UMBRELLA, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS
3	5' WIDE GANGWAY RAMP & MODULAR FLOATING DOCK. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
4	KAYAK LAUNCH DOCK ACCESSORY. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
5	PLAYGROUND EQUIPMENT. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
6	6' BENCH WITH BACK, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS. SEE SURFACE MOUNT DETAIL, SHEET L-501
7	6' PICNIC TABLE, TYP. POWDER COATED TOP & BASE. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
8	PAVILION, TYP. OWNER PROVIDED & CONTRACTOR INSTALLED. CLASSIC RECREATION SIERRA MODEL 9'X18'. INSTALL PER MANUFACTURER DETAILS.
9	BIKE RACK. 5 LOOP. OWNER PROVIDED & CONTRACTOR INSTALLED. INSTALL PER MANUFACTURER DETAILS.
10	CXT TIOGA RESTROOM. SEE CIVIL SITE PLAN.
11	CONCRETE SEAT WALL (TYP), SEE DETAIL, SHEET L-501
12	NATURAL (UNTREATED) LOGS & STUMPS FOR TRANSITION & BORDER MATERIAL. OWNER PROVIDED & CONTRACTOR INSTALLED. SEE PLAN FOR GENERAL LOCATION & ORIENTATION. BURY LOGS & STUMPS MIN. 1/3 INTO THE GROUND.
13	SPECIALTY, TREATED LOGS & STUMPS, OWNER PROVIDED & CONTRACTOR INSTALLED. SEE DETAIL, SHEET L-501
14	CONCRETE CORNHOLE BOARD. TYP. SET ON A 6'X5' CONCRETE BASE. OWNER PROVIDED & OWNER INSTALLED. SEE DETAIL, SHEET L-501
15	HAMMOCK POSTS. 8"X8" TIMBER POSTS WITH SHOULDER EYE-BOLT. SEE DETAIL, SHEET L-501
16	COLLAPSIBLE BOLLARD. OWNER PROVIDED & CONTRACTOR INSTALLED. BOLLARD BY TRAFFIC GUARD, MODEL#: LPHDHB. INSTALL PER MANUFACTURER DETAILS.
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23	32 GAL. TRASH RECEPTACLE (TYP), OWNER PROVIDED & CONTRACTOR INSTALLED. SURFACE MOUNT ON 3'X3' CONCRETE PAD, SEE SURFACE MOUNT DETAIL, SHEET L-501
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25	METAL EDGING, SEE DETAIL, SHEET L-501
26	PLAYGROUND CURB WALL, SEE DETAIL, SHEET L-501
27	LODGE POLE FENCE, SEE DETAIL, SHEET L-501

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NO.	REVISION / DESCRIPTION	BY	APPR.	DATE
1	ADDENDUM 2			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

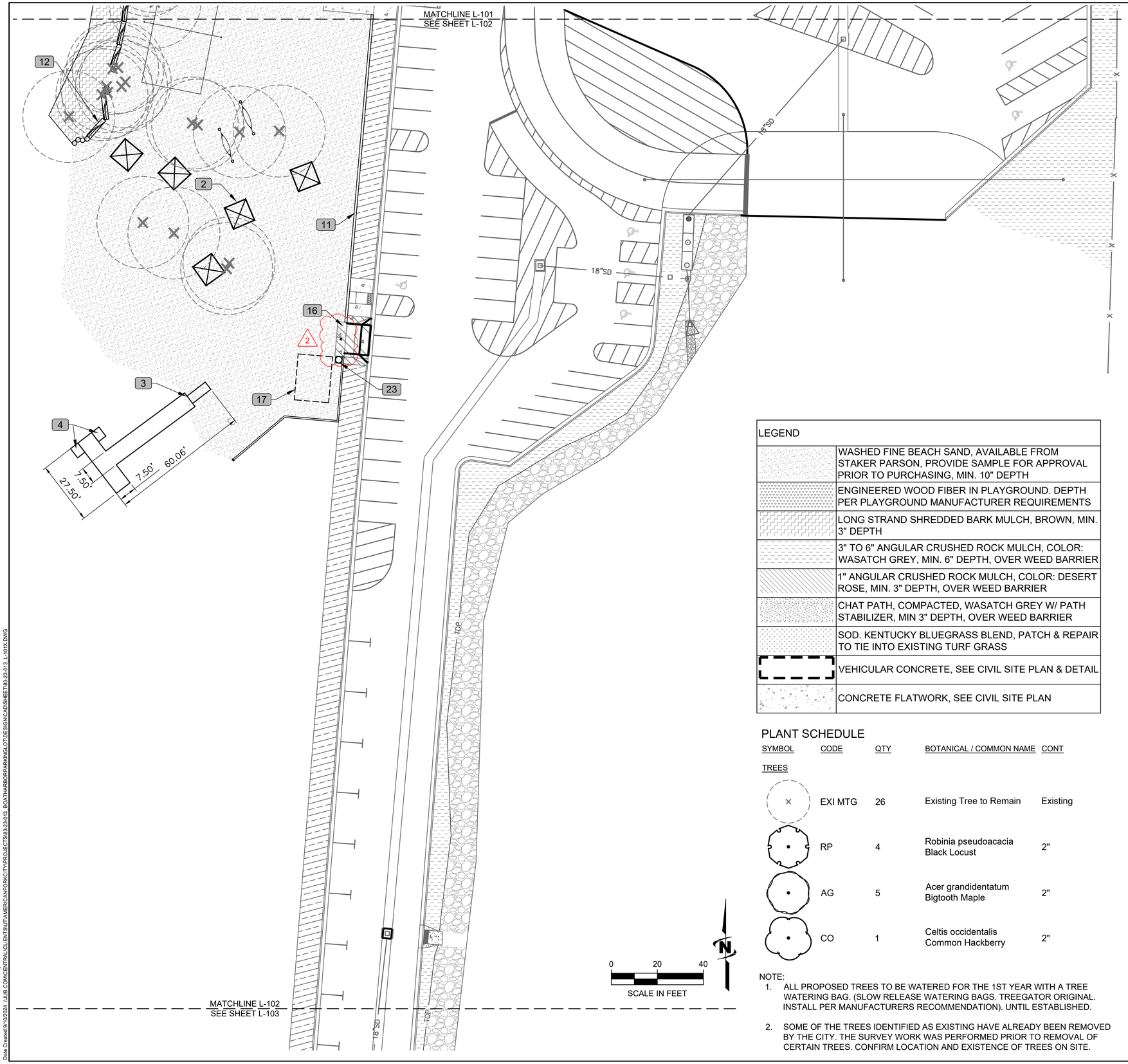
LANDSCAPE AND AMENITIES PLAN

FILE:	83-23-013_L-101X
JUB PROJ. #:	83-23-013
DRAWN BY:	KR
DESIGN BY:	SV
CHECKED BY:	AJN
	ONE INCH AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED:	9/10/2024

SHEET NUMBER:
L-101

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

Plot Date:9/10/2024 10:57 AM Plotted By: Seth Vance
Date Created:9/10/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKING\CIVIL\DESIGN\CAD\SHEETS\83-23-013_L-101X.DWG



LEGEND	
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	CONCRETE FLATWORK, SEE CIVIL SITE PLAN

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
TREES				
×	EXI MTG	26	Existing Tree to Remain	Existing
	RP	4	Robinia pseudoacacia Black Locust	2"
	AG	5	Acer grandidentatum Bigtooth Maple	2"
	CO	1	Celtis occidentalis Common Hackberry	2"

NOTE:
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NO.	REVISION / DESCRIPTION	BY	APPR.	DATE
1	ADDENDUM 2			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

LANDSCAPE AND AMENITIES PLAN

FILE: 83-23-013_L-101X
JUB PROJ. #: 83-23-013
DRAWN BY: KR
DESIGN BY: SV
CHECKED BY: AJN
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 9/10/2024

SHEET NUMBER:
L-102

Plot Date:9/10/2024 10:59 AM Plotted By: Seth Vance
Date Created:9/10/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORKCITY\PROJECTS\83-23-013_BOATHARBORPARKINGLOTDESIGN\CAD\SHEET\83-23-013_L-101X.DWG

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
TREES				
×	EXI MTG	26	Existing Tree to Remain	Existing
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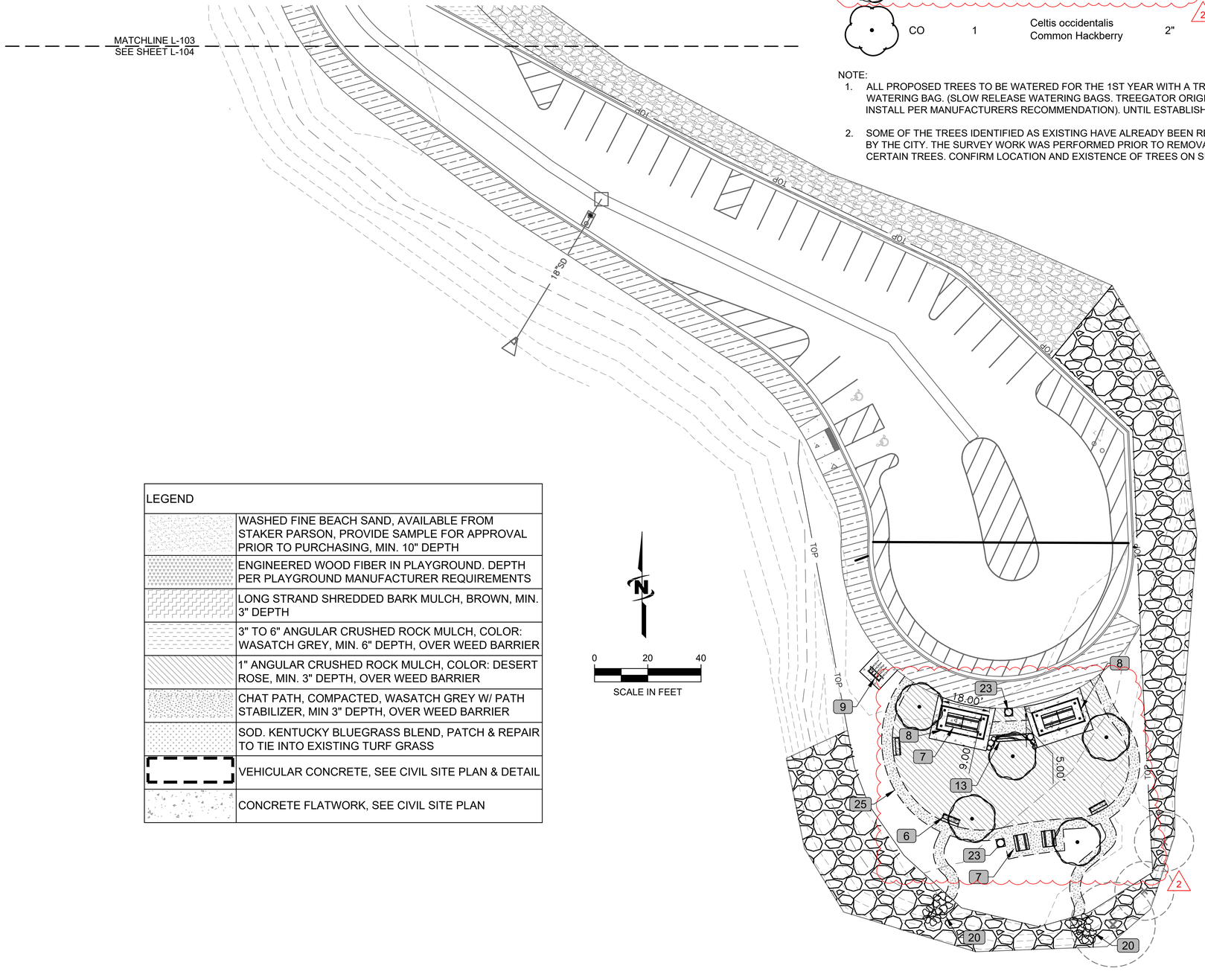

LEGEND	
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	VEHICULAR CONCRETE, SEE CIVIL SITE PLAN & DETAIL
	CONCRETE FLATWORK, SEE CIVIL SITE PLAN

N

0 20 40
SCALE IN FEET

J-U-B ENGINEERS, INC.
J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9052
www.jub.com

BID SET

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	REVISION / DESCRIPTION	BY	APPR.	DATE
1	ADDENDUM 2			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

LANDSCAPE AND AMENITIES PLAN

FILE:	83-23-013_L-101X
JUB PROJ. #:	83-23-013
DRAWN BY:	KR
DESIGN BY:	SV
CHECKED BY:	AJN

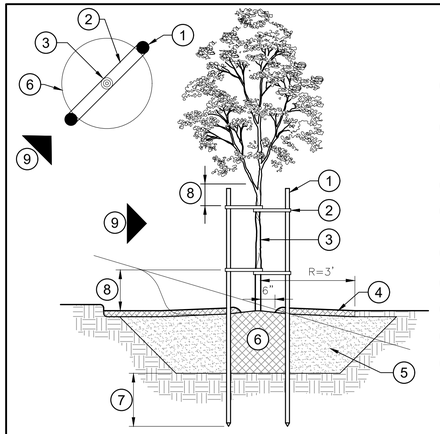
ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY

LAST UPDATED: 9/10/2024

SHEET NUMBER:
L-104

Plot Date:9/10/2024 11:00 AM Plotted By: Seth Vance
Date Created:9/10/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\GIVTYPROJECTS\83-23-013_BOAT HARBOR PARKING LOT\DESIGN\CAD\SHEET\83-23-013_L-101X.DWG

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

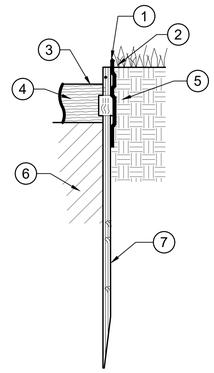


1. 2" DIA. OR 2" x 2" SQ. x 10' STRAIGHT WOODEN STAKE (2 REQUIRED)
2. V.I.T. CINCH-TIE VINYL TREE TIE (2 PER STAKE, LENGTH AS REQUIRED). SECURE TO STAKE W/ GALV. NAIL. 1 (PER TIE)
3. TREE TRUNK
4. 3" LAYER MULCH AROUND EACH TREE (3' RADIUS CIRCLE WHEN IN TURF)
5. SEE TREE/SHRUB PLANTING DETAIL
6. ROOT BALL
7. 24" MIN.
8. 6" MAX.
9. PREVAILING WIND DIRECTION

1 DECIDUOUS TREE STAKING

NTS

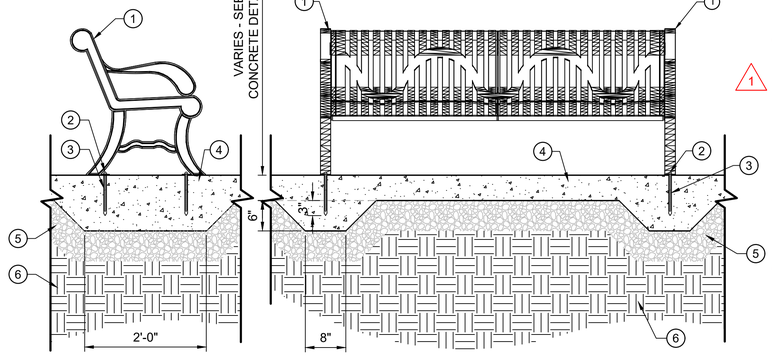
MUN–AFBH–01



1. METAL EDGING
2. FINISH GRADE FOR LAWN AREAS: 1" BELOW TOP OF EDGING FOR SEED; 1-1/2" FOR SOD
3. FINISH GRADE OF MULCH 2" BELOW TOP OF EDGING
4. MULCH - SEE PLANNT MATERIAL SCHEDULE FOR TYPE AND SIZE
5. COMPACT GRADES ADJACENT TO EDGING TO AVOID SETTLING
6. TOPSOIL - SEE NOTES AND SPECIFICATIONS FOR TYPE AND DEPTH
7. 12" STAKES @ 4' O.C. (TYP.)

2 LANDSCAPE METAL EDGING

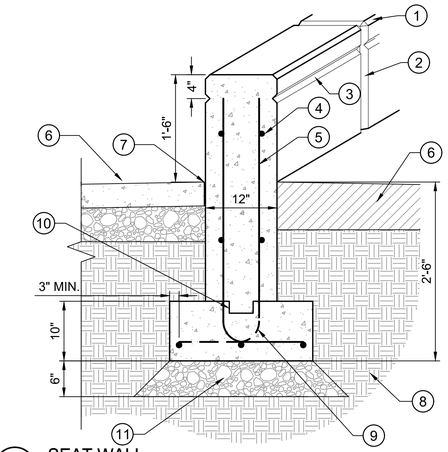
NTS



1. SITE FURNISHING (BENCH, PICNIC TABLE, LITTER BIN, & BICYCLE RACK) - INSTALL SPECIFIC FURNISHING ITEMS PER MANUFACTURER REQUIREMENTS
2. STAINLESS STEEL DROP IN ANCHORS AND BOLTS, LENGTH AS REQUIRED TO EMBED INTO THICKENED SECTION OF CONCTRETE TO A 3" MIN. DEPTH AND TO ALLOW PROPER CONNECTION.
3. DRILL MOUNTING HOLES THROUGH CONCRETE AT SPECIFIED BOLT DIAMETER. EPOXY TO REQUIRED DEPTH.
4. CONCRETE PAD (SEE CIVIL PLANS & INSTALL SPECIFIC FURNISHING ITEM PER MANUFACTURER REQUIREMENTS)
5. 6" UTBC COMPACTED TO 95% MDD
6. UNDISTURBED OR COMPATED SUBGRADE COMPACTED TO 95% MDD

3 SURFACE MOUNTING DETAIL

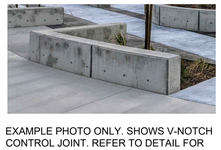
NTS



1. 3/4" CHAMFERED EDGE
2. 3/4" V-NOTCH CONTROL JOINT SPACED EVENLY ALONG WALL AT MIN. 10' O.C.
3. TWO 3/4" CHAMFERED STRIPS TO CREATE CAP APPEARANCE
4. #3 REBAR @ 16" O.C. HORIZONTAL, EACH FACE. 3" CLEARANCE
5. #4 BARS @ 12" O.C.
6. MATERIAL PER PLAN. SEE GRADING PLAN
7. EXPANSION JOINT WHEN ABUTTING CONCRETE
8. UNDISTURBED OR COMPACTED SUBGRADE
9. ALTERNATE HOOK DIRECTION
10. 2"x4" KEYWAY
11. UTBC COMPACTED TO 95%

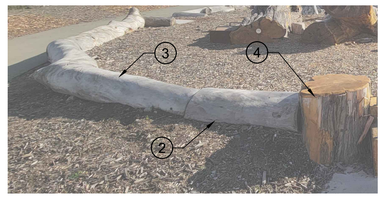
4 SEAT WALL

NTS



EXAMPLE PHOTO ONLY. SHOWS V-NOTCH CONTROL JOINT. REFER TO DETAIL FOR CONSTRUCTION PURPOSES.

NOTES:
1. ALL CONCRETE SHALL HAVE fc=3000 PSI.
2. ALL STEEL SHALL BE 60 KSI DEFORMED REINFORCING BAR.
3. FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL, OR FOUNDATION ROCK IF INADEQUATE SOIL IS PRESENT.
4. REINFORCING BAR INSIDE FORMS SHALL HAVE 3" COVER MINIMUM.



1. STUMPS, STAGGERED HEIGHT BETWEEN 12" ABOVE FINISH GRADE AND 24" ABOVE FINISH GRADE
2. BURIED MIN. 1/3
3. BARK REMOVED, SANDED
4. HARD CORNERS ROUNDED

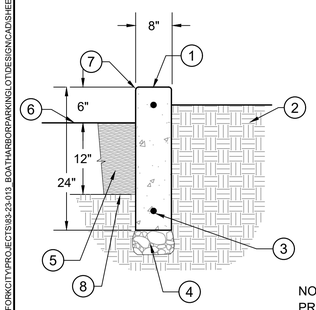
NOTE:
PHOTOS ARE EXAMPLES ONLY TO ILLUSTRATE PRINCIPLES TO BE APPLIED TO SITE/CONSTRUCTION CONDITIONS. SEE PLAN FOR LOG/STUMP LAYOUT.
SPECIALTY LOGS TO BE A MINIMUM OF 18" DIA. AND SPECIALTY STUMPS TO BE A MINIMUM OF 24" DIA. LOGS TO BE A MIN. LENGTH OF 5', AND BE INSTALLED TO NOT HAVE GAPS BETWEEN ADJACENT LOG/STUMP.

SPECIALTY LOGS AND STUMPS TO HAVE BARK STRIPPED, HARD CORNERS ROUNDED OFF OR CHAMFERED, ROUGH SURFACES SANDED SMOOTH.

APPLY CABOT AUSTRALIAN TIMBER OIL AT INSTALLATION. CONTRACTOR TO INCLUDE OIL REAPPLICATION EVERY SIX (6) MONTHS FOR THE FIRST TWO (2) YEARS AS PART OF BASE BID.

5 SPECIALTY LOGS & STUMPS

NTS

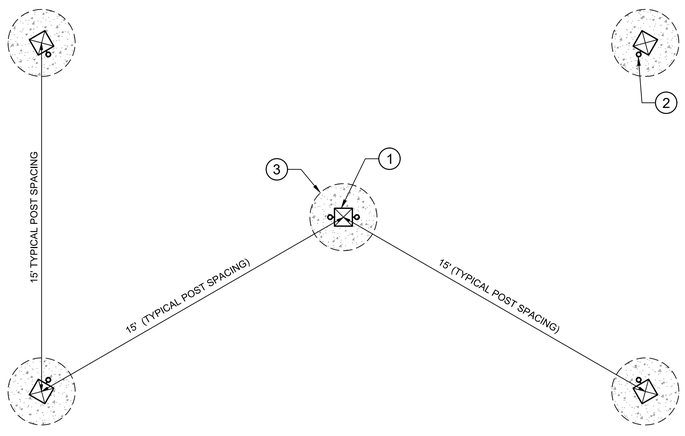


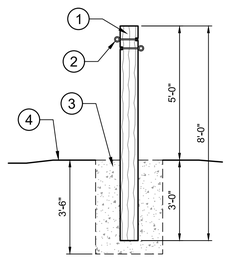
1. 8" CONCRETE CURB WALL DEEP EDGE
2. UNDISTURBED OR 95% MDD COMPACTED SUBGRADE
3. #4 REBAR CONT.
4. 4" UNTREATED BASE COURSE COMPACTED TO 95% MDD
5. 12" SOFT FALL MATERIAL
6. FINISH GRADE
7. 1/2" RADIUS
8. SOF' FALL GEOTEXTILE FABRIC

NOTE:
PROVIDE CONTROL JOINTS EVERY 10' AND EXPANSION JOINTS EVERY 30'. BREAK REBAR AT EXPANSION JOINT AND INSTALL DOWELS.

6 DEEP-EDGE CURB WALL (PLAYGROUND)

NTS

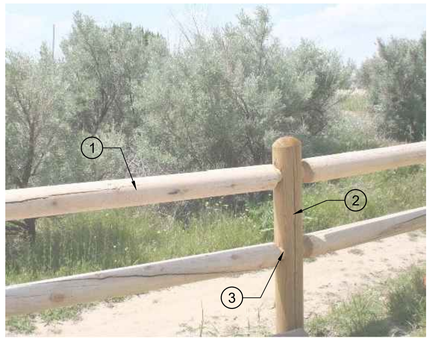




1. 8"X8" TIMBER POST, TREATED FOR OUTDOOR USE, 8' HEIGHT, SET IN CONCRETE FOOTING. POST TO HAVE 5 FEET OF EXPOSED SURFACE ABOVE FINISHED GRADE.
2. 1/2"X8" STAINLESS STEEL SHOULDER EYE BOLT INSTALLED IN A PRE-DRILLED HOLE WITH WASHER AND NUT SET INTO A 1" COUNTERBORED HOLE. WHERE TWO (2) EYE BOLTS ARE REQUIRED ON THE SAME POST (CENTER POSTS) BOLTS TO BE SPACED MIN. OF 4" APART
3. CONC. FOOTING, 30" DIA. X 42" HIGH SONOTUBE
4. FINISHED GRADE

7 HAMMOCK POSTS-TIMBER

NTS



1. 3 1/2" DIA. RAIL, DOWELED ON ENDS. MIN. LENGTH 8', MAX. LENGTH 10'
2. 6" DIA. POST WITH STANDARD DOME CAP, INSTALLED 42' ABOVE GRADE, 30" BELOW GRADE
3. HOLE FOR DOWELED RAIL, 2 1/2" DIA.
4. CONCRETE FOOTING (NOT SHOWN), 18" DIA. X 30" DEEP

8 LODGE POLE FENCE - 2 RAIL

NTS

J-U-B ENGINEERS, INC.
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392 E. Winchester St.
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NO.	REVISION	DESCRIPTION	BY	APPL	DATE
1		ADDENDUM 2			

AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

LANDSCAPE AND AMENITIES DETAILS

FILE : 83-23-013_L-50X
JUB PROJ. # :83-23-013
DRAWN BY: KR
DESIGN BY: SV
CHECKED BY: AJN
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 9/9/2024

SHEET NUMBER:
L-501

Plot Date:9/10/2024 11:34 AM Plotted By: Daniel Nataley
Date Created:8/27/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\01PROJECTS\83-23-013_BOATHARBORPARKING\LOTDESIGN\CADSHEET\83-23-013_L-60X.DWG

Attachment: AFBH_Addendum2_09.10.24 (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.

J-U-B COMPANIES | THE LANGDON GROUP | GATEWAY MAPPING INC.

ADDENDUM NO. 3

AMERICAN FORK CITY
AMERICAN FORK BOAR HARBOR RECONSTRUCTION

September 12, 2024

Addendum No. 3 to the Plans, Contract Documents, and Specifications prepared by J-U-B ENGINEERS, Inc. is hereby submitted for use in bid preparation and submittal. Contractor must acknowledge receipt of all Addenda on the Bid Form.

The following clarifications, additions, and/or deletions are hereby made part of the American Fork Boat Harbor Reconstruction as fully and completely as if the same were entirely set forth in the Contract Documents and Specifications.

The corrections, clarifications, changes, and approvals described herein shall become an integral part of any contract entered into between the Owner and Contractor.

CONTRACTOR QUESTIONS AND RESPONSES

Q: Can you provide additional details on the 6' Aluminum Picnic Tables? Will these come prefabricated? Are they connected to the ground/concrete in some way?
A: The picnic tables will be the 6' Rectangular Portable Table from MyTcoat (available via Sonntag Recreation - 801-278-9797). Tables over concrete should be mounted per detail 3 / L-501 (see keynote #1). Tables over chat material/stone dust should be mounted with a 12" diameter and a minimum 24" deep concrete footing at each anchor point. Specifics related to mounting hardware should be requested by the manufacturer.

Q: Will the manufacturer details and installation for the playground equipment be provided before the bid date? Hard to put a price to it if we don't know what we are installing.
A: American Fork City will purchase and work directly with the manufacturer. The playground will be installed by the manufacturer. Bidders will not be responsible for the purchase or installation of the playground equipment.

Q: There is no PG 58-22....are you meaning PG 58-28?
A: Yes, a PG58-28 is an acceptable solution.

Q: What is the expected/required size for this concrete to be reduced too? From our observations, we are seeing 10' sticks of curb and gutter to full sticks of k-rail as existing slope protections and want clarification on the size this needs to be reduced down too…or if we are permitted to re-shape and just bring in 3'-4' of the infill material so there is a 4" or 6" layer over the top of the existing concrete.

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

A: The required size of the concrete is 12”-minus. Alternatives to the cross section can be discussed after contractor has been selected. Contractor is to remove all reinforced rebar found inside crushed concrete.

VOLUME I FRONT ENDS

1. C-111 Advertisement for Bids: Modification of bid due date and questions deadline.
2. C-430 Bid Bond (Penal Sum Form): Modification of bid due date.

VOLUME II TECHNICAL SPECIFICATIONS

1. Specification 01 22 00 Measurement and Payment,
    - Section 1.44 Bid Item #36 Harbor Slope Protection was modified
    - Section 1.45 Bid Item #37 Lake Exposed Slope Protection was modified

VOLUME III DRAWINGS

1. On Sheet DD506, adjusted note for crushed concrete

Notice is hereby given that this Addendum must be signed and enclosed with a sealed bid for the American Fork Boat Harbor Reconstruction as evidence that the Bidder has familiarized himself/herself with all changes incorporated herein.

NAME OF BIDDER:_____

BY: _____ _____

Signature Date

_____

Name (Print) Title

Submitted By:
J-U-B Engineers, Inc.

Daniel Netzley, P.E.
Project Engineer

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.

J-U-B COMPANIES THE LANGDON GROUP GATEWAY MAPPING INC.

Attachments:

Volume I Front Ends: C-111 Advertisement for Bids and C-430 Bid Bond (Penal Sum Form)
Volume II Technical Specifications: 01 22 00 Measurement and Payment
Volume III Drawings: Sheet DD506

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

J-U-B ENGINEERS, INC.

J-U-B COMPANIES THE LANGDON GROUP GATEWAY MAPPING INC.

PREBID MEETING QUESTIONS AND RESPONSES

Questions are in black and the responses are in red.

1. Is this prebid meeting mandatory?
   The prebid meeting is mandatory and has been changed in Addendum 1 to note that.

2. Can you clarify the Bid Item 78 that talks about the concrete foundation and then it will be paid under a different bid item?
   Bid item has been changed to show that the concrete foundation will be included with the bid item.

3. Can you clarify on Bid Item 6 that reads the Owner and Contractor will choose the location of disposing of the asphalt removal material?
   Bid Item 6 has been changed to read that a portion will be laid on the overflow parking and the rest will be trucked to a location chosen by the Contractor.

4. It will be hard to finish paving by November 30th and follow Project Spec 01 56 39 requirement of at least 30 days in advance of submitting tree protection.
   Project Spec 01 56 39 was modified to ease the requirements to protect the existing trees. A majority of the funding for the project has an expenditure deadline by the end of 2024.

5. Can CAD files be shared?
   Yes, CAD files will be shared to the email addresses provided in the prebid metting attendance record. Note that the CAD files are not project documents and a discrepancy from between the CAD files and the plans will be awarded to the plans.

6. Can an Engineer's Estimate be given?
   The Engineer's Estimate will be sent on September 3.

7. Can the amount of asphalt that will need to be taken from the site that will not be used for the overflow parking be provided?
   The quantity will be sent on September 3.

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

ADVERTISEMENT FOR BIDS

ADDENDUM 3

AMERICAN FORK CITY
AMERICAN FORK, UTAH
AMERICAN FORK BOAT HARBOR RECONSTRUCTION

General Notice

American Fork City (Owner) is requesting Bids for the construction of the following Project:

American Fork Boat Harbor Reconstruction
83-23-013

Bids for the construction of the Project will be received at the **American Fork City Fitness Center Administration** located at **454 N Center St, AMERICAN FORK, UT 84003,** until **September 16 ~~12~~, 2024**, at **3:00 pm** local time. At that time, the Bids received will be **privately** opened and read.

The Project includes the following Work:

The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

Bids are requested for the following Contract: **American Fork Boat Harbor Reconstruction / 83-23-013**

Obtaining the Bidding Documents

Information and Bidding Documents for the Project can be found at the following designated website:

https://bids.sciquest.com/apps/Router/PublicEvent?CustomerOrg=StateOfUtah

Bidding Documents may be downloaded from the designated website. Prospective Bidders are urged to register with the designated website as a plan holder, even if Bidding Documents are obtained from a plan room or source other than the designated website in either electronic or paper format. The designated website will be updated periodically with addenda, lists of registered plan holders, reports, and other information relevant to submitting a Bid for the Project. All official notifications, addenda, and other Bidding Documents will be offered only through the designated website. Neither Owner nor Engineer will be responsible for Bidding Documents, including addenda, if any, obtained from sources other than the designated website.

Pre-bid Conference

A pre-bid conference for the Project will be held on **August 29, 2024,** at **2:00 pm** at the **American Fork City Fitness Center Administration Offices** located at **454 N Center St., AMERICAN FORK, UT 84003.** Attendance at the pre-bid conference is mandatory.

Instructions to Bidders.

For all further requirements regarding bid submittal, qualifications, procedures, and contract award, refer to the Instructions to Bidders that are included in the Bidding Documents.

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

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The selection process schedule is expected to proceed as outlined in Table 1.

Table 1. Selection Schedule

Date	Selection Process
Monday, August 26th, 2024	Issue Invitation to Bid.
Thursday, August 29th, 2024	Pre-bid meeting at 2 p.m. MST.
Wednesday ~~Friday~~, September 11 ~~6~~th, 2024	End of inquiries, questions and interpretation period (5 p.m. MST).
Thursday ~~Tuesday~~, September 12 ~~10~~th, 2024	Final Addendum Issued (if required).
Monday ~~Thursday~~, September 16 ~~12~~th, 2024	Bid submittal due (3:00 p.m. MST).

Table 2. Construction Schedule

Date	Selection Process
Monday, September 30th, 2024	Anticipated Start Date
Saturday, November 30th, 2024	Parking Lot is Completed
Thursday, May 1st, 2024	Substantial Completion
Thursday, May 22nd, 2024	Final Completion

This Advertisement is issued by:

Owner: **American Fork city**
By: Derric Rykert
Title: Project Manager
Date: August 26, 2024

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

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BID BOND (PENAL SUM FORM)

Bidder Name: Address *(principal place of business)*:	**Surety** Name: Address *(principal place of business)*:
Owner Name: **American Fork City** Address *(principal place of business)*: **51 E Main St** **American Fork, UT 84003**	**Bid** Project *(name and location)*: **American Fork Boat Harbor Reconstruction** **End of S 100 W** **American Fork, UT 84003** Bid Due Date: **Sept 16 ~~12~~, 2024**
Bond Penal Sum: Date of Bond:	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder	Surety
_____ *(Full formal name of Bidder)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title:	Title:
Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.	

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

EJCDC® C-430, Bid Bond (Penal Sum Form).
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1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
   3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
   3.2. All Bids are rejected by Owner, or
   3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

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September 12, 2024

SECTION 01 22 00
MEASUREMENT AND PAYMENT
ADDENDUM 3

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Authority

B. Payment

C. Defect Assessment

D. Non-Payment for Rejected Products

E. General Description of Measurement and Payment

F. Alternates

G. Schedule of Bid Items

1.2 DESCRIPTION OF WORK

A. The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

1.3 AUTHORITY

A. See EJCDC C-700 General Conditions 10.07 and 10.08

B. Take all measurements and compute quantities to estimate percent complete of each item listed in the schedule of values. The Engineer will verify measurements and quantities and percent complete.

1.4 PAYMENT

A. See EJCDC C-700 General Conditions 15.01

B. Payment Includes: Full compensation for all required labor, products, tools, equipment, plant, transportation, services, and incidentals; erection, application or installation of an item of the Work; overhead and profit.

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1.5 DEFECT ASSESSMENT

A. EJCDC C-700 General Conditions 10.04 – Rejecting Defective Work
   1. See EJCDC C-700 General Conditions and Article 14

B. Replace the Work, or portions of the Work, not conforming to specified requirements.

C. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Owner will direct one of the following remedies:
   1. The defective Work may remain, but the unit sum will be adjusted to a new sum at the discretion of the Engineer.
   2. The defective Work will be partially repaired to the instructions of the Owner, and the unit sum will be adjusted to a new sum at the discretion of the Engineer.

D. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.

E. The authority of the Engineer to assess the defect and identify payment adjustment is final.

1.6 NON-PAYMENT FOR REJECTED PRODUCTS

A. Payment will not be made for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from the transporting vehicle.
   4. Products placed beyond the lines and levels of the required Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling, and disposing of rejected Products.
   7. Removing rejected materials and/or work and replacing with materials and/or work in compliance with these specifications.

1.7 GENERAL DESCRIPTION OF MEASUREMENT AND PAYMENT

A. Measurement and Payment for the bid items listed in Base Bid shall be based on the description in the Technical Specifications and Drawings. Unless the work to be done is so specifically called out to be measured and paid for in Base Form, payment for such work shall be included in other applicable items, and there shall be no separate measurement and payment for the work.

B. Items listed in EJCDC C-410 – Bid Form as lump sum (L.S.) shall include all work for the complete installation as generally described in the Drawings and the Technical Specifications.

C. Payment shall be made at the contract bid price listed in the Bid Form.

D. Partial payment for unit price bid items and lump sum bid items only partially completed at the end of monthly pay periods shall be made based upon the Engineers

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interpretation of the percentage of work completed. Partial payment for materials delivered and stored will be considered, if said materials have been submitted to the Engineer for review per Section 01 33 00 – Submittal Procedures and supporting invoices and documentation have been provided.

E. Quantities indicated in the Bid Form are for bidding and contract purposes only, unless specified otherwise in the Technical Specifications.

F. If the actual work requires more or fewer quantities than those quantities indicated in the Bid Form, the Contractor shall provide the required quantities.

G. Payment Includes: Full compensation for all required labor, products, tools, equipment, materials, transportation, services and incidentals, erection, application, or installation of an item of the Work, including mobilization, demobilization, supervision, overhead and profit.

H. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit price for work which is incorporated in or made necessary by the Work unless specified otherwise.

I. Material the Contractor removes from the site will be returned to the Owner if requested by the Owner.

J. Construction Staking will be performed by the OWNER's Representative.

1.8 ALTERNATES

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement

B. Coordinate related work and modify surrounding work.

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SCHEDULE OF BID ITEMS – BASE BID

1.9 MOBILIZATION/DEMOBLIZATION – BID ITEM #1

A. Measurement shall be lump sum for the job, complete. Payment shall be as outline below:

PAY FACTORS FOR MOBILIZATION/DEMOBILIZATION AND TEMPORARY FACILITIES	
Percent of Original Contract Amount Earned Not Including Materials Purchased	Percent of Amount Bid for Mobilization to be Paid
5	40
15	20
40	30
50	10

B. This includes, but not limited to, all labor and equipment and materials for, safely moving equipment and related materials to and from the site, sanitation facilities, traffic control required permitting, temporary utilities and controls, project related documentation and coordination with State and Local authorities. Payment for the performance of the mobilization/demobilization work as specified herein will be made at the contract lump sum price for "Mobilization/Demobilization" as listed in the Bid Schedule.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.10 AS-BUILT/RECORD DRAWINGS – BID ITEM #2

A. Measurement shall be lump sum for the job, complete.

B. This includes, but not limited to, all labor and equipment and materials to provide as-built/record drawings as specified in these Specifications and elsewhere in these Contract Documents.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.11 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) – BID ITEM #3

A. Measurement shall be lump sum for the job, complete. Payment shall be as outline below:

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PAY FACTORS FOR STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	
Amount Paid	When Paid
25% of bid item amount	With first estimate
Remaining portion of bid item paid as percentage of the contract completed	With each subsequent estimate

B. Payment for this bid item shall include all costs associated with preparation and implementation of a (SWPPP) and obtaining the Utah Pollutant Discharge Elimination (UPDES) Storm Water permit.

C. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.12 WEED REMOVAL AND MANAGEMENT PLAN – JETTY – BID ITEM #4

A. No direct measurement will be made for weed removal and management plan. This item shall include all equipment, labor, and materials to provide weed removal and management plan for the jetty, including the implementation of the plan for the removal of vegetation. Plan shall include the application of herbicides by Commercial Pesticide Applicator registered in Utah. The plan should be created and executed for the site for construction as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.13 GENERAL REMOVAL AND DISPOSAL – BID ITEM #5

A. Measurement for this item shall be per lump sum. Payment shall include all items not accounted for in the removal bid items, Bid Items 6-13, required to prepare and maintain the site for construction as specified in these Specifications, Plans, and elsewhere in these Contract Documents. Included in this item is coordination with Owner for removal of any other items found in project limits.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.14 REMOVE AND DISPOSE ASPHALT PAVEMENT – BID ITEM #6

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to remove and dispose existing asphalt from the site

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and roadway as called out on the plans. Work includes demolition, sawcutting, hauling, and disposing of asphalt material from the work site to the overflow parking for a portion of the asphalt and the rest to a location chosen by the Contractor. Subgrade removal will be paid for in Excavation bid item. Asphalt is to be sawcut to full depth. No additional payment will be made for sawcutting to provide a clean edge immediately before placing asphalt.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.15 CLEARING AND GRUBBING – BID ITEM #7

A. Measurement shall be lump sum of clearing and grubbing. This includes, but is not limited to, all labor, equipment and materials required for stripping and disposing of vegetation, including but not limited to stumps, roots, shrubs, vegetation, and vegetative debris within the construction limits to cut, remove, haul, and properly dispose of. Trees greater than 4" at 2' from top of existing ground shall be paid out in Remove and Dispose Tree bid item. The price also includes disposal fees. Work on the jetty will be paid under a different bid item.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.16 REMOVE AND DISPOSE TREE– BID ITEM #8

A. Measurement shall be per each tree removed with a diameter of 4 inches or larger measured at a point 2 feet above the existing ground, anything smaller shall be paid for in the Clearing and Grubbing bid item. CONTRACTOR is to verify size with OWNER prior to removal. This includes, but is not limited to, all labor, equipment and materials required for removal of trees called out in the plans to remove, including stumps and roots to cut, wood chip, remove, haul, and properly dispose of to 18" below grade. The price also includes disposal fees.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.17 RELOCATE LIGHT POLES AND ELECTRIC JUNCTION BOXES– BID ITEM #9

A. No direct measurement will be made for relocation of light poles and electric junction boxes. This item shall include all equipment, labor, and materials to remove and coordinate the relocation of light poles and electric junction boxes as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.18 REMOVE AND DISPOSE TOLL BOOTH– BID ITEM #10

A. Measurement for this item shall be lump sum. This item shall include all equipment, labor, and materials to remove and dispose of the complete toll booth station, foundation, and all contents. Contractor is to verify with Owner of all items to be returned located inside the building. Also included is the coordination and removal/abandoning of the existing power lateral.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.19 REMOVE CHAIN AND POST FENCE AND CHAINLINK FENCE– BID ITEM #11

A. Measurement for this item shall be by the linear foot. Payment shall be full compensation for labor, materials, equipment, and appurtenances required to remove and dispose of existing fence per project plans and specifications. If a portion of the existing fence remains, and the fence will not be continued under this project, this item includes furnishing and installing an end post matching the existing fence end posts in size, shape, material, construction, color, and mounting method. This item includes removing and disposing of the fence materials and any concrete foundations and furnishing, placing, backfilling and compacting holes of removed posts.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.20 REMOVE ENTRANCE GATE– BID ITEM #12

A. Measurement for this item shall be lump sum. Payment shall be full compensation for labor, materials, equipment, and appurtenances required to remove and dispose of existing entrance gate per project plans and specifications. If a portion of the existing fence remains, and the fence will not be continued under this project, this item includes furnishing and installing an end post matching the existing fence end posts in size, shape, material, construction, color, and mounting method. This item includes removing and disposing of the gate materials and any concrete foundations and furnishing, placing, backfilling and compacting holes of removed posts.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.21 8” THICK VEHICULAR CONCRETE– BID ITEM #13

A. Measurement shall be by the square foot of vehicular concrete furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the concrete, including expansion joints and rebar. This also includes all necessary forms, expansion/contraction material, curing material, and all other

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necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.22 4" THICK CONCRETE SIDEWALK– BID ITEM #14

A. Measurement shall be by the square foot of 4" thick sidewalk furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the sidewalk, including expansion joints. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.23 CONCRETE FLATWORK– BID ITEM #15

A. Measurement shall be by the square foot of 4" thick minimum flatwork furnished and installed. This includes but is not limited to all labor, equipment, and materials necessary to form, pour, and finish the concrete flatwork, including expansion joints and rebar. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. This pay item also includes all concrete for the trash receptacles, benches, picnic tables, and bike racks. Excluded from this item but included in another is: untreated base course material and landscaping restoration.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.24 8" THICK CONCRETE DRIVE APPROACH – BID ITEM #16

A. Measurement shall be per concrete drive approach furnished and installed. The area in which concrete drive approaches and sidewalks cross are measured under this this item, as will driveway flares. Areas in which concrete drive approaches and curb and gutter cross are not measured under this item - measurement of concrete drive approaches will begin at the back of curb line. Payment shall be full compensation for all labor, equipment, and materials for excavating, preparing grade, and furnishing, forming, placing, and finishing concrete drive approach. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.25 HMA, PG-64-22, SP-1/2, 75ND, 3" THICK WITH MAX 15% RAP - ASPHALT TRAIL – BID ITEM #17

A. Measurement for the asphalt shall be per ton based upon weigh tickets obtained in the field by the inspector. Included in this item is all labor, equipment and materials required to furnish and install asphalt to required thickness. This includes, but is not limited to, tackifier, compaction, preparing and verifying final base grade, material testing, ensuring positive drainage in all locations, and other related appurtenances as shown on the drawings and described in the specifications and contract documents. Eligible payment will be for measured/weighed tons of asphalt material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract ton (TON) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.26 HMA, PG-64-22, SP-1/2, 75ND, 3" THICK WITH MAX 15% RAP – PARKING LOT – BID ITEM #18

A. Measurement for the asphalt shall be per ton based upon weigh tickets obtained in the field by the inspector. Included in this item is all labor, equipment and materials required to furnish and install asphalt to required thickness. This includes, but is not limited to, tackifier, compaction, preparing and verifying final base grade, material testing, ensuring positive drainage in all locations, and other related appurtenances as shown on the drawings and described in the specifications and contract documents. Eligible payment will be for measured/weighed tons of asphalt material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract ton (TON) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.27 UNTREATED BASE COURSE – BID ITEM #19

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to import, place, and compact untreated base course under all asphalt, pedestrian concrete, vehicular concrete, concrete flatwork, concrete drive approach, sidewalk, valley gutter, curb and gutter, handicap ramp, and dumpster enclosure, except as noted in other bid items. Eligible payment will be for placed and compacted cubic yards of untreated base course material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.28 GRANULAR BORROW – BID ITEM #20

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to import, place, and compact granular borrow as shown on the plans. Borrow used for locations other than under pavement as shown in the plans will

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be paid for under a separate item. Eligible payment will be placed and compacted cubic yards of granular borrow material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.29 EXCAVATION – BID ITEM #21

A. Measurement for this item shall be cubic yard. This item shall include all equipment, labor, and materials to excavate as shown in the drawings within the limit of construction including, but not limited to, soil and rock. This includes hauling and disposal fees. No additional payment will be made for over-excavation, unless as written approval by Engineer.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.30 BORROW – BID ITEM #22

A. Measurement for this item shall be per cubic yard. This item shall include all equipment, labor, and materials to furnish and install the borrow as shown in the drawings within the limit of construction. Eligible payment will be for measured/weighed cubic yards of borrow material. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.31 HANDICAP RAMP– BID ITEM #23

A. Measurement shall be per ramp furnished and installed. This includes, but is not limited to, all labor, equipment, and materials necessary to form, pour, and finish the American Disabilities Act (ADA) Ramp, including expansion joints, curb wall (if needed), and raised truncated domes. This also includes all necessary forms, expansion/contraction material, curing material, and all other necessary items. The ADA Ramp is to be built in accordance with the 2010 ADA Standards for Accessible Design and Manual on Uniform Traffic Control Devices (MUTCD). Excluded from this item but included in another is: untreated base course material, sign(s), and signpost(s).

B. Payment shall be made at the contract each (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.32 4’ CONCRETE VALLEY GUTTER– BID ITEM #24

A. Measurement for this item shall be per linear foot. This item includes all labor, equipment, materials necessary to haul, form, pour, and finish the 4’ concrete valley gutter as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents. Included are expansion joints and sealant. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.33 OPEN 24” CURB AND GUTTER– BID ITEM #25

A. Measurement for this item shall be per linear foot. This item includes all labor, equipment, materials necessary to haul, form, pour, and finish the open 24” curb and gutter as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents. Included are expansion joints and sealant. Untreated base course is paid for under separate bid item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.34 VEHICULAR GATE AT ENTRANCE (36’-WIDE MANUAL DOUBLE SWING GATE) – BID ITEM #26

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the swing gates per manufactures instructions and as shown on the drawings, including but not limited to, caps, couplings, fittings and hardware, and other appurtenances required for complete and operational swing gates. Also included is excavation, post foundations, compaction, and backfill material. Gate shall feature a locking mechanism with three (3) functioning keys approved by Owner. The static fencing is paid for under other pay items.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.35 RELOCATED VEHICULAR GATE (12’-WIDE MANUAL SLIDE GATE) – BID ITEM #27

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor, equipment, and materials required for the reinstallation of the existing slide gate per manufactures instructions and as shown on the drawings, including but not limited to, caps, couplings, fittings and hardware, and other appurtenances required for complete and operational slide gate. Also included is excavation, post foundations, compaction, and backfill material. Gate shall feature a locking mechanism with three (3) functioning keys approved by Owner. The static fencing is paid for under other pay items.

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B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.36 GENERAL RELOCATION– BID ITEM #28

A. Measurement for this item shall be per lump sum. Payment shall include all items not accounted for relocation, including shed and flagpole as specified in these Specifications, Plans, and elsewhere in these Contract Documents. Shed is to be installed on a concrete foundation, included in this pay item. Also included is the flagpole foundation. Included in this item is coordination with Owner for relocation of any other items found in project limits.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.37 4’ CHAINLINK FENCE – BID ITEM #29

A. Measurement for this item shall be per linear foot. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the fencing per manufactures instructions (matching existing fence type) and as shown on the drawings, including but not limited to, line posts, caps, couplings, fittings, hardware, and other appurtenances required for a complete fence installation. Also included is excavation, post foundations, compaction, and backfill material.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.38 6’ CHAINLINK FENCE – BID ITEM #30

A. Measurement for this item shall be per linear foot. This includes, but is not limited to, all labor, equipment, and materials required for the installation of the fencing per manufactures instructions (matching existing fence) and as shown on the drawings, including but not limited to, line posts, caps, couplings, fittings, hardware, and other appurtenances required for a complete fence installation. Also included is excavation, post foundations, compaction, and backfill material. The enclosure gate is paid for under another pay item.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.39 DUMPSTER ENCLOSURE– BID ITEM #31

A. Measurement shall be lump sum for furnishing and installing dumpster enclosure. This includes but is not limited to all costs to complete the dumpster enclosure, including concrete slab, concrete curb, concrete foundation, CMU wall, relocation of dumpster,

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and double swing gate as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.40 CONCRETE WHEEL STOP– BID ITEM #32

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install concrete wheel stop as specified in these Specifications and elsewhere in these Contract Documents. Included is drilling holes through pavement for the installation of the wheel stop. Wheel stops that are cracked during construction will be replaced at Contractor's expense.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.41 SIGN WITH 8" DIA. BOLLARD– BID ITEM #33

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install sign with bollard as specified in these Specifications and elsewhere in these Contract Documents. Included is the furnishing and installing steel pipe, sign, steel tube, concrete foundation, as well as paint. Also included is 1 foot of over excavation and placement of compacted (95%) granular borrow subgrade.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.42 STATIONARY 6" DIA. BOLLARD– BID ITEM #34

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to install stationary bollard as specified in these Specifications and elsewhere in these Contract Documents. Included is the furnishing and installing steel pipe and concrete foundation, as well as paint. Also included is 1 foot of over excavation and placement of compacted (95%) granular borrow subgrade.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.43 STRIPING– BID ITEM #35

A. Measurement shall be lump sum for furnishing and installing striping. This includes but is not limited to all costs to complete the markings, including arrows, stop bars, crosswalks, and curb painting. All material shall be installed in accordance with manufacturer specifications and shall be placed reflecting current conditions or as

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directed, also as directed in the 2010 ADA Standards for Accessible Design, MUTCD, and these drawings. Parking stalls and restricted striping are four inches (4") wide white lines. Also included is painted asphalt on the "Heavy Duty Asphalt Pavement Section"

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.44 HARBOR SLOPE PROTECTION – BID ITEM #36

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to import, place, and compact D50=6" riprap and 4" infill/bedding material as specified in these Specifications and elsewhere in these Contract Documents. Also included is the breaking and shaping of the existing concrete on the jetty slopes to receive the infill/bedding material. Also included is the removal and disposal of reinforced rebar. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.45 LAKE EXPOSED SLOPE PROTECTION – BID ITEM #37

A. Measurement for this item shall be per square yard. This item shall include all equipment, labor, and materials to import, place, and compact D50=36" riprap and 6" infill/bedding material as specified in these Specifications and elsewhere in these Contract Documents. Also included is the breaking and shaping of the existing concrete on the jetty slopes to receive the infill/bedding material. Also included is the removal and disposal of reinforced rebar. Provide driver logs and scale receipts from construction pit location.

B. Payment shall be made at the contract square yard (SY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.46 INLET BASIN, 3'X3', 5-7FT DEEP – BID ITEM #38

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install storm drain inlet box with grate and frame as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to inlet box, frame, grate, risers, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.47 STORM DRAIN MANHOLE, 5-FT, 6FT DEEP – BID ITEM #39

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install storm drain manhole with lid as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to manhole, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.48 SAND/OIL SEPERATOR – OSS-A1 – BID ITEM #40

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-A1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.49 SAND/OIL SEPERATOR – OSS-B1 – BID ITEM #41

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-B1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.50 SAND/OIL SEPERATOR – OSS-C1 – BID ITEM #42

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-C1 and D1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary,

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structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.51 SAND/OIL SEPERATOR – OSS-D1 – BID ITEM #43

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install sand/oil separator OSS-D1 as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to connecting pipes to separator, ring, cover, risers, inlet pipe with sample tee, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, well graded backfill material, compacted and in place as shown on the plans.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.52 18” REINFORCED CONCRETE PIPE – BID ITEM #44

A. Measurement for this item shall be per linear foot. This item shall include all equipment, labor, and materials to furnish and install 18” RCP storm drain as specified in these Specifications and elsewhere in these Contract Documents. This item also includes but is not limited to excavation, trenching, shoring, slope stabilization, personal protection as necessary, pipe fittings, pipe appurtenances, bedding material, foundation stabilization as required, zone backfill material (APWA 33 05 20, Plan 381) placed, compacted, complete, and in place.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.53 24” REINFORCED CONCRETE PIPE – BID ITEM #45

A. Measurement for this item shall be per linear foot. This item shall include all equipment, labor, and materials to furnish and install 24” RCP storm drain as specified in these Specifications and elsewhere in these Contract Documents. This item also includes but is not limited to excavation, trenching, shoring, slope stabilization, personal protection as necessary, pipe fittings, pipe appurtenances, bedding material, foundation stabilization as required, zone backfill material (APWA 33 05 20, Plan 381) placed, compacted, complete, and in place.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.54 18" FLARED END SECTION PIPE OUTLET – BID ITEM #46

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install flared end with Oldcastle FES trash guard (or approved equivalent), as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to furnishing and installing trash guard hardware, connecting pipe to flared end, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, energy dissipation apron rock, well graded backfill material, compacted and in place as shown on the plans. Also included is the nonwoven geotextile fabric that wraps the riprap at the daylighting of pipe.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.55 24" FLARED END SECTION PIPE OUTLET – BID ITEM #47

A. Measurement for this item shall be each. This item shall include all equipment, labor, and materials to furnish and install flared end with Oldcastle FES trash guard (or approved equivalent), as specified in these Specifications and elsewhere in these Contract Documents. This item includes but is not limited to furnishing and installing trash guard hardware, connecting pipe to flared end, excavation, trenching, shoring, slope stabilization, personal protection as necessary, structural fill, energy dissipation apron rock, well graded backfill material, compacted and in place as shown on the plans. Also included is the nonwoven geotextile fabric that wraps the riprap at the daylighting of pipe.

B. Payment shall be made at the contract unit (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.56 CXT TIOGA RESTROOM BUILDING– BID ITEM #48

A. Measurement shall be lump sum for coordination for installation of CXT Tioga Double Vault Toilet. Owner will purchase restroom. Included is coordination with CXT, who will be delivering, unloading, excavating, and backfilling for building, and all else as specified in these Specifications and elsewhere in these Contract Documents.

B. Payment shall be made at the contract lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.57 FINE GRADING (LANDSCAPE AREAS)– BID ITEM #49

A. Measurement for this item shall be based on the square footage of fine grading in all softscape areas including final grade preparation in all areas to receive mulches and turf. Also included are other labor, equipment, materials, cleaning, and related

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appurtenances as shown on the drawings and specifications required to provide fine grading.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.58 WASHED BEACH SAND – BID ITEM #50

A. Measurement for this item shall be based on the cubic yards of sand installed at 10" depth in the beach area including final grade preparation in all areas to receive washed beach sand. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide washed beach sand. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.59 ENGINEERED WOOD FIBER (PLAYGROUND) – BID ITEM #51

A. Measurement for this item shall be based on the square foot of 14" depth engineered wood fiber installed inside of the playground wall. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide fine grading. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.60 STEEL EDGING (1/8" THICK, 6" TALL- CORTEN/BORCON) – BID ITEM #52

A. Measurement for this item shall be based on the linear foot of 1/8" thick, 6" tall corten/borcon steel edging installed, including cutting, securing, and placement. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install steel edging.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.61 SOD – BID ITEM #53

A. Measurement for this item shall be based on the square footage of area to receive sod including final grade preparation. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide sod installation.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.62 SHREDDED BARK MULCH – BID ITEM #54

A. Measurement for this item shall be based on the square foot of 3" depth of bark mulch installed along the backside of the log barrier at a width of approx. 15 feet, including final grade preparation in all areas to receive bark mulch. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide bark mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.63 1" DESERT ROSE STONE MULCH (3" DEPTH) – BID ITEM #55

A. Measurement for this item shall be based on the square foot of 3" depth of 1" Desert Rose stone mulch installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 1" stone mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.64 3"-6" WASATCH GREY STONE MULCH (4" DEPTH) – BID ITEM #56

A. Measurement for this item shall be based on the square foot of 6" depth of 3"-6" Wasatch Grey stone mulch installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 3"-6" Wasatch Grey stone mulch. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.65 1/4" MINUS CHAT (PATH MATERIAL) – BID ITEM #57

A. Measurement for this item shall be based on the square foot of 3" depth of ¼" minus chat installed, including all final grade preparation and placement. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install ¼" minus chat. Contractor shall provide weight tickets or verification of quantity.

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B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.66 2" CALIPER DECIDUOUS TREE – BID ITEM #58

A. Measurement for this item shall be based on each 2" caliper deciduous tree installed, including all digging, placement, backfill, watering, and staking. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install 2" caliper deciduous tree.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.67 NOT USED – BID ITEM #59

1.68 TOPSOIL– BID ITEM #60

A. Measurement for this item shall be based on the cubic yard of topsoil installed at 4" depth for sod areas and 12" depth to the mature dripline of the individual trees, including all placement, final grade preparation, and backfilling of tree pits. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to provide and install topsoil for the sod and trees. Contractor shall provide weight tickets or verification of quantity.

B. Payment shall be made at the contract cubic yard (CY) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.69 WEED BARRIER FABRIC– BID ITEM #61

A. Measurement for this item shall be based on the square foot of weed barrier fabric installed, including all placement, staking, securing, and final grade preparation. Also included are other labor, equipment, materials, cleaning, and related appurtenances and connections as shown on the drawings and specifications required to provide and install weed barrier fabric.

B. Payment shall be made at the contract square foot (SF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.70 CONCRETE MOW CURB (6" WIDE) – BID ITEM #62

A. Measurement for this bid item shall be per linear foot of mow curb installed. This includes but is not limited to all labor, equipment, and materials to install the mow curb to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material and all other items necessary.

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B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.71 CAST-IN-PLACE 8" DEEP-EDGE CONCRETE CURB WALL (PLAYGROUND) – BID ITEM #63

A. Measurement for this bid item shall be per linear foot of curb wall installed. This includes but is not limited to all labor, equipment, and materials to install the new curb wall to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material, untreated base course, fiber and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.72 CAST-IN-PLACE CONCRETE SEAT WALL (12" WIDE) – BID ITEM #64

A. Measurement for this bid item shall be per linear foot of concrete seat wall installed. This includes but is not limited to all labor, equipment, and materials to install the seat wall to the lines and grades shown on the plans. Includes expansion joints. Also include all necessary forms, expansion/contraction material, curing material, untreated base course, fiber and all other items necessary.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.73 LODGE POLE FENCE – BID ITEM #65

A. Measurement for this item shall be based on the linear foot of wood lodge pole fencing installed per drawing details, including cutting, securing, and placement. Also included are other labor, equipment, materials, and related appurtenances as shown on the drawings and specifications required to provide and install lodge pole fencing.

B. Payment shall be made at the contract linear foot (LF) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.74 SHADE UMBRELLAS – BID ITEM #66

A. Measurement for this item shall be per each. This item shall include all labor, equipment, hardware, materials, and related appurtenances as shown on the drawings and specifications required to install Owner provided shade umbrella per manufacturer's instructions and details.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.75 MODULAR FLOATING DOCK, GANGWAY, AND KAYAK LAUNCH – BID ITEM #67

A. Measurement for this item shall be lump sum. This includes, but is not limited to, all labor and materials required for the installation of the Owner provided modular floating dock, gangway, and kayak launch per manufacturer's instructions and as shown on the drawings.

B. Payment shall be made at the contract lump sum (LS) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.76 TIMBER HAMMOCK POSTS – BID ITEM # 68

A. Measurement for this item shall be per each. This item shall include all labor, equipment, hardware, materials, and related appurtenances as shown on the drawings and specifications required to provide and install a single timber hammock post.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.77 TRASH RECEPTACLES (POWDER COATED) – BID ITEM #69

A. Measurement for this item shall be per each. This item shall include all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install an Owner provided trash receptacle. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.78 CORNHOLE BOARD – BID ITEM #70

A. Measurement for this item shall be per each. This item shall include all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install an Owner provided pre-cast concrete cornhole board.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.79 NOT USED – BID ITEM #71

1.80 LOG PLAYGROUND BARRIER, TREATED LOGS – BID ITEM #72

A. Measurement for this item shall be per linear foot of treated log/stump. This item includes all labor, equipment, materials necessary to cut and install natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.81 SPECIALTY, TREATED LOGS AND STUMPS – BID ITEM #73

A. Measurement for this item shall be per linear foot of treated log/stump. This item includes all labor, equipment, materials necessary to cut, treat, and install Owner provided natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.82 NATURAL (UNTREATED) LOGS AND STUMPS – BID ITEM #74

A. Measurement for this item shall be per linear foot of untreated log/stump. This item includes all labor, equipment, materials necessary to cut and install Owner provided natural stumps as shown in the plans, specified in these Specifications, and elsewhere in these Contract Documents.

B. Payment shall be made at the contract linear foot (LF) price stated in the bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.83 6’ BENCH (WITH BACK) – BID ITEM #75

A. Measurement for this item shall be based on each Owner provided 6’ bench with back installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 6’ bench with back. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.84 6’ ALUMINUM PICNIC TABLES (POWDER-COATED) – BID ITEM #76

A. Measurement for this item shall be based on each Owner provided 6’ picnic table installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a picnic table.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.85 COLLAPSIBLE ACCESS CONTROL BOLLARD – BID ITEM #77

A. Measurement for this item shall be based on each Owner provided access control bollard installed. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install the bollard.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.86 PAVILION – BID ITEM #78

A. Measurement for this item shall be based on each Owner provided 9’x18’ pavilion structure installed, including all structural footing requirements from the manufacturer. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 9’x18’ pavilion. UTBC will be paid under a different bid item.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.87 BIKE RACK – BID ITEM #79

A. Measurement for this item shall be based on each Owner provided 5-loop bike rack assembly installed, including all mounting hardware and requirements. Also included are other labor, equipment, materials, cleaning, and related appurtenances as shown on the drawings and specifications required to install a 5-loop bike rack assembly. Concrete and UTBC will be paid under different bid items.

B. Payment shall be made at the contract (EA) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.88 IMPORT BUILDING FOUNDATION MATERIAL – BID ITEM #80

A. No direct measurement will be made for this item. Included in this item are all equipment, materials, labor, and costs of work in the delivery, supplying, placing, and compacting material in place as described in the Specifications and Contract Documents.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.89 BUILDING CONCRETE AND REINFORCING – BID ITEM #81

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. This item includes all earthwork, formwork, and other related items required to place the building concrete and reinforcing. All concrete and reinforcing required for the building and the concrete slabs within the building and concrete entry pad outside of walk door are included in this item. Imported foundation material shall be paid for under a separate item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.90 ROUGH CARPENTRY – BID ITEM #82

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All woodwork not visible in the finished building is included in this item. All wall framing, temporary wall supports, blocking between trusses, permanent truss bracing, roof sheathing, wall blocking for cabinets and other wall mounted appurtenances, and other wood elements permanently or temporarily attached to the trusses or wall needed for construction are included in this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.91 SHOP FABRICATED ROOF TRUSSES – BID ITEM #83

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct and install the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

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1.92 SIDING – BID ITEM #84

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. This includes all non-stone siding, trim, accessories, and other items required for this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.93 STONE VENEER AND ASSOCIATED ITEMS – BID ITEM #85

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to install the item. All lathe, channels, trims, grout, waterproofing membrane, etc. required for the typical installation of finish are included in this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.94 METAL FABRICATIONS – BID ITEM #86

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All structural steel and miscellaneous fabrications from any metal used in any application for the construction of the building is included in this item. This item also includes all painting, galvanizing, coating, or other finishing of said fabrications.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.95 THERMAL AND MOISTURE PROTECTION – BID ITEM #87

A. No direct measurement will be made for this item. All waterproofing, water repellants, vapor retarders, joint sealants, weather barriers, and expansion joints are included in this item. Rigid, Batt, or Blown-in insulation shall be paid for under separate items. This item also includes all equipment, materials, labor, and costs of work required to construct the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.96 BATT/BLOWN-IN/SPRAYED-IN INSULATION – BID ITEM #88

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to install the item.

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.97 ROOFING – BID ITEM #89

A. No direct measurement will be made for this item. All metal flashing, metal trim, rain gutters, downspouts, paint, and the standing seam roof system. This item includes all equipment, materials, labor, and costs of work required to construct the item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.98 INTERIOR FINISH – BID ITEM #90

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All gypsum board, taping, plastering, texturing, paint, trim, flooring, sealant, hardware, and anchors required to install this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.99 DOORS, FRAMES, AND HARDWARE – BID ITEM #91

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All additional trim, sealant, hardware, paint, and anchors required to install the doors and frames are included in this item.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.100 GLAZING – BID ITEM #92

A. No direct measurement will be made for this item. This item includes all windows, glass, equipment, materials, labor, and costs of work required to construct/install the item. Water proofing, flashing, and sealants are included in other bid items.

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

1.101 MISCELLANEOUS BUILDING ITEMS – BID ITEM #93

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required for the construction of any item pertaining to the building that is not included in another bid item. This shall include all items within 5 ft of the building perimeter not specifically listed to complete the building systems to achieve a weather tight, structurally sound, secure, and safe building meeting Owner requirements. This shall also include applicable building permitting (fees paid by Owner).

B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

1.102 BUILDING ELECTRICAL– BID ITEM #94

A. No direct measurement will be made for this item. This item includes all equipment, materials, labor, and costs of work required to construct the item. All interior and exterior lighting, outlets, switches, panels, controls, wiring, conduits, labels, coordination with Rocky Mountain Power and other trades, and other items necessary for a complete job as shown in the Drawings and as described in the Specifications and elsewhere in the Contract Documents, and related components not covered under another bid item required for the construction of the building, is included in this item. Also included is stubbing a conduit to the west for future internet.

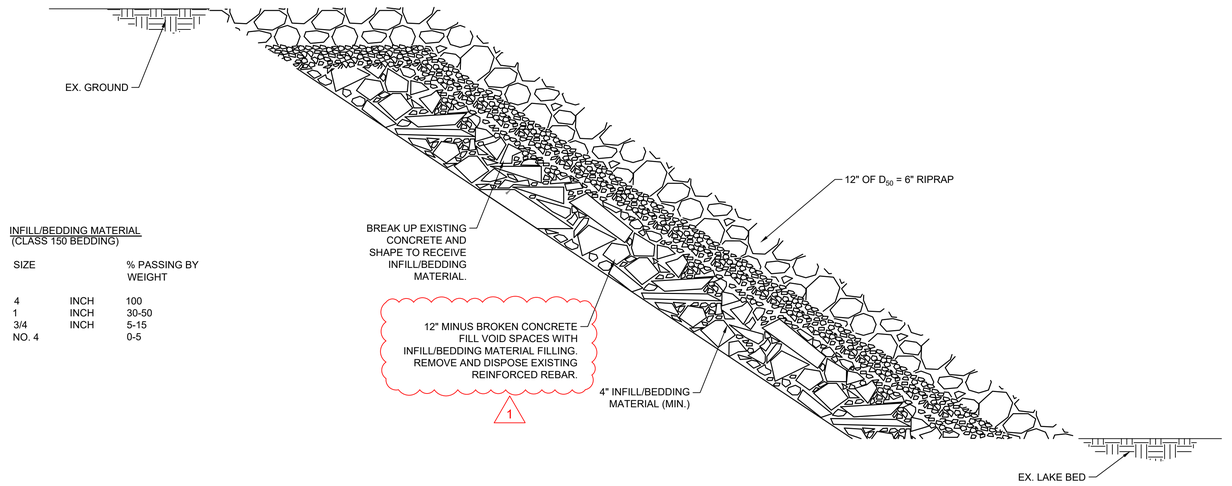
B. Payment shall be made at the lump sum (LS) price stated in the Bid Form. No payment shall be made for material nor labor used in an unauthorized location, outside the pay limits, or when a lesser quantity of material would have met specifications.

PART 2 EXECUTION – NOT USED

END OF SECTION

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

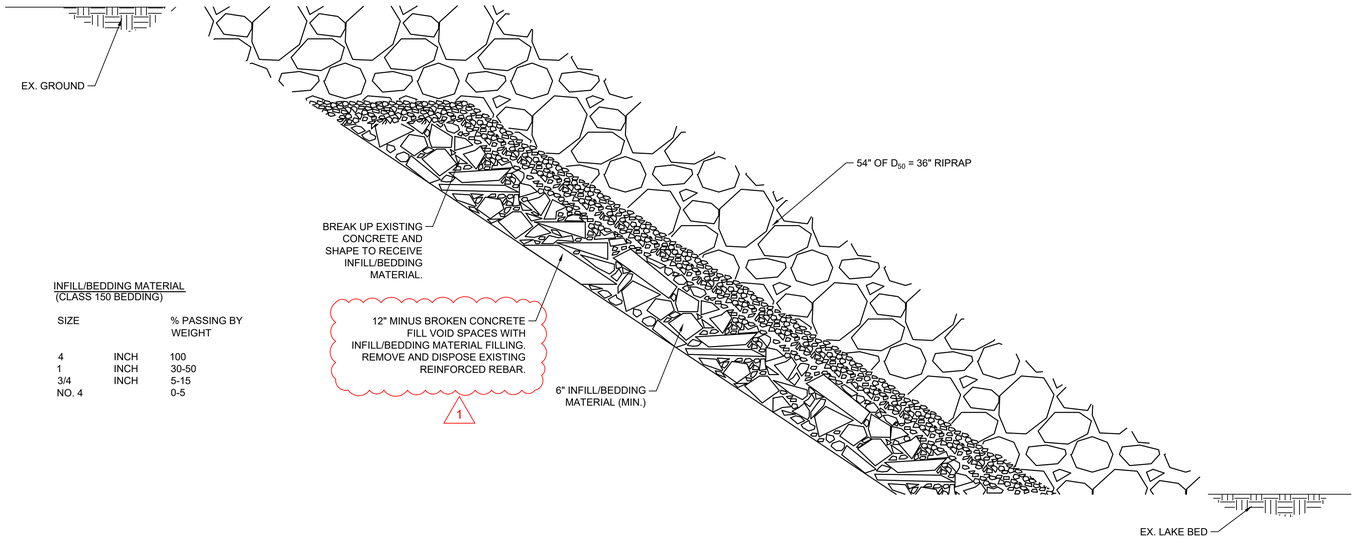
NOTES:
1. CONTRACTOR SHALL SUBMIT RIPRAP GRADATION TO ENGINEER PER REVIEW.



INFILL/BEDDING MATERIAL
(CLASS 150 BEDDING)

SIZE		% PASSING BY WEIGHT
4	INCH	100
1	INCH	30-50
3/4	INCH	5-15
NO. 4		0-5

A1 HARBOR SLOPE PROTECTION DETAIL
SCALE:N.T.S.



INFILL/BEDDING MATERIAL
(CLASS 150 BEDDING)

SIZE		% PASSING BY WEIGHT
4	INCH	100
1	INCH	30-50
3/4	INCH	5-15
NO. 4		0-5

A2 LAKE EXPOSED SLOPE PROTECTION DETAIL
SCALE:N.T.S.

J-U-B ENGINEERS, INC.
J-U-B ENGINEERS, INC.
392 E. Winchester St.
Suite 300
Salt Lake City, UT 84107
Phone: 801.886.9052
www.jub.com

BID SET

REGISTERED PROFESSIONAL ENGINEER
12717219-2202
DANIEL AARON NETZLEY
07/24/2024
STATE OF UTAH

REUSE OF DRAWINGS
J-U-B SHALL RETAIN ALL COMMON LAW, STATUTORY, COPYRIGHT AND OTHER RESERVED RIGHTS OF THESE DRAWINGS, AND THE SAME SHALL NOT BE USED WITHOUT J-U-B'S PRIOR WRITTEN CONSENT. ANY REUSE WITHOUT WRITTEN CONSENT BY J-U-B WILL BE AT CLIENT'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO J-U-B.

NO.	REVISION	BY	DATE
1	ADDENDUM 3	DAN, JRA	9/12/24

DESCRIPTION
AMERICAN FORK BOAT HARBOR RECONSTRUCTION
AMERICAN FORK CITY

DETAILS

FILE : 83-23-013_DD50X
JUB PROJ. # :83-23-013
DRAWN BY: DAN
DESIGN BY: DAN
CHECKED BY: JRA
ONE INCH
AT FULL SIZE, IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 9/10/2024

SHEET NUMBER:
DD506

Attachment: AFBH_Addendum3_09.12.24 (Contract for Boat Harbor Reconstruction)

Plot Date:9/12/2024 5:17 PM Plotted By: Daniel Netzley
Date Created:4/28/2024 \\JUB.COM\CENTRAL\CLIENTS\UT\AMERICANFORK\CITYPROJECTS\83-23-013_BOATHARBORRPARKING\LOTYDESIGN\CAD\SHEETS\83-23-013_DD50X.DWG

NOTICE OF AWARD

Date of Issuance:			
Owner:	American Fork City	Owner's Project No.:	
Engineer:	J-U-B ENGINEERS, Inc.	Engineer's Project No.:	83-23-013
Project:	American Fork Boat Harbor Reconstruction		
Contract Name:	American Fork Boat Harbor Reconstruction		
Bidder:	Condie Construction Company		
Bidder's Address:	53 North 1650 West Springville, UT 84663		

You are notified that Owner has accepted your Bid dated **09/12/2024** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

American Fork Boat Harbor

The Contract Price of the awarded Contract is **$3,547,206.12.** Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, as applicable.

[1] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **[1]** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **American Fork City**

By *(signature)*: _____

Name *(printed)*: _____

Title: _____

Attachment: AFBH_NoA (Contract for Boat Harbor Reconstruction)

EJCDC® C-510, Notice of Award.
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NOTICE TO PROCEED

Owner:	American Fork City	Owner's Project No.:	
Engineer:	J-U-B ENGINEERS, Inc.	Engineer's Project No.:	83-23-013
Contractor:	Condie Construction Company	Contractor's Project No.:	
Project:	American Fork Boat Harbor Reconstruction		
Contract Name:	American Fork Boat Harbor Reconstruction		
Effective Date of Contract:			

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **September , 2024** pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

The date by which Substantial Completion must be achieved is **May 1, 2025**, and the date by which readiness for final payment must be achieved is **May 22, 2025.**

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner:	**American Fork City**
By *(signature)*:	
Name *(printed)*:	
Title:	
Date Issued:	

Copy: Engineer

Attachment: AFBH_NTP (Contract for Boat Harbor Reconstruction)

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AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **American Fork City** ("Owner") and **Condie Construction Company** ("Contractor").

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

ARTICLE 1—WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

The Project will replace and provide upgrades to the existing boat harbor. The site improvements include new asphalt and striping, onsite stormwater system, replaced toll booth, new restroom building, jetty slopes restoration, playground area, and pavilions. The beach area will be revitalized with new sand and landscape item, such as a kayak launch and permanent umbrellas.

ARTICLE 2—THE PROJECT

2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows: **American Fork Boat Harbor Reconstruction**

ARTICLE 3—ENGINEER

3.01 The Owner has retained **J-U-B ENGINEERS, Inc.** ("Engineer") to act as Owner's representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.

3.02 The part of the Project that pertains to the Work has been designed by **J-U-B ENGINEERS, Inc.**

ARTICLE 4—CONTRACT TIMES

4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

A. The Work will be substantially complete on or before **May 1, 2025**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **May 22, 2025**.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and Milestones not achieved within the Contract Times, as duly modified. The parties also

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recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. *Substantial Completion:* Contractor shall pay Owner $**1,000.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.

2. *Completion of Remaining Work:* After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $**1,000.00** for each day that expires after such time until the Work is completed and ready for final payment.

4. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive, and will not be imposed concurrently.

B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.

ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

A. For all Work **$3,547,206.12**

All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

B. The extended prices for Unit Price Work set forth as of the Effective Date of the Contract are based on estimated quantities. As provided in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and

D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on the basis of Contractor's Applications for Payment on or about the **25th** day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions

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(and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

    a. **95** percent of the value of the Work completed (with the balance being retainage).

        1) If 50 percent or more of the Work has been completed, as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

    b. **95** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **200** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

6.04 *Interest*

A. All amounts not paid when due will bear interest at the maximum legal rate percent per annum.

ARTICLE 7—CONTRACT DOCUMENTS

7.01 *Contents*

A. The Contract Documents consist of all of the following:

1. This Agreement.
2. Bonds:
    a. Performance bond (together with power of attorney).
    b. Payment bond (together with power of attorney).
3. General Conditions.
4. Supplementary Conditions.
5. Specifications as listed in the table of contents of the project manual (copy of list attached).
6. Drawings (not attached but incorporated by reference) consisting of **39** sheets with each sheet bearing the following general title: **American Fork Boat Harbor Reconstruction**

Attachment: AFBH-Agreement (Contract for Boat Harbor Reconstruction)

8. Addenda (numbers **[1]** to **[3]**, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
    a. **None**
10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    a. Notice to Proceed.
    b. Work Change Directives.
    c. Change Orders.
    d. Field Orders.
    e. Warranty Bond, if any.

B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 7.

D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS

8.01 *Contractor's Representations*

A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:

1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical

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Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.

7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

8.02 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

8.03 *Standard General Conditions*

A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has

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furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

Attachment: AFBH-Agreement (Contract for Boat Harbor Reconstruction)

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IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on _____ (which is the Effective Date of the Contract).

Owner:	Contractor:
American Fork City *(typed or printed name of organization)*	_____ *(typed or printed name of organization)*
By: _____ *(individual's signature)*	By: _____ *(individual's signature)*
Date: _____ *(date signed)*	Date: _____ *(date signed)*
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)* *(If **[Type of Entity]** is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
Attest: _____ *(individual's signature)*	Attest: _____ *(individual's signature)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address for giving notices: American Fork City 51 E Main St. American Fork, UT 84003	Address for giving notices:
Designated Representative:	Designated Representative:
Name: _____ *(typed or printed)*	Name: _____ *(typed or printed)*
Title: _____ *(typed or printed)*	Title: _____ *(typed or printed)*
Address:	Address:
Phone: _____	Phone: _____
Email: _____ *(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*	Email: _____ License No.: _____ *(where applicable)* State: _____

Attachment: AFBH-Agreement (Contract for Boat Harbor Reconstruction)

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Bid Tabulation

Client: American Fork

Project: American Fork Boat Harbor

Project # 83-23-013

Date: 9/19/2024

				Engineer's Estimate		Condie Construction		Mountian West Industrial	
Item #	Description	Unit	Estimated Quantity	OPC - Unit Price	OPC - Total Price	Bid Unit Price 1	Bid Total Price 1	Bid Unit Price 2	Bid Total Price 2
1	Mobilization/Demoblization	LS	1	$108.00	$108.00	$391,785.00	$391,785.00	$344,000.00	$344,000.00
2	As-Built/Record Drawings	LS	1	$11.00	$11.00	$7,500.00	$7,500.00	$44,000.00	$44,000.00
3	Storm Water Pollution Prevention Plan (SWPPP)	LS	1	$22.00	$22.00	$18,000.00	$18,000.00	$33,770.00	$33,770.00
4	Weed Removal and Management Plan - Jetty	LS	1	$11.00	$11.00	$12,500.00	$12,500.00	$18,000.00	$18,000.00
5	General Removal and Disposal	LS	1	$30,000.00	$30,000.00	$55,000.00	$55,000.00	$15,300.00	$15,300.00
6	Remove and Dispose Asphalt Pavement	SY	15614	$10.00	$156,140.00	$3.25	$50,745.50	$3.70	$57,771.80
7	Clearing and Grubbing	LS	1	$20,000.00	$20,000.00	$52,500.00	$52,500.00	$51,669.00	$51,669.00
8	Remove and Dispose Tree	EA	10	$2,500.00	$25,000.00	$1,215.00	$12,150.00	$4,301.10	$43,011.00
9	Relocate Light Poles and Electric Junction Boxes	LS	1	$5,000.00	$5,000.00	$10,500.00	$10,500.00	$25,400.00	$25,400.00
10	Remove and Dispose Toll Booth	LS	1	$75,000.00	$75,000.00	$2,500.00	$2,500.00	$22,300.00	$22,300.00
11	Remove and Dispose Chain and Post Fence and Chainlink Fence	LF	1,127	$20.00	$22,540.00	$5.00	$5,635.00	$10.00	$11,270.00
12	Remove Entrance Gate	LS	1	$2,000.00	$2,000.00	$600.00	$600.00	$750.00	$750.00
13	8" Vehicular Concrete	SF	1,259	$14.00	$17,626.00	$8.00	$10,072.00	$25.50	$32,104.50
14	4" Thick Concrete Sidewalk	SF	1,160	$12.00	$13,920.00	$7.50	$8,700.00	$12.50	$14,500.00
15	Concrete Flatwork	SF	1,565	$8.00	$12,520.00	$7.50	$11,737.50	$11.00	$17,215.00
16	8" Thick Concrete Drive Approach	EA	1	$7,500.00	$7,500.00	$2,360.00	$2,360.00	$4,510.00	$4,510.00
17	Hot Mix Asphalt, PG-54-22, SP-1/2, 75Nd - Asphalt Trail	TONS	305	$120.00	$36,600.00	$130.00	$39,650.00	$175.00	$53,375.00
18	Hot Mix Asphalt, PG-54-22, SP-1/2, 75Nd - Parking Lot	TONS	2,828	$120.00	$339,360.00	$105.00	$296,940.00	$109.00	$308,252.00
19	Untreated Base Course (Parking Lot, Trail, Vehicular and Flatwork)	CY	3,468	$75.00	$260,100.00	$75.00	$260,100.00	$70.00	$242,760.00
20	Granular Borrow	CY	5,617	$50.00	$280,850.00	$49.00	$275,233.00	$33.00	$185,361.00
21	Excavation	CY	19,300	$30.00	$579,000.00	$26.00	$501,800.00	$36.00	$694,800.00
22	Borrow	CY	1,950	$10.00	$19,500.00	$47.00	$91,650.00	$42.00	$81,900.00
23	Handicap Ramp	EA	7	$4,000.00	$28,000.00	$1,360.00	$9,520.00	$2,050.00	$14,350.00
24	4' Concrete Valley Gutter	LF	1,433	$20.00	$28,660.00	$49.00	$70,217.00	$65.00	$93,145.00
25	Open 24" Curb and Gutter	LF	3,320	$25.00	$83,000.00	$23.00	$76,360.00	$27.50	$91,300.00
26	Vehicular Gate at Entrance (36'-Wide Manual Double Swing Gate)	LS	1	$50,000.00	$50,000.00	$6,120.00	$6,120.00	$5,800.00	$5,800.00
27	Relocated Vehicular Gate (12'-Wide Manual Slide Gate)	LS	1	$5,000.00	$5,000.00	$2,400.00	$2,400.00	$2,400.00	$2,400.00
28	General Relocation	LS	1	$20,000.00	$20,000.00	$9,000.00	$9,000.00	$14,900.00	$14,900.00
29	4' Chainlink Fence	LF	18	$70.00	$1,260.00	$138.50	$2,493.00	$105.00	$1,890.00
30	6' Chainlink Fence	LF	908	$75.00	$68,100.00	$40.50	$36,774.00	$29.50	$26,786.00
31	Dumpster Enclosure	LS	1	$15,000.00	$15,000.00	$32,900.00	$32,900.00	$28,350.00	$28,350.00
32	Concrete Wheel Stop	EA	35	$500.00	$17,500.00	$175.00	$6,125.00	$190.00	$6,650.00
33	Sign with 8" Dia. Bollard	EA	22	$500.00	$11,000.00	$1,355.00	$29,810.00	$1,400.00	$30,800.00
34	Stationary 6" Dia. Bollard	EA	6	$250.00	$1,500.00	$1,380.00	$8,280.00	$1,350.00	$8,100.00
35	Striping	LS	1	$21,000.00	$21,000.00	$11,900.00	$11,900.00	$11,222.00	$11,222.00
36	Harbor Slope Protection	SY	1699	$100.00	$169,900.00	$80.00	$135,920.00	$71.50	$121,478.50
37	Lake Exposed Slope Protection	SY	807	$100.00	$80,700.00	$320.00	$258,240.00	$337.50	$272,362.50

Attachment: AFBH-BidTab (Contract for Boat Harbor Reconstruction)

				Engineer's Estimate		Condie Construction		Mountian West Industrial	
Item #	Description	Unit	Estimated Quantity	OPC - Unit Price	OPC - Total Price	Bid Unit Price 1	Bid Total Price 1	Bid Unit Price 2	Bid Total Price 2
38	Inlet Basin, 3'X3', 5-7Ft Deep	EA	5	$7,500.00	$37,500.00	$5,280.00	$26,400.00	$7,640.00	$38,200.00
39	Storm Drain Manhole, 5-Ft, 6Ft Deep	EA	1	$6,000.00	$6,000.00	$7,345.00	$7,345.00	$11,335.00	$11,335.00
40	Sand/Oil Seperator - OSS-A1	EA	1	$50,000.00	$50,000.00	$36,035.00	$36,035.00	$48,000.00	$48,000.00
41	Sand/Oil Seperator - OSS-B1	EA	1	$20,000.00	$20,000.00	$18,500.00	$18,500.00	$25,150.00	$25,150.00
42	Sand/Oil Seperator - OSS-C1	EA	1	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$25,800.00	$25,800.00
43	Sand/Oil Seperator - OSS-D1	EA	1	$20,000.00	$20,000.00	$20,000.00	$20,000.00	$27,400.00	$27,400.00
44	18" Reinforced Concrete Pipe	LF	472	$160.00	$75,552.00	$130.50	$61,622.10	$293.00	$138,354.60
45	24" Reinforced Concrete Pipe	LF	18	$220.00	$3,960.00	$280.00	$5,040.00	$380.00	$6,840.00
46	18” Flared End Section Pipe Outlet	EA	2	$3,000.00	$6,000.00	$1,900.00	$3,800.00	$1,900.00	$3,800.00
47	24” Flared End Section Pipe Outlet	EA	1	$4,000.00	$4,000.00	$2,075.00	$2,075.00	$3,500.00	$3,500.00
48	CXT Tioga Restroom Building	LS	1	$3,353.30	3,353	$2,440.00	$2,440.00	$3,000.00	$3,000.00
49	Fine Grading (Landscape Areas)	SF	1	$0.12	$0.12	$25,100.00	$25,100.00	$24,365.00	$24,365.00
50	Washed Beach Sand	CY	762	$40.00	$30,480.00	$114.00	$86,868.00	$111.00	$84,582.00
51	Engineered Wood Fiber (Playground)	SF	2,785	$3.50	$9,747.50	$5.10	$14,203.50	$5.00	$13,925.00
52	Steel Edging (1/8” Thick, 6” Tall- Corten/Borcon)	LF	880	$16.00	$14,080.00	$9.60	$8,448.00	$7.65	$6,732.00
53	Sod	SF	1,064	$0.80	$851.20	$1.10	$1,170.40	$1.15	$1,223.60
54	Shredded Bark Mulch	SF	3,822	$1.00	$3,822.00	$1.20	$4,586.40	$1.20	$4,586.40
55	1” Desert Rose Stone Mulch (3” Depth)	SF	11,402	$2.90	$33,065.80	$2.10	$23,944.20	$2.00	$22,804.00
56	3”-6” Wasatch Grey Stone Mulch (4” Depth)	SF	14,668	$3.00	$44,004.00	$2.65	$38,870.20	$3.00	$44,004.00
57	1/4” Minus Chat (Path Material)	SF	1,386	$3.25	$4,504.50	$3.70	$5,128.20	$3.60	$4,989.60
58	2” Caliper Deciduous Tree	EA	10	$600.00	$6,000.00	$570.00	$5,700.00	$605.00	$6,050.00
59	Not Used (Formerly Preservation of Existing Trees)								
60	Topsoil	CY	406	$40.00	$16,240.00	$56.25	$22,837.50	$280.00	$113,680.00
61	Weed Barrier Fabric	SF	26,016	$0.60	$15,609.60	$0.60	$15,609.60	$1.20	$31,219.20
62	Concrete Mow Curb (6” Wide)	LF	5	$20.00	$100.00	$57.00	$285.00	$60.00	$300.00
63	Cast-in-Place 8” Deep-Edge Concrete Curb Wall (Playground)	LF	93	$30.00	$2,790.00	$55.00	$5,115.00	$105.00	$9,765.00
64	Cast-in-Place Concrete Seat Wall (12” Wide)	LF	237	$250.00	$59,250.00	$221.00	$52,377.00	$220.00	$52,140.00
65	Lodge Pole Fence	LF	241	$40.00	$9,640.00	$29.00	$6,989.00	$34.00	$8,194.00
66	Shade Umbrellas	EA	6	$9,060.00	$54,360.00	$4,335.00	$26,010.00	$2,000.00	$12,000.00
67	Modular Floating Dock, Gangway, and Kayak Launch	LS	1	$65,000.00	$65,000.00	$5,285.00	$5,285.00	$13,000.00	$13,000.00
68	Timber Hammocks Posts	EA	10	$300.00	$3,000.00	$2,485.00	$24,850.00	$1,750.00	$17,500.00
69	Trash Receptacles (Powder Coated)	EA	5	$1,200.00	$6,000.00	$200.00	$1,000.00	$400.00	$2,000.00
70	Cornhole Board	EA	2	$2,800.00	$5,600.00	$0.01	$0.02	$750.00	$1,500.00
71	Not Used (Formerly Playground)								
72	Log Playground Barrier, Treated Logs	LF	51	$200.00	$10,200.00	$255.00	$13,005.00	$353.00	$18,003.00
73	Specialty, Treated Logs and Stumps	LF	80	$250.00	$20,000.00	$57.00	$4,560.00	$195.00	$15,600.00
74	Natural (Untreated) Logs and Stumps	LF	200	$50.00	$10,000.00	$45.00	$9,000.00	$135.00	$27,000.00
75	6' Bench (With back)	EA	6	$4,000.00	$24,000.00	$380.00	$2,280.00	$600.00	$3,600.00
76	6' Aluminum Picnic Tables (Powder-Coated)	EA	6	$6,000.00	$36,000.00	$380.00	$2,280.00	$600.00	$3,600.00
77	Collapsible Access Control Bollard	EA	1	$2,000.00	$2,000.00	$380.00	$380.00	$400.00	$400.00
78	Pavilion	EA	2	$19,590.00	$39,180.00	$8,225.00	$16,450.00	$10,000.00	$20,000.00
79	Bike Rack	EA	2	$1,000.00	$2,000.00	$380.00	$760.00	$400.00	$800.00
80	Import Building Foundation	LS	1	$5,275.00	$5,275.00	$1,715.00	$1,715.00	$5,275.00	$5,275.00
81	Building Concrete and Reinforcing	LS	1	$24,400.00	$24,400.00	$9,300.00	$9,300.00	$24,400.00	$24,400.00
82	Rough Carpentry	LS	1	$18,690.00	$18,690.00	$9,075.00	$9,075.00	$18,690.00	$18,690.00

Attachment: AFBH-BidTab (Contract for Boat Harbor Reconstruction)

				Engineer's Estimate		Condie Construction		Mountian West Industrial	
Item #	Description	Unit	Estimated Quantity	OPC - Unit Price	OPC - Total Price	Bid Unit Price 1	Bid Total Price 1	Bid Unit Price 2	Bid Total Price 2
83	Shop Fabricated Roof Trusses	LS	1	$9,345.00	$9,345.00	$5,100.00	$5,100.00	$9,345.00	$9,345.00
84	Siding	LS	1	$2,611.00	$2,611.00	$14,275.00	$14,275.00	$2,611.00	$2,611.00
85	Stone Veneer and Associated Items	LS	1	$2,640.00	$2,640.00	$6,600.00	$6,600.00	$2,640.00	$2,640.00
86	Metal Fabrications	LS	1	$10,600.00	$10,600.00	$8,160.00	$8,160.00	$10,600.00	$10,600.00
87	Thermal and Moisture Protection	LS	1	$1,650.00	$1,650.00	$5,100.00	$5,100.00	$1,650.00	$1,650.00
88	Batt/Blown-in/Sprayed-in insulation	LS	1	$1,050.00	$1,050.00	$4,300.00	$4,300.00	$1,050.00	$1,050.00
89	Roofing	LS	1	$6,750.00	$6,750.00	$5,100.00	$5,100.00	$6,750.00	$6,750.00
90	Interior Finish	LS	1	$4,123.00	$4,123.00	$8,500.00	$8,500.00	$4,123.00	$4,123.00
91	Doors, Frames, and Hardware	LS	1	$2,556.00	$2,556.00	$3,625.00	$3,625.00	$2,556.00	$2,556.00
92	Glazing	LS	1	$4,070.00	$4,070.00	$5,100.00	$5,100.00	$4,070.00	$4,070.00
93	Miscellaneous Building Item	LS	1	$15,165.00	$15,165.00	$4,530.00	$4,530.00	$15,165.00	$15,165.00
94	Building Electrical	LS	1	$22,650.00	$22,650.00	$16,660.00	$16,660.00	$22,650.00	$22,650.00
Total Bid Price					$ 3,408,893.02		$ 3,547,206.12		$ 4,058,070.70

Note: Items highlighted are those that were added up differently than what is recorded on bid.

Attachment: AFBH-BidTab (Contract for Boat Harbor Reconstruction)

REQUEST FOR COUNCIL ACTION
CITY OF AMERICAN FORK
SEPTEMBER 24, 2024

Department Recorder **Director Approval** *Terilyn Lurker*

AGENDA ITEM Review and action on a resolution approving an interlocal cooperation agreement between Utah County, American Fork City, Alpine City, Cedar Hills City, Highland City, and Lehi City, for the administration of the 2024 New School District Election.

SUMMARY RECOMMENDATION
Staff would recommend approval

BACKGROUND
The interlocal agreement is between Utah County and Lehi City, American Fork City, Alpine City, Highland City, and Cedar Hills City, for the administration of the 2024 New School District election. The cities have previously entered into an interlocal agreement for the purpose of creating a new school district. It is to the mutual benefit of Utah County and all the cities involved to enter into this agreement for the administration of the 2024 City New School District Election.

The interlocal agreement spells out the scope of work for election services and the cost for the cities.

BUDGET IMPACT
$5,456.69

SUGGESTED MOTION
Move to adopt the resolution approving the interlocal agreement between Utah County and American Fork, Alpine, Cedar Hills, Draper, Highland, and Lehi cities and authorize the city to sign the agreement.

SUPPORTING DOCUMENTS

09.24.24 - Interlocal with Utah County and six municipalities (DOCX)
09.24.24 - Interlocal Agreement with Utah County re Election Services (PDF)

RESOLUTION NO. _____

A RESOLUTION APPROVING AN INTERLOCAL COOPERATION AGREEMENT BETWEEN UTAH COUNTY AND LEHI CITY, AMERICAN FORK CITY, ALPINE CITY, DRAPER CITY, HIGHLAND CITY, AND CEDAR HILLS CITY FOR THE ADMINISTRATION OF THE 2024 NEW SCHOOL DISTRICT ELECTION

WHEREAS, American Fork City, Alpine City, Cedar Hills, Draper City, Highland City, Lehi City, and Utah County desires to enter into an interlocal cooperation agreement for the administration of the 2024 New School District election.

NOW, THEREFORE, the City Council of American Fork resolves to enter into the attached Interlocal Cooperation Agreement for the administration of the 2024 New School District election.

Passed and adopted by the American Fork City Council on the 24th day of September 2024.

APPROVED:

_____
Bradley J. Frost, Mayor

ATTEST:

_____
Stephanie Finau, Deputy Recorder

Attachment: 09.24.24 - Interlocal with Utah County and six municipalities (Interlocal with Utah County - 2024 School District election)

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

Agreement No. 2024 - ___

INTERLOCAL COOPERATION AGREEMENT BETWEEN UTAH COUNTY AND LEHI CITY, AMERICAN FORK CITY, ALPINE CITY, DRAPER CITY, HIGHLAND CITY, AND CEDAR HILLS CITY FOR THE ADMINISTRATION OF THE 2024 NEW SCHOOL DISTRICT ELECTION

THIS IS AN INTERLOCAL COOPERATION AGREEMENT ("Agreement"), made and entered into by and between Utah County, a political subdivision of the State of Utah, and Lehi City, American Fork City, Alpine City, Draper City, Highland City, and Cedar Hills City, all of which are Utah municipalities and political subdivisions of the State of Utah, hereinafter referred to individually as a CITY and collectively as CITIES.

WITNESSETH:

WHEREAS, pursuant to the provisions of the Interlocal Cooperation Act ("Act"), Title 11, Chapter 13, Utah Code, public agencies, including political subdivisions of the State of Utah as therein defined, are authorized to enter into written agreements with one another for joint or cooperative action; and

WHEREAS, pursuant to the Act, the parties desire to work together through joint and cooperative action that will benefit the residents of both Utah County and CITIES; and

WHEREAS, CITIES have previously entered into an interlocal agreement for the purpose of creating a new school district under Utah Code Section 53G-3-301.4; and

WHEREAS, CITIES are sponsors of the request for the creation of a new school district; and

WHEREAS, the parties to this Agreement are public agencies as defined in the Act; and

WHEREAS, Utah County and CITIES desire to successfully conduct an election in each of the CITIES on the ballot proposition for the creation of a new school district (the "2024 CITY New School District Election"); and

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

WHEREAS, it is to the mutual benefit of both Utah County and CITIES to enter into an agreement providing for the parties' joint efforts to administer the 2024 CITY New School District Election.

NOW, THEREFORE, the parties do mutually agree, pursuant to the terms and provisions of the Act, as follows:

Section 1. EFFECTIVE DATE; DURATION

This Agreement shall become effective and shall enter into force, within the meaning of the Act, upon the submission of this Agreement to, and the approval and execution thereof as described 11-13-202.5(1) of the Interlocal Cooperation Act. The term of this Agreement shall be from the effective date hereof until the completion of the parties' responsibilities associated with the 2024 CITY New School District Election or until terminated but is no longer than 1 year from the date of this Agreement. This Agreement shall not become effective until it has been reviewed and approved as to form and compatibility with the laws of the State of Utah by the Utah County Attorney and the attorney for each of the CITIES. Prior to becoming effective, this Agreement shall be filed with the person who keeps the records of each of the parties.

Section 2. ADMINISTRATION OF AGREEMENT

The parties to this Agreement do not contemplate nor intend to establish a separate legal entity under the terms of this Agreement. The parties hereto agree that, pursuant to Section 11-13-207, Utah Code, Utah County, by and through the Utah County Clerk Elections Office, shall act as the administrator responsible for the administration of this Agreement. The parties further agree that this Agreement does not anticipate nor provide for any organizational changes in the parties. The administrator agrees to keep all books and records in such form and manner as Utah County

shall specify and further agrees that said books shall be open for examination by the parties hereto at all reasonable times. The parties agree that they will not acquire, hold nor dispose of real or personal property pursuant to this Agreement during this joint undertaking.

Section 3. PURPOSES

This Agreement has been established and entered into between the parties for the purpose of administering the 2024 CITY New School District Election. All other election-related services, including but not limited to services for special elections or elections for subsequent years, will need to be agreed to in a separate writing signed by both parties.

Section 4. RESPONSIBILITIES

The parties agree to fulfill the responsibilities and duties as contained in Exhibit A which is attached hereto and by this reference is incorporated herein for the 2024 CITY New School District Election.

Each CITY agrees to pay to Utah County the actual cost of County's administration of the 2024 CITY New School District Election which cost shall not exceed the estimated cost for each CITY as contained in Exhibit B, C, D, E, F, G which is attached hereto and by this reference is incorporated herein. Each CITY agrees to pay to County the cost as contemplated herein within 30 days of receiving an invoice from County.

Section 5. METHOD OF TERMINATION

This Agreement will automatically terminate at the end of its term herein, pursuant to the provisions of paragraph one (1) of this Agreement. Prior to the automatic termination at the end of the term of this Agreement, any party to this Agreement may terminate the Agreement sixty (60) days after providing written notice of termination to the other parties. Should the Agreement be terminated prior to the end of the stated term, CITIES will be responsible for any costs incurred, including costs not then incurred but which are contemplated herein and irreversible at the time of

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

termination such as return mailing costs, through the time of termination. The Parties to this Agreement agree to bring current, prior to termination, any financial obligation contained herein.

Section 6. INDEMNIFICATION

The parties to this Agreement are political subdivisions of the State of Utah. The parties agree to indemnify and hold harmless one another for damages, claims, suits, and actions arising out of a negligent error or omission of its own officials or employees in connection with this Agreement. It is expressly agreed between the parties that the obligation to indemnify is limited to the dollar amounts set forth in the Governmental Immunity Act, Utah Code Section 63G-7-604.

Section 7. FILING OF INTERLOCAL COOPERATION AGREEMENT

Executed copies of this Agreement shall be placed on file in the office of the County Clerk of Utah County and with the official keeper of records of each CITY, and shall remain on file for public inspection during the term of this Agreement.

Section 8. ADOPTION REQUIREMENTS

This Agreement shall be (a) executed by a duly authorized official of each of the parties; (b) submitted to and approved by an authorized attorney of each of the parties, as required by Section 11-13-202.5, Utah Code; and (c) filed in the official records of each party.

Section 9. AMENDMENTS

This Agreement may not be amended, changed, modified or altered except by an instrument in writing which shall be (a) executed by a duly authorized official of each of the parties; (b) submitted to and approved by an Authorized Attorney of each of the parties, as required by Section 11-13-205.5, Utah Code; and (c) filed in the official records of each party.

Section 10. SEVERABILITY

If any term or provision of this Agreement or the application thereof shall to any extent be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to circumstances other than those with respect to which it is invalid or unenforceable,

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

shall not be affected thereby, and shall be enforced to the extent permitted by law. To the extent permitted by applicable law, the parties hereby waive any provision of law which would render any of the terms of this Agreement unenforceable.

Section 11. NO PRESUMPTION

Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against the party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being acknowledged that each of the parties has participated in the preparation hereof.

Section 12. HEADINGS

Headings herein are for convenience of reference only and shall not be considered any interpretation of the Agreement.

Section 13. BINDING AGREEMENT

This Agreement shall be binding upon the heirs, successors, administrators, and assigns of each of the parties hereto.

Section 14. NOTICES

All notices, demands and other communications required or permitted to be given hereunder shall be in writing and shall be deemed to have been properly given if delivered by hand or by certified mail, return receipt requested, postage paid, to the parties at the addresses of the CITY Mayor or Utah County Commission, or at such other addresses as may be designated by notice given hereunder.

Section 15. ASSIGNMENT

The parties to this Agreement shall not assign this Agreement, or any part hereof, without the prior written consent of all other parties to this Agreement. No assignment shall relieve the

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

original parties from any liability hereunder.

Section 16. GOVERNING LAW

All questions with respect to the construction of this Agreement, and the rights and liability of the parties hereto, shall be governed by the laws of the State of Utah.

IN WITNESS WHEREOF, the parties have signed and executed this Agreement, on the dates listed below:

APPROVED AND ADOPTED this ____ day of _____ 2024.

BOARD OF COUNTY COMMISSIONERS,
UTAH COUNTY, UTAH

_____
BRANDON B. GORDON, Chair

ATTEST:
AARON R. DAVIDSON
Utah County Clerk

By: _____
Deputy Clerk

APPROVED AS TO FORM AND LEGALITY:
JEFFREY S. GRAY
Utah County Attorney

By: _____
Deputy County Attorney

BOARD OF COUNTY COMMISSIONERS UTAH COUNTY, UTAH	VOTE YEA	NAY
BRANDON B. GORDON, CHAIR	_____	_____
THOMAS V. SAKIEVICH, COMMISSIONER	_____	_____
AMELIA POWERS GARDNER, COMMISSIONER	_____	_____

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

LEHI CITY

Signed on the _____day of _____2024.

_____
Mayor, CITY

ATTEST:

_____
NAME
CITY Recorder

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH
CITY Attorney

By: _____

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

AMERICAN FORK CITY

Authorized and passed on the _____day of _____2024.

_____
Mayor, CITY

ATTEST:

_____
NAME
CITY Recorder

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH
CITY Attorney

By: _____

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

ALPINE CITY

Authorized and passed on the _____day of _____2024.

_____
Mayor, CITY

ATTEST:

_____
NAME
CITY Recorder

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH
CITY Attorney

By: _____

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

DRAPER CITY

Authorized and passed on the _____day of _____2024.

_____
Mayor, CITY

ATTEST:

_____
NAME
CITY Recorder

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH
CITY Attorney

By: _____

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

HIGHLAND CITY

Authorized and passed on the _____day of _____2024.

_____
Mayor, CITY

ATTEST:

_____
NAME
CITY Recorder

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH
CITY Attorney

By: _____

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

CEDAR HILLS CITY

Authorized and passed on the _____day of _____2024.

_____
Mayor, CITY

ATTEST:

_____
NAME
CITY Recorder

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH
CITY Attorney

By: _____

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

Exhibit A
2024 New School District Elections
Scope of Work for Election Services

Revised 23 August 2024

Services the CITIES will provide include, but are not limited to:

- Publish Public Notices required by law. The CITIES may work with the County to publish notices jointly with other jurisdictions.
- Accept responsibility to keep Interlocal participants and the public up to date and informed on all legal requirements governing the creation of a new school district.
- Thoroughly examine and proof all election programming done for the New School District Elections.
- Host on each City's official web site: a link to or copy of the official reported results as hosted on the County Elections web page, the location of the county-owned ballot drop boxes, and a link to the website for citizens to opt-in to receive ballot alert texts.
- CITIES will not change the format or otherwise alter the official reported results, only displaying them in the form and format as provided by the County.
- Prepare, compile, and design the Voter Information Pamphlet.
- CITIES may work with the County to print either the Voter Information Pamphlet or a postcard. Any printing costs incurred by the County will be reimbursed by the CITIES.
- Work with the County to arrange for postage through the County's discounted rate.
- Reimburse County for postage expenses related to the Voter Information Pamphlet.

The CITIES will provide the County Clerk with information, decisions, and resolutions and will take appropriate actions required for the conduct of the election in a timely manner. The CITIES agree to consolidate all elections administration functions and decisions in the office of the County Clerk to ensure the successful conduct of multiple, simultaneous New School District elections.

In a consolidated election, decisions made by the County regarding resources, procedures and policies are based upon providing the same scope and level of service to all the CITIES and the CITIES recognize that such decisions, made for the benefit of the whole, may not be subject to review by each CITY.

Services Utah County will perform for each CITY include, but are not limited to:

- Ballot layout and design.
- Ballot printing.
- Ballot mailings.
- Return postage.
- Ballot processing.
- Printing optical scan ballots.

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

- Program and test voting equipment.
- Program electronic voter register.
- Poll worker recruitment, training, and supervision.
- Compensate vote center poll workers.
- Delivery of supplies and equipment.
- Tabulate and report election results on Utah County website.
- Provisional ballot verification.
- Update voter history database.
- Conduct audits (as required).
- Conduct recounts (as needed).
- Election day administrative support.
- Operation of county wide vote centers.
- Provide final, canvass report of Official Election Results. Such results will constitute the final Official Results of the Election.
- Election security.
- Ballot drop box services – maintain, lock and unlock boxes, and collect ballots.
- Provide postage to the Interlocal Entity for the Voter Information Pamphlet.
- May provide printing of the Voter Information Pamphlet.
- Grant for/against argument requests, receive all arguments and rebuttals for the Voter Information Pamphlet.

The County will provide a good faith estimate for budgeting purposes. Election costs are based upon the offices scheduled for election, the number of voters, and the number of jurisdictions participating. Each CITY will be invoiced for its share of the actual costs of the elections which will not exceed the estimated rate in Exhibit B, C, D, E, F, and G.

In the event of a state or county special election being held in conjunction with a New School District election, the scope of services and associated costs, and the method of calculating those costs, will remain unchanged.

The CITIES acknowledge that this Interlocal Agreement relates to a New School District ballot and election and as required by state statute, the City Recorder is the Election Officer for each city. The County Clerk will be the election provider.

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

2024 General Elections

Exhibit B

Active Voters per house hold for billing purposes, will be calculated 11 days before each Election Day

Lehi

Election 11/5/2024 **Not to exceed $.75 per voter per election**

	Active Registered House holds	$0.52	
General	20834	$	10,833.68

Estimated Cost as of 8/27/2024	$	10,834.20

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

2024 General Elections

Exhibit C

Active Voters per house hold for billing purposes, will be calculated 11 days before each Election Day

American Fork

Election	11/5/2024	Not to exceed $.75 per voter per election
	Active Registered House holds	$0.52
General	10492	$ 5,455.84
	Estimated Cost as of 8/27/2024	$ 5,456.36

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

2024 General Elections

Exhibit D

Active Voters per house hold for billing purposes, will be calculated 11 days before each Election Day

Alpine

Election	11/5/2024	Not to exceed $.75 per voter per election
	Active Registered Households	$0.52
General	3158	$ 1,642.16
	Estimated Cost as of 8/27/2024	$ 1,642.68 1

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

2024 General Elections
Exhibit E

Active Voters per house hold for billing purposes, will be calculated 11 days before each Election Day

Draper

Election	11/5/2024	Not to exceed $.75 per voter per election
	Active Registered House holds	$0.52
General	956	$ 497.12
	IEstimated Cost as of 8/27/2024	$ 497.64 I

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

2024 General Elections
Exhibit F

Active Voters per house hold for billing purposes, will be calculated 11 days before each Election Day

Highland

Election	11/5/2024	Not to exceed $.75 per voter per election
	Active Registered House holds	$0.52
General	5352	$ 2,783.04
	IEstimated Cost as of 8/27/2024	$ 2,783.56 I

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)

2024 General Elections

Exhibit G

Active Voters per house hold for billing purposes, will be calculated 11 days before each Election Day

Cedar Hills

Election	11/5/2024	Not to exceed $.75 per voter per election
	Active Registered House holds	$0.52
General	2723	$ 1,415.96
	Estimated Cost as of 8/27/2024	$ 1,416.48

Attachment: 09.24.24 - Interlocal Agreement with Utah County re Election Services (Interlocal with Utah County - 2024 School District election)