AMERICAN FORK CITY
AMENDED NOTICE OF PUBLIC HEARING
PLANNING COMMISSION REGULAR SESSION
October 19th, 2022
7:00 p.m.

Notice is hereby given that the American Fork City Planning Commission will meet in regular session on October 19th at the American Fork City Hall, 31 North Church Street, commencing at 7:00 p.m. The agenda shall be as follows:

REGULAR SESSION
Pledge of Allegiance
Roll call

COMMON CONSENT AGENDA
(Common Consent is that class of Commission 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 October 5th, 2022, Planning Commission minutes.

PUBLIC HEARINGS

Public hearing and recommendation on a code text amendment, creating Section 17.5.135 titled Fiber Design Standards, related to fiber design standards to be included in the American Fork Municipal Code.

ACTION ITEMS

1. Review and action on a site plan for 500 E Automall Business Center, for the development of a business center in the PI-1 (Planned Industrial) zone, located at 450 E Automall Drive
2. Review and action on a site plan for Reagan Digital Signs, for the upgrade of an existing billboard to an electronic billboard sign, in the GC-2 Zone, located at 854 E Sam White Lane.
3. Review and action of a Final Plat for Stonecreek Plat K, requesting approval for 55 lots in Plat K of the overall Stonecreek Development, in the PR 3.0 Zone, located in the area of 1000 South 380 West.
4. Review and action of a Final Plat for Pando Lake City, requesting approval for a warehouse development, in the PC (Planned Community) Zone located in the area of 860 E 930 S.

OTHER BUSINESS

1. Upcoming Projects

ADJOURNMENT

Dated this 5th day of October, 2022.

John H. Woffinden, P.G.
Planning Commission Chairman

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

UNNAPROVED MINUTES

AMERICAN FORK CITY
PLANNING COMMISSION MINUTES
OCTOBER 05, 2022
REGULAR SESSION

The American Fork City Planning Commission met in a regular session on OCTOBER 05, 2022 at the American Fork City Hall, 31 North Church Street, commencing at 7:00 pm.

Present:	Christine Anderson	
	Bruce Frandsen	
	Jenny Peay	
	Rodney Martin	
	Chris Christiansen	
Absent:	Chairman Woffinden, David Bird, Harold Dudley	
Staff Present:	Patrick O'Brien	Development Services Director
	George Schade	Communications Director
	Megan Crowley	Administrative Assistant

Others Present:

Christine Anderson led the "Pledge of Allegience"

Christine Anderson: I am filling in for Chairman Woffinden tonight.

Bruce Frandsen moved to approve minutes September 21, 2022 Planning Commission Regular Session. Jenny Peay seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Bruce Frandsen	**AYE**
Jenny Peay	**AYE**
Rodney Martin	**AYE**
Chris Christiansen	**AYE**

The motion passed

1. **Public hearing and recommendation on a proposed code text amendment of the American Fork Municipal Code, amending Section 17.11.103, to update public noticing requirements to remain consistent with the requirements of the Utah State Code.**

Patrick O'Brien: We're just updating our code to match what the state code requires not to do anything beyond that. The main change would be to right now, the city code requires us to notice in a local newspaper, state code no longer requires that. everyone's supposed to post on the state public noticing website. So we're just looking at moving away from that just to be consistent with the state code.

Christine Anderson: Okay, thank you any questions? I can't even remember the last time I opened a newspaper or even saw a newspaper. Also, to have it in a consistent location with consistent formatting that everyone knows where to find it. I think that's very valuable.

Public Hearing Opened

No public comments.

Public Hearing Closed

Rodney Martin motioned to recommend approval of the Public hearing and recommendation on a proposed code text amendment of the American Fork Municipal Code, amending Section 17.11.103, to update public noticing requirements to remain consistent with the requirements of the Utah State Code. Bruce Frandsen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Bruce Frandsen	**AYE**
Jenny Peay	**AYE**
Rodney Martin	**AYE**
Chris Christiansen	**AYE**

The motion passed

2. Other Business

Patrick O'Brien: Yeah, a couple of weeks ago I brought the draft moderate income housing plan to Planning Commission for your recommendation to go before City Council. City Council approved that at last week's City Council meeting. Wednesday morning, I submitted that new plan and our 2022 moderate income housing report to the state just as a part of our state code requirements. We'll look at putting all the items that are on their implementation plan into action in the next couple of weeks and get a more detailed plan for staff and outline tasks. Hopefully after Christmas we will be in a good position to start on their stationarity plan once we get everything from Mountainland association of Governments who we will be working with a get a consultant assigned to update that. One of the items in our plan which is our stationary plan, so

that's number one on our list. We'll have a couple of more core text amendments coming forward but for the most part, the next few agendas will be a couple of the items that were tabled at previous meetings coming back. That's been the bulk of our work at the moment. We've noticed a slight slowdown on some projects coming up into the fall and winter period. So we're hoping things don't dip off too much.

Jenny Peay: Do you know what the date deadline in December is for now? To submit it to the state?

Patrick O'Brien: It was October 1.

Jenny Peay: There's nothing in December to submit?

Patrick O'Brien: It used to be on December 1 this year is the first year with the October 1 requirement. So that's been submitted now.

Jenny Peay moved to adjourn the meeting. Chris Christiansen seconded the motion.

Voting was as follows:

Christine Anderson	**AYE**
Bruce Frandsen	**AYE**
Jenny Peay	**AYE**
Rodney Martin	**AYE**
Chris Christiansen	**AYE**

The motion passed

The meeting was adjourned at 7:06 p.m.

AMERICAN FORK CITY **MEETING DATE:** October 19th, 2022

PLANNING COMMISSION

AGENDA TOPIC:

Public hearing and recommendation on a code text amendment, creating Section 17.5.135 titled Fiber Design Standards, related to fiber design standards to be included in the American Fork Municipal Code.

BACKGROUND:

This code text amendment has been initiated by staff. The purpose of the amendment is to adopt a new section within American Fork's Municipal Code to design standards for the developer installation of communication infrastructure.

Potential Motions – Code Text Amendment

APPROVAL

Mr. Chairman, I move that we recommend approval of the proposed code text amendment of the American Fork Municipal Code, adopting Section 17.5.135, relating to the developer installed communication infrastructure design standards.

DENIAL

Mr. Chairman, I move that we recommend denial of the proposed code text amendment of the American Fork Municipal Code, adopting Section 17.5.135, relating to the developer installed communication infrastructure design standards.

TABLE

Mr. Chairman, I move that we table action on the proposed code text amendment of the American Fork Municipal Code, adopting Section 17.5.135, relating to the developer installed communication infrastructure design standards, and instruct staff/developer to…….

ORDINANCE NO. 2022 - ___ - ___

AN ORDINANCE CREATING SECTION 17.5.135 OF THE AMERICAN FORK CITY MUNICIPAL CODE RELATING TO INSTALLATION OF COMMUNICATION INFRASTRUCTURE DESIGN STANDARDS 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 adopt design standards for the installation of communication infrastructure;

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. Chapter 17.5.135 of the Municipal Code of American Fork City, relating to installation of communication infrastructure design standards, shall read as follows:

17.5.135 Installation of Communication Infrastructure Design Standards

The publication known as the American Fork City Developer Installed Communications Infrastructure Design Standards, adopted _____, 2022, and as amended by motion of the city council, one copy of which is filed in the office of the city recorder, is adopted by reference, in its entirety, as presently constituted and shall be known as Section 17.5.135 of the American Fork Municipal Code.

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 _____, 2022.

_____
Bradley J. Frost
American Fork City Mayor

ATTEST:

_____
Terilyn Lurker
City Recorder

American Fork City
Developer Installed Communications Infrastructure Design Standards



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SECTION 1

GENERAL AFFN REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Furnish and install all American Fork Fiber-Optic Network (hereinafter "AFFN") components as defined on the plans, specifications, details, and special provisions.
B. It is the developer's responsibility to purchase, install, and provide all components and materials, at the developer's expense.
C. Provide all documentation required for the installation and testing of AFFN infrastructure.
D. Developer Design Requirements
E. Once installed and approved by AFFN, American Fork City (hereinafter "AFC") will have full ownership of the infrastructure placed by the developer.

1.2 RELATED SECTIONS

A. SECTION 1 AFFN GENERAL REQUIREMENTS
B. SECTION 2 AFFN CONDUIT REQUIREMENTS
C. SECTION 3 AFFN HANDHOLE ENCLOSURE REQUIREMENTS

1.3 REFERENCES

A. American Wire Gauge (AWG)
B. Electronic Industries Association (EIA) and Telecommunications Industry Association (TIA) Specifications
C. National Electric Code (NEC)
D. Underwriters Laboratory (UL)
E. National Electric Safety Code (NESC)

1.4 DEFINITIONS

A. AFFN – American Fork Fiber Network
B. CFE – City Fiber-Optic Engineer
C. AFC – American Fork City

1.5 SUBMITTALS

A. Provide all required submittals as described in this section, part 2.1, paragraph A.

1.6 WARRANTY

A. Provide to AFFN any warranty documents from the manufacturer for each of its components. The workmanship performed by the developer and its sub-contractors must be warrantied for the duration of one year (the "Warranty Period") from the date of final acceptance of the entire project by AFFN.
B. Warranties are not required for AFFN furnished components (if any).
C. Take any corrective action necessary during the Warranty Period, within 72 hours after written notification by the CFE to restore any identified deficiency caused by defective workmanship or materials. Developer is required to repair or replace defective components at their expense. Notify the CFE when corrective action has been completed for approval inspection by CFE.

1.7 DEVELOPER DESIGN REQUIREMENTS

A. Developer will need to schedule a design meeting with the CFE to go over the common trench design layout to ensure that AFFN Infrastructure will be designed and placed as decided between the developer and the CFE.
    a. Developer will ensure that all road crossings have sleeves with adequate room for AFFN 4-Way conduit to be placed as decided in the design meeting with CFE.
    b. Design meeting is intended to be a kick-off point to make sure developer understands the design placement of handhole enclosures and 4-Way conduit throughout the entire development.

1.8 OWNERSHIP OF AFFN INFRASTRUCTURE

A. All AFFN Infrastructure placed by developer will be fully owned by AFC.

PART 2 PRODUCTS

2.1 DOCUMENTATION

A. Submittals

1. Provide one copy of all documentation, including all manufactures documents, configuration data, and developer provided as-built drawings to the City Fiber-Optic Engineer (hereinafter "CFE") before final acceptance by AFC.
2. The general purpose and content of all required submittals is described in the following list. The details of the submittal requirements for each AFFN component type can be found in the appropriate Standard Specification, Supplemental Specification, or Special Provision for the AFFN component.
   a. Developer Furnished Material and Component Lists: The lists will include the name of the manufacturer, size, and identification number.
   b. Test Reports: After the completion of a successful locate wire continuity test of each conduit placed, provide a test report to certify end-to-end conduit/locate wire continuity. This test should be performed before and after backfilling of the common trench. Provide test report to the CFE in either digital format or a printed format. The test reports will include the following items:
      1) All test results (including failed tests)
      2) Description of any observed discrepancies
      3) Description of required corrective action
      4) Estimated time to complete corrective action and re-test
      5) Results of any corrective action
   c. Completion Notice: Provide a Completion Notice to the CFE after all components have successfully passed AFFN component tests. The Completion Notice consists of the certification that all AFFN components are compliant with all project requirements.
   d. Manufacturer's component documentation for all developer furnished components, provide all factory issued manuals, warrantees, instruction sheets, and parts lists to the CFE.
   e. As-Built Drawings.

B. Documentation Timeline

1. The following list describes the conditions under which submittals must be provided:
   a. Developer Furnished Material and Component Lists: Submit within fifteen business days prior to ordering. All developer furnished components must be approved by the CFE prior to ordering.
   b. Test Reports: Submit within five business days from the completion of a successful test of the components.
   c. Completion Notice: Submit within five business days prior to the final walkthrough of project with the CFE.

d. Manufacturer's component documentation and As-Built Drawings must be received no later than fifteen business days prior to Final Acceptance.

2. The CFE accepts or rejects submittals within ten business days. If rejected, the developer must rectify and resubmit rejected submittals within five business days, or as specified by the CFE.

C. Factory Issued Manuals

1. Acceptable factory manuals must contain technical, diagnostic, and maintenance (preventative and troubleshooting) information. Advertising brochures and catalog cuts not accepted.

PART 3 EXECUTION

3.1 TESTING AND ACCEPTANCE

A. The following test procedures will be required for all AFFN locations:
   1. Perform Locate Wire Continuity Test according to specifications.

3.2 DEVELOPER INSTALLED COMPONENTS

A. Until final acceptance, repair any damage to AFFN developer placed components including but not limited to conduit, junction boxes, pedestals, or underground utilities that are caused by the developers' activities. Request a meeting with the CFE to verify that all installed components are in working order at the project site as requested by the developer, if needed.
B. Developer must coordinate the locating and marking of all utilities prior to initiation of construction. Developer must contact Blue Stakes of Utah, utilities or government agencies not participating in either of the above-mentioned notification agencies, then schedule the locating of underground utilities. Developer must determine the exact location of all existing utilities before commencing work and be fully responsible for any damage that might result from the failure to locate and preserve any underground utilities.
C. Do not proceed on work occurring outside designated right-of-way until the required permits, environmental clearances and approvals are obtained from all local entities.
D. Perform all digging using hand tools if any construction is to take place within two feet either side of existing facilities.

3.3 LOCATION OF INSTALLED COMPONENTS

A. Proposed component locations may be modified to avoid conflict with underground utilities or other obstructions. Consult CFE for approval.
B. Install all above ground components the maximum practical distance from traffic, behind barrier or other approved protection.

3.4 INSTALL GROUND WIRING

A. Ground wire:
   1. All ground wire must be 10 AWG.
   2. Bond each ground wire to the ground rod in each handhole enclosure with removable clamp.
B. Neatly arrange wiring within cabinets, handhole enclosures, fixtures, etc.

3.5 MAINTENANCE

A. Repair, replace, maintain, and operate all installed AFFN components as defined in Section 3.2. Includes but is not limited to:
   1. Repair or replacement of damaged conduit and handhole enclosures.
B. Repair installation or replace components due to any damage.

C. During the Warranty period defined in Section 1.6, failure to provide adequate routine or emergency maintenance will result in AFC or its designated contractor performing the necessary maintenance. AFC will provide written notice to the developer and developer will have 5 business days from receipt of notice to complete the maintenance. If the maintenance is not performed within the allotted time, the developer will be charged for all costs incurred by AFC to perform the work.

END OF SECTION 1

SECTION 2

AFFN CONDUIT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Furnish and install conduit as shown on the plans and details. Unless otherwise specified, install conduit in the common trench where power conduit and communications conduits reside.
B. Install all materials, labor, workmanship, components, and incidental items required for a complete system of conduit.

1.2 RELATED SECTIONS

A. SECTION 1 AFFN GENERAL REQUIREMENTS
B. SECTION 2 AFFN CONDUIT REQUIREMENTS
C. SECTION 3 AFFN HANDHOLE ENCLOSURE REQUIREMENTS

1.3 REFERENCES

A. Standard Specification for Dura-line 4-Way Future Path micro-conduit
B. American National Standards Institutes (ANSI)
C. American Wire Gauge (AWG)
D. National Electric Code (NEC)
E. National Electrical Manufacturers Association (NEMA)
F. Underwriters Laboratory (UL)

PART 2 PRODUCTS

2.1 MATERIALS

A. Conduit and Fittings:
   1. Orange Sheath Dura-line 4-Way Future Path bundled 18/14mm Micro-Conduits with locate wire included.
   2. Microtechnology Accessories 18/14mm Straight Couplers

B. Provide all materials used in the installation of conduits such as couplings, plugs, and fittings to meet or exceed all the recommendations of the conduit manufacturer for suitable installation.

D. In the rare case splicing of the micro-conduits are necessary, use Microtechnology Accessories 18/14mm Straight Couplers installed as recommended by the conduit manufacturer for suitable installation. Splicing of micro-conduit should be avoided and must be approved by the CFE prior to splicing.

E. Provide fiber optic and electrical buried cable marker warning tape that meets the following requirements:
   1. Material: Composite reinforced thermoplastic.
   2. Tape Color: Orange (fiber optic).
   3. Length: 5 feet minimum.
   4. Text: Caution Buried Fiber Optic Cable (front and back).
   5. Text Color: Black.
   6. Width: 3 inch minimum (face or diameter).

PART 3 EXECUTION

3.1 INSTALLATION

A. Conduit must be placed in the common trench a minimum depth of 30 inches and a maximum depth of 48 inches.
B. When installing Dura-Line 4-Way Future Path conduit, please refer to the charts located in Section 4 of this document for bend radius specifications.
C. Obtain appropriate permits before work commences.
D. Conduit Stub
    1. Install conduit into handholes brought up from underneath the open bottom handhole enclosure.
    2. A minimum 12 inches of conduit must be stubbed into handhole.
E. Install compatible conduit plug at each end of the conduit.
F. Fill all new and existing conduit to less than 40 percent as per NEC.

3.2 AFFN CONDUIT IN COMMON TRENCH

A. Place all conduit in the common trench as straight as possible. Refer to Section 4 for details and recommendations on the placement of conduit in the common trench.

END OF SECTION 2

SECTION 3

AFFN HANDHOLE ENCLOSURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Furnish and install handholes as shown in Section 4.
B. Includes all materials, labor, workmanship, components, and incidental items required for a complete conduit system.

1.2 RELATED SECTIONS

A. SECTION 1 AFFN GENERAL REQUIREMENTS
B. SECTION 2 AFFN CONDUIT REQUIREMENTS
C. SECTION 3 AFFN HANDHOLE ENCLOSURE REQUIREMENTS

1.3 REFERENCES

A. American National Standards Institutes (ANSI)
B. National Electric Code (NEC)
C. National Electrical Manufacturers Association (NEMA)
D. Underwriters Laboratory (UL)
E. National Electric Security Code (NESC)

PART 2 PRODUCTS

2.1 MATERIALS

A. Handholes:
   1. AFFN standard handhole enclosures are 30” (w)x48” (l)x36” (d), open bottom, T22 load rated box and T22 load rated lids. Lids may be 1-piece or 2-piece, but the weight of a single lid section may not be greater than 230 lbs. Handhole enclosures shall be straight wall with minimal wall flaring. Handhole enclosure construction may be Polymer Blend, Polymer Concrete, or Plastic. Fiberglass handhole enclosures and lids are not permitted.
   2. Acceptable manufactures and models include Hubbell-Pencell or Quazite, Channell-Bulk Series, or Oldcastle-Carson, Duralite, or PC.

PART 3 EXECUTION

3.1 INSTALLATION

A. Handhole enclosures shall be placed with top of handhole at ground level. Handhole must be placed level unless approved by CFE prior to installation. Lip of handhole must be flush with the ground to prevent any potential tripping hazards.
B. Place a minimum 6 inches of small gravel in the bottom of each handhole for drainage.
C. Conduit entering handhole must be placed as follows:
    1. All conduits must be brought up from underneath an open bottom handhole enclosure.
    2. A minimum 12 inches of conduit must be stubbed into the handhole enclosure,
D. Install a 3/8" x 3'ground rod with no more than 6 inches protruding above gravel base in each handhole enclosure. Ground rods should be placed in a corner closest to the nearest roadway of handhole enclosure.
    1. Install two 10 AWG, stranded, green jacketed ground wires, no less than 5 feet in length. On each wire, attach one end to the ground rod with a removable clamp and install a "Ring Terminal" on the opposite end.
E. AFFN handhole enclosures must be placed at all junction points where all other utilities pedestal/vaults/handhole enclosures are placed.

END OF SECTION 3

SECTION 4

DRAWINGS AND SPECIFICATIONS

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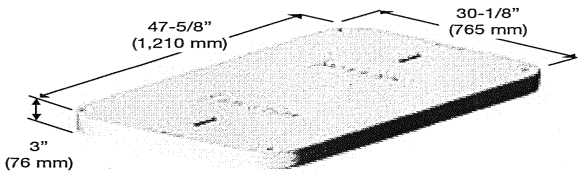
CARSON INDUSTRIES LLC
SPECIFIED AND PREFERRED WORLDWIDE

Glendora, California
Toll-Free: 800.735.5566
Phone: 909.592.6272
Fax: 909.592.7971

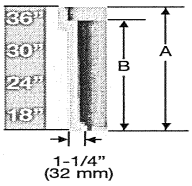
Roscommon, Ireland
Phone: 35.39.03.25922
Fax: 35.39.03.25921

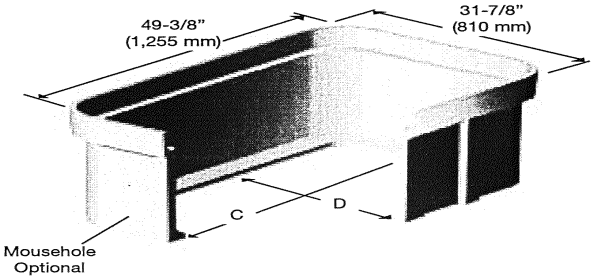
H Series H3048

Heavy Duty



Cover[1] (2 piece)
Material: Polymer Concrete
Weight: 144.0 lbs. (65.3 kgs) per half cover
Model: H3048-P1
Skid Resistant Surface[2]
(Material and cover dimensions compliant with WUC, Guide 3.6[3])





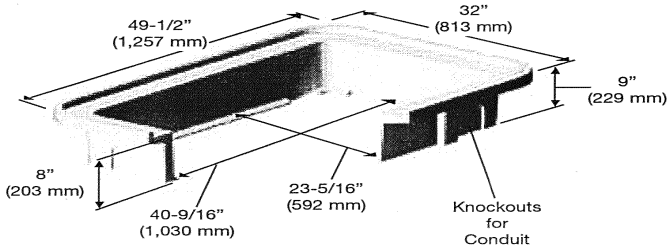
Bodies (18", 24", 30", 36")
Material: Polymer Concrete

- 18" Weight: 165 lbs. (75 kg) Model: H3048-18
- 24" Weight: 220 lbs. (100 kg) Model: H3048-24
- 30" Weight: 271 lbs. (122 kg) Model: H3048-30
- 36" Weight: 314 lbs. (141 kg) Model: H3048-36

	A	B	C	D
H3048-18	18" (457 mm)	15" (381 mm)	41-3/8" (1051 mm)	23-7/8" (606 mm)
H3048-24	24" (610 mm)	21" (533 mm)	41-5/16" (1049 mm)	23-13/16" (605 mm)
H3048-30	30" (762 mm)	27" (686 mm)	41-3/16" (1045 mm)	23-11/16" (601 mm)
H3048-36	36" (914 mm)	33" (838 mm)	41" (1041 mm)	23-1/2" (597 mm)

Bottom Extension
Material: Polymer Concrete
Model: H3048-9X (99.0 lbs. /45 kgs)

Tolerances
Cover ±1/8" (3 mm); Body ±1/8" (3 mm)
Foot ±1/16" (2 mm); Height ±1/4" (6 mm)



Fasteners: 2 each (optional 4 ea) 1/2-13 UNC, Stainless Steel, Hex Head with Washer; Options: Captive bolt and floating nut, size, quantity, type head are available.
Cover Identification is blank unless specified
Pull Slot 1/2" x 4" (13 mm x 102 mm)
Steel Covers Optional

Boxes are stackable. 24" deep shall be used as the lower box only. Vertical load ratings are stated for single boxes.
For units with MOLDED OPENINGS, subtract 2 lbs from Unit Weight.
Weights may vary slightly. Dimensions in inches with metric equivalents.

Revision Date 4/2003

H Series
H3048

Heavy Duty

Carson Industries, LLC

Glendora, California
Toll-Free: 800.735.5566
Phone: 909.592.6272
Fax: 909.592.7971

Roscommon, Ireland
Phone: 35.39.03.25922
Fax: 35.39.03.25921

Vertical and Lateral Load Rating

Heavy Duty Covers

- Compliant with AASHTO, Design Load of H-10; ASTM C 857-95, Design Load of A-8, 8,000 lbs. Capable of withstanding a Static Load of >22,880 lbf transferred through a 10" x 10" steel plate centered on the cover and body.
- Compliant with AASHTO, Design Load of H-20; ASTM C 857-95, Design Load of A-16, 16,000 lbs. Capable of withstanding a Static Load of >45,760 lbf transferred through a 10" x 20" steel plate centered on the cover and body.
- This product is designed to withstand H-10 and H-20 loading in incidental or non-deliberate traffic areas. Not intended to be installed in roadways.

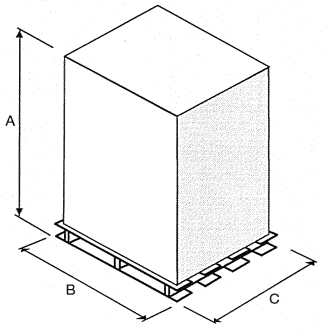
Shipping Configuration

- **Single Bodies – 18":** Unit, 2 assemblies, = 47.8 cu. ft.; 906.0 lbs.
- **Single Bodies – 24":** Unit, 2 assemblies, = 61.8 cu. ft.; 1,016.0 lbs.

Standard Test Method	Properties of Raw Material	ASTM Designation	Test Results
Compressive Strength of Polymer Concretes	Compressive Strength	C 579-96	11,000 psi
Flexural Strength and Modulus of Elasticity of Polymer Concretes	Flexural Strength Modulus of Elasticity	C 580-93	1,800 psi 2,900,000 psi
Chemical Resistance of Polymer Concretes	Chemical Resistance	C 267-97	Pass[4]
Determination of Impact Resistance by means of a Tup (falling weight)	Impact Resistance	D 2444-93	Pass[5]

[1]AASHTO H-10, ASTM C 857, A-8, 8,000 lbs Design Load. Static Vertical Load Rating >22,880 lbf. AASHTO H-20, ASTM C 857 A-16, 16,000 lbs Design Load. Static Vertical Load Rating > 45,760 lbf
[2]Coefficient of Friction (ASTM C1028) >0.5
[3]Western Underground Committee, Guide 3.6
[4]Specimens exposed to ten reagents (alkalis, acids and petroleum distillates) experience <2% weight and dimensional change and retain >75% of average Compressive Strength. Listing of reagents and test reports available upon request.
[5]Capable of withstanding 70 ft lbs impact with a type "C" Tup.

Shipping Information



UNIT 3048-18

Dim.	Description	Value
A	Height	42"
B	Length	42"
C	Width	54"

Units: 2 per pallet
Weight: 961 lbs. per pallet

UNIT 3048-24

Dim.	Description	Value
A	Height	54"
B	Length	42"
C	Width	54"

Units: 2 per pallet
Weight: 1,071 lbs. per pallet

UNIT 3048-30

Dim.	Description	Value
A	Height	36"
B	Length	42"
C	Width	54"

Units: 2 per pallet
Weight: 1,173 lbs. per pallet

UNIT 3048-36

Dim.	Description	Value
A	Height	42"
B	Length	42"
C	Width	54"

Units: 2 per pallet
Weight: 1,259 lbs. per pallet

BODY 3048-18

Dim.	Description	Value
A	Height	42"
B	Length	42"
C	Width	54"

Units: 4 per pallet
Weight: 715 lbs. per pallet

BODY 3048-24

Dim.	Description	Value
A	Height	54"
B	Length	42"
C	Width	54"

Units: 4 per pallet
Weight: 935 lbs. per pallet

BODY 3048-30

Dim.	Description	Value
A	Height	36"
B	Length	42"
C	Width	54"

Units: 2 per pallet
Weight: 597 lbs. per pallet

BODY 3048-36

Dim.	Description	Value
A	Height	42"
B	Length	42"
C	Width	54"

Units: 2 per pallet
Weight: 683 lbs. per pallet

COVER

Dim.	Description	Value
A	Height	21"
B	Length	42"
C	Width	48"

Units: 15 sets per pallet
Weight: 1,485 lbs. per pallet

BOTTOM EXTENSION

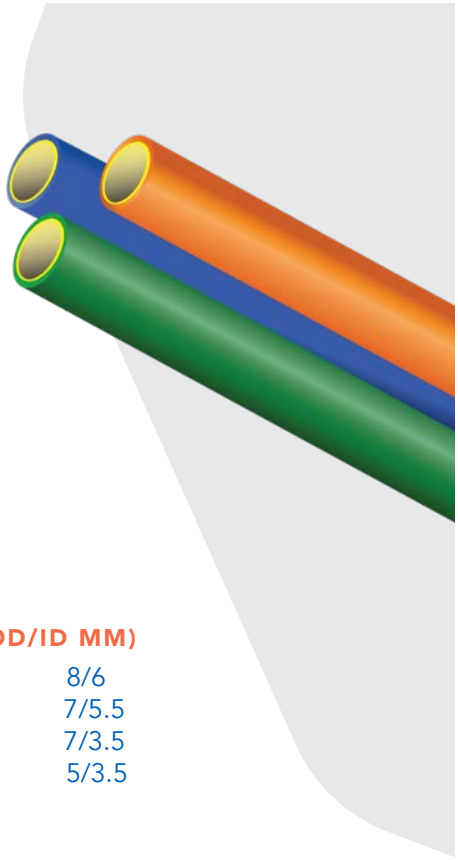
Dim.	Description	Value
A	Height	47"
B	Length	42"
C	Width	48"

Units: 5 per pallet
Weight: 540 lbs. per pallet

All information contained in this brochure was current at the time of printing. Because of Carson Industries' policy of ongoing research and development, the Company reserves the right to discontinue or update product information without notice.

MICROTECHNOLOGY

MICRODUCTS HDPE



- HDPE MicroDucts are small starting at a 5 mm diameter
- Co-extruded with SuperSilicore™ permanent lining to reduce friction on cable installs
- Utilize space in an occupied duct
- Revitalize existing networks with Over-Rides
- Substantially reduce construction costs & deployment time
- Install up to 432 count fiber MicroCables
- Check specifications below

INSTALLATION TYPES

Subdivided Conduit, Overrides, Plow Installations, Trench Installations, Directional Bore, Micro-Trench, Tray Installations

SIZE RANGE AVAILABLE (OD/ID MM)

27/20	14/10	8/6
22/16	12.7/10	7/5.5
18/14	12.7/8	7/3.5
18/10	12/10	5/3.5
16/13	10/8	
16/12	8.5/6	

STANDARD COLORS

Oversheath
MicroDucts
Custom Colors Available

FEATURES

STANDARD

SEQUENTIAL FOOT OR METERZ MARKINGS Custom print streams available

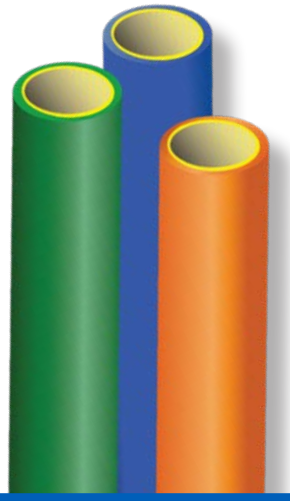
SUPER SILICORE is co-extruded with the tough HDPE wall creating a permanent, super slippery interior lining. It has the lowest co-efficient of friction compared to other options, no performance loss in all temperature conditions and functions without additional wet lubricants

INTERNAL RIBS standard on most MicroDucts (3.5mm ID are designed with a standard smooth interior)

OPTIONS

FIRE RETARDANT Available in Riser, Plenum or Low Smoke Zero Halogen (LSZH)

PRE-INSTALLED FIBER OR PULL-STRING OPTION Fiber cable or cordage can be factory preinstalled; alternatively, MicroDuct can be supplied with a factory pre-installed pull string for pulling in fiber optic cable



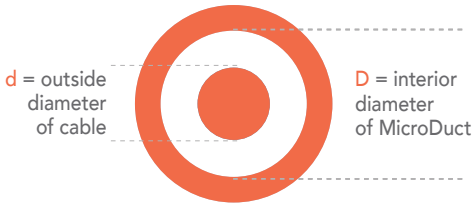
PRODUCT RECOMMENDATIONS:

Dura-Line manufactures many different sizes and configurations of MicroDucts for a variety of applications, such as: Backbone, Back-haul, Direct Buried, Directional Drilling, Over-Rides, and populating existing conduits. In order to get the best product performance, please follow the suggested guidelines for choosing the best MicroDuct size.

DIRECT BURIED (DB): In applications where the MicroDucts will be directly buried, or bundled into FuturePath configurations, we recommend using a thicker walled MicroDuct to maintain the optimum fill ratios and have faster, easier installations.

DIRECT INSTALL (DI): In applications where the MicroDuct or FuturePath configuration will be placed inside an existing conduit, like an Over-Ride or populating an existing conduit, we recommend using a thinner walled product where protection is provided by the existing conduit and space is more sensitive.

MICRODUCT-SIZE (MM)	APPLICATION DB/DI	NOM OD (MM/IN)	MIN ID (MM/IN)	WEIGHT (LB/FT)	BEND RADIUS SUP* (IN)	BEND RADIUS UNSUP* (IN)	SWPS † (LBS)
22/16	DB	22/0.87	15.4 / 0.61	0.116	9	18	615
18/14	DB	18/0.71	13.6 / 0.54	0.066	7	14	352
12.7/10	DB, DI	12.7/0.5	9.8 / 0.39	0.032	5	10	167
5/3.5	DI	5/0.2	3.4 / 0.13	0.006	2	4	33
27/20	DB	26.7/1.05	20.7 / 0.81	0.132	11	21	701
7/3.5	DB	7/0.28	3.7 / 0.15	0.018	3	6	97
7/5.5	DI	7/0.28	5.6 / 0.22	0.009	3	6	49
8/6	DI	8/0.31	5.8 / 0.23	0.014	3	6	76
8.5/6	DI, DB	8.5/0.34	5.9 / 0.23	0.018	3	7	96
10/8	DI	10/0.39	8.1 / 0.32	0.018	4	8	93
12/10	DI	12/0.47	9.9 / 0.39	0.021	5	9	114
12.7/8	DB	12.7/0.5	7.9 / 0.31	0.05	5	10	268
14/10	DB	14/0.55	9.8 / 0.39	0.05	6	11	264
16/12	DB	15.9/0.63	11.6 / 0.46	0.058	6	13	305
16/13	DI	16/0.63	12.8 / 0.5	0.043	6	13	229
18/10	DB	18/0.71	10 0.39	0.11	7	14	581



(D/D)*100 = % FILL RATIO

To calculate the fill ratio, divide the cable diamter (d) by the interior dimension (D) of the MicroDuct. To achieve maximum jetting performances, Dura-Line recommends a fill ratio between 50% and 75%. Several factors impact jetting performance, including the condition of route, bends and equipment.

RECOMMENDED FIBER FILL RATIOS

MICRODUCT SIZE* (MM)	FIBER COUNT†	FIBER CABLE OD RANGE (MM)
5/3.5	up to 12	1.8 – 2.6
7/5.5	up to 48	2.8 – 4.1
8.5/6	up to 96	3.0 – 4.5
10/8	up to 96	4.0 – 6.0
12.7/10	up to 144	5.0 – 7.5
14/10	up to 144	5.0 – 7.5
16/12	up to 192	6.0 – 9.0
16/13	up to 288	6.5 – 9.8
18/10	up to 144	5.0 – 7.5
18/14	up to 288	7.0 – 10.5
22/16	up to 432	8.0 – 12.0
27/20	up to 432	10.0 – 15.0

**Other sizes available, please contact Customer Service for details*
†Fiber count subject to change

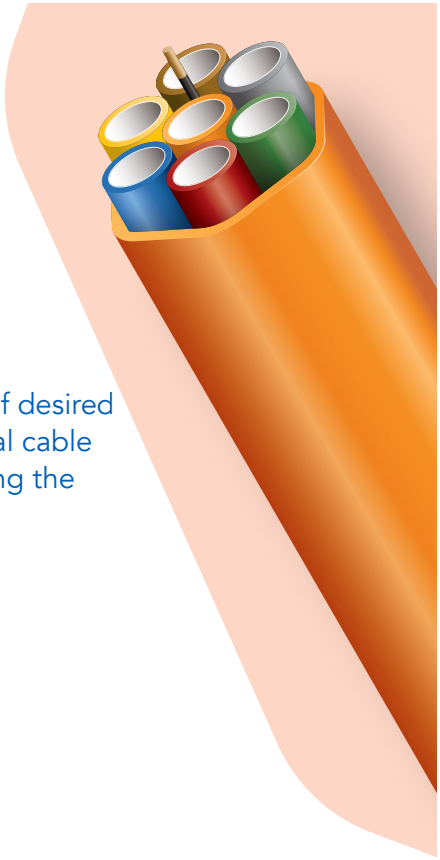
RECOMMENDED MICRODUCT FILL RATIOS (# OF MICRODUCTS PER STANDARD DUCT SIZE SDR11 OR SDR13.5)

DUCT SIZE	16MM/13MM	12.7MM/10 MM	12MM/10MM	10MM/8MM
1"	N/A	2	2	3
1.25"	N/A	3	4	5
1.5"	2	4	6	8
2"	5	7	8	10

Numbers can vary based on the path of the existing conduit, bend radii, elevation changes, distances, and installation method.

MICROTECHNOLOGY

FUTUREPATH



- Multiple pathways for one installation cost, allows flexibility and future growth
- No special tools or equipment needed; installation uses the same as traditional conduit or innerduct
- Choose the correct MicroDuct size based on the Outer Diameter (OD) of desired MicroCable. Dura-Line recommends a fill ratio of 50% to 75% for optimal cable placement performance. Several factors impact jetting distance, including the condition of route, bends, and equipment.

INSTALLATION TYPES

Plow
Micro-Trench
Directional Bore
Tray

CONFIGURATIONS

2-way
3-way
4-way
7-way
12-way
19-way
24-way

OVERSHEATH & MICRODUCT COLORS

custom colors available for MicroDucts and Oversheath

FEATURES

STANDARD

SEQUENTIAL FOOT OR METER MARKINGS Custom print streams available

MATERIAL Available in HDPE, Plenum, Riser, or LSZH and factory bundled in an oversheath

RIP CORD(S) for easy opening of the sheath

SILICORE® ULF (Ultra-Low Friction) is co-extruded inside the HDPE wall creating a slick, permanent, interior lining. With a coefficient of friction 60% lower than standard HDPE conduit without the aid of wet lubricants, SILICORE ULF exhibits no loss in performance over time or in extreme temperature conditions

SHIPS ON STANDARD REEL

INTERNAL RIBS standard (except 3.5mm ID are designed with a standard smooth interior)

OPTIONS

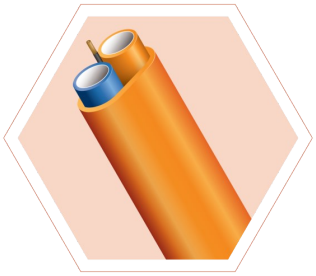
LOCATE WIRE Available with or without a 20 AWG insulated copper wire

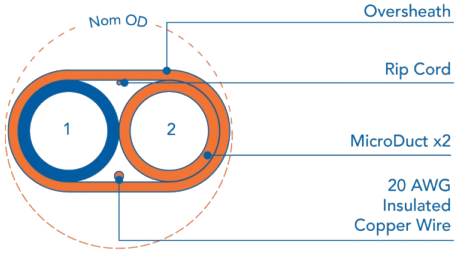
THICKER OVERSHEATH Available in most configurations to meet your needs for more rugged projects

UV PROTECTION Available with carbon black and antioxidents for maximum UV protection

FUTUREPATH

2-way 18/14 mm





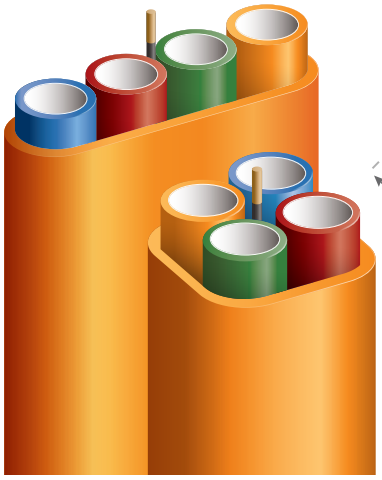
MicroDuct OD/ID	18/14 mm
Nominal OD	1.56 in
MicroDuct Min ID	14 mm
Oversheath	0.07 in
Weight	0.244 lb/ft
Bend Radius Sup	16 in
Bend Radius UnSup	31 in
Conduit SWPS	1316 lbs

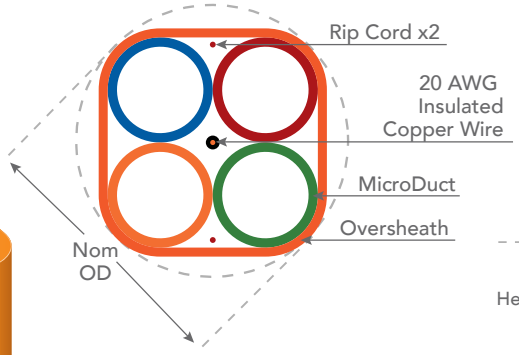
STANDARD DETAILS	
DETAILS	FuturePath is a unit of bundled MicroDucts. Manufactured from flexible HDPE (High Density Polyethylene)
INSTALLATION TYPES	Subdivided Conduit, Overrides, Plow, Trench, Directional Bore, MicroTrench, Tray
FILL RATIO	Choose the correct MicroDuct size based on the Outer Diameter (OD) of desired MicroCable. Dura-Line recommends a fill ratio of 50% to 75% for optimal cable placement performance. Several factors impact jetting distance including the condition of route, bends, and equipment.
COLORS	Oversheath: Orange MicroDucts: (1) Blue, (2) Orange
CONDUIT MARKINGS	Permanent marking along FuturePath includes: material, relevant standards, production info, and sequential feet or meter markings. Custom options available.
CO-EXTRUDED LINING	SILICORE® ULF (Ultra-Low Friction) is co-extruded inside the HDPE wall creating a slick, permanent, interior lining. SILICORE® ULF exhibits no loss in performance over time or in extreme temperature conditions.
INTERNAL RIBS	Standard (except 3.5mm ID MicroDucts which are designed with a standard smooth interior)
LOCATE WIRE	Includes a 20 AWG insulated copper wire
RIP CORD(S)	For easy opening of the oversheath
OPTIONS	
THICKER OVERSHEATH	Available in most configurations to meet your needs for more rugged projects

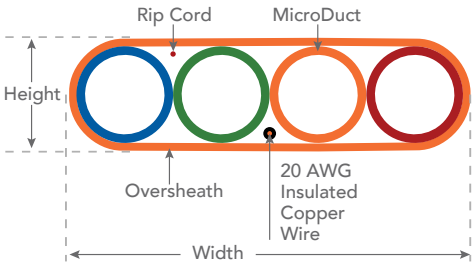
† Safe working pull strength is calculated at 80% of tensile or breaking strength
* Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.

MICROTECHNOLOGY

FUTUREPATH 4-WAY







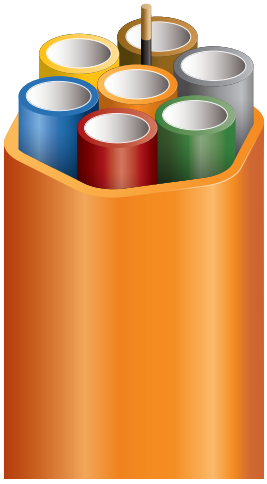
FUTUREPATH 4-WAY TECHNICAL SPECIFICATIONS

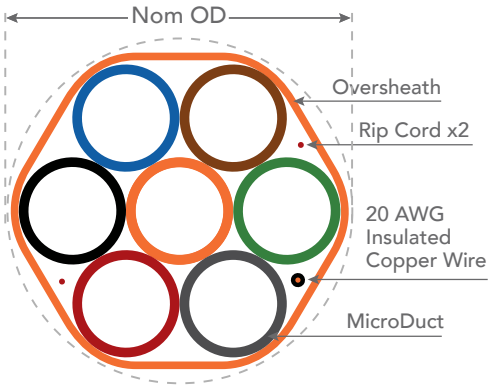
MICRODUCT OD/ID (MM)	NOM OD (IN)	MICRODUCT MIN ID (MM)	MICRODUCT MIN ID (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP* (IN)	BEND RADIUS UNSUP* (IN)	SWPS† (LBS)
5/3.5	0.56	3.4	0.13	0.04	0.050	7	12	276
8.5/6	0.93	5.9	0.23	0.06	0.136	12	20	733
10/8	1.04	8.1	0.32	0.04	0.120	11	17	635
12.7/10	1.34	9.8	0.39	0.07	0.236	13	27	1,260
12.7/10 (FLAT)	2.14	9.8	0.39	0.05	0.223	21	42	1,189
14/10	1.47	9.8	0.39	0.07	0.320	13	25	1,709
16/12	1.66	11.6	0.46	0.07	0.368	17	33	1,963
16/13	1.65	12.8	0.50	0.07	0.308	25	41	1,658
16/13 (FLAT)	2.67	12.8	0.50	0.05	0.290	39	66	1,516
18/14	1.86	13.6	0.54	0.07	0.417	19	37	2,243
22/16	2.23	15.4	0.61	0.07	0.613	28	47	2,840
27/20	2.68	20.7	0.81	0.07	0.751	40	67	4,024

** Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.*
† Safe working pull strength is calculated at 80% of tensile or breaking strength

MICROTECHNOLOGY

FUTUREPATH 7-WAY





FUTUREPATH 7-WAY TECHNICAL SPECIFICATIONS

MICRODUCT OD/ID (MM)	NOM OD (IN)	MICRODUCT MIN ID (MM)	MICRODUCT MIN ID (IN)	OVERSHEATH (IN)	WEIGHT (LB/FT)	BEND RADIUS SUP* (IN)	BEND RADIUS UNSUP* (IN)	SWPS† (LBS)
5/3.5	0.67	3.4	0.13	0.04	0.075	7	13	409
7/5.5	0.93	5.6	0.22	0.05	0.116	9	19	633
8.5/6	1.13	5.9	0.23	0.06	0.207	16	26	1,112
10/8	1.29	8.1	0.32	0.05	0.204	13	26	1,080
12.7/10	1.64	9.8	0.39	0.07	0.360	16	33	1,926
14/10	1.77	9.8	0.39	0.05	0.465	18	35	2,474
16/12	2.03	11.6	0.46	0.07	0.579	20	40	3,079
16/13	2.03	12.8	0.50	0.07	0.471	20	41	2,530
18/14	2.27	13.6	0.54	0.07	0.656	31	52	3,522
22/16	2.74	15.4	0.61	0.07	1.047	38	63	5,588
27/20	2.97	20.7	0.81	0.05	1.126	49	81	6,013

** Unsupported Bend Radius guidelines should be followed during the installation process. The Supported Bend Radius are post-installation measurements.*
† Safe working pull strength is calculated at 80% of tensile or breaking strength

MICROTECHNOLOGY ACCESSORIES

STRAIGHT COUPLERS

- Easy assembly/disassembly, no tools required, low profile design
- Provide an air and water tight connection
- Designed and tested to meet or exceed industry standards
- Color coded to easily identify by size
- Available for all Microduct sizes 5mm–27mm
- Specially designed to ensure a smooth interior transition
- Withstand chemical and harsh environment conditions
- "HD" or "Heavy Duty" denotes enhanced pull-out and pressure characteristics (currently size 18/10 next page)



5/3.5mm (OD/ID)
Straight Coupler

PART #
20001462



6/4mm (OD/ID)
Straight Coupler

PART #
20004725



7mm (OD/ID)
Straight Coupler

PART #
20001463



8/6mm (OD/ID)
Straight Coupler

PART #
20003948



8.5/6mm (OD/ID)
Straight Coupler

PART #
20001834



10/8mm (OD/ID)
Straight Coupler

PART #
20001831



12/8mm (OD/ID)
Straight Coupler

PART #
20001833



12/10mm (OD/ID)
Straight Coupler

PART #
20005069

MICROTECHNOLOGY ACCESSORIES

STRAIGHT COUPLERS

- Easy assembly/disassembly, no tools required, low profile design
- Provide an air and water tight connection
- Designed and tested to meet or exceed industry standards
- Color coded to easily identify by size
- Available for all Microduct sizes 5mm–27mm
- Specially designed to ensure a smooth interior transition
- Withstand chemical and harsh environment conditions
- "HD" or "Heavy Duty" denotes enhanced pull-out and pressure characteristics (currently size 18/10 below)



12.7/10mm (OD/ID) Straight Coupler

PART #
20001832



14/10mm (OD/ID) Straight Coupler

PART #
20003430



16mm (OD/ID) Straight Coupler

PART #
20001517



18/10mm (OD/ID) HD Straight Coupler

PART #
20005217



18/14mm (OD/ID) Straight Coupler

PART #
20001518



22/16mm (OD/ID) Straight Coupler

PART #
20003137



27mm (OD/ID) Straight Coupler

PART #
20001491

MICROTECHNOLOGY ACCESSORIES

TRANSITION COUPLERS

- Easy assembly/disassembly, no tools required
- Provide an air and water tight connection
- Transition couplers available to provide coupling of different diameters
- Designed and tested to meet or exceed industry standards
- Color coded to easily identify by size
- Specially designed to ensure a smooth interior transition
- Withstand chemical and harsh environment conditions



7mm x 5mm Transition Coupler

PART #

20001882



8mm x 5mm Transition Coupler

PART #

20003016



8.5mm x 5mm Transition Coupler

PART #

20001883



8.5mm x 8mm Transition Coupler

PART #

20001884



10mm x 8.5mm Transition Coupler

PART #

20001881



12mm x 10mm Transition Coupler

PART #

20003262



12.7mm x 8.5mm Transition Coupler

PART #

20004736



12.7mm x 10mm Transition Coupler

PART #

20003498



12.7mm x 12mm Transition Coupler

PART #

20001939



14mm x 12.7mm Transition Coupler

PART #

20003658



16mm x 12mm Transition Coupler

PART #

20003708



16mm x 12.7mm Transition Coupler

PART #

20003207



16mm x 14mm Transition Coupler

PART #

20003915

MICROTECHNOLOGY ACCESSORIES

TRANSITION COUPLERS

- Easy assembly/disassembly, no tools required
- Provide an air and water tight connection
- Transition couplers available to provide coupling of different diameters
- Designed and tested to meet or exceed industry standards
- Color coded to easily identify by size
- Specially designed to ensure a smooth interior transition
- Withstand chemical and harsh environment conditions
- Low profile design



18mm x 14mm Transition Coupler

PART #
20004727



18mm x 16mm Transition Coupler

PART #
20003315



22mm x 18mm Transition Coupler

PART #
20004134



8.5mm Close-Down assembly kit

PART #
20004981

TL9000 ISO 9001 REGISTERED

TECHNICAL BULLETIN



Conduit Handling Procedures for Field Forces

CONTENTS:

1.0 General Information

2.0 Recommendations

3.0 Contact Information

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Technical Bulletin: DCEB-17004
Issue: A
Date: April 6, 2017

U N C O N T R O L L E D C O P Y

1.0 GENERAL INFORMATION

1.1 HDPE (High Density Polyethylene) conduit is the preferred product when building a cable pathway, in both inside and outside environments. The flexibility and scalability allows a wide variety of installations to be performed smoothly, without time consuming joints placed every 20 feet, such as in stick conduit.

1.2 HDPE conduit is typically shipped on reels which can accommodate extended continuous lengths. Standard SDR, SIDR, Schedules 40 & 80, single MicroDuct, and FuturePath® are all shipped this way, and Dura-line has developed suggested guidelines for handling HDPE conduit when shipped on a reel, and used in the outside or inside environments.

1.3 HDPE is a plastic pipe, and will form a memory when placed on a reel. While not exactly spring-like, it will exhibit coiling once pulled from a reel. Following recommendations will help to curb some of the issues due to coil memory. Larger diameter conduit will take some care to uncoil, as the more plastic material in the product, the more memory will be observed. Technical Bulletin DCEB-17002 can provide additional information on these procedures.

2.0 RECOMMENDATIONS

2.1 Dura-Line HDPE products are shipped via private trucking companies, and may be subject to damage once the reels leave the manufacturing facility. Inspect reels prior to removal from the truck, if possible, for damage. Damage can occur due to improper forklift use, or poorly secured reels which cause damage to the HDPE. Lift reels by supporting the flanges, or sides of the reel. Do not put the weight of the HDPE and reel against the bottom layer of the conduit, to avoid flattening or crushing (Figure 1).



Figure 1

2.2 Reels should arrive shipped upon flat bed trailers in a vertical position. Reels

UNCONTROLLED COPY

shipped or stored flat may exhibit entanglement of the conduit. Inspect for forklift or other damage before removal from truck (Figure 2).



Figure 2

2.3 Dura-Line ships various size reels depending upon the type of product and length ordered (Figure 3). Order acknowledgements include reel dimensions of each shipment. Installers can plan their installations to determine which reel-handling trailer or device is needed for the pending job. Steel, wooden, or plastic reels are utilized by Dura-Line. Reels should be loaded on trailers, trucks, or stands equipped with locking collars for the spindle used, to keep reels from travelling side-to-side.

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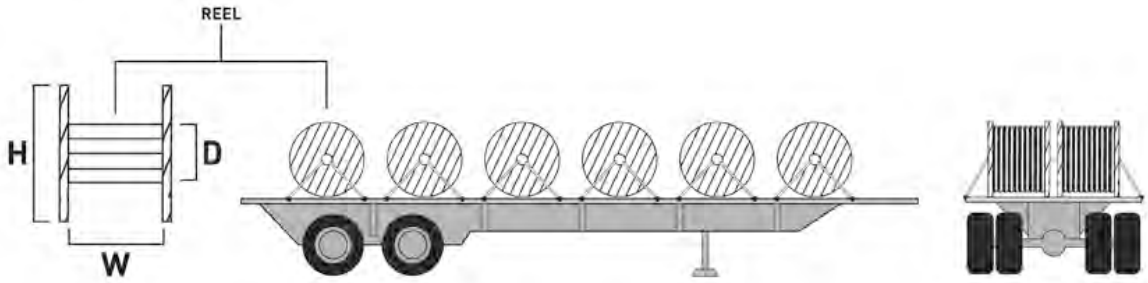


Figure 3

2.4 When pulling conduit from a reel, ensure the inner wraps of product remain tightly turned. Over-pulling, or spinning the reel too quickly can result in excess slack, which can equate to twisting or tangling of the conduit during pull off operations. Tangling can lead to kinking of the conduit, which should be cut at that point and the kink discarded. To form a bend in conduit, slowly push the conduit into a tight bend without exceeding the minimum or supported bend radius, or static bend radius published. When pulling out product, or installing into position, maintain the dynamic or unsupported bend radius. Tighter supported bend radii may be formed prior to final positioning of the conduit (Figure 4).

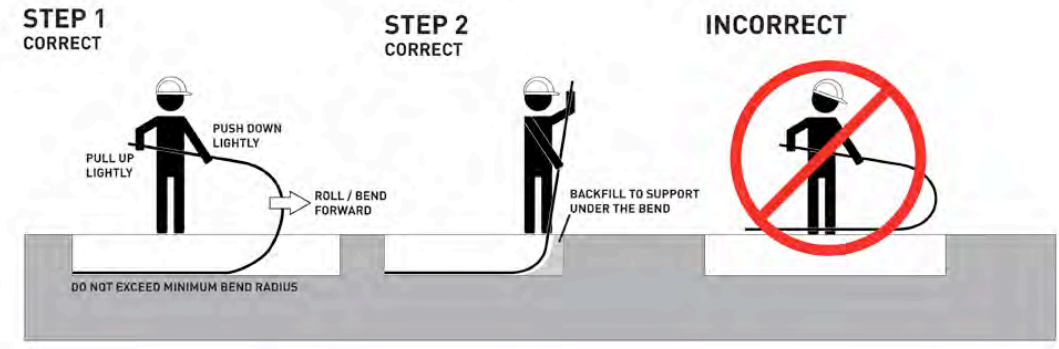


Figure 4

2.5 Excess bends during installation can increase friction or drag, and will affect cable installations. Before back-filling any trench, pull the HDPE tight and push to one side of the trench bottom, anchoring it with soil (Figure 5). Make sure backfill is clean and free of large rocks. Rocks should be no larger than half the diameter of the product being installed. This should be maintained as a layer surrounding the HDPE for several inches. After about 12 inches of back-fill have been placed, larger rocks can be re-introduced into the trench.

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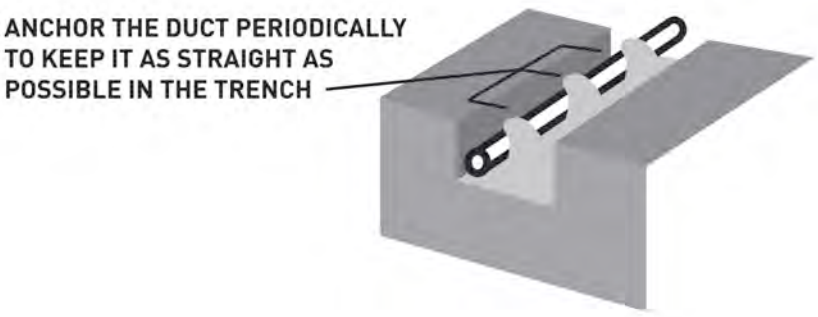
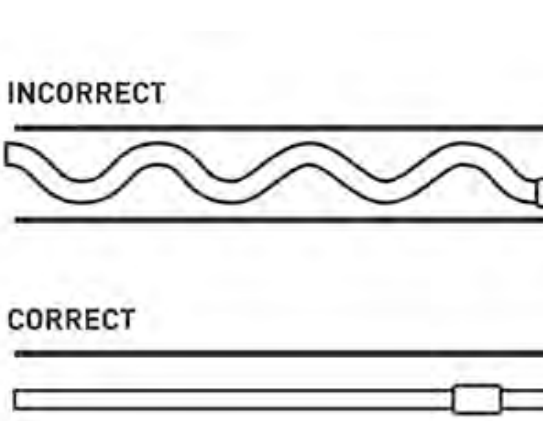


Figure 5

2.6 At times or in colder temperatures, HDPE may be more difficult to work with, showing more reel set or memory. Pull the HDPE straight into a trench, which has been graded or flattened on the bottom, and after the removal of large or jagged rocks (Figures 6-8).





Figures 6-8

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2.7 Load reels so that the HDPE follows the natural bend into the trench or outer conduit. This will be where the conduit feeds from the bottom of the reel. For reverse bend installation, load the reel so that the HDPE feeds off the top of the reel, again, following the natural bend of the conduit. Line up the reel prior to pullout so that it feeds directly into the trench, avoiding any rubbing or entanglements. It is recommended to station an installer at the reel during pullout, to watch for entanglements or overspin of the reel (Figure 9).

Derailments can occur as well, especially when a reel is nearly full, which is where the HDPE loop jumps over the reel side or flange, and can then kink on the spindle or other reel handling structure.

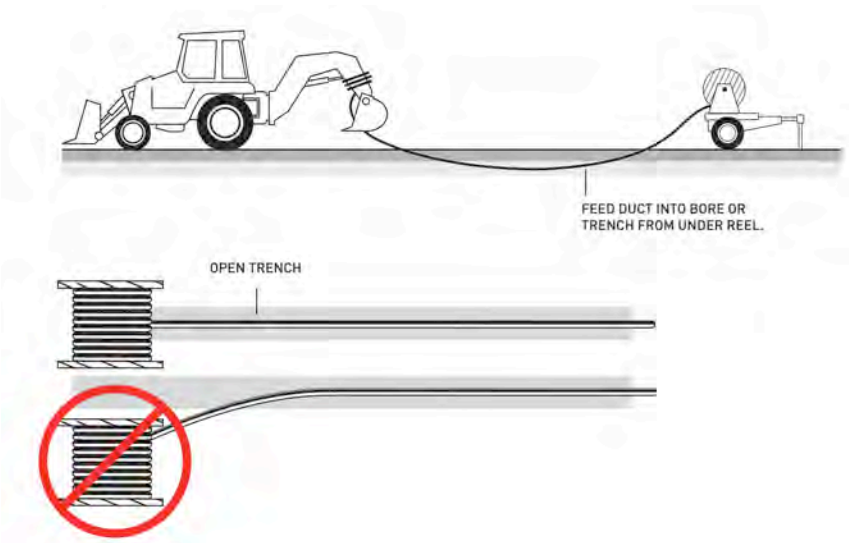


Figure 9

2.7 When pulling out conduit around obstructions, avoid twisting or kinking the HDPE. Utilize a swivel to keep twists out, and maintain tension during the pull-out so the HDPE does not recoil and allow kinking to occur. Maintain recommended bend radii during movement around obstructions, to avoid kinking (Figures 10 & 11).

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Figure 10



Figure 11

2.8 Crushed HDPE may affect the cable placement by minimizing the ID (Inside Diameter) of the product. Avoid this by always keeping the HDPE tight on the reel, especially during transport from one location to another. Take a short section (10-15) feet of Bull-line® and half hitch a knot onto the end of the conduit. Use tape to secure the Bull-line to the conduit wall. Work the slack out of the HDPE towards the outer end, and secure the tail to the reel flange (Figure 12).

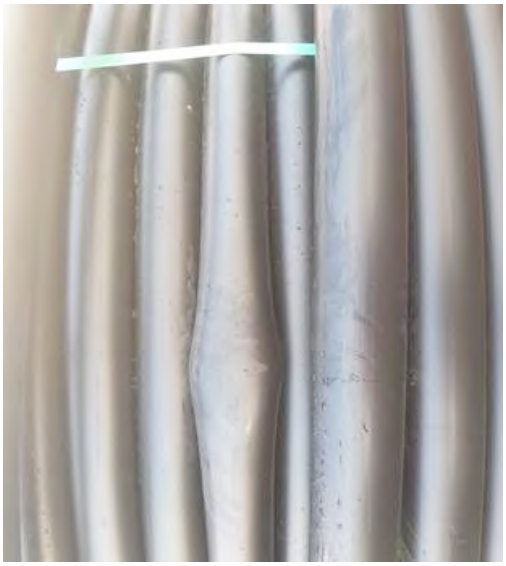


Figure 12

U N C O N T R O L L E D C O P Y

While HDPE is very robust and flexible, it is easy to become overconfident in the conduit's ability to withstand abuse. Even HDPE can become damaged or unusable if care is not taken during installation. It is hoped these guidelines are helpful to any installer of HDPE. The following chart describes some typical Dura-Line products and the recommended minimum bend radii during installation, and post installation (Table A).

DESCRIPTION	NOMINAL DIMENSIONS	BEND RADIUS UNSUPPORTED	BEND RADIUS SUPPORTED *
12.7mm x 10mm 7-way FuturePath	1.64" O.D.	30"	15"
18mm x 14mm 4-way FuturePath	1.86" O.D.	32"	16"
22mm x 16mm 7-way FuturePath	2.62" O.D.	52"	26"
1.25" SDR-11	1.660" O.D.	34"	17"
1.50" SDR-11	1.900" O.D.	38"	19"
2" SDR-13.5	2.375" O.D.	58"	29"
3" SCHED 80	3.500" O.D.	78"	39"
4" SDR-11	4.500" O.D.	100"	50"
6" SDR-11	6.625" O.D.	146"	73"
8" SDR-13.5	8.625" O.D.	233"	155"
16mm x 12mm MicroDuct	0.63" (16mm)	12"	6"
12.7mm x 10mm MicroDuct	0.050" (12.7mm)	10"	5"
8.5mm x 6mm MicroDuct	0.33" (8.5mm)	6"	3"

*SUPPORTED; after installation has occurred, and conduit is in its final position

Table A

UNCONTROLLED COPY

3.0 CONTACT INFORMATION

3.1 Dura-Line Customer Service 1-800-847-7661 or 1-865-218-3460
Fax 1-865-218-3461

3.2 Web: www.duraline.com

3.3 Email: moreinfo@duraline.com

3.4 For further information on this product, contact Customer Service who can arrange for a Field Support Engineer to contact you directly.

3.5 Dura-Line has a library of Technical Bulletins that are for use by our customers and their placing crews.

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TERMS & CONDITIONS

www.duraline.com

ISO 9001 REGISTERED

Customer Service
800-847-7661

STANDARD TERMS AND CONDITIONS

1. CONTRACT FORMATION: These Terms and Conditions ("Terms") govern this Sales Order and any agreement, order, sale or lease is expressly limited to and made conditional upon these Terms becoming a part of the agreement between Dura-Line Corporation ("Seller") and Buyer.

2. ACCEPTANCE: This transaction is expressly limited to and made conditional upon the Terms on the face and reverse side hereof. Any of Buyer's terms in addition to or different from those contained herein, whether contained on a request for quotation, purchase order, acknowledgement or other document, are hereby objected to and shall be of no effect. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any term used in this agreement. Acceptance or acquiescence in a course of performance rendered under this agreement shall not be relevant to determine the meaning of this agreement even though the accepting or acquiescing party has knowledge of the nature of the performance and the opportunity for objection. No waiver or alteration of terms shall be binding unless in writing, signed by an executive officer of Seller. Acceptance of this contract is expressly limited to the exact terms contained in the offer and any attempt to alter or omit any such terms shall be deemed a rejection and counteroffer.

3. PRICE: All prices are F.O.B. Seller's plant unless otherwise specifically set forth on the face of this Sales Order. Prices stated are subject to change without notice in the event of (i) alterations in specifications, quantities, designs, or delivery schedules; (ii) increases in the cost of fuel, power, material, supplies, or labor, and/or (iii) foreign or domestic legislation enacted by any level of government, including tax legislation, which increases the cost of producing, leasing, or selling the Goods. No discount will be permitted unless specifically set forth on the face of this Sales Order. Prices set forth in any proposal sent to Buyer shall be firm for thirty (30) days following the date of such proposal unless otherwise set forth in any proposal. Payment terms of sale are net thirty (30) days unless Seller agrees otherwise in writing. In the event payment is not made within terms, Buyer shall be charged a late payment fee of one and one-half (1.5%) percent per month for each month in which payment is delayed, or the maximum lawful rate, whichever is lower, until payment is made in full. Until the purchase price and any late fees have been paid in full, Seller retains a security interest in the goods sold, consigned or leased ("Goods") and in all proceeds of said Goods. Buyer hereby irrevocably authorizes Seller to execute and file UCC financing statements in support of a purchase money security interest. All orders are subject to the approval by Seller at its offices in Knoxville, Tennessee.

4. DISPUTES: All disputes hereunder shall be made, in writing to the following: Dura-Line Attention: Controller, 11400 Parkside Drive Suite 300, Knoxville, TN 37934. Payments which are intended by Buyer to represent "payment in full" for the Goods sold, and which are less than the amount shown on Seller's invoice as being due, shall be sent to the above address. If said "payment in full" check is not made to the above address then, pursuant to Tennessee Code Ann. Section 47-3-11 the acceptance of said check will not act as a discharge of the remaining balance due under this Seller's invoice.

5. Dura-Line warrants that the following goods manufactured will be free from defects in material and workmanship for the following periods:

1. Conduit, CIC and pipe products for one year following the date of original shipment.
2. Placing equipment and accessories for 90 days following the date of original shipment.
3. With respect to lubricants, chemicals, pull tapes and specialty products, Dura-Line warrants only that such goods will conform to Dura-Line's standards as specified.

If any products are found byDura-Line to be defective, such products, at Dura-Line's option, will be replaced or repaired at Dura-Line's cost. The Purchaser's sole remedy for a defective product, and for any and all claims arising out of the purchase and use of the product, shall be limited to the repair and replacement of the product at Dura-Line's cost.

The foregoing warranties are in lieu of all other warranties, expressed or implied, including those of merchantability or fitness for any purpose.

Goods which may be sold by Dura-Line but which are not manufactured by Dura-Line are not warranted by Dura-Line, but are sold only with the warranties, if any, of the manufacturers thereof.

STANDARD TERMS AND CONDITIONS

This warranty does not cover labor or other costs or expenses to remove or install any defective, repaired or replaced product. Warranty does not apply to any product which has been subjected to misuse, mishandling, misapplication, neglect (including but not limited to improper maintenance), accident, improper installation or modification.

6. LIMITATION OF LIABILITY: SELLER'S LIABILITY (WHETHER UNDER THE THEORIES OF BREACH OF CONTRACT OR WARRANTY, NEGLIGENCE, OR STRICT LIABILITY) FOR ITS GOODS SHALL BE LIMITED TO REPAIRING OR REPLACING PARTS FOUND BY SELLER TO BE DEFECTIVE OR AT SELLER'S OPTION, TO REFUNDING THE PURCHASE PRICE OF SUCH GOODS OR PARTS THEREOF. AT SELLER'S REQUEST, BUYER WILL SEND, AT BUYER'S SOLE EXPENSE, ANY ALLEGEDLY DEFECTIVE PARTS TO THE PLANT OF SELLER WHICH MANUFACTURED THEM FOR INSPECTION AND WARRANTY ADJUSTMENT.

7. DISCLAIMER OF CONSEQUENTIAL DAMAGES: IN NO EVENT SHALL SELLER BE LIABLE FOR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE PURCHASE AND SALE OR LEASING OF SELLER'S GOODS, INCLUDING WITHOUT LIMITATION BREACH OF ANY OBLIGATION IMPOSED ON SELLER HEREUNDER OR IN CONNECTION HEREWITH. CONSEQUENTIAL DAMAGES FOR PURPOSES HEREOF SHALL INCLUDE WITHOUT LIMITATION LOSS OF USE, INCOME OR PROFIT, OR LOSSES SUSTAINED AS THE RESULT OF INJURY (INCLUDING DEATH TO ANY PERSON, OR LOSS OF OR DAMAGE TO PROPERTY (INCLUDING WITHOUT LIMITATION PROPERTY HANDLED OR PROCESSED BY THE USE OF THE GOODS). BUYER SHALL INDEMNIFY SELLER AGAINST ALL LIABILITY, COST OR EXPENSE WHICH MAY BE SUSTAINED BY SELLER ON ACCOUNT OF ANY SUCH LOSS, DAMAGE OR INJURY.

8. ACCEPTANCE AND TRANSPORTATION: Upon Buyer's receipt of shipment, Buyer shall immediately inspect the Goods. Unless Buyer provides Seller with written notice of any claim for shortages of or defects in the Goods within forty-eight (48) hours after receipt of shipment, such Goods shall be deemed finally inspected, checked and accepted by Buyer. In absence of shipping and packing instructions, Seller shall use its own discretion in choice of carrier and method of packing. Seller shall not be responsible for insuring shipments unless specifically requested by Buyer and any insurance so requested shall be at Buyer's expenses and valuation.

9. TITLE AND RISK OF LOSS: Title to any Goods sold and risk of loss of such Goods passes to Buyer upon delivery by Seller to carrier, and any claims for losses or damage shall be made by Buyer directly with carrier.

10. CREDIT TERMS: All orders and shipments shall at all times be subject to the credit approval of the Seller. Seller reserves the right of declining to make shipment whenever, for any reason, there is doubt as to Buyer's financial responsibility and Seller shall not in such event be liable for breach or nonperformance of contract , in whole or in part.

11. TAXES: Unless otherwise specifically provided on the face hereof; the price for the Goods purchased is net and does not include sales, use, excise or similar taxes, whether federal, state or local. The amount of any such taxes applicable to the Goods shall be paid by Buyer in the same manner and with the same effect as if originally included in the purchase.

12. PACKAGING: Prices stated are based on Seller's standard packaging. Special customer packaging will be furnished only when specified and so stated herein, and the cost thereof shall be borne by Buyer.

13. DELIVERY AND DELAYS: Unless expressly specified to the contrary, Goods in stock will be shipped promptly, and Goods not in stock will be shipped as soon as commercially reasonable. However, all shipping dates are approximate, and are based upon current availability of material, present production schedules, and prompt receipt of all necessary information. Seller will not be liable for any damage, loss, fault, or expenses arising out of delays in shipment or other nonperformance, of this agreement caused by or imposed by (a) strikes, fires, disasters, acts of terrorists, riots, acts of God, (b) acts of Buyer, (c) shortages of labor, fuel, power, materials, supplies, transportation, or manufacturing facilities

STANDARD TERMS AND CONDITIONS

(d) government action; (e) subcontractor delay, or (f) any other cause or condition beyond Seller's reasonable control. In the event of any such delay or nonperformance, Seller may, at its option, and without liability, cancel all or any portion of this agreement and/or extend any date upon which any performance hereunder is due. Any delivery not in dispute shall be paid for regardless of other controversies relating to other delivered or undelivered merchandise. Orders will be considered complete upon shipment of a reasonable quantity over or under the amount specified in the Sales Order when it is impracticable to produce the exact quantity ordered.

14. TERMINATION, CANCELLATION, CHANGES, AND RETURNED MATERIAL: Orders cannot be terminated, modified, shipment deferred or returned after acceptance of Buyer's order by Seller, except with Seller's written consent and subject to a minimum $25.00 or 25% restocking charge, whichever is greater. Goods shipped to Buyer approved for return must be shipped freight prepaid. Buyer shall indemnify Seller against liability and expense incurred and commitments made by Seller and shall provide for profit on work in process and contract value of products or parts completed and ready for shipment.

15. PATENTS: The purchase of the Goods shall not entitle Buyer to employ the Goods with any patented process owned by Seller or others. Seller makes no warranty that the Goods or method or process of using them, are free of the claim of any third party by way of patent infringement or the like. Buyer, by its acceptance of the goods or equipment agrees that there is no indemnification by the Seller of any claims of patent infringement, regardless of any rights under the Uniform Commercial Code or other similar regulations, and any such rights are hereby waived. Seller has no obligation to defend or pay damages, settlements, attorneys' fees or any other ancillary damages from such a claim of patent infringement brought against Buyer. Buyer shall hold Seller harmless from, and release and not make claim or suit against Seller because of, any suits, claims, losses, or other liability made against, or suffered by, Buyer arising from any claim of, or infringement of, patent, copyright, trademark, or other proprietary right at common law, or claim of unfair trade or unfair competition, resulting from, or occasioned by, Buyer's use, possession, sale, or delivery of the Goods sold to Buyer by Seller. Buyer agrees to defend and indemnify Seller against any claims or liabilities for, or by reason of the infringement of any United States Patent arising from the manufacture of any of the Goods in accordance with specifications furnished by Buyer or from the sale thereof.

16. GENERAL CONDITIONS: No agent, salesman or other party is authorized to bind Seller by any agreement, warranty, statement, promise or understanding not herein expressed. The sale of Goods pursuant to this contract, shall be governed by the internal laws of the State of Tennessee without regard to conflict principles. In addition to the rights and remedies conferred upon Seller by law, Seller shall not be required to proceed with the performance of any order or contract, if Buyer is in default in the performance of any order or contact with Seller and in case of doubt as to Buyer's financial responsibility, shipments under this order may be suspended or sent sight draft with bill of lading attached by Seller. Any clerical errors are subject to correction. No delay or omission by Seller in exercising any right or remedy provided for herein shall constitute a waiver of such right or remedy and shall not be constituted as a bar to or a waiver of any such right or remedy on any future occasion. Any provision hereof prohibited by law shall be ineffective to the extent of such prohibition and without invalidating the remaining provision hereof.

17. ARBITRATION: Any dispute arising between Buyer and Seller based upon this agreement or the Goods purchased pursuant hereto will be heard in the Chancery Court for Knox County, Tennessee by a Chancellor sitting without a jury and the award of the Chancellor shall be final and binding upon the parties.

18. ENTIRE CONTRACT: The Terms set forth herein and on the face side hereof constitute the entire agreement between Buyer and Seller on these issues. Any representations, promises, warranties or statements by any agent or employee of Seller that differ in any way from these Terms shall be given no effect or force.

TECHNICALBULLETIN

SPECIFICATIONS FOR MICRODUCT AND FUTUREPATH®

CONTENTS:

1.0 General Information
2.0 Quality
3.0 Product Design
4.0 Material Requirements
5.0 Dimensions and Tolerances
6.0 Performance Requirements
7.0 Packaging Requirements
8.0 Contact Information

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1.0 GENERAL INFORMATION

1.1 This Technical Bulletin, DCEB-00009, describes the minimum material and performance requirements for individual MicroDuct and FuturePath®. MicroDuct is an HDPE (High Density Polyethylene) product typically used for placing reduced diameter fiber optic communications cables. FuturePath® is Dura-Line's bundled MicroDuct product, formed by combining multiple MicroDucts and extruding an oversheath onto the MicroDucts, forming a single unit of various MicroDuct in order to increase capacity and to ease placement of multiple MicroDuct pathways. FuturePath® configurations vary from two MicroDucts to 25 MicroDucts, all manufactured with the protective oversheath, adding to the robustness of the MicroDucts. An optional copper-coated locate wire may be added to the construction for meeting locatable requirements.

1.2 Individual MicroDuct can be placed into external conduit singly or in multiple groupings by either jetting (blowing) the MicroDuct, or by pulling in short sections into the conduit. Multiple reels of duct are required for this installation, depending on the number of pathways required. MicroDuct may also be placed as an override solution, being placed into an occupied conduit where the existing cable or conduit (innerduct) allows room for one or more MicroDuct to be placed alongside.

1.3 FuturePath® may be pulled into conduit, horizontally directional drilled (bored), plowed, or placed into open trench installations, without the need for any special tools or equipment. Multiple pathways can then be installed using a single pass and handling procedures reduced through the need for only a single reel of duct.

2.0 QUALITY

2.1 MicroDuct and FuturePath® are manufactured under the control of ISO 9000 with full quality records and traceability. Dura-Line is independently audited and certified to ISO 9001: 2008. Dura-Line shall provide a quality plan, if requested, upon receipt of a formal contract/order.

3.0 PRODUCT DESIGN

3.1 MicroDuct and FuturePath® are designed to be flexible, lightweight, durable, easy to install and are available in multiple configurations. 7mm OD and above MicroDucts are smooth on the outside, internally longitudinally ribbed on the inside, and have a co-extruded permanent lubrication layer of SuperSilicore®. 5mm OD and smaller MicroDucts are smooth on the outside, smooth on the inside and have a co-extruded permanent lubrication layer of SuperSilicore®. The FuturePath® oversheath is smooth on the outside.

3.2 SuperSilicore® is co-extruded with the tough HDPE wall creating a permanent, super slippery interior lining. It has the lowest co-efficient of friction compared to other options, no performance loss in all temperature conditions and functions without additional wet lubricants. All FuturePath® containing 7mm OD MicroDucts and above will be equipped with a Super Silicore® slick permanent liner.

3.3 The anticipated product life of MicroDuct and FuturePath® shall be considered 15 years after installation, allowing for jetting (blowing) operations for cable installations and replacements.

3.4 The workmanship of MicroDuct and FuturePath® will display free from holes, blisters, inclusions, cracks, or other imperfections that would affect the performance or serviceability of the product. Options available with FuturePath® include an integral copper-coated steel insulated locate wire, and ripcord(s) for aiding in access to the MicroDucts.

4.0 MATERIAL REQUIREMENTS

4.1 The MicroDuct and FuturePath® shall be constructed of polymeric materials, which are lightweight, flexible, corrosion resistant and nonconductive. The base material shall be clean virgin grade high-density polyethylene (HDPE), which conforms to ASTM D3350-98a, Type III, Category 5, Class B or C and Grade P-34 per ASTM D1248-84 or equivalent.

4.2 The base HDPE material shall conform to the minimum mechanical properties as listed (Table 1).

MINIMUM OR RANGE	PROPERTY	ASTM STANDARD
Density	D 1505	0.940-0.950 g/cm^3
Melt Index (E)	D 1238	0.10 - 0.35 g/ 10 Minute
ESCR	D 1693	192.0 hrs. (per ASTM D3350)
Tensile @ Yield (min)	D 638	2500 psi to 3200 psi (1,700 – 2,200N/cm^2)
% Elongation	D 638	300%
Flexural Modulus (min)	D 790	115,000 psi (790,000 kPa)
Hardness	D 2240	60 Shore D
VICAT Softening Pt.	D 1525	248 ° F (120 ° C)
Brittleness Temp.	D 746	-94 ° F (-70 ° C)

Table 1

4.3 Standard available colors shall be black, terracotta, red, orange, gray, green, blue, brown, and white. FuturePath® MicroDucts will be individually colored or will be of a single color and be sequentially numbered every two feet. The oversheath of FuturePath® will be available in different colors, although aerial versions of individual MicroDucts and FuturePath® will be available in black only.

U N C O N T R O L L E D C O P Y

Colors shall be protected from ultra-violet (UV) degradation by the incorporation of Hindered Amine Light Stabilizers (HALS). This will allow for one (1) years of outside storage UV protection. Aerial products shall incorporate a higher level of finely divided carbon black and HALS additives, which provides a twenty (20) plus year usable life expectancy. The duct material shall be compounded with antioxidant additives to prevent thermal degradation.

4.4 Fire retardant MicroDucts are typically required for inside buildings and must comply with local fire codes. Both Riser rated and Plenum rated MicroDucts must comply with the applicable requirements of the *Standard for Safety for Optical Fiber and Communication Cable Raceway*, UL-2024. The Riser-rated MicroDucts must comply with UL-1666, and the Plenum-rated MicroDucts must comply with NFPA-262 (Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces, Edition 2011).

Fire retardant MicroDucts shall be tested to the UL Standard by UL, ETL or another approved testing facility, and will be printed with the approval number and fire rating every two feet.

5.0 DIMENSIONS AND TOLERANCES

5.1 HDPE MicroDucts should be circular in form with the following dimensions (Table 2). MicroDuct dimensions are listed in millimeters (mm).

SIZE (OD X ID)	OUTSIDE DIAMETER (OD)	WALL THICKNESS	ID MINIMUM	MIN BEND RADIUS	TENSILE STRENGTH (LBS)
27/20mm	27 ± 0.10	2.67 + 0.0/0.25	20.7	11 in.	701
22/16mm	22 ± 0.10	2.94 + 0.0/0.25	15.4	8 in.	615
18/14mm	18 ± 0.10	2.16 + 0.0/0.13	13.9	7 in.	328
18/15mm	18 ± 0.10	1.37 + 0.0/0.13	14.9	8 in.	300
16/13mm	16 ± 0.10	1.50 + 0.0/0.1	12.9	6 in.	263
16/12mm	16 ± 0.10	2.00 + 0.0/0.05	11.6	6 in.	305
12.7/10mm	12.7 ± 0.10	1.29 + 0.0/0.1	9.8	5 in.	195
12/10mm	12 ± 0.10	0.939 + 0.0/0.1	9.8	5 in.	139
10/8mm	10 ± 0.10	1 + 0.0/0.1	7.9	4 in.	107
8.5/6mm	8.5 ± 0.10	1.25 + 0.0/0.1	5.9	4 in.	115
7/5.5mm	7 ± 0.10	0.75 + 0.0/0.1	5.4	4 in.	55
5/3.5mm	5 ± 0.10	0.75 + 0.0/0.1	3.4	4 in.	50

Table 2

U N C O N T R O L L E D C O P Y

5.2 Riser rated MicroDucts shall be V-2 rated with the following dimensions (Table 3).

Size (OD x ID)	Outside Diameter (OD)	Wall	ID Min
18mm	18.01 ± 0.10	2.01 + 0.0/0.15	13.6
16mm	15.88 ± 0.10	1.50 + 0.0/0.1	12.8
12.7mm	12.7 ± 0.1	1.55 +0.0/0.1	9.6
8.5mm	8.5 ± 0.1	1.25 +0.0/0.1	5.9

Table 3

5.3 Plenum rated MicroDucts shall be V-0 rated with the following dimensions (Table 4).

Size (OD x ID)	Outside Diameter (OD)	Wall	ID Min
18mm	18.01 ± 0.10	2.01 + 0.0/0.15	13.6
16mm	15.9 ± 0.10	1.42 + 0.0/0.05	12.8
12.7mm	12.7 ± 0.1	1.14 +0.0/0.1	10.4
8.5mm	8.5 ± 0.1	0.81 +0.0/0.1	6.68

Table 4

5.4 FuturePath® is a bundled MicroDuct configuration that is available in various sizes and styles. The outside plant versions can be direct buried or trenched, pulled into conduit, horizontally directional drilled (HDD) or plowed. Aerial versions include a lashed and self-support Figure-8 style. An armored version is available for extreme conditions where ground heave or rodents may be a factor. FuturePath® is available in material designed for interior spaces where fire protection is a requirement. These are referred to as Dura-Line Enterprise Products, and are available in HDPE, Riser, Plenum, and LSHF materials. The following list is the FuturePath® specifications for versions available at the time of this Technical Bulletin Issue (Table 5). Note: where material description is not noted in column 1, assume the material to be HDPE.

Size (mm)	# DUCTS	Nom OD (in.)	Over Sheath (in)	Weight (#/ft)	Bend Radii SUP (in.)	Bend Radii UNSUP (in.)	SWPS (lbs)
27 / 20 Min ID 20.7mm							
27/20	**2-Way**	**2.200**	**0.050**	**0.374**	**17**	**29**	**2042**
27/20	**3-Way**	**2.370**	**0.050**	**0.532**	**31**	**52**	**2847**
27/20	**4-Way**	**2.640**	**0.050**	**0.686**	**33**	**55**	**3669**
27/20	**7-Way**	**2.970**	**0.050**	**1.126**	**49**	**81**	**6013**

U N C O N T R O L L E D C O P Y

22 / 16 Min ID 15.5mm							
22/16	2-Way	1.790	0.050	0.295	10	20	1581
22/16	3-Way	1.790	0.050	0.413	17	34	2211
22/16	4-Way	2.130	0.050	0.531	18	36	2840
22/16	7-Way	2.620	0.050	0.869	26	52	5001

18 / 14 Min ID 13.6mm							
18/14	2-Way	1.560	0.070	0.244	9	18	1316
18/14	3-Way	1.670	0.070	0.330	15	30	1776
18/14	4-Way	1.860	0.070	0.417	16	32	2243
18/14	7-Way	2.270	0.070	0.656	21	42	3522
18/14 (Thicker OS)	2-Way	1.620	0.100	0.292	9	18	1578
18/14 (Thicker OS)	3-Way	1.730	0.100	0.387	18	36	2087
18/14 (Thicker OS)	4-Way	1.910	0.100	0.482	16	32	2598
18/14 (Thicker OS)	7-Way	2.330	0.100	0.743	22	44	3998
18/14 (Flat)	3-Way	2.230	0.050	0.306	8	16	1645

16 / 13 Min ID 12.8mm							
16 / 13	2-Way	1.350	0.050	0.153	7	14	824
16 / 13	3-Way	1.490	0.070	0.247	13	26	1331
16 / 13	4-Way	1.650	0.070	0.308	14	28	1658
16 / 13	7-Way	2.030	0.070	0.471	19	38	2530
16 / 13 (Thicker OS)	4-Way	1.710	0.100	0.370	15	30	1996
16 / 13 (Thicker OS)	7-Way	2.080	0.100	0.550	19	38	2962
16 / 13 (Flat)	3-Way	1.980	0.050	0.220	8	16	1184
16 / 13 (Flat)	4-Way	2.620	0.050	0.290	8	16	1516

16 / 12 Min ID 11.6mm							
16 / 12	2-Way	1.350	0.050	0.18	8	16	976
16 / 12	3-Way	1.490	0.070	0.292	13	26	1559
16 / 12	4-Way	1.660	0.070	0.368	14	28	1963
16 / 12	7-Way	2.030	0.070	0.579	19	38	3079
16 / 12 (Thicker OS)	2-Way	1.450	0.100	0.260	8	16	1396
16 / 12 (Thicker OS)	4-Way	1.720	0.100	0.431	15	30	2307
16 / 12 (Thicker OS)	7-Way	2.090	0.100	0.657	19	38	3505
16 / 12 (Flat)	3-Way	1.980	0.050	0.265	8	16	1412

U N C O N T R O L L E D C O P Y

14 / 10 Min ID 9.8mm							
14 / 10	2-Way	1.190	0.040	0.149	7	14	795
14 / 10	3-Way	1.740	0.040	0.217	7	14	1157
14 / 10	4-Way	1.470	0.070	0.320	12	24	1709
14 / 10	7-Way	1.770	0.050	0.465	16	32	2474
14 / 10 (Thicker OS)	2-Way	0.121	0.050	0.162	7	14	866
14 / 10 (Thicker OS)	2-Way	1.240	0.070	0.189	7	14	1013
14 / 10 (Thicker OS)	7-Way	1.870	0.100	0.579	17	34	3096

12.7 / 10 Min ID 9.8mm							
12.7 / 10	2-Way	1.100	0.050	0.119	6	12	635
12.7 / 10	3-Way	1.140	0.070	0.191	11	22	1021
12.7 / 10	4-Way	1.340	0.070	0.236	12	24	1260
12.7 / 10	7-Way	1.640	0.070	0.360	15	30	1926
12.7 / 10	12-Way	2.140	0.070	0.566	20	40	3004
12.7 / 10	19-Way	2.640	0.070	0.826	24	48	4373
12.7 / 10 (Thicker	2-Way	1.140	0.070	0.143	7	14	766
12.7 / 10 (Thicker	4-Way	1.410	0.100	0.289	12	24	1549
12.7 / 10 (Thicker	7-Way	1.700	0.100	0.424	16	32	2264
12.7 / 10 (Flat)	4-Way	2.090	0.050	0.223	6	12	1189
12.7 / 10 x 7 + 16/13	8-Way	1.790	0.070	0.416	18	36	2215

10 / 8 Min ID 7.9mm							
10 / 8	2-Way	0.870	0.040	0.070	5	10	373
10 / 8	3-Way	0.990	0.070	0.128	9	18	684
10 / 8	4-Way	1.040	0.040	0.120	9	18	635
10 / 8	7-Way	1.290	0.050	0.204	12	24	1080
10 / 8	9-Way	1.610	0.050	0.252	13	26	1332
10 / 8	12-Way	1.700	0.050	0.314	15	30	1655
10 / 8	19-Way	2.090	0.060	0.489	19	38	2577
10 / 8 (Flat)	3-Way	1.29	0.050	0.116	5	10	619
10 / 8 (Flat/Double	3-Way	1.34	0.040/0.0	0.154	6	12	826
10 / 8	2-Way	0.890	0.050	0.081	5	10	433
10 / 8	4-Way	1.090	0.070	0.157	10	20	837

8.5 / 6 Min ID 5.9mm							
8.5 / 6 (No Locate)	2-Way	0.770	0.050	0.075	5	10	404
8.5 / 6 (No Locate)	3-Way	0.850	0.060	0.110	8	16	593
8.5 / 6 (No Locate)	4-Way	0.930	0.060	0.136	8	16	733
8.5 / 6 (No Locate)	7-Way	1.130	0.060	0.207	11	22	1112
8.5 / 6 (No Locate)	12-Way	1.480	0.060	0.322	13	26	1727
8.5 / 6 (No Locate)	19-Way	1.800	0.060	0.472	16	32	2528
8.5 / 6 (No Locate)	24-Way	2.130	0.060	0.579	16	32	3099

U N C O N T R O L L E D C O P Y

7 / 5.5 Min ID 5.6mm							
7 / 5.5 (No Locate)	2-Way	0.063	0.040	0.044	4	8	240
7 / 5.5 (No Locate)	7-way	0.930	0.050	0.116	9	80	633

5/3.5 Min ID 3.4mm							
5 / 3.5 (No Locate)	2-Way	0.460	0.030	0.026	3	6	143
5 / 3.5 (No Locate)	3-way	0.480	0.040	0.040	5	10	220
5 / 3.5 (No Locate)	4-Way	0.560	0.040	0.050	5	10	276
5 / 3.5 (No Locate)	7-Way	0.670	0.040	0.075	6	12	409
5 / 3.5 (No Locate)	12-Way	0.870	0.040	0.115	8	16	630
5 / 3.5 (No Locate)	19-Way	1.070	0.040	0.168	10	20	920
5 / 3.5 (No Locate)	24-Way	1.270	0.040	0.202	10	20	1120

Table 5

5.5 FuturePath® Flex is an array of MicroDucts connected by an oversheath and a tangential partitioned web. Its flat configuration and ease of duct segregation make it ideal for MicroTrenching and FTTX applications (Figure 1).



Figure 1

Duct separation is easily performed with nearly any knife, and it is available in Fire-Retardant versions for use inside buildings. The inside versions can be easily connected to the OSP FuturePath® Flex by using push-on air and watertight couplers (Figure 2), eliminating the need for a splice cabinet.

U N C O N T R O L L E D C O P Y



Figure 2

In this manner, a single, uninterrupted pathway is created for the fiber cable. The 18/15mm version is large enough to accommodate a pre-connectorized fiber drop with an SC-style connector and nylon pulling-sock, should that be the application requirements. Specifications for FuturePath® Flex are located in Figure 3 and Table 6.

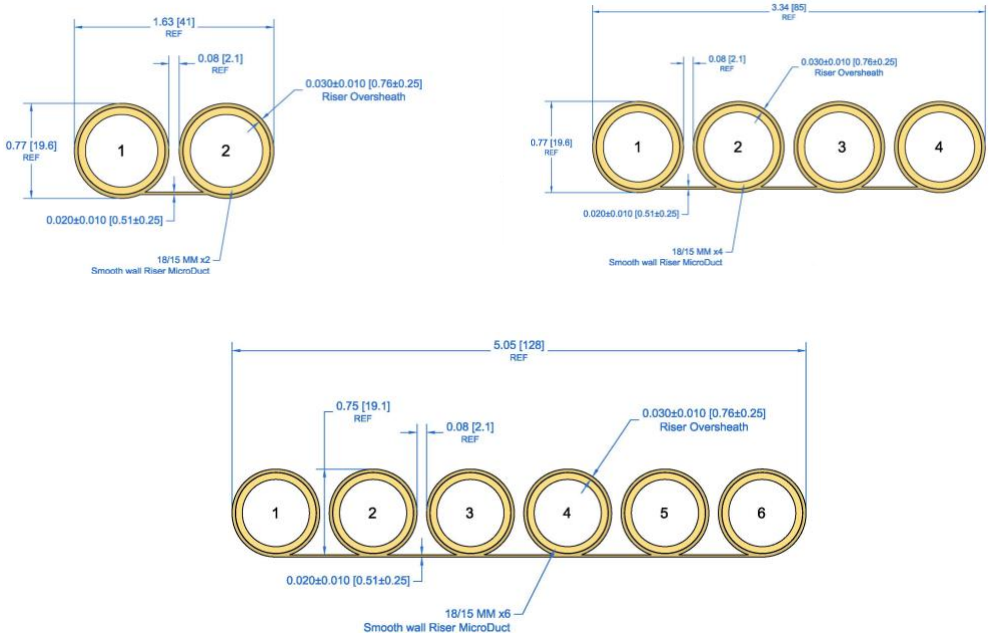


Figure 3

U N C O N T R O L L E D C O P Y

FUTUREPATH® FLEX						
MicroDuct Size (mm)	**Number of MicroDucts**	**Outside Diameter (in.)**	**MDPE Oversheath Thickness (in.)**	**Supported Bend Radius (in.)**	**Unsupported Bend Radius (in.)**	**Safe Working Load (lbs.)**
18/14	6	0.779/5.365	0.020	12	19	3890
18/14	4	0.779/3.649	0.020	12	19	2580
18/14	2	0.779/1.637	0.020	12	19	1260
18/15	6	0.770/5.050	0.020	11	19	2900
18/15	4	0.770/3.340	0.020	11	19	1900
18/15	2	0.770/1.630	0.020	11	19	930

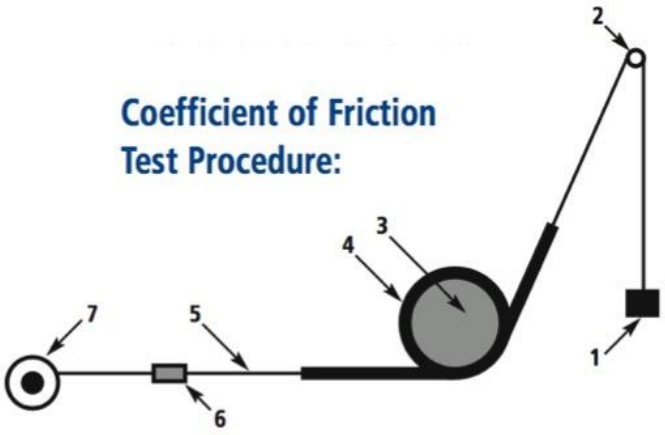
Table 6

6.0 PERFORMANCE REQUIREMENTS

The MicroDucts and FuturePath® can be jetted (blown) inside an outer duct. Typically, individual MicroDucts are jetted either into an empty outer conduit or as an override next to existing cable or duct. Limited pulling force can be applied to the individual MicroDuct for installing into short sections of conduit (Table 7). FuturePath® is generally pulled into conduit or Horizontally Directional Drilled (bored) utilizing a wire mesh-pulling grip installed onto the end of the conduit bundle. The fiber optic cable should be installed inside the MicroDuct or FuturePath® by the jetting (blowing) method. The MicroDucts manufactured by Dura-Line will meet or exceed the following performance requirements. When FuturePath® is placed aerially or buried, fiber optic cables should be installed by the jetting (blowing) method. MicroDucts are not designed for pulling MicroCables into them, primarily because reduced diameter fiber optic cables (MicroCables) have limited pulling force (usually between 90-300 lbs., depending upon the fiber cable selected).

6.1 The typical values for sliding coefficient of friction (m) of Dura-Line MicroDucts with SuperSilicore® permanent lining and internal longitudinal ribs used for cables with polyethylene jackets is <10. The test procedure for coefficient of friction is shown (Figure 4).

U N C O N T R O L L E D C O P Y



Indicator #	Description
1	Tail Weight (15 lbs.)
2	Pulley
3	36" Diameter Wheel - Restrained (no rotation)
4	MicroDuct wrapped 420° around wheel
5	Armored MDPE Jacketed Fiber Optic Cable
6	Load Cell (Load Indicator) & Chart Recorder
7	Variable Speed Winch

Figure 4

6.2 The pull strength for MicroDucts and FuturePath® is the tensile force that can be used to pull it during the installation. The following (Table 7) lists the safe pull strength for MicroDucts.

MicroDuct Size (OD x ID) mm	Safe Pull Strength (lbs.)	Safe Pull Strength (Newtons)
18 x 15	300	1,334
18 x 14	328	1,459
16 x 13	263	1,170
16 x 12	305	1,357
12.7 x 10 (9.8)	227	1,010
12 x 10 (9.8)	179	796
10 x 8	107	476
8.5 x 6	115	512
7 x 5.5	55	245
5 x 3.5	38	169

Table 7

U N C O N T R O L L E D C O P Y

Note 1: Individual MicroDucts are designed for jetting installations (blown in with air), not pulled in the traditional sense, as noted by the low pull strength.
Note 2: The pull and crush strength of a FuturePath® 7 x 12.7mm MicroDucts with an oversheath of 0.070 is the same as 1-1/4" SDR-11 duct.

6.3 The MicroDuct and FuturePath® crush strength (Compression) is a measurement of how the HDPE reacts to a bearing load. The MicroDucts should recover their circular shape upon removal of a transverse compression load. MicroDuct 250mm in length, when placed between two flat plates 100mm x 100mm, is loaded with 150 lbs. (68 kg) for MicroDuct sizes 10mm OD and larger. For MicroDuct sizes 8.5mm OD and smaller, 100 lbs. (45 kg) is used. Applying the force for 60 seconds shall not show deformation of the MicroDuct greater than 15 % (of the original OD), splitting or permanent damage. The test procedure is per Bell Core GR-356-CORE.

$$\% \text{ Deformation} = \frac{\text{(original O.D. – compressed O.D.)}}{\text{original O.D. x 100}}$$

6.4 The burst strength is exceeded when there is a break in the MicroDuct with a loss of air and it retains no pressure holding capability. Sustained (holding the air under pressure for 1000 hours) pressure rating for MicroDuct is shown below (Table 8). The test procedure is per Bell Core GR-356-CORE, with the exception of taking the pressure from 125 psi to 175psi. Testing is conducted using 175 psi (1,206 kPa) at 23^0 C $\pm 5^0$C (73^0 F $\pm 9^0$ F) for duration of 5 minutes with no air loss due to failure of the MicroDuct.

MicroDuct Size (OD x ID) mm	Sustained Pressure PSI (BAR)	Burst Pressure PSI (BAR)
18 x 15	291 (20)	458 (32)
18 x 14	400 (28)	630 (43)
16 x 13	306 (21)	482 (33)
16 x 12	489 (34)	770 (53)
12.7 x 10 (9.8)	445 (31)	700 (48)
12 x 10 (9.8)	388 (27)	611 (42)
10 x 8	316 (22)	498 (34)
8.5 x 6	523 (36)	824 (57)
7 x 5.5	328 (23)	516 (36)
5 x 3.5	479 (33)	754 (52)

Table 8

6.5 MicroDuct is subjected to flexibility testing, otherwise known as a bend test. The MicroDuct and FuturePath® shall be capable of being bent at least 180 degrees over a mandrel (mandrel diameter is equal to or less than 20 times the diameter of MicroDuct) and then straightened without cracking, splitting, breaking or permanent reduction in diameter.

U N C O N T R O L L E D C O P Y

6.6 An environmental stress crack resistance test (ESCR) is performed on Dura-Line MicroDucts. Stresses can be imposed on duct during installation and the MicroDuct and FuturePath® can be subjected to chemical attack from the environment. If the duct is manufactured from a poor-quality polymer, then the induced stress, together with the chemical attack can cause the duct to crack. In the ESCR test, the MicroDuct is pre-stressed and exposed to a chemical solution at an elevated temperature for a given time. Dura-Line Corporation requires zero (0) failure in 192 hours per ASTM D1693, Condition B.

6.7 Each finished reel of MicroDuct and FuturePath® will be subjected to proprietary testing to validate the integrity of the ID.

6.8 A general appearance test is performed as well. The external and internal surfaces of the MicroDucts shall be free from irregularities such as cracks, pinholes, joints, water splash marks, and die marks, repairs and other defects per standard Dura-Line procedure. This does not include internally ribbed product that is extruded with internal longitudinal ribs.

7.0 PACKAGING REQUIREMENTS

7.1 MicroDuct and FuturePath® shall be shipped on wooden or metal reels or in coils. The MicroDuct reel drum size is a minimum of 452mm (18”), flange 609mm (24”) up to 1.22 meters (48”), and a reel width outside to outside maximum of 686mm (27”). The MicroDuct ends are sealed to prevent the ingress of water or dirt. The inside end of the MicroDuct must be accessible for pressurization and testing. The FuturePath® reels will be sized to meet the requirement of the FuturePath®.

7.2 Each reel shall be identified in a weather resistant manner with the following information:

MANUFACTURERS NAME & LOCATION
PRODUCT SIZE
PRODUCT LENGTH
SPECIFIED CUSTOMER NUMBERS

7.3 The MicroDuct and FuturePath® shall be continuously marked and identified along its length in contrasting color and with print of at least 0.118-inch (3mm) height. The print interval shall not exceed 10 feet (3 m), unless specified and shall include the following information:

MANUFACTURERS NAME
PRODUCT NAME/NUMBER
PRODUCTION CODE (Date, Location, Lot)
LENGTH OF DUCT (in feet) on reel

U N C O N T R O L L E D C O P Y

Note: (For fire retardant MicroDucts only, print either Riser or Plenum and the approval code every two feet)

7.4 MicroDuct and FuturePath® should be handled by lifting or cradling the reel flanges as shown (Figure 5). Never lift reels while making contact with the HDPE duct material. The weight of the reel may compress or damage the MicroDucts.

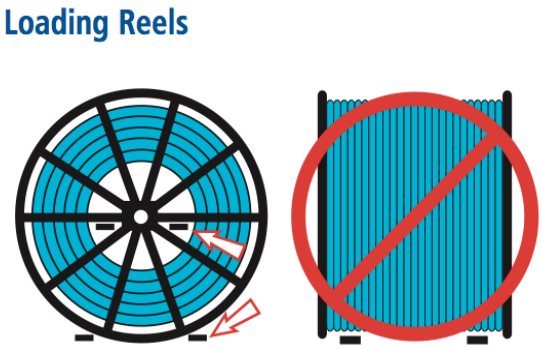


Figure 5

U N C O N T R O L L E D C O P Y

BULK1730241B0110

Description: BULK 17” x 30” x 24”
HDPE body and cover

FEATURES:

- 17 X 30 X 24 inches (Open Floor)
- HDPE Body – HDPE Cover - Load Rated: Light Duty ANSI/SCTE 77 2010)
- Cover meets or exceeds ADA requiremts for slip
- BULK vault body is upgradeable to Tier 22 load ratings by changing the cover

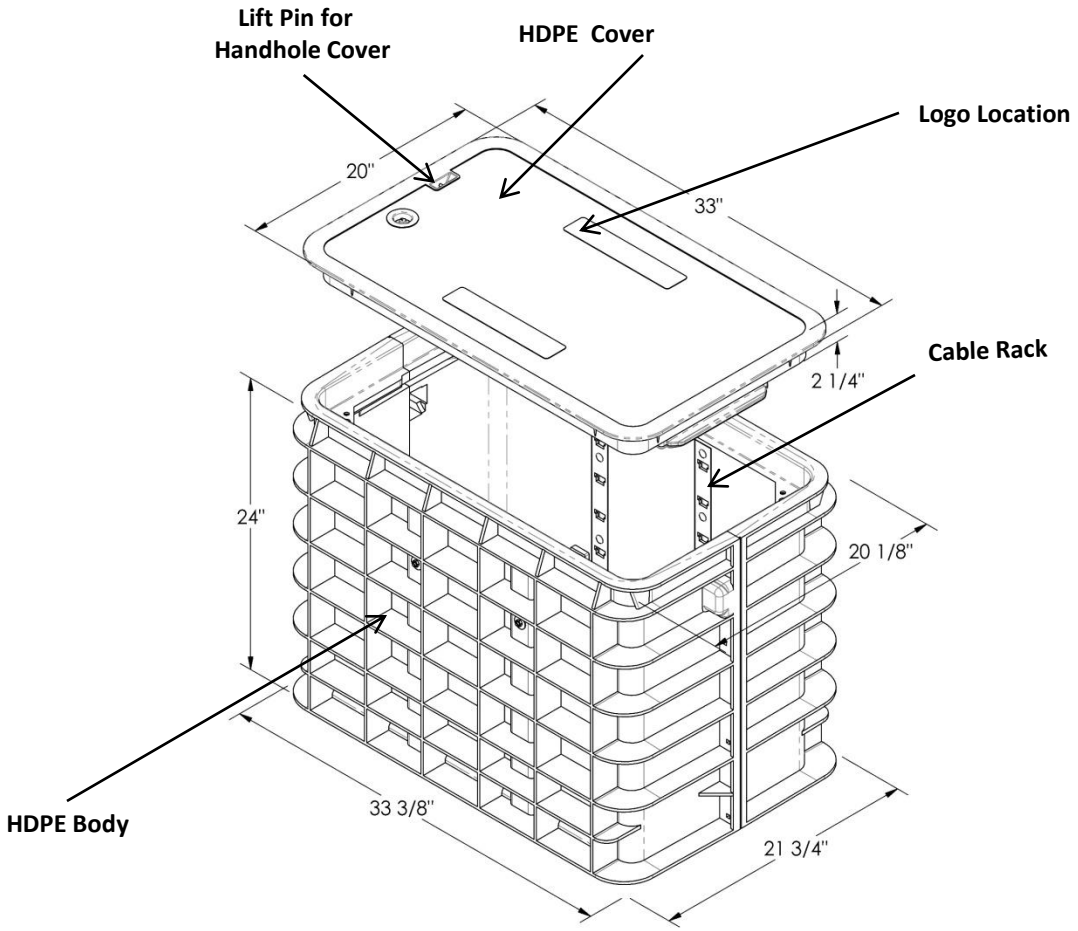
WEIGHT & SHIPPING:

- Cover Weight: 14 lbs
- Box Weight: 34 lbs
- Assembly Weight: 148 lbs
- Loaded Pallet Weight: 205 lbs
- Per Pallet #: 4
- Pallet Dimensions: 34”L x 49”W x 31½” H

LOAD RATINGS:

- ANSI/SCTE 77 LIGHT DUTY

CHANNELL



Inside Dimensions		
Length	**Width**	**Depth**
29.5”	16.5”	24”

SGLBU243624

BULK VAULT HDPE STRUCTURAL FOAM HDPE PLASTIC COVER

FEATURES:

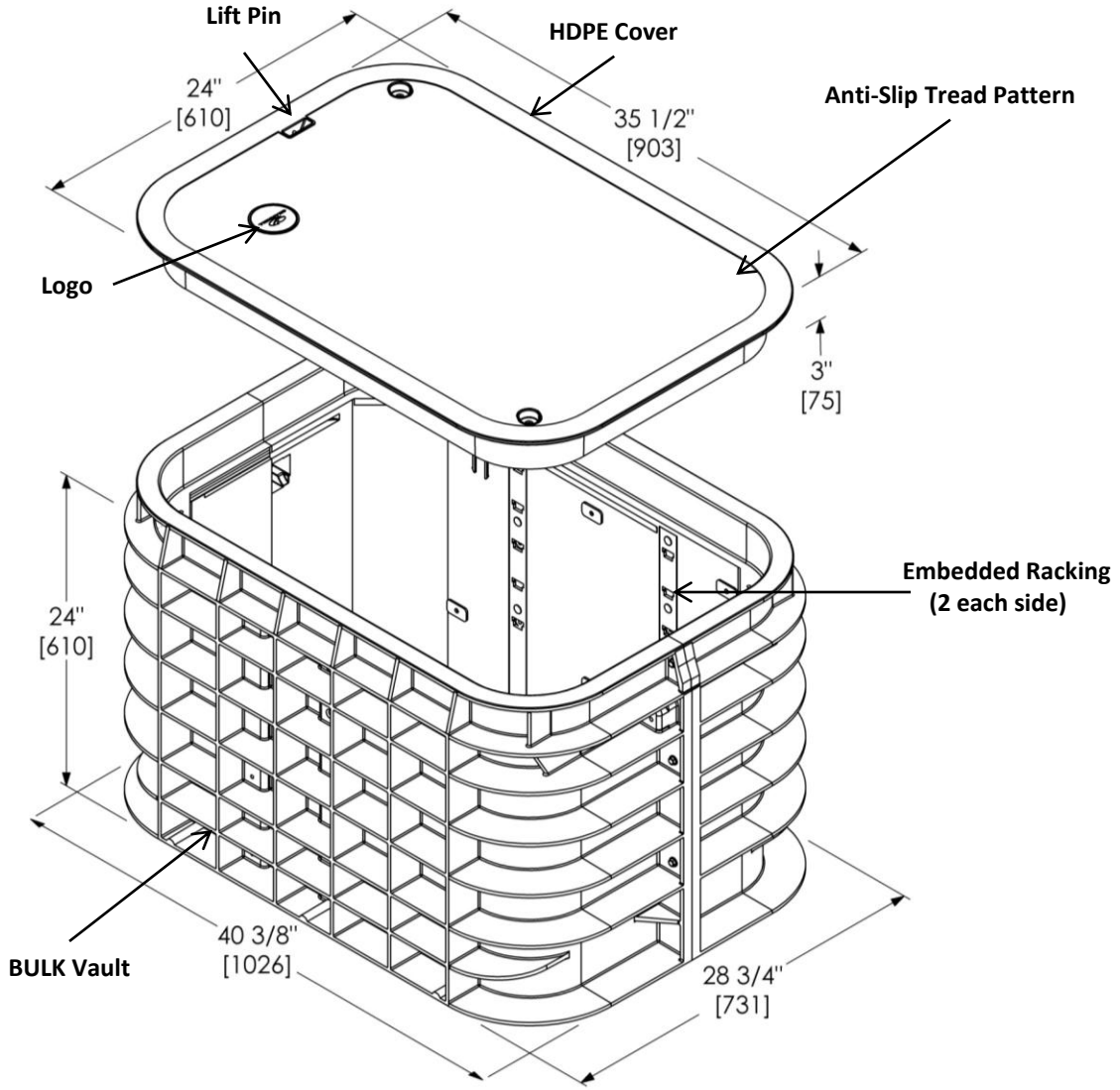
- 24” X 36” X 24” (open floor) (actual dimensions on drawing)
- BULK VAULT – HDPE PLASTIC COVER - Light Duty Load Rated (ANSI/SCTE 77: 2013)
- (2) Cover locking Auger bolts, Hex (9/16”) or Penta (7/8”) head with washer
- (2) Non-Seizing Fastening System, Field Replaceable
- (4) Embedded Composite Rack Support
- (1) Lifting slot equipped with stainless steel pin (slot is approximately 2 ¾”x¾”)
- (2) Winterized Cable Drop slide (1 ¼” X 1 ¼”)
- (1) Logo Disk

WEIGHT & SHIPPING:

- Cover Weight: 23 lbs
- Box Weight: 55 lbs
- Assembly Weight : 78 lbs

PERFORMANCE TESTING:

- ANSI/SCTE 77: 2013 – Light Duty Rated (3,000 lbs)
- Bulk Vault Rated up to 60,000 lbs. (upgradable lid)



Inside Dimensions		
Length	**Width**	**Depth**
34 ⅜” [873]	22 ¾” [578]	21” [533]

CHANNELL

BULKU304824

BULK VAULT HDPE STRUCTURAL FOAM SHIELD X COMPOSITE COVER

BULK™ SHIELD X™

FEATURES:

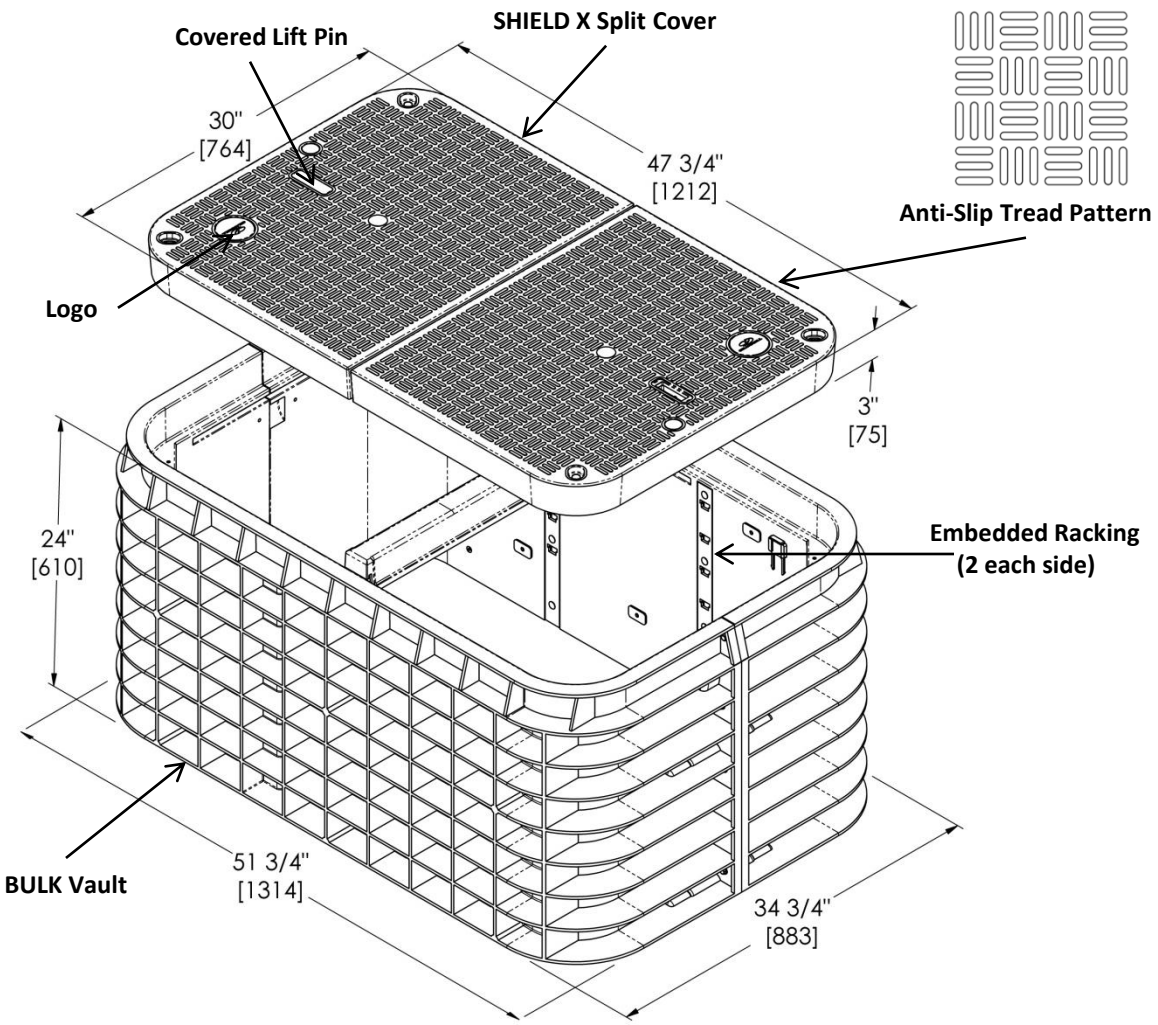
- 30” X 48” X 24” (open floor) (actual dimensions on drawing)
- BULK VAULT – SHIELD X Split COVER- Tier 22 Load Rated (ANSI/SCTE 77: 2016)
- (4) Cover fastener auger bolts, Hex (9/16”) or Penta (7/8”) head with washer (304 stainless steel)
- (4) Non-Seizing Fastening System, Field Replaceable
- (4) Embedded Composite Rack Support
- (1) Lifting slot equipped with stainless steel pin (slot is approximately 2 ¾”x ¾”)
- (1) Galvanized Center Beam
- (2) Logo Disk
- Stainless steel hardware is 300 series.

WEIGHT & SHIPPING:

- Cover Weight: 50 lbs (Per Half)
- Box Weight: 88 lbs
- Assembly Weight : 188 lbs

PERFORMANCE TESTING:

- ANSI/SCTE 77: 2016 - TIER 22 Rated (33,750 lbs)
- AS3996 – Class C
- EN124 Class B125
- ASTM C1028-07 & AS-4586 (Slip Resistance)
- 10,000 Hour Xenon-Arc Exposure (No fiber-bloom)
- ASTM D635-06 (Flammability)



Inside Dimensions		
Length	**Width**	**Depth**
46 ½” [1180]	28 ¾” [730]	21” [533]

CHANNELL

BULKU304836

BULK VAULT HDPE STRUCTURAL FOAM SHIELD X COMPOSITE COVER

BULK™ SHIELD X™

FEATURES:

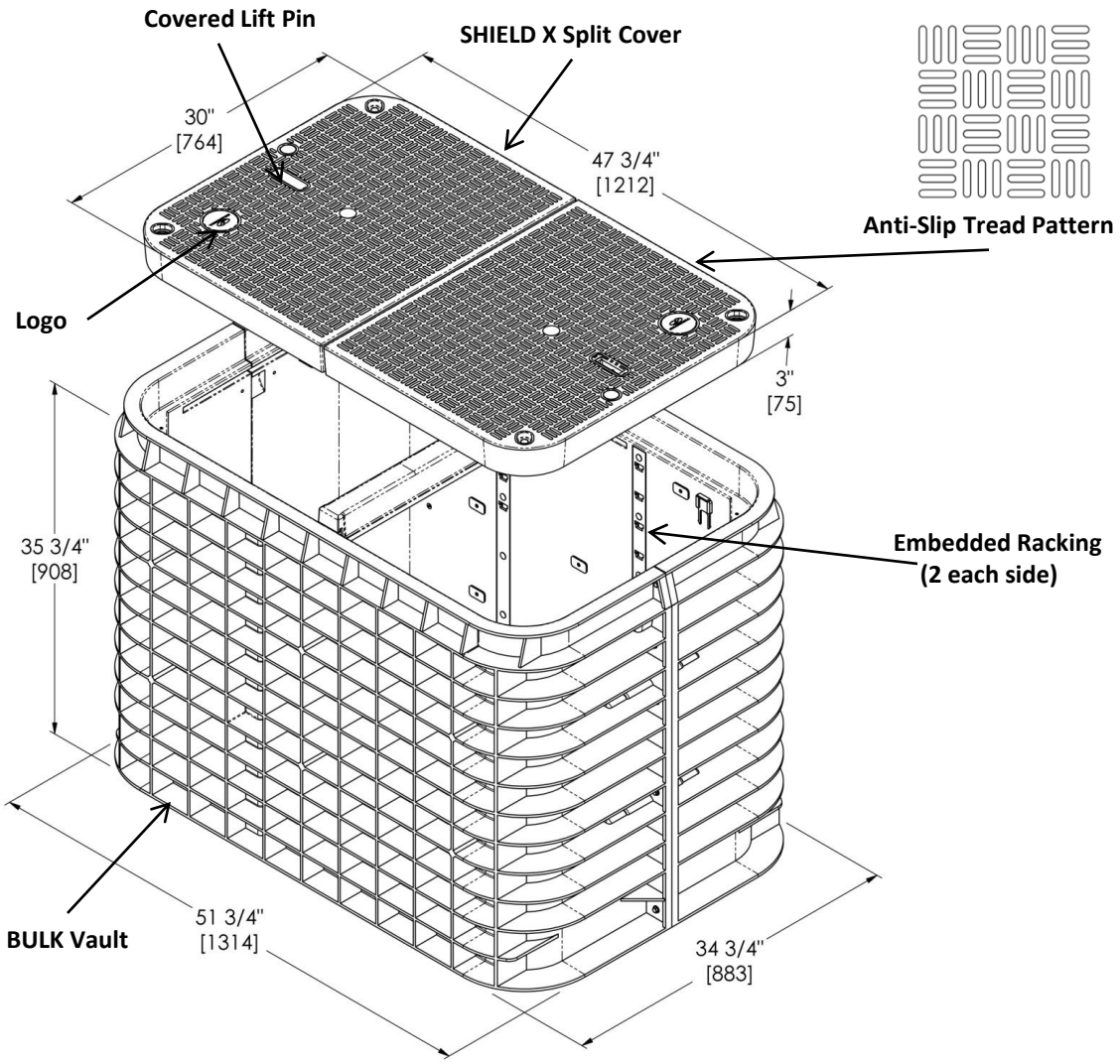
- 30” X 48” X 36” (open floor) (actual dimensions on drawing)
- BULK VAULT – SHIELD X Split COVER- Tier 22 Load Rated (ANSI/SCTE 77: 2016)
- (4) Cover fastener auger bolts, Hex (9/16”) or Penta (7/8”) head with washer (304 stainless steel)
- (4) Non-Seizing Fastening System, Field Replaceable
- (4) Embedded Composite Rack Support
- (1) Lifting slot equipped with stainless steel pin (slot is approximately 2 ¾”x ¾”)
- (1) Galvanized Center Beam
- (2) Logo Disk
- Stainless steel hardware is 300 series.

WEIGHT & SHIPPING:

- Cover Weight: 50 lbs (Per Half)
- Box Weight: 129 lbs
- Assembly Weight : 229 lbs

PERFORMANCE TESTING:

- ANSI/SCTE 77: 2016 - TIER 22 Rated (33,750 lbs)
- AS3996 – Class C
- EN124 Class B125
- ASTM C1028-07 & AS-4586 (Slip Resistance)
- 10,000 Hour Xenon-Arc Exposure (No fiber-bloom)
- ASTM D635-06 (Flammability)



Inside Dimensions		
Length	**Width**	**Depth**
46 ½” [1180]	28 ¾” [730]	32 ¾” [832]

CHANNELL

BULKU366036

BULK VAULT HDPE STRUCTURAL FOAM SHIELD X COMPOSITE COVER

BULK™ SHIELD X™

FEATURES:

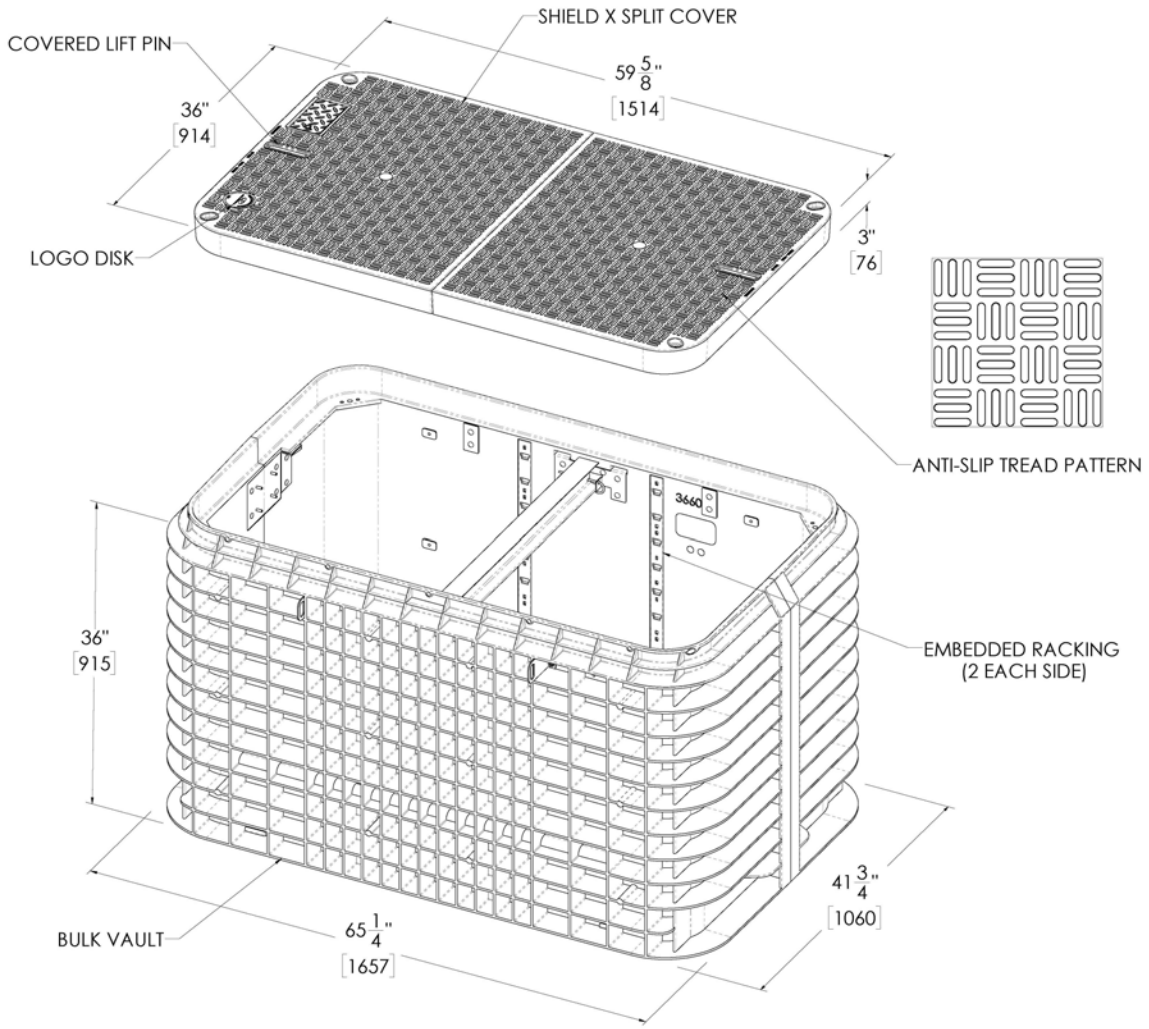
- 36” X 60” X 36” (open floor) (actual dimensions on drawing)
- BULK Vault – SHIELD X Split cover- Tier 22 Load Rated (ANSI/SCTE 77: 2016)
- (4) Cover fastener auger bolts, Hex (9/16”) or Penta (7/8”) head with washer (304 stainless steel)
- (4) Non-Seizing Fastening System, Field Replaceable
- (4) Embedded Composite Rack Support
- (1) Lifting slot, per cover, equipped with stainless steel pin (slot is approximately 4 1/2”x ¾”)
- (1) Galvanized Center Beam
- (1) Logo Disk
- Stainless steel hardware is 300 series.
- Available with flush to surface pad lock box.

WEIGHT & SHIPPING:

- Cover Weight:
  - Fixed Half 76 lbs.
  - Lock Half: 80 lbs.
- Box Weight: 209 lbs
- Assembly Weight : 365 lbs

PERFORMANCE TESTING:

- ANSI/SCTE 77: 2016 - TIER 22 Rated (33,750 lbs)
- AS3996 – Class C
- EN124 Class B125
- ASTM C1028-07 & AS-4586 (Slip Resistance)
- 10,000 Hour Xenon-Arc Exposure (No fiber-bloom)
- ASTM D635-06 (Flammability)

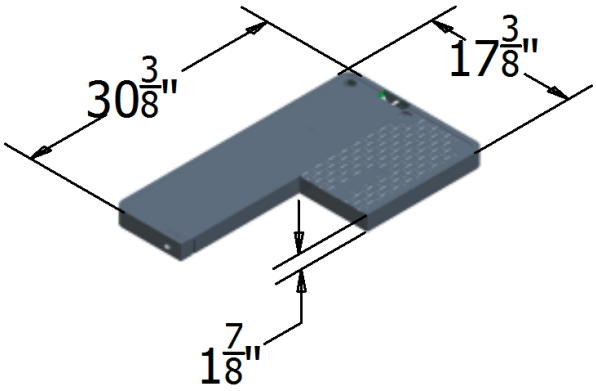


Inside Dimensions		
Length	**Width**	**Depth**
58 1/4" [1480]	34 3/4" [883]	32 5/8" [829]

CHANNELL

1730-24

CARSON® *Spec Grade*



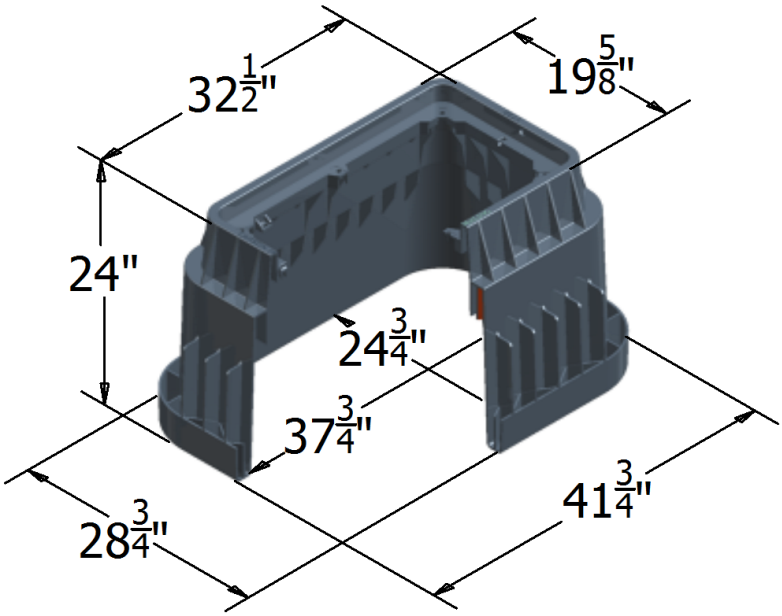


Bolt Down Detail

COVER

Style:	Flush
Material:	HDPE
Model:	17” x 30”
Weight:	10 lbs
Std. Fasteners:	3/8” Hex Bolt
Options:	Logos and Special Markings
Surface:	Skid Resistant & Marked
Performance:	Pedestrian, ASTM C857, WUC 3.6

Cover comes standard with permanent markings for manufacturer and model size.



BODY

Material:	HDPE
Model:	17” x 30”
Weight:	24” Depth: 52 lbs
Wall Type:	Flared
Mouseholes:	0
Performance:	Pedestrian, ASTM C857, WUC 3.6

LOAD RATING / NOTES

LIGHT DUTY
PEDESTRIAN / GREENBELT

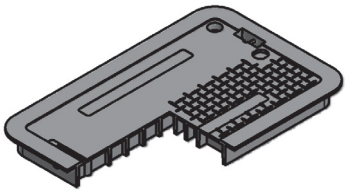
For use in non-vehicular traffic situations only. Weights and dimensions may vary slightly. Actual load rating is determined by the box and cover combination.

1730-24

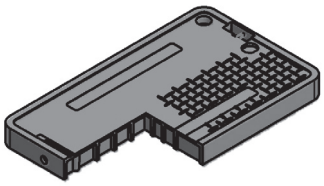
CARSON® *Spec Grade*

COVER OPTIONS

HDPE, T-Cover Solid
HDPE, Flush Solid
HDPE, Flush with Plastic Reader Door
HDPE, Flush with Cast Iron Reader Door



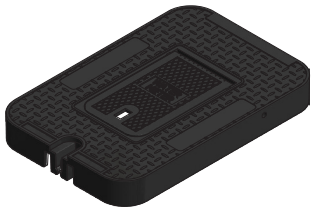
T-Cover Solid



Flush Solid

COLOR OPTIONS

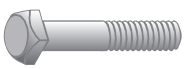
Cover: Black, Green, Gray, Tan, Purple
Body: Black, Green, Gray, Tan, Purple



Reader Door Detail

FASTENER OPTIONS

Hex Head Bolt (A)
Penta Head Bolt (B)
Penta Head Coil Thread Bolt (B)
Oldcastle Vandal Resistant Bolt (C)
Captive Bolt Retainer
Drop-N-Lock™



Standard Thread



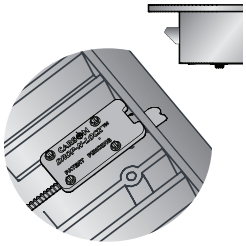
A B C



Coil Thread



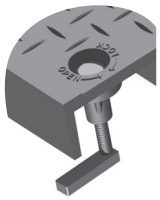
Bolt Retainer
(for standard thread)



Drop-N-Lock
(T-Cover only)

ADD ON OPTIONS

AMR Friendly Solutions
Touch Read Hole
EMS Marker
Racking Provision



L Bolt Detail



EMS Marker

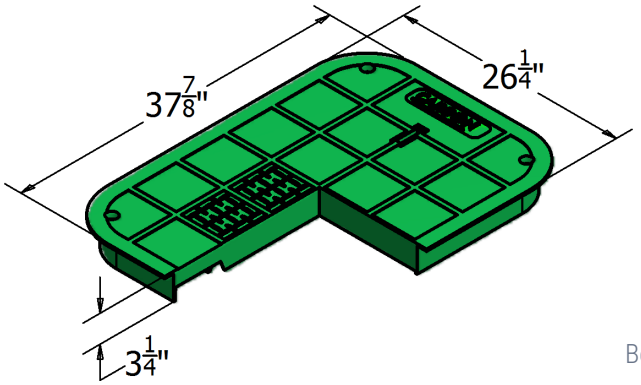
WARNING: Cancer - www.P65Warnings.ca.gov

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2436

CARSON® *Spec Grade*





Bolt Down Detail

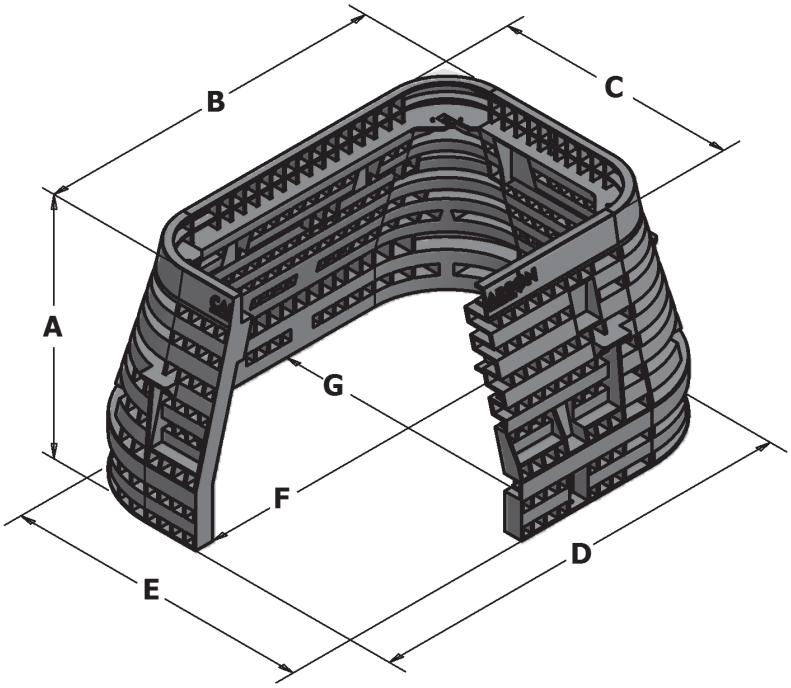
COVER

Style:	T-Cover
Material:	HDPE
Model:	24” x 36”
Weight:	37 lbs
Std. Fasteners:	3/8” Hex Bolt
Options:	Logos and Special Markings
Surface:	Skid Resistant & Marked
Performance:	Pedestrian, ASTM C857, WUC 3.6

Cover comes standard with permanent markings for manufacturer and model size.

BODY

Material:	HDPE
Model:	24” x 36”
Weight:	18” Depth: 47 lbs 24” Depth: 62 lbs
Wall Type:	Flared
Mouseholes:	0
Performance:	Pedestrian, ASTM C857, WUC 3.6



LOAD RATING / NOTES

LIGHT DUTY
PEDESTRIAN / GREENBELT

For use in non-vehicular traffic situations only. Weights and dimensions may vary slightly. Actual load rating is determined by the box and cover combination.

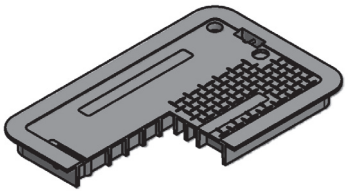
A	B	C	D	E	F	G
18”	37-3/4”	26-1/4”	47”	35-3/8”	42-7/8”	31-1/4”
24”	37-3/4”	26-1/4”	47”	35-3/8”	42-7/8”	31-1/4”

2436

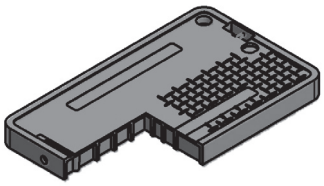
CARSON® *Spec Grade*

COVER OPTIONS

HDPE, T-Cover Solid
HDPE, Flush Solid



T-Cover Solid



Flush Solid

COLOR OPTIONS

Cover: Green, Gray
Body: Black, Gray

FASTENER OPTIONS

Hex Head Bolt (A)
Penta Head Bolt (B)
Penta Head Coil Thread Bolt (B)
Oldcastle Vandal Resistant Bolt (C)
Captive Bolt Retainer
Drop-N-Lock™



Standard Thread



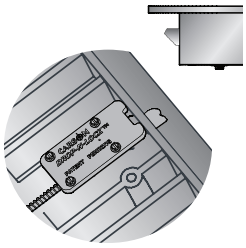
A B C



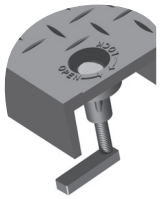
Coil Thread



Bolt Retainer
(for standard thread)



Drop-N-Lock
(T-Cover only)



L Bolt Detail

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Oldcastle Precast®
Enclosure Solutions

CARSON Christy SYNERTECH

www.oldcastleprecast.com/enclosuresolutions

Revision 3.01, 07.26.10

Plastic & Polymer Grade Level Enclosure Installation Procedure

1 SCOPE

Installation instructions provide general information useful for *parkway installation* in both 'grass surround' and 'sidewalk' locations. This guide cannot anticipate all situations that could develop in the field. Rather, it presents information applicable to common installation conditions.

1.1 Installation Location

Location alone should not dictate product selection. Oldcastle Precast Enclosure Solutions divide their product offerings into performance classifications based on Design Load, the maximum load that may repeatedly be applied safely.

1.1.1 Light Duty (Carson/L Series brands)

'Pedestrian Loading', sometimes referred to as 'greenbelt' defines our all HDPE body and cover vaults intended for installation in landscape or grass surround areas where they will not be exposed to vehicular traffic. Exceptions to this rule include residential or light commercial mowers but do not include tractor/ mowers in highway easements.

1.1.2 Medium Duty (Fibrelyte/Carson Hybrid and Heavy Wall brands)

'Incidental/ Non-deliberate Light Vehicular Loading' category includes HDPE and glass filled HDPE bodies with polymer concrete covers and rings (for some sizes). This product range can be installed in sidewalks or in grass surround (between curb and sidewalk) where *it is reasonable to expect that some light vehicular traffic may occur*.

1.1.3 Heavy Duty (Synertech/H-Series brands)

'Incidental/ Non-deliberate Medium and Heavy Vehicular Loading' category is limited to all polymer concrete assemblies of body and cover. These products, while intended for installation in non-traffic areas of sidewalks and other asphalt or concrete surround are also installed in grass surround where governing organizations mandate. It is recommended that when installed in grass or soil surround a three to four-inch (3" – 4") thick concrete collar may be poured around the enclosure.

1.2 Cover Selection

1.2.1 It is entirely appropriate and responsible to specify the use of a cover surface exhibiting a coefficient of friction greater than 0.5 whenever a vault and cover assembly are installed in a designated "walkway". The following coefficient of frictions have been determined using ASTM C-1028 and are typical for Carson brand material and texture patterns:

Cover	Neolite Test Specimen		Leather Test Specimen	
	Dry	Wet	Dry	Wet
HDPE	0.29	0.27	0.28	0.43
Polymer Concrete	0.84	0.67	0.60	0.64

1.2.2 Installation of product in a sidewalk (alone) does not specify a mandatory loading requirement. It is reasonable to assume there will be foot traffic.

1.2.3 HDPE covers receive a "vertical load rating" of "pedestrian traffic" (ASTM, C-857, A-0.3). The rating does not address coefficient of friction requirements that may be proper for installation in a dedicated walkway.

2 PROCEDURE

2.1 Site Preparation

2.1.1 Ensure that national - local electrical and building codes, OSHA and Company safety work rules are observed and provisions made for street flags, barricades and cones.

2.1.2 Secure permits as required by city and Company.

2.2 Excavation

2.2.1 Plan excavation approximately twelve to sixteen inches (12” – 16”) longer and wider than the actual dimensions of the vault to be installed. Similarly, excavate six to eight inches (6” – 8”) deeper than the overall dimensions of the vault with cover in place.

CAUTION: Vault *size* is generally defined by the approximate cover dimensions. The vault actual measurements will differ. Refer to the Oldcastle Precast Enclosure Solutions catalog or measure the vault overall maximum dimensions for computing the excavation hole size.

NOTE: The dimensions above for determining the size of excavation provide sufficient volume for accommodating the maximum recommended select backfill. The volume of the excavation would be reduced if a lesser volume of backfill material were chosen.

2.2.2 Installation can be in a ‘grass surround’ or in a ‘concrete surround’ (sidewalk) as required. The installation procedure is similar. Differences exist primarily in backfill material.

2.2.3 If installation is to be within a sidewalk, it is generally more practical to use a masonry saw and remove the entire sidewalk width to facilitate soil removal.

2.2.4 Excavate hole to appropriate dimension with mechanical excavator or hand dig as appropriate. Confirm the excavation floor is level.

2.3 Installation

2.3.1 While it is a common practice to install Pedestrian Rated vaults in grass surround without select backfill, Oldcastle Precast Enclosure Solutions recommends the use of a minimum two to three-inches (2” – 4”) crushed rock to prevent subsidence over time. Subsidence is a familiar example of neglecting this step.

2.3.2 Vaults designed to withstand incidental/ non-deliberate traffic must be installed on a crushed rock base. A minimum thickness for light traffic (Fibrelyte/Carson Hybrid and Heavy Wall brands 'Medium Duty' classification) should be a minimum of four inches (4"). A thicker base of six to eight inches (6" – 8") is required for vaults designed for medium and heavy incidental traffic (Synertech/H-Series brands 'Heavy Duty' classification) or where shallow ground water is common.

NOTE: Base material shall be crushed rock ¾" and smaller, angular stone, not '*river rock* or *round stone*'. Desired compaction and equivalent resistance to lateral loading will not be achieved with round stone. The rock should be free of soil and organic material.

ALTERNATE: A '*dry lean mix*' may be prepared for backfill using Portland cement and crushed rock in a ratio of 1:10. This higher strength alternative is useful where severe surcharge loading (lateral live load) is anticipated and the more flexible HDPE body is chosen.

2.3.3 Set vault into excavation on top of backfill material and adjust height to grade. Tamp base material to level with a mechanical tamper or hand tamper. It is generally desirable to install vault level. When a vault must be installed on a hill, a retaining wall provision shall be made.

2.3.4 The cover of the enclosure shall not be lower than nor more than two-inches (2") higher than the grade as specified by the Owner/ Operator. Soil in the immediate vicinity shall be tamped and sloped away from the enclosure.

2.3.5 Center the vault in the excavation parallel with sidewalk or curb. Mark the vault for duct/ pipe entry locations. The HDPE vault may be cut with a hole saw and drill motor. Provide adequate clearance for ovality in ducts. Small clearance between duct and vault may be sealed with expanding polyurethane foam.

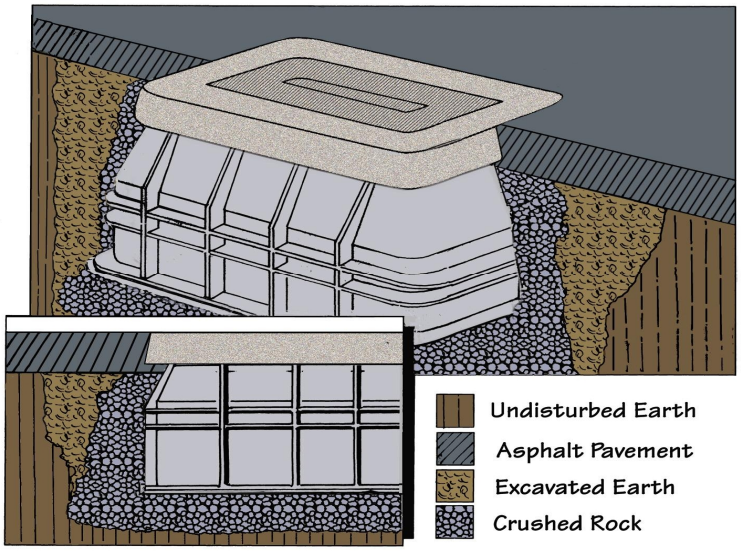
2.3.6 Backfill material can vary based on product and installation location. It is customary and acceptable in landscape installations where vehicles are prevented from traffic on or around a Pedestrian Rated vault to use the spoils removed during excavation for backfill. Remove stones three-inches (3") and larger.

2.3.7 For all product categories, begin the backfilling operation by adding soil, crushed rock or dry lean mix in eight-inch (8") *lifts* or layers.

2.3.8 Oldcastle Precast Enclosure Solutions recommends not using a mechanical tamper with a HDPE vault body, it may be desirable to use internal bracing during the backfill and tamping operation to prevent excessive deflection the sidewalls.

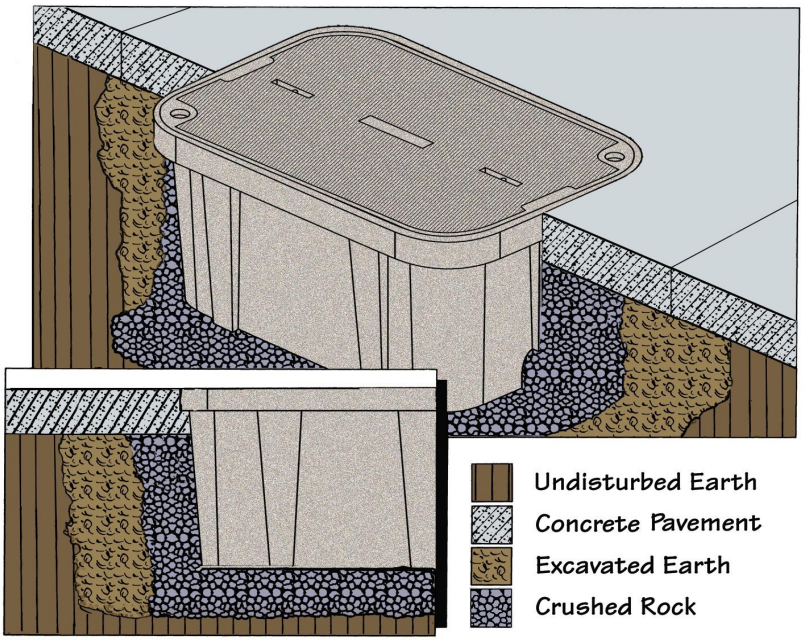
NOTE: The cover should be installed and bolted into the vault body prior to backfilling. This prevents debris from entering the vault or its' cover fasteners and ensures cover fit on completion of installation.

All information contained in this document was current at the time of printing. Because of Oldcastle Precast Enclosure Solutions policy of ongoing research and development, the Company reserves the right to discontinue or update product information without notice.



Medium Duty Product (Fibrelyte/Carson Hybrid and Heavy Wall brands)
Concrete or Asphalt Surround (shown)

Note compacted crushed rock surround. Dry mix could be added to crushed rock under "Ring" to improve vertical load bearing capacity.



Heavy Duty Product (Synertech/H-Series brands)
Concrete or Asphalt Surround (shown)

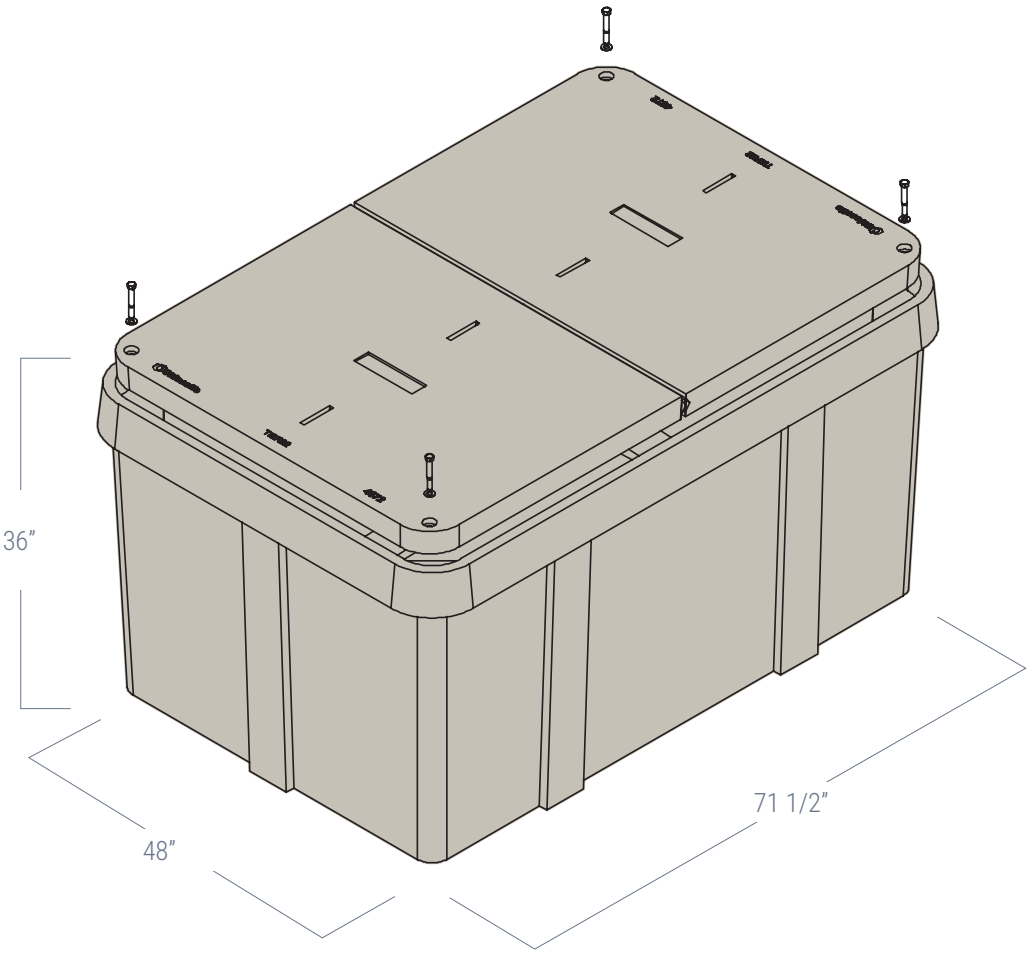
Note compacted crushed rock surround and concrete under vault collar. Not shown but also applicable for this type enclosure is a '*greenbelt'* installation. Many DOT's require a four-inch (4") concrete ring poured around vault collar.

End

Oldcastle Infrastructure
A CRH COMPANY

OLDCASTLE POLYMER

4872



MATERIAL & STYLE

Polymer Concrete
Straight Wall

4872-36

ANSI/SCTE-77, Tier 22
734 lbs

OPTIONS

Mouseholes/Knockouts

Solid Bottom

HEAVY DUTY
ANSI/SCTE TIER 22

For use in non-vehicular traffic situations only. Weights and dimensions may vary slightly. Actual load rating is determined by the box and cover combination.

Cover comes standard with permanent markings for manufacturer, load rating, model size and manufacturing location. Based upon lid and body combination, this unit can be Tier 15 or Tier 22. T22 rating when paired with T22 Cover.

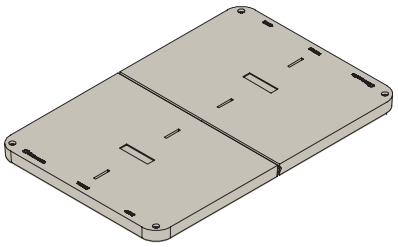
Revision 04/19/21

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OLDCASTLE POLYMER

4872



OPTIONS

Available Covers:

- Polymer Concrete, Flush Split Cover

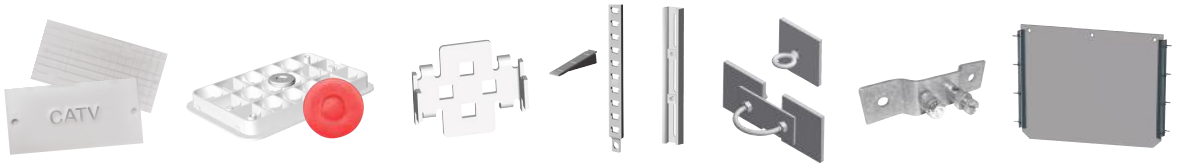




Detail: Lifting Strap

Fasteners:

- Hex Head Bolt
- Penta Head Bolt
- Penta Head Coil Thread Bolt
- Vandal Resistant Bolt
- Captive Bolt Retainer



Add On Options:

- Logos and Special Markings
- Marking Plate
- EMS Marker
- Rack Mount / Cable Rack
- Cable Arms
- Unistrut
- Pulling Eye
- Ground Buss
- Dividers
- Lid Gaskets*

RAW MATERIAL SPECIFICATION

BODY : Material Property	Test Method	Typical Value[1]
COMPRESSIVE STRENGTH	ASTM C 579	> 12,500 PSI
FLEXURAL STRENGTH	ASTM D 790	> 3,000 PSI
MODULAS OF RUPTURE	ASTM C 99	≥ 3,000 PSI
WATER ABSORPTION	ASTM C 97	≤ 0.25%
IMPACT RESISTANCE	ASTM D 2444	> 70 FT-LB
FRICTION COEFFICIENT	ASTM C 1028	> 0.5
CHEMICAL RESISTANCE	ASTM D 543	RESISTANT, > 75% RETENTION PHYSICAL PROPERTIES

[1] The values listed for physical property measurements are nominal values only. Certain physical property measurements are subject to variations consistent with the test methods and are within a generally accepted range for such values.

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* Lid Gaskets inhibit water flow into the box, they do not make enclosure fully waterproof.

Product modifications, including but not limited to, cutting for conduit access, or "mouseholes" may alter ratings and product performance listed within this document unless stated otherwise.

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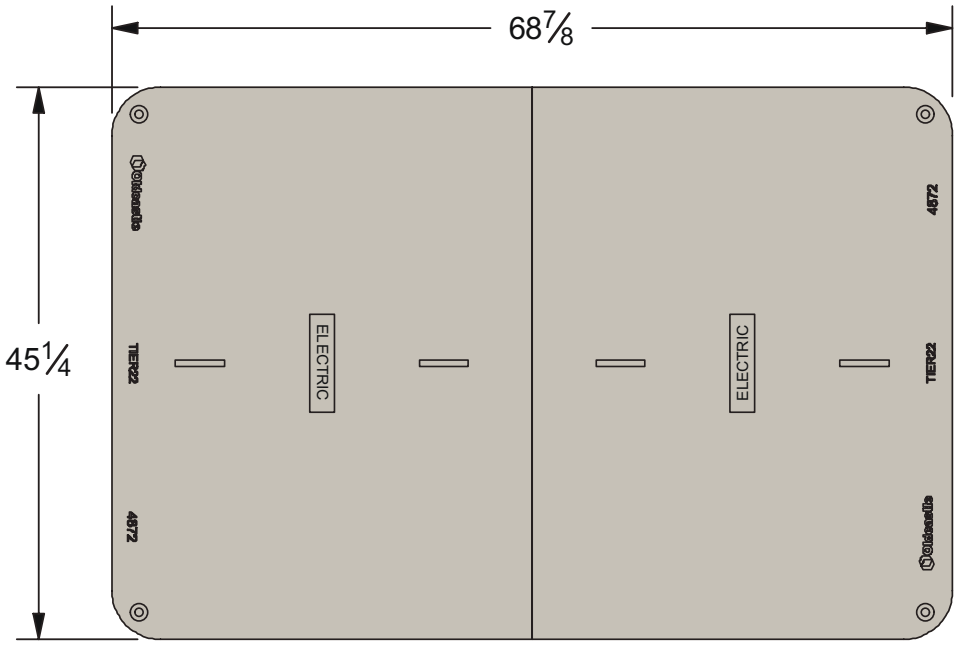
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OLDCASTLE POLYMER

4872 COVER



MATERIAL & STYLE

Polymer Concrete
Flush Split Cover
Non-skid texture

HARDWARE

1/2-13 Stainless Steel Hex Head Bolt, Washer and Floating Nut

PERFORMANCE & WEIGHT

ANSI/SCTE-77, Tier 22
337 lbs / Half

OPTIONS

Marking Plate
Hex Head Bolt
Penta Head Bolt
Penta Head Coil Thread Bolt
Vandal Resistant Bolt
Logos and Special Markings
EMS Marker

Cover comes standard with permanent markings for manufacturer, load rating, model size and manufacturing location.

RAW MATERIAL SPECIFICATION

COVER : Material Property	Test Method	Typical Value[1]
COMPRESSIVE STRENGTH	ASTM C 579	> 12,500 PSI
FLEXURAL STRENGTH	ASTM D 790	> 3,000 PSI
MODULAS OF RUPTURE	ASTM C 99	≥ 3,000 PSI
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HEAVY DUTY
ANSI/SCTE TIER 22

For use in non-vehicular traffic situations only. Weights and dimensions may vary slightly. Actual load rating is determined by the box and cover combination.

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UNDERGROUND MARKING TAPE

PREMIUM SUPERSTRETCH™

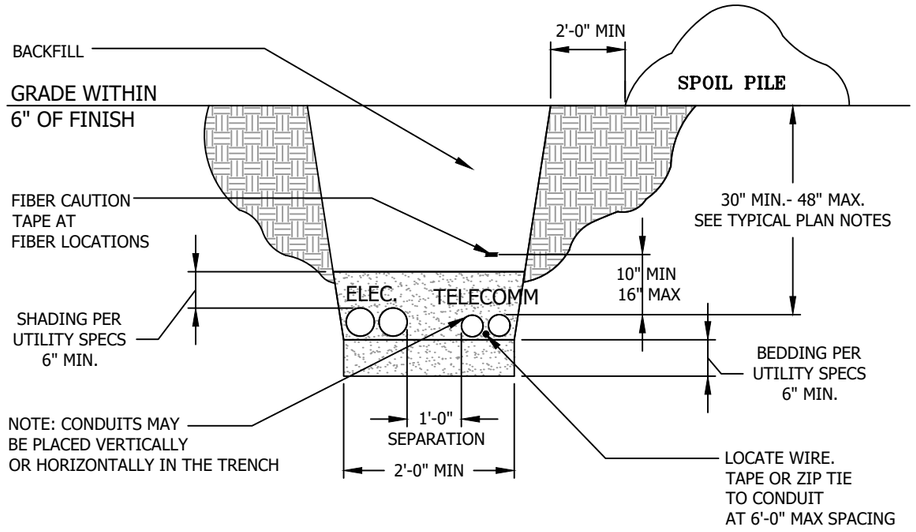
Property	Test Method	U.S. Value	Metric Value
Overall Thickness	ASTM D-2103	6.0 Mil (Nominal)	0.15 mm
Weight	ASTM D-2103	27.3 lbs /1000 ft^2	13.3 kg/100 m^2
Tensile Strength	ASTM D-882	6050 PSI 32.7 lbs/in width	41.7 MPa 145.5 N
Elongation	ASTM D-882	950%	950%
Printability	ASTM D-2578	> 40 dynes	> 40 dynes

Key Features and Benefits

** Specially formulated plastic film with super-enhanced tensile and elongation characteristics*
** Identifies and protects buried lines*
** Suitable for both plow and open trench applications*
** Lead-free pigments maintain color vibrancy in the soil*
** Environmentally safe ink ensures a long lasting warning message*
** Acid and alkali resistance enhances long term integrity in the ground*
** Meets American Public Works Association (APWA) National Color Code*
** Available in orange with black lettering. Other film colors may be available upon request.*

Approvals

* U.S. DOT, Office of Pipeline Safety
* NTSB, Prevention of Damage to Pipeline Study
* OSHA, Location of Underground Utility Lines Regulation
* API, Recommended Practice For Marking Buried Petroleum Pipelines
* GSA, Public Buildings Mechanical & Electrical Equipment Specification
* REA, National Electrical Safety Code for Underground Construction



TYPICAL TELECOMMUNICATIONS AND POWER SHARED TRENCH DETAIL

TYPICAL PLAN NOTES

SEE THE TYPICAL DETAILS FOR MORE INFORMATION.

BURIED TELECOMMUNICATION FACILITES

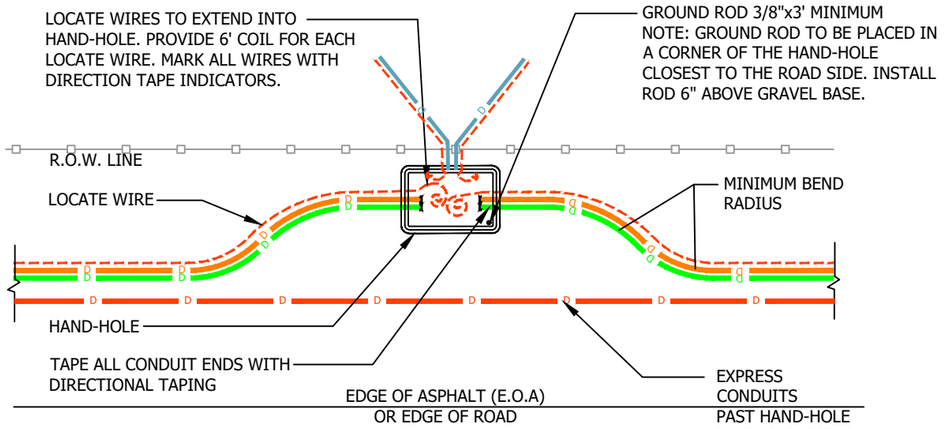
1. TYPICAL TRENCH DEPTHS:
   - A. ALL TRENCH DEPTHS ARE THE MINIMUM REQUIRED FROM FINAL FINISH GRADE TO TOP OF CONDUIT.
     - I. RESIDENTIAL 30".
     - II. COUNTY AND CITY ROW 36".
2. ALL PEDESTALS AND VAULTS TO BE PLACED NEXT TO GROUND TRANSFORMERS, SWITCHES, AND OTHER GROUND INSTALLED POWER FACILITIES SHALL MEET MINIMUM CLEARANCE REQUIREMENTS REQUIRED BY THE POWER COMPANY.
3. ALL PEDESTALS AND VAULTS TO BE PLACED A MINIMUM OF 4'-0" CLEAR OF POWER POLES.
4. CONDUIT AND RUNS TO MAINTAIN 4'-0" MINIMUM FROM POWER POLE RUNNING LINE.
5. NOTIFY THE INSPECTOR IF MINIMUM CLEARANCES TO POWER POLES OR POWER RUNNING LINES ARE NOT ABLE TO BE MET.
6. ALL CONDUITS PLACED IN AN OPEN TRENCH TO BE LOCATED SUCH THAT THEY MINIMIZE SNAKING AND MAINTAIN AS STRAIGHT A PROFILE AS POSSIBLE.
7. ALL CONDUIT PATHWAYS SHALL BE PROOFED FOR FUTURE CABLE INSTALLATION PRIOR TO THE COMPLETION OF CONSTRUCTION.

NOTES:

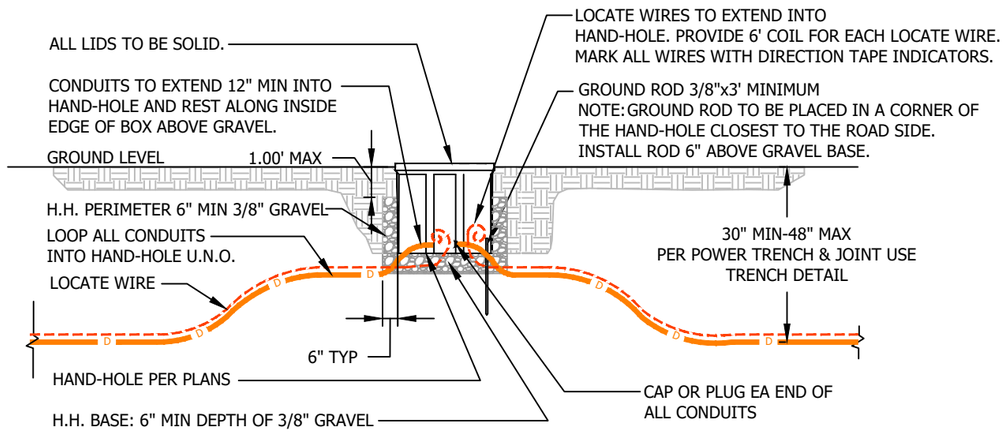
1. PLACE HAND-HOLE AGAINST R.O.W. LINE UNLESS NOTED OTHERWISE (U.N.O.) ON THE PLANS. SWEEP DUCTS AND TRACER LOCATE WIRE INTO HAND-HOLE WHILE MAINTAINING MINIMUM BEND RADIUS AT ALL CONDUIT BENDS. PLUG OR CAP ALL CONDUIT ENDS. MARK ALL CONDUIT ENDS WITH DIRECTIONAL TAPE INDICATORS.

2. SWEEP DUCTS AND LOCATE WIRE INTO HAND-HOLE WHILE MAINTAINING MIN. BENDING RADIUS AT ALL CONDUIT BENDS.
   MIN. BEND RADIUSES: 18/14 MICRO-DUCT= 7"
   4 WAY OR 7 WAY FUTURE PATH MICRO-CONDUITS = 4'

3. DETAIL IS REPRESENTATIVE OF TYPICAL FIELD CONDITIONS. ACTUAL CONDITIONS MAY VARY AND ARE SUSCEPTIBLE TO ALTERATIONS AS WARRANTED BY FIELD INSPECTORS.



PLAN VIEW



PROFILE VIEW

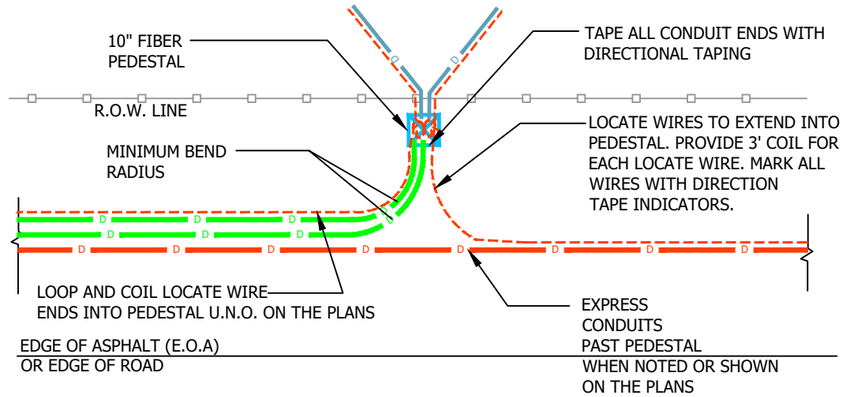
PREFERRED HAND-HOLE PLACEMENT DETAIL

NOTES:

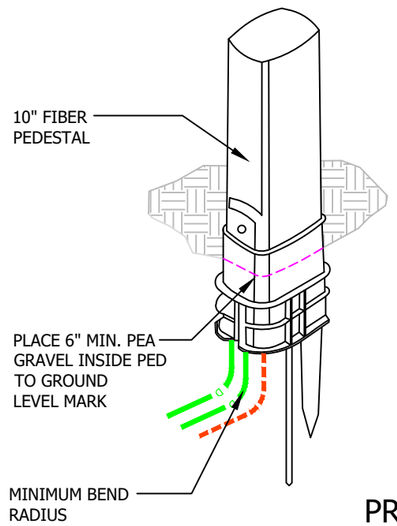
1. PLACE PEDESTAL AGAINST R.O.W. LINE UNLESS NOTED OTHERWISE (U.N.O.) ON THE PLANS. LOOP ALL DUCTS INTO PEDESTAL WHILE MAINTAINING A RADIUS/SWEEP AT ALL BENDS. PLUG OR CAP ALL CONDUIT ENDS FOR CONDUITS NOT IN USE. MARK ALL CONDUIT ENDS WITH DIRECTIONAL TAPE INDICATORS.

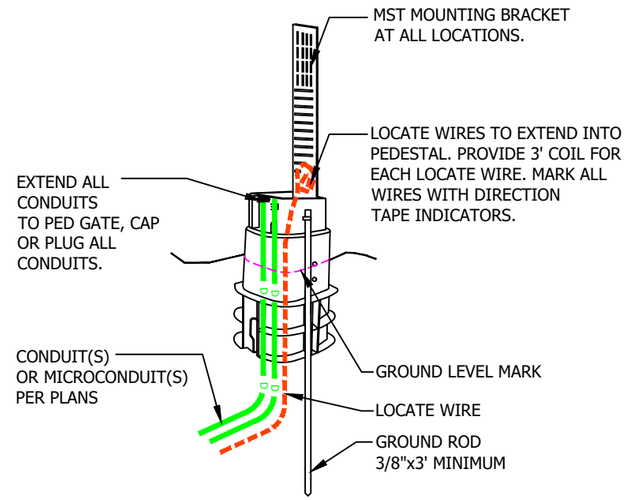
2. DETAIL IS REPRESENTATIVE OF TYPICAL FIELD CONDITIONS. ACTUAL CONDITIONS MAY VARY AND ARE SUSCEPTIBLE TO ALTERATIONS AS WARRANTED BY STRATA NETWORKS FIELD INSPECTORS.

3. SWEEP DUCTS AND LOCATE WIRE INTO HAND-HOLE WHILE MAINTAINING MIN. BENDING RADIUS AT ALL CONDUIT BENDS.
   MIN. BEND RADIUSES: 18/14 MICRO-DUCT= 7"
   4 WAY OR 7 WAY FUTURE PATH MICRO-CONDUITS = 4'



PLAN VIEW





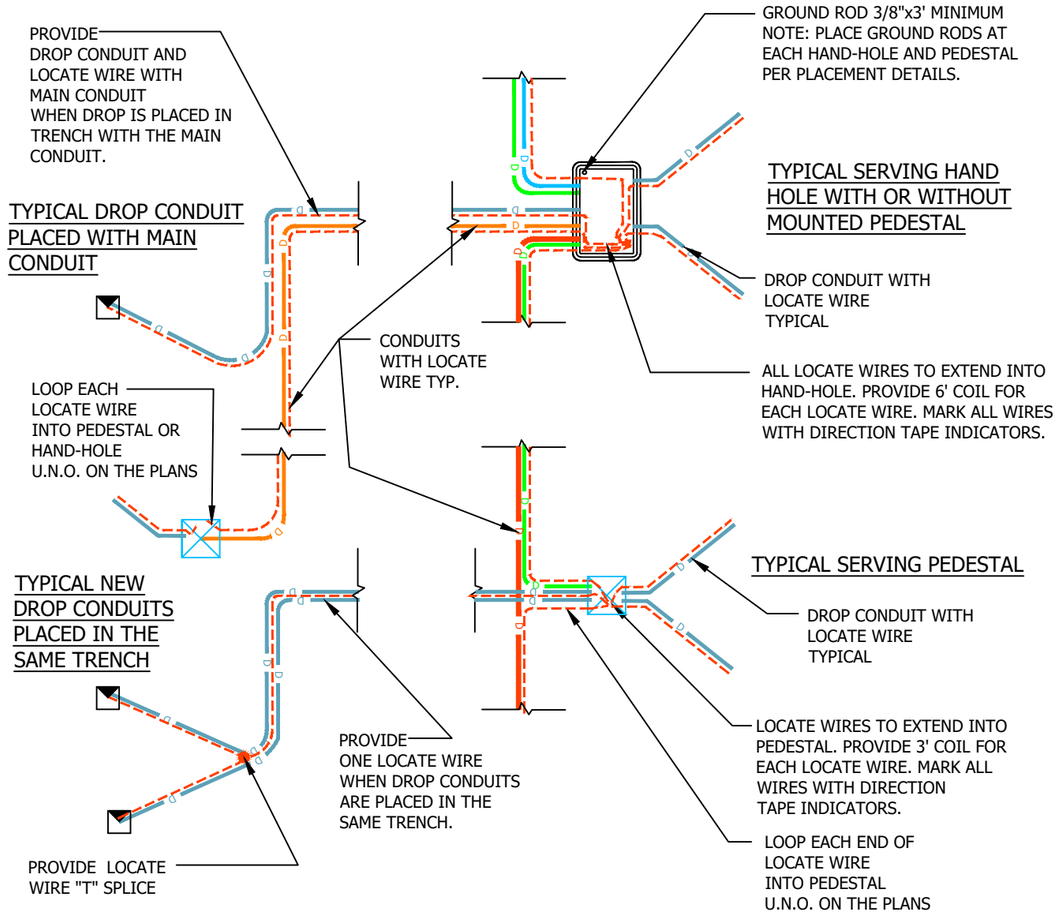
PROFILE VIEW

PEDESTAL PLACEMENT DETAIL

TITLE: MUNICIPAL FIBER DETAILS --TITLE BLOCK (2)	**Project #: PROJECT NUMBER**	**Tax Code: TAX CODE**	**Sheet #: XX OF 9**

NOTES:
1. LOCATE WIRE TO RUN CONTINUOUS FROM HAND-HOLE/PEDESTAL TO ADJACENT HAND-HOLE/PEDESTAL. MID-SPAN SPLICING OF LOCATE WIRE IS NOT PERMITTED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE INSPECTOR. ALL MAIN LINE LOCATE WIRES CONTAINING A INTERMEDIATE SPLICE WILL BE SUBJECT TO PRE-APPROVAL, LOCATION VERIFICATION, AND LOCATE TESTING PRIOR TO ACCEPTANCE.

2. ATTACH ALL LOCATE WIRE TO CONDUIT AT 6'-0" MAX SPACING WITH TAPE OR ZIP TIES PRIOR TO PLACING CONDUIT INTO THE TRENCH.

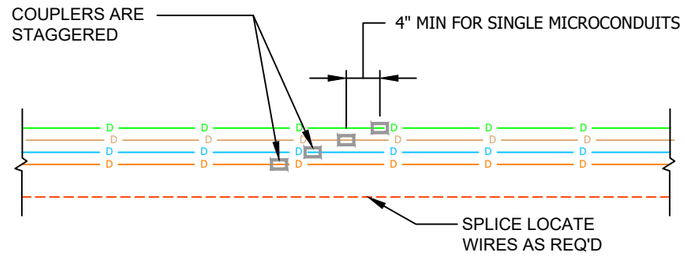


TYPICAL LOCATE SYSTEM DETAIL

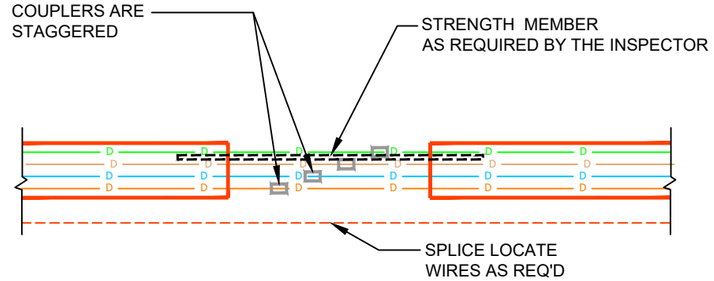
NOTES:
1. LOCATE WIRE MAY BE LOCATED INSIDE OF AN EXISTING CONDUIT OR FASTENED TO THE EXTERIOR OF A NEW CONDUIT.

2. ALL CONDUIT COUPLERS ARE TO BE SUPPLIED OR APPROVED BY THE CONDUIT MANUFACTURER.

2. DETAIL IS REPRESENTATIVE OF TYPICAL FIELD CONDITIONS. ACTUAL CONDITIONS MAY VARY AND ARE SUSCEPTIBLE TO ALTERATIONS AS WARRANTED BY STRATA NETWORKS FIELD INSPECTORS.



SINGLE MICROCONDUIT COUPLE DETAIL



4 WAY FUTURE PATH MICROCONDUITS COUPLE DETAIL

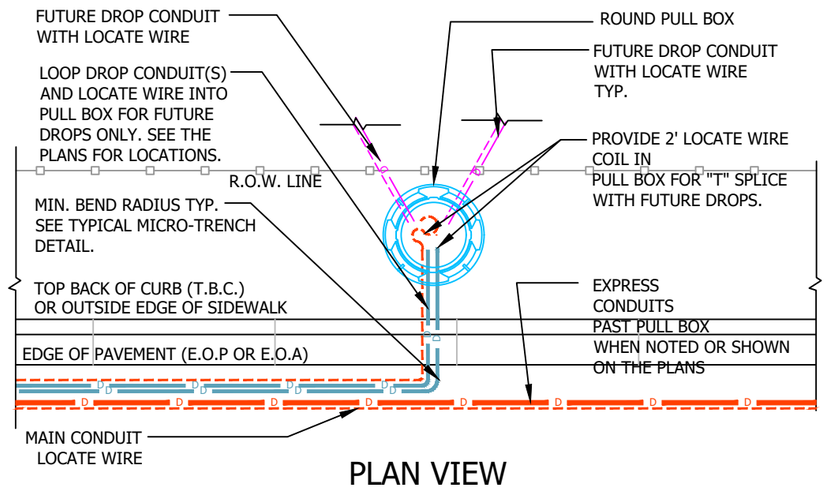
CONDUIT COUPLE DETAILS

TITLE: MUNICIPAL FIBER DETAILS --TITLE BLOCK (3)	**Project #: PROJECT NUMBER**	**Tax Code: TAX CODE**	**Sheet #: XX OF 9**

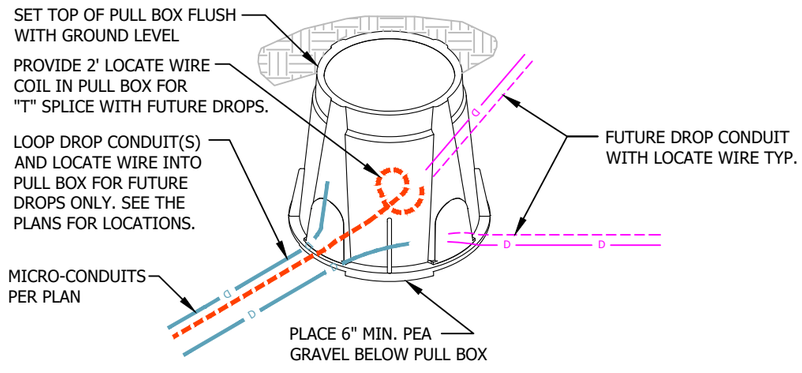
NOTES:

1. PLACE PULL BOX AGAINST R.O.W. LINE WHERE POSSIBLE. PULL BOXES ARE NOT TO BE PLACED IN LOCATIONS WHERE POTENTIAL VEHICLE TRAFFIC MAY OCCUR. LOOP ALL UNUSED DROP MICRO-CONDUITS INTO PULL BOX WHILE MAINTAINING A RADIUS/SWEEP AT ALL BENDS. PLUG OR CAP ALL MICRO-CONDUIT ENDS INSIDE PULL BOX. PULL BOX IS INTENDED TO BE REMOVED ONCE THE FUTURE DROP CONDUIT HAS BEEN INSTALLED.

2. DETAIL IS REPRESENTATIVE OF TYPICAL FIELD CONDITIONS. ACTUAL CONDITIONS MAY VARY AND ARE SUSCEPTIBLE TO ALTERATIONS AS WARRANTED BY STRATA NETWORKS FIELD INSPECTORS.



PLAN VIEW



PROFILE VIEW

PULL BOX PLACEMENT DETAIL

KEY FOR COLOR CODING CABLES, CONDUITS, & LOCATE WIRE:

TAPE THE ENDS OF THE CABLES, CONDUITS, AND LOCATE WIRE IN PEDS AND HAND-HOLES, DEPENDING ON WHICH DIRECTION THEY ARE LEAVING THE PEDESTAL OR HAND-HOLE. COLORS MAY BE COMBINED TO DELINEATE ADDITIONAL DIRECTIONS, I.E. SOUTH-WEST, NORTH-WEST, ETC. USE ONLY SOLID COLORED TAPE.

CENTRAL OFFICE/NETWORK FEED-BLUE
(USE BLUE ONLY WHEN DIRECTED BY THE INSPECTOR)
NORTH-ORANGE
EAST-GREEN
SOUTH-BROWN
WEST-SLATE

TITLE: MUNICIPAL FIBER DETAILS --TITLE BLOCK (4)	**Project #: PROJECT NUMBER**	**Tax Code: TAX CODE**	**Sheet #: XX OF 9**

AMERICAN FORK CITY **MEETING DATE:** October 19th, 2022
PLANNING COMMISSION STAFF REPORT

AGENDA TOPIC:

Review and action on a Site Plan for 500 E Automall Business Center, for the development of a business center in the PI-1 (Planned Industrial) zone, located at 450 E Automall Drive.

BACKGROUND INFORMATION		
Location:		450 E Automall Drive
Project Type:		Site Plan
Applicants:		Davies Design, ae urbia
Existing Land Use:		Design Industrial
Proposed Land Use:		N/A
Surrounding Land Use:	North	Design Commercial
	South	Design Industrial
	East	Design Industrial
	West	Design Industrial
Existing Zoning:		PI-1
Proposed Zoning:		N/A
Surrounding Zoning:	North	GC-2
	South	Unincorporated Territory, GC-1
	East	PI-1
	West	Unincorporated Territory

BACKGROUND:

The applicant is applying for site plan approval for 500 E Automall Business Center, for the development of a business center in the PI-1 (Planned Industrial) zone, located at 450 E Automall Drive. The proposal consists of 1 parcel for an office/warehouse structure and the entire development parcel consists of 3.81 acres.

Sec 17.6.101 Administrative Site Plan Review

Wherever the terms of this code require submission and approval of a site plan, such review shall be conducted in accordance with the following provisions.

1. Planning commission to approve. The planning commission, acting in an administrative capacity, shall have the function, duty and power to approve or disapprove a project plan and to attach such modifications or conditions as may be deemed appropriate to improve the layout, to ensure that the project will not pose any detrimental effect to persons or property, or to protect the health, safety, and general welfare of the citizens of the city.
2. Application required. Application for site plan approval shall be submitted on forms provided by the city and shall be accompanied by maps and drawings showing the following:
    1. The location of all existing and proposed buildings and structures on the site, with full dimensions showing the distance between buildings and distances from buildings to adjacent property lines.
    2. The location of all parking spaces, driveways, and points of vehicular ingress and egress.
    3. A landscaping plan showing the location, types, and initial sizes of all planting materials to be used together with the location of fences, walls, hedges, and decorative materials.
    4. Preliminary elevations of main buildings showing the general appearance and types of external materials to be used.
    5. The locations of solid waste receptacles and trash pick-up areas.
3. Appeals permitted. Any person aggrieved by a determination of the planning commission may request a hearing before the city council who shall have the authority to reverse, affirm or modify any decision of said commission. Any such appeal shall be filed within ten days of the determination of the planning commission.
4. Issuance of a permit. A building permit shall not be issued for any building or structure or external alterations thereto until the provisions of this section have been complied with. Any construction not in conformance with an approved site plan shall be considered a violation of this code. Any building permit issued shall ensure that development is undertaken and completed in conformity with the plans as approved.

PROJECT MAP:



PROJECT CONDITIONS OF APPROVAL:

1. This project is still under review.

STANDARD CONDITIONS OF APPROVAL:

APPLICANT is responsible and shall submit/post/obtain all necessary documentation and evidence to comply with these Standard Conditions of Approval prior to any platting, permitting, or any other form of authorization by the City including plat recording or other property conveyance to the City and prior to scheduling a pre-construction meeting. All recording shall take place at the Utah County Recorder's Office.

1. **Title Report:** Submit an updated Title Report not older than 30 days or other type of appropriate verification that shows all dedications to the City are free and clear of encumbrances, taxes, or other assessments.
2. **Property Taxes and Liens:** Submit evidence that all the property taxes, for the current and/or previous years, liens, and agricultural land use roll over fees have been paid in full.
3. **Water Rights:** Submit evidence that all the required water rights have been conveyed to American Fork City.
4. **Performance Guarantee:** Post a performance guarantee for all required public and essential common improvements.

5. **Easements and Agreements:** Submit/record a long-term Storm Water Pollution Prevention Maintenance Agreement signed and dated by the property owner and any required easement documentation.
6. **Land Disturbance Permit:** Obtain a Land Disturbance Permit.
7. **Compliance with the Plan Review Comments:** All plans and documents shall comply with all the Technical Review Committee comments and the City Engineer's final review.
8. **Commercial Structure:** Record an Owner Acknowledgment and Utility Liability Indemnification if the proposed building is a multi-unit commercial structure served by a single utility service.
9. **Sensitive Lands:** Record all applicable documents required for compliance with the City's Sensitive Lands Ordinance.
10. **Utility Notification Form:** Submit a Subdivision Utility Notification Form.
11. **Professional Verification:** Submit final stamped construction documentation by all appropriate professionals.
12. **Fees:** Payment of all development, inspection, recording, streetlight, and other project related fees.
13. **Mylar:** Submit a Mylar. All plats will receive final verification of all formats, notes, conveyances, and other items contained on the plat by City staff (recorder, legal, engineer, GIS, planning).

STAFF RECOMMENDATION:

The site plan application does not meet the requirements of Section 17.6.101 and the staff recommends TABLING the application.

POTENTIAL MOTIONS – Site Plan

APPROVAL

Mr. Chairman, I move that we recommend approval on the site plan for 500 E Automall Business Center, located at 450 E Automall Drive, subject to any conditions found in the Staff Report.

DENIAL

Mr. Chairman, I move that we deny the site plan for 500 E Automall Business Center, located at 450 E Automall Drive.

TABLE

Mr. Chairman, I move that we table action on the site plan for 500 E Automall Business Center, located at 450 E Automall Drive, and instruct the developer/staff to _____.

9/2/2022 10:58:26 AM

AMERICAN FORK OFFICE/WAREHOUSE

AMERICAN FORK, UT

Include project address

OWNERSHIP

DAVIES DESIGN BUILD

240 NORTH 1200 E SUITE 201
LEHI, UTAH 84043
PHONE: 1(801) 592-6044
WWW.DAVIESDESIGNBUILD.COM

ARCHITECT & STRUCTURAL ENGINEER

aeurbia architects and engineers
909 West South Jordan Parkway
south jordan , utah 84095
phone: 801.746.0456 - fax: 801.575.6456
webpage: aeurbia.com

GENERAL CONTRACTOR

BENCHMARK CIVIL

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

CIVIL ENGINEER

PKJ DESIGN GROUP
Landscape Architecture ⁄ Planning & Visualization

3450 N. TRIUMPH BLVD SUITE 102
LEHI, UT 84043
OFFICE 801.960.2698

ELECTRICAL ENGINEER

DESIGN BUILD GROUP
CONSULTING ENGINEERS

4704 CRESTMOOR CT.
WEST JORDAN, UTAH 84088
OFFICE 801.330.1472
FAX 801.999.4341

MECHANICAL ENGINEER

POWELL ENGINEERING L.L.C
Kevin G. Powell, P.E.
555 E. 1830 N.
OREM, UT 84097
PHONE: 801-721-5806
KGPOWELL@XMISSION.COM

LANDSCAPE ARCHITECT

DAVIES DESIGN BUILD

240 NORTH 1200 E SUITE 201
LEHI, UTAH 84043
PHONE: 1(801) 592-6044
WWW.DAVIESDESIGNBUILD.COM

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DEFERRED SUBMITTALS

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN, AND OF THE PROJECT THAT ARE NOT SUBMITTED AT THE TIME OF THE BUILDING PERMIT APPLICATION, AND ARE TO BE SUBMITTED TO THE DESIGN PROFESSIONAL AND BUILDING OFFICIAL PRIOR TO DOING THE WORK.

2. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL (AE URBIA, INC), WHO SHALL REVIEW AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE PROJECT. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTED DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

3. THE FOLLOWING ARE DEFERRED SUBMITTAL ITEMS:
- ESFR FIRE SPRINKLER DRAWINGS/FIRE ALARM & UNDERGROUND FIRE-LINE WORK.
  - WATER SUPPLY INFORMATION MUST SHOW A FIRE FLOW OF 2,000 GPM AT 20 PSI CAN BE ACHIEVED.
  - IF A FIRE PUMP IS TO BE UTILIZED, THE BUILDING WILL NEED TO BE RE-EVALUATED TO ENSURE THAT ALL APPLICABLE REQUIREMENTS (UT. ST. FIRE CODE AMEND. 15A-5-204, NFPA-20, IFC, IBC, ETC.) CAN BE MET.
- AN EMERGENCY RESPONDER RADIO COVERAGE SYSTEM (ERRCS) SHALL BE PROVIDED UNLESS IT CAN BE PROVEN THAT RADIO COVERAGE IS ADEQUATE WITHOUT SUCH A SYSTEM.
- OPEN WEB STEEL JOISTS/GIRDERS
- BUCKLING RESTRAINED BRACES AND GUSSET PLATES
- FACE SHELL TO STRUCTURAL PANEL CONNECTION

4. FIRE PERMITS SHALL BE IN ACCORDANCE WITH IFC SECTIONS 105.1.1 THROUGH 105.7.16. THE FOLLOWING ITEM(S) REQUIRE A SEPARATE FIRE PERMIT:
   A. UNDERGROUND WATER MAINS, LATERALS, FIRE HYDRANTS,
   B. AUTOMATIC FIRE SPRINKLER SYSTEMS, AND
   C. OCCUPANT NOTIFICATION (FIRE ALARM), INTERCONNECTION WITH FIRE PROTECTION SYSTEMS, AND APPROVED REMOTE STATION.

BUILDING CODES

ALL CONSTRUCTION IN ASSOCIATION WITH THIS PROJECT SHALL COMPLY WITH THE STATE ADOPTED CODES LISTED BELOW:
- 2018 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), INCLUDING APPENDIX J
- 2020 EDITION OF THE NATIONAL ELECTRICAL CODE (NEC)
- 2018 EDITION OF THE INTERNATIONAL PLUMBING CODE (IPC)
- 2018 EDITION OF THE INTERNATIONAL MECHANICAL CODE (IMC)
- 2018 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- 2018 EDITION OF THE INTERNATIONAL FUEL GAS CODE (IFGC)
- 2018 INTERNATIONAL FIRE CODE (IFC)
- ICC/ANSI A117.1-2009
- UTAH STATE AMENDMENTS TO THE ABOVE MENTIONED CODES.

NOTE

THE CONTRACTOR IS TO CONTACT THE UTAH DIVISION OF AIR QUALITY, (801) 536-4000. COMPLIANCE WITH THEIR REQUIREMENTS IS MANDATORY.

CONTRACTOR COORDINATION NOTES:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BEFORE COMMENCING CONSTRUCTION, AND TO ASSURE THAT ALL PARTIES ARE AWARE OF ALL REQUIREMENTS, REGARDLESS OF WHERE THE REQUIREMENTS OCCUR IN THE CONTRACT DOCUMENTS, WHICH MIGHT AFFECT THE WORK OF THAT PARTY AND THAT THE MOST UP TO DATE DOCUMENTS ARE BEING REFERENCED.

2. AS PART OF THE CONTRACTORS RESPONSIBILITY TO COORDINATE THE WORK OF ALL SUB-CONTRACTORS, TRADES AND SUPPLIERS, THE CONTRACTOR SHALL ENDEAVOR TO IDENTIFY AND NOTIFY THE ARCHITECT OF ANY CONFLICTS BETWEEN THE WORK OF DIFFERENT PARTIES AT THE EARLIEST POSSIBLE DATE SO AS TO ALLOW REASONABLE AND ADEQUATE TIME FOR THE CONFLICT TO BE RESOLVED WITHOUT DELAYING THE WORK. ALL DEVIATIONS FROM THAT WHICH IS REQUIRED BY THE CONTRACT DOCUMENTS MUST BE REVIEWED IN ADVANCE BY THE ARCHITECT.

3. THE CONTRACTOR SHALL NOTIFY THE OWNER REPRESENTATIVE OF ANY CONFLICTS BETWEEN VENDOR DRAWINGS AND THE CONSTRUCTION DOCUMENTS. LATEST VENDOR DRAWINGS SHALL BE VERIFIED WITH OWNER AND ARCHITECT.

4. IN THE CASE OF CONFLICTS BETWEEN IN THE CONTRACT DOCUMENTS THE MOST STRINGENT REQUIREMENT GOVERNS



DEFERRED SUBMITTALS:

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN, AND OF THE PROJECT THAT ARE NOT SUBMITTED AT THE TIME OF THE BUILDING PERMIT APPLICATION, AND ARE TO BE SUBMITTED TO THE DESIGN PROFESSIONAL AND BUILDING OFFICIAL PRIOR TO DOING THE WORK.

2. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL (AE URBIA, INC), WHO SHALL REVIEW AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE PROJECT. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTED DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

3. THE FOLLOWING ARE DEFERRED SUBMITTAL ITEMS:
- FIRE SPRINKLER DRAWINGS/FIRE ALARM
- CURTAIN WALL WINDOW SYSTEM

1

NEXT STEP:

Revise and Resubmit based on comments made from staff.

American Fork City
Technical Review Committee

Planning and Zoning
Reviewed
copperman 09/28/2022

Fire Department
Reviewed
M. Sacco 09/29/2022

Comments can be found on sheets CSP.01 and CUP.01

TIS review files request on 10/6 a reminder sent on 10/11. still not receiving

3

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M901	HVAC ISOMETRIC	
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E201	ELECTRICAL SITE PLAN	
E301	OVERALL LIGHTING PLAN - LEVEL 01	
E401	OVERALL POWER PLAN - LEVEL 01	
E501	MODEL ENERGY CODE CALCULATIONS	

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LICENSED ARCHITECT 174600 JAMES MICHAEL STATE OF UTAH

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AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	09/02/2022
3	CITY REVIEW COMMENTS #2	

AE2020.283

COVER

DESIGN DEVELOPMENT

DATE: 03/10/2021

SHEET #:

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AMERICAN FORK OFFICE WAREHOUSE
NEW OFFICE WAREHOUSE – BUILDING SHELL
2018 IBC CODE ANALYSIS

Code Item Reference	Code Requirement	Actual Building	Comments
Occupancy Chapter 3	B/S-1/S-2/F-1/F-2	B/S-1/S-2/F-1/F-2	Office, Warehouse, Industrial
Construction Type Chapter 6	II-B	II-B	New building shell.
Allowable Height Table 504.3	75'	39' /1	Ok
Allowable Stories Table 504.4	3	1	Ok
Allowable Area Section 507 if unlimited Otherwise table 506.2	62,000 SF	51,063 SF	Ok
Frontage Increase 506.3 frontage increase	NA	NA	NA
Mixed Use Section 508	NA	NA	Non-separated use per 508.3
Max. Area of Ext. Wall Unprotected openings Table 705.8	No Limit	No Limit	Ok
Automatic Sprinkler Systems Section 903	Yes	Yes	NFPA-13 ESFR
Max. Floor Area Allowances per Occupant, Table 1004.1.2	Load Factors 150 Office 500 Warehouse	Preliminary occupant load: 5,106/150 = 35 45,957/500 = 92 Total occupants: 127	Note: actual occupant load to be determined with each future tenant improvement.
Min. Number of Exits Section 1006	2	14	Ok
Common Path Table 1006.2.1	B: 100' max S: 100' max F: 100' max	Less than maximum See plan	Ok
Exit Access Travel Table 1017.2	w/ Sprinkler: S-1, F-1: 400' S-2, F-2: 400' B: 300'	Less than maximum See plan	Section 1017.2.2: S-1, F-1 increase Ok
Accessibility	Chapter 11		Ok
Ventilation, Temperature, Lighting	Chapter 12 and Mechanical code		Ok
Min. Roofing Class. Table 1505.1	C	C	Ok
Plumbing Facilities Table 2902.1 Water Closets Lavatories Drinking Fountain Service Sink	Note: Actual plumbing fixture count to be determined with each future tenant improvement.	Note: Actual plumbing fixture count to be determined with each future tenant improvement.	B/S 1:25 first 50,1:50 / 1:100 1:40 first 80,1:80 / 1:100 1:100 / 1:1,000 1/1
Fire Extinguishers			Per Fire Marshal
Energy Efficiency	Chapter 13	International Energy Conservation Code	Ok

Note: Building area is approximate and portrays gross building area for code compliance only. Additional area plans can be provided at the request of the owner for BOMA calculations, etc. Contractor shall be responsible for determining building areas for bidding purposes.

FIRE-RESISTANCE RATING REQUIREMENTS (hours)

Building Element	Type II-B
Structural Frame Including Columns, Girders, Trusses	0
Bearing Walls Exterior Interior	 0 0
Nonbearing Walls and Partitions Exterior Interior	 0 0
Floor Construction Including supporting Beams and Joists	0
Roof Construction Including supporting Beams and Joists	0

Corridor fire-resistance rating = 0 hr per table 1020.1

INTERIOR WALL AND CEILING FINISH REQUIREMENTS

Sprinkled	Group S, F	Group B
Exit enclosures and exit passageways	C	B
Corridors	C	C
Rooms and enclosed spaces	C	C

See Table 803.13
Class A flame spread 0-25; Smoke developed 0-450
Class B flame spread 26-75; Smoke developed 0-450
Class C flame spread 76-200; Smoke developed 0-450

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LICENSED ARCHITECT
174600
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REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES NOTED BELOW:
☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: _____ DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

CODE ANALYSIS

DATE: 03/10/2021

SHEET #:

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DESIGN DEVELOPMENT

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GENERAL PROJECT NOTES

DEFINITIONS

1. PROVIDE:
MEANS TO PROVIDE, FURNISH AND INSTALL, A COMPLETE SYSTEM AND READY FOR OPERATIONS AND USE FOR PURPOSE INTENDED INCLUDES THOSE ITEMS SPECIFIED WITHIN THE DRAWINGS AND SPECIFICATIONS AS WELL AS THOSE ITEMS THAT ARE REQUIRED TO PROVIDE A COMPLETE SYSTEM. THE CONTRACTOR AND SUB CONTRACTORS ARE REQUIRED TO PROVIDE THE FULL AND COMPLETE SYSTEM.

2. FURNISH:
MEANS TO SUPPLY, PURCHASE, PROCURE AND DELIVER COMPLETE WITH RELATED ACCESSORIES, READY FOR ASSEMBLY, APPLICATION, INSTALLATION, AND SIMILAR OPERATIONS, AS APPLICABLE IN EACH INSTANCE.

3. INSTALL:
MEANS TO CONSTRUCT, ASSEMBLE, ERECT, MOUNT, ANCHOR, PLACE, CONNECT, APPLY AND SIMILAR OPERATIONS, COMPLETE WITH RELATED ACCESSORIES, AS APPLICABLE IN EACH INSTANCE.

4. EQUIVALENT:
MEANS "EQUIVALENT AS ACCEPTED BY THE ARCHITECT." WITH RESPECT TO PRODUCTS, EQUIVALENT MEANS A LIKE DEGREE OF FEATURES, ATTRIBUTES, PERFORMANCES, OR QUALITIES DEEMED ESSENTIAL TO THE DESIGN INDICATED INSTEAD, THE TERM INTENDED TO MEAN ARCHITECT WILL CONSIDER SUBSTITUTION PROPOSALS FOR THE PRODUCT. DO NOT ASSUME THAT SUBSTITUTE PRODUCTS ARE ACCEPTABLE. SUBSTITUTIONS MADE BY THE CONTRACTOR WITHOUT FULL AND FINAL APPROVAL, MAY REQUIRE TO BE REMOVED IF NOT DEEMED ACCEPTABLE BY THE ARCHITECT. ALL COSTS ASSOCIATED TO REMOVAL OF SUBSTITUTION NOT APPROVED, AND INSTALLATION OF ACCEPTED PRODUCTS WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

GENERAL NOTES

1. SITE VISITS
VISITS TO THE JOB SITE BY ANY REPRESENTATIVE OF THE ARCHITECT DO NOT CONSTITUTE APPROVAL OF THE WORK PERFORMED BY THE CONTRACTOR OR HIS SUBCONTRACTORS, AND ARE MERELY FOR THE PURPOSE OF OBSERVING THE WORK PERFORMED.

2. DISCREPANCIES IN THE FIELD
CONTRACTOR SHALL NOTIFY ENGINEER / ARCHITECT OF ANY DISCREPANCIES, OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND / OR SPECIFICATIONS BEFORE PROCEEDING WITH ANY WORK INVOLVED. FIELD CONFIRMATION OF DISCREPANCIES SHALL BE RECORDED ON REPRODUCIBLE DOCUMENT AND IMMEDIATELY TRANSMITTED TO ARCHITECT FOR PROJECT RECORD, COORDINATION, AND NECESSARY RESOLUTION PRIOR TO CONTINUING WITH WORK. IN ALL CASES, UNLESS OTHERWISE DIRECTED, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN AND BE PERFORMED.

3. FIELD MEASUREMENTS
VERIFY FIELD MEASUREMENTS BEFORE ORDERING MATERIALS AND PREFABRICATED ITEMS. ANY NECESSARY ADJUSTMENTS BETWEEN FIELD MEASUREMENTS AND DRAWINGS SHALL BE MADE IN CONSULTATION WITH THE ARCHITECT.

4. SCALE OF DRAWINGS
DO NOT SCALE DRAWINGS. ARCHITECT SHALL NOT BE RESPONSIBLE FOR DIMENSIONS, TAKE-OFFS OR CALCULATIONS BASED ON DIGITAL MEDIA. REFER TO PRINTED DIMENSIONS ONLY. DRAWINGS OF A LARGER SCALE TAKE PRECEDENT OVER DRAWINGS OF A SMALLER SCALE.

5. CONTRACT DOCUMENTS AT SITE
THE CONTRACTOR SHALL MAINTAIN CURRENT PERMIT DRAWINGS; SHOP DRAWINGS; REVISED DRAWINGS; CLARIFICATION DRAWINGS, ADDENDA; CHANGE ORDERS; BULLETINS; INSPECTIONS; TEST CERTIFICATIONS AND RECORDS; PRODUCT SUBMITTAL DATA AND SAMPLES. FIELD OFFICE SHALL CONTAIN A CURRENT COPY OF ALL GOVERNING BUILDING CODE(S). MAKE DOCUMENTS AVAILABLE AT ALL TIMES FOR ARCHITECT'S REVIEW. ALL DRAWINGS MUST BE CLEARLY MARKED AS TO THE FINAL APPROVED DRAWINGS.

6. RECORD DRAWINGS (AS BUILTS)
THE CONTRACTOR SHALL MAINTAIN ACCURATELY DIMENSIONED RECORDS OF ALL UNDERGROUND LINES, SERVICES, AND UTILITIES, AS WELL AS ANY DISCREPANCIES OR REQUIRED CHANGES IN THE CONTRACT DOCUMENTS. AT THE END OF THE PROJECT, FORWARD TO ARCHITECT FOR FUTURE RECORDS. ONE DIGITAL COPY OF COMPLETE RECORD DRAWINGS TO OWNER IN PDF FORMAT AFTER COMPLETING FINAL PUNCH LIST.

7. CONFLICTING DIMENSIONS
WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED SIZES; DO NOT SCALE DRAWINGS TO DETERMINE ANY LOCATIONS. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES, PRIOR TO CONTINUING WITH WORK.

8. SHOP DRAWING AND SUBMITTAL REVIEW
SHOP DRAWINGS AND SUBMITTALS SHALL BE REVIEWED BY THE ENGINEER / ARCHITECT AND **OWNER** PRIOR TO ORDERING, FABRICATION OR ERECTION FOR ANY PREFABRICATED OR MANUFACTURED - DESIGNED COMPONENTS.

9. SUPPORTING STRUCTURES
SIZES, LOCATIONS, LOADS, AND ANCHORAGE OF EQUIPMENT SHALL BE VERIFIED IN THE FIELD WITH EQUIPMENT MANUFACTURES (SUPPLIERS) PRIOR TO FABRICATION OR INSTALLATION OF SUPPORTING STRUCTURES.

10. TEMPORARY BRACING
TEMPORARY BRACING SHALL BE PROVIDED WHEREVER NECESSARY TO TAKE CARE OF ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING WIND. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY, OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE COMPLETED. ALL BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

11. DESIGN LOADS
DURING AND AFTER CONSTRCITON THE CONTRACTOR AND/OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOAD.

12. INTENT OF THE DOCUMENTS
DRAWINGS AND SPECIFICATIONS ARE INTENDED TO PROVIDE THE BASIS FOR THE PROPER COMPLETION OF THE PROJECT, SUITABLE FOR THE INTENDED USE OF THE OWNER. ITEMS NOT EXPRESSLY SET FORTH WITHIN THE DRAWINGS AND SPECS, BUT WHICH ARE REASONABLY IMPLIED FOR COMPLETION OF A COMPLETE SYSTEM, OR NECESSARY, FOR THE PROPER PERFORMANCE OF THE WORK SHALL BE INCLUDED.

13. DRAWINGS AND SPECIFICATIONS
SPECIFICATIONS ARE INTENDED TO BE COMPLIMENTARY AND SUPPLEMENTAL TO THE DRAWINGS. NO RELATIVE IMPORTANCE OF DRAWINGS VERSUS SPECIFICATIONS HAS BEEN ESTABLISHED AND NONE SHOULD BE ASSUMED, BUT THE MOST STRINGENT CONDITIONS SHOULD BE ASSUMED FOR ALL BIDDING AND CONSTRUCTION REQUIREMENTS. IN THE EVENT OF DISCREPANCIES OR CONFLICTS, THE ARCHITECT SHALL BE CONSULTED IN ORDER TO RENDER AN INTERPRETATION. BIDDING, PRICING OR CONSTRUCTION DONE PRIOR TO RECEIVING FINAL BUILDING DEPARTMENT PERMITS IS AT THE CONTRACTORS OWN RISK. CHANGES TO THE DRAWINGS MAY BE REQUIRED AS PART OF THE PLAN CHECK AND/ OR OWNER REVIEW PROCESS. J.M. WILLIAMS AND ASSOCIATES/AE URBIA AND ITS CONSULTING ENGINEERS WILL NOT BE HELD LIABLE FOR, NOR COMPENSATE FOR, CHANGES TO THESE DRAWINGS BEFORE FINAL JURISDICTION AND OWNER APPROVAL IS OBTAINED.

14. WORK NOT INCLUDED
ANY ITEM INDICATED ON THE DRAWINGS AS "N.I.C." (NOT IN CONTRACT), OR OTHERWISE DESIGNATED TO BE DONE BY OTHERS IS NOT A PART OF THE CONTRACT. INSTALLATION AND/OR BACKING MAY BE REQUIRED FOR SOME EQUIPMENT FURNISHED BY OWNER OR OWNER'S SUBCONTRACTOR. REFER TO DRAWINGS FOR SPECIFIC REQUIREMENTS.

15. FURNISHINGS BY OWNER
ALL FURNITURE, PLANTS, INTERIOR SIGNAGE, FILES / FILING CABINETS, APPLIANCES, OFFICE EQUIPMENT TO BE FURNISHED, INSTALLED AND PAID FOR BY THE OWNER / TENANT, UNLESS NOTED OTHERWISE.

16. CODE CONFORMANCE
ALL WORK SHALL CONFORM TO THE LATEST ADOPTED EDITIONS OF ALL APPLICABLE BUILDING CODES, THE AMERICANS WITH DISABILITIES ACT, AS WELL AS ALL OTHER LOCAL GOVERNING CODES AND ORDINANCES:
a. PLUMBING:
ALL PLUMBING WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE INTERNATIONAL PLUMBING CODE, AND LOCAL ORDINANCES. ALL PLUMBING WORK AND FIXTURES MUST MEET THE APPROVAL OF THE OWNER, CONTRACTOR, ARCHITECT/ENGINEER, TENANT AND THE BUILDING OFFICIAL.
b. HVAC:
ALL HVAC WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE INTERNATIONAL MECHANICAL CODE, AND LOCAL ORDINANCES. HVAC WORK, UNITS, AND CONTROLS, MUST MEET THE APPROVAL OF THE OWNER, CONTRACTOR, ARCHITECT/ENGINEER, TENANT, AND THE BUILDING OFFICIAL.
c. ELECTRICAL:
ALL ELECTRICAL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE ICC ELECTRICAL CODE AND LOCAL ORDINANCES. ALL ELECTRICAL WORK, FIXTURES, SWITCHES, ETC... MUST MEET APPROVAL OF THE OWNER, CONTRACTOR, ARCHITECT / ENGINEER, TENANT AND BUILDING OFFICIAL.
d. REST ROOMS, ETC., SHALL COMPLY WITH THE LATEST ADA REQUIREMENTS, NATIONAL AND LOCAL.
e. CONSTRUCTION MUST BE IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE.
f. CONSTRUCTION MUST BE IN COMPLIANCE WITH THE CURRENT INTERNATIONAL FIRE CODE.

17. REFERENCE STANDARDS
COMPLY WITH ASSOCIATION, TRADE, FEDERAL, COMMERCIAL, ASTM, AND OTHER SIMILAR STANDARDS REFERENCED WITHIN INDIVIDUAL SECTIONS, EXCEPT WHERE MORE EXPLICIT OR STRINGENT REQUIREMENTS ARE INDICATED, OR REQUIRED BY APPLICABLE CODES. REFERENCE STANDARDS HAVE SAME FORCE AND EFFECT AS IF BOUND INTO CONTRACT DOCUMENTS. SHOULD SPECIFIED REFERENCE STANDARDS CONFLICT WITH CONTACT DOCUMENTS, REQUEST CLARIFICATION FROM ARCHITECT BEFORE PROCEEDING.

18. APPROVAL
ALL WORK MUST MEET THE APPROVAL OF THE BUILDING OWNERS, THE TENANT (IF APPLICABLE), THE DESIGNER, AND THE BUILDING AND ZONING DEPARTMENTS.

19. CHANGES
ANY AND ALL CHANGES OR VARIATIONS FROM THESE DOCUMENTS MUST BE APPROVED IN WRITING BY THE OWNERSHIP PRIOR TO MAKING THEM.

CONTRACTOR REQUIREMENTS

1 EXISTING CONDITIONS
THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ALL EXISTING SITE CONDITIONS, UTILITIES, CONNECTIONS, LOCATIONS, ETC, AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

2 EXISTING UTILITIES
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, WHETHER SHOWN HEREIN OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE FOR THE REPAIR OR REPLACEMENT OF UTILITIES AND ALL OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH EXECUTION OF WORK.

3 CODE COMPLIANCE
THE CONTRACTOR SHALL BE REQUIRED TO MEET ALL NATIONAL, STATE AND LOCAL, AND RELATED CODES FOR STANDARD CONSTRUCTION PRACTICES.

4 INSTALLATION STANDARDS
ALL MANUFACTURED MATERIALS AND PRODUCTS SHALL BE APPLIED, INSTALLED, CONNECTED, CLEANED AND CONDITIONED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. ALL REFERENCES TO STANDARDS OR TO MANUFACTURER'S SPECIFICATIONS SHALL BE TO THE LATEST EDITIONS OR LATEST AMENDMENTS.

5 INSPECTIONS
ANY SPECIAL INSPECTIONS, TESTS, AND OTHER SERVICES SPECIFIED OR REQUIRED ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE TO BE PAID BY THE OWNER. REFER TO INDIVIDUAL SELECTIONS FOR ADDITIONAL REQUIREMENTS. EMPLOYMENT OF TESTING LABORATORY SHALL IN NO WAY RELIEVE CONTRACTOR OF OBLIGATION TO PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS OF CONTRACT DOCUMENTS.

6 PROJECT LOG
MAINTAIN DAILY LOG CONTAINING ALL INFORMATION REGARDING CONSTRUCTION OPERATIONS AND OTHER OCCURRENCES PERTAINING TO THE PROJECT. MAKE LOG AVAILABLE FOR ARCHITECT'S REVIEW.

7 WORK PROGRESS SCHEDULE
MAINTAIN AN UPDATED WORK PROGRESS SCHEDULE POSTED IN A VISIBLE PLACE LOCATED IN FIELD OFFICE. UPDATE SCHEDULE DAILY TO REFLECT WORK PROGRESS.

8 BUILDING PERMITS
THE GENERAL BUILDING PERMITS SHALL BE PAID FOR BY THE OWNER AND SECURED BY THE GENERAL CONTRACTOR. ALL OTHER REQUIRED PERMITS SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR OR SUBCONTRACTOR DIRECTLY RESPONSIBLE.

9 FINAL APPROVALS
CONTRACTOR SHALL ASSIST OWNER IN OBTAINING FINAL APPROVAL OF LOCAL HEALTH DEPARTMENT AND THE TEMPORARY AND FINAL CERTIFICATES OF OCCUPANCY.

10 REQUIRED LICENSES
ADDITIONAL REQUIRED CITY AND COUNTY LICENSES SHALL BE ACQUIRED AND PAID FOR BY THE INDIVIDUAL TRADES.

11 WORKMAN'S COMPENSATION
ALL CONTRACTORS SHALL HAVE VALID CERTIFICATES OF WORKMAN'S COMPENSATION OF FILE WITH THE APPROPRIATE AGENCIES.

12 SAFETY
CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES, AND SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE JOB SITE.

13. CONTRACTOR'S FIELD OFFICE
PROVIDE AND MAINTAIN A FIELD OFFICE ON THE PREMISES WHERE DIRECTED. OFFICE SHALL BE OF NEAT, SUBSTANTIAL CONSTRUCTION. PROVIDE HANGING PLAN FILES AND MAINTAIN WITH ALL CURRENT DRAWINGS.
a. STORAGE STRUCTURE: PROVIDE AND MAINTAIN, WHERE DIRECTED, A WATERTIGHT STORAGE STRUCTURE FOR ALL MATERIALS WHICH MIGHT BE DAMAGED BY WEATHER, INCLUDING STORAGE FACILITIES FOR CONCRETE TEST SAMPLES, OR OTHER MATERIAL SAMPLES REQUIRED FOR WORK.
b. COSTS: PAY COSTS FOR A LOCAL BUSINESS TELEPHONE FOR USE BY CONTRACTOR, OWNER AND ARCHITECT THROUGHOUT CONTRACT PERIOD.
c. COMMUNICATION EQUIPMENT: PROVIDE A TELEPHONE ON SITE. ASSIGN A RESPONSIBLE PERSON TO ANSWER ALL TELEPHONE CALLS IN EVENT THE SUPERINTENDENT IS ABSENT FROM THE PREMISES. PROVIDE APPROVED MEANS TO ESTABLISH URGENT COMMUNICATIONS (CELLULAR TELEPHONE OR PAGER).

14. TEMPORARY FACILITIES
PROVIDE TEMPORARY FACILITIES AND CONNECTIONS AS REQUIRED FOR THE PROPER COMPLETION OF THE PROJECT. PROVIDE AND MAINTAIN TEMPORARY UTILITY SERVICES. PROVIDE SUITABLE WASTE DISPOSAL UNITSAND EMPTY REGULARLY. DO NOT PERMIT ACCUMULATION OF TRASH AND WASTE MATERIALS. PROVIDE TEMPORARY SANITARY FACILITIES AS REQUIRED.

15. STORAGE AND PROTECTION
STORE AND PROTECT PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS WITH LABELS INTACT AND LEGIBLE. STORE SENSITIVE PRODUCTS IN WEATHERTIGHT, CLIMATE CONTROLLED ENCLOSURES. PROVIDE OFFSITE STORAGE AND PROTECTION WHEN SITE DOES NOT PERMIT ON SITE STORAGE.

16. FIELD QUALITY CONTROL
EMPLOY ONLY EXPERIENCED INSTALLERS AND FURNISH EVIDENCE OF EXPERIENCE IF REQUESTED. USE OF ANY SUBCONTRACTOR OR INSTALLER IS SUBJECT TO OWNER'S APPROVAL. EMPLOY FULL-TIME, COMPETENT SUPERINTENDENT AS WELL AS NECESSARY ASSISTANTS. SUPERINTENDENT SHALL REPRESENT THE CONTRACTOR AND ALL COMMUNICATIONS GIVEN TO THE SUPERINTENDENT SHALL BE AS BINDING AS IF GIVEN TO THE CONTRACTOR.

17. SOURCE QUALITY CONTROL
PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS, WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS, UNLESS MORE STRINGENT CRITERIA ARE SPECIFIED IN INDIVIDUAL SECTIONS. USE OF ANY SUPPLIER IS SUBJECT TO OWNER'S APPROVAL.

18. PRODUCT HANDLING
TRANSPORT AND HANDLE PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DELIVER PRODUCTS IN UNDAMAGED CONDITION, IN MANUFACTURER'S ORIGINAL UNOPENED CONTAINER'S OR PACKING, WITH IDENTIFYING LABELS INTACT AND LEGIBLE. PROMPTLY INSPECT SHIPMENTS TO ENSURE THAT PRODUCTS COMPLY WITH REQUIREMENTS OF CONTRACT DOCUMENTS, QUANTITIES ARE CORRECT, AND PRODUCTS ARE UNDAMAGED.

19. COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS
HANDLE, INSTALL, ERECT, CONNECT, CONDITION, USE, ADJUST, AND CLEAN PRODUCTS IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTION AND IN CONFORMITY WITH SPECIFIED REQUIREMENTS, INCLUDING EACH STEP IN SEQUENCE. DO NOT OMIT PREPARATORY STEPS OR INSTALLATION PROCEDURES UNLESS SPECIFICALLY MODIFIED OR EXEMPTED BY CONTRACT DOCUMENTS. SHOULD JOB CONDITIONS OR SPECIFIED REQUIREMENTS CONFLICT WITH MANUFACTURER'S INSTRUCTIONS, REQUEST CLARIFICATION IN WRITING FROM ARCHITECT BEFORE PROCEEDING. INSTALL MATERIALS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH PROPER APPEARANCE.

20. MANUFACTURER'S FIELD SERVICES
WHEN SPECIFIED IN INDIVIDUAL SECTIONS, REQUIRE MATERIAL OR PRODUCT SUPPLIERS OR MANUFACTURERS TO PROVIDE QUALIFIED STAFF PERSONNEL TO OBSERVE SITE CONDITIONS, CONDITIONS OF SURFACES, QUALITY OF WORKMANSHIP, AND CONDITIONS OF INSTALLATION AS APPLICABLE AND TO INITIATE ADDITIONAL INSTRUCTIONS WHEN NECESSARY.

21. SUBSTITUTIONS
PROPOSALS FOR SUBSTITUTION OF MATERIALS, EQUIPMENT, AND METHODS WILL ONLY BE CONSIDERED WHEN ACCOMPANIED BY FULL AND COMPLETE TECHNICAL DATA AS WELL AS ANY OTHER INFORMATION REQUIREDTO EVALUATE THE PROPOSED SUBSTITUTION. SUBSTITUTIONS ARE UNACCEPTABLE UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT. IN THE EVENT OF SUBSTITUTION PROPOSALS AFTER THE CONTRACT HAS BEEN AWARDED, ALL SUCH PROPOSALS SHALL BE ACCOMPANIED BY SUBSTANTIAL COST SAVINGS FOR THE OWNER.

22. AVAILABILITY OF PRODUCTS
VERIFY PRIOR TO CONSTRUCTION START THAT ALL SPECIFIED ITEMS WILL BE AVAILABLE IN TIME FOR INSTALLATION DURING ORDERLY AND TIMELY PROGRESS OF THE WORK. IN THE EVENT SPECIFIED ITEM OR ITEM WILL NOT BE SO AVAILABLE, NOTIFY THE ARCHITECT PRIOR TO START OF CONSTRUCTION. COST OF DELAYS BECAUSE OF NON-AVAILABILITY OF SPECIFIED ITEMS OR SUBSTITUTED ITEMS, WHEN THE CONTRACTOR COULD HAVE AVOIDED SUCH DELAYS, WILL BE BORNE BY THE CONTRACTOR.

23. PRODUCTS AND MATERIALS
PROVIDE PRODUCTS AND MATERIALS SPECIFIED. REQUEST ARCHITECTS SELECTION OF COLORS AND ACCESSORIES IN SUFFICIENT TIME TO AVOID DELAYING PROGRESS OF THE WORK.

24. VERIFICATION OF WORK
CONTRACTOR SHALL VERIFY, AND BE RESPONSIBLE FOR, ALL WORK AND MATERIALS - INCLUDING THOSE FURNISHED BY SUBCONTRACTORS. CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND ELEVATIONS, ETC., AT THE SITE AND SHALL COORDINATE WORK PERFORMED BY ALL TRADES.

25. CONFORMANCE WITH DOCUMENTS
ANY AND ALL CHANGES OR VARIATIONS FROM THESE DOCUMENTS MUST BE APPROVED IN WRITING PRIOR TO MAKING THEM.

26. NON-CONFORMING WORK
ANY WORK THAT DOES NOT CONFORM TO THE CONTRACT DOCUMENTS SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.

27. PRODUCT IDENTIFICATIONS
NAMEPLATES, TRADEMARKS, LOGOS, AND OTHER IDENTIFYING MARKS ON PRODUCTS ARE NOT PERMITTED ON SURFACES EXPOSED TO VIEW IN PUBLIC AREAS, INTERIOR OR EXTERIOR. PLUMBING, MECHANICAL, AND ELECTRICAL EQUIPMENT NOT EXPOSED TO PUBLIC VIEW ARE EXCLUDED FROM FOREGOING LIMITATION. REQUIRED UL OR FM LABELS ARE ALSO EXCLUDED.

28. PROTECTION OF ADJACENT WORK
PROVIDE TEMPORARY PROTECTION FOR ADJACENT AREAS TO PREVENT DAMAGE BY INSTALLATION OF NEW WORK OR DEMOLITION OF EXISTING CONSTRUCTION. PROMPTLY REPAIR ANY DAMAGE AT NO ADDITIONAL COST TO THE OWNER. PROTECT ADJACENT AREAS FROM CONTAMINATION BY CONSTRUCTION DUST AND DEBRIS. PROVIDE TEMPORARY BARRICADES AS NECESSARY TO ENSURE PROTECTION OF THE PUBLIC. MAINTAIN EGRESS WITHIN AND AROUND CONSTRUCTION AREAS.

29. DAMAGED PRODUCTS
DO NOT USE PRODUCTS IN WORK, WHICH HAVE DETERIORATED, BECOME DAMAGED, OR ARE OTHERWISE UNFIT FOR USE. RESTORE UNITS DAMAGED DURING INSTALLATION. REPLACE UNITS, WHICH CANNOT BE RESTORED AT NO ADDITIONAL EXPENSE TO THE OWNER.

30. SECURITY
PROVIDE FACILITIES TO PROTECT WORK FROM UNAUTHORIZED ENTRY, VANDALISM, AND THEFT. CONDUCT OPERATIONS IN MANNER TO AVOID RISK OF LOSS, THEFT, OR DAMAGE BY VANDALISM.

31. TEMPORARY CONTROLS
a. HEAT:
PRIOR TO ENCLOSURE, PROVIDE HEATING AS NECESSARY TO PROTECT MATERIALS, PRODUCTS, AND FINISHES FROM DAMAGE DUE TO TEMPERATURE OR HUMIDITY. ENCLOSURE IS DEFINED AS STATE OF CONSTRUCTION WHEN EXTERIOR WALLS ARE ERECTED, DOORS AND WINDOWS ARE INSTALLED AND GLAZED, ROOF DECK AND ROOFING ARE COMPLETE, AND WHEN OTHER OPENINGS IN EXTERIOR ENVELOPE ARE EQUIPPED WITH TEMPORARY CLOSURES. EXCEPT WHERE INDICATED OTHERWISE IN INDIVIDUAL SPECIFICATION SECTIONS, MAINTAIN MINIMUM AMBIENT TEMPERATURE OF 50 DEGREES FIN AREAS WHERE CONSTRUCTION IS IN PROGRESS.
b. VENTILATION:
VENTILATE ENCLOSED AREAS TO ASSIST CURE OF MATERIALS, TO DISSIPATE HUMIDITY, AND TO PREVENACCUMULATION OF DUST, FUMES, VAPORS, OR GASES.
c. BARRIERS AND CLOSURES:
PROVIDE BARRIERS TO PREVENT UNAUTHORIZED ENTRY TO CONSTRUCTION AREAS AND TO PROTECT EXISTING FACILITIES AND ADJACENT PROPERTIES FROM DAMAGE FROM CONSTRUCTION OPERATION
d. FIRE PROTECTION:
COMPLY WITH LOCAL FIRE PROTECTION CODE AND GOVERNING AUTHORITIES. PROVIDE AND MAINTAIN ADEQUATE FIRE PROTECTION INCLUDING, WITHOUT LIMITATION, FIRE EXTINGUISHERS AND OTHER APPROPRIATE EQUIPMENT FOR FIRE EXTINGUISHING READY FOR IMMEDIATE USE. MAINTAIN ANY REQUIRED FIRE ALARM SYSTEMS IN OPERATION DURING CONSTRUCTION. DISTRIBUTE EQUIPMENT AROUND SITE AND PARTICULARLY IN IMMEDIATE VICINITY OF PERFORMANCE OF WELDING OR SIMILAR HAZARDOUS WORK.

32. INTERRUPTION OF SERVICES
INTERRUPTIONS TO ANY SERVICE FOR THE PURPOSE OF MAKING OR BREAKING A CONNECTION SHALL BE MADE ONLY AFTER CONSULTATION WITH THE OWNER AND SHALL BE AT SUCH TIME AND OF SUCH DURATION AS MAY BE DIRECTED.

33. EXCAVATIONS OR TRENCHING
KEEP THE INTERVALS BETWEEN EXCAVATION OR TRENCHING, INSTALLATION OF CONDUIT OR PIPING, AND BACK FILLING OPERATIONS TO AN ABSOLUTE MINIMUM. PROVIDE SUITABLE TEMPORARY COVERS FOR EXCAVATIONS OR TRENCHING CROSSING ROADWAYS, WALKS, OR OTHER TRAFFIC WAYS AS REQUIRED BY GOVERNING AGENCIES.

34. CUTTING AND PATCHING
DO NOT CUT AND PATCH IN A MANNER THAT WOULD RESULT IN A FAILURE OF THE WORK TO PERFORM AS INTENDED, DECREASE FIRE PERFORMANCE, DECREASE ACOUSTICAL PERFORMANCE, DECREASE ENERGY PERFORMANCE, DECREASE OPERATIONAL LIFE, OR DECREASE SAFETY FACTORS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT. CUT WITH TOOLS APPROPRIATE FOR MATERIALS TO BE CUT. PATCH WITH MATERIALS AND METHODS TO PRODUCE PATCH THAT IS NOT VISIBLE FROM A DISTANCE OF THREE FEET.

35. COORDINATION AND CLEARANCES
VERIFY AND COORDINATE CLEARANCES, DIMENSIONS, AND INSTALLATION OF ADJOINING CONSTRUCTION, EQUIPMENT, PIPING, DUCTS, CONDUITS, OR OTHER MECHANICAL OR ELECTRICAL ITEMS OR APPARATUS. VERIFY DIMENSIONS FOR PRODUCTS TO BE FITTED INTO WORK.
a. ATTACHMENTS AND CONNECTIONS:
PROVIDE ATTACHMENT AND CONNECTION DEVICES METHODS FOR SECURING AND ANCHORING WORK. SECURE IN PLACE WITH DEVICES DESIGNATED AND SIZED TO WITHSTAND STRESSES, VIBRATION, PHYSICAL DISTORTION, OR DISFIGUREMENT.
b. EXPANSION AND MOVEMENT:
ALLOW FOR EXPANSION OF MATERIALS AND BUILDING MOVEMENT.
c. ISOLATION OF DISSIMILAR ITEMS:
ISOLATE EACH UNIT OF WORK FROM INCOMPATIBLE WORK AS NECESSARY TO PREVENT DETERIORATION AND ELECTROLYTIC ACTION.
d. MAINTENANCE:
CLEAN AND PERFORM MAINTENANCE ON INSTALLED WORK AS FREQUENTLY AS NECESSARY THROUGH REMAINDER OF CONSTRUCTION PERIOD. LUBRICATE OPERABLE COMPONENTS TO ENSURE OPERABILITY WITHOUT DAMAGING EFFECTS.
e. ADJUSTMENTS: ADJUST OPERATING PRODUCTS AND EQUIPMENT TO ENSURE SMOOTH AND UNHINDERED OPERATION.

36. EXAMINATION OF CONDITIONS
EXAMINE SUBSTRATES AND CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. DO NOT COMMENCE WORK OVER UNSATISFACTORY CONDITIONS DETRIMENTAL TO PROPER AND TIMELY EXECUTION OF WORK. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. COMMENCEMENT OF INSTALLATION CONSTITUTES ACCEPTANCE OF CONDITIONS AND COSTS OF ANY CORRECTIVE MEASURES ARE RESPONSIBILITY OF CONTRACTOR.

37. BACKING SUPPORT
CONTRACTOR SHALL PROVIDE BACKING SUPPORT OF ALL WALL, CEILING, AND PARTITION MOUNTED ITEMS SUCH AS TABLE BRACKETS, LIGHT FIXTURES, ARTIFACTS, SHELVING, EQUIPMENT, AND TELEVISIONS. COORDINATE LOCATIONS AND REQUIREMENTS WITH THE PLUMBING, MECHANICAL, ELECTRICAL DRAWINGS.

38. SECURE OPENINGS
EXTERIOR OPENINGS SHALL COMPLY WITH ALL SECURITY REQUIREMENTS AS OUTLINED IN ALL LOCAL BUILDING CODES AND ORDINANCES.

39. GLAZING REQUIREMENTS
GLASS AND GLAZING FOR ALL WINDOWS SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES. IN ADDITION ALL WINDOWS MUST MEET THE "AAMA" WINDOW STANDARDS FOR INSTALLATION. THE CONTRACTOR SHALL OBTAIN, AND SHALL FOLLOW ALL REQUIREMENTS OF THE "AAMA" STANDARDS IN ADDITION TO THE MANUFACTURER SPECIFICATIONS AND ARCHITECTURAL DETAILS INCLUDED WITHIN THE DRAWINGS.

40. ROOFING REQUIREMENTS
ROOFING WORK SHALL BE PERFORMED AND ALL PENETRATIONS THROUGH THE ROOFING MEMBRANE SHALL BE PATCHED OR FLASHED AS PER THE MANUFACTURER'S STANDARDS.

41. ROOF ACCESS
ROOF OBSTRUCTIONS SUCH AS TELEVISION ANTENNAE, SOLAR PANELS, AND GUY WIRES SHALL NOT BE LOCATED OR INSTALLED IN SUCH A WAY AS TO PREVENT FIRE DEPARTMENT ACCESS OR EGRESS IN THE EVENT OF A FIRE.

42 FINISH FLAME SPREAD REQUIREMENTS
INTERIOR WALL AND CEILING FINISHES SHALL NOT EXCEED FLAME SPREAD CLASSIFICATIONS DICTATED BY ALL APPLICABLE BUILDING CODES.

43. GYPSUM REQUIREMENTS
GYPSUM BOARD AND SUSPENDED CEILING SYSTEMS SHALL CONFORM TO ALL LOCAL GOVERNING BUILDING CODES AND ORDINANCES.

44. EQUIPMENT IN STRUCTURAL SLAB
PIPES, CONDUITS, OR DUCTS EXCEEDING ONE THIRD OF THE SLAB OR MEMBER THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND STRUCTURAL DRAWINGS FOR LOCATION OF SLEEVES AND OTHER ACCESSORIES.

45. FIRE EXTINGUISHERS
VERIFY FIRE EXTINGUISHER REQUIREMENTS AND LOCATIONS WITH FIRE MARSHAL AND OWNER'S REPRESENTATIVE.

46. INSECT CONTROL
CONTRACTOR SHALL SEAL ALL GAPS, HOLES, AND CRACKS IN BUILDING CONSTRUCTION AS REQUIRED TO CONTROL INFILTRATION OF INSECTS.

47. DISPOSAL OF TRASH AND EXCESS EXCAVATION
DISPOSE OF TRASH, AND DEBRIS AT DESIGNATED AREAS OFF THE PREMISES AT NO ADDITIONAL COST TO THE OWNER. BURNING OF TRASH AND DEBRIS ON THE PREMISES IS PROHIBITED. COORDINATE TRASH REMOVAL WITH LANDLORD WHERE APPLICABLE.

48. COORDINATION
ELECTRICAL, MECHANICAL, AND PLUMBING SYSTEM ARE SCHEMATIC ONLY. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL WORK TO AVOID CONFLICTS BETWEEN TRADES. THE CONTRACTOR SHALL PERFORM ALL WORK TO PROVIDE COMPLETE FUNCTIONING SYSTEMS IN ACCORDANCE WITH THE INTENT INDICATED AND CODES AND REQUIREMENTS OF ALL AGENCIES HAVING JURISDICTION.

49. CLEANING MATERIALS AND EQUIPMENT
PROVIDE ALL REQUIRED PERSONNEL, EQUIPMENT, AND MATERIALS NEEDED TO MAINTAIN THE SPECIFIED STANDARD OF CLEANLINESS. USE ONLY THE CLEANING MATERIALS AND EQUIPMENT WHICH ARE COMPATIBLE WITH THE SURFACE BEING CLEANED, AS RECOMMENDED BY THE MANUFACTURER OF THE MATERIAL.

50. LOADS ON STRUCTURE
DURING AND AFTER CONSTRUCTION THE CONTRACTOR AND / OR OWNER SHALL KEEP LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN LOAD.

51. FIRE RATED ASSEMBLIES
RATED ASSEMBLIES SHALL BE CONTINUOUS BOTH HORIZONTALLY AND VERTICALLY AND SHALL EXTEND FROM RATED ASSEMBLY TO RATED ASSEMBLY. FIRE CAULK ALL PENETRATIONS.

TOLERANCES

1. TOLERANCES AND ALLOWABLE DEVIATIONS
INSTALL WORK TRUE TO LINE, PLUMB, AND LEVEL. EXCEPT WHERE SPECIFIED OTHERWISE, WORK EXECUTED WITHIN THE FOLLOWING TOLERANCE WILL BE ACCEPTABLE.
a. TRUE TO LINE:
ALLOWED DEVIATION FROM AN ABSOLUTELY STRAIGHT LINE OF SIGHT WITHIN PLUS OR MINUS 1/8 INCH IN 10 FT. AND WITHIN PLUS OR MINUS ¼ INCH FOR ENTIRE LENGTH OF A PARTICULAR ELEMENT OF CONSTRUCTION OVER 20'-0" IN LENGTH.
b. PLUMB:
ALLOWED DEVIATIONS FROM AN ABSOLUTELY VERTICAL PLANE OF PLUS OR MINUS 1/8 INCH IN 10 FT. AND WITHIN PLUS OR MINUS ¼ INCH FOR ENTIRE LENGTH OF A PARTICULAR ELEMENT OF CONSTRUCTION OVER 20'-0" IN LENGTH.
c. LEVEL:
ALLOWED DEVIATIONS FROM AN ABSOLUTELY HORIZONTAL PLANE OF PLUS OR MINUS 1/8 INCH IN 10 FT. AND WITHIN PLUS OR MINUS ¼ INCH FOR ENTIRE LENGTH OF A PARTICULAR ELEMENT OF CONSTRUCTION OVER 20'-0" IN LENGTH.
d. ALLOWED DEVIATIONS FROM AN ABSOLUTELY FLAT IF WITHIN PLUS OR MINUS 1/16 INCH IN ONE SQUARE FOOT, WITHIN PLUS OR MINUS 1/8 INCH IN AN AREA 10 FEET BY 10 FEET, AND WITHIN PLUS OR MINUS ¼ INCH FOR ENTIRE AREA OF A PARTICULAR ELEMENT OF CONSTRUCTION OVER 20'-0" IN LENGTH.

PROJECT CONTRACT CLOSEOUT

1. SUBSTANTIAL COMPLETION
AT SUBSTANTIAL COMPLETION OF THE PROJECT, SCHEDULE AND ATTEND A PUNCH LIST WALK THROUGH OF REMAINING WORK FOR REVIEW WITH THE ARCHITECT AND OWNER. COMPLETE ALL DEFECTS AND OMISSIONS NOTED IN THE FINAL PUNCHLIST PROMPTLY, IN THE TIME PERIOD AGREED UPON WITH THE OWNER, AT NO ADDITIONAL EXPENSE TO THE OWNER.

2. CERTIFICATE OF OCCUPANCY
PROVIDE THE FINAL CERTIFICATE OF OCCUPANCY FROM THE BUILDING DEPARTMENT.

3. PERMITS/INSPECTION CARDS
FURNISH COPIES OF PERMITS AND SIGNED INSPECTION CARDS FOR EACH OF THE FOLLOWING AGENCIES: BUILDING DEPARTMENT; PLUMBING/MECHANICAL DEPARTMENT; ELECTRICAL DEPARTMENT; FIRE DEPARTMENT; HEALTH DEPARTMENT; OTHERS AS REQUIRED.

4. MAINTENANCE MANUALS AND WARRANTIES
FURNISH (2) COPIES FOR EACH UNIT OF ALL MANUALS, MAINTENANCE INSTRUCTIONS, CONTRACTORS AND MANUFACTURER'S PRINTED WARRANTIES, AND INSTRUCTIONS FOR OPERATION OF ALL EQUIPMENT SPECIFIED HEREIN OR SHOWN ON DRAWINGS, TRAIN OWNER'S PERSONNEL IN USE OF BUILDING SYSTEMS.

5. TOUCH-UP MATERIAL
FURNISH OWNER WITH ONE GALLON OF EACH PAINT AND STAIN USED PER UNIT. PROVIDE AN ADDITIONAL 2 PERCENT OF QUANTITY INSTALLED OF ALL FINISH MATERIAL INCLUDING CEILING PANELS, TILE, AND SHEET GOODS.

6. SUBCONTRACTORS
PROVIDE THE OWNER THE NAMES, ADDRESSES, AND PHONE NUMBERS OF ALL SUBCONTRACTORS, FINAL UNCONDITIONAL LIEN RELEASES, AND WARRANTIES FROM EACH.

7. FINAL CLEANING AND REPAIRS
REMOVE TEMPORARY FACILITIES AND PROVIDE FINAL CLEANING AND TOUCH-UP. RESTORE PORTIONS OF BUILDING, SITE IMPROVEMENTS, LANDSCAPING AND OTHER ITEMS DAMAGED BY CONSTRUCTION OPERATIONS TO THE SATISFACTION OF THE ARCHITECT, AT NO ADDITIONAL EXPENSE TO THE OWNER.

8. CLOSEOUT DOCUMENTS
PROVIDE THE OWNER WITH A COMPACT DISK OF ALL RECORD DRAWINGS IN PDF FORMAT, COPY OF ALL SHOP DRAWINGS AND PRODUCT SUBMITTALS, SERVICE CONTRACTS, HVAC AIR BALANCE REPORT, AND WASTELINE VIDEO INSPECTION REPORT.

LEGEND OF ABBREVIATIONS

AB	ANCHOR BOLT(S)
ABV	ABOVE
APPROX	APPROX
ARCH	ARCHITECT(URAL)
BLDG	BUILDING
BLK	BLOCKING
BLW	BELOW
BM-X	BEAM
B.N.	BOUNDARY NAILING
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
C.J.	CONST/CONTROL JOINT
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CTR	CENTER
CW-X	CONCRETE WALL
DBL	DOUBLE
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
EA	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
ELEC	ELECTRICAL
ELEV	ELEVATION
EQ	EQUAL
E.W.	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FC-X	CONTINUOUS FOOTING
FDN	FOUNDATION
FIN	FINISH(ED)
FLR	FLOOR
FR-X	RECTANGULAR FOOTING
FS-X	SQUARE FOOTING
FT	FEET
FTG	FOOTING
HORIZ	HORIZONTAL
HT	HEIGHT
I.F.	INTERIOR FACE
IN.	INCHES
INT	INTERIOR

JT	JOINT
JST	JOIST
K	KIPS
KLF	KIP PER FOOT
KSF	KIP PER SQUARE FOOT
LBS	POUNDS
LF	LINEAL FOOT
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
NTS	NOT TO SCALE
O.C.	ON CENTER
O.F.	OUTSIDE FACE
OPP	OPPOSITE
PCF	POUNDS PER CUBIC FT
PERP	PERPENDICULAR
PLF	POUNDS PER LINEAL FT
PSI	POUNDS PER SQ INCH
PSF	POUNDS PER SQ FOOT
REINF	REINFORCEMENT
REQ'D	REQUIRED
SBP-X	STEEL BASE PLATE
SC-X	STEEL COLUMN
SCP-X	STEEL CAP PLATE
SI	SPECIAL INSPECTION
SIM	SIMILAR
SOG	SLAB ON GRADE
SQ	SQ SQUARE
SW-X	SW-X SHEAR WALL
T&B	TOP AND BOTTOM
TEMP	TEMPERATURE
T.O.	TOP OF
TOF	TOP OF FOOTING
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
w/	WITH
WF	WIDE FLANGE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

SYMBOLS LEGEND

Symbol	Meaning
x / x/x	= DETAILS CALL-OUTS TAGS
x / x.x	= SECTION CUTS TAGS
145-2	= DOOR TAGS (SEE SHEET A601)
A	= STOREFRONT/CURTAINWALL WALL TAGS (SEE SHEET A602 & A603)
xx/xxx	= KEYNOTE TAGS (SEE A101)
100	= ROOM NUMBER
C6.0	= WALL TYPE TAGS; SEE WALL TYPES (SEE SHEET G010) "C" = WALL TYPE "6" = STUD SIZE "0" = FIRE RATING IN HOURS

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LICENSED ARCHITECT
174600
JAMES MICHAEL WILLIAMS
STATE OF UTAH
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REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date

DESIGN DEVELOPMENT

AE2020.283

GENERAL NOTES & LEGENDS

DATE: **03/10/2021**

SHEET #:

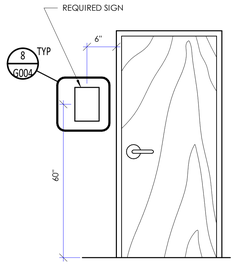
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SINGLE DOOR

N.T.S.

LETTERS AND NUMBER:
1. CHARACTER WIDTH TO BE 55-110% OF THE CHARACTER HEIGHT. STROKE THICKNESS TO BE 10-15% OF CHARACTER HEIGHT.
2. CONTRAST CHARACTERS AND SYMBOLS WITH BACKGROUND. CHARACTERS ARE TO BE SANS SERIF FONT.
3. SEE DETAIL BELOW FOR SIGN LAYOUT.

SIGNS / PICTOGRAMS:
4. PICTOGRAMS / PICTORIAL SYMBOL SIGNS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM. THE BORDER DIMENSION SHALL BE 6" MINIMUM HEIGHT.
5. CHARACTERS AND BACKGROUNDS SHALL BE OF NON-GLARE CONTRASTING COLORS.
6. SIGNS / PICTOGRAMS SHALL BE INSTALLED ON THE WALL ADJACENT TO DOOR LEADING TO THE ROOM OR SPACE THEY DESCRIBE AND AT 60" AFF TO SIGN CENTERLINE AND WHERE A PERSON MAY APPROACH WITHIN 3" OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING WITHIN THE DOOR SWING AREA.
7. VERTICAL CLEARANCE AT SUSPENDED SIGNS WITH MINIMUM HEADROOM OF 80" REQUIRE MINIMUM 3" CHARACTER HEIGHT MEASURED BY USING UPPERCASE "X". CHARACTERS AND NUMBERS SHALL BE SIZED ACCORDING TO VIEWING DISTANCE FROM WHICH READ. LOWER CASE CHARACTERS PERMITTED.

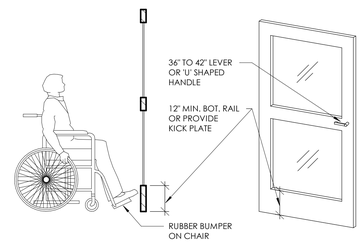
SIGN LOCATIONS:
8. ALL ACCESSIBLE ENTRANCES IDENTIFIED WITH MINIMUM OF ONE STANDARD SIGN.
9. ADDITIONAL DIRECTIONAL SIGNS ALONG ACCESSIBLE PATH OF TRAVEL ARE REQUIRED.
10. BUILDING REMODELED TO PROVIDE ACCESSIBLE SANITARY FACILITIES FOR PUBLIC USE SHALL HAVE INFORMATION POSTED IN THE LOBBY AS PART OF THE BUILDING DIRECTORY.

INTERNATIONAL SYMBOL OF ACCESSIBILITY:
11. STANDARD USED TO IDENTIFY ACCESSIBLE FACILITIES.
12. WHITE FIGURE ON BLUE BACKGROUND, COLOR 15090 ON FEDERAL STANDARD 595A.
13. WHEN ENFORCING AGENCY DETERMINES, IF APPROPRIATE, SPECIAL DESIGNS AND COLORS MAY BE APPROVED.

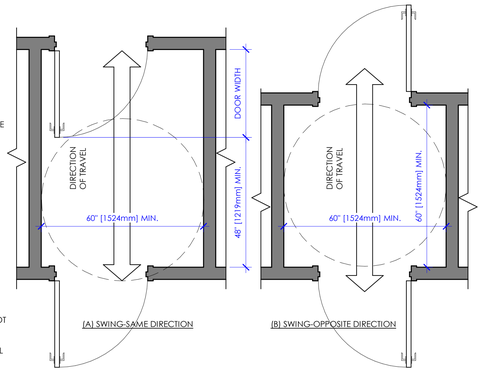
BRAILLE:
14. USE CONTRASTED GRADE 2 BRAILLE.
15. SEE DETAIL BELOW FOR SPACING & SIZE
16. DOTS TO BE RAISED MINIMUM 0.025 INCH ABOVE BACKGROUND.

DOOR TYPE:
1. MINIMUM 10" HIGH SMOOTH SURFACE AT DOOR BOTTOM, EITHER ATTACHED PANEL OR BOTTOM RAIL.
HARDWARE:
2. OPEN FROM INSIDE WITHOUT USE OF KEY OR SPECIAL KNOWLEDGE OR EFFORT.
3. OPEN BY SINGLE EFFORT LEVER-TYPE DEVICE (NOT REQUIRING GRASPING).
4. MOUNTED 36" TO 42".
5. MAXIMUM 8.5 LBS EFFORT TO OPERATE EXTERIOR DOOR, 5 LBS FOR INTERIOR.
6. MOUNTING HEIGHTS FOR THE DOOR HARDWARE SHALL COMPLY WITH IBC 1010.1.9.2

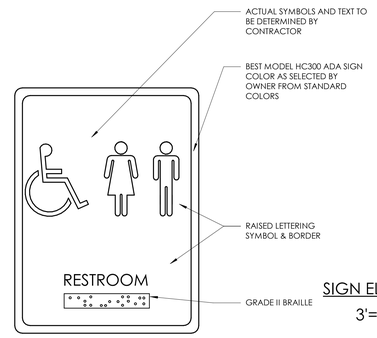
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1 G004 ADA DOOR REQUIREMENTS
1/2" = 1'-0"

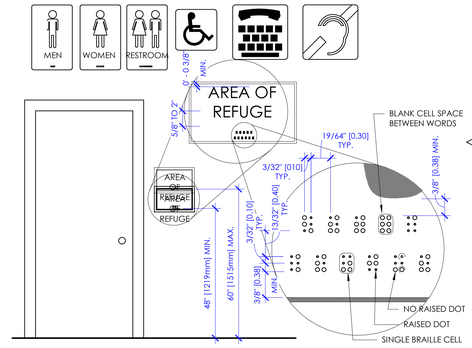


7 G004 RESTROOM SIGN
1/2" = 1'-0"

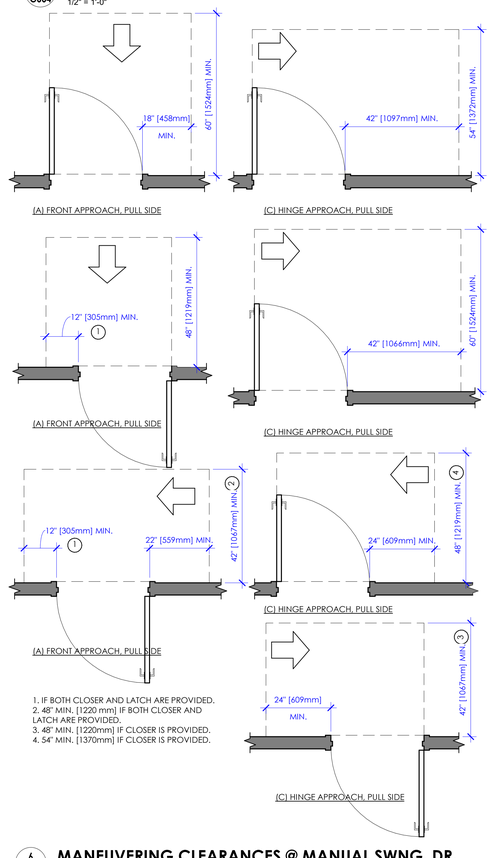


SIGN ELEVATION

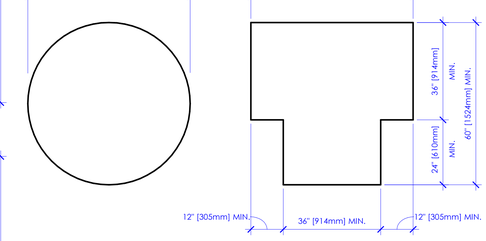
3"=1'-0"



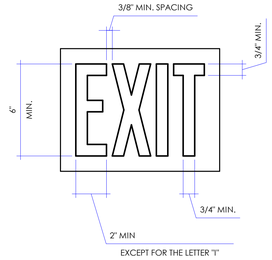
5 G004 TYPICAL SIGNAGE DIMENSIONS & LAYOUT
1/2" = 1'-0"



2 G004 CLEARANCES FOR DOORS IN SERIES
1/2" = 1'-0"



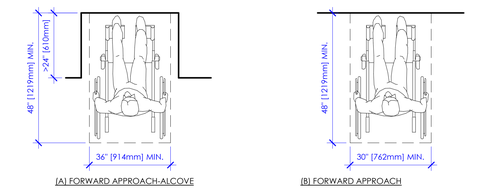
8 G004 REQUIRED SIGN
6" = 1'-0"



NOTES:
1. PROVIDE INTERNALLY LIT SIGN POWERED BY EMERGENCY POWER SYSTEM.
2. SIGN TO REMAIN ILLUMINATED AT ALL TIMES.

9 G004 EXIT SIGN DETAIL
3" = 1'-0"

3 G004 TURNING FLOOR CLEARANCES
1/2" = 1'-0"



6 G004 MANEUVERING CLEARANCES @ MANUAL SWNG. DR.
1/2" = 1'-0"

4 G004 TYPICAL FLOOR CLEARANCES
1/2" = 1'-0"

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LICENSED ARCHITECT
174600
JAMES MICHAEL
MITCHELL
STATE OF UTAH
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REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH APPLICABLE CONSTRUCTION CODES AS NOTED BELOW:
☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

ADA GENERAL NOTES AND DETAILS

DATE: **03/10/2021**

SHEET #:

G004

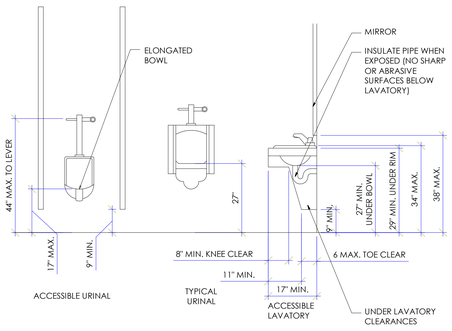
DESIGN DEVELOPMENT

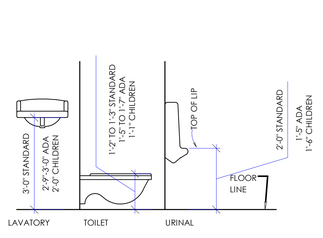
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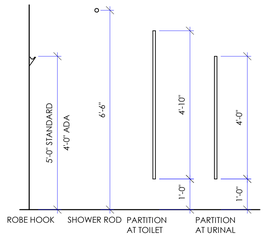
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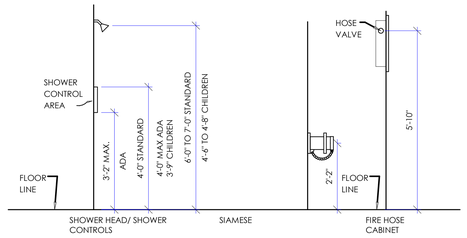
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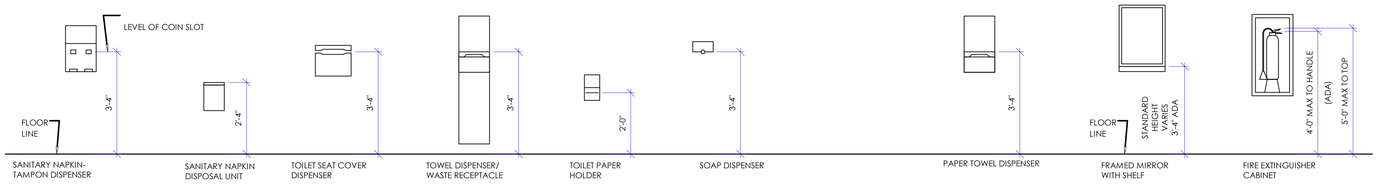
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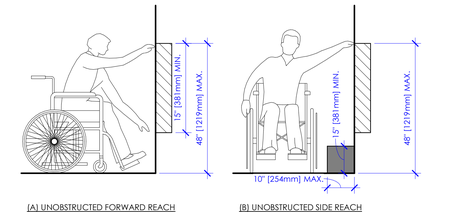


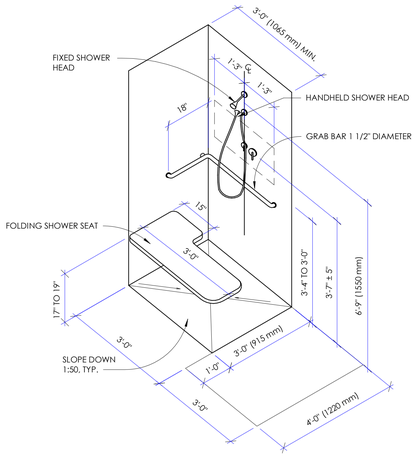




4 G005 MOUNTING HEIGHTS DETAIL

1/2" = 1'-0"

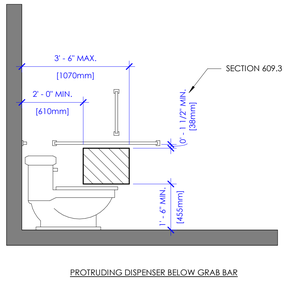




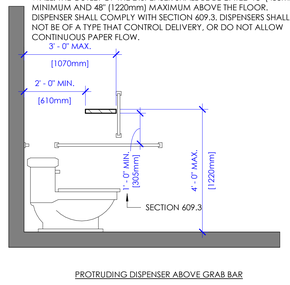
7 G005 ADA SHOWER

1/2" = 1'-0"

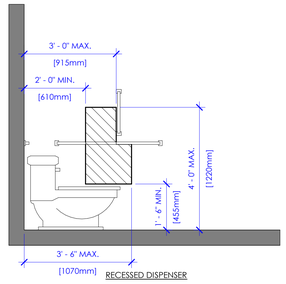
NOTE:
TOILET PAPER DISPENSERS SHALL COMPLY WITH SECTION 309.4. WHERE THE DISPENSER IS LOCATED BELOW THE GRAB BAR, THE OUTLET OF THE DISPENSER SHALL BE LOCATED WITHIN AN AREA 24" (610mm) MINIMUM AND 42" (1065mm) MAXIMUM FROM THE REAR WALL. THE OUTLET OF THE DISPENSER SHALL BE LOCATED 18" (455mm) MINIMUM AND 48" (1220mm) MAXIMUM ABOVE THE FLOOR. DISPENSER SHALL COMPLY WITH SECTION 609.3. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROL DELIVERY, OR DO NOT ALLOW CONTINUOUS PAPER FLOW.



PROTRUDING DISPENSER BELOW GRAB BAR



PROTRUDING DISPENSER ABOVE GRAB BAR

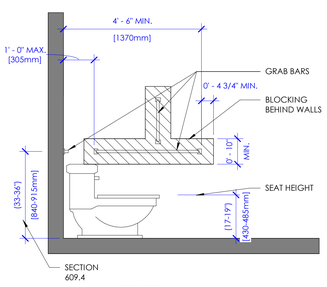


RECESSED DISPENSER

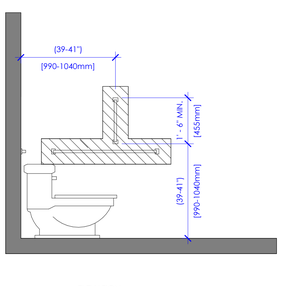
5 G005 TOILET ROOM GRAB BAR HEIGHTS

1/2" = 1'-0"

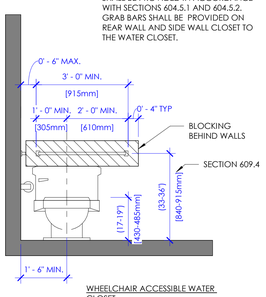
NOTE:
GRAB BARS TO CONFORM WITH ANSI A117.1. GRAB BARS FOR WATER CLOSETS SHALL COMPLY WITH SECTION 609 AND SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS 604.5.1 AND 604.5.2. GRAB BARS SHALL BE PROVIDED ON REAR WALL AND SIDE WALL CLOSET TO THE WATER CLOSET.



ELEVATION



ELEVATION



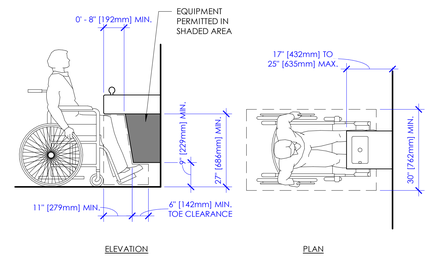
WHEELCHAIR ACCESSIBLE WATER CLOSET

6 G005 TOILET ROOM GRAB BAR HEIGHTS

1/2" = 1'-0"

1 G005 REACH REQUIREMENTS FOR WHEEL CHAIR ACCESS

1/2" = 1'-0"

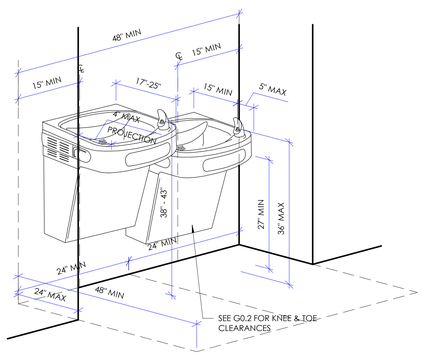


ELEVATION PLAN

NOTE: DRINKING FOUNTAINS TO BE PROVIDED WITH TENANT IMPROVEMENT.

2 G005 TOE/KNEE CLEARANCES

1/2" = 1'-0"



3 G005 ADA DRINKING FOUNTAIN REQUIREMENTS

1/2" = 1'-0"

aeurbia
architects and engineers
609 West South Jordan Parkway
south jordan, utah 84095
phone: 801.746.0456 - fax: 801.575.6456
webpage: aeurbia.com

LICENSED ARCHITECT 174600 JAMES MICHAEL WILLIAMSON STATE OF UTAH

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REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS NOTED BELOW:
☑ BUILDING ☑ ARCHITECTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ IMC
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: _____ DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule		
MARK	DESCRIPTION	Revision Date

AE2020.283

ADA GENERAL NOTES AND DETAILS

DATE: 03/10/2021

SHEET #:

G005

DESIGN DEVELOPMENT

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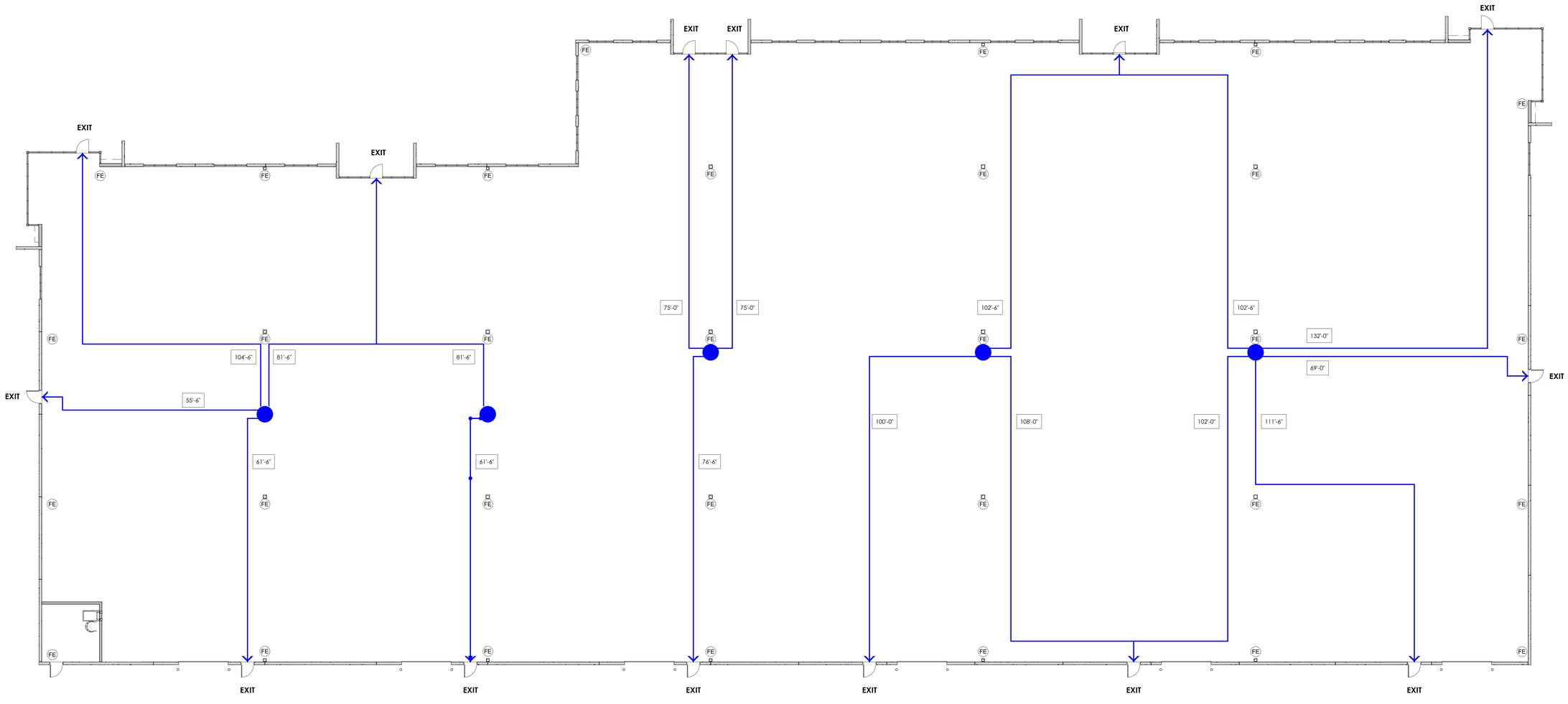
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LEGEND:

- = COMMON PATH OF EGRESS
- = EXIT ACCESS TRAVEL
- EXIT = EXIT LOCATION SEE ELECTRICAL PLANS FOR LOCATION OF EXIT SIGNAGE
- FE = FIRE EXTINGUISHER
- XX = OCCUPANCY TAG



1 G006 **LEVEL 1 - EGRESS PLAN**
3/32" = 1'-0"

aeurbia architects and engineers
909 West South Jordan Parkway
south jordan, utah 84095
phone: 801.746.0456 - fax: 801.575.6456
webpage: aeurbia.com

LICENSED ARCHITECT 174600 JAMES MICHAEL [illegible] STATE OF UTAH

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REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS NOTED BELOW:
- ☑ BUILDING
- ☑ MECHANICAL
- ☑ ELECTRICAL
- ☑ ACCESSIBILITY
- ☑ STRUCTURAL
- ☑ PLUMBING
- ☑ ENERGY
- ☐ FIRE

PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: [illegible] DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date

AE2020.283

EGRESS PLAN

DATE: 03/10/2021

SHEET #:

G006

DESIGN DEVELOPMENT

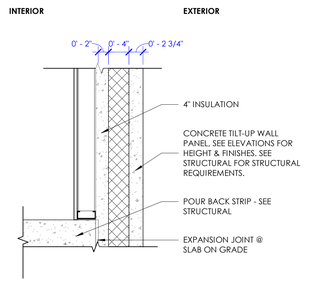
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FIRE RATING		4 HOUR RATED
* WALL DEPTH	A7.4	7-1/4" CONCRETE TILT-UP WALL
	A8.4	8" CONCRETE TILT-UP WALL
	A9.4	9-1/4" CONCRETE TILT-UP WALL
	A11.4	11" CONCRETE TILT-UP WALL
	A12.4	12" CONCRETE TILT-UP WALL

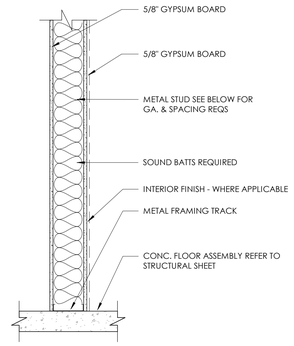


A WALL DETAIL - CONCRETE TILT-UP WALL w/ INSULATION

A G007

1" = 1'-0"

FIRE RATING		NON-RATED
* STUD WIDTH	C4.0	3-5/8" METAL STUD
	C6.0	6" METAL STUD



C WALL DETAIL - METAL STUD INTERIOR PARTITION

C G007

1" = 1'-0"

STUD WIDTH		3-5/8"
FIRE RATING		NON-RATED
* STUD GAUGE & SPACING REQ.	1	3-5/8" X 20 GA. STEEL STUDS AT 24" O.C. (MAX HT. 17'-4")
	2	3-5/8" X 16 GA. STEEL STUDS AT 24" O.C. (MAX HT. 22'-10")
	3	3-5/8" X 20 GA. STEEL STUDS AT 16" O.C. (MAX HT. 21'-3")
	4	3-5/8" X 18 GA. STEEL STUDS AT 16" O.C. (MAX HT. 24'-5")
STC: N/A		
	WALL DESCRIPTION: INTERIOR WALL - -	

STUD WIDTH		6"
FIRE RATING		NON-RATED
* STUD GAUGE & SPACING REQ.	1	6" X 20 GA. STEEL STUDS AT 24" O.C. (MAX HT. 23'-4")
	2	6" X 16 GA. STEEL STUDS AT 24" O.C. (MAX HT. 34'-2")
	3	6" X 14 GA. STEEL STUDS AT 24" O.C. (MAX HT. 36'-7")
	4	6" X 20 GA. STEEL STUDS AT 16" O.C. (MAX HT. 28'-7")
	5	6" X 18 GA. STEEL STUDS AT 16" O.C. (MAX HT. 34'-5")
STC: N/A	6	6" X 18 GA. STEEL STUDS AT 12" O.C. (MAX HT. 39'-8")
	WALL DESCRIPTION: INTERIOR WALL - -	

STUD WIDTH		6"
FIRE RATING		1 HOUR
* STUD GAUGE & SPACING REQ.	1	6" X 20 GA. STEEL STUDS AT 24" O.C. (MAX HT. 23'-4")
	2	6" X 16 GA. STEEL STUDS AT 24" O.C. (MAX HT. 34'-2")
	3	6" X 14 GA. STEEL STUDS AT 24" O.C. (MAX HT. 36'-7")
	4	6" X 20 GA. STEEL STUDS AT 16" O.C. (MAX HT. 28'-7")
STC:		
	WALL DESCRIPTION: FULL HEIGHT 1 HOUR FIRE RATED INTERIOR WALL	

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609 West South Jordan Parkway
South Jordan, Utah 84095
phone: 801.746.0456 · fax: 801.575.6456
webpage: aeurbia.com

LICENSED ARCHITECT
174600
JAMES MICHAEL
MITCHELL
STATE OF UTAH

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REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS NOTED BELOW:
☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

MARK	DESCRIPTION	Revision Date

Revision Schedule

AE2020.283

WALL TYPES

DATE: 03/10/2021

SHEET #:

G007

DESIGN DEVELOPMENT

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AMERICAN FORK OFFICE & WAREHOUSE

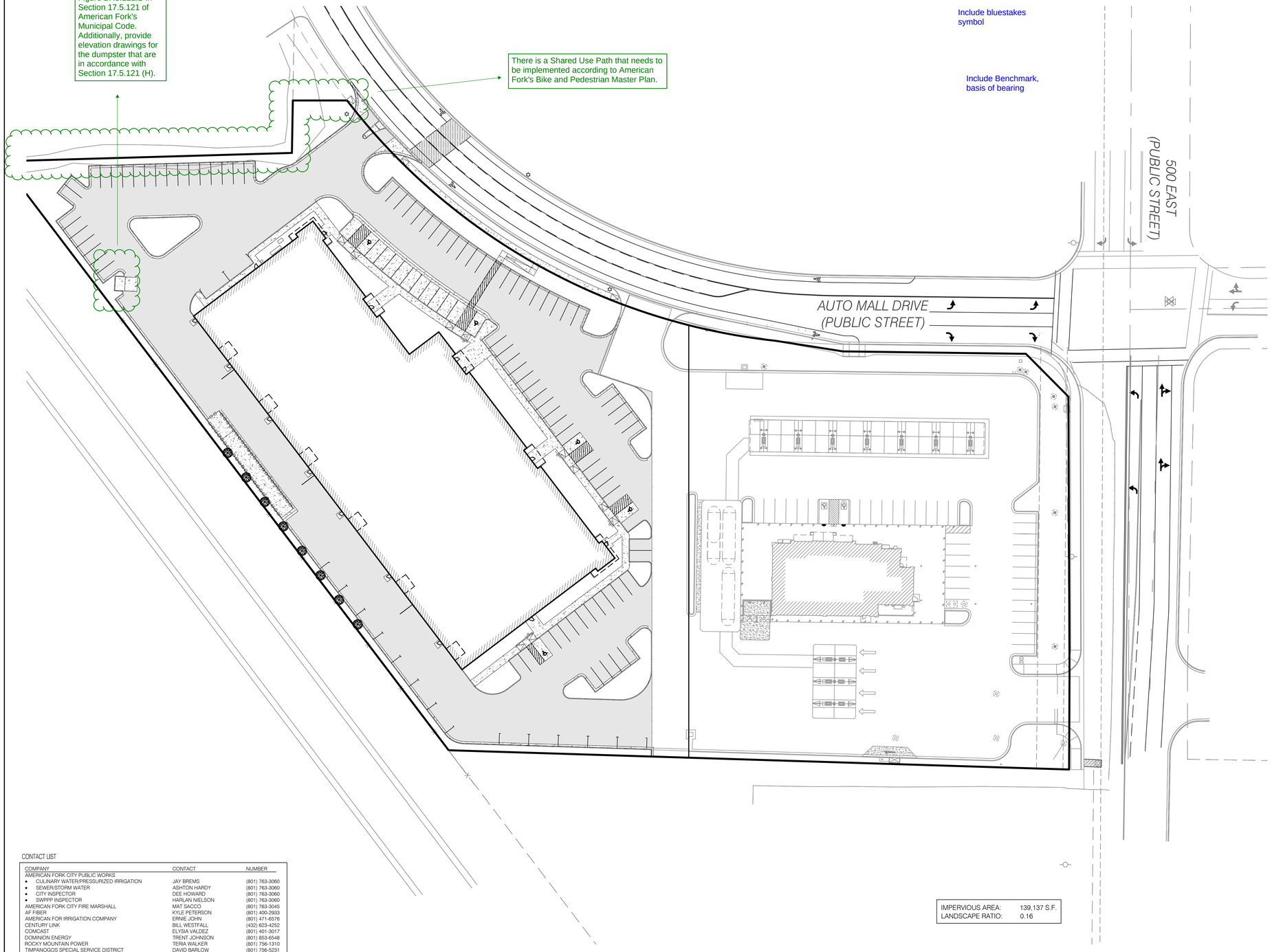
LOCATED IN THE NORTHWEST QUARTER OF SECTION 25,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN
AMERICAN FORK CITY, UTAH COUNTY, UTAH

Dumpster enclosure needs to be to city standards. City standards are shown in Figure 17.5.121.B in Section 17.5.121 of American Fork's Municipal Code. Additionally, provide elevation drawings for the dumpster that are in accordance with Section 17.5.121 (H).

There is a Shared Use Path that needs to be implemented according to American Fork's Bike and Pedestrian Master Plan.

Include bluestakes symbol

Include Benchmark, basis of bearing



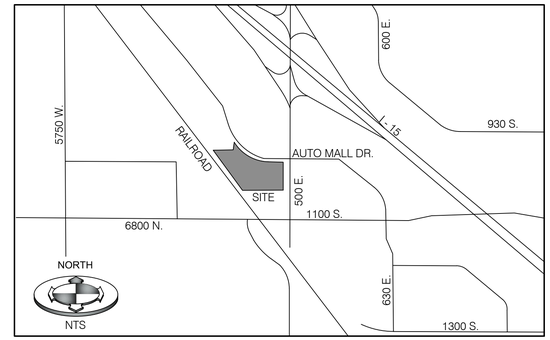
IMPERVIOUS AREA:	139,137 S.F.
LANDSCAPE RATIO:	0.16

NORTH

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40ft.



VICINITY MAP
N.T.S

OWNER/DEVELOPER:
DAVIES DESIGN
JONATHAN JENSEN
240 NORTH 1200 EAST, SUITE 201
LEHI, UTAH 84043
801.592.6044
JON@DAVIESDESIGNBUILD.COM

DRAWING INDEX

COVER	COVER SHEET
CGN.01	GENERAL NOTES, LEGEND & ABBREVIATION
CSP.01	SITE PLAN
CUP.01	UTILITY PLAN
CGD.01	GRADING & DRAINAGE PLAN
CGD.02	GRADING & DRAINAGE PLAN
CEP.01	EROSION CONTROL PLAN
CEP.02	EROSION CONTROL DETAILS
CSS.01	SIGNAGE AND STRIPING SHEET
CDT.01	DETAILS & NOTES
CDT.02	DETAILS & NOTES
CDT.03	DETAILS & NOTES
CDT.04	DETAILS & NOTES
CDT.05	DETAILS & NOTES
CDT.06	DETAILS & NOTES
CDT.07	DETAILS & NOTES

CIVIL CONSTRUCTION PLANS

CONTACT LIST

COMPANY	CONTACT	NUMBER
AMERICAN FORK CITY PUBLIC WORKS		
• CULINARY WATER/PRESSURIZED IRRIGATION	JAY BREMS	(801) 763-3060
• SEWER/STORM WATER	ASHTON HARDY	(801) 763-3060
• CITY INSPECTOR	DEE HOWARD	(801) 763-3060
• SWPPP INSPECTOR	HARLAN NIELSON	(801) 763-3060
AMERICAN FORK CITY FIRE MARSHALL	MAT SACCO	(801) 763-3045
AF FIBER	KYLE PETERSON	(801) 400-2933
AMERICAN FOR IRRIGATION COMPANY	ERNIE JOHN	(801) 471-6576
CENTURY LINK	BILL WESTFALL	(432) 623-4252
COMCAST	ELYSIA VALDEZ	(801) 401-3017
DOMINION ENERGY	TRENT JOHNSON	(801) 853-6548
ROCKY MOUNTAIN POWER	TERIA WALKER	(801) 756-1310
TIMPANOGOS SPECIAL SERVICE DISTRICT	DAVID BARLOW	(801) 756-5231
MITCHELL HOLLOW IRRIGATION CO.	DALE JONES	(801) 768-8150

BENCHMARK CIVIL

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE # 100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

AMERICAN FORK OFFICE/WAREHOUSE
450 EAST AUTOMALL DRIVE
AMERICAN FORK CITY, UTAH

DRAFT: JHO	DESIGN: JHO	CHECK: AGA
DATE: 05/01/2021	DATE: 05/03/2021	DATE: 05/05/2021

PROJECT NO. 1905136

No.	DATE	DESCRIPTION
5	02/24/22	REVISED SEWER LATERAL LOCATION PER OWNER
6	04/11/22	REVISED PER CITY COMMENTS
7	05/05/22	REVISED PER CITY COMMENTS
8	08/17/22	REVISED PER CITY COMMENTS
9	09/1/22	REVISED PER CITY COMMENTS
10	09/23/22	REVISED PER TRAFFIC STUDY

COVER

BENCHMARK ENGINEERING CONTACT: ALLISON G. ALBERT, PE

LINETYPES:

NEW / EXISTING

- SECTION LINE
- PROPERTY LINE
- ADJACENT PL or LOT LINES
- RIGHT-OF-WAY LINE
- CENTERLINE of ROAD
- EASEMENT LINE
- CURB & GUTTER
- EDGE OF ASPHALT
- FENCE / WALL, STONE
- FENCE, BLOCK
- FENCE, BRICK
- FENCE, CHAIN
- FENCE, IRON
- FENCE, VINYL
- FENCE, WIRE
- FENCE, WOOD
- INDEX CONTOUR LINE (4475)
- INTERMEDIATE CONTOUR LINE
- SPOT ELEVATION (XX.XX TOC)
- SANITARY SEWER LINE (SS)
- STORM DRAIN LINE (SD)
- WATER LINE (W)
- IRRIGATION LINE (IRR)
- OVERHEAD POWER LINE (OHP)
- UNDERGROUND POWER LINE (UG)
- GAS LINE (GAS)
- TELEPHONE LINE (T)
- CABLE TELEVISION LINE (CATV)
- DRAINAGE / DITCH CENTERLINE
- TREE LINE EDGE
- FIBER OPTIC LINE (FO)
- PROPOSED ASPHALT
- PROPOSED CONCRETE

SYMBOLS:

NEW / EXISTING

- SECTION CORNER (FOUND)
- SECTION CORNER (NOT FOUND)
- STREET MONUMENT (FOUND)
- STREET MONUMENT (NOT FOUND)
- BRASS CAP MONUMENT
- POWER POLE & OVERHEAD POWER
- LIGHT POLE
- GUY WIRE
- TELEPHONE MANHOLE
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- DIRECTION OF DRAINAGE
- WATER MANHOLE
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- IRRIGATION VALVE
- GAS MANHOLE
- TREE

ABBREVIATIONS

BC	BAR & CAP
BOW	BOTTOM OF VISIBLE WALL
COR.	SECTION CORNER
CB	CATCH BASIN
CF	CUBIC FEET
D	DELTA ANGLE
EG	EXISTING GROUND
EOA	EDGE OF ASPHALT
EOC	EDGE OF CONCRETE
EX	EXISTING
FFE	FINISH FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
GB	GRADE BREAK
GW	GUY WIRE
HW	HEAD WALL
I.E.	INVERT ELEVATION
LIP	LENGTH OF CURVE
L	LIP OF CURB
LF	LINEAR FEET
LP	LOW POINT
M-M	MONUMENT TO MONUMENT
MH	MANHOLE
MON.	SURVEY MONUMENT
OHP	OVERHEAD POWER
PVC	POINT OF CURVATURE
PVI	POINT OF INTERSECTION
PP	POWER POLE
PVT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
R	RADIUS OF CURVE
RR	RAILROAD
ROW	RIGHT-OF-WAY
R/W	RIGHT-OF-WAY
SSMH	SEWER MANHOLE
SD	STORM DRAIN
SF	SQUARE FEET
TBC	TOP BACK OF CURB
TMH	TELEPHONE MANHOLE
TOA	TOP OF ASPHALT
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOE	TOE OF SLOPE
TOG	TOP OF GRATE
TOP	TOP OF SLOPE
TOW	TOP OF WALL
TR	TELEPHONE RISER
UGP	UNDERGROUND POWER
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
WM	WATER METER
WV	WATER VALVE



NOTE:

IN THE EVENT THAT THE CONSTRUCTION NOTES CONFLICT WITH RESPONSIBLE DISTRICT OR AGENCY STANDARDS NOTES AND SPECIFICATIONS, THE DISTRICT OR AGENCY STANDARD NOTES AND SPECIFICATIONS GOVERN.

CAUTION NOTICE TO CONTRACTORS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AN HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

CONTACT LIST

COMPANY	CONTACT	NUMBER
AMERICAN FORK CITY PUBLIC WORKS		
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AMERICAN FORK CITY FIRE MARSHALL	MAT SACCO	(801) 763-3045
AF FIBER	KYLE PETERSON	(801) 400-2933
AMERICAN FOR IRRIGATION COMPANY	ERNIE JOHN	(801) 471-6576
CENTURY LINK	BILL WESTFALL	(432) 623-4252
COMCAST	ELYSIA VALDEZ	(801) 401-3017
DOMINION ENERGY	TRENT JOHNSON	(801) 853-6548
ROCKY MOUNTAIN POWER	TERIA WALKER	(801) 756-1310
TIMPANOGOS SPECIAL SERVICE DISTRICT	DAVID BARLOW	(801) 756-5231

CONSTRUCTION NOTES

RESPONSIBLE DISTRICTS OR AGENCIES AND APPLICABLE STANDARDS
CITY OR COUNTY- AMERICAN FORK CITY
WATER UTILITY COMPANY- AMERICAN FORK PUBLIC WORKS
SEWER- AMERICAN FORK PUBLIC WORKS
STORM DRAIN/GROUNDWATER- AMERICAN FORK CITY
ELECTRICAL- ROCKY MOUNTAIN POWER
TELEPHONE- CENTURY LINK/COMCAST
NATURAL GAS- DOMINION ENERGY

APPLICABLE STANDARDS:
APWA 2017 STANDARDS
2018 INTERNATIONAL FIRE CODE

GENERAL

1. ALL MATERIALS AND CONSTRUCTION IN THE PUBLIC RIGHT OF WAY SHALL BE IN ACCORDANCE WITH RESPONSIBLE DISTRICT OR AGENCY.

2. CONTRACTOR AND APPLICABLE SUBCONTRACTORS SHALL ATTEND ALL PRE-CONSTRUCTION CONFERENCES AND PERIODIC PROGRESS MEETINGS. PRIOR TO ANY WORK BEING PERFORMED, THE CONTRACTOR SHALL CONTACT RESPONSIBLE DISTRICT OR AGENCY FOR A PRE-CONSTRUCTION CONFERENCE. CONTRACTOR SHALL ALSO NOTIFY THE APPROPRIATE PROJECT CONTACTS (48) HOURS IN ADVANCE OF SAID MEETING.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC SAFETY AND OSHA STANDARDS.

4. THE CONTRACTOR SHALL FAMILIARIZE HIM/HER SELF WITH THE PLANS, THE GEOLOGY REPORTS AND THE SITE CONDITIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL INSPECT THE SITE OF WORK PRIOR TO BIDDING TO SATISFY THEMSELVES BY PERSONAL EXAMINATION OR BY SUCH OTHER MEANS AS THEY MAY PREFER, OF THE LOCATION OF THE PROPOSED WORK, AND OF THE ACTUAL CONDITIONS OF AND AT THE SITE OF WORK.

CONDITIONS WHICH APPEAR TO THEM TO BE IN CONFLICT WITH THE LETTER OR SPIRIT OF THE PROJECT PLANS AND SPECIFICATIONS, THEY SHALL CONTACT THE ENGINEER FOR ADDITIONAL INFORMATION AND EXPLANATION BEFORE SUBMITTING THEIR BID.

SUBMISSION OF A BID BY THE CONTRACTOR SHALL CONSTITUTE ACKNOWLEDGMENT THAT, IF AWARDED THE CONTRACT, THEY HAVE RELIED AND ARE RELYING ON THEIR OWN EXAMINATION OF (1) THE SITE OF THE WORK, (2) ACCESS TO THE SITE, AND (3) ALL OTHER DATA AND MATTERS REQUISITE TO THE FULFILLMENT OF THE WORK AND ON THEIR OWN KNOWLEDGE OF EXISTING FACILITIES ON AND IN THE VICINITY OF THE SITE OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.

THE INFORMATION PROVIDED BY THE OWNER OR THE ENGINEER IS NOT INTENDED TO BE A SUBSTITUTE FOR, OR A SUPPLEMENT TO, THE INDEPENDENT VERIFICATION BY THE CONTRACTOR TO THE EXTENT SUCH INDEPENDENT INVESTIGATION OF SITE CONDITIONS IS DEEMED NECESSARY OR DESIRABLE BY THE CONTRACTOR. CONTRACTOR SHALL ACKNOWLEDGE THAT THEY HAVE NOT RELIED SOLELY UPON OWNER OR ENGINEER FURNISHED INFORMATION REGARDING SITE CONDITIONS IN PREPARING AND SUBMITTING THEIR BID.

5. ALL WORK SHALL COMPLY WITH THE AMERICAN PUBLIC WORKS ASSOCIATION UTAH CHAPTER (APWA) MANUAL OF STANDARD SPECIFICATIONS 2017 EDITION AND THE MANUAL OF STANDARD PLANS 2017 EDITION. SAID STANDARD SPECIFICATIONS AND PLANS SHALL BE SUBSIDIARY TO MORE STRINGENT REQUIREMENTS BY APPLICABLE LOCAL JURISDICTION.

6. THE CONTRACTOR SHALL BE SKILLED AND REGULARLY ENGAGED IN THE GENERAL CLASS AND TYPE OF WORK CALLED FOR IN THE PROJECT PLANS AND SPECIFICATIONS. THEREFORE, THE OWNER IS RELYING UPON THE EXPERIENCE AND EXPERTISE OF THE CONTRACTOR, IT SHALL BE EXPECTED THAT THE PRICES PROVIDED WITHIN THE CONTRACT DOCUMENTS SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE.

THE CONTRACTOR SHALL BE COMPETENT, KNOWLEDGEABLE AND HAVE SPECIAL SKILLS ON THE NATURE, EXTENT AND INHERENT CONDITIONS OF THE WORK TO BE PERFORMED. CONTRACTOR SHALL ALSO ACKNOWLEDGE THAT THERE ARE CERTAIN REGULAR AND INHERENT CONDITIONS EXISTENT IN THE CONSTRUCTION OF THE PARTICULAR FACILITIES WHICH MAY CREATE, DURING THE CONSTRUCTION PROGRAM, UNUSUAL OR PECULIAR UNSAFE CONDITIONS HAZARDOUS TO PERSONS, PROPERTY AND THE ENVIRONMENT. CONTRACTOR SHALL BE AWARE OF SUCH PECULIAR RISKS AND HAVE THE SKILL AND EXPERIENCE TO FORESEE AND TO ADOPT PROTECTIVE MEASURES TO ADEQUATELY AND SAFELY PERFORM THE CONSTRUCTION WORK WITH RESPECT TO SUCH HAZARDS.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS AND LICENSES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT, AND SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS OF ALL PERMITS AND APPROVALS APPLICABLE TO THIS PROJECT. THE CONTRACTOR SHALL ENSURE THAT THE NECESSARY RIGHT-OF-WAY, EASEMENTS, AND/OR PERMITS ARE SECURED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL OBTAIN APPROPRIATE PERMITS WHERE APPLICABLE FOR ANY WORK DONE WITHIN RIGHT-OF-WAY OR EASEMENTS FROM THE CITY AND/OR UDOT. CONTRACTOR SHALL NOTIFY CITY, COUNTY, AND/OR STATE, 24 HOURS IN ADVANCE OF COMMUNICATING THE WORK, OR AS REQUIRED BY SAID PERMITS.

8. CONSTRUCTION STAKING FOR GRADING, CURB, GUTTER, SIDEWALK, SANITARY SEWER, STORM DRAIN, WATER, AND ELECTROLIERS SHALL BE DONE BY THE OWNER'S SURVEYOR. THE CONTRACTOR SHALL NOTIFY THE SURVEYOR FORTY-EIGHT (48) HOURS IN ADVANCE OF THE NEED FOR STAKING. ANY STAKING REQUESTED BY THE CONTRACTOR OR THEIR SUBCONTRACTORS THAT IS ABOVE AND BEYOND STANDARD STAKING NEEDS, WILL BE SUBJECT TO AN EXTRA WORK BACK CHARGE TO THE CONTRACTOR. THE CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCH MARKS, CONTROL POINTS, REFERENCE POINTS AND ALL SURVEY STAKES, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT AND/OR ERRORS CAUSED BY THEIR UNNECESSARY LOSS OR DISTURBANCE.

9. IT IS INTENDED THAT THESE PLANS AND SPECIFICATIONS REQUIRE ALL LABOR AND MATERIALS NECESSARY AND PROPER FOR THE WORK CONTEMPLATED AND THAT THE WORK BE COMPLETED IN ACCORDANCE WITH THEIR TRUE INTENT AND PURPOSE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY REGARDING ANY DISCREPANCIES OR AMBIGUITIES WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS. THE ENGINEER'S INTERPRETATION THEREOF SHALL BE CONCLUSIVE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER AND/OR ENGINEER.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SCHEDULING INSPECTION AND TESTING OF ALL FACILITIES CONSTRUCTED UNDER THIS CONTRACT. ALL TESTING SHALL CONFORM TO THE REGULATORY AGENCY'S STANDARD SPECIFICATIONS. ALL TESTING AND INSPECTION SHALL BE PAID FOR BY THE OWNER; ALL RE-TESTING AND/OR REINSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.

11. IF EXISTING IMPROVEMENTS NEED TO BE DISTURBED AND/OR REMOVED FOR THE PROPER PLACEMENT OF IMPROVEMENTS TO BE CONSTRUCTED BY THESE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. COST OF REPLACING OR REPAIRING EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS REQUIRING REMOVAL AND/OR REPLACEMENT OF EXISTING IMPROVEMENTS AND ANYTHING THAT HAS ALREADY BEEN CONSTRUCTED. THERE WILL BE NO EXTRA COST DUE THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, AFTER PROPER BACKFILLING AND/OR CONSTRUCTION, WITH MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL EXISTING FACILITIES. THE FINISHED PRODUCT SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER, THE ENGINEER, AND THE RESPECTIVE REGULATORY AGENCY.

12. THE CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE AS-BUILT RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL MECHANICAL; ELECTRICAL AND INSTRUMENTATION EQUIPMENT; PIPING AND CONDUITS; STRUCTURES AND OTHER FACILITIES. THE AS-BUILTS OF THE ELECTRICAL SYSTEM SHALL INCLUDE THE STREET LIGHT LAYOUT PLAN SHOWING LOCATION OF LIGHTS, CONDUITS, CONDUCTORS, POINTS OF CONNECTIONS TO SERVICES, PULLBOXES, AND WIRE SIZES. AS-BUILT RECORD DRAWINGS SHALL REFLECT CHANGE ORDERS, ACCOMMODATIONS, AND ADJUSTMENTS TO ALL IMPROVEMENTS CONSTRUCTED. WHERE NECESSARY, SUPPLEMENTAL DRAWINGS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR.

13. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO ENGINEER. ONE SET OF NEATLY MARKED AS-BUILT RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. AS-BUILT RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE AS-BUILT RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATION REDLINES AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.

UTILITIES

14. CONTRACTOR TO SPACE UTILITIES TO PROVIDE MINIMUM DISTANCES AS REQUIRED BY LOCAL, COUNTY, STATE, AND INDIVIDUAL UTILITY CODES.

15. ALL UTILITES INSTALLED IN ACCORDANCE WITH THE RESPONSIBLE DISTRICTS OR AGENCIES STANDARDS AND SPECIFICATIONS.

16. COORDINATE ALL SERVICE LATERAL AND BUILDING CONNECTIONS WITH CORRESPONDING ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWING FOR LOCATION AND ELEVATION. NOTIFY ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE ENCOUNTERED.

17. ALL STORM DRAIN MANHOLES AND CATCH BASINS ARE TO BE PRECAST CONCRETE FROM APPROVED LOCAL MANUFACTURER UNLESS OTHERWISE NOTED. AND COMPLY WITH CITY/COUNTY STANDARD

18. ALL STORM WATER CONVEYANCE PIPING TO BE RCP - CLASS 3 OR ADS HDPE PIPE OR EQUAL UNLESS OTHERWISE NOTED.

19. ALL ELECTRICAL CONDUITS/LINES TO BE PVC SCH 40 OR BETTER.

20. ALL GAS LINES TO BE HDPE WITH COPPER TRACER WIRE AND DETECTA TAPE. TERMINATE TRACER WIRE AT APPROVED LOCATIONS.

21. ALL GAS LINE TAPS, VALVES AND CAPS TO BE FUSED USING ELECTRO - FUSION TECHNOLOGY.

22. ALL PHONE AND TV CONDUITS TO BE PVC SCH 40 OR BETTER.

23. NO GROUNDWATER OR DEBRIS TO BE ALLOWED TO ENTER THE NEW PIPE DURING CONSTRUCTION. THE OPEN END OF ALL PIPES IS TO BE COVERED AND EFFECTIVELY SEALED AT THE END OF EACH DAYS WORK.

24. THE CONTRACTOR SHALL PROVIDE ALL SHORING, BRACING, SLOPING OR OTHER PROVISIONS NECESSARY TO PROTECT WORKMEN FOR ALL AREAS TO BE EXCAVATED TO A DEPTH OF 4' OR MORE AND SHALL COMPLY WITH INDUSTRIAL COMMISSION OF UTAH SAFETY ORDERS SECTION 68 - EXCAVATIONS, AND SECTION 69 - TRENCHES, ALONG WITH ANY LOCAL CODES OR ORDINANCES.

25. PRIOR TO OPENING AN EXCAVATION, EFFORT SHALL BE MADE TO DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E. SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATIONS ARE LOCATED. WHEN THE EXCAVATION APPROACHES THE APPROXIMATE LOCATION OF SUCH AN INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION. ALL KNOWN OWNERS OF UNDERGROUND FACILITIES IN THE AREA CONCERNED SHALL BE ADVISED OF PROPOSED WORK AT LEAST 48 HOURS PRIOR TO THE START OF ACTUAL EXCAVATION.

26. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL PIPE OF ADEQUATE CLASSIFICATION WITH SUFFICIENT BEDDING TO MEET ALL REQUIREMENTS AND RECOMMENDATIONS FOR H-20 LOAD REQUIREMENTS.

27. ACTUAL CONNECTIONS TO EXISTING WATER LINES WILL NOT BE PERMITTED PRIOR TO THE COMPLETION OF STERILIZATION AND TESTING OF NEW WATER MAINS. ALL EXISTING WATER VALVES TO BE OPERATED UNDER THE DIRECTION OF THE CITY/COUNTY PUBLIC WORKS DEPARTMENT PERSONNEL ONLY.

28. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE INSPECTED, TESTED, AND APPROVED BY AUTHORITIES HAVING JURISDICTION PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK, AND STREET PAVING.

SEWER

29. ALL SEWER MAINS AND LATERALS MUST BE INSPECTED AND APPROVED BY THE CITY INSPECTOR BEFORE TRENCH BACKFILLING IS COMPLETED.

30. ALL SEWER LINES TO BE FLUSHED, PRESSURE TESTED TO 5 PSI VIDEO INSPECTED AND OTHERWISE TESTED IN ACCORDANCE WITH DISTRICT STANDARDS PRIOR TO PLACING IN SERVICE.

31. ALL SEWER PIPES ARE TO BE SDR-35 PVC PIPE.

32. SEWER MANHOLES, LATERALS AND CLEANOUTS TO BE INSTALLED PER RESPONSIBLE DISTRICT OR AGENCY STANDARDS. THE UNIT COST OF THE SEWER LATERAL INCLUDES CONNECTION TO THE SEWER MAIN. THE CLEANOUT RISER FOR EACH SERVICE SHALL BE INSTALLED BY THE CONTRACTOR.

33. DURING CONSTRUCTION OF THE SEWER LINE, THE LATERAL CONNECTION SHALL INSERT-A-TEE OR WYE AT TEN O'CLOCK POSITIONING TO THE CENTER OF THE MAIN LINE AND SHALL BE ENCASED IN CONCRETE AFTER INSPECTION IS MADE. (SEE RESPONSIBLE DISTRICT OR AGENCY STANDARDS)

WATER

34. WATERLINES TO BE PVC C-900. WATER LINES SHALL BE A MINIMUM OF 10' HORIZONTALLY FROM SEWER MAINS. CROSSINGS SHALL MEET STATE HEALTH STANDARDS. (MECHANICAL JOINTS REQUIRED WHEN LESS THAN 18" VERTICAL OR TEN FEET HORIZONTAL SEPARATION FROM SEWERLINE)

35. ALL WATERLINES SHALL BE 8" MINIMUM SIZE AND SERVICE LATERALS SHALL BE 1-1/2" MINIMUM UNLESS OTHERWISE NOTED.

36. WATER SERVICE LATERALS TO INCLUDE ALL BRASS SADDLE; CORP. STOP LATERAL, DOUBLE CHECK VALVE AND BACKFLOW PREVENTION DEVICE, AND SHUTOFF VALVE IN BOX NEAR BUILDING EDGE.

37. ALL WATERLINES SHALL BE 48" BELOW FINISH GROUND TO TOP OF PIPE. ALL VALVE BOXES AND MANHOLES SHALL BE RAISED OR LOWERED TO FINISH GRADE AND SHALL INCLUDE A CONCRETE COLLAR IN PAVED AREAS. ALL WATER LINES SHALL BE LOOPED AROUND GRAVITY LINES OR ROPED PER RESPONSIBLE DISTRICT OR AGENCY INSPECTOR.

38. CONTRACTOR TO NOTIFY RESPONSIBLE DISTRICT OR AGENCY FOR CHLORINE TEST PRIOR TO FLUSHING LINES, CHLORINE LEFT IN PIPE 24 HRS. MINIMUM WITH 25 PPM RESIDUAL. ALL TURNING OF MAINLINE VALVES, CHLORINATION, FLUSHING, PRESSURE TESTING, BACTERIA TESTING, ETC. TO BE COORDINATED WITH RESPONSIBLE DISTRICT OR AGENCY. ALL TESTS TO BE IN ACCORDANCE WITH RESPONSIBLE DISTRICT OR AGENCY.

39. BOTTOM FLANGE OF FIRE HYDRANTS TO BE SET TO APPROXIMATELY 4 INCHES ABOVE BACK OF CURB ELEVATION. HYDRANTS TO INCLUDE TEE, 6" LINE VALVE, AND HYDRANT COMPLETE TO MEET RESPONSIBLE DISTRICT OR AGENCY STANDARDS, UNLESS OTHERWISE NOTED ON PLANS.

EXISTING UTILITIES

40. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITIES SHOWN OR NOT SHOWN. THE INFORMATION SHOWN ON THE PLANS WITH REGARDS TO THE EXISTING UTILITIES AND/OR IMPROVEMENTS WAS DERIVED FROM FIELD INVESTIGATION AND/OR RECORD INFORMATION. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE FACILITIES SHOWN AND ANY OTHER FACILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS. PRIOR TO CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY ALL EXISTING IMPROVEMENTS AND TO EXPOSE ALL EXISTING UNDERGROUND UTILITIES RELATED TO THE PROJECT, INCLUDING BUT NOT LIMITED TO, SEWER, STORM DRAIN, WATER IRRIGATION, GAS, ELECTRICAL, ETC. AND SHALL NOTIFY THE ENGINEER IN WRITING FORTY-EIGHT (48) HOURS IN ADVANCE OF EXPOSING THE UTILITIES SO, THAT THE EXACT LOCATION AND ELEVATION CAN BE VERIFIED AND DOCUMENTED. THE COST ASSOCIATED TO PERFORM THIS WORK SHALL BE INCLUDED IN EITHER THE LUMP SUMP CLEARING COST OR IN THE VARIOUS ITEMS OF WORK. IF LOCATION AND/OR ELEVATION DIFFERS FROM THAT SHOWN ON THE DESIGN PLANS, PROVISIONS TO ACCOMMODATE NEW LOCATION BE MADE PRIOR TO CONSTRUCTION.

41. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES 48 HOURS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK THE CONTRACTOR SHALL RECORD THE BLUE STAKES ORDER NUMBER AND FURNISH ORDER NUMBER TO OWNER AND ENGINEER PRIOR TO ANY EXCAVATION. IT WILL BE THE CONTRACTORS SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS TO THEM DURING THE PERFORMANCE OF THIS CONTRACT. ANY REPAIRS NECESSARY TO DAMAGED UTILITIES SHALL BE PAID FOR BY THE CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.

42. ALL MANHOLE RIMS, LAMPHOLES, VALVE BOX COVERS, MONUMENT BOXES AND CATCH BASIN GRATES ARE TO BE ADJUSTED TO FIT THE FINISHED GRADE AFTER PAVING, UNLESS OTHERWISE NOTED. COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES FOR SAID FACILITIES.

43. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT ALL PIPES, WALLS, ETC. ARE ADEQUATELY BRACED DURING CONSTRUCTION.

CLEARING AND GRADING

44. CONTRACTOR SHALL PERFORM EARTHWORK IN ACCORDANCE WITH APWA 2017 STANDARD DRAWINGS AND STANDARD SPECIFICATIONS AND THE RECOMMENDED EARTHWORK SPECIFICATION FOUND IN THE PROFESSIONALLY PREPARED REPORT OF GEOTECHNICAL INVESTIGATION.

45. THE CONTRACTOR SHALL REMOVE ALL VEGETATION AND DELETERIOUS MATERIALS FROM THE SITE UNLESS NOTED OTHERWISE; ALL EXISTING WELLS AND SEPTIC TANKS SHALL BE REMOVED AND/OR ABANDONED PER THE REQUIREMENTS OF ALL LOCAL, STATE AND FEDERAL REGULATIONS. THE COST TO PERFORM THIS WORK SHALL BE INCLUDED IN THE LUMP SUM CLEARING COST.

46. SUBSOIL INVESTIGATIONS HAVE BEEN CONDUCTED AT THE SITE OF THE WORK. BEFORE FOOTING, FOUNDATION OR STRUCTURAL WALL CONSTRUCTION CAN COMMENCE, A REVIEW OF THE PROFESSIONAL REPORT OF THESE INVESTIGATIONS, MUST BE REVIEWED BY CMT ENGINEERING LABORATORIES.

SOIL INVESTIGATIONS WERE CONDUCTED BY CMT ENGINEERING LABORATORIES ON AUGUST 2ND, 2019 FOR DESIGN PURPOSES ONLY, AND THE DATA SHOWN IN THE REPORTS ARE FOR SUBSURFACE CONDITIONS FOUND AT THE TIME OF THE INVESTIGATION. THE OWNER AND ENGINEER DISCLAIM RESPONSIBILITY FOR THE INTERPRETATION BY THE CONTRACTOR OF DATA, SUCH PROJECTION OR EXTRAPOLATION, FROM THE TEST HOLES TO OTHER LOCATIONS ON THE SITE OF THE WORK, SOIL BEARING VALUES AND PROFILES, SOIL STABILITY AND THE PRESENCE, LEVEL AND EXTENT OF UNDERGROUND WATER FOR SUBSURFACE CONDITIONS DURING CONSTRUCTION OPERATIONS.

47. ALL PROPOSED ELEVATIONS SHOWN ON THE GRADING PLAN ARE TO FINISHED SURFACE, THE CONTRACTOR IS RESPONSIBLE TO DEDUCT THE THICKNESS OF THE PAVEMENT STRUCTURAL SECTION FOR TOP OF SUB GRADE ELEVATIONS.

48. IF AT ANY TIME DURING CONSTRUCTION ANY UNFAVORABLE GEOLOGICAL CONDITIONS ARE ENCOUNTERED, WORK IN THAT AREA WILL STOP UNTIL APPROVED CORRECTIVE MEASURES ARE OBTAINED FROM THE ENGINEER.

49. UNSUITABLE MATERIAL, SUCH AS TOP SOIL, WEATHERED BED ROCK, ETC., SHALL BE REMOVED AS REQUIRED BY THE SOILS ENGINEER (AND/OR ENGINEERING GEOLOGIST, WHERE EMPLOYED) FROM ALL AREAS TO RECEIVE COMPACTED FILL OR DRAINAGE STRUCTURES.

50. NO TREES SHALL BE REMOVED OR DAMAGED WITHOUT SPECIFIC WRITTEN AUTHORIZATION FROM PROPERTY OWNER.

THE EXISTING TOPOGRAPHY ON THESE PLANS IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY BENCHMARK ENGINEERING AND LAND SURVEYING ON AUGUST 8TH, 2019 AND MAY HAVE BEEN MODIFIED SINCE THIS SURVEY WAS PERFORMED.

51. FILLS IN EXCESS OF 4 FEET IN THICKNESS AND BENEATH ALL FOUNDATIONS OR PAVEMENT SECTIONS SHALL BE COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE ASTM D-1557 COMPACTION CRITERIA. ALL OTHER STRUCTURAL FILL LESS THAN 4 FEET IN THICKNESS SHOULD BE COMPACTED TO AT LEAST 90 PERCENT OF THE ABOVE CRITERIA. REFERENCE GEOTECHNICAL REPORT PREPARED BY CMT ENGINEERING LABORATORIES ON AUGUST 2, 2019..

52. COMPACTION TESTING WILL BE ACCOMPLISHED BY THE CONTRACTOR, OR THE CONTRACTOR WILL HAVE SUCH TESTING ACCOMPLISHED BY A SEPARATE CONTRACTOR. TEST RESULTS WILL BE SUBMITTED FOR REVIEW WITHIN 24 HOURS AFTER TEST.

53. CONTRACTOR TO SUBMIT PROCTOR AND/OR MARSHALL TEST DATA 24 HOURS PRIOR TO COMPACTION TESTS.

54. STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN CONTOUR LINES AND SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON PLANS.

55. ALL SLOPES IN ADJOINING STREETS, DRAINAGE CHANNELS, OR OTHER FACILITIES SHALL BE GRADED NO STEEPER THAN 2 TO 1 FOR CUT AND FILL.

56. GRADES WITHIN ASPHALT PARKING AREAS SHALL BE CONSTRUCTED TO WITHIN 0.10 FEET OF THE DESIGN GRADE. HOWEVER, THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE IN ALL PAVEMENT AREAS AND ALONG ALL CURBS. ALL CURBS SHALL BE BUILT IN ACCORDANCE TO THE PLAN. CURBS AND PAVEMENT AREAS WHICH ARE NOT INSTALLED PER PLAN MUST BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

57. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS OWN ESTIMATE OF EARTHWORK QUANTITIES.

58. WHERE NEW CURB AND GUTTER IS BEING CONSTRUCTED ADJACENT TO EXISTING ASPHALT OR CONCRETE PAVEMENT, THE FOLLOWING SHALL APPLY; PRIOR TO PLACEMENT OF ANY CONCRETE THE CONTRACTOR SHALL HAVE A LICENSE SURVEYOR VERIFY THE GRADE AND CROSS SLOPE OF THE CURB AND GUTTER FORMS, THE CONTRACTOR SHALL SUBMIT THE SLOPE AND GRADES TO THE ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF CONCRETE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY SECTION WHICH DOES NOT CONFORM TO THE DESIGN OR TYPICAL CROSS SECTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CURB AND GUTTER POURS WITHOUT THE APPROVAL OF THE ENGINEER.

59. SITE WORK SHALL MEET OR EXCEED OWNER'S SITE SPECIFICATIONS.

60. ALL SITE CONCRETE OR CONCRETE ELEMENT NOT SPECIFICALLY SHOWN AND DETAILED ON STRUCTURAL DRAWINGS TO HAVE A MINIMUM OF 28 DAY COMPRESSION STRENGTH OF 4000 PSI.

61. CUT SLOPES SHALL BE NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL

62. FILL SLOPES SHALL BE NO STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL

63. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING PROJECT.

DEWATERING

64. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE AND MAINTAIN ALL MACHINERY, APPLIANCES AND EQUIPMENT TO MAINTAIN ALL EXCAVATIONS FREE FROM WATER DURING CONSTRUCTION. THE CONTRACTOR SHALL DISPOSE OF THE WATER SO AS NOT TO CAUSE DAMAGE TO PUBLIC OR PRIVATE PROPERTY, OR TO CAUSE A NUISANCE OR MENACE TO THE PUBLIC OR VIOLATE THE LAW. THE DEWATERING SYSTEM SHALL BE INSTALLED AND OPERATED SO THAT THE GROUND LEVEL OUTSIDE THE EXCAVATION IS NOT REDUCED TO THE EXTENT WHICH WOULD CAUSE DAMAGE OR ENDANGER ADJACENT STRUCTURES OR PROPERTY. ALL COST FOR DEWATERING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ALL PIPE CONSTRUCTION. THE STATIC WATER LEVEL SHALL BE DRAWN DOWN A MINIMUM OF 1 FOOT BELOW THE BOTTOM OF EXCAVATIONS TO MAINTAIN THE UNDISTURBED STATE OF NATURAL SOILS AND ALLOW THE PLACEMENT OF ANY FILL TO THE SPECIFIED DENSITY. THE CONTRACTOR SHALL HAVE ON HAND, PUMPING EQUIPMENT AND MACHINERY IN GOOD CONDITION FOR EMERGENCIES AND SHALL HAVE WORKMEN AVAILABLE FOR ITS OPERATION: DEWATERING SYSTEM SHALL OPERATE CONTINUOUSLY UNTIL BACKFILL HAS BEEN COMPLETED TO 1 FOOT ABOVE THE NORMAL STATIC GROUNDWATER LEVEL.

65. THE CONTRACTOR SHALL CONTROL SURFACE WATER TO PREVENT ENTRY INTO EXCAVATIONS. AT EACH EXCAVATION, A SUFFICIENT NUMBER OF TEMPORARY OBSERVATION WELLS TO CONTINUOUSLY CHECK THE GROUNDWATER LEVEL SHALL BE PROVIDED.

66. SUMPS SHALL BE NO DEEPER THAN 5 FEET AND SHALL BE AT THE LOW POINT OF EXCAVATION. EXCAVATION SHALL BE GRADED TO DRAIN TO THE SUMPS.

67. THE CONTROL OF GROUNDWATER SHALL BE SUCH THAT SOFTENING OF THE BOTTOM OF EXCAVATIONS, OR FORMATION OF "QUICK" CONDITIONS OR "BOILS", DOES NOT OCCUR. DEWATERING SYSTEMS SHALL BE DESIGNED AND OPERATED SO AS TO PREVENT REMOVAL OF NATURAL SOILS. THE RELEASE OF GROUNDWATER AT ITS STATIC LEVEL SHALL BE PERFORMED IN SUCH A MANNER AS TO MAINTAIN THE UNDISTURBED STATE OF NATURAL FOUNDATION SOILS, PREVENT DISTURBANCE OF COMPACTED BACKFILL, AND PREVENT FLOTATION OR MOVEMENT OF STRUCTURES, PIPELINES AND SEWERS. IF A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR DISPOSAL OF WATER FROM CONSTRUCTION DEWATERING ACTIVITIES, IT SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO ANY DEWATERING ACTIVITIES.

68. ONE HUNDRED PERCENT STANDBY PUMPING CAPACITY SHALL BE AVAILABLE ON SITE AT ALL TIMES AND SHALL BE CONNECTED TO THE DEWATERING SYSTEM PIPING AS TO PERMIT IMMEDIATE USE. IN ADDITION STANDBY EQUIPMENT AND APPLIANCES FOR ALL ORDINARY EMERGENCIES, AND COMPETENT WORKMEN FOR OPERATION AND MAINTENANCE OF ALL DEWATERING EQUIPMENT SHALL BE ON SITE AT ALL TIMES. STANDBY EQUIPMENT SHALL INCLUDE EMERGENCY POWER GENERATION AND AUTOMATIC SWITCH OVER TO THE EMERGENCY GENERATOR WHEN NORMAL POWER FAILS. DEWATERING SYSTEMS SHALL NOT BE SHUT DOWN BETWEEN SHIFTS, ON HOLIDAYS, ON WEEKENDS, OR DURING WORK STOPPAGES.

SITE SAFETY AND MAINTENANCE

69. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.

70. THE CONTRACTOR AGREES THAT:

A. THEY SHALL BE RESPONSIBLE TO CLEAN THE JOB SITE AT THE END OF EACH PHASE OF WORK.

B. THEY SHALL BE RESPONSIBLE TO REMOVE AND DISPOSE OF ALL TRASH, SCRAP AND UNUSED MATERIAL AT THEIR OWN EXPENSE IN A TIMELY MANNER.

C. THEY SHALL BE RESPONSIBLE TO MAINTAIN THE SITE IN A NEAT, SAFE AND ORDERLY MANNER AT ALL TIMES.

D. THEY SHALL BE RESPONSIBLE TO KEEP MATERIALS, EQUIPMENT, AND TRASH OUT OF THE WAY OF OTHER CONTRACTORS SO AS NOT TO DELAY THE JOB. FAILURE TO DO SO WILL RESULT IN A DEDUCTION FOR THE COST OF CLEAN UP FROM THE FINAL PAYMENT.

E. THEY SHALL BE RESPONSIBLE FOR THEIR OWN SAFETY, TRAFFIC CONTROL, PERMITS, RETESTING AND REINSPECTIONS AT THEIR OWN EXPENSE.

F. UNLESS OTHERWISE NOTED ALL EXCESS SOILS AND MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LAWFULLY DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.

G. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, BARRICADES, SIGNS, FLAGMEN OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.

H. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTORS USE DURING CONSTRUCTION.

I. ALL DEBRIS AND FOREIGN MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT APPROVED DISPOSAL SITES. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FOR THE TRANSPORTATION OF MATERIAL TO AND FROM THE SITE.

72. FOR ALL WORK WITHIN PUBLIC RIGHTS-OF-WAY OR EASEMENTS, THE CONTRACTOR SHALL PRESERVE THE INTEGRITY AND LOCATION OF ANY AND ALL PUBLIC UTILITIES AND PROVIDE THE NECESSARY CONSTRUCTION TRAFFIC CONTROL. CONTRACTOR SHALL, THROUGH THE ENCROACHMENT PERMIT PROCESS, VERIFY WITH THE NECESSARY REGULATORY AGENCIES, THE NEED FOR ANY TRAFFIC ROUTING PLAN. IF PLAN IS REQUIRED, CONTRACTOR SHALL PROVIDE PLAN AND RECEIVED PROPER APPROVALS PRIOR TO BEGINNING CONSTRUCTION. WORK IN EASEMENT AND/OR RIGHTS-OF-WAY IS SUBJECT TO THE APPROVAL AND ACCEPTANCE OF THE REGULATORY AGENCY RESPONSIBLE FOR OPERATION AND/OR MAINTENANCE OF SAID AND/OR RIGHT-OF-WAY. ALL CONSTRUCTION WORK IN UDOT RIGHT- OF -WAY SHALL BE SUBJECT TO INSPECTION BY THE STATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT INSPECTIONS TAKE PLACE WHERE AND WHEN REQUIRED AND TO INSURE THAT ALL WORK IS COMPLETED TO UDOT STANDARDS.

SURFACE IMPROVEMENTS:

73. SUBGRADE PREPARATION: SUBGRADE SHALL BE COMPACTED TO A 95% RELATIVE C0MPACTION TO A MINIMUM DEPTH OF 6" FOR ALL ON-SITE DEVELOPMENT. ALL OFF-SITE IMPROVEMENTS ARE TO BE DONE PER APWA STANDARDS.

74. AGGREGATE SUB-BASE: AGGREGATE SUB-BASE SHALL BE GRANULAR BACKFILL BORROW. AGGREGATE SUB-BASE MATERIAL SHALL BE CLEAN AND FREE FROM VEGETABLE MATTER AND OTHER DELETERIOUS SUBSTANCE. AGGREGATE SHALL COMPLY WITH THE GUIDELINE REQUIREMENTS FOR PAVEMENTS FOUND IN THE PROFESSIONALLY PREPARED OF THE SOILS INVESTIGATIONS COMPLETED ON THIS SITE.

75. AGGREGATE BASE: AGGREGATE BASE SHALL BE GRADE 3/4 UNTREATED BASE COURSE, AND COMPLY PREPARED REPORT OF THE SOILS INVESTIGATION PREPARED ON THIS SITE.

76. ALL SIDEWALKS AND CROSSINGS TO MEET CURRENT ADA STANDARDS/ APWA STANDARDS.

77. PAYMENT FOR PAVEMENT WILL BE MADE ONLY FOR AREAS SHOWN ON PLANS. REPLACEMENT OF PAVEMENT WHICH IS BROKEN OR CUT DURING THE INSTALLATION OF THE WORK COVERED BY THESE GENERAL NOTES, AND WHICH LIES OUTSIDE OF SAID AREAS, SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR PAVEMENT, AND NO ADDITIONAL PAYMENT SHALL BE MADE FOR SUCH WORK.

78. INSTALLATION OF STREET LIGHTS SHALL BE IN ACCORDANCE WITH CITY STANDARDS.

79. PRIOR TO FINAL ACCEPTANCE OF THE IMPROVEMENTS BUILT BY THESE PLANS AND SPECIFICATIONS THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE OWNER, CITY, AND POWER COMPANY TO HAVE THE ELECTRICAL SYSTEM AND ALL STREET LIGHTS ENERGIZED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL STRIPING AND/OR PAVEMENT MARKINGS NECESSARY TO THE EXISTING STRIPING INTO FUTURE STRIPING. METHOD OF REMOVAL SHALL BE BY GRINDING OR SANDBLASTING.

80. STRIPING AND PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH MUTCD & APWA 32 17 23.

81. DURING THE BIDDING PROCESS, CONTRACTOR TO REVIEW DESIGN SLOPES SHOWN FOR PAVEMENT AND WARRANTY THE PAVEMENT TO THE OWNER BASED UPON THE DESIGN SLOPES SHOWN HEREON. CONCERNS WITH SLOPES MUST BE BROUGHT DURING THE BIDDING PROCESS.

82. IT IS THE INTENT ON THESE PLANS THAT ALL PAVEMENT SLOPE TO A CATCH BASIN, INLET BOX OR OUT INTO A STREET.CONTRACTOR TO VERIFY FINISH SPOT ELEVATIONS AND NOTIFY ENGINEER IF THERE ARE DISCREPANCIES THAT WOULD CAUSE PUDDLING ON THE SITE.

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9	09/1/22	REVISED PER CITY COMMENTS
10	09/23/22	REVISED PER TRAFFIC STUDY

DRAWN BY JHO
CHECKED BY MCP
FIELD CREW SURVEY
DATE 05/05/2021
DWG. FILE 1905136_SITE

0 0.5 1
SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK CIVIL
BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
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AMERICAN FORK OFFICE & WAREHOUSE
450 EAST AUTOMALL DRIVE
AMERICAN FORK, UTAH

PROJECT NO. 1905136

GEN. NOTES LEGEND & ABBREV.

CGN.01
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NOTE:
SLOPE ACROSS THE ACCESSIBLE PARKING STALLS & ACCESS ISLE SHALL NOT EXCEED A 1:48 (2.00%) SLOPE. THE MAX GRADE DIFFERENCE BETWEEN THE ASPHALT SURFACE, ACCESSIBLE RAMP, AND SIDEWALK SHALL NOT EXCEED 1/4 INCH VERTICAL OR 1/2 INCH WHEN BEVELED. THE ACCESSIBLE MEANS OF EGRESS INCLUDING THE DRIVEWAY PORTION SHALL NOT EXCEED A SLOPE OF 1:20 (5.0%) & A CROSS SLOPE OF 1:48 (2.0%). ALL EXTERIOR DOOR WAY ACCESS REQUIRE AN EXTERIOR LANDING 60 INCHES IN LENGTH WITH A SLOPE NOT EXCEEDING A 1:48 (2.0%) SLOPE

NORTH

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.

TKT AUTOMALL, LLC
PARCEL NO.
47-335-0001

RJ CHRISTENSEN PROPERTIES
PARCEL NO. 13-061-0095

UDOT
PARCEL NO. 13-061-0094

500 EAST
(PUBLIC STREET)

AUTO MALL DRIVE
(PUBLIC STREET)

EAST 44.05'
N 00°59'20" E 42.68'
N 88°21'00" E 236.09'
S 81°01'24" E 55.22'
S 89°15'02" E 148.83'
S 44°44'26" E 49.07'
S 00°13'50" E 224.17'
S 00°15'03"
N 88°13'25" W 504.67'
N 37°10'59" W 601.28'
S 37°10'59" E 27.52'
S 52°49'01" W 32.59'
S 52°49'01" W 20.00'
N 37°10'59" W 27.52'
S 52°49'01" W 15.48'
S 52°49'01" E 178.49'
S 82°10'59" E 43.52'
S 82°10'59" E 33.90'
N 52°49'01" E 4.90'
S 20°27'40" W 60.00'
S 89°51'30" E 32.75'
S 88°13'25" E 28.00'
N 88°13'25" W 204.93'
N 46°46'35" E 19.80'
S 43°13'25" E 19.80'
N 64°25'12" E 79.73'
EAST 186.71'
WEST 132.01'
NORTH 315.64'
SOUTH 301.31'
NORTH 351.80'
SOUTH 60.96'
61.69'
135.0'
47.5'
25.2'
38.0'
12.1'
220.4'
195.29'
152.6'
118.13'
135.25'
56.00'
62.60'
16.50'
6.0'

"NO LEFT TURN" SIGN
NEW STREET LIGHT PER AF CITY STDS.
EX. CURB & GUTTER (REMOVE)
EX. CURB & GUTTER (PROTECT)
Show site traingles
L=338.79
R=508.00
Δ=38°12'39"
CH=S 56°39'34" E
CL=332.54
L=410.76
R=508.00
Δ=46°19'41"
CH=S 60°43'04" E
CL=399.66
L=55.20
R=508.00
Δ=6°13'34"
CH=S 72°39'06" E
CL=55.17
L=45.93
R=568.00
Δ=4°38'01"
CH=S 71°51'20" E
CL=45.92
L=41.23
R=508.00
Δ=4°39'03"
CH=S 81°33'23" E
CL=41.22
L=30.73
R=508.00
Δ=3°27'59"
CH=S 77°29'53" E
CL=30.73
L=30.58
R=568.00
Δ=3°05'06"
CH=S 78°50'16" E
CL=30.58
EX. 6" PERFORATED PVC GROUND WATER MONITORING PIPE
10.0' PUE
UTILITY EASEMENT IN FAVOR OF AMERICAN FORK CITY.
NEW STREET LIGHT PER AF CITY STDS.
EX. CURB WALL (REMOVE)
EX. EDGE OF ASHPALT
4' BIKE LANE
CROSS ACCESS EASEMENT IN FAVOR OF LOT 1
30.0' CROSS ACCESS EASEMENT IN FAVOR OF LOT 2
20.0' PUE
10.0' PUE & SIDEWALK EASEMENT
EX. EDGE OF ASHPALT
CROSS ACCESS EASEMENT IN FAVOR OF LOT 1
NEW WALL (BY OTHERS)
FIRE RISER ROOM
NEW GARAGE DOOR
WARP WATERWAY IN WALKING PATH TO BE ADA COMPLIANT (SEE CGD.01)
DUMPSTER ENCLOSURE (SEE 4/CDT.04)
EX. WIRE FENCE (PROTECT)
5' x 5' CONCRETE LANDING (TYP.)
NEW CONCRETE DOCK (4' ABOVE TOA)
NEW 4' MAX RETAINING WALL (DESIGN BY OTHERS)
NEW CONCRETE RAMP
SOUTHERN PACIFIC RAILROAD
NEW GARAGE DOOR
NEW WALL (BY OTHERS)
NEW GARAGE DOOR
NEW WALL (BY OTHERS)
NEW GARAGE DOOR
NEW WALL (BY OTHERS)
(TYP.)

LOT 1
166,260 SQ FT
3.817 ACRES
452 E. AUTO MALL DR.
NEW BUILDING
51,063 SQ-FT

LOT 2
104,065 SQ FT
2.389 ACRES
1046 S. 500 E.
EX. MAVERIK GAS STATION

This dock obstructs the necessary 26ft aerial fire apparatus access along the south/southwest side of the building. It needs to be relocated or removed to accommodate code requirements. Aerial Apparatus access should be no closer than 15ft and no further than 30ft from the building. I can work minimally with the 15ft minimum; however the apparatus access should not be conflicted with egress doors and the need to exit the facility..

Parking along the south/southwest restricts required 26ft wide aerial fire apparatus access and needs to be removed.

The included measurements show the spacing needed for aerial fire apparatus along the entire side of the building.

For office/warehouse developments you need 4 spaces per thousand s.f. for office use as mentioned in Section 17.5.133 (3)(f). Your total parking would still be over, which is fine to have, I'm just letting you know you that you have a little bit more wiggle room if needed.

PARKING COUNT		
PARTICULARS	PROVIDED	
	STANDARD	ADA
PARKING STALLS	111	5
TOTAL	116*	

*SEE PARKING REQUIREMENT NOTE BELOW

PARKING REQUIREMENT NOTE:
BUILDING AREA USED AS WAREHOUSE: 40,850 S.F.
PARKING REQUIREMENT FOR WAREHOUSE: 1 SPOT PER 1000 S.F.
BUILDING AREA USED AS OFFICE: 10,213 S.F.
PARKING REQUIREMENT FOR OFFICE: 4.5 SPOTS PER 1000 S.F.
TOTAL REQUIRED PARKING SPACES = 46 + 5 = 51 PARKING SPACES NEEDED

CONSTRUCTION KEY NOTE REFERENCE		
NO.	DESCRIPITON	DETAIL
1	ASPHALT PAVEMENT WITH GRANULAR BASE	1/CDT.01
2	CONCRETE CURB AND GUTTER PER AMERICAN FORK STDS.	6/CDT.01
3	RELEASE CURB & GUTTER	2/CDT.01
4	TRANSITION CURB & GUTTER	
5	SIDEWALK THICKENED EDGE	3/CDT.01
6	SIDEWALK PER AMERICAN FORK STDS.	
7	ADA RAMP	1/CDT.03
8	ADA SIGN	1/CDT.03
9	DIP DRIVE APPROACH PER AMERICAN FORK STDS.*	5/CDT.01
10	CONCRETE PAVEMENT WITH GRANULAR BASE	1/CDT.01
11	6" CURB WALL	4/CDT.01
12	SAWCUT AND RESTORE ASPHALT PER AMERICAN FORK STDS.	
13	SCREENING - 2" CALIPER FLOWERING PLUM TREES (25' ON CENTER)	
14	2' CURB CUT	
15	VAN ACCESSIBLE ADA SIGN	1/CDT.03
16	4' CONCRETE WATERWAY PER APWA #211	

*SIDEWALK AT DRIVE APPROACH SHALL BE 6" THICK.

NOTE:
EXISTING IMPROVEMENTS NEED TO MEET AMERICAN FORK CITY STANDARD AND QUALITY.

NOTE:
ALL WORK WITHIN THE CITY PUBLIC RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN FORK CITY STANDARDS & SPECIFICATIONS.

NOTE:
SAWCUT WIDTH, LOCATIONS AND TIE-IN ELEVATIONS IN EXISTING HARDSCAPE ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY LOCATION AND EXTENT OF SAWCUTTING PRIOR TO CONSTRUCTION. NOTIFY CIVIL ENGINEER IF REVISIONS ARE REQUIRED. SEE NOTE 58 ON CGN.01 FOR FURTHER DETAIL.

BENCHMARK:
THE FOUND RIGHT-OF-WAY MARKER AT THE NORTHWEST CORNER OF THE INTERSECTION OF 500 EAST & AUTO MALL DRIVE, AS SHOWN.
BENCHMARK ELEVATION = 4530.32 (FROM R2)
VERTICAL DATUM: NAVD 88

FEMA FLOOD HAZARD ZOND: FLOOD ZONE A
FEMA FLOOD HAZARD COMMUNITY PANEL NUMBER: 49049C0306F
FEMA FLOOD HAZARD EFFECTIVE DATE: 06/19/2020

BASIS OF BEARING:
THE BASIS OF BEARINGS FOR THIS SURVEY IS NORTH 00°05'48" WEST, AS SHOWN ON THE ALTA SURVEY.

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	N 30°09'02" E	6.00'
L2	S 60°07'22" E	5.00'
L3	N 29°36'14" E	6.00'

CURVE TABLE					
LINE #	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C1	4.94'	518.00'	0°32'48"	S 60°07'22" E	4.94'

AREA TABLE		
PARTICULARS	S.F.	%
BUILDING	51,063	30.71
HARDSCAPE	88,165	53.03
LANDSCAPE	27,032	16.26
TOTAL	166,260	100.0

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SCALE MEASURES 1"INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
0 0.5 1

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG FILE: 1905136_SITE

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
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AMERICAN FORK, UTAH

PROJECT NO. 1905136

SITE
PLAN

CSP.01
3 OF 16

EX. FIRE HYDRANT (PROTECT)

EX. FIRE HYDRANT (PROTECT)

EX. SEWER STUB (REMOVE)

SSMH RIM=4532.97 IE = 4529.07

EX. COMMUNICATION LINE (PROTECT)

EX. 6" PVC IRRIGATION MAIN (PROTECT)

EX. GAS MAIN (PROTECT)

EX. SEWER STUB (PROTECT)

EX. 6" PERFORATED PVC GROUND WATER MONITOR PIPE

EX. SEWER STUB (REMOVE TO NEW MANHOLE)

FIRE RISER ROOM

IE (6" SS):4521.28
IE (12" SD):4522.86

6" PVC SDR-35 SEWER LATERAL
98 L.F. @ 3.0% SLOPE
(RUN SEWER AT 3.0% MIN SLOPE TO ACCOUNT FOR FUTURE GREASE TRAP)

IE:4522.77

SEWER CLEAN OUT WITHIN 5' OF BUILDING FOUNDATION

6" PVC SDR-35 SEWER LATERAL
5 L.F. @ 1.0% SLOPE

BLDG. FFE
4529.77

261 ft

661 ft
2.53 %

EX. SSMH RIM=4531.81 IE = 4527.70

EX. UNDERGROUND POWER LINE (PROTECT)

EX. 8" DUCTILE IRON WATER MAIN (PROTECT)

EX. FIBER OPTIC LINE (PROTECT)

SEWER EJECTOR PUMP INSIDE NEW 4' SSMH
RIM:4531.48
IE (NE):4528.67 =
IE (SW):4519.78
(CONTRACTOR TO FIELD VERIFY EXISTING INVERT ELEVATION)

SSMH RIM=4530.54 IE = 4526.73

EX. FIRE HYDRANT (PROTECT)

EX. 8" SEWER MAIN (PROTECT)

Coordinate with the adjacent property owner for the hydrant to be installed in this area. This hydrant will be required before fire clearance is given. Otherwise, hydrant spacing exceeds allowable limits.

EX. OVERHEAD POWER LINE (PROTECT)

EX. COMMUNICATION LINE (PROTECT)

EX. 6" PVC IRRIGATION MAIN (PROTECT)

EX. 21" SEWER MAIN (PROTECT)

EX. 36" STORM MAIN (PROTECT)

NOTE:
STORM DRAIN TO BE STUBBED TO PROPERTY CONCURRENTLY WITH CONSTRUCTION OF MAVERIK IN ORDER TO REDUCE THE NUMBER OF SAWCUTS IN CITY ROAD AND TO ELIMINATE THE NEED TO SAWCUT INTO MAVERIK HARDSCAPE

EX.SSMH RIM=4527.77 IE = 4520.13

BENCHMARK:
THE FOUND RIGHT-OF-WAY MARKER AT THE NORTHWEST CORNER OF THE INTERSECTION OF 500 EAST & AUTO MALL DRIVE, AS SHOWN.
BENCHMARK ELEVATION = 4530.32 (FROM R2)
VERTICAL DATUM: NAVD 88

NOTE A:
18" OF VERTICAL SEPARATION REQUIRED BETWEEN STORM AND WATER LINES. LOOP WATER MAIN IF IN CONFLICT.

NOTE B:
12" OF VERTICAL SEPERATION REQUIRED BETWEEN SEWER AND STORM. CONTACT ENGINEER FOR REDESIGN IF NECESSARY

NOTE C.
CONTRACTOR TO INSTALL RIGID INSULATION OVER TOP OF SEWER PIPE WHERE LESS THAN 4.0' OF COVER EXISTS.

NORTH

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.

CONSTRUCTION KEY NOTE REFERENCE		
NO.	DESCRIPITON	DETAIL
1	GATE VALVE PER AMERICAN FORK STDS.	2/CDT.02
2	1" POLY WATER SERVICE LINE	1/CDT.02
3	1" WATER METER & VAULT PER AMERICAN FORK STDS.*	1/CDT.02
4	THRUST BLOCK PER AMERICAN FORK CITY STDS.	4/CDT.02
5	6" PVC C-900 FIRELINE	
6	FIRE HYDRANT PER AMERICAN FORK CITY STDS.	3/CDT.02
7	1" POLY IRRIGATION SERVICE LINE	5/CDT.02
8	6" PVC SDR-35 SEWER LATERAL (MIN SLOPE = 0.50%)	6/CDT.02
9	SEWER CLEAN OUT	6/CDT.02
10	1" IRRIGATION METER PER AMERICAN FORK CITY STDS.	5/CDT.02
11	SEWER EJECTOR PUMP (MUST MEET 75 GPM FLOW, 1/CDT.07)	1/CDT.06
12	4' SSMH PER AMERICAN FORK CITY STDS.	
13	8" PVC-900 FIRELINE	

*INSTALL WATER METER LEVEL WITH SIDEWALK

NOTE:
MINIMUM WATER LINE COVER IS 48".
MINIMUM PASSIVE IRRIGATION LINE COVER IS 24".

NOTE:
ALL LATERAL CONNECTIONS SHALL BE INSERT-A-TEE OR WYE AT TEN O'CLOCK POSITIONING TO THE CENTER OF THE MAIN LINE.

NOTE:
SEWER LIFT STATION TO BE OPERATED AND MAINTAINED BY DAVIES DESIGN BUILD. REPRESENTATIVE: CANON JENSEN, (801) 609-9863, EMAIL: canon@daviesdb.com

NOTE:
ALL SANITARY SEWER MAINS AND LATERALS MUST BE INSPECTED AND APPROVED BY THE CITY INSPECTOR BEFORE TRENCH BACKFILLING IS COMPLETED.

NOTE:
PRIOR TO FABRICATION OR CONSTRUCTION, BEGIN AT THE LOW END OF ALL GRAVITY UTILITY LINES AND VERIFY THE INVERT ELEVATION OF THE POINT OF CONNECTION. NOTIFY ENGINEER FOR REDESIGN IF CONNECTION POINT IS HIGHER THAN SHOWN OR IF ANY UTILITY CONFLICTS OCCUR. GRAVITY CONNECTIONS MUST BE DONE PRIOR TO BUILDING FOOTINGS AND ROUGH PLUMBING ARE CONSTRUCTED.

NOTE:
POTHOLE TO IDENTIFY ANY CONFLICTS BEFORE ANY PIPE INSTALLATION. CONTACT ENGINEER IF ANY CONFLICTS ARE IDENTIFIED.

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SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
SPEC #&#: 1905136_SITE

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450 EAST AUTOMALL DRIVE
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UTILITY PLAN

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BENCHMARK:
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BENCHMARK ELEVATION = 4530.32 (FROM R2)
VERTICAL DATUM: NAVD 88

NOTE:
MINIMUM STORM DRAIN PIPE COVER IS 24". NOTIFY THE ENGINEER IF A REDESIGN IS NECESSARY.

GRADING AND DRAINAGE KEY NOTE REFERENCE

NO.	DESCRIPITON	DETAIL
1	GRADE SITE TO ELEVATIONS SHOWN ON PLAN	
2	8" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
3	24" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
4	STORM DRAIN INLET BOX PER AMERICAN FORK STDS.	1/CDT.04
5	3'X3' CATCH BASIN	2/CDT.03
6	HD R-TANK SYSTEM	1/CDT.05
7	12" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
8	15" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
9	PRE-TREATMENT DEVICE (OLDCASTLE 1500 GAL. OR EQUAL)	2/CDT.04
10	4" DIAMETER HDPE ADS N-12 ROOF DRAIN LINE	

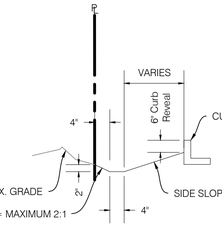
ALL HDPE/RCP CLASS III PIPE TO HAVE SOIL TIGHT JOINTS

SURVEY CONTROL NOTE:
THE CONTRACTOR OR SURVEYOR PERFORMING THE CONSTRUCTION SURVEYING SHALL BE RESPONSIBLE TO PROVIDE CONSTRUCTION LAYOUT PER THE APPROVED PLANS ONLY. THE SURVEYOR SHALL ALSO BE RESPONSIBLE FOR VERIFYING HORIZONTAL CONTROL FROM THE SURVEY MONUMENTS AND FOR VERIFYING ANY ADDITIONAL CONTROL POINTS SHOWN ON THE SURVEY OR IMPROVEMENTS PLANS OR ON ELECTRONIC DATA PROVIDED BY BENCHMARK ENGINEERING AND LAND SURVEYING. THE SURVEYOR SHALL ALSO USE THE BENCHMARKS AS SHOWN ON THE PLAN, AND VERIFY THEM AGAINST NO LESS THAN THREE EXISTING HARD IMPROVEMENT ELEVATIONS INCLUDED ON THESE PLANS OR ON ELECTRONIC DATA PROVIDED BY BENCHMARK ENGINEERING AND LAND SURVEYING. IF ANY DISCREPANCIES ARE ENCOUNTERED, THE SURVEYOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND RESOLVE THE DISCREPANCIES BEFORE PROCEEDING WITH ANY CONSTRUCTION SURVEYING. IT IS ALSO THE RESPONSIBILITY OF THE SURVEYOR TO VERIFY ANY ELECTRONIC DATA WITH THE APPROVED STAMPED AND SIGNED PLANS AND NOTIFY THE ENGINEER WITH ANY DISCREPANCIES.

NOTE:
PRIOR TO FABRICATION OR CONSTRUCTION, BEGIN AT THE LOW END OF ALL GRAVITY UTILITY LINES AND VERIFY THE INVERT ELEVATION OF THE POINT OF CONNECTION. NOTIFY ENGINEER FOR REDESIGN IF CONNECTION POINT IS HIGHER THAN SHOWN OR IF ANY UTILITY CONFLICTS OCCUR. GRAVITY CONNECTIONS MUST BE DONE PRIOR TO BUILDING FOOTINGS AND ROUGH PLUMBING ARE CONSTRUCTED.

NOTE:
SAW/CUT WIDTH, LOCATIONS AND TIE-IN ELEVATIONS IN EXISTING HARDSCAPE ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY LOCATION AND EXTENT OF SAWCUTTING PRIOR TO CONSTRUCTION. NOTIFY CIVIL ENGINEER IF REVISIONS ARE REQUIRED. SEE NOTE 58 ON CGN.01 FOR FURTHER DETAIL.

NOTE:
POTHOLE TO IDENTIFY ANY CONFLICTS BEFORE ANY PIPE INSTALLATION. CONTACT ENGINEER IF ANY CONFLICTS ARE IDENTIFIED.



Ensure storm drain have a min. cover of 24"

SWALE CROSS SECTION (A)
SCALE: NTS

NORTH

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20ft.

CONSTRUCT SWALE NEXT TO DITCH TO PREVENT STORM WATER FROM ENTERING DITCH. SEE A/CGD.01

NEW SDIB (#402)
(4) TBC:4529.24
IE (W):4523.51
IE (SE):4523.51

(2) 8" Ø HDPE SD PIPE
130 L.F. @ 0.30% SLOPE

CONSTRUCT SWALE BETWEEN CURB AND PROPERTY LINE. SEE A/CGD.01

NEW 3' X 3' CB (#401)
(5) TG: 4526.72
IE (E):4523.90

Show ditch, show swale, show how they correlate with each other. Ditch may need to be piped per Master Plan. Confirm trail requirement with Planning and Community Development departments.

NEW 3' X 3' CB (#403)
(5) TG: 4528.13
IE (NW):4523.09
IE (SE):4523.09

(3) 24" Ø HDPE SD PIPE
140 L.F. @ 0.30% SLOPE

(3) 24" Ø HDPE SD PIPE
182 L.F. @ 0.30% SLOPE

NEW SDIB (#404)
TBC:4528.14 (4)
IE (NW):4522.54
IE (S):4522.54

(6) NEW R-TANK SYSTEM
1,181 SD QUAD TANK UNITS
SYSTEM VOLUME = 13,071 CF
TOP OF STONE: 4525.86
TOP OF TANK: 4524.86
BTTM OF TANK: 4521.90
INLET IE : 4521.90
OUTLET IE : 4523.71
BTTM OF ROCK: 4521.57
MAX COVER EL: 4534.85
MIN COVER EL: 4526.36
2' GRAVEL WRAP AROUND TANKS

MATCH CGD.02

Show the location of the maintenance port

(10) IE:25.77 (SEE MECHANICAL PLANS FOR CONTINUATION)

4" HDPE SD PIPE
13 L.F. @ 17.0% SLOPE

(10) IE:25.77 (SEE MECHANICAL PLANS FOR CONTINUATION)

4" HDPE SD PIPE (10)
13 L.F. @ 22.6% SLOPE

(2) 8" Ø HDPE SD PIPE
374 L.F. @ 0.30% SLOPE

(10) IE:25.77 (SEE MECHANICAL PLANS FOR CONTINUATION)

4" HDPE SD PIPE (10)
13 L.F. @ 19.5% SLOPE

24" Ø HDPE SD PIPE (3)
193 L.F. @ 0.30% SLOPE

NEW OIL/WATER SEPARATOR (#412)
RIM:4526.88 (9)
IE (NW):4521.93
IE (SE):4521.93

NEW SDIB (#405)
TBC:4527.03 (4)
IE (N):4521.96
IE (NW):4521.96
IE (S):4521.96

(7) 12" Ø HDPE SD PIPE
74 L.F. @ 0.30% SLOPE

(8) 15" Ø HDPE SD PIPE
70 L.F. @ 0.30% SLOPE

NEW SDIB (#406)
(4) TBC:4526.55
IE (N):4522.18
IE (W):4522.18

12" Ø HDPE SD PIPE (7)
87 L.F. @ 0.30% SLOPE

NEW SDIB (#413)
TBC:4527.28 (4)
IE (E):4522.44
IE (NW):4522.44

CONSTRUCT SWALE BETWEEN CURB AND PROPERTY LINE. SEE A/CGD.01

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8	08/17/22	REVISED PER CITY COMMENTS
9	09/1/22	REVISED PER CITY COMMENTS
10	09/23/22	REVISED PER TRAFFIC STUDY

SCALE MEASURES 1"INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
1" 0 0.5 1

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG FILE: 1905136_SITE

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
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SANDY, UTAH 84070 (801) 542-7192
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450 EAST AUTOMALL DRIVE
AMERICAN FORK, UTAH

PROJECT NO. 1905136

GRADING & DRAINAGE PLAN

CGD.01
5 OF 16

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BENCHMARK:
THE FOUND RIGHT-OF-WAY MARKER AT THE NORTHWEST CORNER OF THE INTERSECTION OF 500 EAST & AUTO MALL DRIVE, AS SHOWN.
BENCHMARK ELEVATION = 4530.32 (FROM R2)

GRADING AND DRAINAGE KEY NOTE REFERENCE

NO.	DESCRIPITON	DETAIL
1	GRADE SITE TO ELEVATIONS SHOWN ON PLAN	
2	12" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
3	24" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
4	STORM DRAIN INLET BOX PER AMERICAN FORK STDS.	1/CDT.04
5	3'X3' CATCH BASIN	2/CDT.03
6	HD R-TANK SYSTEM	1/CDT.05
7	4.4' Ø ORIFICE	3/CDT.03
8	4'X4' STORM DRAIN CATCH BASIN W/ SOLID LID & BAFFLE WALL	3/CDT.03
9	15" Ø RCP CLASS-III STORM DRAIN LINE	
10	PRE-TREATMENT DEVICE (OLDCASTLE 1500 GAL. OR EQUAL)	2/CDT.04
11	15" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
12	8" DIAMETER HDPE ADS N-12 STORM DRAIN LINE	
13	5' Ø STORM DRAIN MANHOLE PER APWA #341.1	

*ALL HDPE/RCP CLASS III PIPE TO HAVE SOIL TIGHT JOINTS

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NORTH

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20ft.

Storm Drain Pipe Hydraulic Calculations

Rational Method
$Q = CiA$

Site Average C = 0.79
i = 1.09 * in/hr
A = 3.82
Q = 3.289402 cfs

Hydraulic Calculations - Manning's Equation
$Q = \frac{k}{n} * A * R_h^{\frac{2}{3}} * S^{\frac{1}{2}}$

Q = 3.289402 cfs
k = 1.486
S = 0.0030
n = 0.012 *
Required ϕ = 1.2 ft
Required ϕ = 14.2 in
R_h (@ full) = 3.54 in

Recommended ϕ = **15** in
R_h (@ full) = 3.75 in

*Roughness coefficient and storm intensity values were obtained from the American Fork Storm Water Technical Manual. Calculations were done using values for the 25-year storm with 60 min time of concentration per American Fork Storm Water Technical Manual, Section 5.0.

STORM DRAINAGE CALCULATIONS
Rational Method (Q=CIA)

Area Identification (A)		Rational Coefficient (C)	C*A
Roof =	51,063	0.9	45956.7 S.F.
Pavement =	88,074	0.9	79266.6 S.F.
Landscaping =	27,123	0.2	5424.6 S.F.
Sum:	166260 S.F.	Sum:	130647.9 S.F.

NOAA ATLAS 14 (100 YEAR STORM)

Allowable Discharge = .20cfs/acre
Perc + Allowable Discharge 0.86 cfs

Time (min)	Intensity (in/hr)	Rainfall (inches)	Rainfall Excess (cu.ft.)	Allowed Discharge (cu.ft)	Volume to Detain (cu.ft)
15	3.95	0.988	10751	774	9977
30	2.66	1.330	14480	1548	12932
60	1.65	1.650	17964	3096	**14868**
120	0.89	1.780	19379	6192	13187
180	0.60	1.800	19597	9288	10309
360	0.32	1.920	20904	18576	2328
720	0.18	2.160	23517	37152	0
1440	0.09	2.160	23517	74304	0

HD R-Tank Underground Detention:
Total R-Tank System Volume (Tanks + Voids) = **13,071 cf** *

*See R-Tank Subsurface Storage System Calculations for Details, 3/CDT.04

Percolation
Percolation Rate 60.00 min/in *
Surface Area 4175 s.f.
Percolation Discharge 0.10 cfs

Tank Elevations:
Top of Tank El = 4,524.86 ft
Bottom of Tank El = 4,521.90 ft
Top of Stone El = 4,525.86 ft
Bottom of Stone El = 4,521.57 ft
Minimum Cover El = 4,526.36 ft
Maximum Cover El = 4,534.85 ft

Pipe Storage:
Diameter = 8 inch
Length = 130 ft
Volume = **45 cf**
Diameter = 12 inch
Length = 74 ft
Volume = **58 cf**
Diameter = 15 inch
Length = 70 ft
Volume = **86 cf**
Diameter = 24 inch
Length = 537 ft
Volume = **1,686 cf**

80% Percentile Retention Volume

Tributary Area, A:	166,260 sf	$R_V = 0.91 * imp - 0.0204$
Impervious Area:	139,137 sf	WQV= R_V * d * A
Imperviousness:	0.84 sf	
85% Percentile Storm Depth, d:	0.50 in	
Volumetric Runoff Coefficient, Rv:	0.74 sf	
Required Water Quality Volume, WQV:	**5,134 cf**	
Provided Water Quality Volume, WQV:	**7,221 cf**	**YES**

Is there adequate storage? Storage Provided = **14,946 cf**
Req. Storage = **14,868 cf** **YES**

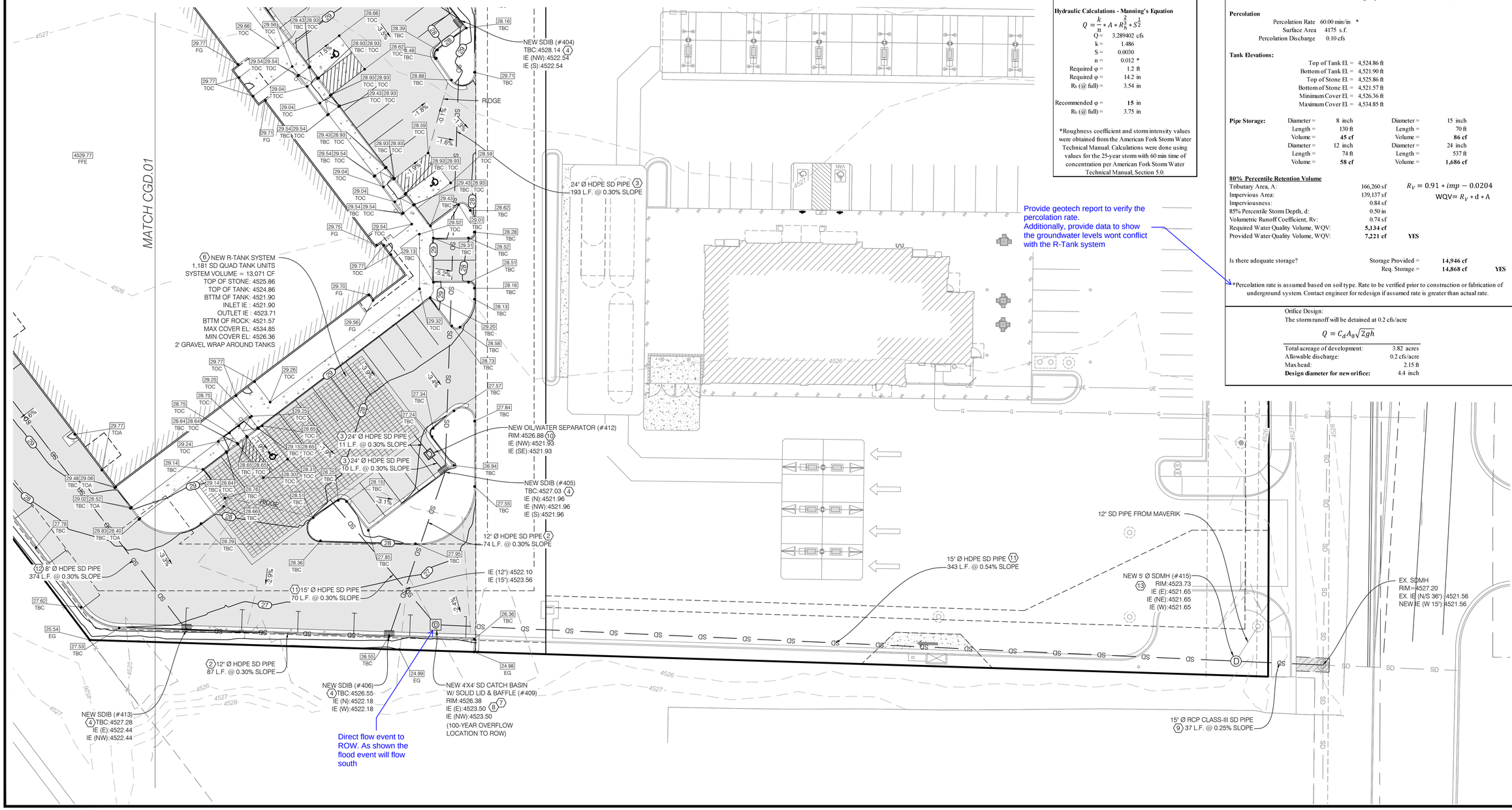
*Percolation rate is assumed based on soil type. Rate to be verified prior to construction or fabrication of underground system. Contact engineer for redesign if assumed rate is greater than actual rate.

Orifice Design:
The storm runoff will be detained at 0.2 cfs/acre

$Q = C_d A_0 \sqrt{2gh}$

Total acreage of development:	3.82 acres
Allowable discharge:	0.2 cfs/acre
Max head:	2.15 ft
Design diameter for new orifice:	4.4 inch

Provide geotech report to verify the percolation rate.
Additionally, provide data to show the groundwater levels wont conflict with the R-Tank system



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10	09/23/22	REVISED PER TRAFFIC STUDY

SCALE MEASURES 1"INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS
1" 0.5 0

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG FILE: 1905136_CGD.02

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
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450 EAST AUTOMALL DRIVE
AMERICAN FORK, UTAH

PROJECT NO. 1905136

GRADING & DRAINAGE PLAN

CGD.02
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NORTH

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 inch = 40ft.

NOTE:
EXISITING IMPROVEMENTS NEED TO MEET AMERICAN FORK CITY STANDARD AND QUALITY.

NOTE:
ALL WORK WITHIN THE CITY PUBLIC RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN FORK CITY STANDARDS & SPECIFICATIONS.

AUTO MALL DRIVE
(PUBLIC STREET)

500.0'

DOUBLE 4" SOLID YELLOW LINE

BEGIN 100' TAPER TO DOUBLE 4" SOLID YELLOW LINE AT CENTERLINE OF ROAD

SIGHT TRIANGLES PER AMERICAN FORK CITY STANDARDS

4" SOLID AND BROKEN YELLOW LINE

BIKE LANE SYMBOL PER MUTCD (TYP.)

What is the taper and stopping sight distance needed for the 1 car to queue here without going into the left turn lane? Provide calculations for the length and update as necessary in the striping plans.

TRAVEL LANE TO BE 10' MINIMUM. REDUCE BIKE LANE WIDTH WHERE REQUIRED

CONTRACTOR TO COORDINATE WITH CITY TO END BIKE LANE AT FUTURE RAMP (BUILT AND DESIGNED BY OTHERS)

4" SOLID AND BROKEN YELLOW LINE

SINGLE 4" SOLID YELLOW LINE

5' BIKE LANE

DOUBLE 4" SOLID YELLOW LINE

SINGLE 8" SOLID WHITE LINE

46.4'

177.8'

242.8'

100.0'

5' BIKE LANE

10.0' PUE

BIKE LANE EXIT SIGN

TRANSITION BIKE LANE ONTO SIDEWALK AT NEW RAMP

500 EAST
(PUBLIC STREET)

Missing striping

Provide the offsets of the lanes through the intersection in all directions.

12.0' 12.0' 13.3'

11' TRAVEL LANE
12' LEFT TURN LANE
11' TRAVEL LANE
11' RIGHT TURN LANE

16.9'
19.3'
12.0'

AUTO MALL DRIVE
(PUBLIC STREET)

12.0' 12.0' 12.0' 12.0'

SIGHT TRIANGLE PER AMERICAN FORK CITY STANDARDS

Confirm if all striping in 500 East is existing, or if you are modifying any of the existing striping.

INSTALL AND ACTIVATE PEDESTRIAN SIGNAL POLE PER AMERICAN FORK CITY STANDARDS. COORDINATE WITH CITY FOR DETAILS AND LOCATION.

Missing the rest of the striping across the subdivision frontage.

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1" 0.5 0

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9/23/22

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SIGNAGE & STRIPING PLAN

CSS.01
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NOTE: CONTRACTOR SHALL INSTALL EROSION CONTROLS (SILT FENCES, STRAW BALES, ETC) AS REQUIRED BY REGULATORY AGENCIES. SAID CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH AGENCY STANDARDS AND FOLLOWING BEST MANAGEMENT PRACTICES FOR ACTUAL PLACEMENT ON SITE. STRAW BALES SHOWN ON THESE DRAWINGS ARE INTENDED AS A MINIMUM REQUIREMENT. ADDITIONAL CONTROLS REQUESTED BY AGENCY INSPECTORS SHALL BE REQUIRED. DUST CONTROL SHALL BE PROVIDED AT ALL TIMES, AT THE CONTRACTORS EXPENSE, TO MINIMIZE ANY DUST NUISANCE AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY.

SWPPP KEY NOTES REFERENCE

PROVIDE, INSTALL AND/OR CONSTRUCT THE FOLLOWING PER THE SPECIFICATIONS GIVEN OR REFERENCED AND THE DETAILS NOTED AND AS SHOWN ON THE CONSTRUCTION DRAWINGS.

NO	DESCRIPTION	DETAIL
1	CONCRETE WASTE MANAGEMENT	1/CEP.02
2	INLET PROTECTION WATTLE	2/CEP.02
3	MATERIALS STORAGE	3/CEP.02
4	PORTABLE TOILETS	4/CEP.02
5	SILT FENCE	6/CEP.02
6	TEMPORARY CONSTRUCTION ENTRANCE	7/CEP.02

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30ft.

No.	DATE	DESCRIPTION
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SCALE MEASURES 1"INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

0 0.5

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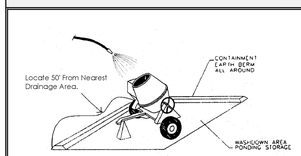
PROJECT NO. 1905136

EROSION CONTROL PLAN

CEP.01
8 OF 16

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BMP: Concrete Waste Management



DESCRIPTION:
Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

APPLICATIONS:
This technique is applicable to all types of sites.

INSTALLATION/APPLICATION CRITERIA:
- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement on-site.
- Perform washout of concrete trucks off-site or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier information sheet.)
- Train employees and subcontractors in proper concrete waste management.

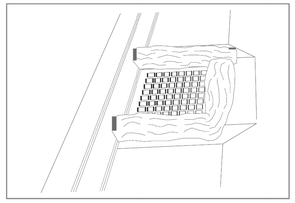
LIMITATIONS:
- Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:
- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis.

CONCRETE WASTE MANAGEMENT 1
SCALE: NTS

BMP: Inlet Protection – Wattle

IP-W
CONSTRUCTION



DESCRIPTION:
Sediment barrier erected around storm drain inlet.

APPLICATION:
Construct at storm drainage inlets located down-gradient of areas to be disturbed by construction.

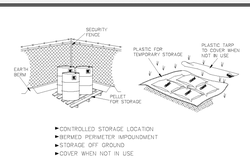
INSTALLATION/APPLICATION CRITERIA:
- Provide up-gradient sediment controls, such as silt fence during construction of inlet
- When construction of curb and gutter and roadways is complete, install gravel filled wattles around perimeter of inlet

LIMITATIONS:
- Recommended maximum contributing drainage area of one acre
- Requires shallow slopes adjacent to inlet

MAINTENANCE:
- Inspect inlet protection following storm event and at a minimum of once every 14 days.
- Remove accumulated sediment when it reaches 4 inches in depth.
- Look for bypassing or undercutting and repair or realign as needed.

INLET PROTECTION WATTLE 2
SCALE: NTS

BMP: Materials Storage



DESCRIPTION:
Controlled storage of on-site materials.

APPLICATION:
- Storage of hazardous, toxic, and all chemical substances.
- Any construction site with outside storage of materials.

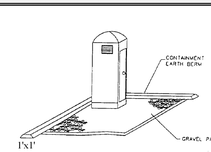
INSTALLATION/APPLICATION CRITERIA:
- Designate a secured area with limited access as the storage location. Ensure no waterways or drainage paths are nearby.
- Construct compacted earthen berm (See Earth Berm Barrier Information Sheet), or similar perimeter containment around storage location for impoundment in the case of spills.
- Ensure all on-site personnel utilize designated storage area. Do not store excessive amounts of material that will not be utilized on site.
- For active use of materials away from the storage area ensure materials are not set directly on the ground and are covered when not in use. Protect storm drainage during use.

LIMITATIONS:
- Does not prevent contamination due to mishandling of products.
- Spill Prevention and Response Plan still required.
- Only effective if materials are actively stored in controlled location.

MAINTENANCE:
- Inspect daily and repair any damage to perimeter impoundment or security fencing.
- Check materials are being correctly stored (i.e. standing upright, in labeled containers, tightly capped) and that no materials are being stored away from the designated location.

MATERIALS STORAGE 3
SCALE: NTS

BMP: Portable Toilets



DESCRIPTION:
Temporary on-site sanitary facilities for construction personnel.

APPLICATION:
All sites with no permanent sanitary facilities or where permanent facility is too far from activities.

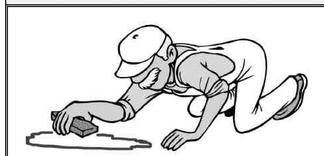
INSTALLATION/APPLICATION CRITERIA:
- Locate portable toilets in convenient locations throughout the site.
- Prepare level, gravel surface and provide clear access to the toilets for servicing and for on-site personnel.
- Construct earth berm perimeter (See Earth Berm Barrier Information Sheet), control for spill/protection leak.

LIMITATIONS:
No limitations.

MAINTENANCE:
- Portable toilets should be maintained in good working order by licensed service with daily observation for leak detection.
- Regular waste collection should be arranged with licensed service.
- All waste should be deposited in sanitary sewer system for treatment with appropriate agency approval.

PORTABLE TOILETS 4
SCALE: NTS

BMP: Spill Clean-Up



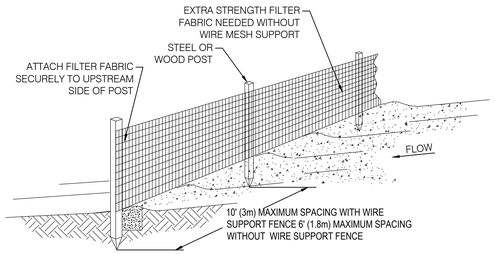
DESCRIPTION:
Practices to clean-up leakage/spillage of on-site materials that may be harmful to receiving waters.

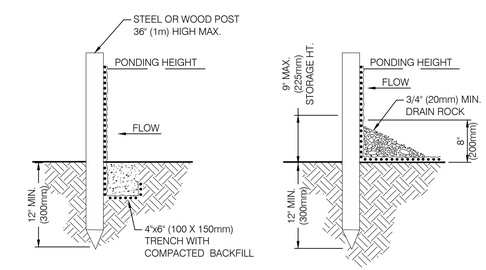
APPLICATION:
All sites

GENERAL:
- Store controlled materials within a storage area.
- Educate personnel on prevention and clean-up techniques.
- Designate an Emergency Coordinator responsible for employing preventative practices and for providing spill response.
- Maintain a supply of clean-up equipment on-site and post a list of local response agencies with phone numbers.

METHODS:
- Clean-up spills/leaks immediately and remediate cause.
- Use as little water as possible. NEVER HOSE DOWN OR BURY SPILL CONTAMINATED MATERIAL.
- Use rags or absorbent material for clean-up. Excavate contaminated soils. Dispose of clean-up material and soil as hazardous waste.
- Document all spills with date, location, substance, volume, actions taken and other pertinent data.
- Contact local Fire Department and State Division of Environmental Response and Remediation (Phone #536-4100) for any spill of reportable quantity.

SPILL CLEAN UP 5
SCALE: NTS





TRENCH DETAIL

INSTALLATION WITHOUT TRENCHING

NOT TO SCALE

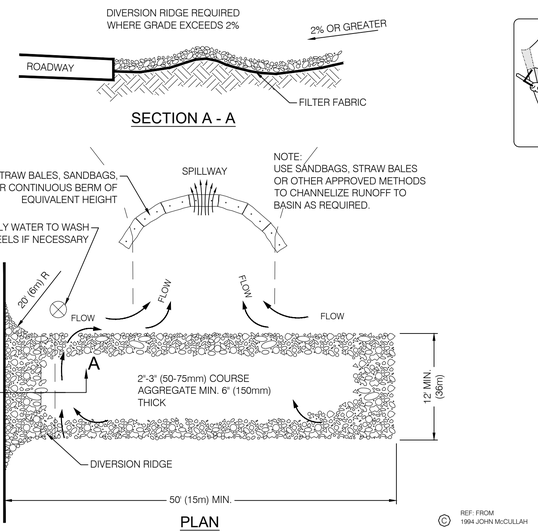
NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.

3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

© REF: FROM 1994 JOHN McCULLAH

SILT FENCE 6
SCALE: NTS



© REF: FROM 1994 JOHN McCULLAH

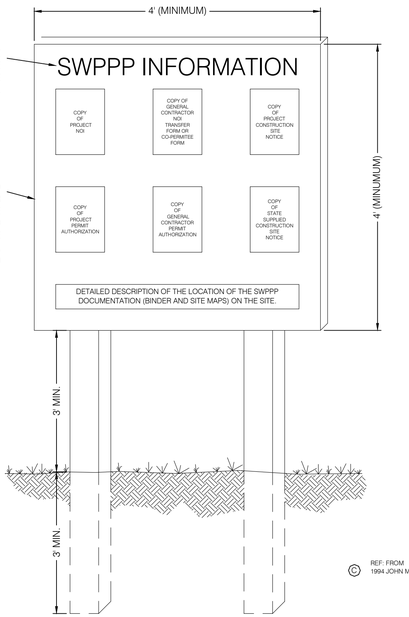
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT 7
SCALE: NTS

CALL BEFORE YOU DIG. IT'S FREE & IT'S THE LAW.
BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER
1-800-662-4111
www.bluestakes.org
811



NOTES:
1) THE SWPPP INFORMATION SIGN MUST BE LOCATED NEAR THE CONSTRUCTION EXIT OF THE SITE, SUCH THAT IT IS ACCESSIBLE AND VIEWABLE BY THE GENERAL PUBLIC, BUT NOT OBSTRUCTING VIEWS AS TO CAUSE A SAFETY HAZARD.

2) ALL POSTED DOCUMENTS MUST BE MAINTAINED IN A CLEARLY READABLE CONDITION AT ALL TIMES THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE-TO TERMINATION (NOT) IS FILED FOR THE PERMIT.

3) CONTRACTOR SHALL POST OTHER STORM WATER AND/OR EROSION AND SEDIMENT CONTROL RELATED PERMITS ON THE SIGN AS REQUIRED BY THE GOVERNING AGENCY.

4) SIGN SHALL BE LOCATED OUTSIDE OF PUBLIC RIGHT-OF-WAY AND EASEMENTS UNLESS APPROVED BY THE GOVERNING AGENCY.

5) CONTRACTOR IS RESPONSIBLE FOR ENSURING STABILITY IF THE SWPPP INFORMATION SIGN.

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SWPPP INFORMATION SIGN 8
SCALE: NTS

No.	DATE	DESCRIPTION
5	02/24/22	REVISED SEWER LATERAL LOCATION PER OWNER
6	04/11/22	REVISED PER CITY COMMENTS
7	05/05/22	REVISED PER CITY COMMENTS
8	08/17/22	REVISED PER CITY COMMENTS
9	08/22/22	REVISED PER TRAFFIC STUDY
10		SCALE MEASURES 1/INCH ON FULL SIZE SHEETS ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
WORK FILE: 1905136_SITE

0 0.5 1"

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7102
www.benchmarkcivil.com

AMERICAN FORK OFFICE & WAREHOUSE
450 EAST AUTOMALL DRIVE
AMERICAN FORK, UTAH

PROJECT NO. 1905136

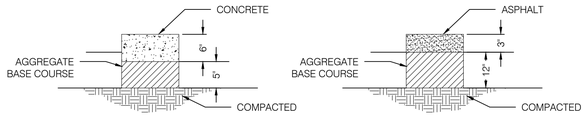
EROSION CONTROL DETAILS

CEP.02
9 OF 16



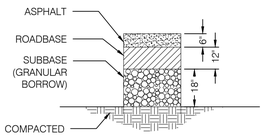
ALTERNATE:	STANDARD
ASPHALT	3"
ROAD BASE	4"
SUB BASE	6"

PARKING AREAS

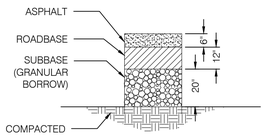


ALTERNATE:	STANDARD
ASPHALT	3"
ROAD BASE	6"
SUB BASE	8"

DRIVE AREAS



500 EAST ROAD

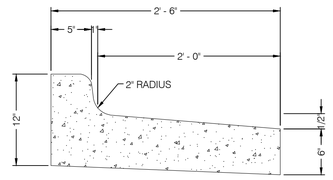


AUTOMALL DRIVE

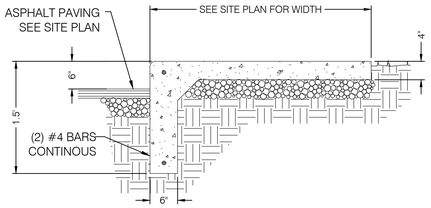
NOTE:
1. FOR REINFORCEMENT DESIGN OF PCC PAVEMENT SECTIONS SEE STRUCTURAL ENGINEER
2. FOR DOWEL DESIGN OF PCC PAVEMENT SECTIONS SEE GEOTECHNICAL ENGINEER.
3. REFER TO GEOTECHNICAL ENGINEERING REPORT FOR PAVEMENT SECTION, ROADBASE AND SUBBASE REQUIREMENTS.

PAVEMENT SECTIONS (1)
SCALE: NTS

NOTE: 6" MIN. OF UNTREATED BASE COURSE REQ'D UNDER CURB AND GUTTER. COMPACT TO 95% ASSHTO T-180 - METHOD D.

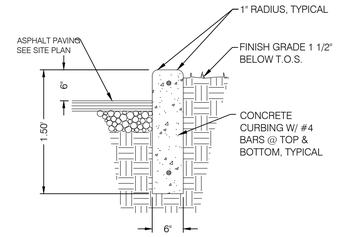


TYPICAL RELEASE CURB & GUTTER (2)
SCALE: NTS



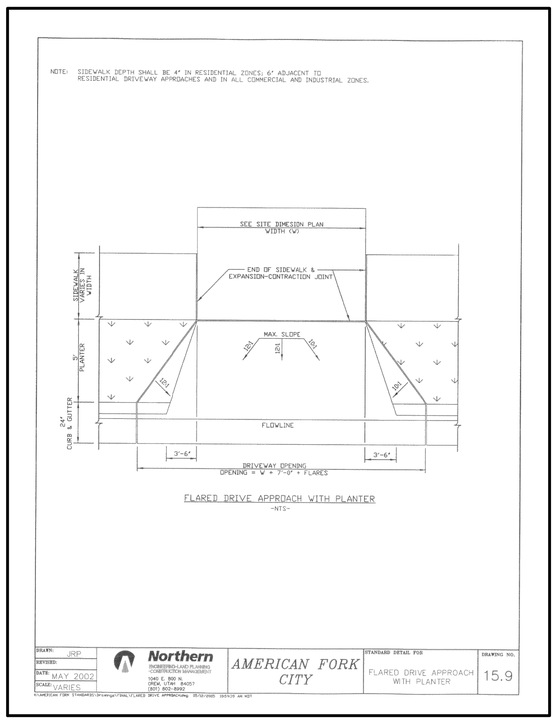
INTEGRAL SIDEWALK & CURB (3)
SCALE: NTS

NOTE: 6" MIN. OF UNTREATED BASE COURSE REQ'D UNDER CURB AND GUTTER. COMPACT TO 95% ASSHTO T-180 - METHOD D.



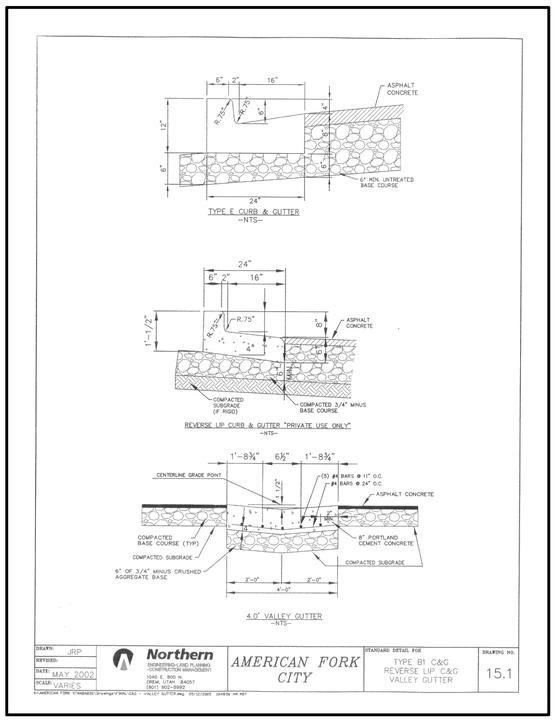
POURED CONCRETE CURB REINFORCED W/ POLYPROPYLENE MULTIFILAMENT FIBERS.

TYPICAL CONCRETE CURB WALL SECTION (4)
SCALE: N.T.S.

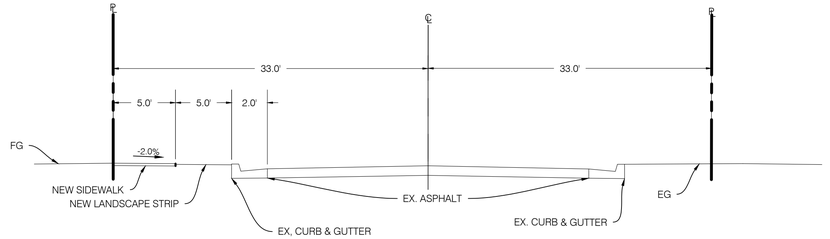


FLARED DRIVE APPROACH WITH PLANTER
-NTS-

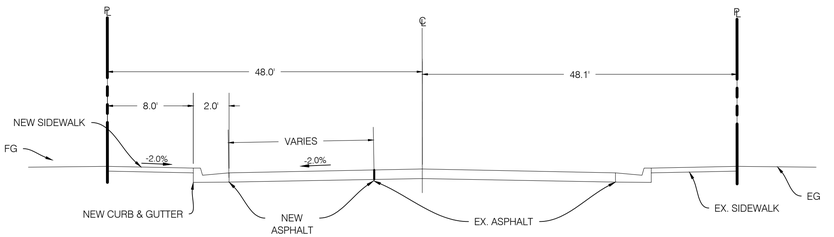
DRIVE APPROACH (5)
SCALE: NTS



CURB AND GUTTER (6)
SCALE: NTS



AUTO MALL DRIVE ROW CROSS SECTION (7)
SCALE: NTS



500 EAST ROW CROSS SECTION (8)
SCALE: NTS

No.	DATE	DESCRIPTION
5	02/24/22	REVISED SEWER LATERAL LOCATION PER OWNER
6	04/11/22	REVISED PER CITY COMMENTS
7	05/05/22	REVISED PER CITY COMMENTS
8	08/17/22	REVISED PER CITY COMMENTS
9	09/1/22	REVISED PER CITY COMMENTS
10	09/20/22	REVISED PER TRAFFIC STUDY

SCALE MEASURES 1/INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG FILE: 1905136_SITE

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

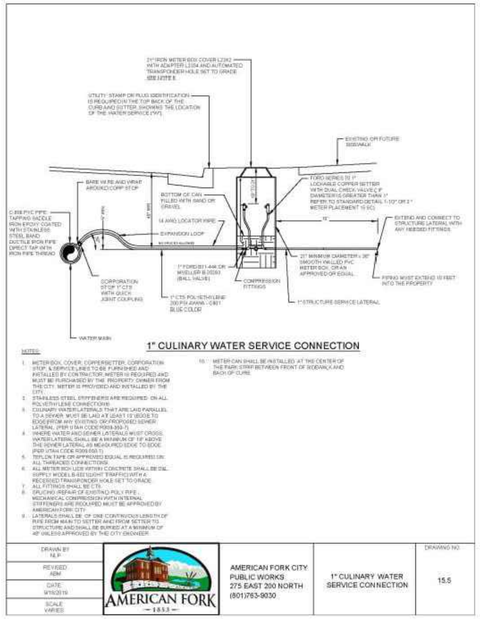
BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
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AMERICAN FORK OFFICE & WAREHOUSE
450 EAST AUTOMALL DRIVE
AMERICAN FORK, UTAH

PROJECT NO. 1905136

DETAIL SHEET

CDT.01
10 OF 16

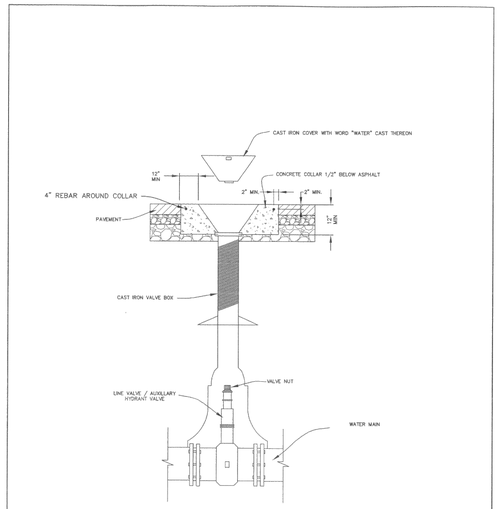


1" CULINARY WATER SERVICE CONNECTION

NOTES:
1. METER BOX, COVER, COPPER METER, CORPORATION STOP, & SERVICE LINES TO BE FURNISHED AND INSTALLED BY CONTRACTOR. METER IS REQUIRED AND MUST BE PURCHASED BY THE PROPERTY OWNER FROM THE CITY. METER IS PROVIDED AND INSTALLED BY THE CITY.
2. STAINLESS STEEL STIFFENERS ARE REQUIRED ON ALL POLYETHYLENE CONNECTIONS.
3. CULINARY WATER LATERALS THAT ARE LAID PARALLEL TO A SEWER MUST BE LAID AT LEAST 10' (EDGE TO EDGE) HORIZONTALLY FROM THE SEWER OR SEWER LATERAL. (PER UTAH CODE R309-550-7)
4. WHERE WATER AND SEWER LATERALS MUST CROSS, WATER LATERAL SHALL BE A MINIMUM OF 18" ABOVE THE SEWER LATERAL AS MEASURED SIDE TO SIDE (PER UTAH CODE R309-550-7)
5. TAPE OR TAPE OR APPROVED EQUAL IS REQUIRED ON ALL METALLIC WATER LINES.
6. ALL METER BOX LIDS WITHIN CONCRETE SHALL BE DUAL SUPPLY MODEL B-450 LIGHT TRAFFIC WITH A RECESSED TRANSPONDER HOLE SET TO GRADE.
7. ALL FITTINGS SHALL BE CTS.
8. ALL PIPE SHALL BE CTS POLY PIPE.
9. MECHANICAL COMPRESSION PATH INTERNAL STIFFENERS ARE REQUIRED MUST BE APPROVED BY AMERICAN FORK CITY.
9. LATERALS SHALL BE OF ONE CONTINUOUS LENGTH OF PIPE FROM MAIN TO METER AND FROM METER TO STRUCTURE AND SHALL BE BURIED AT A MINIMUM OF 48" UNLESS APPROVED BY THE CITY ENGINEER
10. METER CAN SHALL BE INSTALLED AT THE CENTER OF THE PARK STRIP BETWEEN FRONT OF SIDEWALK AND BACK OF CURB

DRAWN BY: NJP	AMERICAN FORK	AMERICAN FORK CITY PUBLIC WORKS 275 EAST 200 NORTH (801)763-9030	1" CULINARY WATER SERVICE CONNECTION	DRAWING NO. 15.5
REVISED: AEM				
DATE: 9/15/2019				
SCALE: VARIES				

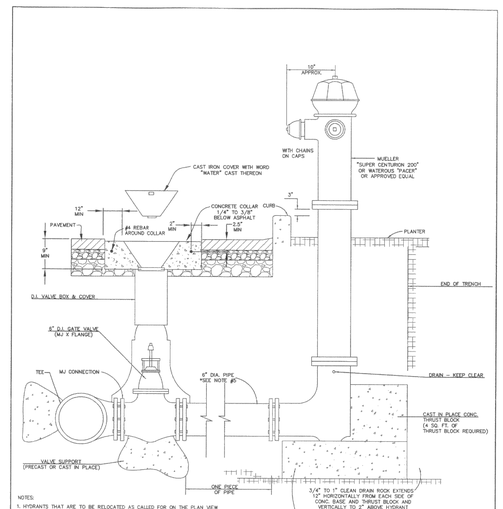
CULINARY WATER SERVICE LINE CONNECTION (1)
SCALE: NTS



VALVE BOX DETAIL

DRAWN: JRP	Northern ENGINEERING • LAND PLANNING • CONSTRUCTION MANAGEMENT 1040 E. 800 N. OREM, UTAH 84057 (801) 802-8992	AMERICAN FORK CITY	VALVE BOX DETAIL	DRAWING NO. 15.4
REVISED:				
DATE: JULY 2002				
SCALE: VARIES				

GATE VALVE (2)
SCALE: NTS

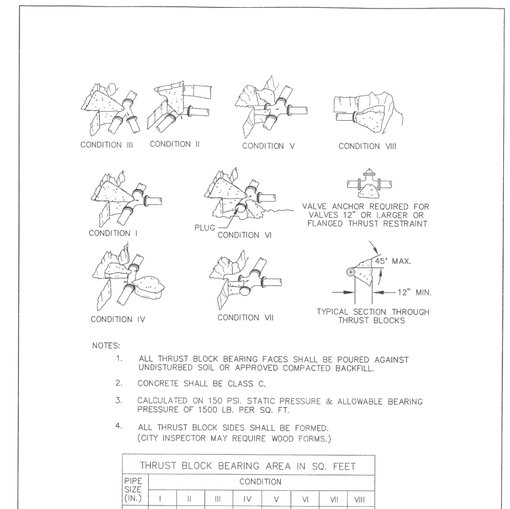


NOTES:
1. HYDRANTS THAT ARE TO BE RELOCATED AS CALLED FOR ON THE PLAN VIEW SHALL BE REINSTALLED IN ACCORDANCE WITH THIS DETAIL.
2. ALL GATE VALVES SHALL BE LOCATED AT THE HYDRANT AS SHOWN ON THIS DETAIL.
3. WHERE EXISTING FITTINGS ARE NOT COMPATIBLE WITH NEW MAIN CONSTRUCTION, SUITABLE ADAPTORS OR NEW FITTINGS SHALL BE USED UPON APPROVAL BY THE AMERICAN FORK CITY ENGINEER.
4. ALL ANCHORS AND BLOCKING TO BEAR AGAINST UNDISTURBED SOIL.
5. IF LENGTH EXCEEDS 1 LENGTH OF PIPE, INCREASE DIAMETER TO 8 INCH MINIMUM.

FIRE HYDRANT DETAIL
-NTS-

DRAWN: JRP	Northern ENGINEERING • LAND PLANNING • CONSTRUCTION MANAGEMENT 1040 E. 800 N. OREM, UTAH 84057 (801) 802-8992	AMERICAN FORK CITY	FIRE HYDRANT	DRAWING NO. 15.6
REVISED:				
DATE: MAY 2002				
SCALE: VARIES				

FIRE HYDRANT (3)
SCALE: NTS



NOTES:
1. ALL THRUST BLOCK BEARING FACES SHALL BE POURED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED BACKFILL.
2. CONCRETE SHALL BE CLASS C.
3. CALCULATED ON 150 PSI. STATIC PRESSURE & ALLOWABLE BEARING PRESSURE OF 1500 LB. PER SQ. FT.
4. ALL THRUST BLOCK SIDES SHALL BE FORMED. (CITY INSPECTOR MAY REQUIRE WOOD FORMS.)

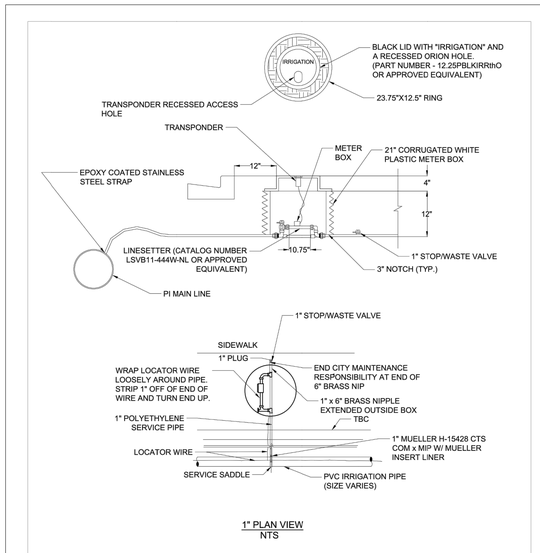
THRUST BLOCK BEARING AREA IN SQ. FEET

PIPE SIZE (IN.)	CONDITION							
	I	II	III	IV	V	VI	VII	VIII
4	1.5	1.8	1	0.5	1.3	1.3	1.3	1.3
8	5	7.1	3.8	2	5	5	5	5
10	7.8	11.1	6	3	7.8	7.8	7.8	7.8
14	15.4	21.7	11.8	6	15.4	15.4	15.4	15.4

WATER LINE THRUST BLOCK DETAILS

DRAWN: JRP	Northern ENGINEERING • LAND PLANNING • CONSTRUCTION MANAGEMENT 1040 E. 800 N. OREM, UTAH 84057 (801) 802-8992	AMERICAN FORK CITY	WATERLINE THRUST BLOCKING	DRAWING NO. 15.21
REVISED:				
DATE: MAY 2002				
SCALE: VARIES				

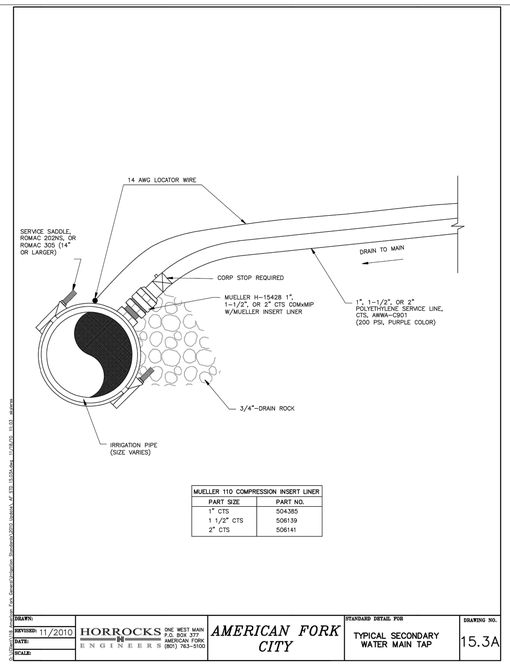
THRUST BLOCK (4)
SCALE: NTS



1" PLAN VIEW
NTS

NOTES:
1. CITY MAINTENANCE RESPONSIBILITY ENDS AT THE END OF THE 6" BRASS NIPPLE.
2. STOP/WASTE VALVE IS THE PROPERTY OWNER'S VALVE TO ISOLATE SPRINKLER SYSTEM.
3. REFER TO SECTION 7.6 OF AMERICAN FORK STANDARDS FOR SECONDARY WATER SERVICE LATERAL CONNECTION.

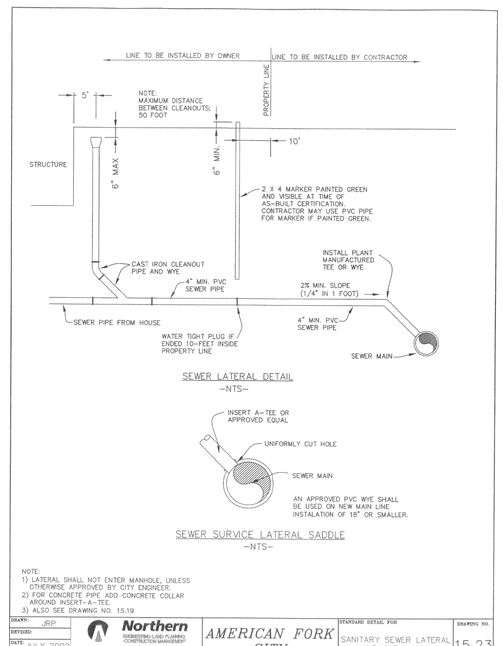
DRAWN: MVU	AMERICAN FORK	AMERICAN FORK CITY PUBLIC WORKS 275 EAST 200 NORTH (801) 763-9030	1" PI METER PLACEMENT	DRAWING NO. 15.5D
REVISED:				
DATE: MAY 2019				
SCALE: VARIES				



MUELLER 110 COMPRESSION INSERT LINER	
PART SIZE	PART NO.
1" CTS	504385
1 1/2" CTS	506139
2" CTS	506141

DRAWN:	HORROCKS ENGINEERS ONE WEST MAIN P.O. BOX 377 AMERICAN FORK (801) 763-5100	AMERICAN FORK CITY	TYPICAL SECONDARY WATER MAIN TAP	DRAWING NO. 15.3A
REVISED: 11/2010				
DATE:				
SCALE:				

SECONDARY WATER METER AND CONNECTION (5)
SCALE: NTS



SEWER LATERAL DETAIL
-NTS-

SEWER SERVICE LATERAL SADDLE
-NTS-

NOTE:
1) LATERAL SHALL NOT ENTER MANHOLE, UNLESS OTHERWISE APPROVED BY CITY ENGINEER.
2) FOR CONCRETE PIPE ADD CONCRETE COLLAR AROUND INSERT-A-TEE.
3) ALSO SEE DRAWING NO. 15.19

DRAWN: JRP	Northern ENGINEERING • LAND PLANNING • CONSTRUCTION MANAGEMENT 1040 E. 800 N. OREM, UTAH 84057 (801) 802-8992	AMERICAN FORK CITY	SANITARY SEWER LATERAL AND CLEAN OUT	DRAWING NO. 15.23
REVISED:				
DATE: JULY 2002				
SCALE: VARIES				

SEWER LATERAL AND CLEANOUT (6)
SCALE: NTS

No.	DATE	DESCRIPTION
5	02/04/22	REVISED SEWER LATERAL LOCATION PER OWNER
6	04/11/22	REVISED PER CITY COMMENTS
7	05/05/22	REVISED PER CITY COMMENTS
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10	09/23/22	SCALE MEASURES 1-INCH ON FULL SIZE SHEETS ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG FILE: 1905136_SITE

0 0.5 1"

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

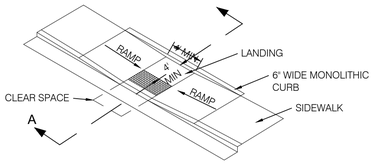
BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
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AMERICAN FORK OFFICE & WAREHOUSE
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AMERICAN FORK, UTAH

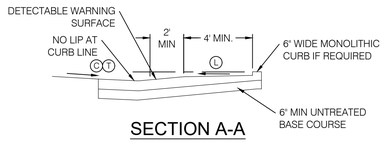
PROJECT NO. 1905136

DETAIL SHEET

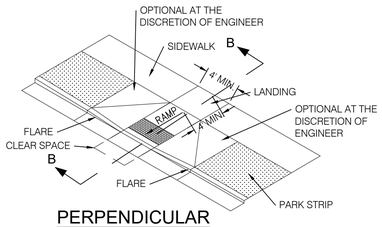
CDT.02
11 OF 16



PARALLEL PEDESTRIAN RAMP

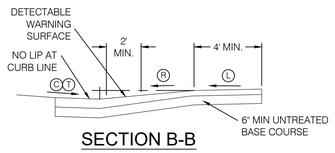


SECTION A-A

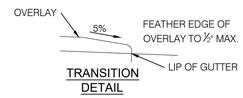


PERPENDICULAR PEDESTRIAN RAMP

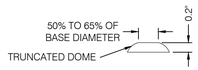
FLARE IS ACCEPTABLE IN LIEU OF FULL HEIGHT CURB SEE LOCAL AGENCY REQUIREMENTS

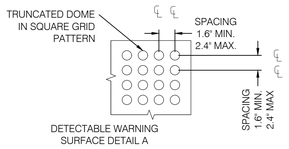


SECTION B-B

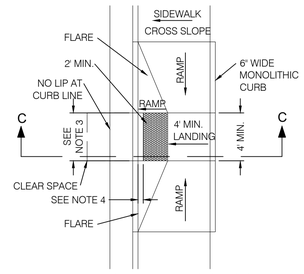


TRANSITION DETAIL

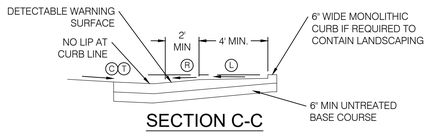




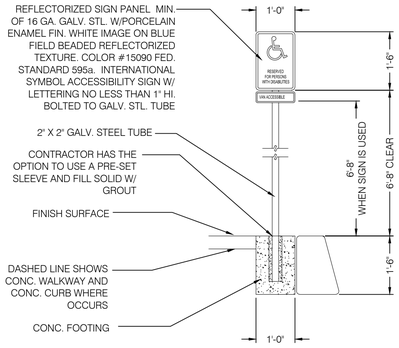
THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD



PEDESTRIAN ACCESS RAMP DETAIL



SECTION C-C



ADA SIGN POST DETAIL

TABLE OF DIMENSIONS	
ELEMENT	DIMENSION
T R	4 FEET WIDE MINIMUM
L C	4 FEET SQUARE MINIMUM*

* WHERE LANDING SPACE IS CONSTRAINED ON 2 SIDES, PROVIDE 5 FEET IN THE DIRECTION OF THE CROSSWALK



DIRECTION OF TRAVEL OR APPROACH

THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD



INTERNATIONAL SYMBOL OF ACCESSIBILITY

THIS DRAWING PRODUCED BY THE U.S. ACCESS BOARD

STRIPING SYMBOLS

SCALE: N.T.S.

NOTES:

1. CONFIGURATION OF RAMPS AND LANDINGS MAY BE CHANGED BUT MUST MEET PEDESTRIAN RAMP DIMENSIONS AND SLOPE REQUIREMENTS. SPECIFIC SITE CONDITIONS WILL VARY. THE USE OF FLARES, CURBWALLS, ETC. ARE AT THE DISCRETION OF THE ENGINEER.
2. PERPENDICULAR AND PARALLEL PEDESTRIAN RAMPS SHOWN ON THIS DRAWING ARE ACCEPTABLE FOR USE AT MID BLOCK OR CORNER INSTALLATIONS.
3. PROVIDE DETECTABLE WARNING SURFACE FOR FULL WIDTH OF RAMP, LANDING OR CURB CUT. SEE DETAIL A FOR DETECTABLE WARNING SURFACE DIMENSIONS.
4. LOCATE DETECTABLE WARNING SURFACE SO THAT THE EDGE NEAREST THE STREET IS 4 TO 6 INCHES FROM THE TOP BACK OF CURB.
5. PROVIDE DETECTABLE WARNING SURFACE. COLOR SHALL BE YELLOW.
6. USE CLASS AA (AE) CONCRETE.
7. USE 6" MIN. DEPTH OR UNTREATED BASE COURSE UNDER ALL CONCRETE FLATWORK COMPACTED TO 96% MAXIMUM DRY DENSITY.

SLOPE TABLE			
	ITEM	RUNNING SLOPE*	CROSS SLOPE
L	LANDING	1.5-2% (1V:48H) (b)	1.5-2% (1V:48H) (b)
R	RAMP	8.33% (1V:12H) (c)	1.5-2% (1V:48H) (d)
T	TRANSITION	5% (1V:20H) (a)	1.5-2% (1V:48H) (d)
C	CLEAR SPACE	5% (1V:20H) (a)	1.5-2% (1V:48H) (d)
	SIDEWALK	--	1.5-2% (1V:48H)
	FLARE	10% (1V:10H)	--

* RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL, WHILE CROSS SLOPE IS PERPENDICULAR TO PEDESTRIAN TRAVEL.

(a) TRANSITION RUNNING SLOPE NEEDS TO BE CONSTANT ACROSS ENTIRE CURB CUT. WARP GUTTER PAN TO MEET REQUIRED TRANSITION SLOPE AT CURB CUT (0.10' MAX. ABOVE FLOWLINE.)

EXCEPTION:

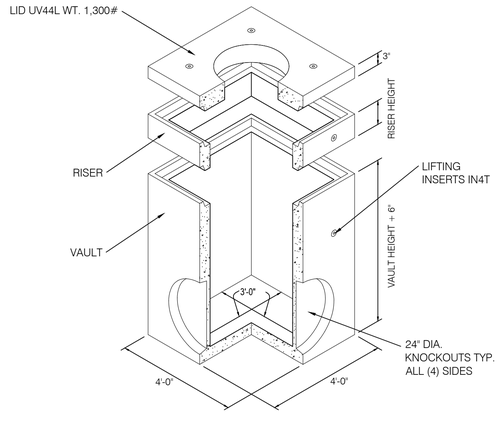
(b) IF SLOPE REQUIREMENTS CANT BE ACHIEVED ON MID-BLOCK RAMPS CONTACT THE ENGINEER.

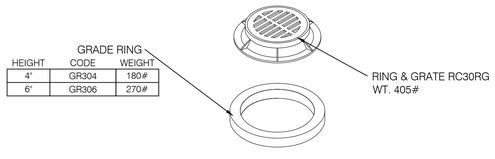
(c) PARALLEL RAMPS ARE NOT REQUIRED TO EXCEED 15-FEET IN LENGTH.

(d) CROSS SLOPE REQUIREMENT DOES NOT APPLY AT PERPENDICULAR RAMP MID-BLOCK CROSSING.

STANDARD ACCESS RAMP (1)

SCALE: NTS





GRADE RING		
HEIGHT	CODE	WEIGHT
4"	GR304	180#
6"	GR306	270#

RISER

HEIGHT	CODE	WEIGHT
1'	UV441R	1,350#
2'	UV442R	2,700#
3'	UV443R	4,050#
4'	UV444R	5,400#
5'	UV445R	6,750#
6'	UV446R	8,100#

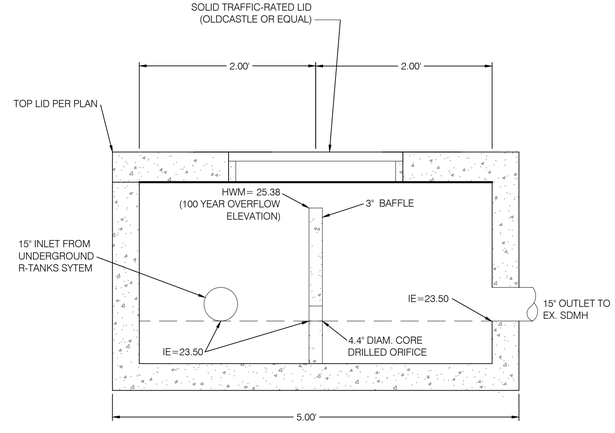
VAULT

HEIGHT	CODE	WEIGHT
3'	CB443	3,225#
4'	CB444	4,575#
5'	CB445	5,925#
6'	CB446	7,275#

NOTES:
1. CATCH BASINS ARE DESIGNED TO MEET ASTM C858 WITH AASHTO HS-20 LOADING.
2. OPENINGS MAY BE SIZED AND LOCATED AS REQUIRED.
3. OPTIONAL GRATING OR COVER MATERIAL MAY BE CAST IN AS REQUIRED.
4. CHECK HARDWARE SECTION FOR OPTIONAL ACCESSORIES.

3'x3' CATCH BASIN (2)

SCALE: NTS



4'X4' CATCH BASIN WITH SOLID LID & BAFFLE (3)

SCALE: N.T.S.

No.	DATE	DESCRIPTION
5	02/24/22	REVISED SEWER LATERAL LOCATION PER OWNER
6	04/11/22	REVISED PER CITY COMMENTS
7	05/05/22	REVISED PER CITY COMMENTS
8	08/17/22	REVISED PER CITY COMMENTS
9	09/1/22	REVISED PER CITY COMMENTS
10	09/23/22	REVISED PER TRAFFIC STUDY

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
SYRC FILE: 1905136 SITE

0 0.5 1

PROFESSIONAL ENGINEER
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH
9/23/22

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070. (801) 542-7192
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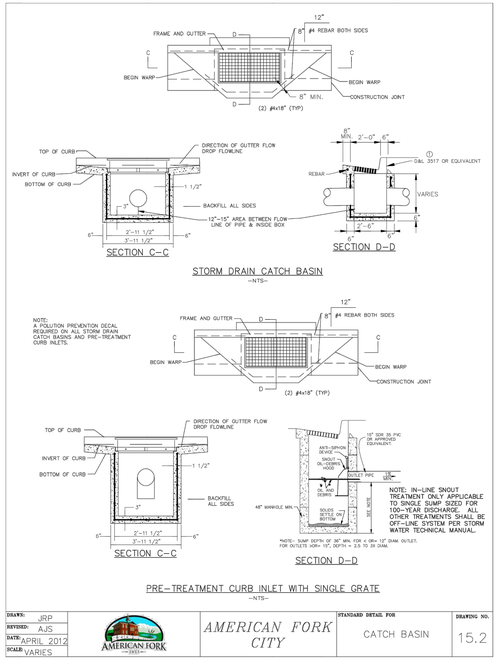
BENCHMARK CIVIL

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450 EAST AUTOMALL DRIVE
AMERICAN FORK, UTAH

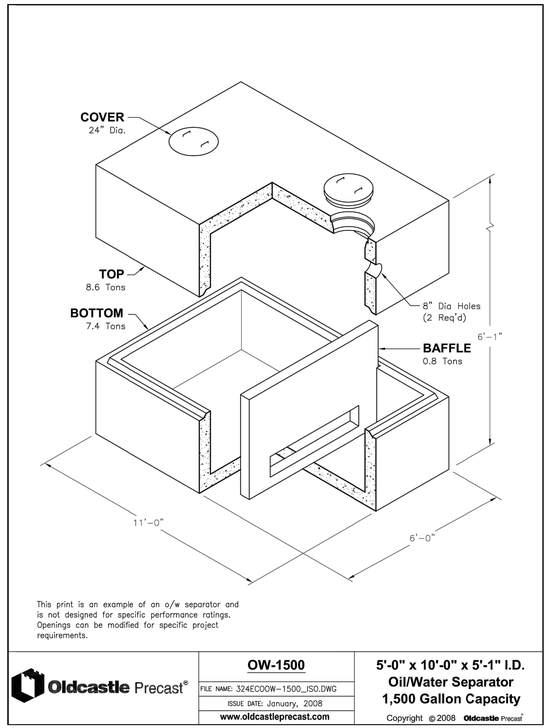
PROJECT NO. 1905136

DETAIL SHEET

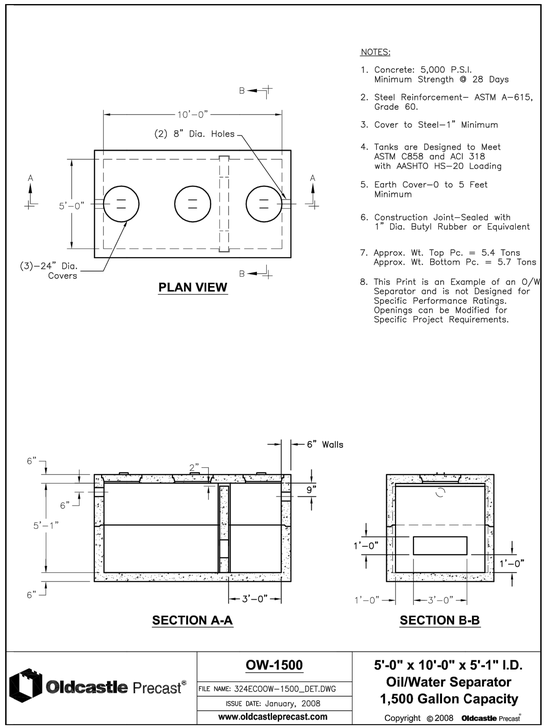
CDT.03
12 OF 16



STORM DRAIN INLET BOX (1)
SCALE: NTS



OLDCASTLE STORM WATER PRE-TREATMENT (2)
SCALE: NTS



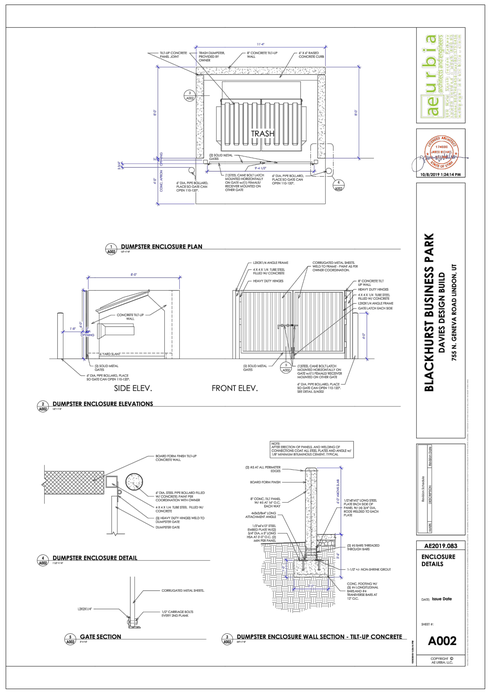
R-TANKS CALCULATION SHEET (3)
SCALE: NTS

R-TANK SUBSURFACE STORAGE SYSTEM

PROJECT INFORMATION	
Project Name	American Fork Office and Warehouse
City/County	American Fork
State	UT
Site Designation	UGDS

SUBSURFACE STORAGE REQUIREMENTS		
Storage Volume Required	12,995 cf	ENTER VALUE
R-Tank System Excavation Width	45.00 ft	ENTER VALUE
Use Stone Storage Volume	YES	SELECT FROM LIST
Stone Void Ratio	40%	ENTER VALUE
Dead Storage Required	NO	SELECT FROM LIST

R-TANK DESIGN		
R-Tank Selected	SD QUAD	SELECT FROM LIST
Width of R-Tank	15.75 in	
Length of R-Tank	28.15 in	
Height of R-Tank	35.46 in	
Volume of Storage per Module	8.64 cf	
Number of R-Tanks Wide	31	
Number of R-Tanks Long	37	
Number of Rotated End R-Tanks	34 (17 on each end)	
Total Number of R-Tank Modules	1,181	
R-Tank System Width	40.69 ft	
R-Tank System Length	89.42 ft	
Backfill Perimeter Width (2ft typ)		
Sides	2.00 ft	ENTER VALUE
Ends	2.00 ft	ENTER VALUE
R-Tank System Excavation Width	44.69 ft	
R-Tank System Excavation Length	93.42 ft	
Effective Footprint of System (Excavation)	4,174.74 sq.ft.	
Base Thickness	4 in	ENTER VALUE
Use Base for Storage	YES	
Cover Thickness	12 in	ENTER VALUE
Use Cover for Storage	YES	
Storage Volume Provided in R-Tank only	10,204 cf	
Storage Volume Provided in Backfill (40% Voids)	2,867 cf	
Total System Storage Volume	**13,071 cf**	
Volume of Backfill Required	265 cy	



DUMPSTER AND DUMPSTER ENCLOSURE DETAIL (4)
SCALE: NTS

No.	DATE	DESCRIPTION
5	02/24/22	REVISED SEWER LATERAL LOCATION PER OWNER
6	04/11/22	REVISED PER CITY COMMENTS
7	05/05/22	REVISED PER CITY COMMENTS
8	08/17/22	REVISED PER CITY COMMENTS
9	09/1/22	REVISED PER CITY COMMENTS
10	09/23/22	REVISED PER TRAFFIC STUDY

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG FILE: 1905136_SITE

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
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AMERICAN FORK OFFICE & WAREHOUSE
450 EAST AUTOMALL DRIVE
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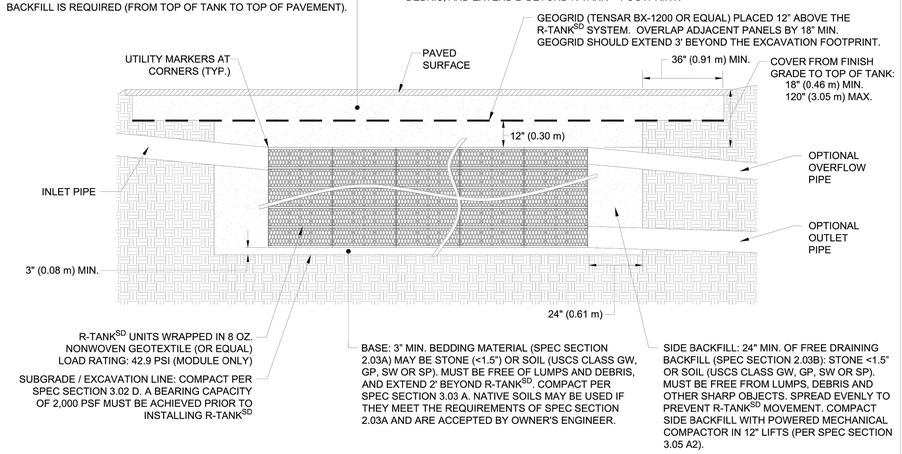
PROJECT NO.: 1905136

DETAIL SHEET

CDT.04
13 OF 16

TOTAL COVER: 18" MINIMUM AND 120" MAXIMUM. FIRST 12" MUST BE FREE DRAINING BACKFILL (SPEC SECTION 2.03B): STONE <1.5" OR SOIL (USCS CLASS GW, GP, SW OR SP). ADDITIONAL FILL MAY BE STRUCTURAL FILL (SPEC SECTION 2.03C): STONE OR SOIL (USCS CLASS SM, SP, SW, GM, GP OR GW) WITH MAX CLAY CONTENT<10%, MAX 25% PASSING NO. 200 SIEVE, AND MAX PLASTICITY INDEX OF 4. A MIN. 12" COVER MUST BE MAINTAINED BETWEEN BACKFILL EQUIPMENT AND THE TOP OF THE R-TANK™ SYSTEM AT ALL TIMES. TOTAL HEIGHT OF TOP BACKFILL SHOULD NOT EXCEED 10'. CONTACT ACF ENVIRONMENTAL IF MORE THAN 10' OR LESS THAN 18" OF TOP BACKFILL IS REQUIRED (FROM TOP OF TANK TO TOP OF PAVEMENT).

NOTES:
1. FOR COMPLETE MODULE DATA, SEE APPROPRIATE R-TANK^{SD} MODULE SHEET .
2. INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF HL-93 LOADING PER THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, CUSTOMARY U.S. UNITS, 7TH EDITION, 2014 WITH 2015 AND 2016 INTERIM REVISIONS.
3. PRE-TREATMENT STRUCTURES NOT SHOWN.
4. FOR INFILTRATION APPLICATIONS, GEOTEXTILE ENVELOPING R-TANK SHALL BE ACF M200 (PER SPEC SECTION 2.02A) AND BASE SHALL BE 4" MIN. UNCOMPACTED FREE DRAINING BACKFILL (SPEC SECTION 2.03A) TO PROVIDE A LEVEL BASE. SURFACE MUST BE SMOOTH, FREE OF LUMPS OR DEBRIS, AND EXTEND 2' BEYOND R-TANK^{SD} FOOTPRINT.



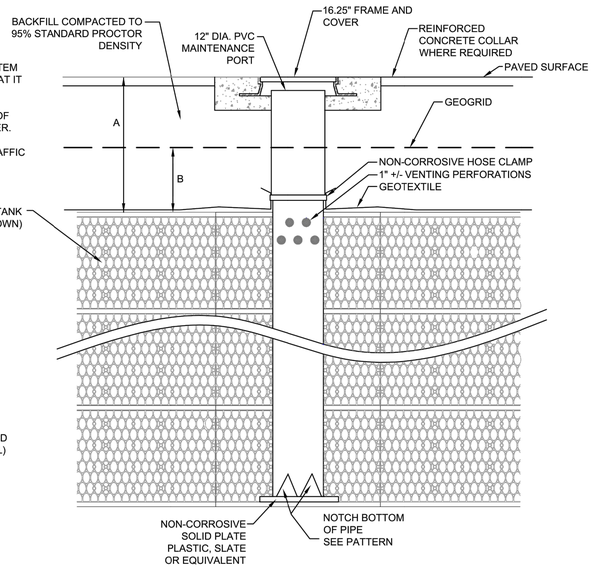
09/13/2017

R-TANK^{SD} & HS-20 LOADS - SECTION VIEW

FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

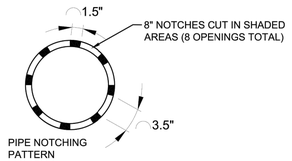
HS-20 Loading - R-Tank^{SD} - Sept 2017.dwg 9/13/17

NOTES
- THIS PORT IS USED TO PUMP WATER INTO THE SYSTEM AND RE-SUSPEND ACCUMULATED SEDIMENT SO THAT IT MAY BE PUMPED OUT.
- MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH AS NEEDED.
- ONLY R-TANK^{HD} AND R-TANK^{SD} MAY BE USED IN TRAFFIC APPLICATIONS.



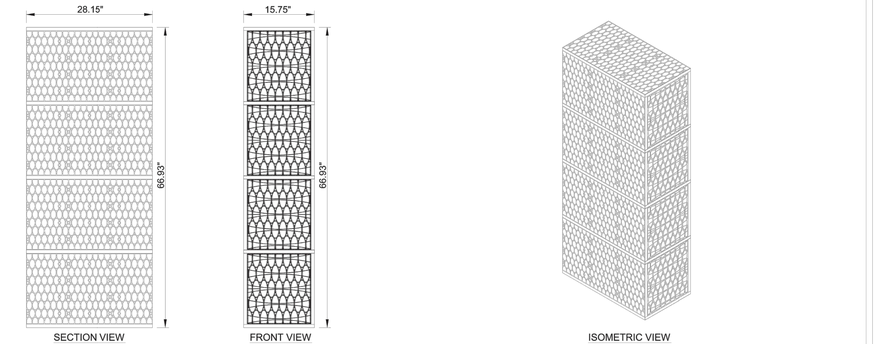
DEPTH SUMMARY

TYPE	A	B
R-TANK	12" MIN - 36" MAX	AS SHOWN ON PLANS
R-TANK^{HD}	20" MIN - 6.99' MAX	12"
R-TANK^{SD}	18" MIN - 9.99' MAX	12"



MAINTENANCE PORT
FOR R-TANK, R-TANK^{HD}, AND R-TANK^{SD}

FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com 6/16



MODULE DATA

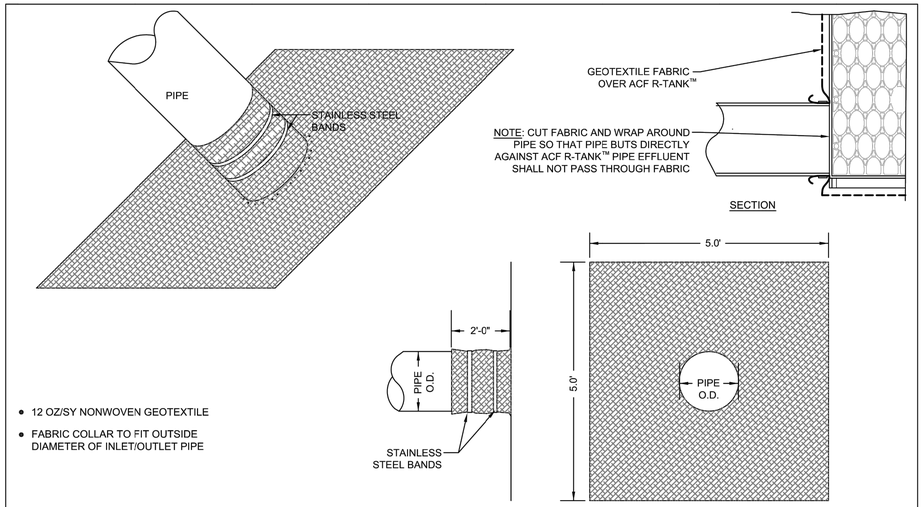
GEOMETRY: LENGTH = 28.15 IN. (715 MM)
WIDTH = 15.75 IN. (400 MM)
HEIGHT = 66.93 IN. (1700 MM)
STORAGE VOLUME = 16.31 CF (462 L)
VOID INTERNAL VOLUME: 95%
VOID SURFACE AREA: 90%

LOAD RATING: 40 PSI, (MODULE ONLY)
HS25, (WITH ACF COVER SYSTEM)

MATERIAL: 85% RECYCLED POLYPROPYLENE

R-TANK^{HD} - QUADMODULE

FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com



- 12 OZ/SY NONWOVEN GEOTEXTILE
- FABRIC COLLAR TO FIT OUTSIDE DIAMETER OF INLET/OUTLET PIPE

FABRIC PIPE BOOT FOR R-TANK™

FOR ADDITIONAL INFORMATION PLEASE CONTACT: ACF ENVIRONMENTAL, 1-800-448-3636, www.acfenvironmental.com

SD R-TANK SYSTEM (1)
SCALE: NTS

No.	DATE	DESCRIPTION
5	02/14/22	REVISED SEWER LATERAL LOCATION PER OWNER
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10	09/23/22	REVISED PER TRAFFIC STUDY
		SCALE MEASURES 1-INCH ON FULL SIZE SHEETS ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG. FILE: 1905136_SITE

0 0.5 1

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
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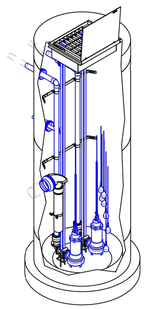
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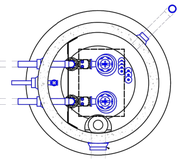
PROJECT NO. 1905136

DETAIL SHEET

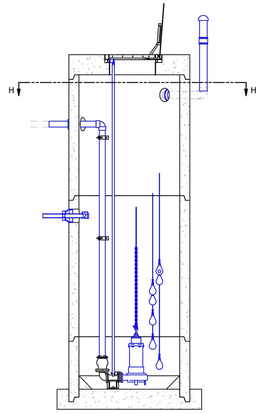
CDT.05
14 OF 16



VIEW8
SCALE 1 / 25



SECTION H-H
SCALE 1 / 20



SECTION G-G
SCALE 1 / 20

DESIGN CRITERIA	
RIM ELEVATION	4531.48'
INFLUENT INVERT	4519.78'
PEAK INFLOW	75 GPM
TOTAL DYNAMIC HEAD	Calcs. By Romtec
PUMP CONFIGURATION	Duplex
FORCE MAIN DIAMETER	3" SCH80 PVC
WATERTYPE	Wastewater
SUPPLY POWER	240V/3-Phase

COLOR LEGEND

MAJOR CONCRETE COMPONENTS WITH PRE-INSTALLED COMPONENTS.

COMPONENTS PRE-ASSEMBLED TO THE EXTENT POSSIBLE AND WILL NEED TO BE FIELD INSTALLED.

NOTE: PRE-ASSEMBLY IS DONE AT ROMTEC UTILITIES' DISCRETION AND MAY CHANGE AT THE TIME OF PRODUCTION.

NOTE: ALL DIMENSIONS AND ELEVATIONS SHOWN ARE NOMINAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE ON-SITE CONTRACTOR OR ROMTEC UTILITIES CUSTOMER (NOT ROMTEC UTILITIES) TO VERIFY THE ACCURACY OF ANY CRITICAL DIMENSIONS OR ELEVATIONS PRIOR TO SETTING OR INSTALLING ANY EQUIPMENT.

ALL MATERIALS SHOWN ON THIS SHEET WILL BE SUPPLIED BY ROMTEC UTILITIES AND DELIVERED TO THE SITE AFTER THE HOLE HAS BEEN EXCAVATED AND SHORED. THE CONTRACTOR SHALL SUPPLY A CRANE OF SUFFICIENT SIZE TO LOWER ALL THE CONCRETE PIECES INTO THE HOLE SAFELY. THE CONTRACTOR SHALL INSTALL THE WET WELL (AND VALVE VAULT AND METERING VAULT IF APPLICABLE). ROMTEC UTILITIES WILL PROVIDE A REPRESENTATIVE FOR TECHNICAL ASSISTANCE ON THE DAY OF INSTALLATION TO ANSWER ANY QUESTIONS THAT MAY ARISE. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING AND ELECTRICAL CONNECTIONS AND INSTALLATION. ITEMS NOTED AS "BY OTHERS" WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. ROMTEC UTILITIES WILL NOT INSTALL ANY OF THE COMPONENTS SHOWN ON THIS PAGE.

ROMTEC UTILITIES

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1. PREFABRICATED WET WELL AND MECHANICAL

1.1 Package pump station supplier is responsible for the prefabrication of the wet well structure and associated interior wet well mechanical equipment prior to shipment to the jobsite.
1.2 Wet Well to be designed and sized by the package pump station supplier to ensure proper fitment, clearance, active volume, and operation with all internal mechanical equipment. Wet well design to include the precast wet well, top slab with hatch, base, and all associated risers.
1.3 The precast concrete wet well shall be constructed of 4,000 psi concrete and 60,000 psi steel conforming to ASTM C478 standard specifications for precast reinforced concrete manhole sections.
1.4 All joints between wet well sections shall be a single offset joint with R-3 rubber gasket conforming to ASTM C443 and C478.
1.5 The precast top slab & hatch shall be designed in accordance with the owner's and site requirements relative to load ratings.
1.6 The wet well base slab shall be pre-fabricated, self-cleaning and include this first barrel section as one monolithic piece.
1.7 Each cored hole shall have an associated Kor-N-Seal for each particular pipe size entering and exiting the wet well to ensure no water leakage outside the wet well.
1.8 Sealant and tapecoat shall be provided for each section of the wet well to ensure no water leakage through the joints.
1.9 The access hatch shall be designed and supplied with the minimum opening to ensure proper clearance for the pumps and level sensing and in accordance with the load ratings.
1.10 The safety grate shall be hinged but non-removable and provide fall-through protection per OSHA standards.
1.11 The hatch shall be able to accommodate pump guide brackets and lifting chains.
1.12 The package pump station will provide prefabricated alignment pins & brackets for proper orientation during installation.
1.13 The package pump station will be supplying all in-well discharge piping and fittings from the pump discharge elbow up and through the wet well structure.

2. SUBMERSIBLE PUMPS

2.1 The pump discharge elbows and associated anchors shall be pre-installed in the base at the manufacturer's facility to provide a complete and integrated installation.
2.2 Pumps, mechanical seals and motor units provided shall be from the same pump manufacturer in order to achieve standardization of operation, maintenance, spare parts, service and warranty.
2.3 Pumping equipment shall be furnished with all motors, power cables, pump bases, guide bars and brackets, discharge piping, fittings, anchors, anchor bolts, anchor bolt sleeves and other appurtenances as specified or required for complete installation and for satisfactory operation.
2.4 Each pump to be furnished with a guide rail system consisting of a dual rail system connected to the discharge head and to an upper guide bar holder mounted to the access frame. The guide rail system shall consist of stainless steel guide bar brackets and Schedule 40 type 304 stainless steel pipe.
2.5 Each pump shall be equipped with complete attachments necessary for lifting the pump and motor from the wet well.

A. Manufacturer: KSB
B. Pumping Rate: 95gpm each pump
C. Setup: Duplex
D. Horsepower: 2HP
E. Power: 460V/Three Phase
F. Cable Length: 100 ft.

3. LEVEL CONTROL SYSTEM

3.1 The primary level sensing for pump control shall be in accordance with the owner's requirements and integrate with the system control panel for duplex operation
3.2 The wet well hatch shall include provisions for hanging/suspension of level sensing cables.

GENERAL SPECIFICATIONS & SCOPE

A. The package pump station supplier of the sewer lift station shall be Romtec Utilities. The package pump station supplier shall design and draw the complete lift station including the wet well structure and associated piping and valves along with the control panel and the associated schematics.
B. The package pump station supplier shall be solely responsible for proper prefabrication, integration, supply, performance, and warranty of all package pump station components delineated in this specification and on the drawings, which shall be used as a guide of the minimum product specifications that shall be met.
C. The package pump station supplier work shall include designing and supplying the piping, mechanical, and appurtenances within and adjacent to the wet well as a complete, predesigned, packaged pump station as described herein.
D. The drawings shall be of sufficient detail for the Engineer to review for conformity to the contract. All drawings shall include elevations on the same datum point as in the contract plans.
E. Romtec Utilities will manufacture and deliver the pump station as described below to the job site for the contractor. A representative of Romtec Utilities will be present the day of the underground installation.
F. The package pump station supplier is responsible for overseeing all start-up, testing and training procedures.
G. A representative of the package pump station supplier must be present the day the lift station is installed to provide technical advice to the contractor.
H. After installation, a package pump station start-up shall be performed by the installing contractor under the supervision of the package pump station supplier's authorized representative.
I. Start-up to include two (2) days of on-site field service.
J. Services shall include, but not be limited to, inspection of the completed package pump station installation to ensure that it has been performed in accordance with the Pump Manufacturer's instructions and recommendations, supervision of all field-testing and activation of the warranty.
K. The Contractor shall be responsible for coordinating the required field services with the package pump station supplier.
L. The package pump station supplier shall provides support for the installing electrician over the phone both prior to and during installation of the pumps station.
M. The package pump station supplier's electrical engineering staff shall help troubleshoot issues encountered on-site during construction as well as during normal operation of the pump station. This service is available to both the installing contractor as well as the owner and their maintenance personnel.
N. The package pump station supplier is to supply an electronic copy of the Operation & Maintenance manual for all components in this prepackaged pump station. Separate sections include, but not limited to the following: pumps, controls, mechanical components, schematics, troubleshooting instructions, and data sheets for every supplied component.
O. The package pump station supplier shall provided a minimum of 1-year warranty on materials and workmanship for the pumping system.

VERIFY SCALE BAR IS ACCURATE ON PLOTTED DRAWINGS

0 1"

DESIGNED:
DRAWN:
CHECKED:
DATE:

REV	DATE	DESCRIPTION	BY

REVISION HISTORY

ROMTEC UTILITIES
12476 NORTH BANK ROAD
ROSEBURG, OREGON 97470
PHONE: (541) 496-3679
WWW.ROMTECUTILITIES.COM

WET WELL COMPONENTS

MECHANICAL SHEET
1

GENERAL INFORMATION

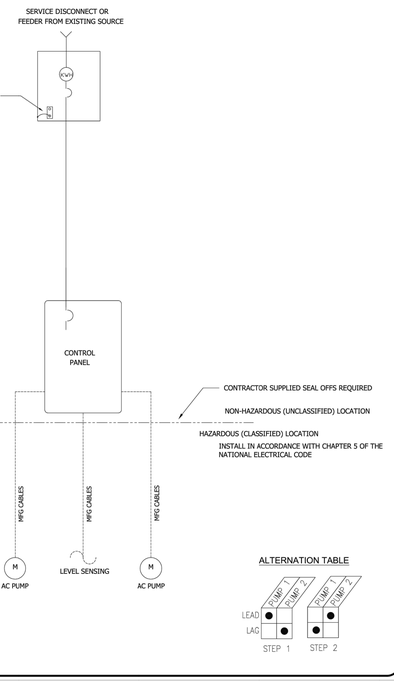
- ELECTRICAL SERVICE - 480V, 3 PHASE
- PRIMARY CONTROLLER - PC3000XC CONFIGURED FOR DUPLEX OPERATION
- DEVICE MOUNTING - INNER DOOR
- PANEL MOUNTING - FLOOR MOUNT

1. ELECTRICAL SCOPE

1.1 Package pump station supplier's work shall include the design and fabrication of the control panel and pump station electrical equipment in accordance with the system and owner requirements.
1.2 Electrical equipment including control panel and level sensing to be by pump station supplier.
1.3 Supplier shall provide technical support for installing electrical contractor both prior to and during installation of the pump station.
1.4 Pump station start-up shall be performed by the pump station supplier. The startup technician shall be a trained and qualified employee of the system supplier and not be provided by a third-party.
1.5 During the first day of field service, the startup technician work will provide direction to Installer for pump station field-testing and troubleshooting any issues with system startup and operation. The startup technician will perform an inspection of the pump station installation to ensure that it was completed in accordance with the approved design. The startup technician will also direct and oversee the installation of the delivered pumps and level sensors. Delivered pumps and level sensors are to be stored on-site during construction, but not installed until the time of startup testing.
1.6 Day two of field service will include operation and maintenance training provided by the startup technician to all parties involved in the ongoing operation and maintenance of the lift station. This should include the owner or owner's representative, maintenance personnel, operation personnel, the Installer, and any other parties that are integral to the ongoing performance of the lift station. The Installer shall coordinate with the owner to determine and verify all parties are present for training.
1.7 During operation of the system as part of the system startup, the startup technician will prove the performance of the system based on the approved Scope of Supply and Design Submittal.
1.8 The startup technician will complete a field startup report and training forms per the approved Scope of Supply and Design Submittal. These forms will be signed to acknowledge completion of startup activities by the required parties.
1.9 The startup technician will provide a copy of the field startup report to be provided to the owner and/or operator.

2. CONTROL REQUIREMENTS

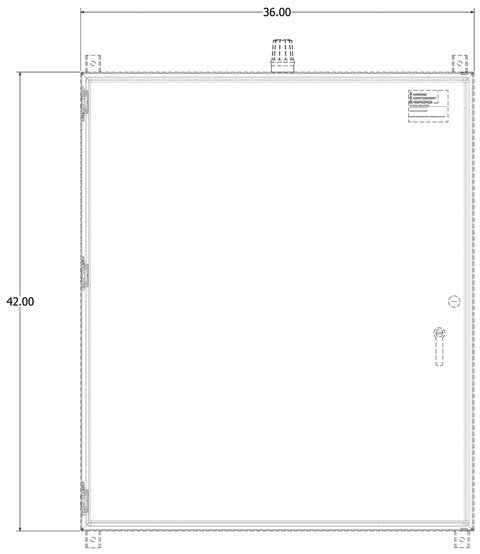
2.1 Control Panel to be UL Listed in the United States
2.2 Panel enclosure to meet minimum requirements of NEMA 4 painted steel enclosure with an interior dead front"panel.
2.2 Panel to be configured for duplex operation.
2.3 Panel to include hand-off-auto (HOA) switches.
2.4 Primary pump controller: PC3000XC controller.
2.5 Panel to include alarm beacon.
2.6 Panel to include audible alarm notification.



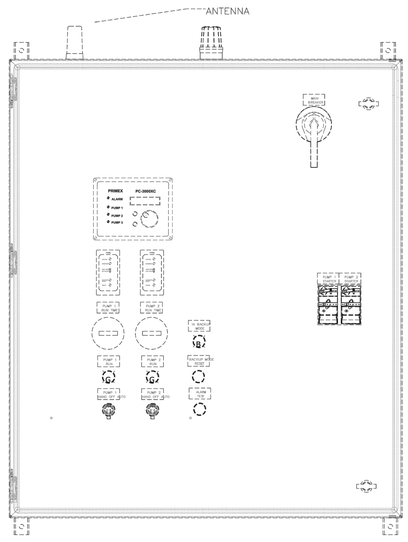
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ELECTRICAL NOTES
DUPLEX LIFT STATION

ELECTRICAL SHEET
E1



OUTER FRONT DOOR

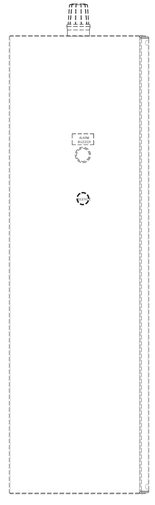


INNER DOOR

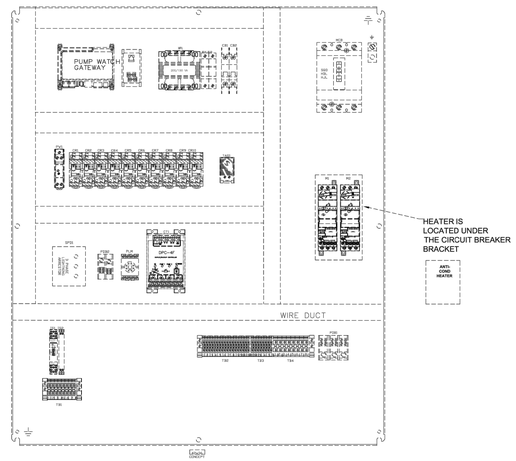
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ELECTRICAL ENCLOSURE
DUPLEX LIFT STATION

ELECTRICAL SHEET
E2



LEFT SIDE



BACK PLATE

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ENCLOSURE LAYOUT
DUPLEX LIFT STATION

ELECTRICAL SHEET
E3

No.	DATE	DESCRIPTION
5	02/24/22	REVISED SEWER LATERAL LOCATION PER OWNER
6	04/11/22	REVISED PER CITY COMMENTS
7	05/05/22	REVISED PER CITY COMMENTS
8	08/17/22	REVISED PER CITY COMMENTS
9	09/1/22	REVISED PER CITY COMMENTS
10	09/23/22	REVISED PER TRAFFIC STUDY

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG FILE: 1905136_SITE

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
SANDY, UTAH 84070 (801) 542-7192
www.benchmarkcivil.com

AMERICAN FORK OFFICE & WAREHOUSE
450 EAST AUTOMALL DRIVE
AMERICAN FORK, UTAH

PROJECT NO. 1905136

DETAIL SHEET

CDT.06
15 OF 16

SEWER PUMP SPECIFICATIONS AND DETAILS (1)
SCALE: NTS

Waste Water Drainage Sizing

Project Name: American Fork Office/Warehouse

Waste Branch: Building Total - Estimated

Quantity	Fixture Type	Drainage Fixture Unit Value as Load Factors (dfu)	Minimum Size of Trap (inches)	Total Fixture Unit Value as Load Factors (dfu)
0	Automatic Clothes Washers, Commercial	3	2	0
0	Automatic Clothes Washers, Residential	2	2	0
0	Bathroom Group as defined in Section 202 (1.6 gpf water closet)	5	-	0
0	Bathroom Group as defined in Section 202 (water closet flushing...	6	-	0
0	Bathtub (with or without overhead shower or whirlpool attachements)	2	1 1/2	0
0	Bidet	1	1 1/4	0
0	Combination sink and tray	2	1 1/2	0
0	Dental lavatory	1	1 1/4	0
0	Dental unit or cuspidor	1	1 1/4	0
0	Dishwashing machine, domestic	2	1 1/2	0
7	Drinking fountain	1/2	1 1/4	3.5
36	Emergency floor drain	0	2	0
0	Floor drains	2	2	0
0	Floor sinks	3	2	0
7	Kitchen sink, domestic	2	1 1/2	14
0	Kitchen sink, domestic with food waste grinder and/or dishwasher	2	1 1/2	0
0	Laundry tray (1 or 2 compartments)	2	1 1/2	0
56	Lavatory	1	1 1/4	56
0	Shower (5.7 gpm or less)	2	1 1/2	0
0	Shower (5.7 gpm to 12.3 gpm)	3	2	0
0	Shower (12.3 gpm to 25.8 gpm)	5	3	0
0	Shower (25.8 gpm to 55.6 gpm)	6	4	0
7	Service Sink	2	1 1/2	14
0	Sink	2	1 1/2	0
14	Urinal	4	2	56
0	Urinal, 1 gallon per flush or less	2	2	0
0	Urinal, nonwater supplied	1/2	2	0
0	Wash sink (circular or multiple) each set of faucets	2	1 1/2	0
42	Water closet, flushometer tank, public or private	4	3	168
0	Water closet, private (1.6 gpf)	3	3	0
0	Water closet, private (flushing greater than 1.6 gpf)	4	3	0
0	Water closet, public (1.6 gpf)	4	3	0
0	Water closet, public (flushing greater than 1.6 gpf)	6	3	0
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
				311.5

Slope of Waste Water Piping = 1/8 inch inch

Minimum Size of Primary Waste Water Piping = 6 inch

Waste Water Drainage Sizing

Project Name: American Fork Office/Warehouse

Waste Branch: Typical Tenant - Estimated

Quantity	Fixture Type	Drainage Fixture Unit Value as Load Factors (dfu)	Minimum Size of Trap (inches)	Total Fixture Unit Value as Load Factors (dfu)
0	Automatic Clothes Washers, Commercial	3	2	0
0	Automatic Clothes Washers, Residential	2	2	0
0	Bathroom Group as defined in Section 202 (1.6 gpf water closet)	5	-	0
0	Bathroom Group as defined in Section 202 (water closet flushing...	6	-	0
0	Bathtub (with or without overhead shower or whirlpool attachements)	2	1 1/2	0
0	Bidet	1	1 1/4	0
0	Combination sink and tray	2	1 1/2	0
0	Dental lavatory	1	1 1/4	0
0	Dental unit or cuspidor	1	1 1/4	0
0	Dishwashing machine, domestic	2	1 1/2	0
1	Drinking fountain	1/2	1 1/4	0.5
5	Emergency floor drain	0	2	0
0	Floor drains	2	2	0
0	Floor sinks	3	2	0
1	Kitchen sink, domestic	2	1 1/2	2
0	Kitchen sink, domestic with food waste grinder and/or dishwasher	2	1 1/2	0
0	Laundry tray (1 or 2 compartments)	2	1 1/2	0
8	Lavatory	1	1 1/4	8
0	Shower (5.7 gpm or less)	2	1 1/2	0
0	Shower (5.7 gpm to 12.3 gpm)	3	2	0
0	Shower (12.3 gpm to 25.8 gpm)	5	3	0
0	Shower (25.8 gpm to 55.6 gpm)	6	4	0
1	Service Sink	2	1 1/2	2
0	Sink	2	1 1/2	0
2	Urinal	4	2	8
0	Urinal, 1 gallon per flush or less	2	2	0
0	Urinal, nonwater supplied	1/2	2	0
0	Wash sink (circular or multiple) each set of faucets	2	1 1/2	0
6	Water closet, flushometer tank, public or private	4	3	24
0	Water closet, private (1.6 gpf)	3	3	0
0	Water closet, private (flushing greater than 1.6 gpf)	4	3	0
0	Water closet, public (1.6 gpf)	4	3	0
0	Water closet, public (flushing greater than 1.6 gpf)	6	3	0
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
				44.5

Slope of Waste Water Piping = 1/8 inch inch

Minimum Size of Primary Waste Water Piping = 4 inch

Domestic Water Sizing

Project Name: American Fork...

Dom. Wtr Branch: Typical Tenant - Estimated

Quantity	Fixture Type	Occupancy	Type of Supply Control	Load Values in Water Supply Fixture Units (wsfu) Cold	Hot	Total	Minimum sizes of Fixture Water Supply Pipes (Table 604.5)
0	Bathroom Group	Private	Flush Tank	0	0	0	-
0	Bathroom Group	Private	Flushometer Valve	0	0	0	-
0	Bathtub	Private	Faucet	0	0	0	1/2
0	Bathtub	Public	Faucet	0	0	0	1/2
0	Bidet	Private	Faucet	0	0	0	3/8
0	Combination Fixture	Private	Faucet	0	0	0	1/2
0	Dishwashing Machine	Private	Automatic	-	0	0	1/2
1	Drinking fountain	Offices, etc.	3/8" valve	0.25	-	0.25	3/8
1	Kitchen Sink	Private	Faucet	1	1	1.4	1/2
0	Kitchen Sink	Hotel/Restaurant	Faucet	0	0	0	3/4
0	Laundry tray (1 to 3 compartments)	Private	Faucet	0	0	0	1/2
8	Lavatory	Private	Faucet	4	4	5.6	3/8
0	Lavatory	Public	Faucet	0	0	0	3/8
1	Service Sink	Offices, etc.	Faucet	2.25	2.25	3	1/2
0	Shower Head	Public	Mixing Valve	0	0	0	1/2
0	Shower Head	Private	Mixing Valve	0	0	0	1/2
0	Urinal	Public	1" Flushometer Valve	0	-	0	1
2	Urinal	Public	3/4" Flushometer Valve	10	-	10	3/4
0	Urinal	Public	Flush Tank	0	-	0	1/2
0	Washing Machine (8 lbs)	Private	Automatic	0	0	0	1/2
0	Washing Machine (8 lbs)	Public	Automatic	0	0	0	1/2
0	Washing Machine (15 lbs)	Public	Automatic	0	0	0	3/4
0	Water Closet	Private	Flushometer Valve	0	-	0	1
6	Water Closet	Private	Flush Tank	13.2	-	13.2	3/8
0	Water Closet	Public	Flushometer Valve	0	-	0	1
0	Water Closet	Public	Flush Tank	0	-	0	3/8
0	Water Closet	Public or Private	Flushometer Tank	0	-	0	3/8
0	Water Closet	Private	Flush Tank	0	-	0	3/8
0	Hose Bibb	Public or Private	3/4" Valve	0	-	0	3/4
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
					7.25	33.45	wsfu

DCW wsfu into GPM = 24.9 GPM ** Used GPM for 35 wsfu

DCW Distribution Pipe Size Rqrd from Figure E103.3(2) = 1.5 inch ** Based on Flow rate of 5-8 Feet per Second maximum

Domestic Water Sizing

Project Name: American Fork...

Dom. Wtr Branch: Building Total - Estimated

Quantity	Fixture Type	Occupancy	Type of Supply Control	Load Values in Water Supply Fixture Units (wsfu) Cold	Hot	Total	Minimum sizes of Fixture Water Supply Pipes (Table 604.5)
0	Bathroom Group	Private	Flush Tank	0	0	0	-
0	Bathroom Group	Private	Flushometer Valve	0	0	0	-
0	Bathtub	Private	Faucet	0	0	0	1/2
0	Bathtub	Public	Faucet	0	0	0	1/2
0	Bidet	Private	Faucet	0	0	0	3/8
0	Combination Fixture	Private	Faucet	0	0	0	1/2
0	Dishwashing Machine	Private	Automatic	-	0	0	1/2
7	Drinking fountain	Offices, etc.	3/8" valve	1.75	-	1.75	3/8
7	Kitchen Sink	Private	Faucet	7	7	9.8	1/2
0	Kitchen Sink	Hotel/Restaurant	Faucet	0	0	0	3/4
0	Laundry tray (1 to 3 compartments)	Private	Faucet	0	0	0	1/2
56	Lavatory	Private	Faucet	28	28	39.2	3/8
0	Lavatory	Public	Faucet	0	0	0	3/8
7	Service Sink	Offices, etc.	Faucet	15.75	15.75	21	1/2
0	Shower Head	Public	Mixing Valve	0	0	0	1/2
0	Shower Head	Private	Mixing Valve	0	0	0	1/2
0	Urinal	Public	1" Flushometer Valve	0	-	0	1
14	Urinal	Public	3/4" Flushometer Valve	70	-	70	3/4
0	Urinal	Public	Flush Tank	0	-	0	1/2
0	Washing Machine (8 lbs)	Private	Automatic	0	0	0	1/2
0	Washing Machine (8 lbs)	Public	Automatic	0	0	0	1/2
0	Washing Machine (15 lbs)	Public	Automatic	0	0	0	3/4
0	Water Closet	Private	Flushometer Valve	0	-	0	1
42	Water Closet	Private	Flush Tank	92.4	-	92.4	3/8
0	Water Closet	Public	Flushometer Valve	0	-	0	1
0	Water Closet	Public	Flush Tank	0	-	0	3/8
0	Water Closet	Public or Private	Flushometer Tank	0	-	0	3/8
0	Water Closet	Private	Flush Tank	0	-	0	3/8
0	Hose Bibb	Public or Private	3/4" Valve	0	-	0	3/4
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
					50.75	234.15	wsfu

DCW wsfu into GPM = 75 GPM ** Used GPM for 250 wsfu

DCW Distribution Pipe Size Rqrd from Figure E103.3(2) = 3 inch ** Based on Flow rate of 5-8 Feet per Second maximum

DCW Maximum Devloped Pipe Length to Farthest Fixture = 500 Feet ** Measured on architectural plans

BLDG Minimum Size of Water Meter (if needed) = 2 inch ** Based on Table E201.1 (30-39 psi)

Peak Domestic Cold Water Flow 75 GPM

Average Daily Flow 1125 GPD ** Based on typical 10 hr work day

CALCULATION FOR THE WASTEWATER FLOWS (1)

SCALE: NTS

NOTES:

WASTE WATER CALCULATIONS PROVIDED BY A.E.URBIA.

No.	DATE	DESCRIPTION
5	02/24/22	REVISED SEWER LATERAL LOCATION PER OWNER
6	04/11/22	REVISED PER CITY COMMENTS
7	05/05/22	REVISED PER CITY COMMENTS
8	08/17/22	REVISED PER CITY COMMENTS
9	09/1/22	REVISED PER CITY COMMENTS
10	09/23/22	REVISED PER TRAFFIC STUDY

SCALE MEASURES 1-INCH ON FULL SIZE SHEETS
ADJUST ACCORDINGLY FOR REDUCED SIZE SHEETS

DRAWN BY: JHO
CHECKED BY: MCP
FIELD CREW: SURVEY
DATE: 05/05/2021
DWG FILE: 1905136_SITE

0 0.5 1

PROFESSIONAL ENGINEER
9/23/22
No. 11366633
ALLISON G. ALBERT
STATE OF UTAH

BENCHMARK ENGINEERING & LAND SURVEYING
9138 SOUTH STATE STREET SUITE #100
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BENCHMARK CIVIL

AMERICAN FORK OFFICE & WAREHOUSE

450 EAST AUTOMALL DRIVE
AMERICAN FORK, UTAH

PROJECT NO. 1905136

DETAIL SHEET

CDT.07
16 OF 16

LANDSCAPE PLAN SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes landscape procedures for the Project including all labor, materials, and installation necessary, but not limited to, the following:

1. Site Conditions
2. Guarantees
3. Maintenance
4. Soil Amendments
5. Fine Grading
6. Landscape Edging
7. Furnish and Installing Plant
8. Turf Planting
9. Weed Barrier

1.2 SITE CONDITIONS

A. Examination: Before submitting a Bid, each Contractor shall carefully examine the Contract Documents; shall visit the site of the Work; shall fully inform themselves as to all existing conditions and limitations; and shall include in the Bid the cost of all items required by the Contract Documents are at a variance with the applicable laws, building codes, rules, regulations, or contain obvious erroneous or uncoordinated information, the Contractor shall promptly notify the Project Representative and the necessary changes shall be accomplished by Addendum.

B. Protection: Contractor to conduct the Work in such a manner to protect all existing underground utilities or structures. Contractor to repair or replace any damaged utility or structure using identical materials to match existing at no expense to the Owner.

C. Irrigation System: Do not begin planting until the irrigation system is completely installed, is adjusted for full coverage and is completely operational.

1.3 PERMITS

A. Blue Stake/ Dig Line: When digging is required, "Blue Stake" or "Dig Line" the work site and identify the approximate location of all known underground utilities or structures.

1.4 PLANT DELIVERY, QUALITY, AND AVAILABILITY

A. Unauthorized substitutions will not be accepted. If proof is submitted that specific plants or plant sizes are unobtainable, written substitution requests will be considered for the nearest equivalent plant or size. All substitution requests must be made in writing and preferably before the bid due date.

1.5 FINAL INSPECTION

A. All plants will be inspected at the time of Final Inspection prior to receiving a Landscape Substantial Completion for conformance to specified planting procedures, and for general appearance and vitality. Any plant not approved by the Project Representative will be rejected and replaced immediately.

1.6 LANDSCAPE SUBSTANTIAL COMPLETION

A. A Substantial Completion Certificate will only be issued by the Project Representative for "landscape and irrigation" in their entirety. Substantial Completion will not be proportioned to be designated areas of a project.

1.7 MAINTENANCE

A. Plant Material: The Contractor is responsible to maintain all planted materials in a healthy and growing condition for 30 days after receiving a Landscape Substantial Completion at which time the Guarantee period commences. This maintenance is to include mowing, weeding, cultivating, fertilizing, monitoring water schedules, controlling insects and diseases, re-guying and staking, and all other operations of care necessary for the promotion of root growth and plant life so that all plants are in a condition satisfactory at the end of the guarantee period. The Contractor shall be held responsible for failure to monitor watering operations and shall replace any and all plant material that is lost due to improper application of water.

1.8 GUARANTEE

A. Guarantee: A guarantee period of one year shall begin from end of maintenance period and final acceptance for trees, shrubs, and ground covers. All plants shall grow and be healthy for the guarantee period and trees shall live and grow in acceptable upright position. Any plant not alive, in poor health, or in poor condition at the end of the guarantee period will be replaced immediately. Any plant will only need to be replaced once during the guarantee period. Contractor to provide documentation showing where each plant to be replaced is located. Any outside factors, such as vandalism or lack of maintenance on the part of the Owner, shall not be part of the guarantee

PART II - PRODUCTS

2.1 LANDSCAPE MATERIALS

A. Tree Staking: All trees shall be staked for one year warranty period. All trees not plumb shall be replaced. Staked trees shall use vinyl tree ties and tree stakes two (2) inch by two (2) by eight (8) foot common pine stakes used as shown on the details.

B. Tree Wrap: Tree wrap is not to be used.

C. Mulch/Rock: See Plans. All planter beds to receive a minimum 3" layer for trees, shrubs, and perennials and 1" for groundcovers.

D. Weed Barrier: DeWitt 5 oz. weed barrier fabric. Manufactured by DeWitt Company, dewittcompany.com or approved equal.

E. Tree, Shrub, and Grass Backfill Mixture; Backfill mixture to be 75% native soil and 25% topsoil, thoroughly mixed together prior to placement.

F. Topsoil: Required for turf areas, planter beds and Backfill Mixture. Acceptable topsoil shall meet the following standards:

a. PH: 5.5-7.5

b. EC (electrical conductivity): < 2.0 mmhos per centimeter

c. SAR (sodium absorption ration): < 3.0

d. % OM (percent organic matter): >1%

e. Texture (particle size per USDA soil classification): Sand <70%; Clay < 30%; Silt < 70%, Stone fragments (gravel or any soil particle greater than two (2) mm in size) < 5% by volume.

G. Turf Sod: All sod shall be 18 month old as specified on plans (or approved equal) that has been cut fresh the morning of installation. Only sod that has been grown on a commercial sod farm shall be used. Only use sod from a single source.

H. Landscape Curb Edging: six (6) inches by four (4) inches extruded concrete curb made up of the following materials:

a. Washed mortar sand free of organic material.

b. Portland Cement (see concrete spec. below for type)

c. Reinforced fiber - Specifically produced for compatibility with aggressive alkaline environment of Portland cement-based composites.

d. Only potable water for mixing.

I. Landscape Metal Edging: 5.5" steel edging with 18" dowels into the ground for stabilization.

PART III - EXECUTION

3.1 GRADING

A. Topsoil Preparation: Grade planting areas according to the grading plan. Eliminate uneven areas and low spots. Provide for proper grading and drainage.

B. Topsoil Placement: Slope surfaced away from building at two (2) percent slope with no pockets of standing water. Establish finish grades of one (1) inches for planters below grade of adjacent paved surfaced. Provide neat, smooth, and uniform finish grades. Remove surplus sub-soil and topsoil from the site.

C. Compaction: compaction under hard surface areas (asphalt paths and concrete surfaces) shall be ninety-five (95) percent. Compaction under planting areas shall be between eighty-five (85) and ninety (90) percent.

3.2 TURF GRADING

A. The surface on which the sod is to be laid shall be firm and free from footprints, depressions, or undulations of any kind. The surface shall be free of all materials larger than 1/2" in diameter.

B. The finish grade of the topsoil adjacent to all sidewalks, mow-strips, etc. prior to the laying of sod, shall be set such that the crown of the grass shall be at the same level as the adjacent concrete or hard surface. No exceptions.

3.3 PLANTING OPERATIONS

A. Review the exact locations of all trees and shrubs with the Project Representative for approval prior to the digging of any holes. Prepare all holes according to the details on the drawings.

B. Water plants immediately upon arrival at the site. Maintain in moist condition until planted.

C. Before planting, locate all underground utilities prior to digging. Do not place plants on or near utility lines.

D. The tree planting hole should be the same depth as the root ball, and two times the diameter of the root ball.

E. Trees must be placed on undisturbed soil at the bottom of the planting hole.

F. The tree hole depth shall be determined so that the tree may be set slightly high of finish grade, 1" to 2" above the base of the trunk flare, using the top of the root ball as a guide.

G. Plant immediately after removal of container for container plants.

H. Set tree on soil and remove all burlap, wire baskets, twine, wrappings, etc. before beginning and backfilling operations. Do not use planting stock if the ball is cracked or broken before or during planting operation.

I. Apply vitamin B-1 root stimulator at the rate of one (1) tablespoon per gallon.

J. Upon completion of backfilling operation, thoroughly water tree to completely settle the soil and fill any voids that may have occurred. Use a watering hose, not the area irrigation system. If additional prepared topsoil mixture needs to be added. It should be a courser mix as required to establish finish grade as indicated on the drawings.

K. The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches. All cuts, scars, and bruises shall be properly treated according to the direction of the Project Representative. Proper pruning techniques shall be used. Do not leave stubs and do not cut the leader branch. Improper pruning shall be cause for rejection of the plant material.

L. Prepare a watering circle of 2' diameter around the trunk. For conifers, extend the watering well to the drip line of the tree canopy. Place mulch around the planted trees.

4. TURF - SOD LAYING

A. Top Soil Amendments: Prior to laying sod, commercial fertilizer shall be applied and incorporated into the upper four (4) inches of the topsoil at a rate of four pounds of nitrogen per one thousand (1,000) square feet. Adjust fertilization mixture and rate of application as needed to meet recommendations given by topsoil analysis. Include other amendments as required.

B. Fertilization: Three weeks after sod placement fertilize the turf at a rate of ½ pound of nitrogen per 1000 square feet. Use fertilizer specified above. Adjust fertilization mixture and rates to meet recommendations given by topsoil analysis.

C. Sod Availability and Condition: Sod is to be delivered to the site in good condition. It is to be inspected upon arrival and installed within 24 hours. Sod is to be moist and cool to ensure that decomposition has not begun and is to be free of pests, diseases, or blemishes. The Contractor shall satisfy himself as to the existing conditions prior to any construction. The Contractor shall be fully responsible for furnishing and laying all sod required on the plans. He shall furnish new sod as specified above and lay it so as too completely satisfy the intent and meaning of the plans and specification at no extra cost to the owner. In the case of any discrepancy in the amount of sod to be removed or amount to be used, it shall be the Contractor's responsibility to report such to the Project Representative prior to commencing the work.

D. Sod Laying: The surface upon which the new sod to be laid will be prepared as specified in the detail and be lightly watered before laying. Areas where sod is to be laid shall be cut trimmed, or shaped to receive full width sod (minimum twelve (12) inches). No partial strip or pieces will be accepted.

E. Sod shall be tamped lightly as each piece is set to ensure that good contact is made between edges and also the ground. If voids or holes are discovered, the sod piece(s) is (are) to be raised and topsoil is to be used to fill in the areas until level. Sod laid on any sloped areas shall be anchored with wooden dowels or other materials which are accepted by the grass sod industry.

F. Sod shall be rolled with a roller that is at least 50% full immediately after installation to ensure the full contact with soil is made.

G. Apply water directly after laying sod. Rainfall is not acceptable.

H. Watering of the sod shall be the complete responsibility of the Contractor by whatever means necessary to establish the sod in an acceptable manner to the end of the Maintenance period. If an irrigation system is in place on the site, but for whatever reason, water is not available in the system. It is the responsibility of the Contractor to water the sod by whatever means, until the sod is accepted by the Project Representative.

I. Protection of the newly laid sod shall be the complete responsibility of the Contractor. The Contractor shall provide acceptable visual barriers, to include barricades set appropriate distances with strings or tapes between barriers, as an indication of new work. The Contractor is to restore any damaged areas caused by others (including vehicular traffic), erosion, etc, until such time as the lawn is accepted by the Owner.

J. All sod that has not been laid within 24 hours shall be deemed unacceptable and will be removed from the site.

3.5 WEED BARRIER

A. For the health of the soil and the microorganisms, weed barrier is not recommended. If use is required or requested, do not place in annual or grass areas.

B. Cut weed barrier back to the edge of the plant rootball.

C. Overlap rows of fabric min. 6"

D. Stable fabric edges and overlaps to ground.

END OF SECTION

LANDSCAPE NOTES

INSTALLATION

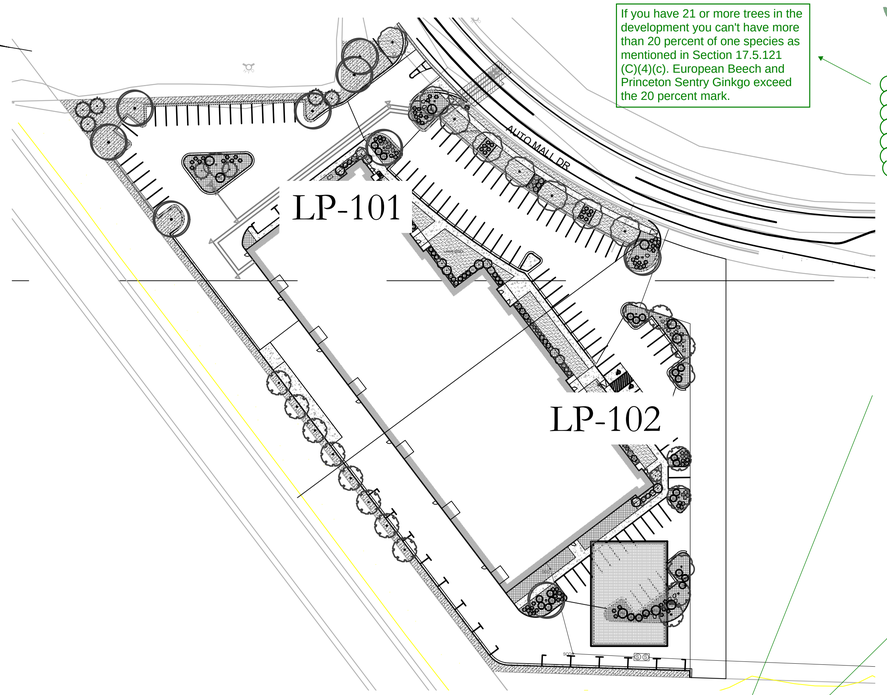
1. LANDSCAPE CONTRACTOR SHALL HAVE ALL UTILITIES BLUE STAKED PRIOR TO DIGGING. ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT CONTRACTORS EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
2. DURING THE BIDDING AND INSTALLATION PROCESS, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING QUANTITIES OF ALL MATERIALS. IF DISCREPANCIES EXIST, THE PLAN SHALL DICTATE QUANTITIES TO BE USED.
3. ALL PLANT MATERIAL SHALL BE PLANTED ACCORDING TO INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) STANDARDS WITH CONSIDERATION TO INDIVIDUAL SOIL AND SITE CONDITIONS, AND NURSERY CARE AND INSTALLATION INSTRUCTIONS.
4. SELECTED PLANTS WILL BE ACCORDING TO THE PLANT LEGEND. IF SUBSTITUTIONS ARE NECESSARY, PROPOSED LANDSCAPE CHANGES MUST BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO LAYING SOD.
5. SHOULD THE SITE REQUIRE ADDITIONAL TOPSOIL, REFER TO SOIL TEST WHEN MATCHING EXISTING SOIL. IF A MATCHING SOIL IS NOT LOCATABLE, A 6" DEPTH OF SANDY LOAM TOPSOIL (MIXED PRIOR TO SPREADING WITH 2-3" OF QUALITY COMPOST) CAN BE INCORPORATED INTO THE EXISTING SOIL USING THE FOLLOWING DIRECTIONS: SCARIFY TOP 6" OF EXISTING SUBSOIL AND INCORPORATE 3" OF NEW COMPOST ENRICHED TOPSOIL SPREAD REMAINING TOPSOIL TO REACH FINISHED GRADE.
6. SOD FOR NEW LAWN AREAS SHALL BE A DROUGHT TOLERANT VARIETY. FINE LEVEL ALL AREAS PRIOR TO LAYING SOD.
7. EDGING, AS INDICATED ON PLAN, IS TO BE INSTALLED BETWEEN ALL LAWN AND PLANTER AREAS. ANY TREES LOCATED IN LAWN MUST HAVE A 4-6' TREE RING OF THE SAME EDGING.
8. IF REQUIRED BY CITY OR OWNER SPECIFIED, DeWitt 5 OZ WEED BARRIER FABRIC TO BE INSTALLED IN ALL PLANTER AREAS EXCEPT UNDER ANNUAL PLANTING AREAS AS SHOWN ON PLAN. WEED BARRIER SHALL BE CUT BACK FROM EACH PLANT TO THE DIAMETER OF THE ROOTBALL.
9. ROCK MULCH (INORGANIC MULCH) TO BE APPLIED AT THE FOLLOWING DEPTHS: 3" IN ALL TREE, SHRUB, AND PERENNIAL PLANTER AREAS; ANNUAL PLANTING AREAS AS SHOWN ON PLAN TO RECEIVE 4" OF SOIL AID MATERIAL (ORGANIC MULCH). NO MULCH SHALL BE PLACED WITHIN 12" OF BASE OF TREE AND 6" WITHIN BASE OF SHRUBS AND PERENNIALS.
10. A NEW UNDERGROUND, AUTOMATIC IRRIGATION SYSTEM IS TO BE INSTALLED BY CONTRACTOR IN ALL LANDSCAPED AREAS. LAWN AREAS TO RECEIVE AT LEAST 100% HEAD TO HEAD COVERAGE AND PLANTER AREAS TO RECEIVE A FULL DRIP SYSTEM TO EACH TREE AND SHRUB. POINT SOURCE DRIP OR IN-LINE DRIP TUBING TO BE SECURED AT EDGE OF ROOTBALL, NOT AGAINST TRUNK. SEE IRRIGATION PLAN.
11. UPON REQUEST, A PLANT GUIDE IS AVAILABLE WITH OUR RECOMMENDATIONS REGARDING WEED BARRIER, PLANT CARE AND MAINTENANCE

INSTALLER RESPONSIBILITIES AND LIABILITIES

1. THESE PLANS ARE FOR BASIC DESIGN LAYOUT AND INFORMATION. LANDSCAPE CONTRACTOR IS REQUIRED TO USE TRADE KNOWLEDGE FOR IMPLEMENTATION. OWNER ASSUMES NO LIABILITIES FOR INADEQUATE ENGINEERING CALCULATIONS, MANUFACTURER PRODUCT DEFECTS, INSTALLATION OF ANY LANDSCAPING AND COMPONENTS, OR TIME EXECUTION.
2. LANDSCAPE CONTRACTOR IS RESPONSIBLE AND LIABLE FOR INSTALLATION OF ALL LANDSCAPING AND IRRIGATION SYSTEMS INCLUDING CODE REQUIREMENTS, TIME EXECUTIONS, INSTALLED PRODUCTS AND MATERIALS.

GRADING AND DRAINAGE REQUIREMENTS

1. AS PER CODE, ALL GRADING IS TO SLOPE AWAY FROM ANY STRUCTURE. SURFACE OF THE GROUND WITHIN 10' FEET OF THE FOUNDATION SHOULD DRAIN AWAY FROM THE STRUCTURE WITH A MINIMUM FALL OF 6"
2. AS PER CODE, FINISHED GRADE WILL NOT DRAIN ON NEIGHBORING PROPERTIES
3. A MINIMUM OF 6" OF FOUNDATION WILL BE LEFT EXPOSED AT ALL CONDITIONS
4. LANDSCAPE CONTRACTOR TO MAINTAIN OR IMPROVE FINAL GRADE AND PROPER DRAINAGE ESTABLISHED BY EXCAVATOR, INCLUDING BUT NOT LIMITED TO ANY MAINTENANCE, PRESERVATION, OR EXAGGERATION OF SLOPES, BERMS, AND SWALES.
5. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY DAMAGED OR IMPROPER WATERFLOW OF ALL SWALES, BERMS, OR GRADE
6. DEVICES FOR CHANNELING ROOF RUN-OFF SHOULD BE INSTALLED FOR COLLECTION AND DISCHARGE OF RAINWATER AT A MINIMUM OF 10' FROM THE FOUNDATION, OR BEYOND THE LIMITS OF FOUNDATION WALL BACKFILL; WHICHEVER DISTANCE IS GREATER



You are going to need one tree per two thousand five hundred square feet of improved area, with no more than twenty percent of the total being ornamental trees or evergreens. Additionally, one five-gallon shrub per three hundred square feet of improved area as mentioned in Section 17.5.121 (C).

Improved area means the total (gross) lot area being used including the building, parking lot, and storage or display areas as mentioned in Section 17.5.121 (C)(7).

For a total of 166,260 s.f. of improved area there needs to be 555 shrubs required and 67 trees required. There's currently 191 shrubs provided and 59 trees provided, both under the required amount. Additionally, you can have twenty-five percent of the required shrubs be converted to turf based on one five-gallon shrub per fifty square feet of turf as mentioned in Section 17.5.121 (C)(1). 25 percent of the required amount of shrubs is 139 shrubs. The current amount turf that you have can increase your current shrub total to 330, still short 225 required amount of shrubs.

Will you provide percentages for each type of tree, shrub, and grasses that you are using due to species diversity mentioned in Section 17.5.121 (C)(3 & 4)

Because you are in a PI-1 Zone you will need to follow Section 17.5.121.K as well as all other landscaping requirements as mentioned in Section 17.5.121 (C).

If you have 21 or more trees in the development you can't have more than 20 percent of one species as mentioned in Section 17.5.121 (C)(4)(c). European Beech and Princeton Sentry Ginkgo exceed the 20 percent mark.

If you have 60 or more shrubs you can't have more than 15 percent of one species as mentioned in Section 17.5.121 (C)(3)(d). Low Scape Mound Black Chokeberry and Gold Drop Potentilla exceed the 15 percent mark.

PLANT LEGEND

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	ACE PLA	5	Acer platanoides `Fairview` Fairview Maple	B & B	2"Cal	
	FAG SYL	14	Fagus sylvatica `Dawyck Purple` European Beech	B & B	2"Cal	
	GIN BIL	14	Ginkgo biloba `Princeton Sentry` Princeton Sentry Ginkgo	B & B	2"Cal	
	PRU CER	2	Prunus cerasifera `Crimson Pointe` `Crimson Pointe Flowering Plum	B & B	2"Cal	
	ULM PAR	8	Ulmus parvifolia Lacebark Elm	B & B	2"Cal	
	ZEL SER	9	Zelkova serrata Sawleaf Zelkova	B & B	2"Cal	

EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	PIC COL	7	Picea pungens `Colorado Green` Blue Spruce	B & B		6'

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
Al	Al	47	Aronia melanocarpa `UCONNAM165` TM Low Scape Mound Black Chokeberry	5 gal
Bm	Bm	13	Buxus microphylla japonica `Winter Gem` Winter Gem Boxwood	5 gal
Ad	Ad	16	Cornus sericea `Alleman's Compact` Dwarf Red Twig Dogwood	5 gal
Iv	Iv	2	Itea virginica `Henry's Garnet` Henry's Garnet Sweetspire	5 gal
Jb	Jb	24	Juniperus horizontalis `Blue Chip` Blue Chip Juniper	5 gal
Po	Po	9	Physocarpus opulifolius `Diablo` Diablo Ninebark	5 gal
Gp	Gp	49	Potentilla fruticosa `Gold Drop` Gold Drop Potentilla	5 gal
Ol	Ol	18	Prunus laurocerasus `Otto Luyken` Luykens Laurel	5 gal
Rf	Rf	7	Rhamnus frangula `Columnaris` Tall Hedge Buckthorn	5 gal
Rc	Rc	6	Ribes alpinum Alpine Currant	5 gal

GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	CONT
Ca	Ca	12	Calamagrostis x acutiflora `Karl Foerster` Feather Reed Grass	2 gal

SITE MATERIALS LEGEND

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
1.01	SODDED LAWN AREA	7,284 sf
1.02	1" WASATCH GRAY COBBLE: 3" DEPTH OF ROCK. PLANTING AREAS TO RECEIVE MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS.	10,081 sf
1.03	1"-1.5" OQUIRRH GRAVEL COBBLE: 3" DEPTH OF ROCK. PLANTING AREAS TO RECEIVE MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS.	9,270 sf

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
1.06	BOULDERS - DECORATIVE	33

ISSUE DATE	PROJECT NUMBER
5/30/2021	UT21037

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

0' 30' 60' 120' 240'
GRAPHIC SCALE: 1" = 60'

PROJECT INFORMATION

AMERICAN FORK OFFICE
500 E. & AUTO MALL DR.
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Property Owner:
AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

Architect / Engineer:
CIR CIVIL ENGINEERING
3032 SOUTH 1030 WEST, SUITE 202
SALT LAKE CITY, UT 84119
801-949-6296

LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

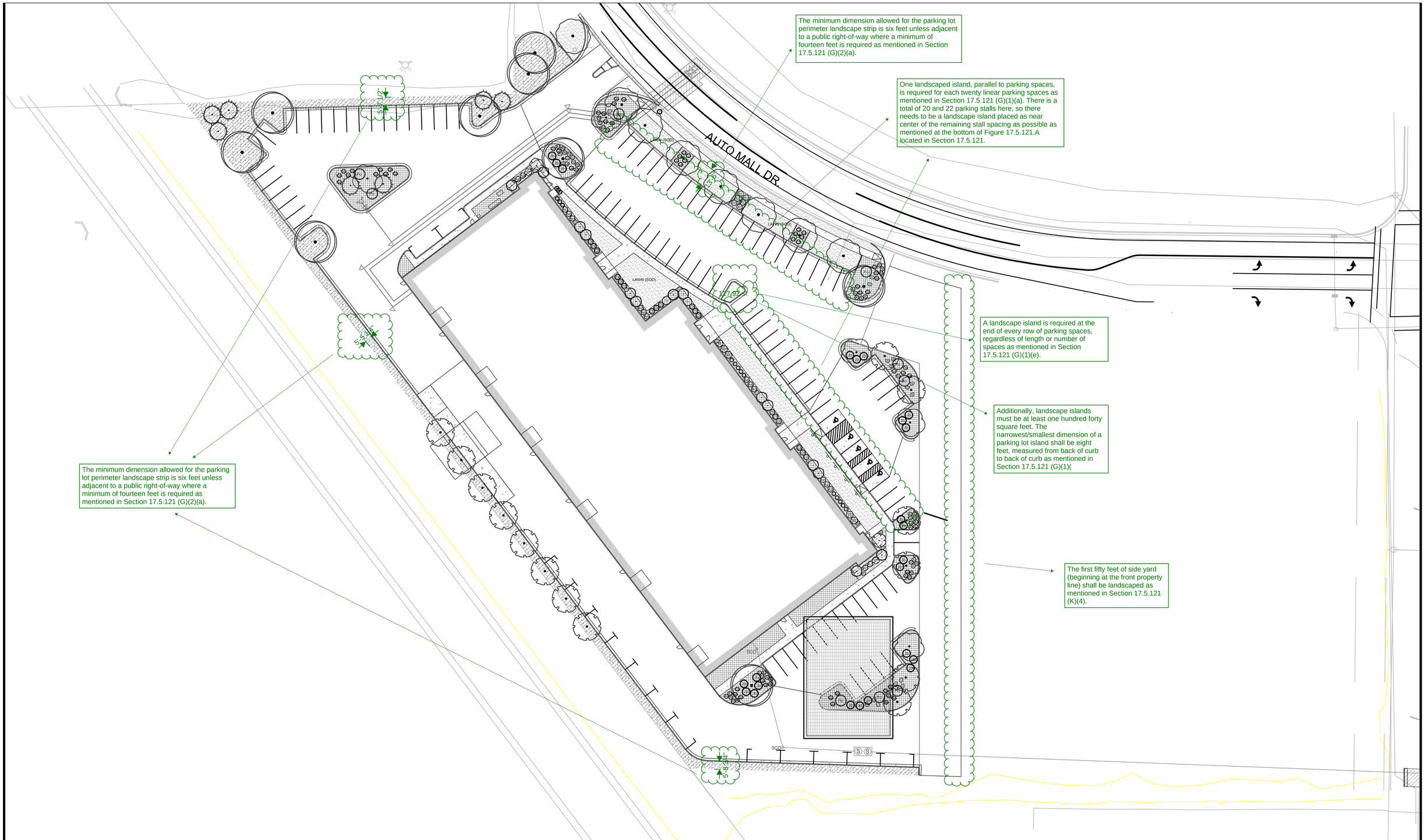
LICENSED LANDSCAPE ARCHITECT
JEREMY ANDREWS
8128125-5301
05/30/2021
RENEW
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	KBA
CHECKED:	JMA
PLOT DATE:	5/30/2021

COVER SHEET

LP-COVER



ISSUE DATE	PROJECT NUMBER
5/30/2021	UT21037

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
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1-800-662-4111
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0' 15' 30' 60' 120'
GRAPHIC SCALE: 1" = 30'

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AMERICAN FORK, UTAH

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Property Owner:
AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

Architect / Engineer:
CIR CIVIL ENGINEERING
3032 SOUTH 1030 WEST, SUITE 202
SALT LAKE CITY, UT 84119
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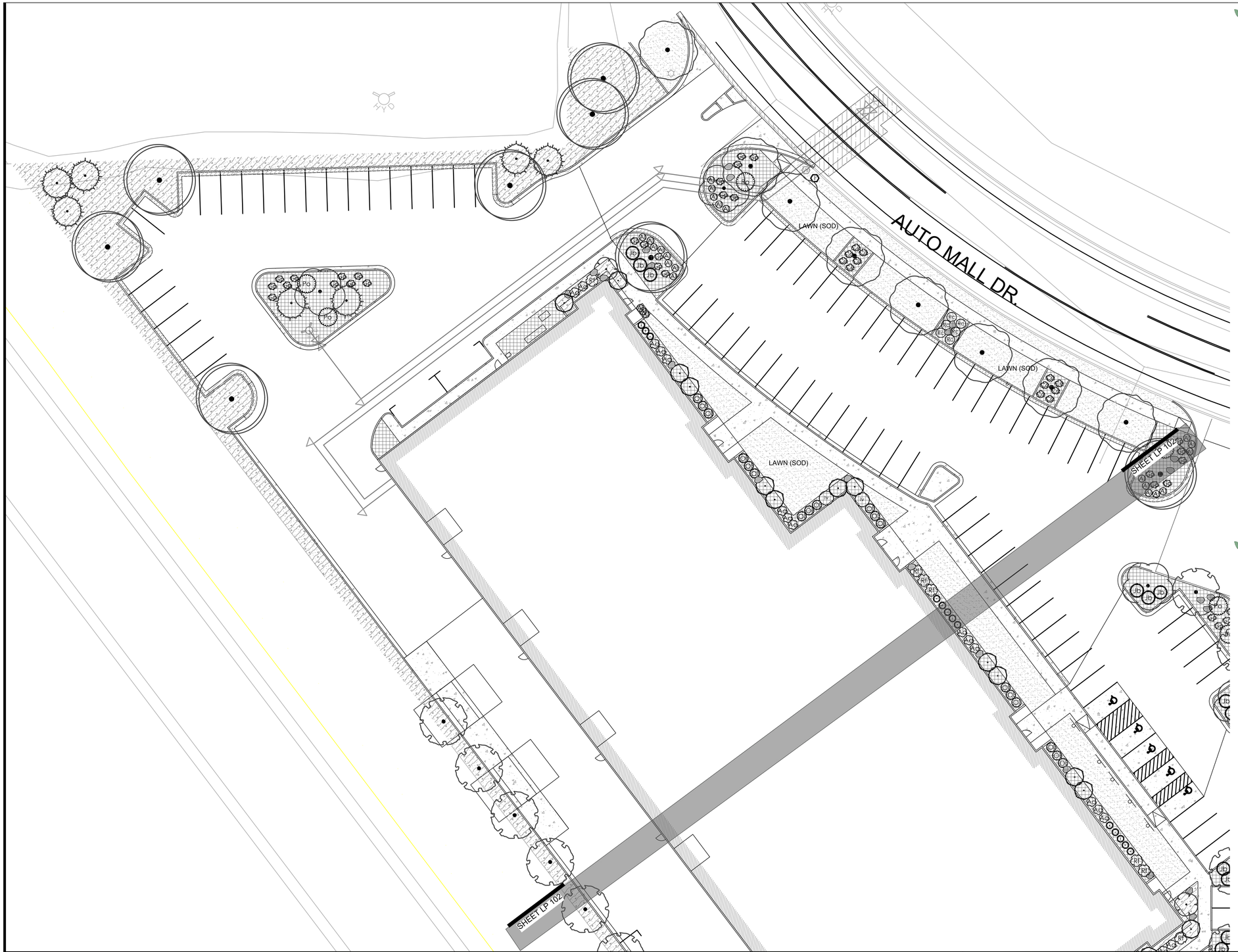
LICENSED LANDSCAPE ARCHITECT
JEREMY ANDREATH
8139126-5301
05/30/2021
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	KBA
CHECKED:	JMA
PLOT DATE:	5/30/2021

PROJECT OVERVIEW PLAN

OVERVIEW



PLANT LEGEND

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	ACE PLA	5	Acer platanoides `Fairview` Fairview Maple	B & B	2"Cal	
	FAG SYL	14	Fagus sylvatica `Dawyck Purple` European Beech	B & B	2"Cal	
	GIN BIL	14	Ginkgo biloba `Princeton Sentry` Princeton Sentry Ginkgo	B & B	2"Cal	
	PRU CER	2	Prunus cerasifera `Crimson Pointe` `Crimson Pointe Flowering Plum	B & B	2"Cal	
	ULM PAR	8	Ulmus parvifolia Lacebark Elm	B & B	2"Cal	
	ZEL SER	9	Zelkova serrata Sawleaf Zelkova	B & B	2"Cal	

EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	PIC COL	7	Picea pungens `Colorado Green` Blue Spruce	B & B		6'

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
A	Al	47	Aronia melanocarpa `UCONNAM165` TM Low Scape Mound Black Chokeberry	5 gal
Bm	Bm	13	Buxus microphylla japonica `Winter Gem` Winter Gem Boxwood	5 gal
Ad	Ad	16	Cornus sericea `Alleman's Compact` Dwarf Red Twig Dogwood	5 gal
Iv	Iv	2	Itea virginica `Henry's Garnet` Henry's Garnet Sweetspire	5 gal
Jb	Jb	24	Juniperus horizontalis `Blue Chip` Blue Chip Juniper	5 gal
Po	Po	9	Physocarpus opulifolius `Diablo` Diablo Ninebark	5 gal
Gp	Gp	49	Potentilla fruticosa `Gold Drop` Gold Drop Potentilla	5 gal
Ol	Ol	18	Prunus laurocerasus `Otto Luyken` Luykens Laurel	5 gal
Rf	Rf	7	Rhamnus frangula `Columnaris` Tall Hedge Buckthorn	5 gal
Rc	Rc	6	Ribes alpinum Alpine Currant	5 gal

GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	CONT
Ca	Ca	12	Calamagrostis x acutiflora `Karl Foerster` Feather Reed Grass	2 gal

SITE MATERIALS LEGEND

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
L-01	SODDED LAWN AREA	7,284 sf
L-02	1" WASATCH GRAY COBBLE: 3" DEPTH OF ROCK. PLANTING AREAS TO RECEIVE MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS.	10,081 sf
L-03	1"-1.5" OQUIRRH GRAVEL COBBLE: 3" DEPTH OF ROCK. PLANTING AREAS TO RECEIVE MIN. 6" DEPTH OF QUALITY TOPSOIL. IF TOPSOIL IS PRESENT ON SITE, PROVIDE SOIL TEST TO DETERMINE SOIL QUALITY FOR PROPOSED PLANTINGS.	9,270 sf

SYMBOL	1 LANDSCAPE DESCRIPTION	QTY
L-06	BOULDERS - DECORATIVE	33

ISSUE DATE	PROJECT NUMBER
5/30/2021	UT21037

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
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PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

PROJECT INFORMATION

AMERICAN FORK OFFICE
500 E. & AUTO MALL DR.
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Property Owner:
AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

Architect / Engineer:
CIR CIVIL ENGINEERING
3032 SOUTH 1030 WEST, SUITE 202
SALT LAKE CITY, UT 84119
801-949-6296

LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

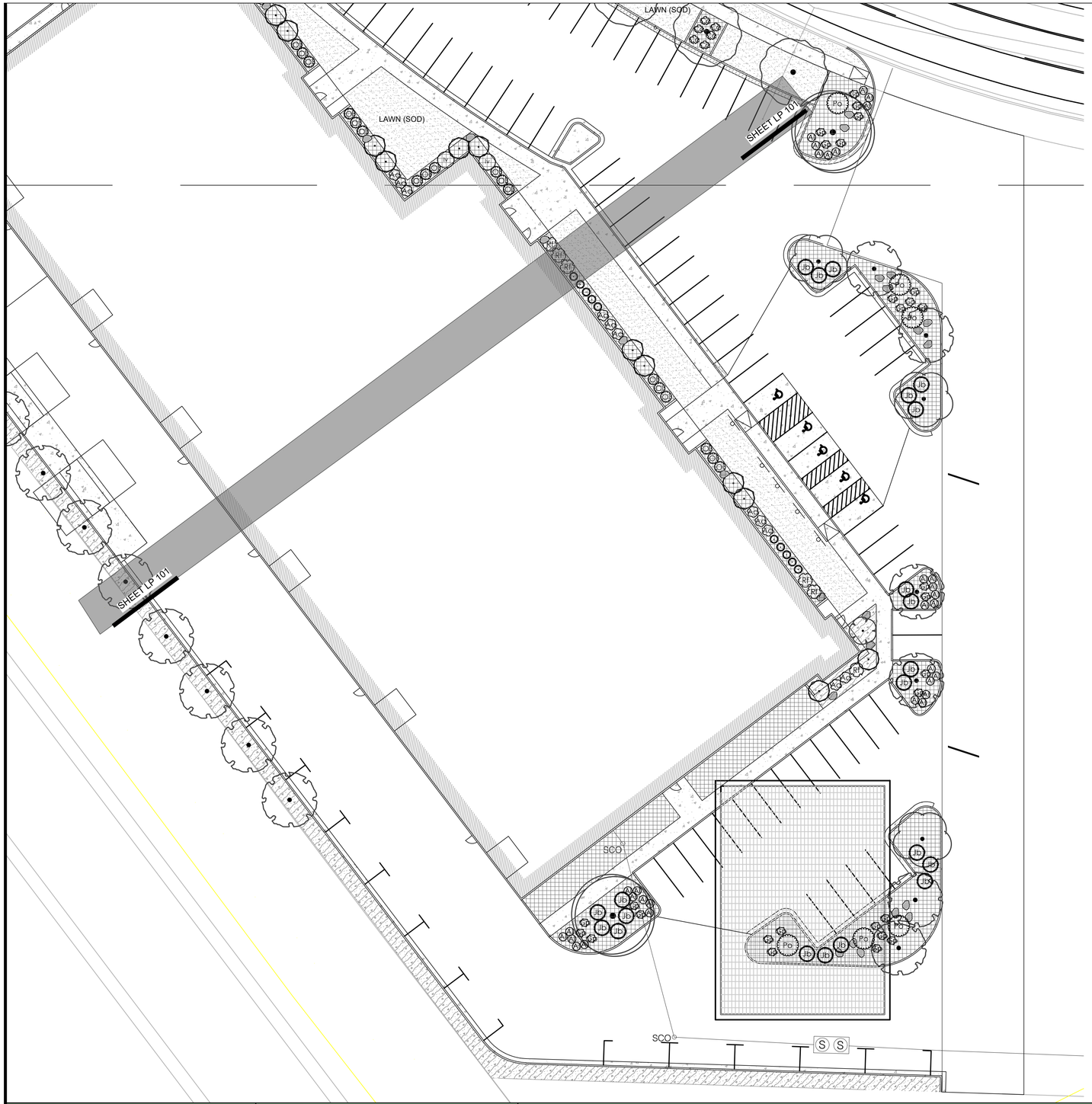
REGISTERED LANDSCAPE ARCHITECT
JEREMY ANSWORTH
05/31/2021
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	KBA
CHECKED:	JMA
PLOT DATE:	5/30/2021

LANDSCAPE PLAN

LP-101



PLANT LEGEND

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	ACE PLA	5	Acer platanoides `Fairview` Fairview Maple	B & B	2"Cal	
	FAG SYL	14	Fagus sylvatica `Dawyck Purple` European Beech	B & B	2"Cal	
	GIN BIL	14	Ginkgo biloba `Princeton Sentry` Princeton Sentry Ginkgo	B & B	2"Cal	
	PRU CER	2	Prunus cerasifera `Crimson Pointe` `Crimson Pointe Flowering Plum	B & B	2"Cal	
	ULM PAR	8	Ulmus parvifolia Lacebark Elm	B & B	2"Cal	
	ZEL SER	9	Zelkova serrata Sawleaf Zelkova	B & B	2"Cal	

EVERGREEN TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	PIC COL	7	Picea pungens `Colorado Green` Blue Spruce	B & B		6`

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
Al	Al	47	Aronia melanocarpa `UCONNAM165` TM Low Scape Mound Black Chokeberry	5 gal
Bm	Bm	13	Buxus microphylla japonica `Winter Gem` Winter Gem Boxwood	5 gal
Ad	Ad	16	Cornus sericea `Alleman`s Compact` Dwarf Red Twig Dogwood	5 gal
Iv	Iv	2	Itea virginica `Henry`s Garnet` Henry`s Garnet Sweetspire	5 gal
Jb	Jb	24	Juniperus horizontalis `Blue Chip` Blue Chip Juniper	5 gal
Po	Po	9	Physocarpus opulifolius `Diablo` Diablo Ninebark	5 gal
Gp	Gp	49	Potentilla fruticosa `Gold Drop` Gold Drop Potentilla	5 gal
Ol	Ol	18	Prunus laurocerasus `Otto Luyken` Luykens Laurel	5 gal
Rf	Rf	7	Rhamnus frangula `Columnaris` Tall Hedge Buckthorn	5 gal
Rc	Rc	6	Ribes alpinum Alpine Currant	5 gal

GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	CONT
Ca	Ca	12	Calamagrostis x acutiflora `Karl Foerster` Feather Reed Grass	2 gal

SITE MATERIALS LEGEND

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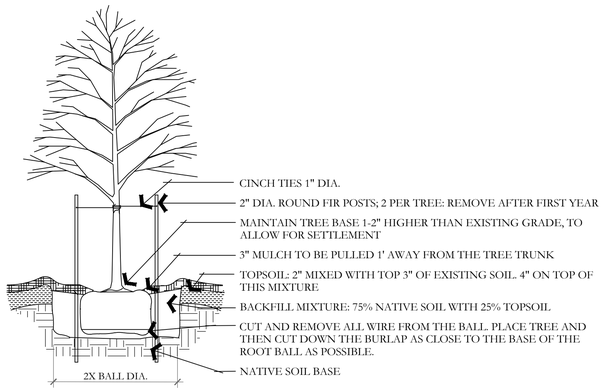
LICENSED LANDSCAPE ARCHITECT
JEREMY ANDREWS
8128126-5301
05/30/2021
SIGNED
STATE OF UTAH

DRAWING INFO

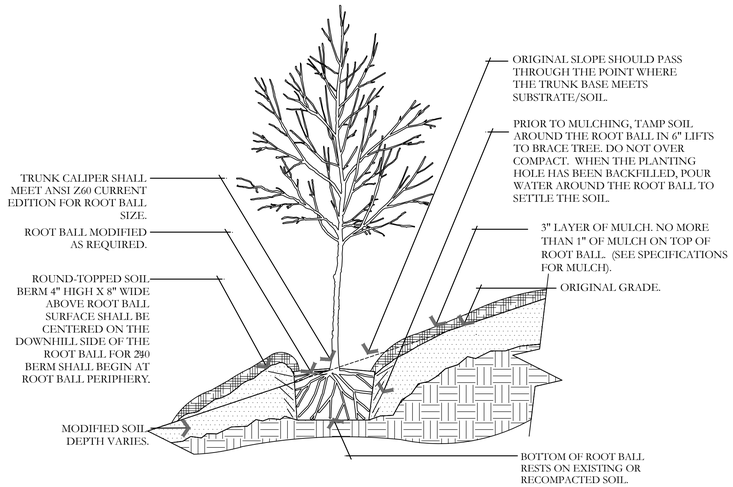
PM:	JTA
DRAWN:	KBA
CHECKED:	JMA
PLOT DATE:	5/30/2021

LANDSCAPE PLAN

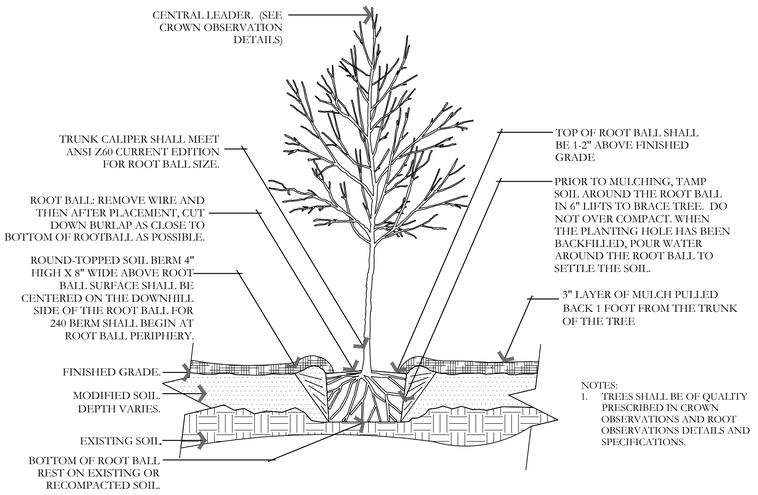
LP-102



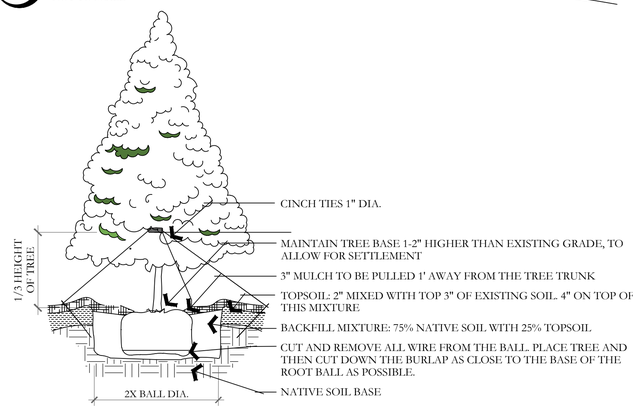
A DECIDUOUS TREE PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



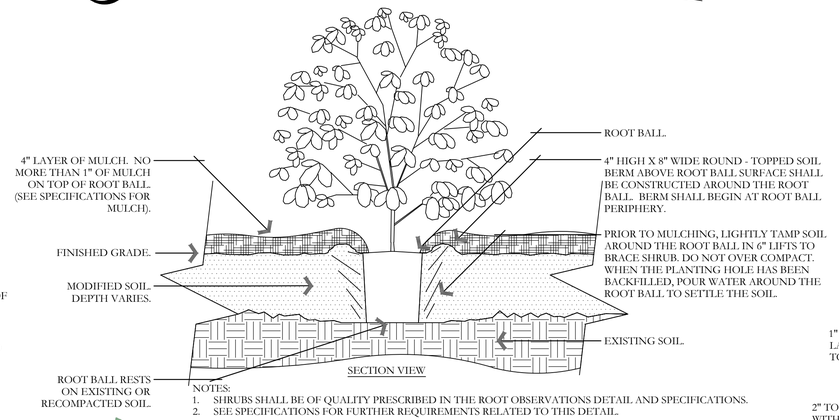
B TREE ON SLOPE 5% (20:1) TO 50% (2:1)
NOT TO SCALE
PKJ DESIGN GROUP



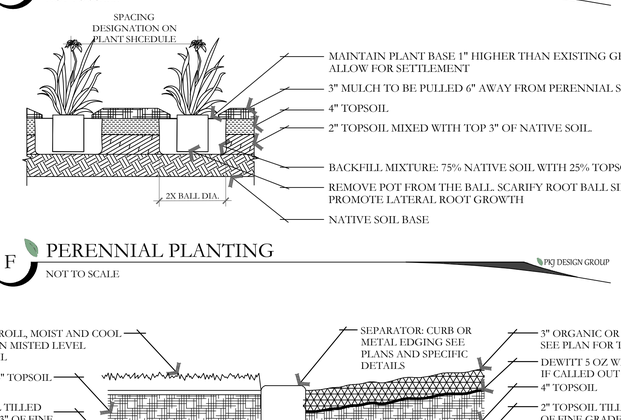
C TREE W/ BERM (EXISTING SOIL MODIFIED)
NOT TO SCALE
PKJ DESIGN GROUP



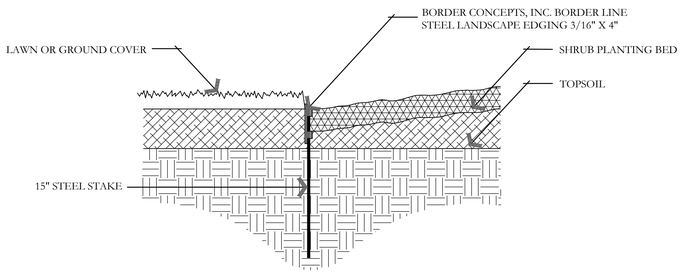
D EVERGREEN TREE PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



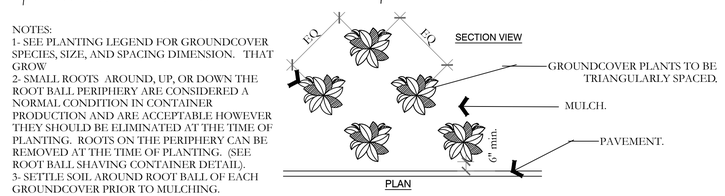
E SHRUB - MODIFIED SOIL
NOT TO SCALE
PKJ DESIGN GROUP



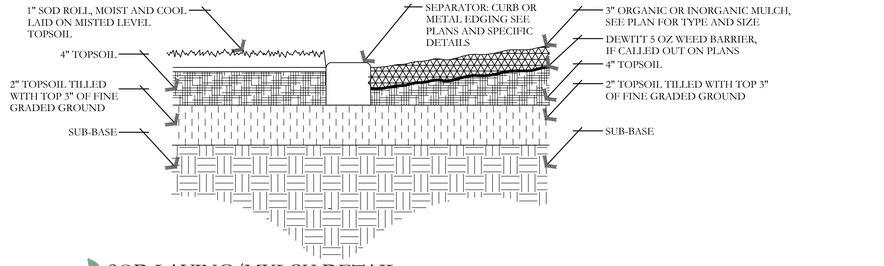
F PERENNIAL PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



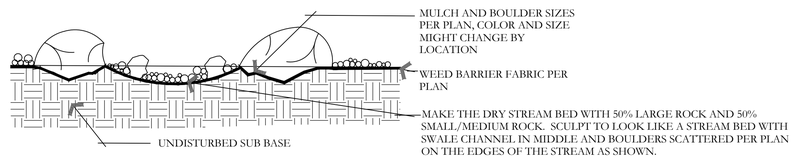
G METAL EDGING DETAIL
NOT TO SCALE
PKJ DESIGN GROUP



H PERENNIAL/GROUNDCOVER PLANTING
NOT TO SCALE
PKJ DESIGN GROUP



I SOD LAYING/MULCH DETAIL
NOT TO SCALE
PKJ DESIGN GROUP



J BOULDER AND DRY STREAM BED DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

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LICENSED LANDSCAPE ARCHITECT
8128126-5301
05/30/2021
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	KBA
CHECKED:	JMA
PLOT DATE:	5/30/2021

LANDSCAPE DETAILS

LP-501

AMERICAN FORK OFFICE

AMERICAN FORK, UTAH

IRRIGATION PLAN SPECIFICATIONS

IRRIGATION SPECIFICATIONS

PART 1 - GENERAL

1.1 SUMMARY

Work to be done includes all labor, materials, equipment and services required to complete the Project irrigation system as indicated on the Construction Drawings, and as specified herein. Includes but is not limited to: Furnishing and installing underground and above ground sprinkler system complete with any accessories necessary for proper function and operation of the system. All plant material on the Project shall be irrigated. Remove and dispose of any existing sprinkler system components which are disturbed during the construction process and are not to be saved. Restoration of any altered or damaged existing landscape to original state and condition.

1.2 SYSTEM DESCRIPTION

A. Design of irrigation components: Locations of irrigation components on Construction Drawings may be approximate. Piping, sleeving and/or other components shown on Construction drawings may be shown schematically for graphic clarity and demonstration of component groupings and separations. All irrigation components shall be placed in landscaped areas, with the exception of popc and wire in sleeving under hardscapes. Actual routing of pipe, wire or other components may be altered due to site conditions not accounted for in the design process.

B. Construction requirements: Actual placement may vary as required to achieve a minimum of 100% coverage without overspray onto hardscape, buildings or other features.

C. Layout of Irrigation Components: During layout and staking, consult with Owner Approved Representative (hereafter referred to as OAR) to verify proper placement of irrigation components, and to provide Contractor recommendations for changes where revisions may be advisable. Small or minor adjustments to system layout are permissible to avoid existing field obstructions such as utility boxes or street light poles. Contractor shall place remote control valves in groups as practical to economize on quantity of manifold isolation valves. Quick coupler valves shall be placed with manifold groups and protected by manifold isolation valves. Quick coupler valves are shown on Construction Documents in approximate locations.

1.3 DEFINITIONS

A. Water Supply: Secondary water piping and components, furnished and installed by others to provide irrigation water to this Project, including but not limited to filter, saddles, nipples, spools, shut off valves, corporation stop valves, water meters, pressure regulation valves, and piping upstream of (or prior to) the Point of Connection.

B. Point of Connection: Location where the Contractor shall tie into the water supply. May require filter, saddle, nipples, spools, isolation valves or Stop and Waste valve for landscape irrigation needs and use.

C. Main Line Piping: Pressurized piping downstream of the Point of Connection to provide water to remote control valves and quick couplers. Normally under constant pressure.

D. Lateral Line Piping: Circuit piping downstream of remote control valves to provide water to sprinkler heads, drip systems or bubblers.

1.4 REFERENCES

A. The following standards will apply to the work of this Section:

a. ASTM-American Society for Testing and Materials

b. IA - The Irrigation Association: Main BMP Document, Landscape Irrigation Scheduling and Water Management Document.

1.5 SUBMITTALS

A. At least thirty (30) days prior to ordering of any materials, the Contractor shall provide manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system. Submittals shall be in three ring binders or other similar bound form. Provide five copies of submittals to OAR for distribution. Place cover or index sheet indicating order in submittal document. No material shall be ordered, delivered or any work preceded in the field until the required submittals have need reviewed in its entirety and stamped approved. Delivered material shall match the approved samples.

B. Operation and Maintenance Manual:

a. At least thirty (30) days prior to final inspection, the Contractor shall provide Operation and Maintenance manual to OAR, containing:

i. Manufacturer catalog cut sheet and current printed specifications for each element or component of the irrigation system.

ii. Parts list for each operating element of the system

iii. Manufacturer printed literature on operation and maintenance of operating elements of the system.

iv. Section listing instructions for overall system operation and maintenance. Include directions for Spring Start-up and Winterization.

b. Project Record Copy

i. Maintain at project site one copy of all project documents clearly marked "Project Record Copy". Mark any deviation in material installation on Construction drawings. Maintain and update drawing at least weekly. Project Record Copy to be available to OAR on demand.

ii. Completed Project As-Built Drawings

1. Prior to final inspection, prepare and submit to OAR accurate as-built drawings
2. Show detail and dimension changes made during installation. Show significant details and dimensions that were not shown in original Contract Documents.
3. Field dimension locations of sleeving, points of connection, main line piping, wiring runs not contained in main line pipe trenches, valves and valve boxes, quick coupler valves.
4. Dimensions are to be taken from permanent constructed surfaces, features, or finished edges located at or above finished grade.
5. Controller Map: upon completion of system, place in each controller a color coded copy of the area that controller services: indicating zone number, type of plant material and location on project that zone services. Laminate map with heat shrink clear plastic.

1.6 QUALITY ASSURANCE

A. Acceptance: Do not install work in this section prior to acceptance by OAR.

B. Regulatory Requirements: All work and materials shall be according to any and all rules, regulations or codes, whether they are State or Local laws and ordinances. Contract documents, drawings or specifications may not be construed or interpreted to permit work or materials not conforming to the above codes.

C. Adequate Water Supply: Water supply to this Project exists, installed by others. Connections to these supply lines shall be by this Contractor. Verify that proper connection is available to supply line and is of adequate size. Verify that secondary connection components may be installed if necessary. Perform static pressure test prior to commencement of work. Notify OAR in writing of problems encountered prior to proceeding.

D. Workmanship and Materials:

a. It is the intent of this specification that all material herein specified and shown on the construction documents shall be of the highest quality available and meeting the requirements specified.

b. All work shall be performed in accordance with the best standards of practice relating to the trade.

E. Contractor Qualifications:

a. Contractor shall provide document or resume including at least the following items:

i. That Contractor has been installing sprinklers on commercial projects for five previous consecutive years.

ii. Contractor is licensed to perform Landscape and Irrigation construction in the State of this Project.

iii. Contractor is bondable for the work to be performed.

iv. References of five projects of similar size and scope completed within the last five years. Three of the projects listed shall be local.

v. Listing of suppliers where materials will be obtained for use on this Project.

vi. Project site Foreman or Supervisor has at least five consecutive years of commercial irrigation installation experience. This person shall be a current Certified Irrigation Contractor in good standing as set forth by the Irrigation Association. This person shall be on Project site at least 75% of each working day.

vii. Evidence that Contractor currently employs workers in sufficient quantities to complete Project within time limits that are established by the Contract.

viii. All General laborers or workers on the Project shall be previously trained and familiar with sprinkler installation and have a minimum of one-year experience. Those workers performing tasks related to PVC pipe shall have certificates designated below.

1.7 DELIVERY-STORAGE-HANDLING

A. During delivery, installation and storage of materials for Project, all materials shall be protected from contamination, damage, vandalism, and prolonged exposure to sunlight. All material stored at Project site shall be neatly organized in a compact arrangement and storage shall not disrupt Project Owner or other trades on Project site. All material to be installed shall be handled by Contractor with care to avoid breakage or damage. Damaged materials attributed to Contractor shall be replaced with new at Contractor's expense.

1.8 SEQUENCING

A. Perform site survey, research utility records, contact utility location services. The Contractor shall familiarize himself with all hazards and utilities prior to work commencement. Install sleeving prior to installation of concrete, paving or other permanent site elements. Irrigation system Point of Connection components, backflow prevention and pressure regulation devices shall be installed and operational prior to all downstream components. All main lines shall be thoroughly flushed of all debris prior to installation of any sprinkler heads.

1.9 WARRANTY

A. Contractor shall provide one year Warranty. Warranty shall cover all materials, workmanship and labor. Warranty shall include filling and or repairing depressions or replacing turf or other plantings due to settlement of irrigation trenches or irrigation system elements. Valve boxes, sprinklers or other components settled from original finish grade shall be restored to proper grade. Irrigation system shall have been adjusted to provide proper, adequate coverage of irrigated areas.

1.10 OWNER'S INSTRUCTION

A. After system is installed, inspected, and approved, instruct Owner's Representatives in complete operation and maintenance procedures. Coordinate instruction with references to previously submitted Operation and Maintenance Manual.

1.11 MAINTENANCE

A. Furnish the following items to Owner's Representative:

a. Two quick coupler keys with hose swivels.

b. One of each type or size of quick coupler valve and remote control valve. Five percent of total quantities used of each sprinkler and sprinkler nozzle.

B. Provide the following services:

a. Winterize entire irrigation system installed under this contract. Winterize by 'blow-out' method using compressed air. Compressor shall be capable of minimum of 175 CFM. This operation shall occur at the end of first growing season after need for plant irrigation but prior to freezing. Compressor shall be capable of evacuating system of all water pressure regulation devices. Compressor shall be regulated to not more than 60 PSI. Start up system the following spring after danger of freezing has passed. Contractor shall train Owner's Representative in proper start-up and winterization procedure.

PART 2 - PRODUCTS

2.1 GENERAL NOTES

A. Contractor shall provide materials to be used on this Project. Contractor shall not remove any material purchased for this Project from the Project Site, nor mix Project materials with other Contractor owned materials. Owner retains right to purchase and provide project material.

2.2 POINT OF CONNECTION

A. The Contractor shall connect onto existing irrigation or water main line as needed for Point(s) of Connection. Contractor shall install new main line as indicated.

2.3 CONNECTION ASSEMBLY

A. Secondary water shall be used on this Project. Install filter and RPZ as needed.

2.4 CONTROL SYSTEM

A. Power supply to the irrigation controller shall be provided for by this Contract.

B. Controller shall be as specified in the drawings. Controller shall be surge protected.

a. Installation of wall-mount controllers: Irrigation contractor shall be responsible for this task. Power configuration for wall-mount controllers shall be 120 VAC unless otherwise noted.

b. Locate Controller(s) in general location shown on Construction drawings. Coordinate power supply and breaker allocation with electrical contractor. Contractor shall be responsible for all power connections to Controllers, whether they are wall mount or pedestal mount. Contractor shall coordinate with electrical or other Project trades as needed to facilitate installation of power to controllers.

C. Wires connecting the remote control valves to the irrigation controller are single conductors, type PE. Wire construction shall incorporate a solid copper conductor and polyethylene (PE) insulation with a minimum thickness of 0.045 inches. The wires shall be UL listed for direct burial in irrigation systems and be rated at a minimum of 30 VAC. Paige Electric Co., LP specification number P7079D.

a. A minimum of 24" of additional wire shall be left at each valve, each splice box and at each controller.

b. Common wire shall be white in color, 12 gauge. Control wire shall be red in color, 14 gauge. Spare wire shall be looped within each valve box of the grouping it is to service.

D. RCV wire splicing connectors shall be 3M brand DBY or DBR. Wire splicing between controller and valves shall be avoided if at all possible. Any wire splices shall be contained within a valve box. Splices within a valve box that contains no control valves shall be stamped 'WIRE SPLICE' or 'WS' on box lid.

2.5 SLEEVING

A. Contractor shall be responsible to proteet existing underground utilities and components. Sleeving minimum size shall be 2". Sleeving 2" through 4" in size shall be S/40 PVC solvent weld. Sleeving 6" and larger shall be CL 200 PVC gasketed. Sleeve diameter shall be at least two times the diameter of the pipe within the sleeve. Sleeves shall be extended 6" minimum beyond walk or edge of pavement. Wire or cable shall not be installed in the same sleeve as piping, but shall be installed in separate sleeves. Sleeve ends on sleeve sizes 4" and larger shall be capped with integral corresponding sized PVC slip cap, pressure fit, until used, to prevent contamination. Sleeves shall be installed at appropriate depths for main line pipe or lateral pipe.

2.6 MAIN LINE PIPE

A. All main line pipe 4" and larger shall be Class 200 gasketed bell end. All main line pipe 3" in size and smaller shall be Schedule 40 PVC solvent weld bell end.

a. Maximum flows allowed through main line pipe shall be:

3/4"	8 GPM
1"	12 GPM
1-1/2"	30 GPM
2"	53 GPM
2-1/2"	75 GPM
3"	110 GPM
4"	180 GPM

b. Main line pipe shall be buried with 24" cover

2.7 MAIN LINE FITTINGS

A. All main line fittings 3" and larger shall be gasketed ductile iron material. All ductile iron fittings having change of direction shall have proper concrete thrust block installed. All main line fittings smaller than 3" in size shall be Schedule 80 PVC.

2.8 ISOLATION VALVES

A. Isolation valves 3" and larger shall be Waterous brand model 2500 cast iron gate valve, resilient wedge, push on type, with 2" square operating nut. Place sleeve of 6" or larger pipe over top of valve vertically and then extend to grade. Place 10" round valve box over sleeve at grade.

B. Isolation valves 2-1/2" and smaller shall be Apollo brand 70 series brass ball valves, contained in a Carson Standard size valve box. Valves shall be installed with S/80 PVC TOE Nipples on both sides of the valve. Valve shall be placed so that the handle is vertical toward the top of the valve box in the 'off' position.

2.9 MANIFOLDS

A. Action Manifold fittings shall be used to create unions on both sides of each control valve, allowing the valve to be removed from the box without cutting piping. Valves shall be located in boxes with ample space surrounding them to allow access for maintenance and repair. Where practical, group remote control valves in close proximity, and protect each grouping with a manifold isolation valve as shown in details. Manifold Main Line (or Sub-Main Line) and all manifold components and isolation valves shall be at least as large as the largest diameter lateral served by the respective manifold.

2.10 REMOTE CONTROL VALVES

A. Remote control valves shall be as specified on the drawings. Remote control valves shall be located separately and individually in separate control boxes.

2.11 MANUAL CONTROL VALVES

A. Quick coupler valve shall be attached to the manifold sub-main line using a Lasco G175212 swing joint assembly with snap-lock outlet and brass stabilizer elbow. Quick coupler valve shall be placed within a Carson 10" round valve box. Top of quick coupler valve cover shall allow for complete installation of valve box lid, but also allow for insertion and operation of key. Base of quick coupler valve and top of quick coupler swing joint shall be encased in ¼" gravel. Contractor shall not place quick coupler valves further than 200 feet apart, to allow for spot watering or supplemental irrigation of new plant material. Quick coupler valve at POC shall not be eliminated or relocated.

2.12 LATERAL LINE PIPE

A. All lateral piping shall be Schedule 40 PVC, solvent weld, and bell end. Lateral pipe shall be buried with 12-18" of cover typically. Lateral pipe shall be ¼", 1", 1 ¼", 1 ½" or 2" in size as indicated on Construction Drawings.

2.13 LATERAL LINE FITTINGS

A. All lateral line fittings shall be S/40 PVC

2.14 Spray Sprinklers

A. Spray head sprinklers shall be as specified on the drawings. Nozzles shall be as specified on the drawings.

2.15 VALVE BOXES

A. Carson valve boxes shall be used on this project. Sizes are as directed in these Specifications, detail sheets or plan sheets. Valve boxes shall be centered over the control valve or element they cover. Valve box shall be sized large enough to allow ample room for services access, removal or replacement of valve or element. Valve box shall be set to flush to finish grade of topsoil or barked areas. Contractor shall provide extensions or stack additional valve boxes as necessary to bring valve box pit to proper grade.

2.16 IMPORT BACKFILL

A. All main line pipe, lateral line pipe and other irrigation elements shall be bedded and backfilled with clean soil, free of rocks 1" and larger. Contractor shall furnish and install additional backfill material as necessary due to rocky conditions. Trenches and other elements shall be compacted and/or water settled to eliminate settling. Debris from trenching operations un-usable for fill shall be removed from project and disposed of properly by Contractor.

2.17 OTHER PRODUCTS

A. Substitution of equivalent products is subject to the OAR's approval and must be designated as accepted in writing.

a. The Contractor shall provide materials to make the system complete and operational.

PART 3 - EXECUTION

3.1 PREPARATION

A. Contractor shall repair or replace work damaged by irrigation system installation. If damaged work is new, repair or replacement shall be performed by the original installer of that work. The existing landscape of this Project shall remain in place. Contractor shall protect and work around existing plant material. Coordination of trench and valve locations shall be laid out for the OAR prior to any excavation occurring. Plant material deemed damaged by the OAR shall be replaced with new plant material at Contractor's expense. Contractor shall not cut existing tree roots larger than 2" to install this Project. Route pipe, wire and irrigation elements around tree canopy drip line to minimize damage to tree roots. Contractor shall have no part of existing system used by other portions of site landscape without water for more than 24 hours at a time.

3.2 TRENCHING AND BACKFILLING

A. Pulling of pipe shall not be permitted on this project. Over excavate trenches both in width and depth. Ensure base of trench is rock or debris free to protect pipe and wire. Grade trench base to ensure flat, even support of piping. Backfill with clean soil or import material. Contractor shall backfill no less than 2" around entire pipe with clean, rock free fill. Main line piping and fittings shall not be backfilled until OAR has inspected and pipe has passed pressure testing. Perform balance of backfill operation to eliminate any settling.

3.3 SLEEVING

A. Sleeve all piping and wiring that pass under paving or hardscape features. Wiring shall be placed in separate sleeving from piping. Sleeves shall be positioned relative to structures or obstructions to allow for pipe or wire within to be removed if necessary.

3.4 GRADES AND DRAINAGE

A. Place irrigation pipe and other elements at uniform grades. Winterization shall be by evacuation with compressed air. Automatic drains shall not be installed on this Project. Manual drains shall only be installed at POC where designated on Construction Drawings.

3.5 PVC PIPE

A. Install pipe to allow for expansion and contraction as recommended by pipe manufacturer.

B. Install main line pipes with 18" of cover, lateral line pipes with 12" of cover.

C. Drawings show diagrammatic or conceptual location of piping - Contractor shall install piping to minimize change of direction, avoid placement under large trees or large shrubs, avoid placement under hardscape features.

D. Plastic pipe shall be cut squarely. Burrs shall be removed. Spigot ends of pipes 3" and larger shall be beveled.

E. Pipe shall not be glued unless ambient temperature is at least 50 degress F. Pipe shall not be glued in rainy conditions unless properly tented. All solvent weld joints shall be assembled using IPS 711 glue and P70 primer according to manufacturer's specification, no exceptions. All workers performing glue operations shall provide evidence of certification. Glued main line pipe shall eure a minimum of 24 hours prior to being energized. Lateral lines shall eure a minimum of 2 hours prior to being energized and shall not remain under constant pressure unless eured for 24 hours.

F. Appropriate thrust blocking shall be performed on fittings 3" and larger. All threaded joints shall be wrapped with Teflon tape or paste unless directed by product manufacturer or sealing by o-ring.

3.6 CONTROLLERS

A. All grounding for pedestal controllers shall be as directed by controller manufacturer and ASIC guidelines, not to exceed a resistance reading of 5 OHMs.

B. Locate controllers in protected, inconspicuous places, when possible. Coordinate location of pedestal controllers with Landscape Architect to minimize visibility.

C. Coordinate location of wall mount controllers with building or electrical Contractor to facilitate electrical service and future maintenance needs. Wall mount shall be securely fastened to surface. If exterior mounted, wall mount controllers shall have electrical service wire and field control wire in separate, appropriate sized weatherproof electrical conduit, PVC pipe shall not be used.

D. Wiring under hardscape surfaces shall be placed continuously in conduit. Contractor shall be responsible to coordinate sleeving needs for conduit or sweeps elbows from exterior to interior of building.

E. Pedestal controllers shall be placed upon VIT-Strong Box Quick Pad as per manufacturer's recommendations. Controllers shall be oriented such that Owner's Representative maintenance personnel may access easily and perform field system tests efficiently.

F. Place Standard valve box at base of controller or nearby to allow for three to five feet of slack field control wire to be placed at each controller. This Contractor shall provide conduit access if needed for Electrical Contractor. Electrical supply and installation, as well as hook-up to controller shall be by this Contractor.

3.7 VALVES

A. Isolation valves, remote control valves, and quick coupler valves shall be installed according to manufacturer recommendation and Contract Specifications and Details.

B. Valve boxes shall be set over valves so that all parts of the valve can be reached for service.

C. Valve box and lid shall be set to be flush with finished grade. Only one remote control valve may be installed in a Carson 1419124 box. Place a minimum of 4" of ¼" washed gravel beneath valve box for drainage. Bottom of remote control valve shall be a minimum of 2" above gravel.

3.8 SPRINKLER HEADS

A. No sprinkler shall be located closer than 6" to walls, fences, or buildings.

B. Heads adjacent to walks, curbs, or paths shall be located at grade and 2" away from hardscape.

C. Control valves shall be opened. Then fully flush lateral line pipe and swing joints prior to installation of sprinklers.

D. Spray heads shall be installed and flushed again prior to installation of nozzles.

E. Contractor shall be responsible for adjustment if necessary due to grade changes during landscape construction.

3.9 FIELD QUALITY CONTROL

A. Main line pipes shall not be backfilled or accepted until the system has been tested for 2 hours at 100 psi.

B. Main line pressure test shall include all pipe and components from the point of connection to the upstream side of remote control valves. Test shall include all manifold components under constant pressure. Piping may be tested in sections that can be isolated.

C. Contractor shall provide pressurized water pump to increase or boost pressure where existing static pressure is less than 100 psi.

D. Schedule testing with OAR 48 hours in advance for approval.

E. Leaks or defects shall promptly be repaired or rectified at the Contractors expense and retested until able to pass testing.

F. Grounding resistance at pedestal controller shall also be tested and shall not exceed 5 OHMs.

3.10 ADJUSTMENT

A. Sprinkler heads shall be adjusted to proper height when installed. Changes in grade or adjustment of head height after installation shall be considered a part of the original contract and at Contractor's expense.

B. Adjust all sprinkler heads for arc, radius, proper trim and distribution to cover all landscaped areas that are to be irrigated.

C. Adjust sprinklers so they do not water buildings, structures, or other hardscape features.

D. Adjust run times of station to meet needs of plant material the station services.

3.11 CLEANING

A. Contractor shall be responsible for cleanliness of jobsite. Work areas shall be swept cleanly and picked up daily.

B. Open trenches or hazards shall be protected with yellow caution tape.

C. Contractor is responsible for removal and disposal of offsite trash and debris generated as a result of this Project.

D. OAR shall perform periodic as well as a final cleanliness inspection.

E. Contractor shall leave Project in at least a 'broom clean' condition.

END OF SECTION

90 Day Establishment Period Irrigation Schedule (April, May, June)

	Type	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Operating Pressure
Turf	Turf	15 min	15 min	15 min	15 min	15 min	15 min	15 min	30 psi
Shrubs	Shrubs	25 min	0	25 min	0	25 min	0	25 min	40 psi

Note: Begin irrigation 4:00 am, only 1 cycle per day.

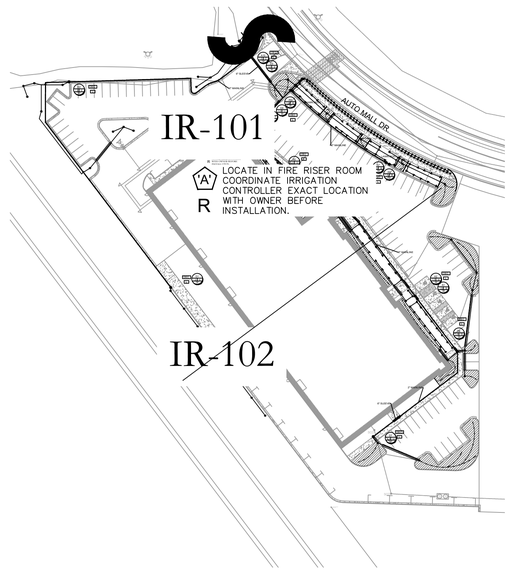
Regular Irrigation Schedule (see Seasonal Differential Chart)

	Type	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Operating Pressure
Turf	Turf	15 min	15 min		15 min		15 min		30 psi
Shrubs	Shrubs	45 min		45 min		45 min		45 min	40 psi

Note: Begin irrigation 4:00 am, only 1 cycle per day.

Seasonal Differential

	April	May	June	July	August	Sept.	October
Turf	10 min	10 min	15 min	15 min	15 min	10 min	10 min
Shrubs	30 min	30 min	45 min	45 min	45 min	30 min	30 min



2" MAINLINE ROUTING ,CONTROLLER AND P.O.C. LOCATION OVERVIEW

ISSUE DATE	PROJECT NUMBER
5/28/2021	UT21037

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
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PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

0' 40' 80' 160' 320'

GRAPHIC SCALE: 1" = 80'

PROJECT INFORMATION

AMERICAN FORK OFFICE
500 E. & AUTO MALL DR.
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Property Owner:
AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

Architect / Engineer:
CIR CIVIL ENGINEERING
3032 SOUTH 1030 WEST, SUITE 202
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LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture / Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

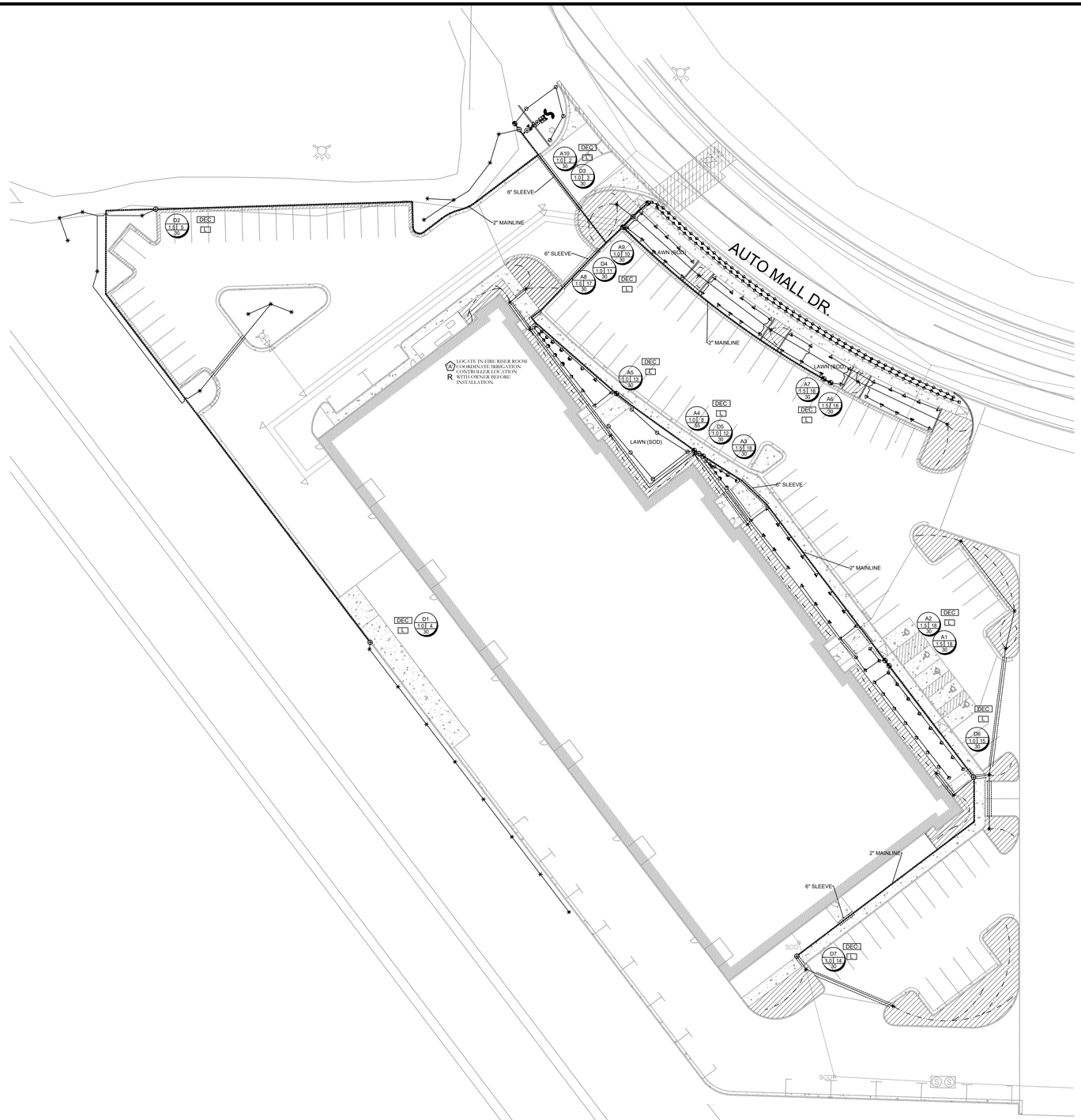
LICENSED LANDSCAPE ARCHITECT
JEREMY ANDREOTTI
812812-5301
05/28/2021
UTAH
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	AP
CHECKED:	KA
PLOT DATE:	5/28/2021

COVER SHEET

IR-COVER



ISSUE DATE	PROJECT NUMBER
5/28/2021	UT21037

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
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PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

0' 15' 30' 60' 120'

GRAPHIC SCALE: 1" = 30'

PROJECT INFORMATION

AMERICAN FORK OFFICE
500 E. & AUTO MALL DR.
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Property Owner:

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909 W. SOUTH JORDAN PARKWAY
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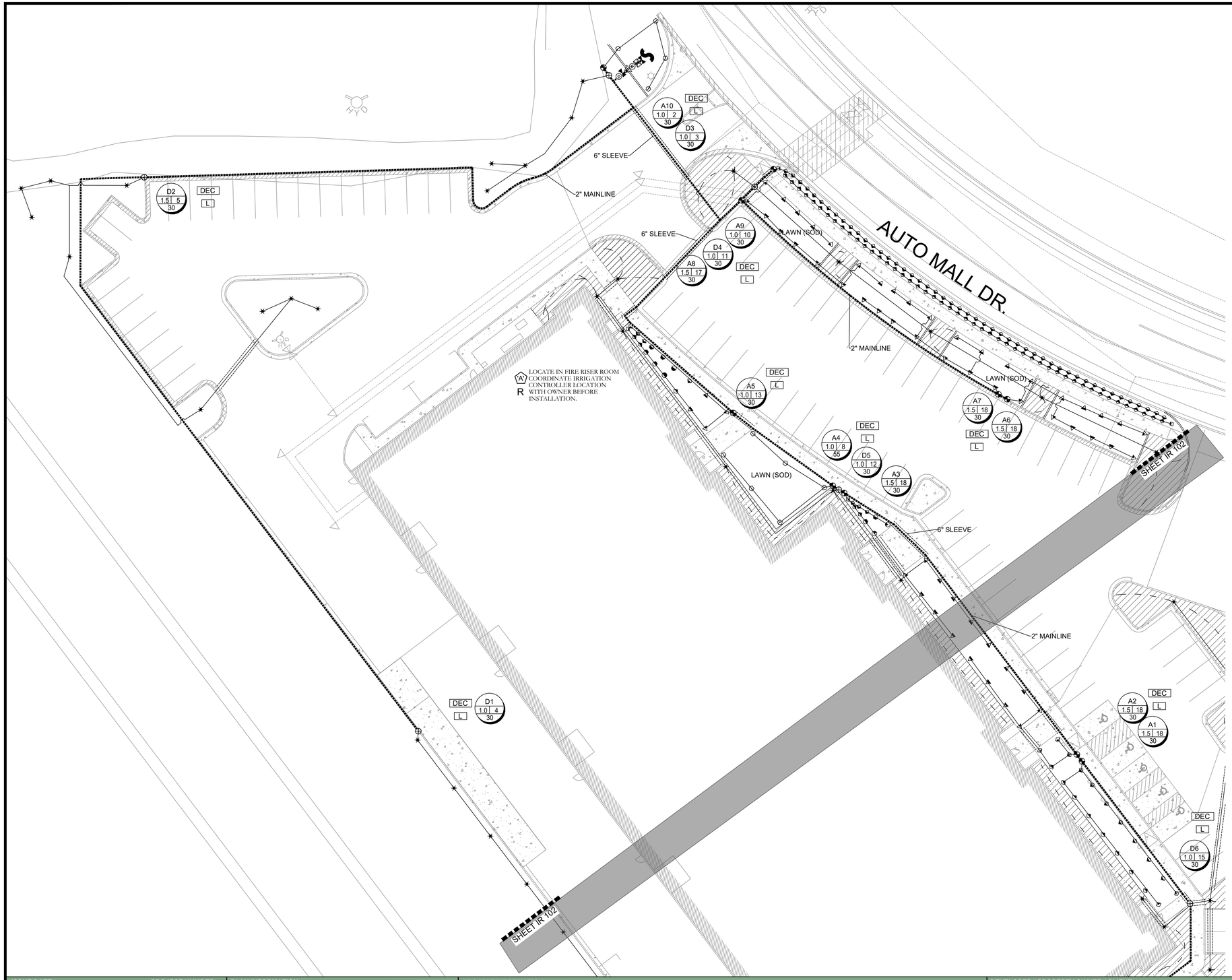
REGISTERED LANDSCAPE ARCHITECT
JEREMY ANDREWS
5128127-5301
05/28/2021
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	AP
CHECKED:	KA
PLOT DATE:	5/28/2021

PROJECT OVERVIEW PLAN

IR-OVERVIEW



IRRIGATION LEGEND

SYMBOL	MANUFACTURER-MODEL NUMBER
	RAINBIRD RD04-S-PRS POP UP SPRAY 5 SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 8 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 10 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 12 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 SST @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 EST @ 30 PSI
	RAINBIRD 5000 SERIES MPR NOZZLES @ 55 PSI
	RAINBIRD 8005 SERIES Q#8-6.6 GPM, H#14-12.6 GPM, F#26-24.3 GPM NOZZLES @ 55 PSI
S	POINT OF CONNECTION (SECONDARY WATER) SEE PLAN FOR SIZE
A' R	CONTROLLER/RAINBIRD ESP-LXIVM WITH LIMR REMOTE KIT, PLACE IN FIRE RISER ROOM, CONTRACTOR TO ADJUST LOCATION WITH OWNER PRIOR TO CONSTRUCTION.
	RAINBIRD WR2-RC WIRELESS RAIN SHUT OFF DEVICE.
	ISOLATION BALL VALVE - LINE SIZED INSTALL PER MANUFACTURER'S SPEC.
	2" T SUPER AMIAD PLASTIC FILTER - INSTALL PER MANUFACTURE'S. RECOMMENDATIONS (130 MICRON)
M	MASTER VALVE
F	FLOW SENSOR
QC	QUICK COUPLER: RAINBIRD 44LRC INSTALL PER MANUFACTURER'S SPEC.
DEC L	VALVE DECODER (AT ALL VALVE GROUPINGS) INSTALL PER MANUFACTURER'S SPEC. LIGHTNING ARRESTER (AT ALL VALVE GROUPINGS) INSTALL PER MANUFACTURER'S SPEC.
	REMOTE CONTROL VALVE: RAINBIRD IVMSOL AUTOMATIC CONTROL VALVE (SIZE AS NOTED ON PLAN- USE JUMBO BOX-PURPLE LID) PLACE YELLOW TAGS ON ALL VALVES AND LABEL.
	DRIP CONTROL ZONE KIT: RAINBIRD XCZ-(PER PLAN)-PRBR-COM MED FLOW (SIZE AS NOTED ON PLAN)
	MAINLINE: SCHEDULE 40 PVC WITH SCHEDULE 80 FITTINGS, 2" DIAMETER 24" MIN. COVER
	LATERAL LINE: SCHEDULE 40 PVC WITH SCH. 40 FITTINGS. SEE PIPE SIZING CHART
	DRIP CONNECTION. PROVIDE DRIP IRRIGATION TO ALL TREES, SHRUBS,AND PERENNIALS IN PLANTER AREAS
	DRIP LINE: RAINBIRD XFSP-09-18-100 OR EQUIVALENT
	CLASS 200 SLEEVE PER PLAN
NO SYMBOL	WIRE CHASE, SIZE TO BE TWICE THE DIAMETER OF THE WIRE BUNDLE WITHIN. 1.1/4" DIAMETER MINIMUM
	14 GAUGE SOLID COPPER SINGLE STRAND CONTROL WIRE. INSTALL PER MANUFACTURER'S SPEC. PROVIDE 2 WIRE LOOP SYSTEM. ONLY WIRE FROM POC TO CONTROLLER IS DEPICTED ON PLANS. CONTRACTOR TO INSTALL WIRE IN CONDUIT FROM POC TO ALL VALVES. THE WIRE TO VALVES IS NOT SHOWN ON PLAN

DRIP ZONE

TYPE	PART NUMBER	EMITTER FLOW	EMITTER SPACING	ROW SPACING	ROW SPACING
XFS DRIPLINE	XFSP-09-18	.9 GPH	18"	18"	18-21 IN.

TOTAL DRIP ZONE FLOW	20 GPM	TIME TO APPLY 1 /4" OF WATER	23
MAX. LATERAL LENGTH OF TUBING	350 FT	REQUIRED NUMBER OF STAKES	500
TOTAL LENGTH OF ZONE DRIPLINE	2,000 FT (varies per plan)	NUMBER OF FLUSH POINTS	2
APPLICATION RATE	.64 IN. / HR	SUGGESTED HEADER & FOOTER PIPE SIZE	CLASS 200 1.25"

*NUMBERS MAY CHANGE DUE TO SIZE OF DRIP ZONE PER PLAN

IRRIGATION NOTES

1. BEFORE WORK IS TO COMMENCE, BLUE STAKES/DIG LINE IS TO BE CALLED AND NOTIFIED. IF ANY DAMAGE TO UTILITIES HAPPEN DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR IT AT THEIR EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY PERMITS IN ACCORDANCE WITH CITY AND/OR COUNTY CODES AND COMPLY WITH SPECIFICATIONS AND DRAWINGS.
3. INVESTIGATE TO MAKE SURE THAT THE IRRIGATION SYSTEM IS, IN FACT, BEING CONNECTED TO A SECONDARY SYSTEM. IF IT IS NOT CONNECTED TO SECONDARY, CONTACT THE OWNER AND LANDSCAPE ARCHITECT TO COORDINATE A CULINARY SYSTEM AND REQUIRED COMPONENTS. A FUNCTIONING AMIAD FILTER IS TO BE USED AT THE POINT OF CONNECTION.
4. VERIFY THAT THE POINT OF CONNECTION IS IN THE CORRECT LOCATION BEFORE INSTALLATION. ALL CONNECTIONS ON THIS PROJECT ARE TO SECONDARY WATER AND SHOULD BE NOTED AS SUCH; THEREFORE, ALL PARTS MUST MEET WATER STANDARDS THAT PERTAIN TO SECONDARY WATER.USE PURPLE VALVE BOXES FOR SECONDARY WATER SYSTEMS.
5. ON OCCASION AND FOR GRAPHIC PURPOSES ONLY, THE IRRIGATION SYSTEM MIGHT BE SHOWN IN HARDSCAPE AREAS. THIS IRRIGATION IS TO BE PLACED IN LANDSCAPED AREAS ON THE PROPERTY SITE.
6. CONTRACTOR SHALL USE ONLY COMMERCIAL GRADE IRRIGATION PRODUCTS. THIS INCLUDES PIPE TO BE SCHEDULE 40 PVC OR BETTER. NO POLY PIPE IS TO BE USED. FITTINGS UP TO 1-1/2" MUST BE SCHEDULE 40 OR BETTER. FITTINGS LARGER THAN 1-1/2" SHALL BE SCHEDULE 80 OR BETTER. CONTRACTOR IS RESPONSIBLE FOR ENSURING ACCURATE COUNTS AND QUANTITIES OF ALL IRRIGATION MATERIALS FOR BIDDING AND INSTALLATION.
7. MAIN LINES SHALL BE A MINIMUM OF 24" DEEP AND LATERAL LINES A MINIMUM OF 12" DEEP. NO ROCK GREATER THAN 1/2" DIAMETER SHALL BE ALLOWED IN TRENCHES. TRENCHING BACKFILL MATERIAL SHALL BE COMPACTED TO PROPER FINISHED GRADE.
8. NO IRRIGATION MAIN LINE MAY BE LOCATED WITHIN 5 FEET OF ANY STRUCTURE.
9. TO AVOID PIPE DAMAGE, ADJUST LOCATION OF PIPE TO NOT BE DIRECTLY UNDER PLANT MATERIALS. VALVE BOXES ARE PREFERRED TO BE IN PLANTER BEDS INSTEAD OF THE LAWN.
10. PLAN INDICATES 100% OR BETTER HEAD TO HEAD COVERAGE. SHOULD CONTRACTOR FIND DISCREPANCIES DUE TO NECESSARY FIELD ADJUSTMENTS, CONTACT LANDSCAPE ARCHITECT FOR IRRIGATION CORRECTION.
11. DRIP IRRIGATION TO BE INSTALLED PER DETAILS. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS. TUBING SHOULD REST TOWARD OUTER EDGE OF ROOTBALL AND NOT AGAINST TRUNK OF PLANT.
12. A QUICK COUPLER SHALL BE INSTALLED AT POINT OF CONNECTION TO ALLOW BLOW OUT OF SYSTEM BY AIR COMPRESSOR AT END OF EACH SEASON.
13. INSTALL SLEEVES FOR ALL PIPES AND WIRE CONDUIT THAT ARE PLACED UNDER PAVEMENT AND SIDEWALKS. SLEEVES SHALL BE 2 SIZES LARGER THAN PIPE BEING PLACED INTERNALLY. WIRE CONDUIT SHALL BE INSTALLED IN CLASS 200 PIPE. AT ANY DIRECTIONAL CHANGE THAT OCCURS, A JUNCTION BOX IS TO PLACED.
14. CONDUITS CAN NOT BE SHARED BY WATER AND ELECTRICAL LINES. ALL WIRE TO BE PUT IN PVC CONDUIT. ALL WIRE CONNECTIONS TO BE PLACED IN A VALVE BOX. ALL WIRE CONNECTIONS TO USE WATERPROOF WIRE CONNECTORS WITH AT LEAST 3' OF EXTRA WIRE. PROVIDE PLENTY OF EXTRA WIRE AT EVERY DIRECTIONAL CHANGE. INSULATED 14 GAUGE COPPER TO BE USED FOR ALL CONTROL WIRES AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
15. CONTRACTOR TO INSTALL LIGHTNING ARRESTOR AND GROUNDING RODS ON SITE PER MANUFACTURER'S RECOMMENDATIONS, SEE DETAILS.
16. CONTRACTOR TO SEPARATE SYSTEM (CONTROLLER, VALVES, AND DIFFERENT COLORED WIRE) FROM CITY MAINTAINED PROPERTY AND HOA/OWNER MAINTAINED PROPERTY.
17. DUCT TAPE ALL SLEEVES TO PREVENT SOIL OR OTHER DEBRIS ENTERING PIPE. IDENTIFY ALL SLEEVES BY WOOD OR PVC STAKES AND SPRAY PAINT WITH MARKING PAINT. REMOVE STAKES ONCE IRRIGATION SYSTEM IS COMPLETE.
18. TO PREVENT EROSION AND LOW POINT DRAINAGE CONTRACTOR SHALL INSTALL CHECK VALVES
19. LOCATE SPRAY HEADS NO CLOSER THAN 6" FROM WALLS, FENCES OR BUILDINGS AND 2" AWAY FROM WALKS, PATHS OR CURBS.
20. PRESSURE TEST MAINLINE FOR LEAKS PRIOR TO BACKFILLING. CONTACT LANDSCAPE ARCHITECT/OWNER AT THIS TIME FOR COMPLIANCE.
21. CONTRACTOR TO CONSULT WITH OWNER ON EXACT LOCATION OF CONTROLLER. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR AND OWNER FOR THE POWER SUPPLY. INSTALL ALL PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL INSTALL A RAIN SENSOR WITH THE CONTROLLER UNLESS OTHERWISE DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.
22. LATERAL LINES SHALL BE NO SMALLER THAN 3/4". LANDSCAPE CONTRACTOR TO ENSURE THE FOLLOWING PIPE SIZES DO NOT EXCEED THE SUGGESTED GPM LISTED BELOW:

3/4"	8 GPM
1"	12 GPM
1-1/2'	50 GPM
2"	53 GPM
2-1/2"	75 GPM
3"	110 GPM
4"	180 GPM

VALVE ID TAG

A1 — CONTROLLER NUMBER, VALVE NUMBER
VALVE SIZE — 1.0 | 18 — GALLONS PER MINUTE
PSI AT LAST HEAD IN ZONE — 55

NOTE:
1. VALVE ID TAGS ARE LOCATED NEAR VALVES IN THE ORDER THE VALVES APPEAR ON THE DRAWING.

ISSUE DATE	PROJECT NUMBER
5/28/2021	UT21037

NO.	REVISION	DATE
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811 BLUE STAKES OF UTAH
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N

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

PROJECT INFORMATION

AMERICAN FORK OFFICE
500 E. & AUTO MALL DR.
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Property Owner:
AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

Architect / Engineer:
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LANDSCAPE ARCHITECT / PLANNER

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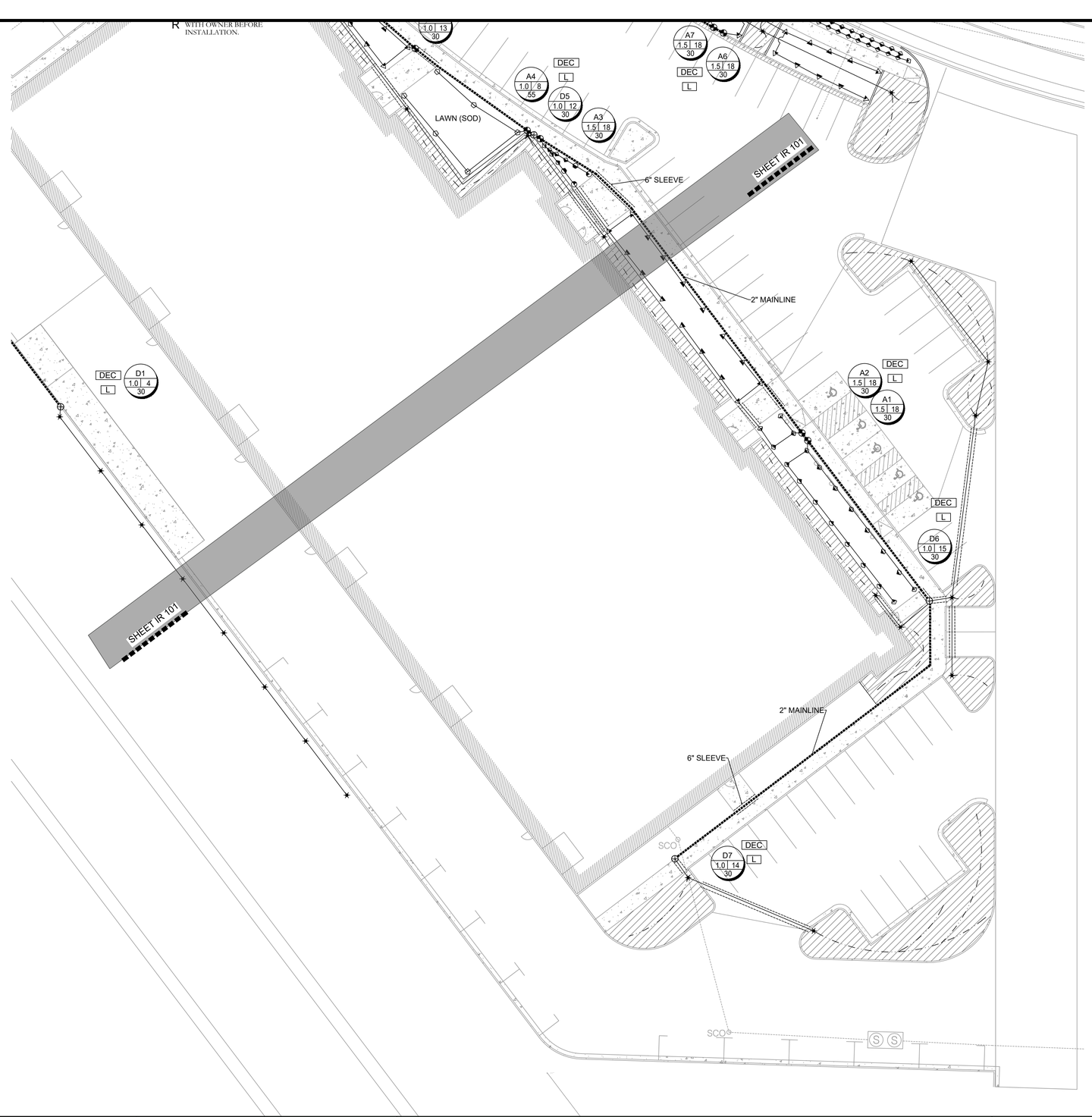
REGISTERED LANDSCAPE ARCHITECT JEREMY ANDREWS 8128871-5501 05/28/2021 UTAH STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	AP
CHECKED:	KA
PLOT DATE:	5/28/2021

IRRIGATION PLAN

IR-101



IRRIGATION LEGEND

SYMBOL	MANUFACTURER-MODEL NUMBER
	RAINBIRD RD04-S-PRS POP UP SPRAY 5 SERIES @ 30 PSI
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	RAINBIRD RD04-S-PRS POP UP SPRAY 10 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 12 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 U-SERIES @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 SST @ 30 PSI
	RAINBIRD RD04-S-PRS POP UP SPRAY 15 EST @ 30 PSI
	RAINBIRD 5000 SERIES MPR NOZZLES @ 55 PSI
	RAINBIRD 8005 SERIES Q#8-6.6 GPM, H#14-12.6 GPM, F#26-24.3 GPM NOZZLES @ 55 PSI
S	POINT OF CONNECTION (SECONDARY WATER) SEE PLAN FOR SIZE
A	CONTROLLER:RAINBIRD ESP-LXIVM WITH LIMR REMOTE KIT, PLACE IN FIRE RISER ROOM, CONTRACTOR TO ADJUST LOCATION WITH OWNER PRIOR TO CONSTRUCTION.
R	RAINBIRD WR2-RC WIRELESS RAIN SHUT OFF DEVICE
	ISOLATION BALL VALVE - LINE SIZED INSTALL PER MANUFACTURER'S SPEC.
	2" T SUPER AMIAD PLASTIC FILTER - INSTALL PER MANUFACTURE'S. RECOMMENDATIONS (130 MICRON)
M	MASTER VALVE
F	FLOW SENSOR
R	QUICK COUPLER: RAINBIRD 44LRC INSTALL PER MANUFACTURER'S SPEC.
DEC L	VALVE DECODER (AT ALL VALVE GROUPINGS) INSTALL PER MANUFACTURER'S SPEC. LIGHTNING ARRESTER (AT ALL VALVE GROUPINGS) INSTALL PER MANUFACTURER'S SPEC.
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	DRIP CONNECTION. PROVIDE DRIP IRRIGATION TO ALL TREES, SHRUBS,AND PERENNIALS IN PLANTER AREAS
	DRIP LINE: RAINBIRD XFSP-09-18-100 OR EQUIVALENT
	CLASS 200 SLEEVE PER PLAN
NO SYMBOL	WIRE CHASE, SIZE TO BE TWICE THE DIAMETER OF THE WIRE BUNDLE WITHIN. 1.1/4" DIAMETER MINIMUM
	14 GAUGE SOLID COPPER SINGLE STRAND CONTROL WIRE. INSTALL PER MANUFACTURER'S SPEC. PROVIDE 2 WIRE LOOP SYSTEM. ONLY WIRE FROM POC TO CONTROLLER IS DEPICTED ON PLANS. CONTRACTOR TO INSTALL WIRE IN CONDUIT FROM POC TO ALL VALVES. THE WIRE TO VALVES IS NOT SHOWN ON PLAN

DRIP ZONE

TYPE	PART NUMBER	EMITTER FLOW	EMITTER SPACING	ROW SPACING	ROW SPACING
XFS DRIPLINE	XFSP-09-18	.9 GPH	18"	18"	18-21 IN.
TOTAL DRIP ZONE FLOW		20 GPM	TIME TO APPLY 1/4" OF WATER		23
MAX. LATERAL LENGTH OF TUBING		350 FT	REQUIRED NUMBER OF STAKES		500
TOTAL LENGTH OF ZONE DRIPLINE		2,000 FT (varies per plan)	NUMBER OF FLUSH POINTS		2
APPLICATION RATE		.64 IN. / HR	SUGGESTED HEADER & FOOTER PIPE SIZE		CLASS 200 1.25"

*NUMBERS MAY CHANGE DUE TO SIZE OF DRIP ZONE PER PLAN

IRRIGATION NOTES

1. BEFORE WORK IS TO COMMENCE, BLUE STAKES/DIG LINE IS TO BE CALLED AND NOTIFIED. IF ANY DAMAGE TO UTILITIES HAPPEN DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR IT AT THEIR EXPENSE WITH NO ADDITIONAL COST TO THE OWNER.
2. CONTRACTOR SHALL APPLY AND PAY FOR ALL NECESSARY PERMITS IN ACCORDANCE WITH CITY AND/OR COUNTY CODES AND COMPLY WITH SPECIFICATIONS AND DRAWINGS.
3. INVESTIGATE TO MAKE SURE THAT THE IRRIGATION SYSTEM IS, IN FACT, BEING CONNECTED TO A SECONDARY SYSTEM. IF IT IS NOT CONNECTED TO SECONDARY, CONTACT THE OWNER AND LANDSCAPE ARCHITECT TO COORDINATE A CULINARY SYSTEM AND REQUIRED COMPONENTS. A FUNCTIONING AMIAD FILTER IS TO BE USED AT THE POINT OF CONNECTION.
4. VERIFY THAT THE POINT OF CONNECTION IS IN THE CORRECT LOCATION BEFORE INSTALLATION. ALL CONNECTIONS ON THIS PROJECT ARE TO SECONDARY WATER AND SHOULD BE NOTED AS SUCH; THEREFORE, ALL PARTS MUST MEET WATER STANDARDS THAT PERTAIN TO SECONDARY WATER.USE PURPLE VALVE BOXES FOR SECONDARY WATER SYSTEMS.
5. ON OCCASION AND FOR GRAPHIC PURPOSES ONLY, THE IRRIGATION SYSTEM MIGHT BE SHOWN IN HARDSCAPE AREAS. THIS IRRIGATION IS TO BE PLACED IN LANDSCAPED AREAS ON THE PROPERTY SITE.
6. CONTRACTOR SHALL USE ONLY COMMERCIAL GRADE IRRIGATION PRODUCTS. THIS INCLUDES PIPE TO BE SCHEDULE 40 PVC OR BETTER. NO POLY PIPE IS TO BE USED. FITTINGS UP TO 1-1/2" MUST BE SCHEDULE 40 OR BETTER. FITTINGS LARGER THAN 1-1/2" SHALL BE SCHEDULE 80 OR BETTER. CONTRACTOR IS RESPONSIBLE FOR ENSURING ACCURATE COUNTS AND QUANTITIES OF ALL IRRIGATION MATERIALS FOR BIDDING AND INSTALLATION.
7. MAIN LINES SHALL BE A MINIMUM OF 24" DEEP AND LATERAL LINES A MINIMUM OF 12" DEEP. NO ROCK GREATER THAN 1/2" DIAMETER SHALL BE ALLOWED IN TRENCHES. TRENCHING BACKFILL MATERIAL SHALL BE COMPACTED TO PROPER FINISHED GRADE.
8. NO IRRIGATION MAIN LINE MAY BE LOCATED WITHIN 5 FEET OF ANY STRUCTURE.
9. TO AVOID PIPE DAMAGE, ADJUST LOCATION OF PIPE TO NOT BE DIRECTLY UNDER PLANT MATERIALS. VALVE BOXES ARE PREFERRED TO BE IN PLANTER BEDS INSTEAD OF THE LAWN.
10. PLAN INDICATES 100% OR BETTER HEAD TO HEAD COVERAGE. SHOULD CONTRACTOR FIND DISCREPANCIES DUE TO NECESSARY FIELD ADJUSTMENTS, CONTACT LANDSCAPE ARCHITECT FOR IRRIGATION CORRECTION.
11. DRIP IRRIGATION TO BE INSTALLED PER DETAILS. CONTRACTOR SHALL MAKE NECESSARY ADJUSTMENTS. TUBING SHOULD REST TOWARD OUTER EDGE OF ROOTBALL AND NOT AGAINST TRUNK OF PLANT.
12. A QUICK COUPLER SHALL BE INSTALLED AT POINT OF CONNECTION TO ALLOW BLOW OUT OF SYSTEM BY AIR COMPRESSOR AT END OF EACH SEASON.
13. INSTALL SLEEVES FOR ALL PIPES AND WIRE CONDUIT THAT ARE PLACED UNDER PAVEMENT AND SIDEWALKS. SLEEVES SHALL BE 2 SIZES LARGER THAN PIPE BEING PLACED INTERNALLY. WIRE CONDUIT SHALL BE INSTALLED IN CLASS 200 PIPE. AT ANY DIRECTIONAL CHANGE THAT OCCURS, A JUNCTION BOX IS TO PLACED.
14. CONDUITS CAN NOT BE SHARED BY WATER AND ELECTRICAL LINES. ALL WIRE TO BE PUT IN PVC CONDUIT. ALL WIRE CONNECTIONS TO BE PLACED IN A VALVE BOX. ALL WIRE CONNECTIONS TO USE WATERPROOF WIRE CONNECTORS WITH AT LEAST 3' OF EXTRA WIRE. PROVIDE PLENTY OF EXTRA WIRE AT EVERY DIRECTIONAL CHANGE. INSULATED 14 GAUGE COPPER TO BE USED FOR ALL CONTROL WIRES AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
15. CONTRACTOR TO INSTALL LIGHTNING ARRESTOR AND GROUNDING RODS ON SITE PER MANUFACTURER'S RECOMMENDATIONS, SEE DETAILS.
16. CONTRACTOR TO SEPARATE SYSTEM (CONTROLLER, VALVES, AND DIFFERENT COLORED WIRE) FROM CITY MAINTAINED PROPERTY AND HOA/OWNER MAINTAINED PROPERTY.
17. DUCT TAPE ALL SLEEVES TO PREVENT SOIL OR OTHER DEBRIS ENTERING PIPE. IDENTIFY ALL SLEEVES BY WOOD OR PVC STAKES AND SPRAY PAINT WITH MARKING PAINT. REMOVE STAKES ONCE IRRIGATION SYSTEM IS COMPLETE.
18. TO PREVENT EROSION AND LOW POINT DRAINAGE CONTRACTOR SHALL INSTALL CHECK VALVES
19. LOCATE SPRAY HEADS NO CLOSER THAN 6" FROM WALLS, FENCES OR BUILDINGS AND 2" AWAY FROM WALKS, PATHS OR CURBS.
20. PRESSURE TEST MAINLINE FOR LEAKS PRIOR TO BACKFILLING. CONTACT LANDSCAPE ARCHITECT/OWNER AT THIS TIME FOR COMPLIANCE.
21. CONTRACTOR TO CONSULT WITH OWNER ON EXACT LOCATION OF CONTROLLER. CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR AND OWNER FOR THE POWER SUPPLY. INSTALL ALL PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL INSTALL A RAIN SENSOR WITH THE CONTROLLER UNLESS OTHERWISE DIRECTED BY OWNER OR LANDSCAPE ARCHITECT.
22. LATERAL LINES SHALL BE NO SMALLER THAN 3/4". LANDSCAPE CONTRACTOR TO ENSURE THE FOLLOWING PIPE SIZES DO NOT EXCEED THE SUGGESTED GPM LISTED BELOW:

3/4"	8 GPM
1"	12 GPM
1-1/2"	30 GPM
2"	53 GPM
2-1/2"	75 GPM
3"	110 GPM
4"	180 GPM

VALVE ID TAG

A1 — CONTROLLER NUMBER, VALVE NUMBER
1.0 — VALVE SIZE
18 — GALLONS PER MINUTE
55 — PSI AT LAST HEAD IN ZONE

NOTE:
1. VALVE ID TAGS ARE LOCATED NEAR VALVES IN THE ORDER THE VALVES APPEAR ON THE DRAWING

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5/28/2021	UT21037

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PLAN INFORMATION

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N

0' 10' 20' 40' 80'
GRAPHIC SCALE: 1" = 20'

PROJECT INFORMATION

AMERICAN FORK OFFICE
500 E. & AUTO MALL DR.
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Property Owner:
AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

Architect / Engineer:
CIR CIVIL ENGINEERING
3032 SOUTH 1030 WEST, SUITE 202
SALT LAKE CITY, UT 84119
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LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture • Planning & Visualization
3450 N. TRIUMPH BLVD. SUITE 102
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LICENSE STAMP

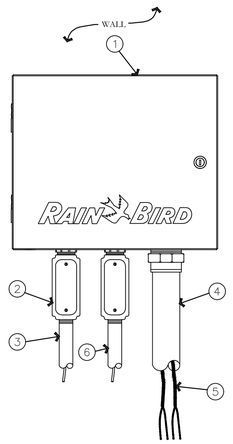
LICENSED LANDSCAPE ARCHITECT — STEVE ANSORTH — 5128727-5501 — 05/28/2021 — RENEWAL DATE — STATE OF UTAH

DRAWING INFO

PM:	JTA
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PLOT DATE:	5/28/2021

IRRIGATION PLAN

IR-102



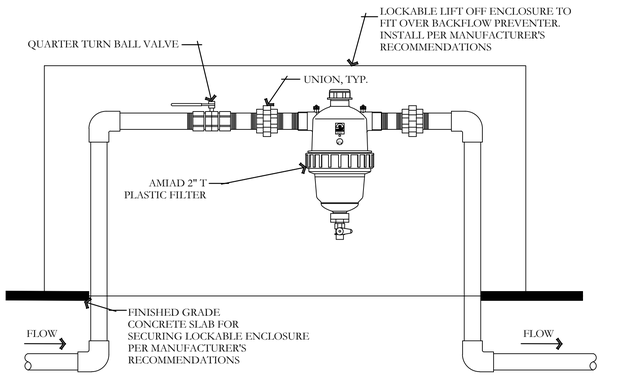
1. TWO-WIRE CONTROLLER: RAIN BIRD ESP-LXIVM/PRO IN LXMM METAL CABINET WITH OUTSIDE WALL MOUNT. INSTALL CONTROLLER AND CABINET ON WALL PER MANUFACTURER'S RECOMMENDATIONS.
2. JUNCTION BOX
3. 1-INCH CONDUIT AND FITTINGS FOR POWER SUPPLY WIRE
4. 2-INCH CONDUIT AND FITTINGS FOR TWO-WIRE CABLE
5. MAXICABLE TWO-WIRE PATH TO FIELD DEVICES, USE A DIFFERENT CABLE JACKET COLOR FOR EACH PATH.
6. 1-INCH CONDUIT AND FITTINGS FOR GROUND WIRE. ONLY FOR OUTDOOR INSTALLATIONS.

NOTES:
1. ESP-LXIVM CONTROLLER IS AVAILABLE IN TWO MODELS. THE LXIVM WITH 60 STATIONS AND THE LMIVM-PRO WITH 240 STATIONS. REFER TO THE CHART BELOW FOR DIFFERENCES BETWEEN THE TWO MODELS.
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS. IF CONTROLLER IS MOUNTED INDOORS, USE POWER SUPPLY GROUND.

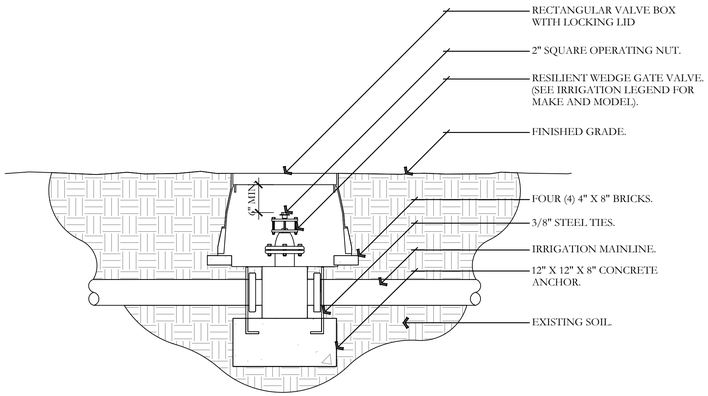
KEY SPECIFICATIONS

FEATURE / MODEL	MAX PROGRAMS	STATIONS	MAX SIMULSTATIONS	MASTER VALVES	FLOW SENSORS	WEATHER SENSORS
LX-IVM	10	60	8	5	5	4
LX-IVM PRO	40	240	16	10	10	8

A ESP-LXIVM/PRO TWO-WIRE CONTROLLER IN METAL CABINET
NOT TO SCALE
PKJ DESIGN GROUP

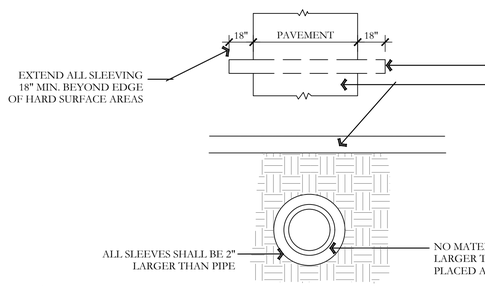


B 2" PLASTIC FILTER DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

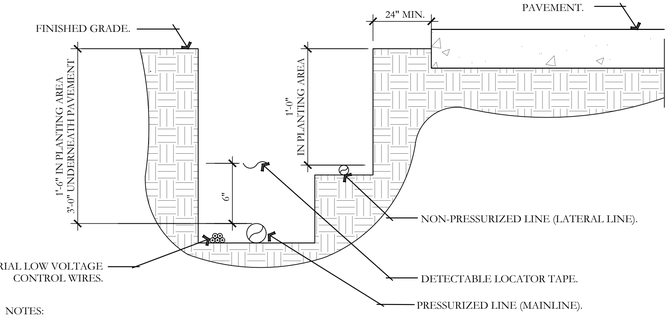


NOTES:
1. INSTALL GATE VALVE PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. VALVE BOX SHALL BE WRAPPED WITH MINIMUM 3 MIL. THICK PLASTIC AND SECURE IT TO VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
3. VALVE BOX SHALL BE LOCATED IN PLANTING AREA.

C GATE VALVE AND ANCHOR DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

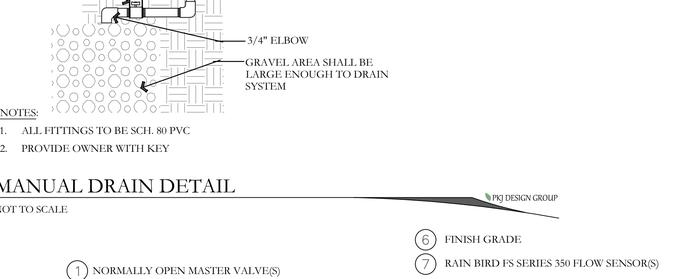


D TYPICAL SLEEVING DETAIL
NOT TO SCALE
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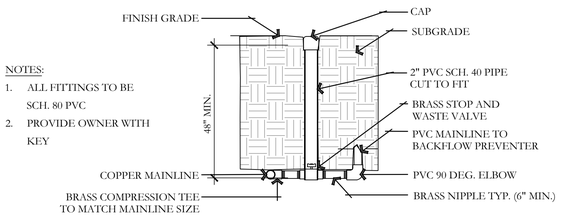
NOTES:
1. SEE IRRIGATION LEGEND FOR MAINLINE AND LATERAL LINE PIPE SIZE AND TYPE.
2. DIRECT BURIAL CONTROL WIRES SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT IF REQUIRED.
3. 2-WIRE IRRIGATION WIRE SHALL BE INSTALLED IN SCH. 40 PVC ELECTRICAL CONDUIT.
4. DETECTABLE LOCATOR TAPE SHALL BE LOCATED SIX INCHES (6") ABOVE THE ENTIRE MAINLINE RUN.

E IRRIGATION TRENCHING DETAIL
NOT TO SCALE
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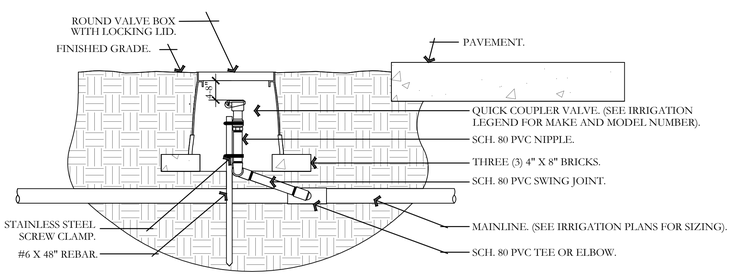
NOTES:
1. ALL FITTINGS TO BE SCH. 80 PVC
2. PROVIDE OWNER WITH KEY

F MANUAL DRAIN DETAIL
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PKJ DESIGN GROUP



NOTES:
1. ALL FITTINGS TO BE SCH. 80 PVC
2. PROVIDE OWNER WITH KEY

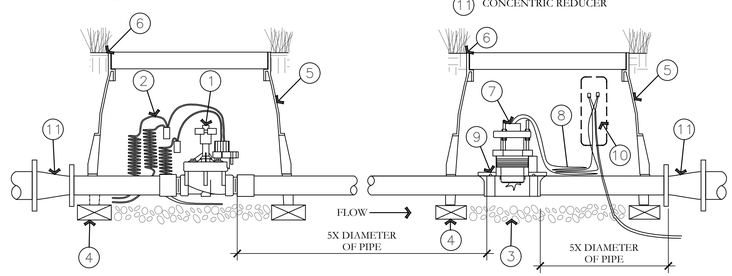
H STOP AND WASTE VALVE ASSEMBLY DETAIL
NOT TO SCALE
PKJ DESIGN GROUP



NOTES:
1. ALL THREADED CONNECTIONS SHALL BE INSTALLED USING TEFLON TAPE.
2. VALVE BOX SHALL BE WRAPPED WITH A MINIMUM 3 MIL THICK PLASTIC AND SECURED TO THE VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
3. ALL QUICK COUPLERS SHALL BE INSTALLED A MINIMUM OF 18" OFF OF THE MAINLINE.
4. VALVE BOXES SHALL BE LOCATED IN PLANTING AREAS.

G QUICK COUPLER DETAIL
NOT TO SCALE
PKJ DESIGN GROUP

1. NORMALLY OPEN MASTER VALVE(S)
2. 36-INCH LENGTH OF COILED WIRE TO SATELLITE CONTROLLER SPARE STATION
3. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
4. BRICK (1 OF 4)
5. VALVE BOX WITH COVER - 12-INCH SIZE
6. FINISH GRADE
7. RAIN BIRD FS SERIES 350 FLOW SENSOR(S)
8. 36-INCH LENGTH OF COILED PE-CABLE TO FLOW SENSING EQUIPMENT AT CCU/SATELLIT CONTROLLER ASSEMBLY
9. DOUBLE-STRAP SADDLE
10. SEE MAXICOM DETAIL 611 FOR SPLICE. SEE FLOW SENSOR DETAIL FOR WIRING DIAGRAM.
11. CONCENTRIC REDUCER



I MASTER VALVE AND FLOW SENSOR DETAIL
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PLAN INFORMATION

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500 E. & AUTO MALL DR.
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Property Owner:
AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
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Architect / Engineer:
CIR CIVIL ENGINEERING
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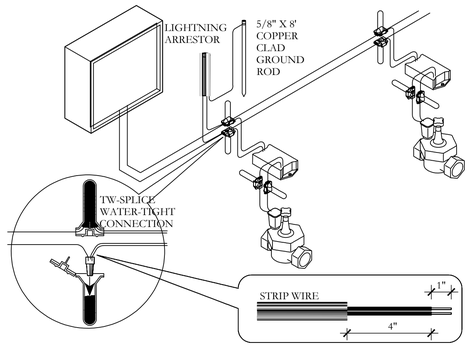
LICENSED LANDSCAPE ARCHITECT
JEREMY AINSWORTH
8128121-5301
05/28/2021
RENEWAL DATE
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	AP
CHECKED:	KA
PLOT DATE:	5/28/2021

IRRIGATION DETAILS

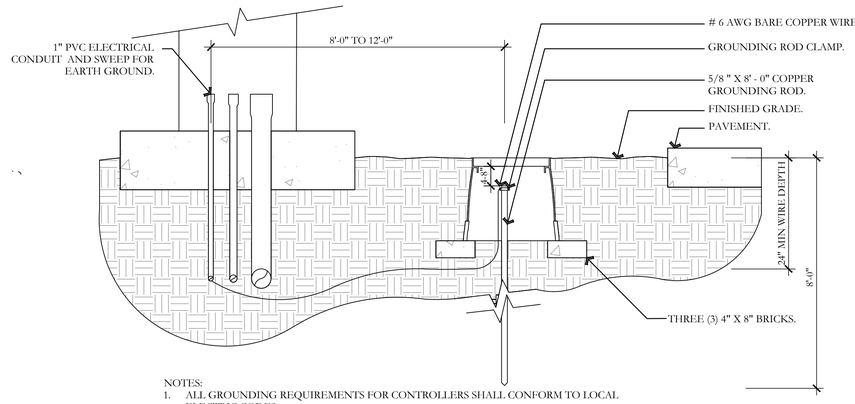
IR-501



J 2-WIRE CONNECTION DETAIL

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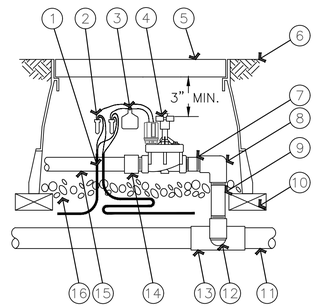


NOTES:
1. ALL GROUNDING REQUIREMENTS FOR CONTROLLERS SHALL CONFORM TO LOCAL ELECTRIC CODES.
2. GROUNDING ROD SHALL NOT BE LOCATED IN THE SAME TRENCH AS THE IRRIGATION MAINLINES OR LATERAL LINES.
3. VALVE BOX SHALL BE WRAPPED WITH A MINIMUM 3 MIL THICK PLASTIC AND SECURED TO THE VALVE BOX USING DUCT TAPE OR ELECTRICAL TAPE.
4. INSTALL GROUNDING ROD PER THE CONTROLLER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

K GROUNDING ROD DETAIL

PKJ DESIGN GROUP

NOT TO SCALE

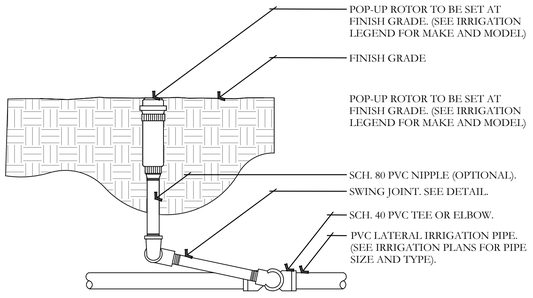


1. 30-INCH LENGTH OF 2-WIRE CABLE
2. WATERPROOF CONNECTION RAIN BIRD WC20 (TWO REQUIRED)
3. ID TAG: RAIN BIRD VID SERIES
4. REMOTE CONTROL VALVE: RAIN BIRD PEB/PESB/PESB-R WITH IVM
5. VALVE BOX WITH COVER: RAIN BIRD VB-STD
6. FINISH GRADE/TOP OF MULCH
7. PVC SCH 80 NIPPLE (CLOSE)
8. PVC SCH 40 ELL
9. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
10. BRICK (1 OF 4)
11. PVC MAINLINE PIPE SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND SCH 40 ELL
12. PVC SCH 40 TEE OR ELL
13. PVC SCH 40 MALE ADAPTER
14. PVC LATERAL PIPE
15. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

M ELECTRIC REMOTE-CONTROL VALVE PEB OR PESB SERIES WITH IVM

PKJ DESIGN GROUP

NOT TO SCALE

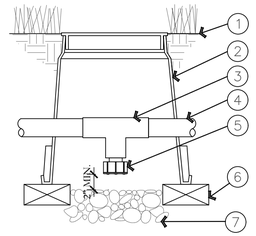


NOTES:
1. ALL THREADED CONNECTION POINTS BETWEEN SCH. 40 PVC AND SCH. 80 PVC FITTING SHALL BE INSTALLED USING TEFLON TAPE.
2. CONTRACTOR SHALL COMPACT SOIL AROUND ROTOR AND RISER PRIOR TO PLANTING, PLUGGING, SEEDING, OR LAYING OF SOD.

N ROTOR SPRAYHEAD DETAIL

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NOT TO SCALE

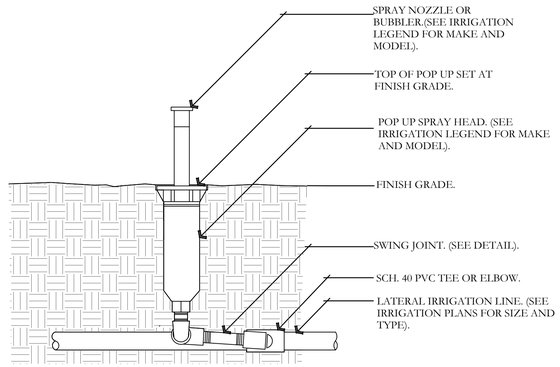


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-6RND
3. PVC SCH 40 TEE
4. PVC LATERAL PIPE
5. FILTERED DRAIN VALVE: RAIN BIRD 16A-FDV-075
6. BRICK (1 OF 2)
7. 6-INCH MINIMUM DEPTH OF 3/4" WASHED GRAVEL

L LATERAL LINE DRAIN VALVE DETAIL

PKJ DESIGN GROUP

NOT TO SCALE



NOTE:
1. 6" POP UPS SHALL BE USED IN TURF AREAS.
2. CONTRACTOR SHALL SETTLE SOIL AROUND THE POP UP AFTER INSTALLATION.
3. ALL POP UP SPRAY HEADS SHALL HAVE CHECK VALVES.
4. ALL SCH. 40 PVC TO SCH. 80 PVC CONNECTIONS SHALL BE MADE USING TEFLON TAPE.

O POP UP-SPRAY HEAD DETAIL

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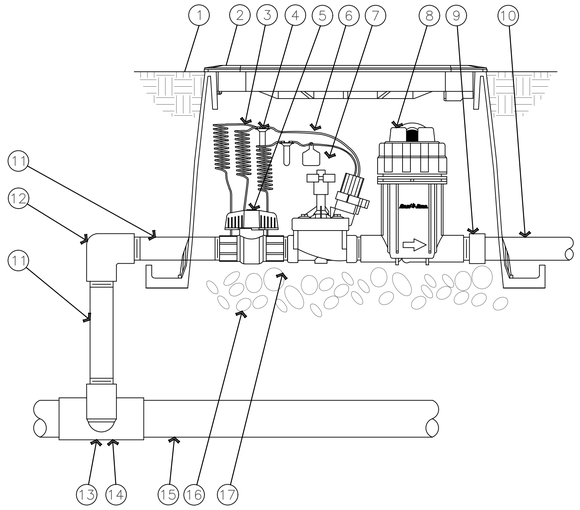
LICENSED LANDSCAPE ARCHITECT
JEREMY ANDMORTH
812812I-5301
05/28/2021
RENEWAL DATE
STATE OF UTAH

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IRRIGATION DETAILS

IR-502

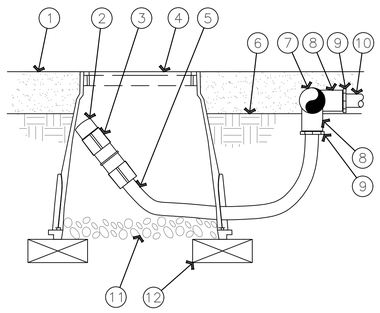


1. FINISH GRADE/TOP OF MULCH
2. VALVE BOX WITH COVER: RAIN BIRD VB-STD
3. 30-INCH LINEAR LENGTH OF WIRE, COILED
4. WATERPROOF CONNECTION: RAIN BIRD DB SERIES
5. 1-INCH BALL VALVE (INCLUDED IN XCZ-PRB-100-COM KIT)
6. ID TAG
7. REMOTE CONTROL VALVE: RAIN BIRD PESB (INCLUCED IN XCZ-PRB-100-COM KIT)
8. PRESSURE REGULATING QUICK CHECK BASKET FILTER: RAIN BIRD PRB-QKCHK-100 (INCLUDED IN XCZ-PRB-100-COM KIT)
9. PVC SCH 40 FEMALE ADAPTOR
10. LATERAL PIPE
11. PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
12. PVC SCH 40 ELL
13. PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
14. PVC SCH 40 TEE OR ELL
15. MAINLINE PIPE
16. 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
17. PVC SCH 80 NIPPLE, CLOSE (INCLUDED IN XCZ-PRB-100-COM KIT)

P DRIP CONTROL ZONE KIT DETAIL

NOT TO SCALE

PKJ DESIGN GROUP



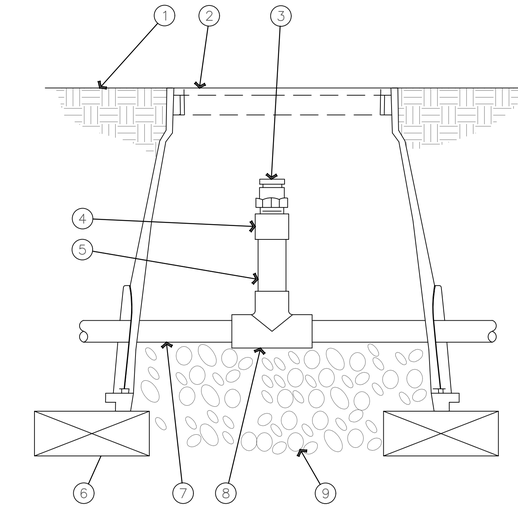
1. MULCH
2. FLUSH CAP FOR EASY FIT COMPRESSION FITTINGS: POTABLE:RAIN BIRD MDCFCAP
3. EASY FIT COUPLING: RAIN BIRD MDCFCOUP
4. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
5. ½" POLYETHYLENE TUBING: RAIN BIRD XF BLANK TUBING
6. FINISH GRADE
7. PVC EXHAUST HEADER
8. PVC SCH 40 TEE OR EL
9. BARB X MALE FITTING: RAIN BIRD XFF-MA FITTING (TYPICAL)
10. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV DRIPLINE
11. 3-INCH MINIMUM DEPTH OF 3/4 " WASHED GRAVEL
12. BRICK (1 OF 2)

NOTE:
1. ALLOW A MINIMUM OF 6-INCHES OF DRIPLINE TUBING IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

Q ON-SURFACE DRIPLINE FLUSH POINT DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

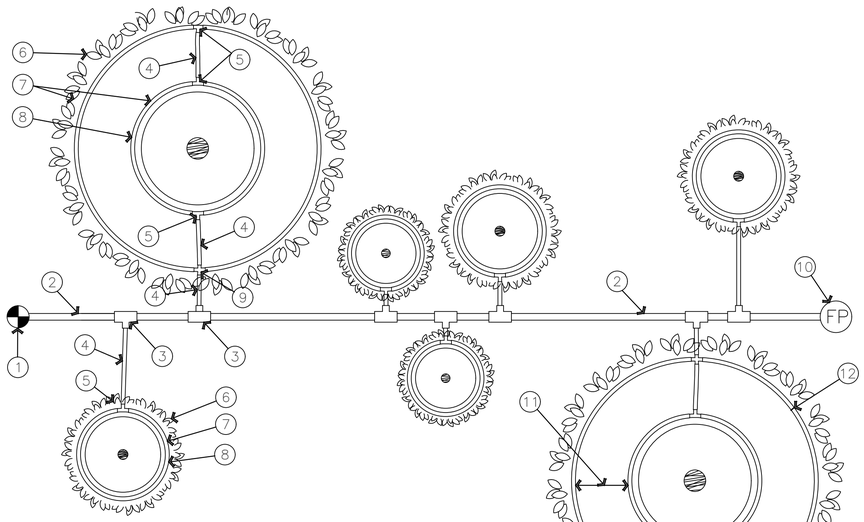


1. FINISH GRADE
2. SUBTERRANEAN EMITTER BOX: RAIN BIRD SEB 7XB
3. ½" AIR RELIEF VALVE: RAIN BIRD ARV050 TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
4. PVC SCH 40 FEMALE ADAPTER
5. PVC SCH 80 RISER
6. BRICK (1 OF 2)
7. PVC HEADER PIPE
8. PVC SCH 40 TEE
9. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL

R AIR RELIEF VALVE DETAIL

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PKJ DESIGN GROUP



1. RAIN BIRD CONTROL ZONE KIT (SIZED TO ACCOMIDATE LATERAL FLOW DEMAND)
2. PVC DRIP MANIFOLD PIPE
3. PVC SCH 40 TEE OR EL (TYPICAL)
4. ½" POLYETHYLENE TUBING: RAIN BIRD XF SERIES BLANK TUBING (TYPICAL)
5. BARB X BARB INSERT TEE: RAIN BIRD XFF-TEE (TYPICAL)
6. PROJECTED CANOPY LINE OF TREE OR SHRUB (TYPICAL)
7. ON-SURFACE DRIPLINE: RAIN BIRD XF SERIES DRIPLINE POTABLE: XFCV SERIES PLACE AS SHOWN (LENGTH AS REQUIRED, TYPICAL)
8. ROOT BALL (TYPICAL)
9. BARB X BARB INSERT CROSS: RAIN BIRD XFD-CROSS (TYPICAL)
10. DRIPLINE FLUSH POINT (SEE RAIN BIRD DETAIL: "XFCV DRIPLINE FLUSH POINT WITH BALL VALVE")
11. SPACING PER SPECIFICATION
12. TIE DOWN STAKE: RAIN BIRD TDS-050 WITH BEND (QUANTITY AS REQUIRED, SEE NOTES 2-3 BELOW)

NOTES:
1. INSTALL MULTIPLE RINGS AS REQUIRED TO PROVIDE IRRIGATION COVERAGE FROM ROOT BALL TO PROJECTED TREE CANOPY. REFER TO RAIN BIRD DESIGN GUIDELINES AND SPECIFICATIONS FOR RECOMMENDED SPACING BETWEEN RINGS.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

S ON-SURFACE DRIPLINE TREE/SHRUB DETAIL

NOT TO SCALE

PKJ DESIGN GROUP

ISSUE DATE	PROJECT NUMBER
5/28/2021	UT21037

NO.	REVISION	DATE
1	XXXX	XX-XX-XX
2		
3		
4		
5		
6		
7		

PLAN INFORMATION

811 BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC
1-800-662-4111
www.bluestakes.org

N

PROJECT INFORMATION

AMERICAN FORK OFFICE
500 E. & AUTO MALL DR.
AMERICAN FORK, UTAH

DEVELOPER / PROPERTY OWNER / CLIENT

Property Owner:
AE URBIA
909 W. SOUTH JORDAN PARKWAY
SOUTH JORDAN, UT 84095
801-575-6455

Architect / Engineer:
CIR CIVIL ENGINEERING
3032 SOUTH 1030 WEST, SUITE 202
SALT LAKE CITY, UT 84119
801-949-6296

LANDSCAPE ARCHITECT / PLANNER

PKJ DESIGN GROUP
Landscape Architecture / Planning &Visualization
3450 N. TRIUMPH BLVD. SUITE 102
LEHI, UTAH 84043 (801) 960-2698
www.pkjdesigngroup.com

LICENSE STAMP

LICENSED LANDSCAPE ARCHITECT
JEREMY AINSWORTH
8128121-5301
05/28/2021
STATE OF UTAH

DRAWING INFO

PM:	JTA
DRAWN:	AP
CHECKED:	KA
PLOT DATE:	5/28/2021

IRRIGATION DETAILS

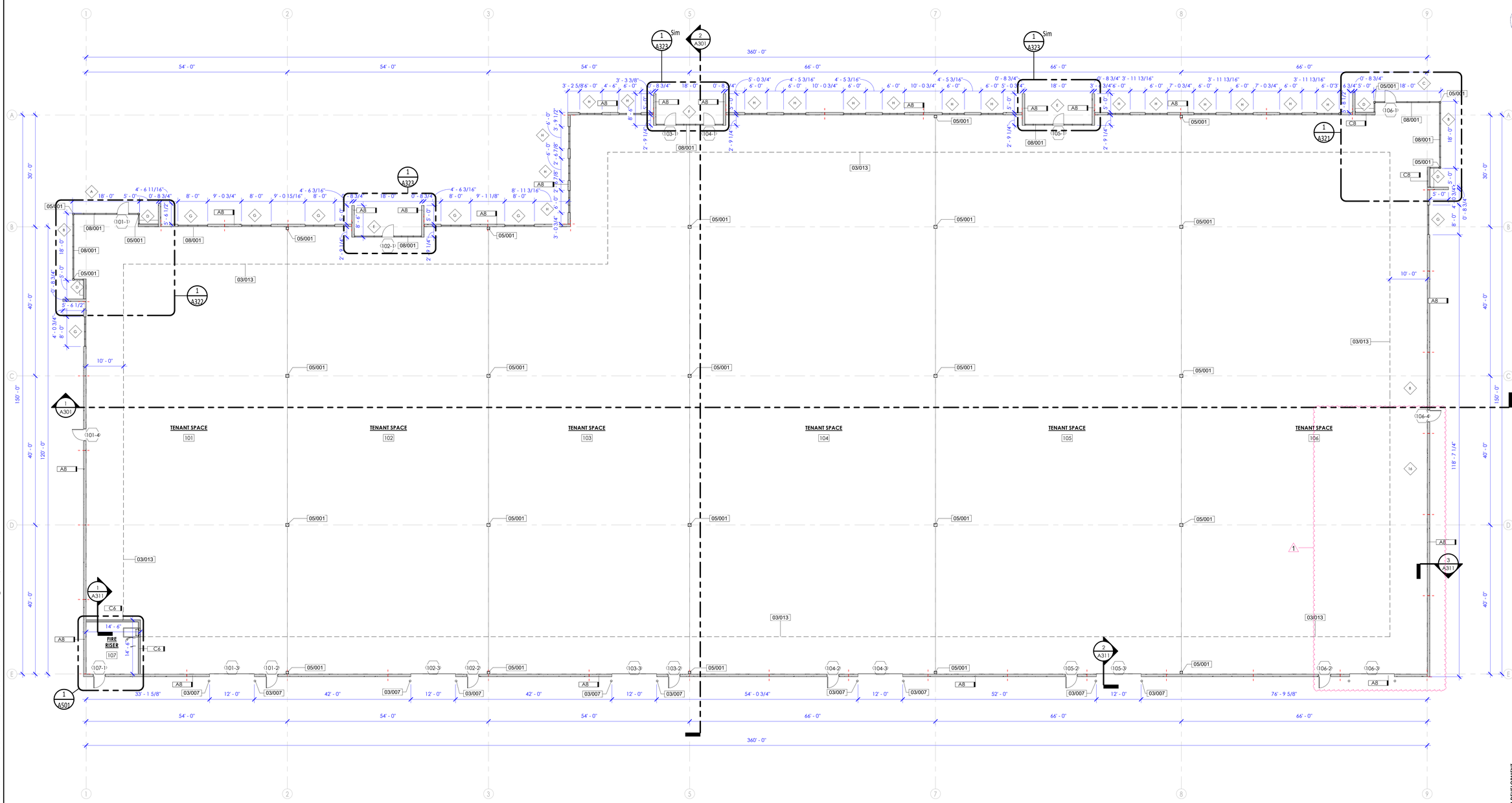
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Keynote Legend	
Key Value	Keynote Text
03/007	PRECAST CONCRETE BOLLARD, SEE DETAIL 6/A001
03/013	POUR BACK STRIP, SEE STRUCTURAL FOR CONTROL JOINTS
05/001	STRUCTURAL STEEL COLUMN - SEE STRUCTURAL
08/001	STOREFRONT WINDOW SYSTEM - PROVIDE SUBMITTAL FOR APPROVAL , SEE SCHEDULE

GENERAL NOTES:

1. INTERIOR DIMENSION AT FACE OF STUD, EXTERIOR DIMENSIONS AT FACE OF TILT-UP PANEL.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY ALL COLORS AND MATERIALS.
3. INSTALL ALL MATERIALS PER MANUFACTURERS RECOMMENDATION.
4. ALL GYP. BOARD SURFACES TO BE TAPED, SANDED, AND PRIMED.
5. SEE STRUCTURAL DRAWINGS AND CALCULATIONS FOR ALL STRUCTURAL REQUIREMENTS.
6. COORDINATE ALL WINDOWS HEAD HEIGHTS AND SIZES WITH ELEVATIONS AND SCHEDULES.
7. FIRE RATED ASSEMBLIES SHALL BE CONTINUOUS BOTH HORIZONTALLY AND VERTICALLY AND SHALL EXTEND FROM RATED ASSEMBLY TO RATED ASSEMBLY. FIRE CAULK ALL PENETRATIONS.
8. FIRE EXTINGUISHERS, SMOKE DETECTORS, OTHER EMERGENCY DEVICE LOCATIONS, AND RATINGS SHALL BE APPROVED BY FIRE MARSHAL PRIOR TO INSTALLATION.
9. FRAMING CONTRACTOR SHALL PROVIDE ADDITIONAL BLOCKING THROUGHOUT THE PROJECT AS REQUIRED TO ACCOMMODATE WALL-MOUNTED FURNISHINGS, ARTWORK, ETC.
10. DOORS SHALL BE LOCATED 6" OFF OF ADJACENT WALL UNLESS NOTED OTHERWISE.
11. CONTRACTOR IS TO PROVIDE SUBMITTALS AND SHOP DRAWINGS ON ALL KEYNOTED ITEMS FOR APPROVAL FROM OWNER/ARCHITECT.
12. PRIOR TO ORDERING ANY EXTERIOR FINISHES, THE CONTRACTOR IS TO VERIFY ALL COLORS AND TYPES OF MATERIALS WITH OWNER/ARCHITECT
13. ALL ASPECTS OF THIS PROJECT SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND THE ASSOCIATED DETAILS - SEE G003 AND G004. IF CONFLICTS OCCUR WHICH MAKE COMPLIANCE WITH THE ADA IMPOSSIBLE, NOTIFY ARCHITECT IMMEDIATELY BEFORE CONTINUING THE WORK.



1 A101 **LEVEL 01**
3/32" = 1'-0"

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699 West South Jordan Parkway
South Jordan, Utah 84095
phone: 801.746.0456 - fax: 801.575.6456
webpage: aeurbia.com

LICENSED ARCHITECT 174600 JAMES MICHAEL [illegible] STATE OF UTAH
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FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES ADOPTED BELOW:
☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ IMC
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BY: [illegible] DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule		
MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

LEVEL 01 FLOOR PLAN

DATE: **03/10/2021**

SHEET #:

A101

DESIGN DEVELOPMENT

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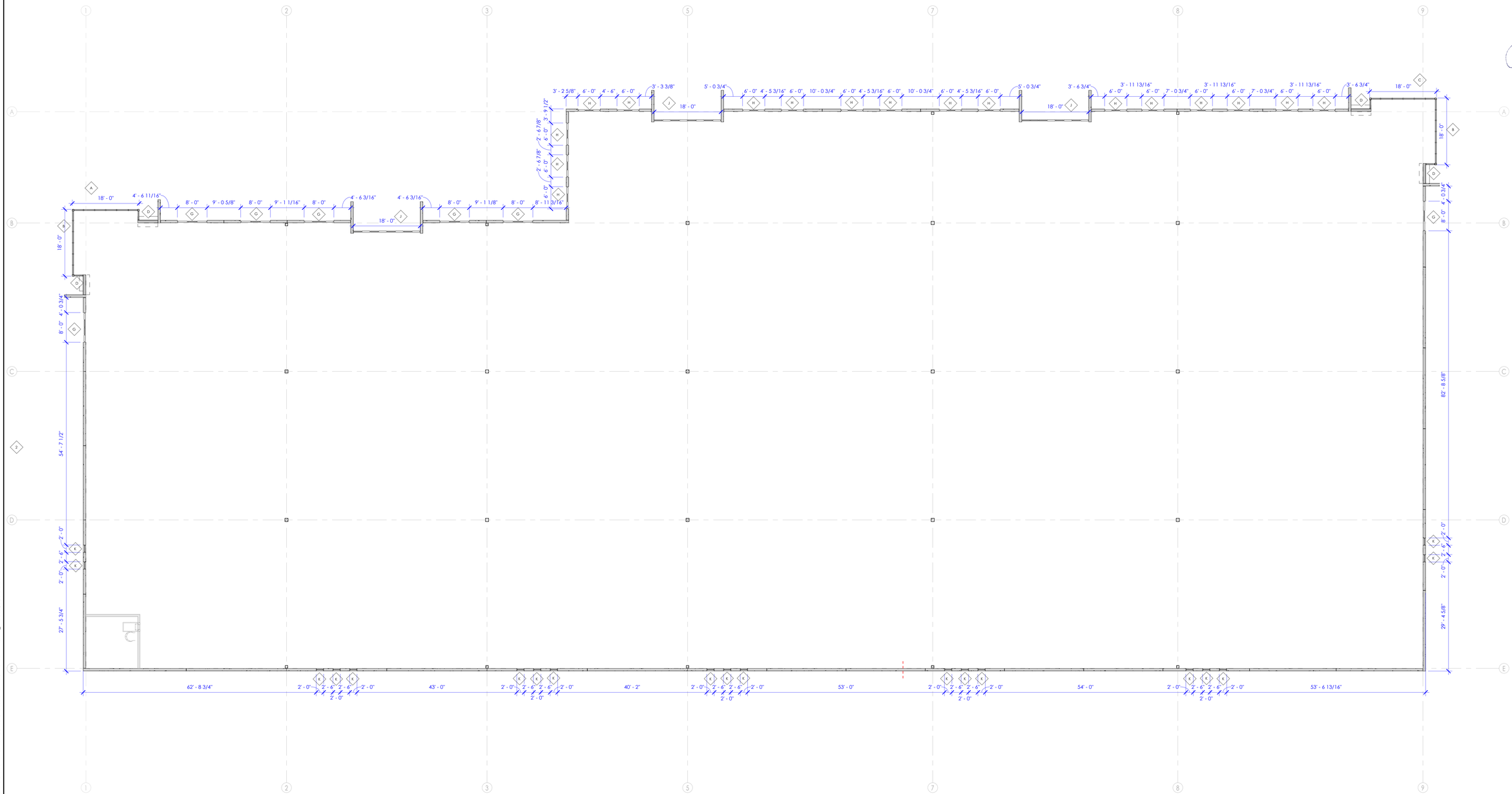
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GENERAL NOTES:

1. INTERIOR DIMENSION AT FACE OF STUD, EXTERIOR DIMENSIONS AT FACE OF TILT-UP PANEL.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY ALL COLORS AND MATERIALS.
3. INSTALL ALL MATERIALS PER MANUFACTURERS RECOMMENDATION.
4. ALL GYP. BOARD SURFACES TO BE TAPED, SANDED, AND PRIMED.
5. SEE STRUCTURAL DRAWINGS AND CALCULATIONS FOR ALL STRUCTURAL REQUIREMENTS.
6. COORDINATE ALL WINDOWS HEAD HEIGHTS AND SIZES WITH ELEVATIONS AND SCHEDULES.
7. FIRE RATED ASSEMBLIES SHALL BE CONTINUOUS BOTH HORIZONTALLY AND VERTICALLY AND SHALL EXTEND FROM RATED ASSEMBLY TO RATED ASSEMBLY. FIRE CAULK ALL PENETRATIONS.
8. FIRE EXTINGUISHERS, SMOKE DETECTORS, OTHER EMERGENCY DEVICE LOCATIONS, AND RATINGS SHALL BE APPROVED BY FIRE MARSHAL PRIOR TO INSTALLATION.
9. FRAMING CONTRACTOR SHALL PROVIDE ADDITIONAL BLOCKING THROUGHOUT THE PROJECT AS REQUIRED TO ACCOMMODATE WALL-MOUNTED FURNISHINGS, ARTWORK, ETC.
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12. PRIOR TO ORDERING ANY EXTERIOR FINISHES, THE CONTRACTOR IS TO VERIFY ALL COLORS AND TYPES OF MATERIALS WITH OWNER/ARCHITECT
13. ALL ASPECTS OF THIS PROJECT SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND THE ASSOCIATED DETAILS - SEE G003 AND G004. IF CONFLICTS OCCUR WHICH MAKE COMPLIANCE WITH THE ADA IMPOSSIBLE, NOTIFY ARCHITECT IMMEDIATELY BEFORE CONTINUING THE WORK.



1 A102 **LEVEL 02**
3/32" = 1'-0"

ARCHITECT NOTE: THIS SHEET IS FOR WINDOW TYPE LOCATIONS AND SIZING ONLY

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architects and engineers
909 West South Jordan Parkway
south jordan, utah 84095
phone: 801.746.0456 · fax: 801.575.6456
webpage: aeurbia.com

LICENSED ARCHITECT
174600
JAMES MICHAEL
STATE OF UTAH

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- [x] BUILDING
- [x] MECHANICAL
- [x] ELECTRICAL
- [x] ACCESSIBILITY
- [x] STRUCTURAL
- [x] PLUMBING
- [x] ENERGY
- [ ] FIRE

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Revision Schedule

MARK	DESCRIPTION	Revision Date

AE2020.283

UPPER WINDOW PLAN

DATE: **03/10/2021**

SHEET #:

A102

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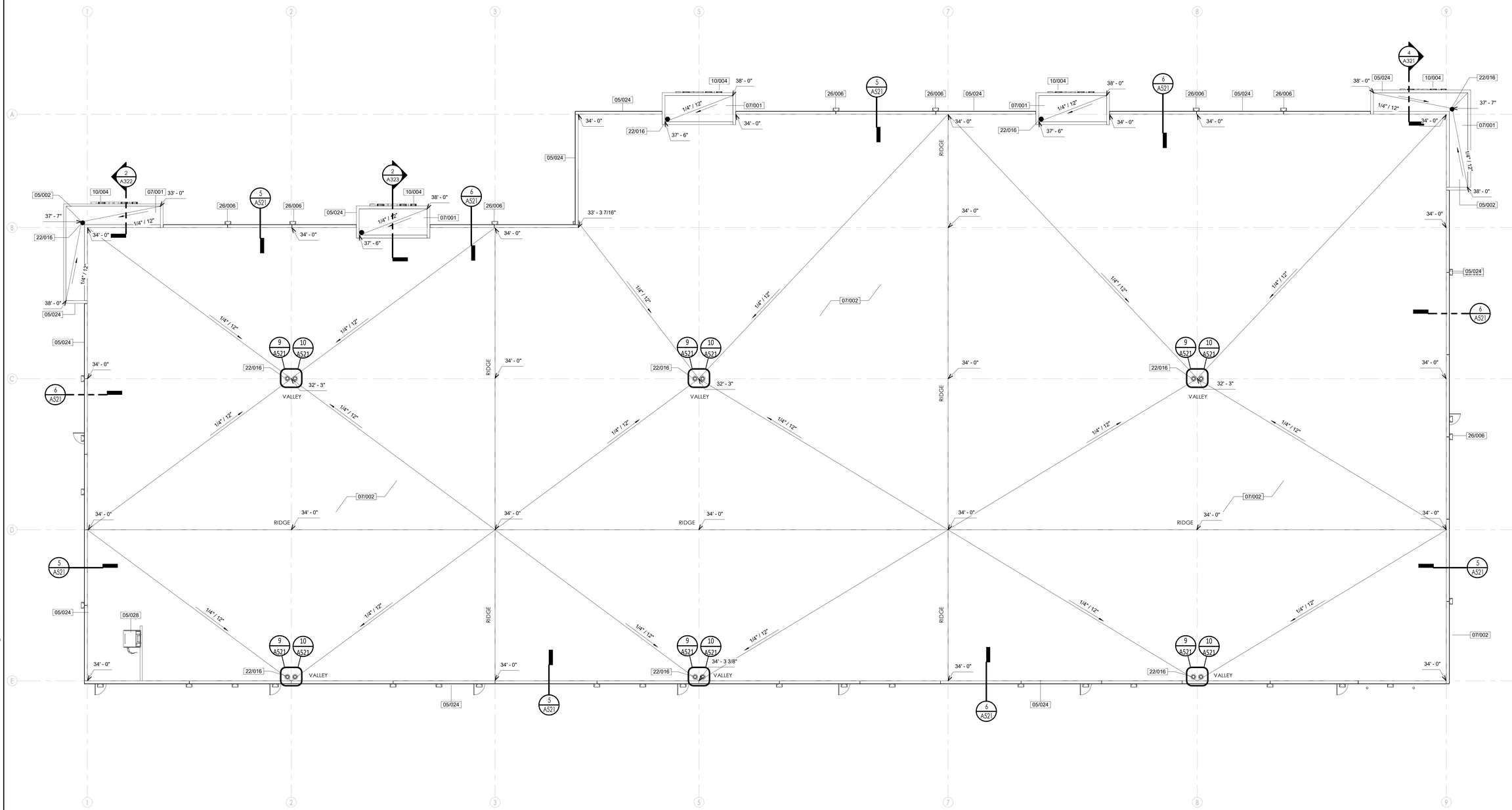
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Keynote Legend	
Key Value	Keynote Text
05/002	ENTRANCE CANOPY, CAVIAR BLACK SEAM METAL FAÇADE, PROVIDE DRAINING WITH SLOPED STRUCTURE
05/024	METAL CAP FASCIA, CAVIAR BLACK SEAM
05/028	ROOF ACCESS HATCH
07/001	STANDING SEAM METAL ROOF - PROVIDE SUBMITTAL FOR APPROVAL
07/002	60 MIL TPO ROOF OVER RIDGID POLYI INSULATION ON METAL DECK FULLY ADHEARRED, 20 YEAR WARRANTY W/ RHINO BOND AND 90 MPH WARRANTY. R-RATED PER COMCHECK ON SHEET G003.
10/004	EXTERIOR SIGNAGE BY OWNER. SIGNAGE IS TO BE REVIEWED AND PERMITTED UNDER A SEPARATE SIGN PERMIT APPLICATION
22/016	ROOF DRAIN. SEE SHEET A402
26/006	EXTERIOR LIGHTING FIXTURES. SEE ELECTRICAL SHEETS

ROOFING NOTES (TYPICAL):

1. PROVIDE FULL MANUFACTURERS WARRANTY ON MATERIALS AND 5 YEAR WARRANTY MIN. ON LABOR. UNO
2. ALL COLORS, ASSEMBLIES AND MATERIALS MUST MEET APPROVAL OF OWNER AND DESIGN PROFESSIONAL.
3. PROVIDE PRODUCT SUBMITTALS FOR PRE APPROVAL PRIOR TO ORDERING AND INSTALLATION
4. FOR TYPICAL ROOF/FLASHING DETAILS, SEE SHEET A402
5. PROVIDE STEP FLASHING COUNTER FLASHING, DRIP EDGES AS REQ'D, CAULK AND SEAL. ROOFING TO EXTEND 18" MIN. UP ADJACENT WALLS AND DISCONTINUITIES TYPICAL.
6. INSTALL ROOF PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. MANUFACTURER TO INSPECT INSTALLATION AS REQ'D FOR WARRANTEE. PROVIDE 1/4" PER FOOT MIN. SLOPE.
7. FOR ALL PLUMBING PENETRATIONS REFER TO DETAILS ON A402 AND PLUMBING DRAWINGS.
8. FOR MISC. ROOF DETAILS SEE A402
9. TYPICAL MINIMUM ROOF SLOPE @ 1/4" MIN. PER FOOT ALL PLACES.
10. SEE MECHANICAL PLAN FOR ROOF MOUNTED EQUIPMENT AND CURBS, ET.



1 A103 **ROOF**
3/32" = 1'-0"

0 4' 8' 16'
GRAPHIC SCALE

NORTH

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webpage: aeurbia.com

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174600
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STATE OF UTAH
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☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
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Revision Schedule		
MARK	DESCRIPTION	Revision Date

AE2020.283

ROOF PLAN

DATE: 03/10/2021

SHEET #:

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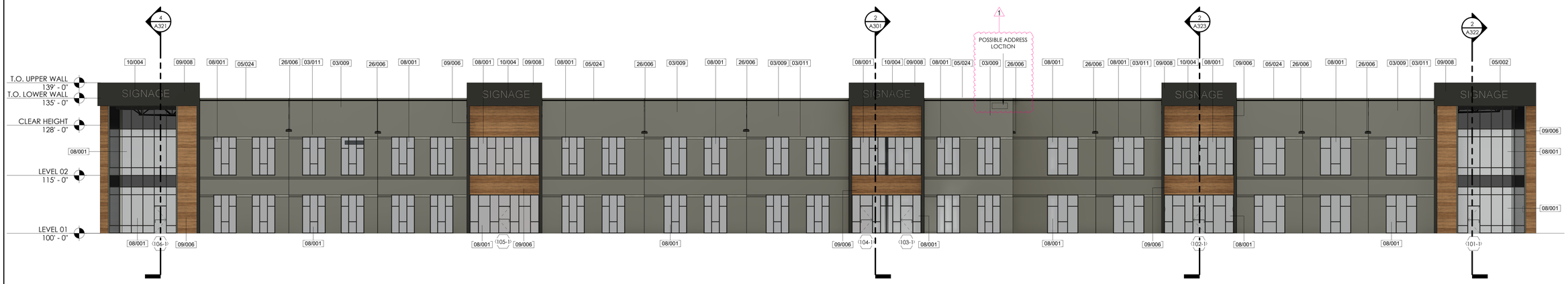
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ELEVATION MATERIALS

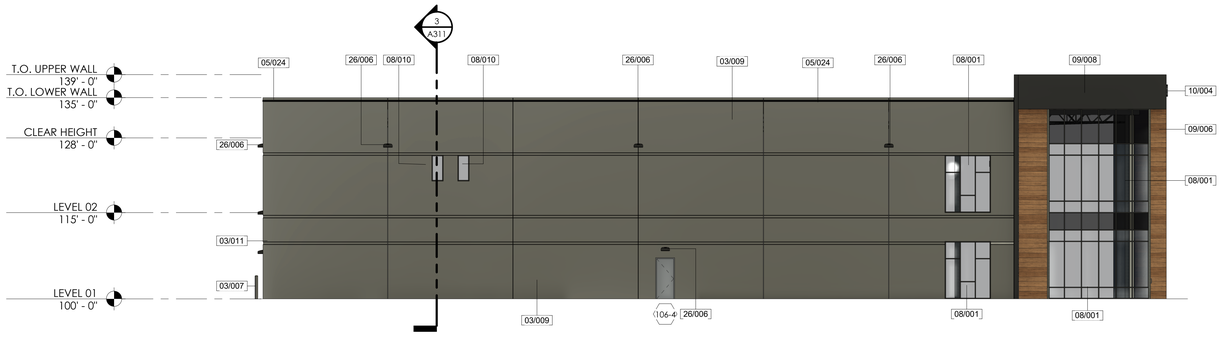
- = TILT UP CONCRETE - IRON ORE
- = METAL PANELING SIDING - KNOTWOOD
- = CLEAR WINDOW GLAZING
- = CAVIAR BLACK SEAM METAL

Keynote Legend

Key Value	Keynote Text
03/007	PRECAST CONCRETE BOLLARD, SEE DETAIL 6/A001
03/009	CONCRETE TILT-UP PANEL PAINTED COLOR SW7069 IRON ORE, SEE STRUCTURAL (SACK AND PATCH, PRIME, AND PAINT FINISH)
03/011	CONCRETE WALL REVEAL
05/002	ENTRANCE CANOPY, CAVIAR BLACK SEAM METAL FAÇADE, PROVIDE DRAINING WITH SLOPED STRUCTURE
05/024	METAL CAP FASCIA, CAVIAR BLACK SEAM
08/001	STOREFRONT WINDOW SYSTEM - PROVIDE SUBMITTAL FOR APPROVAL , SEE SCHEDULE
08/010	2' x 4'-6" UPPER LEVEL WINDOWS - PROVIDE SUBMITTAL FOR APPROVAL
09/006	METAL PANELING SIDING SYSTEM WITH KNOTWOOD, PROVIDE SUBMITTAL FOR APPROVAL
09/008	BLACK METAL PANEL SYSTEM, PROVIDE SUBMITTAL FOR APPROVAL
10/004	EXTERIOR SIGNAGE BY OWNER, SIGNAGE IS TO BE REVIEWED AND PERMITTED UNDER A SEPARATE SIGN PERMIT APPLICATION
26/006	EXTERIOR LIGHTING FIXTURES, SEE ELECTRICAL SHEETS



1 A201 **NORTH ELEVATION**
3/32" = 1'-0"



2 A201 **EAST ELEVATION**
3/32" = 1'-0"

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south jordan, utah 84095
phone: 801.746.0456 · fax: 801.575.6456
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☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ IWUI
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AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

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BUILDING ELEVATIONS

DATE: **03/10/2021**

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A201

DESIGN DEVELOPMENT

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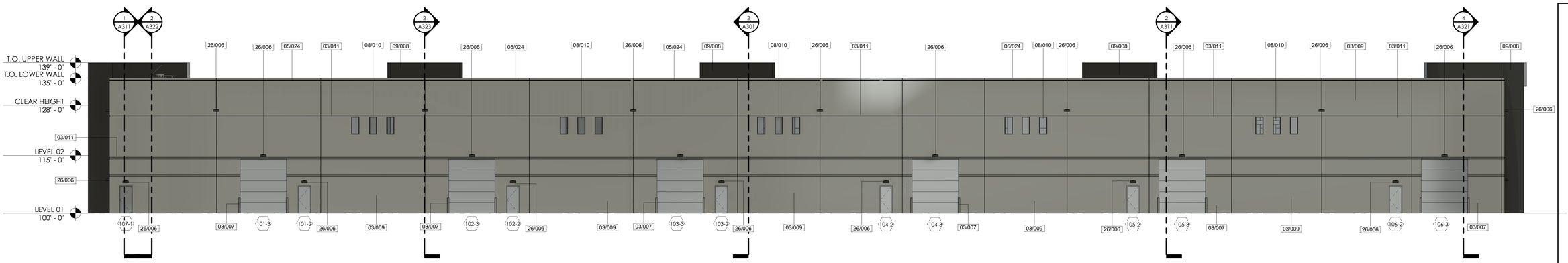
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ELEVATION MATERIALS

- = TILT UP CONCRETE - IRON ORE
- = METAL PANELING SIDING - KNOTWOOD
- = CLEAR WINDOW GLAZING
- = CAVIAR BLACK SEAM METAL

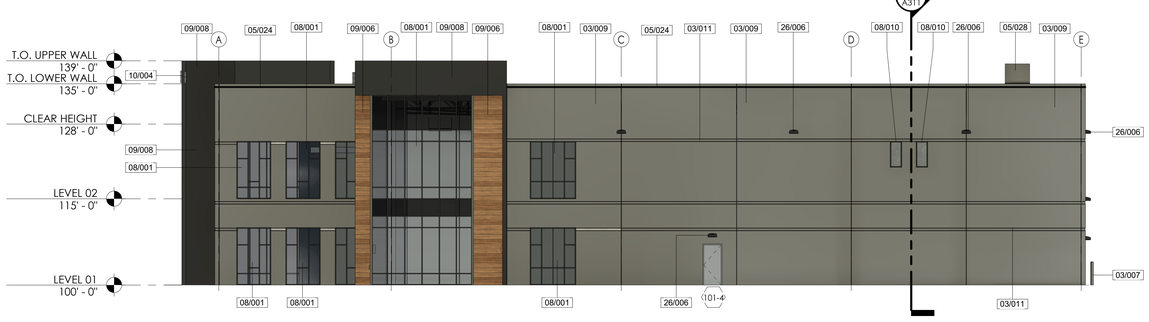
Keynote Legend

Key Value	Keynote Text
03/007	PRECAST CONCRETE BOLLARD, SEE DETAIL 6/A001
03/009	CONCRETE TILT-UP PANEL PAINTED COLOR SW7069 IRON ORE, SEE STRUCTURAL (SACK AND PATCH, PRIME, AND PAINT FINISH)
03/011	CONCRETE WALL REVEAL
05/024	METAL CAP FASCIA, CAVIAR BLACK SEAM
05/028	ROOF ACCESS HATCH
08/001	STOREFRONT WINDOW SYSTEM - PROVIDE SUBMITTAL FOR APPROVAL , SEE SCHEDULE
08/010	2' x 4'-6" UPPER LEVEL WINDOWS - PROVIDE SUBMITTAL FOR APPROVAL
09/006	METAL PANELING SIDING SYSTEM WITH KNOTWOOD, PROVIDE SUBMITTAL FOR APPROVAL
09/008	BLACK METAL PANEL SYSTEM, PROVIDE SUBMITTAL FOR APPROVAL
10/004	EXTERIOR SIGNAGE BY OWNER. SIGNAGE IS TO BE REVIEWED AND PERMITTED UNDER A SEPARATE SIGN PERMIT APPLICATION
26/006	EXTERIOR LIGHTING FIXTURES, SEE ELECTRICAL SHEETS



1 A202 **SOUTH ELEVATION**

3/32" = 1'-0"



2 A202 **WEST ELEVATION**

3/32" = 1'-0"

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phone: 801.746.0456 · fax: 801.575.6456
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☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE

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AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date

AE2020.283

BUILDING ELEVATIONS

DATE: **03/10/2021**

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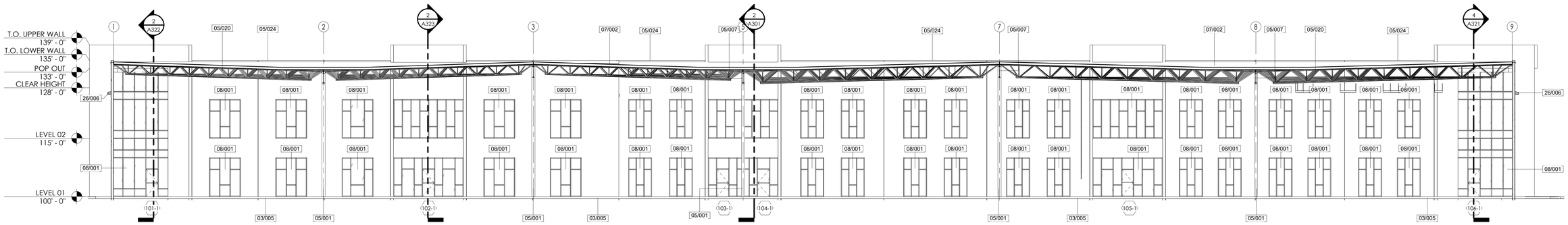
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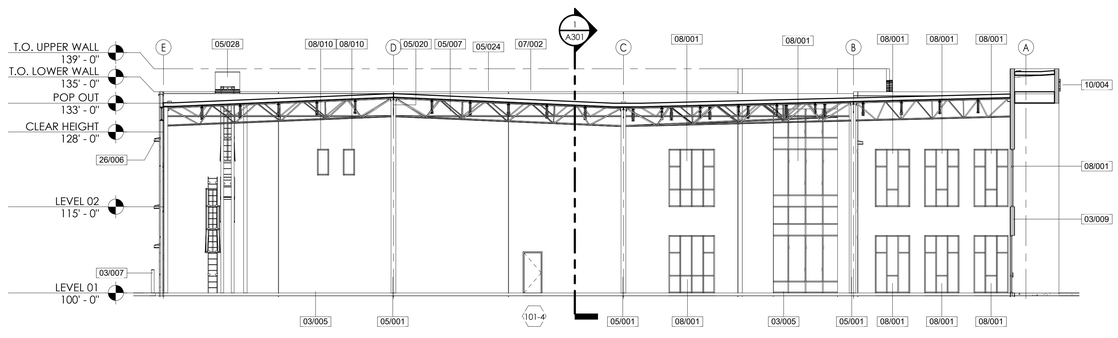
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Keynote Legend	
Key Value	Keynote Text
03/005	CONCRETE FLOOR TO BE SEALED, ALL CONTROL JOINTS TO BE CAULKED FILLED AND LEVELED FLUSH WITH FINISHED FLOOR.
03/007	PRECAST CONCRETE BOLLARD. SEE DETAIL 6/A001
03/009	CONCRETE TILT-UP PANEL PAINTED COLOR SW7069 IRON ORE. SEE STRUCTURAL (SACK AND PATCH, PRIME, AND PAINT FINISH)
05/001	STRUCTURAL STEEL COLUMN - SEE STRUCTURAL
05/007	METAL JOISTS - PER STRUCTURAL FOR SIZE AND SPACING
05/020	METAL GIRDERS - PER STRUCTURAL FOR SIZE AND SPACING
05/024	METAL CAP FASCIA, CAVIAR BLACK SEAM
05/028	ROOF ACCESS HATCH
07/002	60 MIL TPO ROOF OVER RIDGID POLYI INSULATION ON METAL DECK FULLY ADHEARRED, 20 YEAR WARRANTY W/ RHINO BOND AND 90 MPH WARRANTY. R-RATED PER COMCHECK ON SHEET G003.
08/001	STOREFRONT WINDOW SYSTEM - PROVIDE SUBMITTAL FOR APPROVAL , SEE SCHEDULE
08/010	2' x 4'-6" UPPER LEVEL WINDOWS - PROVIDE SUBMITTAL FOR APPROVAL
10/004	EXTERIOR SIGNAGE BY OWNER. SIGNAGE IS TO BE REVIEWED AND PERMITTED UNDER A SEPARATE SIGN PERMIT APPLICATION
26/006	EXTERIOR LIGHTING FIXTURES, SEE ELECTRICAL SHEETS



1 A301 **BUILDING SECTION 01**
3/32" = 1'-0"



2 A301 **BUILDING SECTION 02**
3/32" = 1'-0"

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☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
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BUILDING SECTIONS

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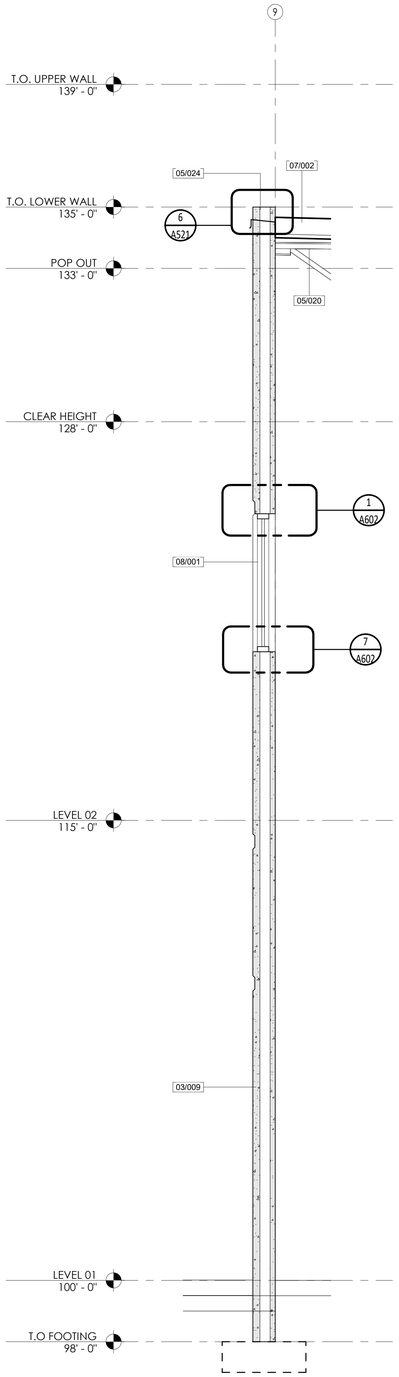
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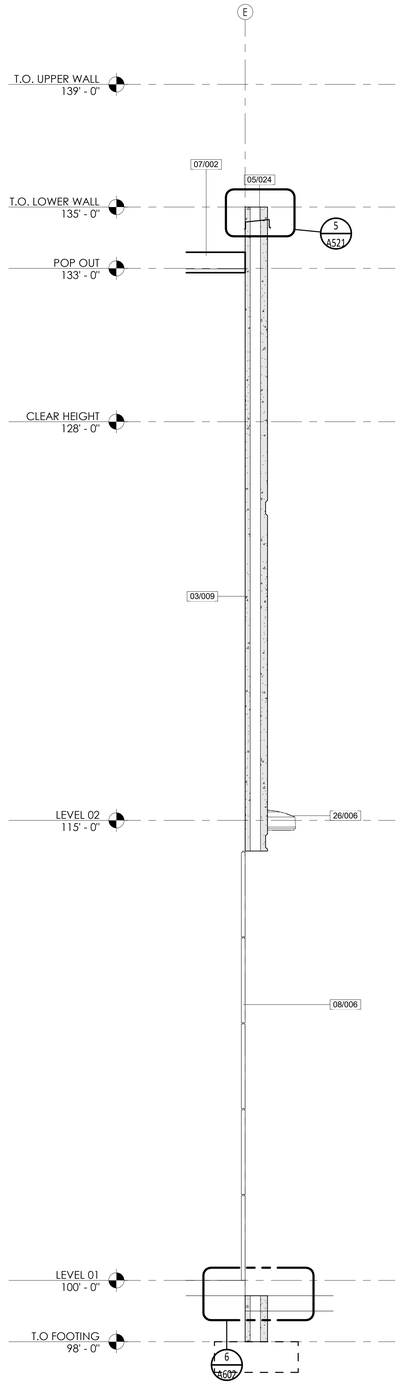
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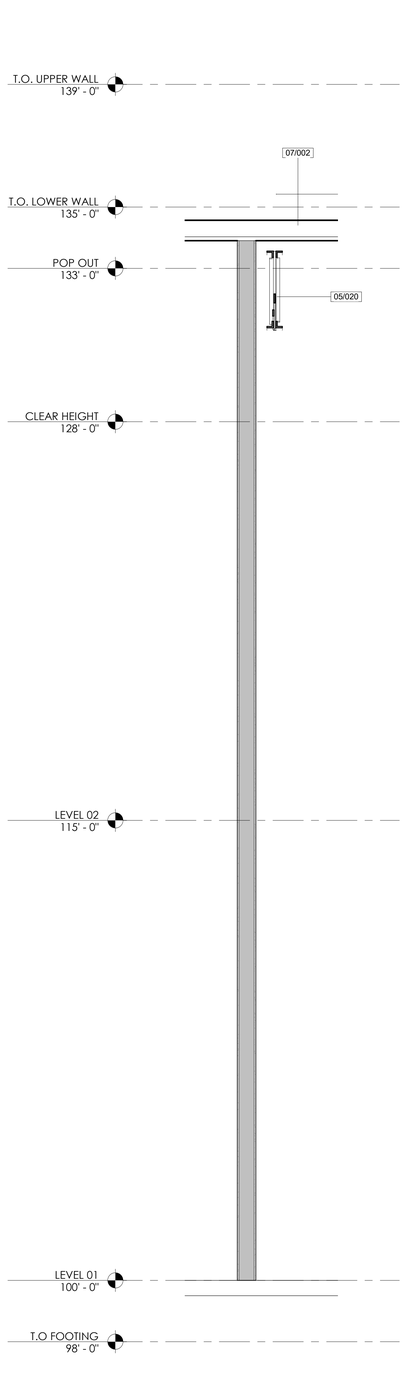
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Key Value	Keynote Text
03/009	CONCRETE TILT-UP PANEL PAINTED COLOR SW7069 IRON ORE. SEE STRUCTURAL (SACK AND PATCH, PRIME, AND PAINT FINISH)
05/020	METAL GIRDERS - PER STRUCTURAL FOR SIZE AND SPACING
05/024	METAL CAP FASCIA, CAVIAR BLACK SEAM
07/002	60 MIL TPO ROOF OVER RIDGID POLYI INSULATION ON METAL DECK FULLY ADHEARRED, 20 YEAR WARRANTY W/ RHINO BOND AND 90 MPH WARRANTY, R-RATED PER COMCHECK ON SHEET G003.
08/001	STOREFRONT WINDOW SYSTEM - PROVIDE SUBMITTAL FOR APPROVAL , SEE SCHEDULE
08/006	OVERHEAD GRADE LEVEL DOOR - SEE SCHEDULE
26/006	EXTERIOR LIGHTING FIXTURES, SEE ELECTRICAL SHEETS



3 A311 **WALL SECTION 03**
1/2" = 1'-0"



2 A311 **WALL SECTION 02**
1/2" = 1'-0"



1 A311 **WALL SECTION 01**
1/2" = 1'-0"

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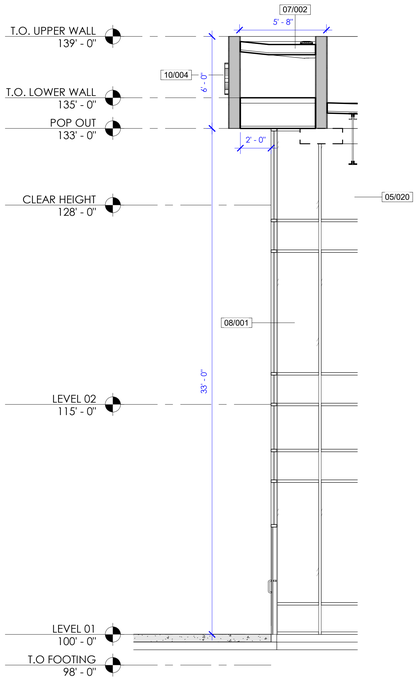
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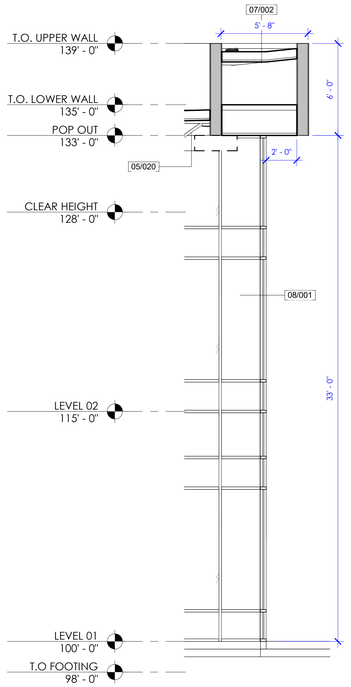
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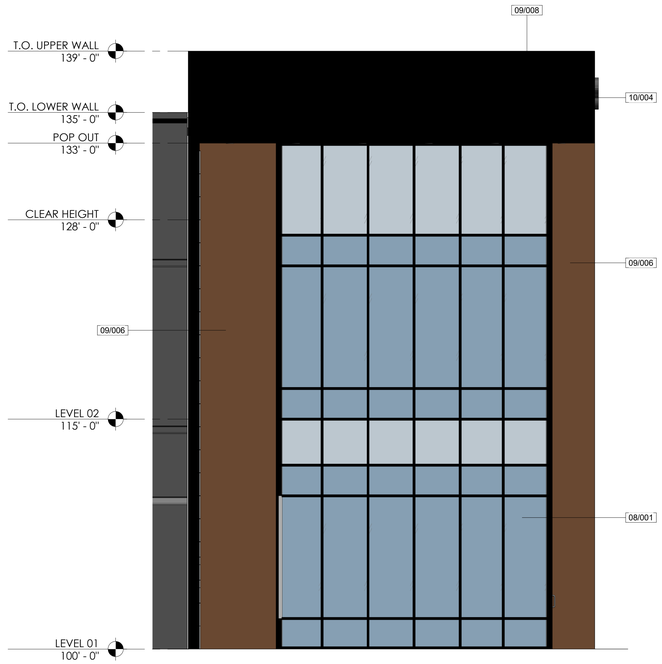
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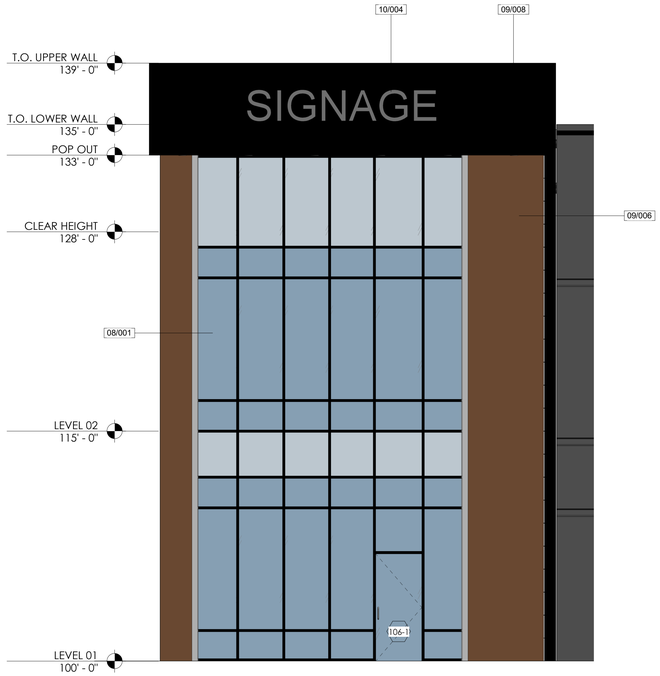
4 A321 **CORNER ENTRANCE 01 SECTION 01**
1/4" = 1'-0"



2 A321 **CORNER ENTRANCE 01 SECTION 02**
1/4" = 1'-0"



5 A321 **CORNER ENTRANCE 01 ELEVATION 02**
1/4" = 1'-0"



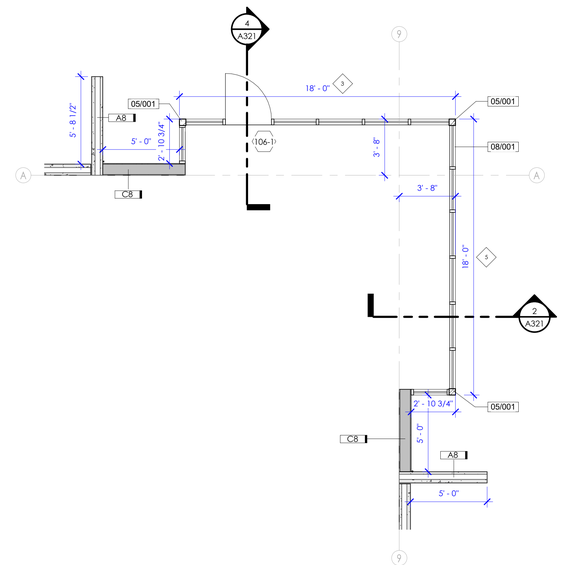
3 A321 **CORNER ENTRANCE 01 ELEVATION 01**
1/4" = 1'-0"

GENERAL NOTES:

1. INTERIOR DIMENSION AT FACE OF STUD. EXTERIOR DIMENSIONS AT FACE OF TILT-UP PANEL.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY ALL COLORS AND MATERIALS.
3. INSTALL ALL MATERIALS PER MANUFACTURERS RECOMMENDATION.
4. ALL GYP. BOARD SURFACES TO BE TAPED, SANDED, AND PRIMED.
5. SEE STRUCTURAL DRAWINGS AND CALCULATIONS FOR ALL STRUCTURAL REQUIREMENTS.
6. COORDINATE ALL WINDOWS HEAD HEIGHTS AND SIZES WITH ELEVATIONS AND SCHEDULES.
7. FIRE RATED ASSEMBLIES SHALL BE CONTINUOUS BOTH HORIZONTALLY AND VERTICALLY AND SHALL EXTEND FROM RATED ASSEMBLY TO RATED ASSEMBLY. FIRE CAULK ALL PENETRATIONS.
8. FIRE EXTINGUISHERS, SMOKE DETECTORS, OTHER EMERGENCY DEVICE LOCATIONS, AND RATINGS SHALL BE APPROVED BY FIRE MARSHAL PRIOR TO INSTALLATION.
9. FRAMING CONTRACTOR SHALL PROVIDE ADDITIONAL BLOCKING THROUGHOUT THE PROJECT AS REQUIRED TO ACCOMMODATE WALL-MOUNTED FURNISHINGS, ARTWORK, ETC.
10. DOORS SHALL BE LOCATED 6" OFF OF ADJACENT WALL UNLESS NOTED OTHERWISE.
11. CONTRACTOR IS TO PROVIDE SUBMITTALS AND SHOP DRAWINGS ON ALL KEYNOTED ITEMS FOR APPROVAL FROM OWNER/ARCHITECT.
12. PRIOR TO ORDERING ANY EXTERIOR FINISHES, THE CONTRACTOR IS TO VERIFY ALL COLORS AND TYPES OF MATERIALS WITH OWNER/ARCHITECT
13. ALL ASPECTS OF THIS PROJECT SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND THE ASSOCIATED DETAILS - SEE G003 AND G004. IF CONFLICTS OCCUR WHICH MAKE COMPLIANCE WITH THE ADA IMPOSSIBLE, NOTIFY ARCHITECT IMMEDIATELY BEFORE CONTINUING THE WORK.

Keynote Legend

Key Value	Keynote Text
05/001	STRUCTURAL STEEL COLUMN - SEE STRUCTURAL
05/020	METAL GIRDERS - PER STRUCTURAL FOR SIZE AND SPACING
07/002	60 MIL TPO ROOF OVER RIDGID POLYI INSULATION ON METAL DECK FULLY ADHEARRED. 20 YEAR WARRANTY W/ RHINO BOND AND 90 MPH WARRANTY. R-RATED PER COMCHECK ON SHEET G003.
08/001	STOREFRONT WINDOW SYSTEM - PROVIDE SUBMITTAL FOR APPROVAL , SEE SCHEDULE
09/006	METAL PANELING SIDING SYSTEM WITH KNOTWOOD, PROVIDE SUBMITTAL FOR APPROVAL
09/008	BLACK METAL PANEL SYSTEM, PROVIDE SUBMITTAL FOR APPROVAL
10/004	EXTERIOR SIGNAGE BY OWNER, SIGNAGE IS TO BE REVIEWED AND PERMITTED UNDER A SEPARATE SIGN PERMIT APPLICATION



1 A321 **CORNER ENTRANCE 01 PLAN**
1/4" = 1'-0"

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☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
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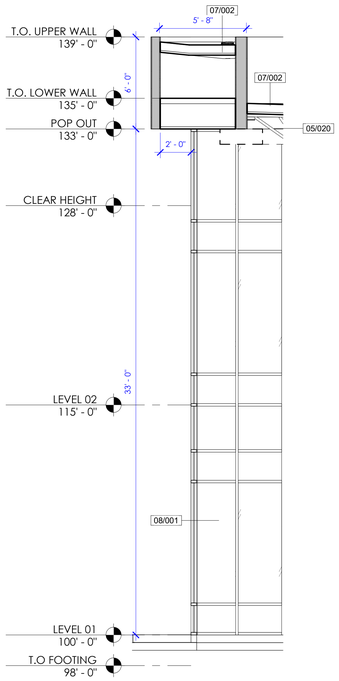
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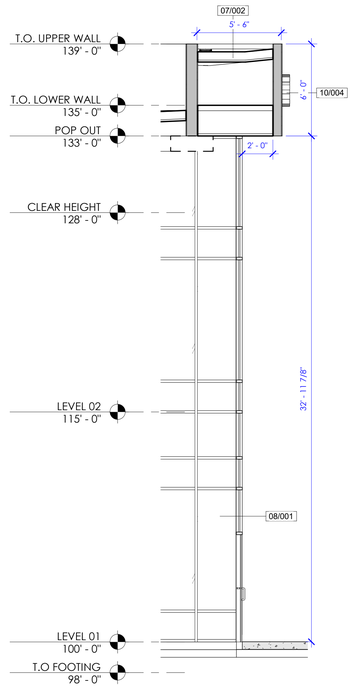
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3 A322 **CORNER ENTRANCE 02 SECTION 02**
1/4" = 1'-0"



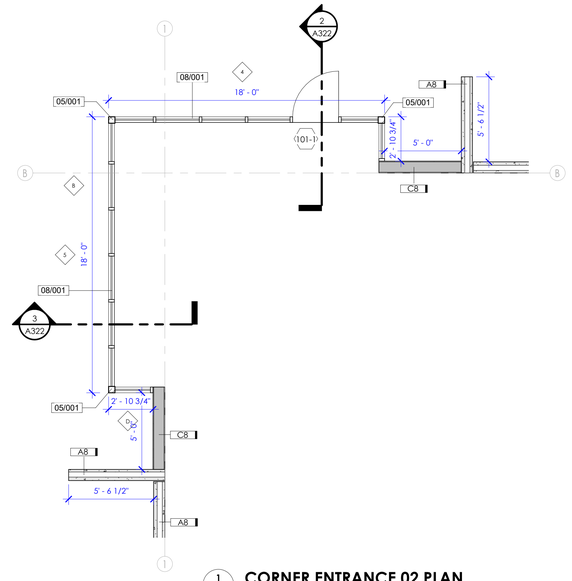
2 A322 **CORNER ENTRANCE 02 SECTION 01**
1/4" = 1'-0"

GENERAL NOTES:

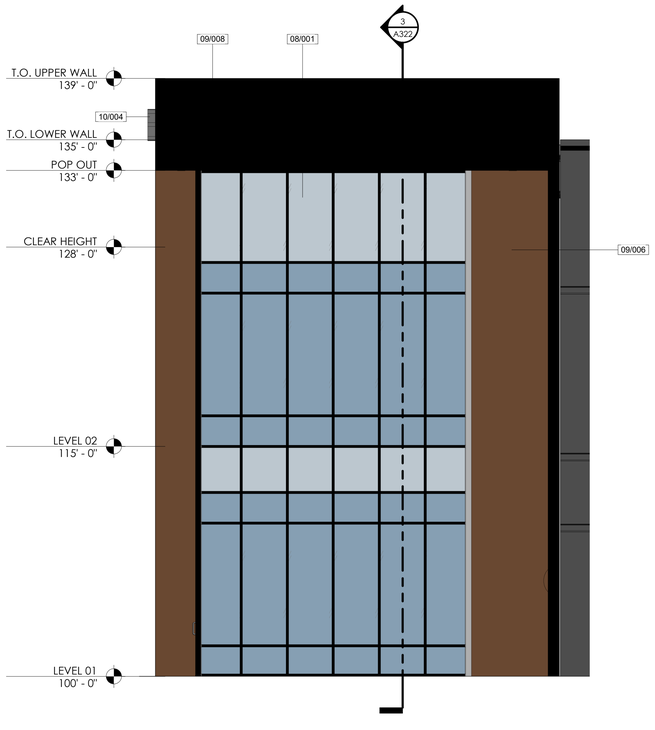
1. INTERIOR DIMENSION AT FACE OF STUD. EXTERIOR DIMENSIONS AT FACE OF TILT-UP PANEL.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY ALL COLORS AND MATERIALS.
3. INSTALL ALL MATERIALS PER MANUFACTURERS RECOMMENDATION.
4. ALL GYP. BOARD SURFACES TO BE TAPED, SANDED, AND PRIMED.
5. SEE STRUCTURAL DRAWINGS AND CALCULATIONS FOR ALL STRUCTURAL REQUIREMENTS.
6. COORDINATE ALL WINDOWS HEAD HEIGHTS AND SIZES WITH ELEVATIONS AND SCHEDULES.
7. FIRE RATED ASSEMBLIES SHALL BE CONTINUOUS BOTH HORIZONTALLY AND VERTICALLY AND SHALL EXTEND FROM RATED ASSEMBLY TO RATED ASSEMBLY, FIRE CAULK ALL PENETRATIONS.
8. FIRE EXTINGUISHERS, SMOKE DETECTORS, OTHER EMERGENCY DEVICE LOCATIONS, AND RATINGS SHALL BE APPROVED BY FIRE MARSHAL PRIOR TO INSTALLATION.
9. FRAMING CONTRACTOR SHALL PROVIDE ADDITIONAL BLOCKING THROUGHOUT THE PROJECT AS REQUIRED TO ACCOMMODATE WALL-MOUNTED FURNISHINGS, ARTWORK, ETC.
10. DOORS SHALL BE LOCATED 6" OFF OF ADJACENT WALL UNLESS NOTED OTHERWISE.
11. CONTRACTOR IS TO PROVIDE SUBMITTALS AND SHOP DRAWINGS ON ALL KEYNOTED ITEMS FOR APPROVAL FROM OWNER/ARCHITECT.
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13. ALL ASPECTS OF THIS PROJECT SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND THE ASSOCIATED DETAILS - SEE G003 AND G004. IF CONFLICTS OCCUR WHICH MAKE COMPLIANCE WITH THE ADA IMPOSSIBLE, NOTIFY ARCHITECT IMMEDIATELY BEFORE CONTINUING THE WORK.

Keynote Legend

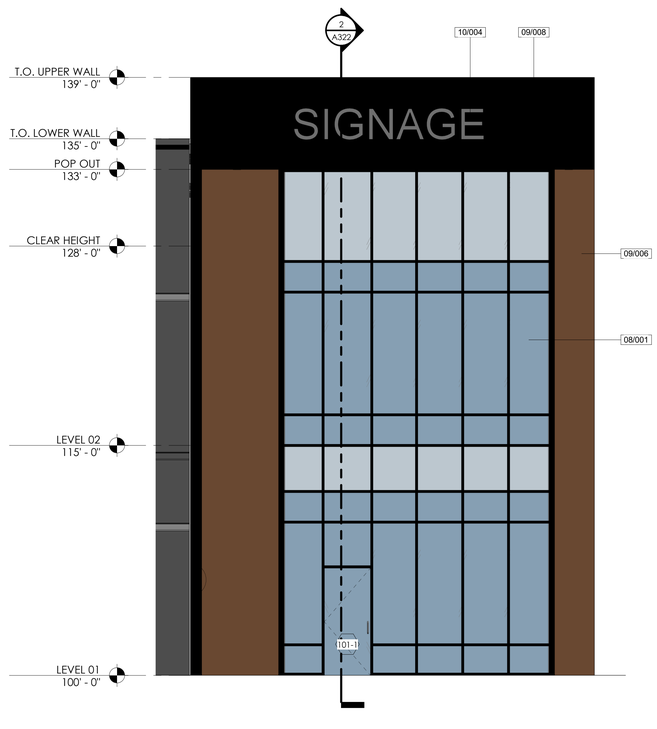
Key Value	Keynote Text
05/001	STRUCTURAL STEEL COLUMN - SEE STRUCTURAL
05/020	METAL GIRDERS - PER STRUCTURAL FOR SIZE AND SPACING
07/002	60 MIL TPO ROOF OVER RIDGID POLYI INSULATION ON METAL DECK FULLY ADHEARRED, 20 YEAR WARRANTY W/ RHINO BOND AND 90 MPH WARRANTY, R-RATED PER COMCHECK ON SHEET G003.
08/001	STOREFRONT WINDOW SYSTEM - PROVIDE SUBMITTAL FOR APPROVAL , SEE SCHEDULE
09/006	METAL PANELING SIDING SYSTEM WITH KNOTWOOD, PROVIDE SUBMITTAL FOR APPROVAL
09/008	BLACK METAL PANEL SYSTEM, PROVIDE SUBMITTAL FOR APPROVAL
10/004	EXTERIOR SIGNAGE BY OWNER. SIGNAGE IS TO BE REVIEWED AND PERMITTED UNDER A SEPARATE SIGN PERMIT APPLICATION



1 A322 **CORNER ENTRANCE 02 PLAN**
1/4" = 1'-0"



5 A322 **CORNER ENTRANCE 02 ELEVATION 02**
1/4" = 1'-0"



4 A322 **CORNER ENTRANCE 02 ELEVATION 01**
1/4" = 1'-0"

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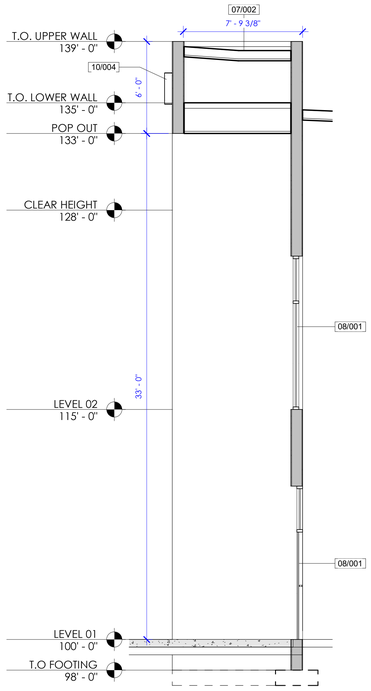
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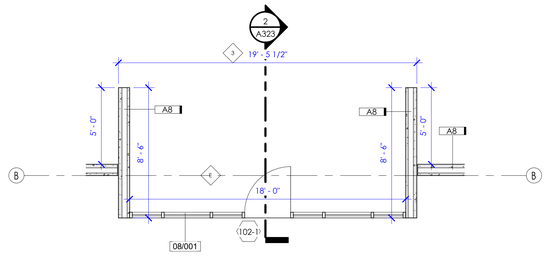
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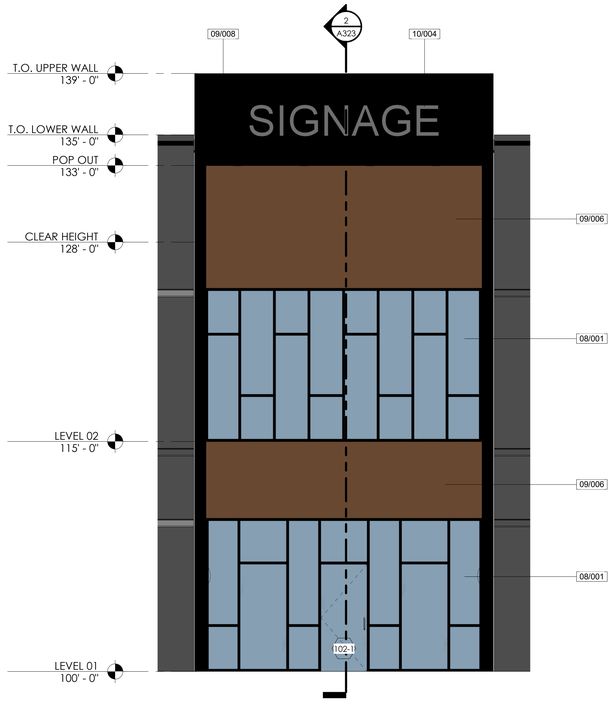
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2 A323 **TYPICAL ENTRANCE SECTION 01**
1/4" = 1'-0"



1 A323 **TYPICAL ENTRANCE PLAN**
1/4" = 1'-0"



3 A323 **TYPICAL ENTRANCE ELEVATION 01**
1/4" = 1'-0"

GENERAL NOTES:

1. INTERIOR DIMENSION AT FACE OF STUD. EXTERIOR DIMENSIONS AT FACE OF TILT-UP PANEL.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY ALL COLORS AND MATERIALS.
3. INSTALL ALL MATERIALS PER MANUFACTURERS RECOMMENDATION.
4. ALL GYP. BOARD SURFACES TO BE TAPED, SANDED, AND PRIMED.
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Keynote Legend

Key Value	Keynote Text
07/002	60 MIL TPO ROOF OVER RIDGID POLYI INSULATION ON METAL DECK FULLY ADHEARRED. 20 YEAR WARRANTY W/ RHINO BOND AND 90 MPH WARRANTY. R-RATED PER COMCHECK ON SHEET G003.
08/001	STOREFRONT WINDOW SYSTEM - PROVIDE SUBMITTAL FOR APPROVAL. SEE SCHEDULE
09/006	METAL PANELING SIDING SYSTEM WITH KNOTWOOD. PROVIDE SUBMITTAL FOR APPROVAL
09/008	BLACK METAL PANEL SYSTEM, PROVIDE SUBMITTAL FOR APPROVAL
10/004	EXTERIOR SIGNAGE BY OWNER. SIGNAGE IS TO BE REVIEWED AND PERMITTED UNDER A SEPARATE SIGN PERMIT APPLICATION

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SHEET #:

A323

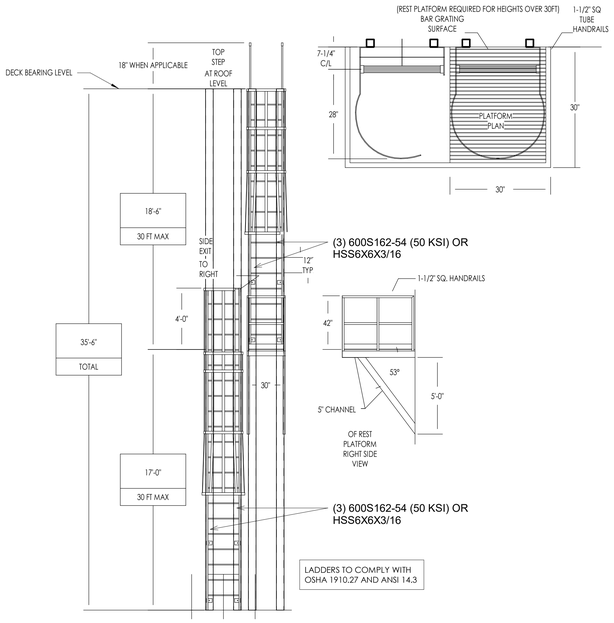
DESIGN DEVELOPMENT

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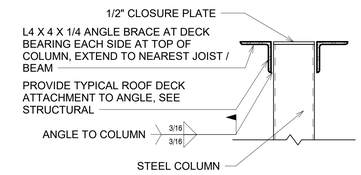
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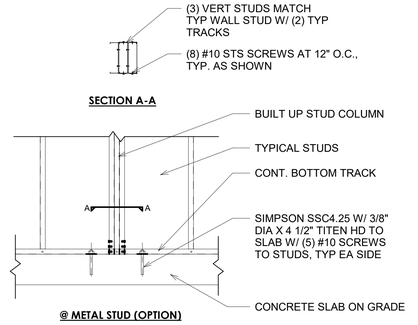
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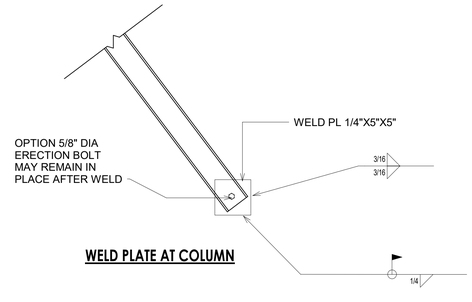
4 A501 **ROOF ACCESS AND LADDER DETAILS**
1/4" = 1'-0"



LADDER COLUMN AT ROOF DECK



3 A501 **ROOF ACCESS LADDER DETAILS**
1" = 1'-0"

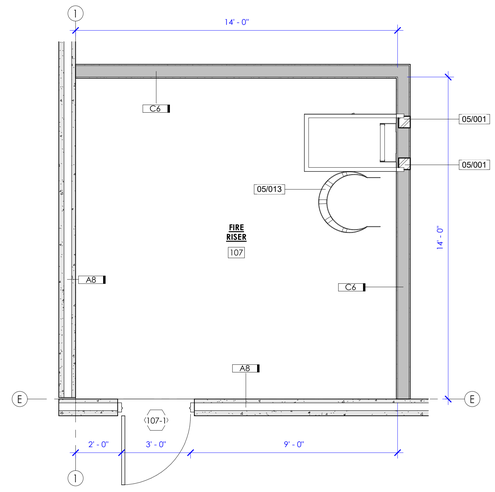


GENERAL NOTES:

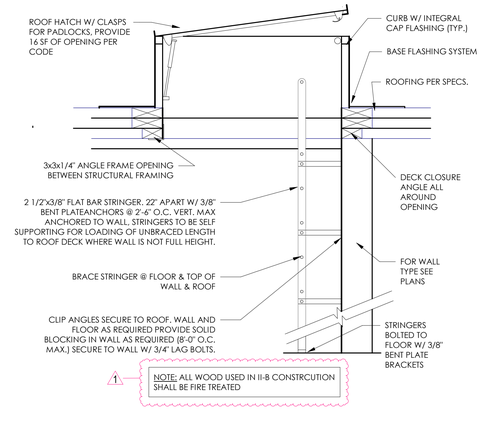
1. INTERIOR DIMENSION AT FACE OF STUD, EXTERIOR DIMENSIONS AT FACE OF TILT-UP PANEL.
2. PRIOR TO CONSTRUCTION, CONTRACTOR TO VERIFY ALL COLORS AND MATERIALS.
3. INSTALL ALL MATERIALS PER MANUFACTURERS RECOMMENDATION.
4. ALL GYP. BOARD SURFACES TO BE TAPED, SANDED, AND PRIMED.
5. SEE STRUCTURAL DRAWINGS AND CALCULATIONS FOR ALL STRUCTURAL REQUIREMENTS.
6. COORDINATE ALL WINDOWS HEAD HEIGHTS AND SIZES WITH ELEVATIONS AND SCHEDULES.
7. FIRE RATED ASSEMBLIES SHALL BE CONTINUOUS BOTH HORIZONTALLY AND VERTICALLY AND SHALL EXTEND FROM RATED ASSEMBLY TO RATED ASSEMBLY. FIRE CAULK ALL PENETRATIONS.
8. FIRE EXTINGUISHERS, SMOKE DETECTORS, OTHER EMERGENCY DEVICE LOCATIONS, AND RATINGS SHALL BE APPROVED BY FIRE MARSHAL PRIOR TO INSTALLATION.
9. FRAMING CONTRACTOR SHALL PROVIDE ADDITIONAL BLOCKING THROUGHOUT THE PROJECT AS REQUIRED TO ACCOMMODATE WALL-MOUNTED FURNISHINGS, ARTWORK, ETC.
10. DOORS SHALL BE LOCATED 6" OFF OF ADJACENT WALL UNLESS NOTED OTHERWISE.
11. CONTRACTOR IS TO PROVIDE SUBMITTALS AND SHOP DRAWINGS ON ALL KEYNOTED ITEMS FOR APPROVAL FROM OWNER/ARCHITECT.
12. PRIOR TO ORDERING ANY EXTERIOR FINISHES, THE CONTRACTOR IS TO VERIFY ALL COLORS AND TYPES OF MATERIALS WITH OWNER/ARCHITECT
13. ALL ASPECTS OF THIS PROJECT SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND THE ASSOCIATED DETAILS - SEE G003 AND G004. IF CONFLICTS OCCUR WHICH MAKE COMPLIANCE WITH THE ADA IMPOSSIBLE, NOTIFY ARCHITECT IMMEDIATELY BEFORE CONTINUING THE WORK.

Keynote Legend

Key Value	Keynote Text
05/001	STRUCTURAL STEEL COLUMN - SEE STRUCTURAL
05/013	ROOF ACCESS LADDER - PROVIDE SUBMITTAL FOR APPROVAL PRIOR TO FABRICATION



1 A501 **FIRE RISER ROOM PLAN**
3/8" = 1'-0"



2 A501 **ROOF ACCESS HATCH & LADDER1**
1" = 1'-0"

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FOR COMPLIANCE WITH THE FOLLOWING APPLICABLE CONSTRUCTION CODES AS NOTED BELOW:
BUILDING ☑ STRUCTURAL ☑
MECHANICAL ☑ PLUMBING ☑
ELECTRICAL ☑ ENERGY ☑
ACCESSIBILITY ☑ FIRE ☐
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

FIRE RISER ROOM PLANS AND DETAILS

DATE: **03/10/2021**

SHEET #:

A501

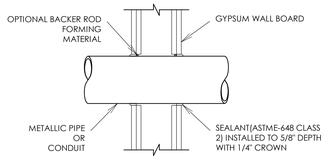
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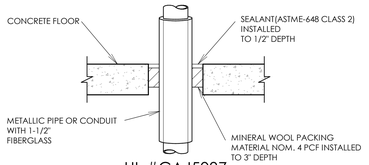
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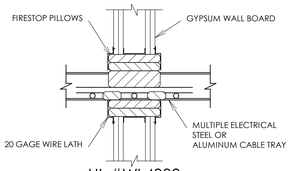
UL #WL1033, 1086

1 OR 2 HR FIRE RATING



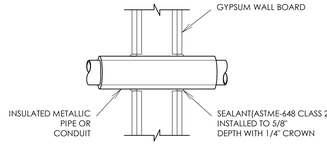
UL #CAJ5087

2 HR. FIRE RATING



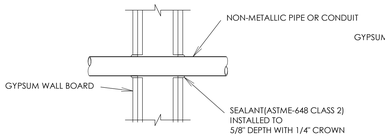
UL #WL4008

2 HR FIRE RATING



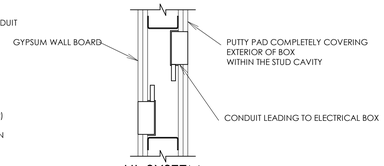
UL #WL5014

1 OR 2 HR FIRE RATING



UL #WL2093, 2100

1 OR 2 HR FIRE RATING



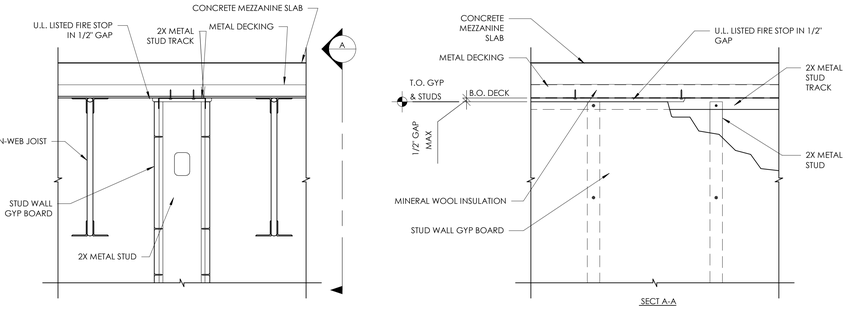
UL SYSTEM

1 OR 2 HR FIRE RATING

FIRE RATED PENETRATION

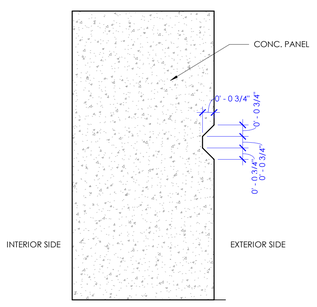
NOTES:

1. ALL PENETRATIONS TO BE CENTERED IN WEB.
2. REINFORCEMENT REQUIRED FOR PENETRATIONS WIDER THAN MANUFACTURER'S PUNCH OUT EXCEPT AS NOTED.
3. NO REINFORCEMENT REQUIRED FOR PENETRATION WIDTHS LESS THAN MANUFACTURER'S PUNCH OUT.
4. FLANGES SHALL NOT BE NOTCHED OR CUT.
5. GENERAL NOTES APPLY TO TRACK, STUDS, JOISTS, AND RAFTERS.



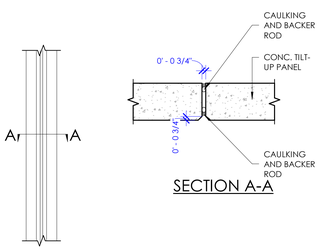
7 A511 **1-HOUR RATED WALL INTERSECTING MEZZANINE OR ROOF**

1 1/2" = 1'-0"



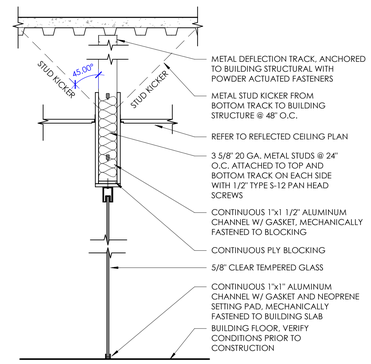
8 A511 **TYPICAL REVEAL DETAIL**

3" = 1'-0"



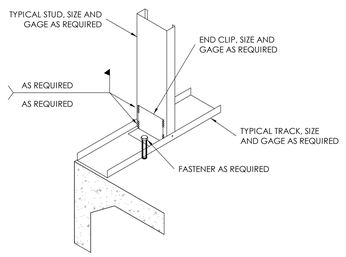
9 A511 **PANEL JOINT**

1" = 1'-0"



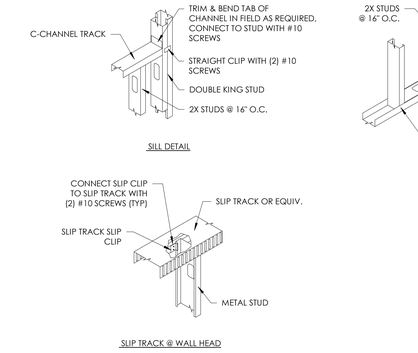
5 A511 **GLASS WALL PARTITION**

1" = 1'-0"



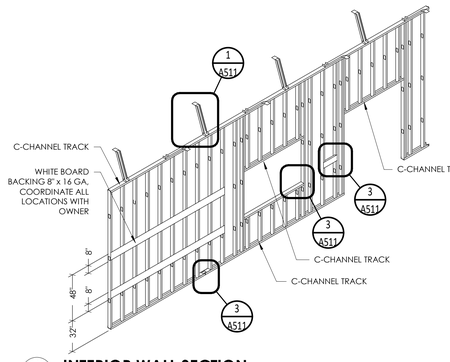
6 A511 **TYPICAL BASE CONNECTION**

3/4" = 1'-0"



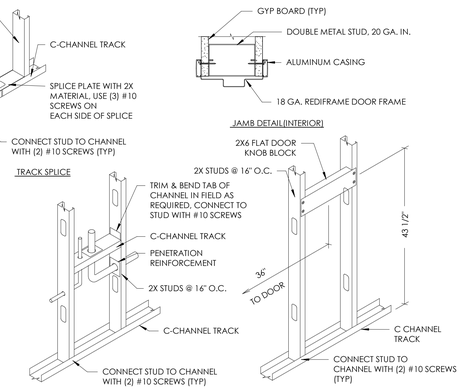
3 A511 **TYPICAL METAL FRAMING DETAILS**

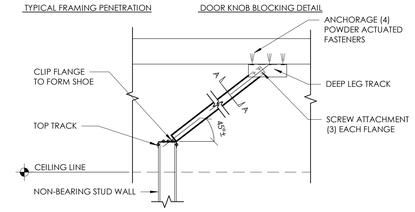
1" = 1'-0"



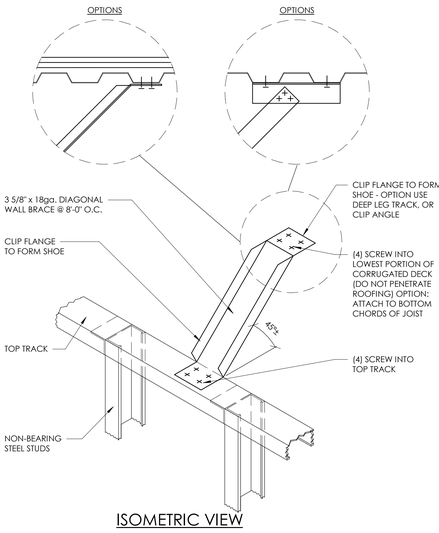
4 A511 **INTERIOR WALL SECTION**

1" = 1'-0"





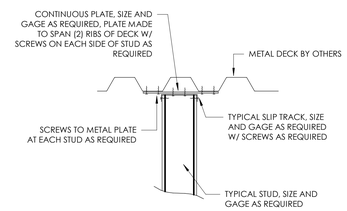
SIDE VIEW



ISOMETRIC VIEW

1 A511 **NON-BEARING INTERIOR WALL W/ BRACE**

1" = 1'-0"



2 A511 **CONNECTION TO METAL DECK**

3/4" = 1'-0"

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☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☐ ENERGY
☑ ACCESSIBILITY ☐ FIRE
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BY: DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule		
MARK	DESCRIPTION	Revision Date

AE2020.283

INTERIOR DETAILS

DATE: **03/10/2021**

SHEET #:

A511

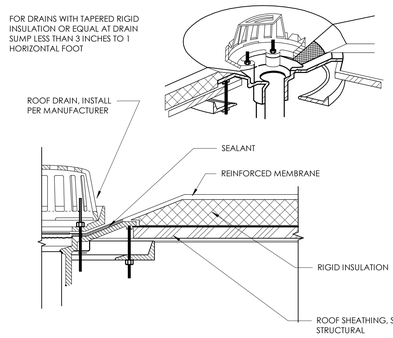
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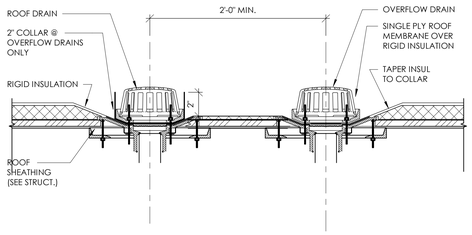
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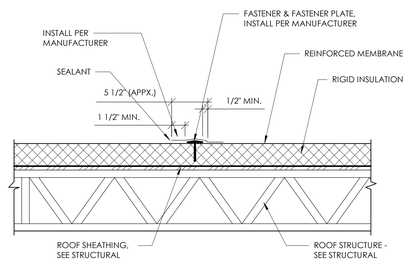
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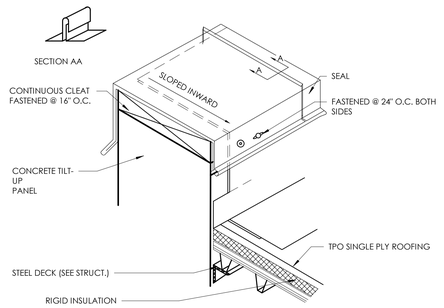
9 A521 ROOF DRAIN
1" = 1'-0"



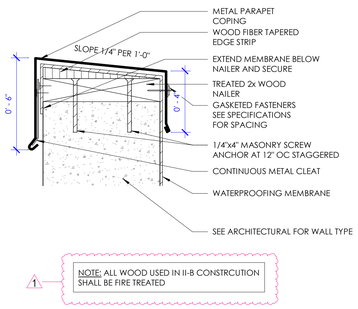
10 A521 ROOF DRAIN SECTION DETAIL
1" = 1'-0"



11 A521 LAP CROSS SECTION
1" = 1'-0"

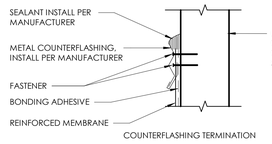


5 A521 COPING DETAIL
1" = 1'-0"

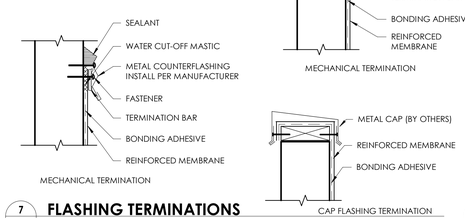


1 NOTE: ALL WOOD USED IN II-B CONSTRCUTION SHALL BE FIRE TREATED

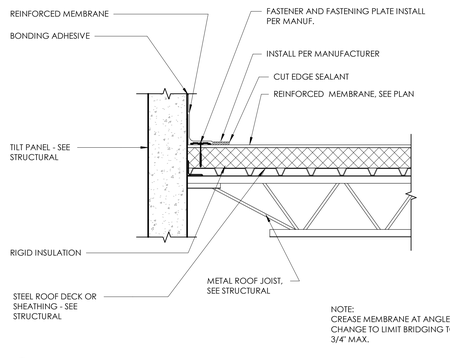
6 A521 COPING DETAIL
3" = 1'-0"



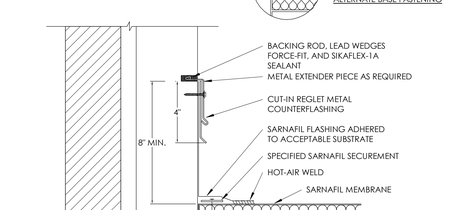
7 A521 FLASHING TERMINATIONS
1" = 1'-0"



8 A521 FLASHING @ TILT PANEL
1" = 1'-0"

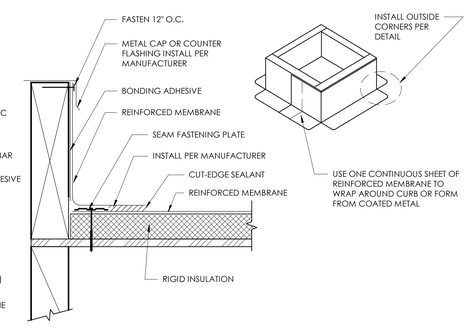


1 A521 CUT IN REGLET
3" = 1'-0"

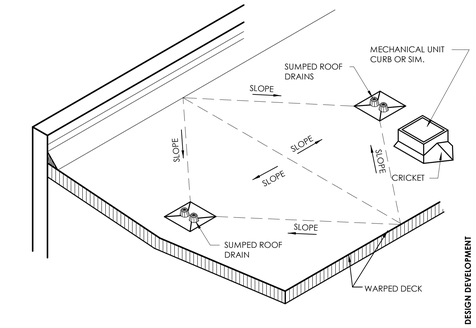


NOTES:
1) METAL EXTENDER PIECE IS REQUIRED IF INTERFLASHING IS CONTAMINATED AND OR COUNTERFLASHING FASCIA IS LESS THAN 4-INCHES WIDE.
2) METAL COUNTERFLASHING IS TO BE INSTALLED TO MEET LOCAL CODES AND REQUIREMENTS.
3) VAPOR BARRIER SHALL BE SEALED AT EDGES.

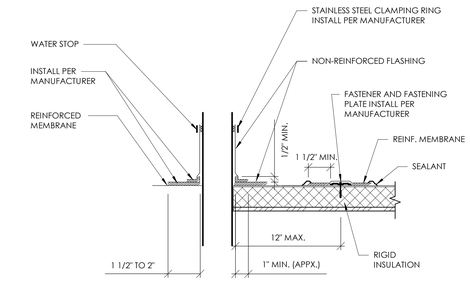
2 A521 FIELD FABRICATED PIPE FLASHING
1" = 1'-0"



3 A521 CURB FLASHING
1" = 1'-0"



4 A521 CRICKET DETAIL
1" = 1'-0"



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AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

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1	CITY REVIEW COMMENTS	07/12/2021

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ROOF DETAILS

DATE: 03/10/2021

SHEET #:

A521

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DOOR PANEL NOTES:

WOOD DOORS: PLAIN SLICED RED OAK WITH OAK EDGES, PRE-FINISHED TO CLEARFINISH, CLEAR-500, LD 2 PARTICALE BOARD CORE (MINERAL CORE AS REQUIRED BY FIRE RATING), PREMIUM GRADE A, FIVE PLY WITH MATCHING EDGES MANUFACTURERS LIFE-TIME WARRANY.
HOLLOW METAL EXTERIOR: 16 GAGE GALVANIZED DOORS WITH SEALED TOP CAPS AND 16 GAGE GALVANIZED WELDED FRAMES, ALL PRIM PAINTED.
HOLLOW METAL INTERIOR: 18 GAGE DOORS AND 16 GAGE WELDED FRAMES, ALL PRIME PAINTED.
ALL HOLLOW METAL FRAMES: TO BE PAINTED "FIRE STEEL" DURON 8794M, SEMI GLOSS.

DOOR HARDWARE NOTES:

HINGES: BALL BEARING HINGES THRU-OUT, STAINLESS STEEL AT EXTERIOR.
LOCKS: GRADE 1, SERIES 4000 SCHLAGE ND SERIES OR ALL LOCKS TO BE MASTERKEYED, GRANDMASTER KEYED PER OWNERS REQUIREMENTS. ALL LOCKS NEED TO BE "PUSH AND TWIST," NOT JUST "PUSH"
CLOSERS: GRADE 1 EQUAL TO LCN 4000 SERIES OR STANLEY EQUAL.
THRESHOLDS, DRIP CAPS, SWEEPS AND WEATHER STRIP: PEMKO OR NATIONAL GUARD
DOOR STOPS: EACH DOOR WITH A CLOSER NEEDS A HEAVY DUTY DOOR STOP OVERHEAD.
EGRESS DOORS: EACH EGRESS DOOR EXCEPT THE MAIN EXTERIOR FRONT ENTRANCE NEEDS TO HAVE A PANIC PUSH BAR.

KEYING TYPE

PVCY	=	PRIVACY LOCKS
KEY	=	KEYED LOCK
TB	=	THUMB BOLT
CR	=	CARD READER
MG	=	MAGNETIC LOCK
ES	=	ELECTRIC STRICK
KOTB	=	KEY OUTSIDE, THUMB TURN INSIDE
TBMK	=	DEADBOLTS, MARKED LOCKED/UNLOCKED
LO	=	LOCK SET KEYED OUTSIDE
DBK	=	DEADBOLT KEYED BOTH SIDES
KOPB	=	KEY OUTSIDE, PANIC PUSH BAR INSIDE

GENERAL NOTES:

1. ALL DOOR HARDWARE TO BE LEVEL TYP MECHANISMS.
2. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
3. MASTER KEY ALL LOCKSETS WITH IC-CORES.
4. MANUAL FLUSH BOLTS FOR THE DOUBLE DOORS ARE ONLY ALLOWED IN THE INACTIVE DOOR ACCESSING MECHANICAL AND STORAGE ROOMS.
5. PROVIDE DOOR STOPS OR BUMPERS @ ALL DOOR LOCATIONS WHERE DOOR COMES IN CONTACT WITH ADJACENT WALL. COORDINATE TYPE AND PLACEMENT WITH OWNER.
6. ALL ALUMINUM FRAMES TO BE KAWNEER METAL FRAMES OR EQUAL.
7. ALL KNOCK-DOWN & WELD FRAMES TO BE PAINT GRADE.
8. ALL FIRE RATED DOORS AND ASSEMBLIES SHALL BE LABELED BY AN APPROVED TESTING LABRATORY INDICATING THE RATING OF THE DOOR.

FOOTNOTES:

A. ENTRY DEADBOLT TO HAVE INDICATOR OF LOCKED OR UNLOCKED, DOOR TO HAVE SIGN "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED".

B. PROVIDE A SIGN INDICATING "FIRE RISER" 4 LETTERS MIN. W/ CONTRASTING BACKGROUND

C. PROVIDE A SIGN INDICATING "FIRE ALARM PANEL" 4 LETTERS MIN. W/ CONTRASTING BACKGROUND

D. OVERHEAD/DOCK DOOR: PER SUBMITTAL
MOTOR: PER SUBMITTAL
FRAME: PER SUBMITTAL
SPRING: PER SUBMITTAL

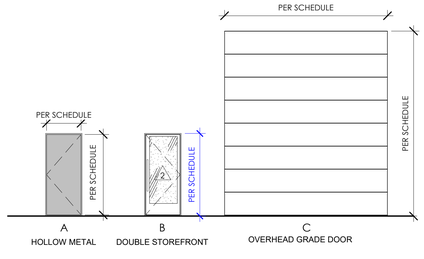
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1

DOOR SCHEDULE

	DOOR					DOOR FRAME																								
MARK	WIDTH	HEIGHT	THICKNESS	DOOR PANEL	PANEL TYPE	FRAME MATERIAL	DOOR FRAME BUTT	DOOR FRAME CAP	DOOR FRAME (THROAT DIM)	GLAZING	FIRE RATING	DOOR SWING	CLOSER	PUSH PULL	KICKPLATE	LEVER	PANIC HARDWARE CRASHBAR LEVER	WEATHER STRIPPING	THRESHOLD	SILENCER	DOOR STOP	SWEEP	HINGE COUNT	KEY TYPE	FOOTNOTES
101-1	3' - 0"	7' - 0"		GLASS	B	HM				YES		LHR		o				•	•			•	3	LO	A
101-2	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		LHR	•		•	•	•	•	•	•	•	•	3	KOPB	
101-3	12' - 0"	14' - 0"		METAL	C	-				NO		OHD											-	OHD	D
101-4	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		LHR	•		•	•	•	•	•	•	•	•	3	KOPB	
102-1	3' - 0"	7' - 0"		GLASS	B	HM				YES		LHR		o				•	o	•		•	3	LO	A
102-2	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		LHR	•		•	•	•	•	•	•	•	•	3	KOPB	
102-3	12' - 0"	14' - 0"		METAL	C	-				NO		OHD											-	OHD	D
103-1	3' - 0"	7' - 0"		GLASS	B	HM				YES		LHR		o				•	o	•		•	3	LO	A
103-2	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		LHR	•		•	•	•	•	•	•	•	•	3	KOPB	
103-3	12' - 0"	14' - 0"		METAL	C	-				NO		OHD											-	OHD	D
104-1	3' - 0"	7' - 0"		GLASS	B	HM				YES		RHR		o				•	o	•		•	3	LO	A
104-2	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		LHR	•		•	•	•	•	•	•	•	•	3	KOPB	
104-3	12' - 0"	14' - 0"		METAL	C	-				NO		OHD											-	OHD	D
105-1	2' - 10"	6' - 9"		GLASS	B	HM				YES		LHR		o				•	o	•		•	3	LO	A
105-2	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		LHR	•		•	•	•	•	•	•	•	•	3	KOPB	
105-3	12' - 0"	14' - 0"		METAL	C	-				NO		OHD											-	OHD	D
106-1	3' - 0"	7' - 0"		GLASS	B	HM				YES		RHR		o				•	o	•		•	3	LO	A
106-2	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		LHR	•		•	•	•	•	•	•	•	•	3	KOPB	
106-3	12' - 0"	14' - 0"		METAL	C	-				NO		OHD											-	OHD	D
106-4	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		RHR	•		•	•	•	•	•	•	•	•	3	KOPB	
107-1	3' - 0"	7' - 0"	0' - 1 3/4"	HM	A	HM				NO		LHR	•		•	•	•	•	•	•	•	•	3	KOPB	B, C



NOTE: ALL EXTERIOR OVERHEAD DOOS TO BE MIN. 90 MPH RATED PER IBC.

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MECHANICAL ☑ PLUMBING ☑
ELECTRICAL ☑ ENERGY ☑
ACCESSIBILITY ☑ FIRE ☐
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WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

DOOR SCHEDULES

DATE: **03/10/2021**

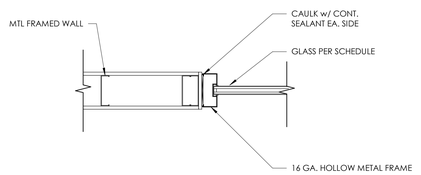
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A601

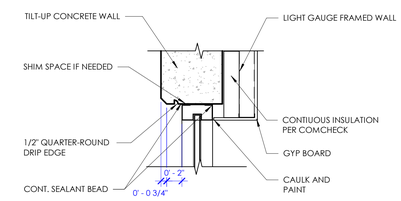
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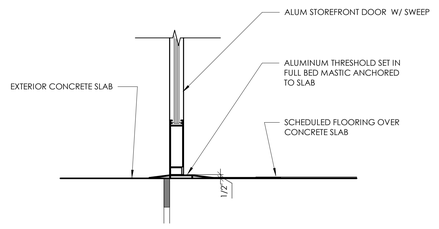
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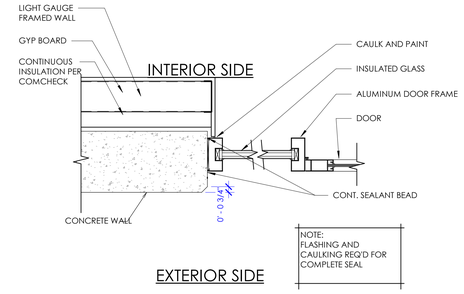
5 A602 HOLLOW MTL. JAMB DETAIL (FRAMED WALL)
1 1/2" = 1'-0"



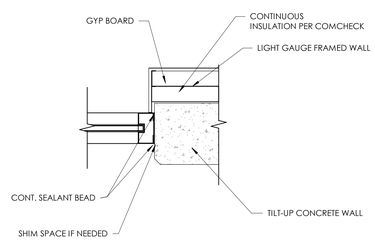
1 A602 WINDOW HEAD TILT PANEL (STOREFRONT)
1 1/2" = 1'-0"



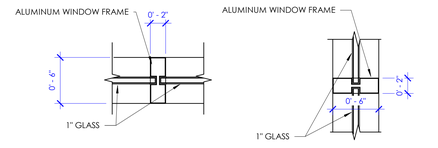
6 A602 ENTRY THRESHOLD DETAIL (STOREFRONT)
1 1/2" = 1'-0"



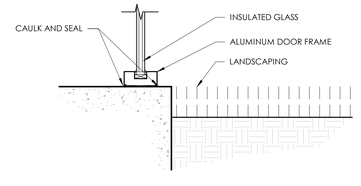
2 A602 WINDOW/DOOR JAMB TILT PANEL (STOREFRONT)
1 1/2" = 1'-0"



7 A602 WINDOW JAMB TILT PANEL (STOREFRONT)
1 1/2" = 1'-0"



3 A602 WINDOW MULLION DETAIL (STOREFRONT)
1 1/2" = 1'-0"



NOTE:
FLASHING AND CAULKING REQ'D FOR COMPLETE SEAL

4 A602 WINDOW SILL (STOREFRONT)
1 1/2" = 1'-0"

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☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☐ ENERGY
☑ ACCESSIBILITY ☐ IMC
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MARK	DESCRIPTION	Revision Date

Revision Schedule

AE2020.283

WINDOW AND DOOR DETAILS

DATE: 03/10/2021

SHEET #:

A602

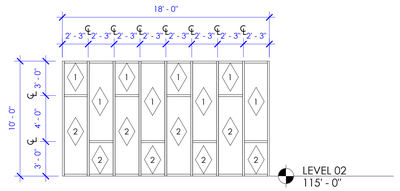
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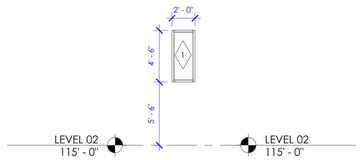
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J A603 **WINDOW TYPE "J"**
3/16" = 1'-0"



K A603 **WINDOW TYPE "K"**
3/16" = 1'-0"

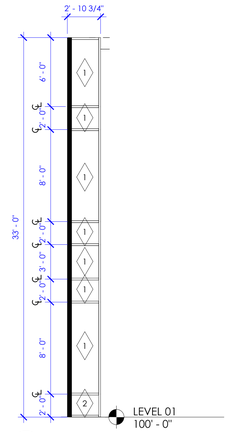
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GLAZING LEGEND

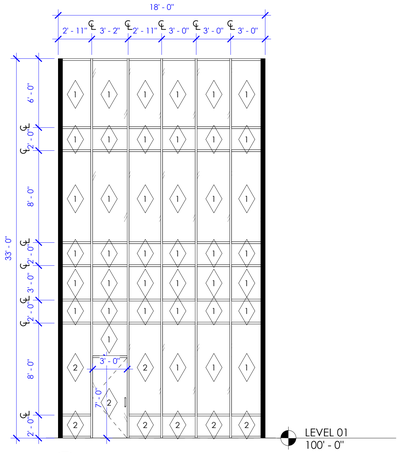
1 DOUBLE PANE LOW-E U-VALUE: 0.38 SHGC: 0.40

2 DOUBLE PANE LOW-E SAFETY GLAZING UFACTOR: 0.38 SHGC: 0.30

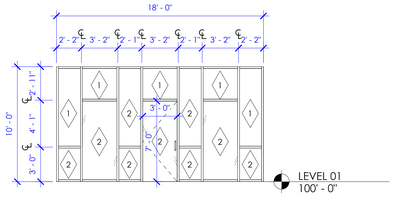
GLAZING NOTES
1. ALL ALUMINUM FRAMES TO BE DARK BRONZE.



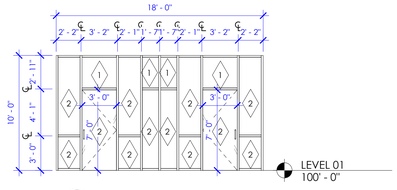
D A603 **WINDOW TYPE "D"**
3/16" = 1'-0"



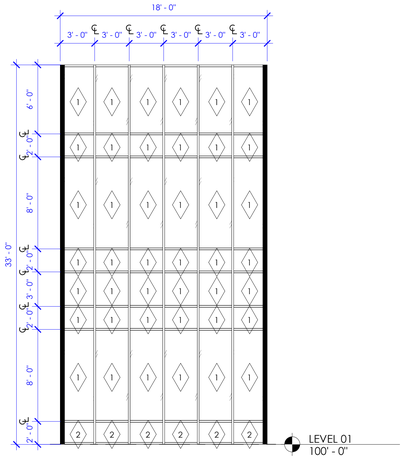
A A603 **WINDOW TYPE "A"**
3/16" = 1'-0"



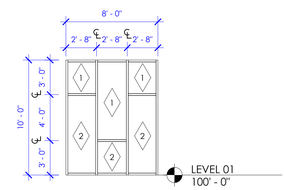
E A603 **WINDOW TYPE "E"**
3/16" = 1'-0"



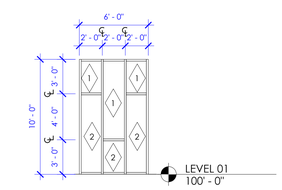
F A603 **WINDOW TYPE "F"**
3/16" = 1'-0"



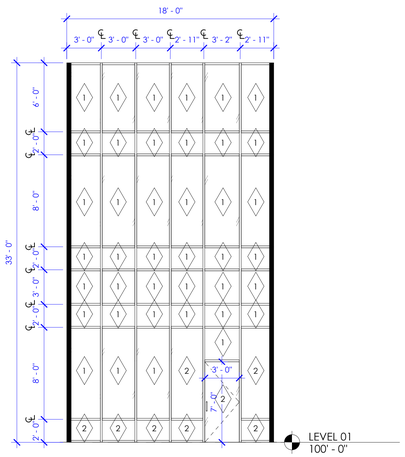
B A603 **WINDOW TYPE "B"**
3/16" = 1'-0"



G A603 **WINDOW TYPE "G"**
3/16" = 1'-0"



H A603 **WINDOW TYPE "H"**
3/16" = 1'-0"



C A603 **WINDOW TYPE "C"**
3/16" = 1'-0"

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AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

WINDOW ELEVATIONS

DATE: **03/10/2021**

SHEET #:

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DESIGN DEVELOPMENT

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DESIGN CODE

2018 INTERNATIONAL BUILDING CODE (IBC)

DESIGN CRITERIA

SEISMIC DESIGN CRITERIA

RISK CATEGORY	= II
SEISMIC IMPORTANCE FACTOR, Ie	= 1.0
SOIL SITE CLASS	= D
SEISMIC DESIGN CATEGORY	= D
CALCULATED BUILDING PERIOD, T	= 0.31 SECONDS
MAPPED SPECTRAL RESPONSE ACCELERATIONS	
SHORT PERIOD ACCELERATION, SS	= 1.285G
1-SECOND ACCELERATION, S1	= 0.467G
SEISMIC RESPONSE COEFFICIENTS	
SHORT PERIOD SITE COEFFICIENT, FA	= 1.00
LONG PERIOD SITE COEFFICIENT, FV	= 1.83
DESIGN SPECTRAL RESPONSE ACCELERATIONS	
SHORT PERIOD ACCELERATION, SDS	= 0.857G
1-SECOND ACCELERATION, SD1	= 0.571G

LATERAL FORCE RESISITING SYSTEM

SPECIAL REINFORCED CONCRETE SHEARWALLS:	
RESPONSE MODIFICATION FACTOR, R	= 5.0
SYSTEM OVERSTRENGTH FACTOR, ΩO	= 2.5
DEFLECTION AMPLIFICATION FACTOR, CD	= 5.0
SEISMIC RESPONSE COEFFICIENT, CS	= 0.171
SEISMIC ANALYSIS PROCEDURE	= E.L.F.
CALCULATED SEISMIC BASE SHEAR, VS	= 642 KIPS

WIND DESIGN CRITERIA

3 SECOND GUST WIND SPEED	= 103 MPH
WIND EXPOSURE	= C
INTERNAL PRESSURE COEFFICIENT	= ± 0.18
COMPONENT & CLADDING DESIGN PRESSURE BY HT)	= 30 PSF (VARIES
WIND ANALYSIS PROCEDURE:	= DIRECTIONAL
CALCULATED WIND BASE SHEAR, VW	= 132 KIPS

DESIGN LOADS

DESIGN LOADS ARE THOSE RECOMMENDED BY THE IBC, LOCAL BUILDING CODES, AND THOSE RECOMMENDED BY JMWA/AEURBIA. CHANGES TO THE DESIGN LOADS MUST BE SUBMITTED TO AND APPROVED IN WRITING BY THE OWNER AND JMWA/AEURBIA IN WRITING PRIOR TO FABRICATION OR CONSTRUCTION.

1. COLLATERAL LOAD(S) ARE DEFINED AS MECHANICAL AND/OR OTHER LOADS FOR USE IN THE FUTURE.

ROOF LOADS

ROOF DEAD LOAD	= 25PSF [20 PSF + 5 PSF (COLLATERAL)]
ROOF SNOW LOAD:	
GROUND SNOW LOAD, PG	= 31 PSF
SNOW IMPORTANCE FACTOR, IS	= 1.0
SNOW EXPOSURE FACTOR, CE	= 1.0
THERMAL FACTOR, CT	= 1.0
FLAT ROOF SNOW LOAD, PF	= 22 PSF + DRIFT

EARTHWORK

DESIGN CRITERIA

SOILS REPORT BY:	CMT
PROJECT NO.:	13084.0
DATE:	AUGUST 2, 2019

DESIGN VALUES:

SOIL BEARING PRESSURE:	1500 PSF
FROST PROTECTION:	30 INCHES
ENGINEERED STRUCTURAL FILL	AS REQ'D ON PLAN & SOILS REPORT
COEFFICENT OF FRICTION	0.3

REQUIREMENTS

1. ALL EARTHWORK, MATERIALS, AND PLACEMENT MUST MEET THE APPROVAL OF THE GEOTECHNICAL / SOILS ENGINEER.
2. THE CONTRACTOR AND OWNER SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL SITE SOIL CONDITIONS.
3. ANY UNFORESEEN CONDITIONS ENCOUNTERED DURING SITE PREPARATION SHALL BE BROUGHT TO THE ATTENTION OF THE SOILS ENGINEER AND ARCHITECT.
4. CONTRACTOR SHALL STRIP THE BUILDING AREA FROM ALL VEGETATION, DEBRIS, AND TOPSOIL. CONTRACTOR SHALL EXCAVATE ANY REMAINING LOOSE NATURAL OR FILL SOILS TO EXPOSE COMPETENT NATURAL SOILS. CONTRACTOR SHALL REMOVE EXISTING FOOTINGS, FOUNDATIONS, SLABS, SITE PAVING, DEBRIS, AND STRUCTURES AS REQUIRED.
5. CONTRACTOR SHALL CHECK FOR SOFT SPOTS OR OTHER UNSUITABLE SOILS BY PROOF ROLLING THE ENTIRE BUILDING PAD AREA WITH NORMAL COMPACTION EQUIPMENT. REMOVE UNSUITABLE MATERIALS AND REPLACE WITH COMPACTED ENGINEERED STRUCTURAL FILL OR 2,000 PSI LEAN CONCRETE, (FLOWABLE FILL).
6. ENGINEERED OR STRUCTURAL FILL MATERIAL BENEATH FOOTINGS SHALL MEET THE REQUIREMENTS OF SOILS REPORT AND SPECIFICATIONS.
7. SEE PLANS FOR THICKNESS OF ALL FLOOR SLABS. UNDERLAY ALL SLABS WITH AT LEAST A 4" THICK LAYER OF FREE-DRAINING GRANULAR MATERIAL. GRANULAR MATERIAL SHALL BE "PEA" GRAVEL OR 1" MINUS CLEAN GAP-GRADED GRAVEL.
8. BACKFILL AROUND FOUNDATION WALLS SHALL BE PERFORMED USING GRANULAR MATERIAL. CARE SHALL BE TAKEN IN PLACING BACKFILL MATERIALS SO AS NOT TO DAMAGE THE FOUNDATION. CONTRACTOR SHALL MONITOR BACKFILL OPERATIONS AS NEEDED.
9. REFER TO THE PROJECT SPECIFICATIONS AND SOILS REPORT FOR FURTHER EARTHWORK REQUIREMENTS.

GENERAL STRUCTURAL NOTES

1. GENERAL STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT PROJECT STRUCTURAL PLANS AND PROJECT SPECIFICATIONS. SPECIFIC NOTES ON PLANS, DETAILS, AND SCHEDULES SHALL GOVERN OVER THE GENERAL NOTES.
2. TYPICAL DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN.
3. DIMENSIONS SHOWN ON PLANS SHALL ARE FOR INFORMATION ONLY. CONSTRUCTION DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS FOR CONSTRUCTION OR SHOP DRAWINGS.
4. CHANGES TO THE CONTRACT DOCUMENTS MAY BE MADE ONLY BY WRITTEN AUTHORIZATION FROM AN AUTHORIZED REPRESENTATIVE OF J.M. WILLIAMS AND ASSOCIATES JMWA/AE URBIA. JMWA/AE URBIA SHALL BE HELD HARMLESS FOR ANY CLAIMS ARISING DIRECTLY OR INDIRECTLY FROM CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM AN AUTHORIZED REPRESENTATIVE OF JWMA/AE URBIA.
5. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS PRIOR TO CONSTRUCTION/FABRICATION AND SHALL IMMEDIATELY NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
6. THE STRUCTURAL DRAWINGS SHALL NOT BE CONSIDERED ALL INCLUSIVE AND DO NOT CONTAIN ALL DIMENSIONS, ELEVATIONS, AND OPENINGS, NEEDED FOR CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ARCHITECTURAL DRAWINGS, SITE CONDITIONS, AND OTHER TRADES INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, CIVIL, ELECTRICAL, AND PLUMBING.
7. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND/OR ENGINEER OF ANY DISCREPANCIES, OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, AND EXISTING CONDITIONS BEFORE PROCEEDING WITH THE CONSTRUCTION/FABRICATION OF ANY AFFECTED ELEMENTS. IN CASE OF CONFLICT, THE MOST STRINGENT REQUIREMENTS AS DIRECTED BY THE ARCHITECT/ENGINEER SHALL GOVERN AND BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.
8. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH ANY CHANGES, SUBSTITUTIONS, OR MODIFICATIONS. ANY CONSTRUCTION, FABRICATION, OR INSTALLATION PERFORMED BEFORE RECEIVING THE ARCHITECT/ENGINEERS WRITTEN APPROVAL WILL BE AT THE CONTRACTOR'S RISK/EXPENSE.
9. THE CONTRACTOR SHALL COORDINATE THE WORK PERFORMED BY ALL TRADES AND IS ULTIMATELY RESPONSIBLE FOR COMPLIANCE WITH CONTRACT DOCUMENTS AND CODE REQUIREMENTS. THE CONTRACTOR SHALL MEET ALL NOTED REQUIREMENTS AND SHALL INCLUDE THE ASSOCIATED COSTS IN THEIR RESPECTIVE BID.
10. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL TRADES AND SHALL NOTIFY ENGINEER OF SIZE AND LOCATION OF ANY EQUIPMENT OR OTHER ADDITIONAL LOADS NOT SHOWN ON STRUCTURAL PLANS OR TYPICAL DETAILS BEFORE CONSTRUCTION/FABRICATION.
11. FAILURE TO FOLLOW PLANS AND CONSTRUCTION DOCUMENTS CONSTITUTES CHANGE IN PROJECT SCOPE. THE ENGINEER RESERVES THE RIGHT TO REQUEST REPLACEMENT OF ANY PORTION OF THE STRUCTURE DEVIATING FROM THE PLANS WHERE WRITTEN APPROVAL HAS NOT BEEN OBTAINED. DEVIATION FROM CONSTRUCTION DOCUMENTS WITHOUT WRITTEN APPROVAL RELIEVES ENGINEER OF ALL LIABILITY, AND CONTRACTOR ASSUMES FULL LIABILITY. STRUCTURE DEVIATING FROM THE PLANS WHERE WRITTEN APPROVAL HAS NOT BEEN OBTAINED.
12. STRUCTURAL ELEMENTS SHALL NOT BE CUT FOR PIPES, DUCTS, SLEEVES, ETC. UNLESS NOTED OTHERWISE IN THE PLANS AND TYPICAL DETAILS. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE ARCHITECT/ENGINEER FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, OPENINGS, ETC NOT EXPLICITLY SHOWN ON CONTRACT DOCUMENTS.
13. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING AS NECESSARY. SHORING AND SUPPORT BEAMS SHALL SUPPORT ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED (I.E. WIND, CONSTRUCTION LOADING, ETC.). SHORING SHALL REMAIN IN PLACE AS LONG AS SAFETY REQUIRES AND/OR UNTIL ALL THE STRUCTURAL ELEMENTS ARE IN PLACE AND CONNECTED AS REQUIRED IN THE CONTRACT DOCUMENTS.
15. DURING AND AFTER CONSTRUCTION, THE LOADS IMPOSED ON THE STRUCTURE BY THE CONTRACTOR AND OWNER SHALL BE WITHIN THE LIMITS OF THE OCCUPANCY DESIGN LOADS. SEE STRUCTURAL PLANS AND CALCULATIONS FOR THE OCCUPANCY DESIGN LOADINGS AND CRITERIA.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND PROTECTION WITHIN AND ADJACENT TO THE JOB SITE.
17. VISITS TO THE JOB SITE BY REPRESENTATIVES OF JMWA/AE URBIA DO NOT CONSTITUTE APPROVAL OR SPECIAL INSPECTION OF THE WORK PERFORMED BY THE CONTRACTOR OR HIS SUBCONTRACTORS.
18. JMWA/AE URBIA SHALL RECEIVE COPIES OF ALL SPECIAL INSPECTION REPORTS COMPLETED BY THE REVIEWING AUTHORITY OR THIRD PARTY REGARDING STRUCTURAL ITEMS LISTED FOR SPECIAL INSPECTION.
19. ALL DEFERRED SUBMITTAL ITEMS, COMPONENTS, AND SYSTEMS NOT SPECIFICALLY ENGINEERED BY THE ENGINEER OF RECORD SHALL BE "DESIGN-BUILD" BY THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS OR AS-BUILT DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER IF REQUIRED BY THE REVIEWING AUTHORITY OR JURISDICTION. IF PRE-ENGINEERED SYSTEM IMPACTS THE ORIGINAL DESIGN FOR INTENT OF THE PROJECT IN ANY WAY, CONTRACTOR SHALL COORDINATE WITH ENGINEER OF RECORD PRIOR TO INSTALLATION.
20. JMWA/AEURBIA IS NOT RESPONSIBLE FOR THE COST OF CONSTRUCTION NOR PROJECT BUDGETS. ANY STRUCTURAL CHANGES REQUIRED BY THE CONTRACTOR, OWNER OR ARCHITECT SHALL BE INVOICED BY JMWA/AEURBIA AND TREATED AS ADDITIONAL SERVICES.
21. JMWA/AEURBIA SHALL BE COMPENSATED FOR ADDITIONAL ENGINEERING REQUIRED AS A RESULT OF ANY THIRD PARTY OR CITY REVIEW, PROVIDED ORIGINAL DESIGN IS IN ACCORDANCE WITH THE CURRENT BUILDING CODE.
22. OMISSIONS IDENTIFIED DURING PLAN REVIEW OR CONSTRUCTION SHALL BE ENGINEERED BY THE ENGINEER OF RECORD AT NO ADDITIONAL COST TO THE OWNER. THE OWNER SHALL BE RESPONSIBLE FOR PAYMENT OF OMISSIONS THROUGH AN APPROVED CHANGE ORDER.
23. REVIEW OF SHOP DRAWING SUBMITTAL ITEMS BY JMWA/AE URBIA SHALL BE FOR GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS AND IS NOT INTENDED FOR APPROVAL. SHOP DRAWING REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF COMPLETING THE PROJECT ACCORDING TO CONTRACT DOCUMENTS.
24. STRUCTURAL SHOP DRAWINGS SHALL BE APPROVED BY THE ENGINEER AND ARCHITECT OF RECORD PRIOR TO FABRICATION AND ERECTION.
25. THE FOLLOWING LIST INCLUDES, BUT IS NOT LIMITED TO, SPECIFIC ITEMS FOR WHICH SHOP DRAWING SUBMITTALS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION/INSTALLATION:
    A. CONCRETE MIX DESIGN
    B. CONCRETE REINFORCING
    C. STRUCTURAL STEEL
    D. STEEL DECKING
    E. CONCRETE TILT-UP PANELS
    F. ALL DEFERRED SUBMITTAL ITEMS

DEFERRED SUBMITTALS

1. FOR THE PURPOSES OF THIS SECTION, DEFERRED SUBMITTALS ARE DEFINED PER IBC SECTION 107.3.4.1 AS THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF THE APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL WITHIN A SPECIFIED PERIOD.
2. DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE PRIOR APPROVAL OF THE BUILDING OFFICIAL. THE ARCHITECT OR ENGINEER OF RECORD SHALL LIST THE DEFERRED SUBMITTALS ON THE PLANS AND SHALL SUBMIT THE DEFERRED SUBMITTAL DOCUMENTS FOR REVIEW BY THE BLDG OFFICIAL.
3. SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER FOR REVIEW PRIOR TO FABRICATION AND INSTALLATION AND SHALL INCLUDE:
    A. COMPLETE CALCULATIONS INDICATING MEMBER FORCES, STRESSES, DURATION FACTORS, DIMENSIONS, AND LOCATIONS.
    B. MATERIAL GRADES, DIMENSIONS, SIZES AND LOCATIONS.
    C. INDICATION OF TYPE AND SIZE OF CONNECTION (WHERE REQUIRED) AND DESIGN REACTIONS AT CONNECTION POINTS FOR REVIEW BY ENGINEER OF RECORD.
4. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

DEFERRED SUBMITTAL ITEMS:

1. OPEN-WEB STEEL JOISTS

CONCRETE NOTES

1. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE IBC, LOCAL ORDINANCES, AND THE MOST CURRENTLY ADOPTED VERSION OF THE AMERICAN CONCRETE INSTITUTE (ACI) ACI 318.
2. CONTRACTOR SHALL COORDINATE OPENINGS, BLOCK OUTS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS, AND ANY OTHER EMBEDDED ITEMS WITH MECHANICAL, ELECTRICAL, AND ARCHITECTURAL PRIOR TO PLACING CONCRETE.
3. NO OPENINGS, PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE INCLUDING BUT NOT LIMITED TO WALLS, BEAMS, COLUMNS, FOOTINGS, GRADE BEAMS AND SUSPENDED SLABS (INCLUDED CONCRETE OVER METAL DECK) UNLESS SPECIFICALLY DETAILED OR WRITTEN APPROVAL IS GIVEN BY ENGINEER. FOOTINGS SHALL BE STEPPED TO AVOID PIPING UNLESS OTHERWISE DETAILED.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PLACEMENT OF ALL ANCHOR BOLTS, SEISMIC ANCHORS OR STRAPS, ETC... INSTALL PER MANUFACTURER'S SPECIFICATIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, DETAILING, CARE, PLACEMENT AND REMOVAL OF ALL FORMWORK AND SHORES. DO NOT REMOVE FORMS AND SHORING UNTIL STRUCTURAL MEMBERS ACQUIRE SUFFICIENT STRENGTH TO SUPPORT THEIR OWN WEIGHT PLUS CONSTRUCTION LOADS.
6. ONLY ONE GRADE OR TYPE OF CONCRETE SHALL BE POURED ON SITE AT ANY GIVEN TIME.
7. CONTRACTOR SHALL SEE CIVIL DRAWINGS AND PROJECT SPECIFICATIONS FOR ADDITIONAL SITE CONCRETE REQUIREMENTS NOT GIVEN IN THIS SECTION.
8. CONSTRUCTION ACTIVITY OR STORAGE OF MATERIALS SHALL NOT TAKE PLACE ON NEWLY PLACED CONCRETE UNTIL CONCRETE HAS ACHIEVED 75% OF SPECIFIED CONCRETE STRENGTH OR 7-DAYS, WHICHEVER IS SOONEST. DAMAGED SLABS OR OTHER STRUCTURAL CONCRETE BECAUSE OF CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.
9. CONTRACTOR SHALL FOLLOW RECOMMENDATIONS IN ACI 305R FOR HOT WEATHER CONCRETE PLACEMENT AND ACI 306R FOR COLD WEATHER CONCRETE PLACEMENT.

CONCRETE MATERIALS

1. ALL CONCRETE ON SITE SHALL BE TYPE I/II CEMENT PER ASTM C150 FOR ALL CONCRETE
2. NO ALUMINUM CONDUIT, PRODUCT CONTAINING ALUMINUM, OR ANY OTHER MATERIAL THAT MAY BE INJURIOUS TO CONCRETE SHALL BE EMBEDDED IN CONCRETE.
3. MAXIMUM SLUMP OF CONCRETE IS EQUAL TO 4 INCHES PLUS OR MINUS 1 INCH.
4. CEMENTITIOUS MATERIALS AND AGGREGATES, UNO:
    A. MIXING WATER — ASTM C1602
    B. FLY ASH AND POZZOLAN — ASTM C618
    C. (25% MAX CEMENTITOUS CONTENT, TYP)
    D. NORMAL WEIGHT AGGREGATES — ASTM C 33
    E. LIGHT WEIGHT AGGREGATES — ASTM C330
    F. MAX AGGREGATE SIZE USED:
        i. 1/5 NARROWEST DIMENSION BTWN FORMS
        ii. 1/3 DEPTH OF THE SLAB
        iii. 3/4 THE MIN CLEAR SPACING BTWN BARS
5. ADMIXTURES WHEN USED, UNO:
    A. WATER REDUCING AND RETARDING ADMIXTURE — ASTM C494
    B. AIR ENTRAINING ADMIXTURES — ASTM C260
    C. CHLORIDE ION CORROSION PREVENTION — ASTM C1582
    D. CALCIUM CHLORIDE SHALL NOT BE ADDED TO CONCRETE MIX
    E. ADMIXTURES NOT MENTIONED AS PART OF THIS SECTION SHALL BE SUBMITTED TO ENGINEER FOR REVIEW BEFORE USE.

CONCRETE STRENGTH

CONCRETE SHALL BE SUPPLIED TO MEET THE FOLLOWING STRENGTH REQUIREMENTS AND REQUIREMENTS SPECIFIC TO THE EXPOSURE CLASSES INCLUDING LIMITS ON WATER/CEMENT RATIO AND AIR CONTENT FOR GIVEN IN ACCORDANCE WITH ACI 318:

CONCRETE ELEMENT:	STRENGTH:	EXPOSURE CLASS:
FOOTINGS & FOUNDATION WALLS:	4000 PSI	(F1, S0, W0, C1)
TILT-UP CONCRETE WALL PANELS	5000 PSI	(F2, S0, W1, C1)
INTERIOR SLABS ON GRADE:	3500 PSI	(F0, S0, W0, C0)
SITE CONCRETE:	4500 PSI	(F3, S0, W1, C2)

REINFORCEMENT & ANCHORAGE

1. REINFORCING STEEL
    A. TYPICAL REINFORCING BAR — ASTM 615 GRADE 60
        i. FIELD BENT DOWELS — ASTM 615 GRADE 40 (OPTIONAL)
2. DEFORMED BAR ANCHORS (DBA): — ASTM A496
3. HEADED STUD ANCHORS (HSA): — ASTM A108
4. ANCHOR BOLTS:
    B. TYPICAL:
        i. ANCHOR BOLTS: — ASTM F1554 GRADE 36
        ii. NUTS: — ASTM A563 NUTS AND
        iii. HARDENED WASHERS: — ASTM F436 (5/16" THICK UNO)
5. ALL SPLICES IN REINFORCING BARS SHALL MEET THE REQUIREMENTS OF "REINFORCING LAP SPLICE SCHEDULE".
6. DO NOT SPLICE STIRRUPS AND TIES. DO NOT SPLICE VERTICAL BARS IN RETAINING WALLS UNLESS SPECIFICALLY SHOWN IN DETAILS.
7. MECHANICAL SPLICES SHALL BE POSITIVE CONNECTING COUPLERS AND SHALL MEET ALL APPLICABLE CODE REQUIREMENTS. ADJACENT MECHANICAL SPLICES SHALL BE STAGGERED A MINIMUM OF 24 INCHES ALONG THE REINFORCING BARS. TENSILE CAPACITY OF MECHANICAL SPLICES SHALL BE 125% OF THE SPLICED BAR.
8. ALL REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH THE ACI DETAILING MANUAL AND ACI STANDARDS.
9. CONCRETE TO BE MECHANICALLY CONSOLIDATED DURING PLACEMENT PER ACI STANDARDS.
10. USE CHAIRS OR OTHER SUPPORT DEVICES RECOMMENDED BY THE CRSI TO SUPPORT AND TIE REINFORCEMENT BARS AND WWF PRIOR TO PLACING CONCRETE. WWF SHALL BE ADEQUATELY SUPPORTED ABOVE GRADE OR DECK. IT IS RECOMMENDED THAT CONTINUOUS SUPPORTS ARE PLACED AT 36" O.C. MAXIMUM.
11. LIFTING OF REINFORCING OFF GRADE OR DECK DURING PLACEMENT OF CONCRETE IS NOT PERMITTED.
12. REINFORCING STEEL AND EMBEDS SHALL BE PROPERLY TIED INTO PLACE PRIOR TO PLACING CONCRETE.
13. HORIZONTAL REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION AND CONTROL JOINTS OR PROVIDE REINFORCING DOWELS TO MATCH MEMBER REINFORCING, UNO.
14. PROVIDE CORNER BARS AT INTERSECTING WALL CORNERS USING THE SAME BAR SIZE AND SPACING AS THE HORIZONTAL WALL REINFORCING, SEE DETAILS.
15. DO NOT WELD REINFORCING BARS. DO NOT SUBSTITUTE REINFORCING BARS FOR DEFORMED BAR ANCHORS OR HEADED STUD ANCHORS.
16. SEE ACI 315 FOR ADDITIONAL DETAILING REQUIREMENTS FOR REINFORCING.
17. CAST-IN-PLACE REINFORCEMENT SHALL HAVE THE FOLLOWING CLEAR COVER:
    A. CAST AGAINST/PERMANENTLY EXPOSED TO EARTH — 3"
    B. FORMED CONCRETE EXPOSED TO EARTH/WEATHER:
        i. #6 THRU #18 BARS — 2"
        ii. #5 AND SMALLER BARS — 1-1/2"
    C. CONCRETE NOT EXPOSED EARTH/WEATHER:
        i. SLABS, WALLS, JOISTS (#11 AND SMALLER) — 3/4"
        ii. BEAMS, COLUMNS, TIES, STIRRUPS — 1-1/2"
    D. CONCRETE TILT-UP PANELS
        i. #8 AND SMALLER BARS — 3/4"
        ii. #9 THRU #18 BARS — 1-1/2"

CONSTRUCTION AND CONTROL JOINTS:

1. CONSTRUCTION OR CONTROL JOINTS IN ALL EXPOSED CONCRETE NOT SHOWN ON PLANS SHALL BE COORDINATED WITH THE ARCHITECT/ENGINEER BEFORE CONCRETE IS PLACED.
2. SPACING BETWEEN CONSTRUCTION OR CONTROL JOINTS SHALL MEET THE FOLLOWING REQUIREMENTS:
    A. CONCRETE SLAB ON GRADE OR CONCRETE OVER METAL DECK:
        i. SLABS ≤ 4" — 15'-0" O.C. MAX OR 225 SQ FT
        ii. SLABS ≥ 5" — 20' O.C. MAX OR 400 SQ FT
3. SAWCUT OR TOOLED CONTROL JOINTS SHALL BE MADE WITHIN 12 HOURS AT PLACING CONCRETE. CONTRACTOR SHOULD NOT WORK JOINTS TOO SOON TO PREVENT SPALLING OF THE CONCRETE.
4. CONSTRUCTION JOINTS SHALL NOT EXCEED A DISTANCE OF 125'-0" O.C. IN ANY DIRECTION.
5. THE LENGTH TO WIDTH RATIO OF CONTROL JOINTS SHALL NOT EXCEED 1.25:1.
6. PROVIDE 2 - #4 BARS X 48 INCHES AT ALL DISCONTINUOUS CONTROL OR CONSTRUCTION JOINTS IN SLAB-ON-GRADE.
7. PROVIDE (1) DIAGONAL #4 BAR X 48" OF ALL INSIDE CORNERS.
8. CONTRACTOR MAY SUBMIT IN WRITING CHANGES OR MODIFICATIONS TO REQUIREMENTS FOR CONTROL AND CONSTRUCTION JOINTS FOR ARCHITECT, OWNER, AND ENGINEER REVIEW.

FOOTINGS

1. SEE FOOTING SCHEDULE AND DETAILS FOR SIZE AND REINFORCING REQUIREMENTS, TYP. INTERIOR FOOTINGS MAY BE MONOLITHIC WITH SLAB.
2. CONTRACTOR TO ENSURE THAT ALL EXTERIOR FOOTINGS SHALL BEAR BELOW FROST DEPTH AS NOTED IN "EARTHWORK" SECTION. CONTRACTOR SHALL STEP FOOTINGS & FOUNDATION AS REQUIRED.
3. NO FOOTING SHALL BE PLACED IN WATER OR ON FROZEN GROUND.

FOUNDATION AND RETAINING WALLS

1. BRACE WALLS AS REQUIRED UNTIL FLOOR SLABS AND/OR FLOOR FRAMING ARE IN PLACE, AND UNTIL WALLS HAVE PROPERLY CURED.
2. FOUNDATION WALLS AND RETAINING WALLS SHALL NOT BE BACKFILLED UNTIL CONCRETE HAS ACHIEVED THE DESIGN STRENGTH OR IS PROPERLY SHORED.
3. BACKFILL ADJACENT TO FOUNDATION WALLS OR IN LANDSCAPED AREAS SHALL BE PLACED IN 8 INCH MAXIMUM LOOSE LIFTS. FILL SHALL HAVE MOISTURE CONTENT WITHIN 2% OF OPTIMUM AND SHALL BE COMPACTED TO AT LEAST 90% MAXIMUM DENSITY (ASTM D 1557). HEAVY EQUIPMENT SHALL NOT BE USED TO BACKFILL WITHOUT PRIOR CONSENT OF THE ENGINEER.
4. SEE ARCHITECTURAL DRAWINGS AND DETAILS FOR DRAINAGE METHOD BEHIND FOUNDATION AND RETAINING WALLS.
5. CONSTRUCTION JOINTS (COLD JOINTS) IN WALLS SHALL BE WATERPROOFED TO PREVENT LEAKS.
6. CONTRACTOR SHALL COORDINATE ALL STEPS IN WALLS WITH THE ARCHITECTURAL PRIOR TO PLACEMENT.

SLAB ON GRADE

1. THICKNESS AND REINFORCING OF SLABS ON GRADE SHALL BE PER PLAN.
2. DEPRESSED SLABS: LOCATION AND DEPTH OF ALL DEPRESSIONS IN SLAB ON GRADE AS REQUIRED IN AREAS OF CERAMIC TILE, SPECIAL ENTRY MATS, HARDWOOD FLOORS, ETC. SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS.
3. VAPOR RETARDER: PLACEMENT OF SLAB ON GRADE UNDERLAYMENT IS REQUIRED BENEATH FINISHED OFFICE AREAS OR AS OTHERWISE DIRECTED BY ARCHITECT OR GEOTECHNICAL ENGINEER.
    A. VAPOR RETARDER SHOULD MEET THE FOLLOWING REQUIREMENTS UNLESS NOTED OTHERWISE BY SOILS REPORT:
        i. MEET OR EXCEED REQUIREMENTS OF ASTM E1745, CLASS A MINIMUM
        ii. 10 MIL THICKNESS (MINIMUM)
        iii. TAPE ALL SEAMS AND PENETRATIONS WITH 6" WIDE TAPE AS RECOMMENDED BY MANUFACTURER.
    B. INSTALLATION PROCEDURES AND REQUIREMENTS SHALL BE FOLLOWED AS REQUIRED BY PRODUCT MANUFACTURER AND ACI 302.1R-15.
4. PROVIDE ISOLATION JOINTS OR BLOCKOUTS AROUND COLUMNS.

CONCRETE TILT-UP PANELS

1. SEE ARCHITECTURAL PLANS FOR DIMENSIONS, OPENINGS, FINISH CONDITIONS (REVEALS, RECESSES, FORMLINERS, ETC).
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH ARCHITECTURAL PRIOR TO PLACING CONCRETE.
3. PANEL THICKNESS IS THE TOTAL PANEL THICKNESS INCLUDING REVEALS, RECESSES, ETC.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, LOCATION, FURNISHING, AND PLACEMENT OF ALL PANEL LIFTING INSERTS AND ANY ADDITIONAL REINFORCING FOR INSERTS REQUIRED FOR THE LIFTING AND PLACING OF THE PANELS.
5. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PLACING ALL CONNECTION ELEMENTS (ANGLES, BOLTS, EMBEDS, LEDGERS, PLATES, ETC).
6. THE CONTRACTOR SHALL PROVIDE OPENINGS, SLEEVES, AND INSERTS FOR PLUMBING, MECHANICAL, ELECTRICAL, AND OTHER MISCELLANEOUS PIPES, DUCTS, AND CONDUITS. BREAKING OR DRILLING HOLES IN OR THROUGH PANELS WILL NOT BE PERMITTED.
7. THE CONTRACTOR SHALL TEMPORARILY SUPPORT ALL WALL PANELS (VERTICALLY AND HORIZONTALLY) WITH THE NECESSARY SHORING, SHIMS, AND BRACING. DO NOT REMOVE SHORING UNTIL ALL STRUCTURAL MEMBERS, INCLUDING THE POUR STRIPS AND ROOF DECK, ARE SECURED.
8. PROVIDE NON-SHRINK GROUT UNDER ALL PANELS - SHIMS ARE TO BE USED FOR TEMPORARY SUPPORT ONLY.
    A. RECOMMENDED SPACING OF PANEL SUPPORT SHIMS SHALL BE 4'-0" O.C. MAX TO PREVENT EXCESSIVE POINT LOADING ON FOOTINGS. ACTUAL SHIM SPACING TO BE DETERMINED BY CONTRACTOR AS A MEANS AND METHODS OF CONSTRUCTION.
9. SEE PLANS FOR THE REQUIRED CENTERLINE LOCATION OF THE VERTICAL REINFORCING, (FOR SINGLE OR DOUBLE CURTAIN REINFORCING).
10. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL PANELS. SHOP DRAWINGS SHALL INCLUDE, BUT NOT BE LIMITED TO:
    A. DIMENSIONS TO ALL OPENING LOCATIONS
    B. PANEL REINFORCING
    C. LIFTING AND BRACING INFORMATION
    D. ANGLES, BOLTS, EMBEDS, LEDGERS, PLATES, ETC.
    E. ARCHITECTURAL REVEALS, FINISHES ETC.
    F. WHERE APPLICABLE SHOP DRAWINGS SHALL BE SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED.
11. SEE SCHEDULES, TABLES, AND TYPICAL DETAILS FOR ADDITIONAL INFORMATION.

STRUCTURAL STEEL NOTES

1. ALL WORK TO BE IN STRICT ACCORDANCE WITH THE IBC, LOCAL ORDINANCES, AND THE MOST CURRENTLY ADOPTED VERSION OF THE FOLLOWING DESIGN SPECIFICATIONS:
    A. AISC 360 "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" WITH "COMMENTARY"
    B. AISC 341 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS"
    C. AISC 303 "CODE OF STANDARD PRACTICE" EXCLUDING: SECTIONS 3.2, 4.4, 4.4.1.
    D. AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", AND "SEISMIC PROVISION FOR STRUCTURAL BUILDINGS".
    E. AWS "STRUCTURAL WELDING CODE", EXCEPT AS MODIFIED BY THE REQUIREMENTS GIVEN BY AISC.
2. ALL DIMENSIONS AND CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND ERECTION.
3. SEE ARCHITECTURAL SHEETS FOR DIMENSIONS, ELEVATIONS, ACCESS HATCHES, DRAFT STOPS, ETC.
4. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL FOR ADDITIONAL STEEL MEMBERS (BRACKETS, ANGLES, ETC...) WHERE REQUIRED.
5. ALL STEEL SHALL BE PROPERLY PRIMED EXCEPT AREAS THAT REQUIRE FIELD WELDING OR THAT WILL RECEIVE SPRAY-ON FIREPROOFING.
6. ALL FAYING SURFACES MUST BE PROPERLY PREPARED FOR CONNECTION AND BE FREE OF RUST/CORROSION.
7. ALL EXPOSED EXTERIOR STEEL ELEMENTS SHALL BE HOT-DIPPED GALVANIZED. CONTRACTOR TO COORDINATE WITH ARCHITECT BEFORE FABRICATION.
8. STANDARD PENETRATIONS THROUGH STRUCTURAL MEMBERS FOR MECHANICAL, PLUMBING, ELECTRICAL SYSTEMS, ETC. SHALL BE PROVIDED ON THE CENTERLINE OF THE MEMBER'S DEPTH AND WITHIN THE MIDDLE ONE-THIRD OF THE SPAN. ALL PENETRATIONS MUST BE SHOWN IN SHOP-DRAWINGS. NO FIELD-CUT PENETRATIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL FROM JMWA/AEURBIA.
9. REFER TO ARCHITECTURAL DRAWINGS FOR STEEL FIREPROOFING REQUIREMENTS.

MATERIALS

1. WIDE FLANGE SECTIONS: — ASTM A992 (50 KSI)
2. SHAPES AND PLATES:
    A. TYPICAL — ASTM A36
3. HSS (SQUARE, RECTANGULAR): — ASTM A500 GRADE C (50 KSI)
4. NON-SHRINK GROUT — ASTM C1107 GRADE B (7500 PSI MIN)
5. BOLTED CONNECTIONS (TYPICAL):
    A. TYPICAL BOLTS (3/4" DIA UNO): — ASTM F3125 A325
    B. NUTS: — ASTM A563 NUTS
    C. HARDENED WASHERS: — ASTM F436
6. WELDS (TYPICAL):
    A. E70 XX AT ALL JOISTS
    B. E60 XX AT ALL DECKS
    C. E70 XX AT ALL OTHER LOCATIONS

WELDING

1. ALL WELDS AND BOLTING TO MEET APPROVAL OF SPECIAL INSPECTOR AS REQUIRED BY BUILDING OFFICIAL.
2. ALL WELDING AND CUTTING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.
3. WELDS MAY BE PERFORMED IN THE SHOP OR IN THE FIELD. DESIGNATIONS IN THE CONTRACT DOCUMENTS ARE SHOWN ONLY FOR THE PURPOSE OF ASSISTING THE CONTRACTOR IN THE BIDDING PROCESS. AT THE DISCRETION OF THE CONTRACTOR FIELD WELDS MAY BE SUBSTITUTED FOR SHOP WELDS AND FIELD WELDS FOR SHOP WELDS. THE CONTRACTOR SHALL COORDINATE THE WELDING SEQUENCE BETWEEN SUB-CONTRACTORS AND FABRICATORS. CONTRACTOR IS TO VERIFY THAT SEQUENCE OF WELDING CONFORMS WITH APPLICABLE CODES AND REQUIREMENTS SET FORTH IN THE CONTRACT DOCUMENTS.
4. ALL INTERSECTING STEEL SHAPES WHICH ARE NOT BOLTED SHALL BE CONNECTED BY A FILLET WELD ALL AROUND, UNLESS NOTED OTHERWISE.
5. WHERE FILLET WELDS ARE NOT SHOWN, WELD SIZES SHALL BE 1/16" LESS THAN THE THINNEST CONNECTED PART, UNLESS NOTED OTHERWISE FOR THICKNESSES 1/4" AND LARGER. FOR THICKNESSES LESS THAN 1/4", WELD SIZE SHALL BE THE SAME SIZE AS THE THINNEST CONNECTED PART, UNLESS NOTED OTHERWISE.
6. DO NOT WELD REBAR OR ANCHOR BOLTS, INCLUDING "TACK" WELDS.
7. WELDED HEADED STUD ANCHORS (HSA) AND DEFORMED BAR ANCHORS (DBA) SHALL USE FULL FUSION TYPE WELDS USING ELECTRIC ARC AND CERAMIC FERRULES AS SPECIFIED BY THE MANUFACTURER.
    A. THE LENGTHS SPECIFIED IN THE PLANS AND DETAILS MAY BE TAKEN AS THE OVERALL LENGTH OF THE STUD/BAR BEFORE WELDING. OVERALL LENGTH REDUCTION OF STUD/BAR SHALL NOT EXCEED 0.25 INCHES.
    B. CONSULT GUIDELINES AND RESTRICTIONS ON THROUGH DECK WELDING AS REQUIRED BY AWS D1.1 STRUCTURAL WELDING CODE.

BOLTED CONNECTIONS

1. TIGHTEN BOLTS BY THE TURN OF THE NUT, CALIBRATED WRENCH, OR DIRECT TENSION INDICATOR METHOD.
2. USE HARDENED WASHERS BENEATH THE TURNED ELEMENT OF ALL BOLTS OR NUTS. HARDENED BEVELED WASHERS MAY ALSO BE USED TO COMPENSATE FOR THE LACK OF PARALLELISM.
3. PROVIDE HARDENED WASHERS BENEATH THE HEAD AND NUT WHERE A490 BOLTS ARE SPECIFIED PER AISC REQUIREMENTS.
4. HARDENED WASHERS AND PLATES AT OVERSIZED HOLES SHALL CONFORM TO ASTM F-436 AND SHALL COMPLETELY COVER THE SLOT AFTER INSTALLATION.
5. DO NOT REUSE BOLTS, NUTS OR WASHERS.
6. SEE TYPICAL BOLT SCHEDULE FOR BOLT SIZES AND TYPICAL CONNECTIONS. PROVIDE A STANDARD AISC FRAMED CONNECTION FOR ONE HALF THE BEAM'S TOTAL UNIFORM LOAD CAPACITY WHERE A CONNECTION IS NOT SHOWN.
7. PROVIDE FULL-DEPTH STIFFENER PLATES AT EACH SIDE OF ALL BEAMS AT ALL BEARING POINTS. STIFFENER PLATE THICKNESS EQUALS THE BEAM WEB THICKNESS (1/4" MIN.). FILLET WELD BOTH SIDES OF STIFFENER, ALL AROUND.

METAL DECKING

1. STEEL DECK TO MEET LATEST REQUIREMENTS OF STEEL DECK INSTITUTE (SDI).
2. ALL DECKS SHALL BE 3-SPAN CONTINUOUS MINIMUM. WHERE 3-SPAN CONDITIONS ARE NOT POSSIBLE, THE CONTRACTOR SHALL PROVIDE HEAVIER GAUGE DECK TO PROVIDE THE EQUIVALENT LOADING OF A DECK UNDER A THREE SPAN CONDITION.
3. STEEL DECK SHALL NOT BE USED TO SUPPORT LOADS FROM PLUMBING, HVAC, FIXTURES, ARCHITECTURAL ELEMENTS, OR EQUIPMENT OF ANY KIND UNLESS SPECIFICALLY NOTED.
4. ALL DECKS AND SUPPORTING MEMBERS MUST BE DRY BEFORE WELDING.
5. CRIMP SEAMS PRIOR TO WELDING OR BUTTON PUNCHING INTERLOCKING SEAMS.
6. LIMIT THE YIELD STRESS OF STEEL DECKS TO A MAXIMUM OF 50 KSI.
7. WHERE DECKS RECEIVE SPRAYED-ON FIREPROOFING, USE SPECIAL PAINT THAT ALLOWS THE SPRAYED-ON FIREPROOFING TO ADHERE TO THE PAINTED DECK.
8. GALVANIZE (G60) DECKS WHEN USED ABOVE OR BELOW MECHANICAL EQUIPMENT ROOMS.
9. REINFORCE DECK AT ALL OPENINGS. SEE PLAN AND DETAILS FOR REQUIREMENTS.
10. CONTRACTOR TO COORDINATE FINISH OF ALL EXPOSED STEEL DECK WITH ARCHITECT.
11. PROVIDE 3" MINIMUM BEARING AND A 4-INCH LAP AT ALL SPLICE POINTS.
12. ALTERNATE ROOF DECK ATTACHMENTS THAN THOSE LISTED IN METAL DECK SCHEDULE MUST BE SUBMITTED TO EOR FOR REVIEW PRIOR TO INSTALLATION AND MUST MEET OR EXCEED THE SHEAR LOAD REQUIREMENTS GIVEN.
13. SEE "DECK SCHEDULE" FOR ROOF AND FLOOR DECK TYPES, CAPACITIES, AND ATTACHMENT REQUIREMENTS.

OPEN WEB STEEL JOISTS

1. JOISTS AND GIRDERS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST REQUIREMENTS, SPECIFICATIONS, AND RECOMMENDATIONS OF THE STEEL JOIST INSTITUTE (SJI) AND MANUFACTURER.
2. SEE ARCHITECT FOR ALL BEARING ELEVATIONS. CONTRACTOR SHALL VERIFY ALL ELEVATIONS, DIMENSIONS AND CONDITIONS PRIOR TO FABRICATION, INCLUDING BUT NOT LIMITED TO CLEAR HEIGHT AND HEADROOM.
3. ALL JOISTS WITH SERIES DESIGNATION HAVE BEEN SELECTED TAKING INTO ACCOUNT ALL APPLIED LOADS. JOISTS WITH TOTAL LOAD/LIVE LOAD DESIGNATION ARE TO BE DESIGNED BY JOIST SUPPLIER. JOISTS SUPPLIER SHALL DESIGN JOISTS TO CARRY STANDARD DESIGN LOADS PLUS INDICATED SNOW DRIFTING AND OTHER LOADS AS INDICATED ON THE PLANS.
4. JOIST AND GIRDER LOADS CALLED OUT IN DRAWINGS ARE ALLOWABLE STRESS DESIGN (ASD) LOADS, UNO.
5. OPEN WEB JOISTS AND GIRDERS DEFLECTIONS SHALL BE LIMITED TO:
    LIVE LOAD DEFLECTION LIMIT = L/360
    TOTAL LOAD DEFLECTION LIMIT = L/240
6. JOIST BRIDGING SHOWN ON PLANS IS FOR SCHEMATIC PURPOSES ONLY; BRIDGING, BRACING, ETC. SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS. CONTRACTOR AND JOIST SUPPLIER SHALL COORDINATE BRIDGING LOCATIONS TO AVOID INTERFERENCE WITH MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION EQUIPMENT, AND SKYLIGHTS.

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PROFESSIONAL ENGINEER
No. 11866339
TYSON ALDER
STATE OF UTAH
08/30/2021

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
BUILDING / STRUCTURAL / MECHANICAL / PLUMBING / ELECTRICAL / ENERGY / ACCESSIBILITY / FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

GENERAL STRUCTURAL NOTES

DATE: **06/15/2021**

PERMIT SET

SHEET #:

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7. PROVIDE SPECIAL BEARING ENDS TO ACCOMMODATE SLOPES FROM SLOPED JOISTS, SLOPED GIRDERS OR SLOPED BEARING CONDITIONS, OR TO MATCH HEIGHT OF ADJACENT JOISTS.
8. MODIFICATIONS TO ANY JOIST OR GIRDER ARE NOT PERMITTED WITHOUT THE WRITTEN CONSENT AND DIRECTION FROM THE JOIST/GIRDER MANUFACTURER.
9. CONTRACTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL UPON COMPLETION OF FABRICATION PER IBC 1704.2.5.
10. CONCENTRATED LOADS SHALL NOT BE PLACED NOR HUNG FROM JOISTS UNLESS THEY ARE PLACED AT PANEL POINTS. CONCENTRATED LOADS NOT SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR REVIEW.
11. ALL JOISTS TO BE PROPERLY PRIMED AND PAINTED. VERIFY COLOR WITH ARCHITECT. ALL EXPOSED JOISTS TO BE PAINTED GRAY, UNO.
12. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

BUCKLING RESTRAINED BRACE FRAMES

1. BUCKLING RESTRAINED BRACE FRAMES SHALL BE FABRICATED AS A SPECIALTY ITEM BY A MANUFACTURER THAT HAS CONDUCTED THE NECESSARY TESTING PER THE REQUIREMENTS OF AISC 341.
2. CONTRACTOR SHALL SUBMIT THE FOLLOWING ITEMS AS PART OF DEFERRED SUBMITTAL THAT CONFORMS WITH THE REQUIREMENTS OF THESE DRAWINGS AND PROJECT SPECIFICATIONS:
3. BRACE DESIGN SHOP DRAWINGS:
4. BUCKLING RESTRAINED BRACES (BRB'S) CONFORMING TO SPECIFIED MATERIAL AND SIZE SHOWN IN CONTRACT DOCUMENTS.
5. DESIGN OF GUSSET CONNECTIONS OF BRACE TO GUSSET AND GUSSET TO FRAME COLUMNS, BEAMS, AND BASE PLATES.
6. CONFIRMATION OF OVERSTRENGTH (B & Ω) AND STIFFNESS FACTORS (KF) ASSUMED IN DESIGN AND SHOWN IN THE CONTRACT DOCUMENTS.
7. CALCULATIONS AND CERTIFICATION OF TESTING FOR BRACES AND CONNECTIONS
8. MANUFACTURER'S QUALITY ASSURANCE PLAN
9. INFORMATION SHOWN IN BRB CONNECTIONS BELOW IS FOR EXAMPLE ONLY. FINAL CONNECTION DESIGN AND GUSSET REQUIREMENTS TO BE DETERMINED BYB BRB SUPPLIER.
10. ALL GUSSET PLATES AND BASE PLATES SHALL BE ASTM A572 GR.50.
11. PRE-ERECTION MEETING: CONTRACTOR SHALL SCHEDULE A MEETING WITH A REPRESENTATIVE OF JWMA/AEURBIA, THE BRB-MANUFACTURER, AND THE STEEL ERECTOR PRIOR TO INSTALLATION TO REVIEW PROCEDURES FOR HANDLING AND INSTALLATION OF BRB'S.
12. BRB'S AND THEIR GUSSETS SHALL NOT BE FIELD CUT OR ALTERED WITHOUT PRIOR WRITTEN CONSENT FROM BRB MANUFACTURER AND JMWA/AEURBIA. NO FIELD WELDS OR ATTACHMENT OF NON-STRUCTURAL COMPONENTS TO THE BRB'S IS PERMITTED. SEE CONTRACT DOCUMENTS AND BRACE MANUFACTURER FOR PROTECTED ZONES.
13. WHERE BRACES EXTEND BELOW GRADE, BRACE IS TO BE WRAPPED IN 2" OF FOAM AND ENCASED IN CONCRETE.
14. SEE BUCKLING RESTRAINED BRACE SCHEDULE FOR ADDITIONAL REQUIREMENTS AND DESIGN ASSUMPTIONS.

POST INSTALLED ANCHOR NOTES

1. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS FOR POST INSTALLED ANCHORS, ACI STANDARDS, AND MSJC SPECIFICATIONS.
2. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFICALLY CALLED FOR IN THE CONTRACT DOCUMENTS. IF POST-INSTALLED ANCHORS ARE DESIRABLE TO BE USED IN LIEU OF CAST-IN-PLACE ANCHORS CONTRACTOR MUST SUBMIT FORMAL WRITTEN REQUEST TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
3. ANY USE OF POST-INSTALLED ANCHORS FOR RETROFIT OR PLACEMENT/REPLACEMENT OF MISSING ANCHORS INTENDED TO BE CAST-IN-PLACE MUST FIRST BE APPROVED IN WRITING FROM THE ENGINEER.
4. CONTRACTOR SHALL FOLLOW ICC EVALUATION REPORTS AND ALL MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS FOR INSTALLATION OF ALL POST-INSTALLED ANCHORS.
5. REFER TO MANUFACTURERS RECOMMENDATIONS FOR HOLE DRILLING AND PREPARATION. DRILLED HOLES MUST BE COMPLETELY DRY AND FREE OF DUST, DEBRIS, AND STANDING WATER.
6. REFER TO DETAILS OR CONTACT ENGINEER OF RECORD FOR EMBEDMENT DEPTH, ANCHOR DIAMETER, ANCHOR MATERIAL, AND ACCEPTABLE FASTENING TYPE (ADHESIVE, MECHANICAL, SCREW, ETC).
7. ALTERNATIVE ANCHORS NOT LISTED AS PART OF THIS SECTION MAY BE SUBMITTED FOR REVIEW TO THE ENGINEER BY THE CONTRACTOR. THE CONTRACTOR MUST SUBMIT CALCULATIONS AND ASSOCIATED ICC REPORTS FOR THE REQUESTED ALTERNATIVE TO THE ENGINEER FOR REVIEW PRIOR TO USE.

ADHESIVE ANCHORS AND DOWELS IN CONCRETE

1. ALL ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT THE TIME OF INSTALLATION OR UNTIL CONCRETE HAS ACHIEVED FULL DESIGN STRENGTH.
   A. OBTAIN WRITTEN APPROVAL FROM ENGINEER FOR INSTALLATION PRIOR TO THE 21 DAY PERIOD.
2. PERMITTED CONCRETE ADHESIVES:
   A. HILTI HIT RE-500-V3 (ICC ESR-3814)
   B. HILTI HIT HY-200 (ICC ESR-3187)
   C. SIMPSON SET-3G (ICC ESR-4057)
   D. SIMPSON SET-XP (ICC ESR-2508)
3. INSTALL EPOXY/ADHESIVE AND ANCHORS OR DOWELS PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS INCLUDING TEMPERATURE RANGES, DRILLING, AND HOLE CLEANING.
4. CONTRACTOR TO ENSURE THAT EPOXY IS USED PRIOR TO THE MANUFACTURER GIVEN EXPIRATION DATE AND HAS BEEN STORED PER THE RECOMMENDATIONS FROM THE MANUFACTURER. DO NOT USE EPOXY THAT HAS BEEN EXPOSED TO EXTREME HEAT OR FREEZE-THAW.
5. UNLESS NOTED OTHERWISE, MINIMUM EMBEDMENT OF EPOXIED ANCHORS SHALL COMPLY WITH "POST-INSTALLED ANCHOR EMBEDMENT" SCHEDULE.

EXPANSION ANCHORS

1. ALL ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 7 DAYS AT THE TIME OF INSTALLATION OR UNTIL CONCRETE HAS ACHIEVED FULL DESIGN STRENGTH.
   A. OBTAIN WRITTEN APPROVAL FROM ENGINEER FOR INSTALLATION PRIOR TO THE 7 DAY PERIOD.
2. PERMITTED CONCRETE ANCHORS:
   A. HILTI KWIK BOLT TZ (ICC-ES ESR-1917)
   B. SIMPSON STRONG-BOLT 2 (ICC-ES ESR-3037)

SCREW ANCHORS

1. ALL ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 7 DAYS AT THE TIME OF INSTALLATION OR UNTIL CONCRETE HAS ACHIEVED FULL DESIGN STRENGTH.
   A. OBTAIN WRITTEN APPROVAL FROM ENGINEER FOR INSTALLATION PRIOR TO THE 21 DAY PERIOD.
2. PERMITTED CONCRETE ANCHORS:
   A. TITEN HD (ICC-ES ESR-2713)
   B. KWIK HUS-EZ (ICC-ES ESR-3027)

POWDER ACTUATED FASTENERS

1. FOR FASTENERS DRIVEN INTO STEEL, CONCRETE, OR GROUTED MASONRY AS NOTED ON PLANS SHALL BE HILTI 'X-U P-8' KNURLED SHANK FASTENER (ICC ESR-2269), UNO.
   A. UNLESS NOTED OTHERWISE FASTENER EMBEDMENT INTO CONCRETE SHALL BE EQUAL TO 1.1/4".
   B. EMBEDMENT FOR FASTENERS DRIVEN INTO STEEL SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2018 IBC

STATEMENT OF SPECIAL INSPECTION (1704.3)

ACCORDING TO CHAPTER 17 OF THE IBC, SPECIAL INSPECTION AND QUALITY ASSURANCE SHALL BE PROVIDED BY AN APPROVED AGENCY OR AGENCIES AS EMPLOYED BY THE OWNER. PRIOR TO THE START OF THE CONSTRUCTION, THE APPROVED AGENCIES SHALL PROVIDE WRITTEN DOCUMENTATION TO THE BUILDING OFFICIAL DEMONSTRATING COMPETENCE AND RELEVANT EXPERIENCE OR TRAINING OF THE SPECIAL INSPECTORS WHO WILL PERFORM THE SPECIAL INSPECTIONS AND TESTS DURING CONSTRUCTION. THE CONSTRUCTION OR WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED FOR SPECIAL INSPECTION OR TESTING PURPOSES UNTIL THE REQUIRED SPECIAL INSPECTION OR TESTS ARE COMPLETE. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. APPROVED AGENCIES SHALL KEEP RECORDS OF SPECIAL INSPECTIONS AND TESTS. THE APPROVED AGENCY SHALL SUBMIT REPORTS OF SPECIAL INSPECTIONS AND TESTS TO THE BUILDING OFFICIAL, CONTRACTOR, AND TO THE REGISTERED ARCHITECT AND ENGINEER IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED OR TESTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THEY ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND TO AND TO THE REGISTERED ARCHITECT AND ENGINEER IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. A FINAL REPORT DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND TESTS, AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS OR TESTS, SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE OWNER OR THE OWNER'S AUTHORIZED AGENT TO THE BUILDING OFFICIAL. SPECIAL INSPECTION IS REQUIRED FOR ALL ITEMS LISTED IN THE SPECIAL INSPECTION SCHEDULE.

SPECIAL INSPECTION NOTES

1. CONTINUOUS SPECIAL INSPECTION MEANS THE FULL-TIME OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK IS BEING PERFORMED. PERIODIC SPECIAL INSPECTION MEANS THE PART-TIME OR INTERMITTENT OBSERVATION OF WORK REQUIRING SPECIAL INSPECTION BY AN APPROVED SPECIAL INSPECTOR WHO IS PRESENT IN THE AREA WHERE THE WORK HAS BEEN OR IS BEING PERFORMED AND AT THE COMPLETION OF THE WORK.
2. ANY CONSTRCTION OR MATERIAL THAT HAS FAILED INSPECTION SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT.
3. EPOXY AND EXPANSION ANCHORS INTO MASONRY OR CONCRETE MAY BE USED ONLY WHEN APPROVED BY ARCHITECT AND / OR ENGINEER USING AN APPROVED PRODUCT WITH CURRENT PUBLISHED ICBO RESEARCH REPORT NUMBERS
4. SPECIAL INSPECTION OF SOILS SHALL REFERENCE THE APPROVED SOILS REPORT TO DETERMINE COMPLIANCE.
5. SPECIAL INSPECTIONS ARE NOT REQUIRED DURING PLACEMENT OF FILL LESS THAN 12 INCHES DEEP.
6. ALL WELDS SHALL BE VISUALLY INSPECTED (IBC 1704.3) AND SHALL BE IN COMPLIANCE WITH AWS D1.1.
7. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED ULTRASONICALLY OR BY USING ANOTHER APPROVED METHOD (AISC 360 N5)
8. SLIP-CRITICAL CONNECTIONS MAY HAVE PERIODIC SPECIAL INSPECTION PROVIDED THAT THE TURN-OF-THE-NUT METHOD WITH MATCH MARKING TECHNIQUES IS USED.

ITEM FOR VERIFICATION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
PREFABRICATED CONSTRUCTION (IBC 1704.2.5)			
PREFABRICATED OR PRECAST CONSTRUCTION			WHERE FABRICATION OF ELEMENTS FOR STRUCTURAL LOAD-BEARING OR LATERAL LOAD RESISTING MEMBERS IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION, EXCEPT WHERE THE FABRICATOR HAS BEEN APPROVED TO PERFORM WORK WITHOUT SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC 1704.2.5.1. CERTIFICATE OF COMPLIANCE MUST BE SUBMITTED TO THE BUILDING OFFICIAL FOR ALL COMPLETED WORK.
SOILS (IBC 1705.6)			
SPECIAL INSPECTIONS OF THE SOIL SHALL BE PERFORMED FOR COMPLIANCE WITH THE STATED REQUIREMENTS IN THE CONSTRUCTION DOCUMENTS AND APPROVED GEOTECHNICAL REPORT.			
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		●	
VERIFY EXCAVATIONS ARE EXTENDED TO THE PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.		●	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		●	APPLIES IN ALL AREAS WHERE COMPACTED FILL, STRUCTURAL FILL, AND BACKFILL IS REQUIRED
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	●		APPLIES IN ALL AREAS WHERE COMPACTED FILL, STRUCTURAL FILL, AND BACKFILL IS REQUIRED
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.		●	APPLIES IN ALL AREAS WHERE COMPACTED FILL, STRUCTURAL FILL, AND BACKFILL IS REQUIRED
POST-INSTALLED ANCHORS (IBC 1705.1.1)			
ALL POST-INSTALLED ANCHORS IN CONCRETE OR MASONRY SHALL BE PERFORMED PER MANUFACTURERS INSTALLATION AND QUALITY ASSURANCE REQUIREMENTS. ICC-ES REPORTS SHOULD BE COLLECTED FOR EACH ANCHORAGE TYPE USED.			
ADHESIVE ANCHORS (DRILL & EPOXY)	●		ADHESIVE ANCHORS INSTALLED IN HORIZONTAL OR UPWARDLY INCLINED ORIENTATION TO RESIST SUSTAINED TENSION OR SEISMIC LOADS SHOULD BE CONTINUOUSLY INSPECTED. ALL OTHER INSTALLATION TYPES MAY BE INSPECTED PERIODICALLY.
SCREW OR MECHANICAL ANCHORS		●	
MISCELLANEOUS ITEMS REQUIRING SPECIAL INSPECTION (1705.12.4, 1705.12.5, 1705.12.6, 1705.12.7)			
ARCHITECTURAL COMPONENTS		●	ERECTION AND FASTENING OF INTERIOR & EXTERIOR NON-BEARING WALLS & INTERIOR & EXTERIOR CLADDING. SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE: (1) CLADDING AND WALLS ARE LESS THAN 30 FEET IN HEIGHT, (2) CLADDING AND/OR VENEER WEIGH LESS THAN 5 PSF, (3) INTERIOR NON-BEARING WALLS WEIGHING LESS THAN 15 PSF OR LESS
ANCHORAGE OF ELECTRICAL EQUIPEMENT DESIGNED FOR EMERGENCY AND STANDBY POWER SYSTEMS.		●	IN SDC C, D, E, OR F.
ANCHORAGE OF MECHANICAL AND PLUMBING SYSTEMS CARRYING HAZARDOUS MATERIALS		●	IN SDC C, D, E, OR F.
INSTALLATION AND ANCHORAGE OF M/E/P FOR AUTOMATIC FIRE SUPPRESSION SYSTEMS.		●	IN SDC C, D, E, OR F. REQUIRED ONLY WHEN FLEXIBLE HOSE FITTING ARE NOT USED.
STORAGE RACK ANCHORAGE		●	IN SDC D, E, OR F. ANY STORAGE RACK GREATER THAN 8 FEET IN HEIGHT.
INSTALLATION AND ANCHORAGE OF M/E/P FOR AUTOMATIC FIRE SUPPRESSION SYSTEMS.		●	***REQUIRED ONLY WHEN FLEXIBLE HOSE FITTING ARE NOT USED.***
DESIGNATED SEISMIC SYSTEMS		●	IN SDC C, D, E, OR F. VERIFY THAT THE LOCATION, LABEL, AND ANCHORAGE CONFORM TO THE MANUFACTURERS CERTIFICATE OF COMPLIANCE
ACCESS FLOORS		●	IN SDC D, E, OR F.
METAL ROOF/FLOOR DECK (1705.2.2, 1705.11.3)			
DECK PLACEMENT		●	VERIFY PLACEMENT IS IN COMPLIANCE WITH APPROVED SUBMITTALS AND CONTRACT DOCUMENTS
DECK MATERIALS		●	VERIFY MATERIAL AND GAUGE ARE IN COMPLIANCE WITH CONTRACT DOCUMENTS AND APPROVED SUBMITTALS
FASTENING		●	FASTENER TYPE, SIZE, AND SPACING COMPLIES WITH CONTRACT DOCUMENTS, APPROVED SUBMITTALS, AND MANUFACTURERS REQUIREMENTS.
OPEN WEB STEEL JOISTS AND GIRDERS (1705.2.3)			
CERTIFICATE OF COMPLIANCE		●	CERTIFICATE OF COMPLIANCE MUST BE SUBMITTED TO THE BUILDING OFFICIAL PER 1704.2.5.
JOIST PLACEMENT		●	VERIFY JOIST SIZE AND PLACEMENT IS IN COMPLIANCE WITH APPROVED SUBMITTALS AND CONTRACT DOCUMENTS
END CONNECTIONS			WELDED AND/OR BOLTED
BRIDGING		●	HORIZONTAL AND DIAGONAL INSTALLED PER MANUFACTURERS REQUIREMENTS (INCLUDES BOTH STANDARD AND NON-STANDARD BRIDGING PER SJI)

ITEM FOR VERIFICATION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
CONCRETE CONSTRUCTION (IBC 1705.3)			
CONCRETE ITEMS REQUIRING SPECIAL INSPECTION: EXTERIOR CONCRETE FOOTINGS, CONCRETE WALLS, CONCRETE FOOTINGS AND FOUNDATION WALLS, INTERIOR CONCRETE SLAB-ON-GRADE, CONCRETE TILT-UP PANELS			
CONCRETE PLACEMENT	●		
VERIFYING REQUIRED DESIGN MIX		●	VERIFY MIX DESIGN MEETS STRENGTH AND EXPOSURE REQUIREMENTS LISTED ON GENERAL STRUCTURAL NOTES
EMBEDDED BOLTS, PLATES, AND ANCHORS		●	VERIFY TYPE, SIZE, DETAILS, AND LOCATION OF EMBEDS
FORMWORK		●	VERIFY DIMENSIONS AND LOCATION; VERIFY CONSTRUCTION LOADS HAVE BEEN CONSIDERED BY CONTRACTOR; VERIFY RATE AND METHOD OF CONCRETE PLACEMENT
CURING TEMPERATURE / TECHNIQUES		●	CURING OF THE CONCRETE SHOULD BE IN COMPLIANCE WITH HOT AND COLD CONDITIONS PER ACI LIMITATIONS.
TILT-UP PANELS / PRECAST MEMBERS		●	VERIFY ALL CONCRETE TILT-UP PANEL CONNECTIONS AND REINFORCING ARE IN PLACE DURING INSTALLATION AND ERECTION.
SANDWICH / COMPOSITE PANEL CONSTRUCTION		●	CONSTRUCTION AND INSTALLATION ACCORDING TO THE ICC-ESR OR IAPMO-UES ER REPORT.
CONCRETE TILT-UP PANEL CONNECTIONS		●	INCLUDES ALL PANEL-TO-FOOTING AND PANEL-TO-PANEL CONNECTIONS. VERIFY ALL EMBEDS AND CONNECTIONS ARE IN PLACE PER PLAN.
STRENGTH TESTS (COMPRESSION AND/OR FLEXURE), SLUMP, AIR ENTRAINMENT, AND CONCRETE TEMPERATURE	●		TESTING SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY AND SHALL BE AT A MINIMUM OF (1) ONCE PER DAY (2) ONCE PER 150 CUBIC YARDS OF CONCRETE (3) ONCE PER 1500 SQ FT OF SURFACE AREA FOR SLABS OR WALLS; A MINIMUM OF (5) TOTAL STRENGTH TESTS SHOULD BE PERFORMED RANDOMLY ACROSS BATCHES
REINFORCING STEEL PLACEMENT			
ASTM DESIGNATION AND GRADE OF REINFORCING		●	
TYPE, SIZE, LOCATION, DETAILING, AND EMBEDMENT LENGTH		●	
CONCRETE COVER TO REINFORCING		●	
LOCATION AND LENGTH OF LAP SPLICES		●	
TYPE AND LOCATION OF MECHANICAL SPLICES		●	
ASTM DESIGNATION FOR PROTECTIVE COATINGS		●	
PROPER STORAGE OF REINFORCING		●	VERIFY REINFORCEMENT IS FREE OF DIRT, OIL, AND EXCESSIVE CORROSION
MILL TEST REPORTS FOR ALL REINFORCING		●	
WELDING OF REINFORCMENT	●		WELDING OF REINFORCING BARS SHALL BE PER AWS D1.4
STEEL BOLTING (AISC 360-10)			
INSPECTION TASKS PRIOR TO BOLTING			
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	●		
FASTENERS		●	MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS
CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL		●	INCLUDING GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE.
CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL		●	
CONNECTING ELEMENTS			MEET APPLICABLE REQUIREMENTS INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED.
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED			NOT REQUIRED IF ONLY SNUG-TIGHT JOINTS ARE SPECIFIED
PROTECTED STORAGE			STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS
INSPECTION TASKS DURING BOLTING			
FASTENER PLACEMENT		●	FASTENER ASSEMBLIES PLACED IN ALL HOLES, WASHERS, AND NUTS ARE POSTIONED AS REQUIRED
JOINT		●	BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION
FASTENER COMPONENT		●	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING
PRETENSIONED FASTENERS		●	VERIFY THAT PRETENSIONED FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES
INSPECTION TASKS AFTER BOLTING			
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	●		

ITEM FOR VERIFICATION	INSPECTION FREQUENCY		COMMENTS
	CONTINUOUS	PERIODIC	
STEEL WELDING (AISC 360-10)			
INSPECTION TASKS PRIOR TO WELDING			
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	●		
WELDING PROCEDURE SPECIFICATIONS AVAILABLE	●		
MANUFACTUERER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	●		
MATERIAL IDENTIFICATION (TYPE/GRADE)		●	
WELDER IDENTIFICATION SYSTEM		●	
FIT-UP GROOVE WELDS		●	INCLUDING JOINT GEOMETRY, PREPARATIONS, DIMENSIONS, CLEANLINESS, TACKING, AND BACKING TYPE FIT (WHERE APPLICABLE)
CONFIGURATION AND FINISH OF ACCESS HOLES		●	
FIT-UP OF FILLET WELDS		●	INCLUDING DIMENSIONS, CLEANLINESS, AND TACKING
CHECKING WELDING EQUIPMENT		●	
INSPECTION TASKS DURING WELDING			
CONTROL AND HANDLING OF WELDING CONSUMABLES		●	INCLUDING PACKAGING AND EXPOSURE CONTROL
USE OF QUALIFIED WELDERS		●	
CRACKED TACK WELDS		●	VERIFY NO WELDING OVER CRACKED TACK WELDS
ENVIRONMENTAL CONDITIONS		●	VERIFY WIND SPEED WITHIN LIMITS, PRECIPITATION, AND TEMPERATURE
WELDING PROCEDURE SPECIFICATIONS FOLLOWED		●	VERIFY SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE (MIN/MAX), PROPER POSITION (F, V, H, OH)
WELDING TECHNIQUES		●	VERIFY INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, EACH PASS MEETS QUALITY REQUIREMENTS
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS		●	
SINGLE-PASS FILLET WELDS		●	
MULTIPASS FILLET WELDS	●		
COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	●		
INSPECTION TASKS AFTER WELDING			
WELDS CLEANED	●		
SIZE, LENGTH AND LOCATION OF WELDS	●		
WELDS MEET VISUAL ACCEPTANCE CRITERIA; CRACK PROHIBITION, WELD/BASE-METAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, AND POROSITY	●		
ARC STRIKES, K-AREA, BACKING AND WELD TABS REMOVED (WHERE REQUIRED), AND ALL REPAIR ACTIVITIES	●		
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER		●	
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF EOR		●	

ABBREVIATIONS

A.B.	ANCHOR BOLTS
ABV	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT
ARCH'L	ARCHITECTURAL (DRAWINGS)
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AWS	AMERICAL WELDING SOCIETY
BFF	BELOW FINISHED FLOOR
BLW	BELOW
BOT	BOTTOM
BRB	BUCKLING RESTRAINED BRACE
BRG	BEARING
BTWN	BETWEEN
CJ	CONTROL JOINT
CL	CENTER LINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNITS
COL	COLUMN
COMP	COMPOSITE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CP	CONCRETE PIER
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CW	CONCRETE WALL
DB	DECK BEARING
DBA	DEFORMED BAR ANCHOR
DB	DECK BEARING
DBL	DOUBLE
Ø	OR DIA. DIAMETER
DIM(S)	DIMINSION(S)
DL	DEAD LOAD
DET	DETAIL
DWG(S)	DRAWING(S)
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
ELECT	ELECTRICAL (DRAWINGS)
ELEV	ELEVATION
E.L.F.	EQUIVALENT LATERAL FORCE
EMBED	EMBEDMENT
EOR	ENGINEER OF RECORD
EOS	EDGE OF SLAB
EQ	EQUAL, EQUALLY
EXP	EXPANSION
EXT	EXTERIOR
EQUIP	EQUIPMENT
EXIST	EXISTING
FDN	FOUNDATION
FLR	FLOOR
FRMG	FRAMING
FT	FEET
FTG	FOOTING
FV	FIELD VERIFY
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GSN	GENERAL STRUCTURAL NOTES
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
HT	HEIGHT
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IN	INCH(ES)

INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIPS
KLF	KIPS PER LINEAR FOOT
KSF	KIPS PER SQUARE FOOT
LBS (OR #)	POUNDS
LF	LINEAR FOOT
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LSV	LONG SIDE VERTICAL
LSH	LONG SIDE HORIZONTAL
MFR	MANUFACTURER
MAX	MAXIMUM
MECH	MECHANICAL (DRAWINGS)
MIN	MINIMUM
MISC	MISCELLANEOUS
MSJC	MASONRY STANDARDS JOINT COMMITEE
MSW	METAL STUD WALL
MTL	METAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O.A.	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
PCF	POUNDS PER CUBIC FOOT
PDF	POWDER DRIVEN FASTENER
PL	PLATE
PLF	POUNDS PER LINEAL FOOT
PLUMB	PLUMBING (DRAWINGS)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF	REINFORCING
REQ'D	REQUIRED
RTU	ROOF TOP UNIT
SFRS	SEISMIC FORCE RESISTING SYSTEM
SBP	STEEL BASE PLATE
SC	STEEL COLUMN
SCP	STEEL CAP PLATE
SCHED	SCHEDULE
SF	SQUARE FOOT
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SL	SNOW LOAD
SPECS	SPECIFICATIONS
STRUCT	STRUCTURAL (DRAWINGS)
STS	SELF TAPPING SCREWS
SW	WOOD SHEAR WALL
T&B	TOP AND BOTTOM
TO	TOP OF ...
TOF	TOP OF FOOTING
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
W/O	WITHOUT
WP	WORK POINT
WSW	WOOD STUD WALL
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

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PROFESSIONAL ENGINEER
No. 11866339
TYSON ALDER
STATE OF UTAH
08/30/2021

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 02/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

GENERAL STRUCTURAL NOTES

DATE: **06/15/2021**

PERMIT SET

SHEET #:

S002

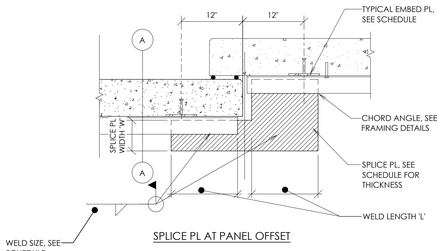
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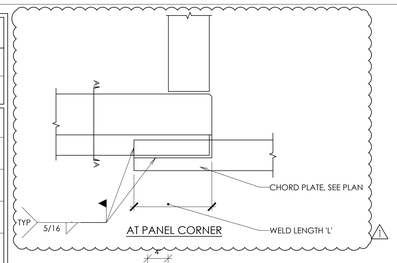
LEDGER SCHEDULE 'L'

MARK	SIZE	PANEL CONNECTION	SPLICE PLATE THICKNESS	SPLICE PLATE WIDTH 'W'	SPLICE PLATE WELD SIZE	SPLICE PLATE WELD LENGTH 'L'
'L1'	L4x4x1/4	3/8"x4"x0'-8" EMBED PL w/(2) 3/4" DIA x 0'-5" HSA@ 3'-0" O.C. (MAX)	3/8"	5.1/2"	5/16"	9"
'L2'	L4x4x1/2	3/8"x4"x0'-8" EMBED PL w/(2) 3/4" DIA x 0'-5" HSA@ 4'-0" O.C. (MAX)	3/8"	6.1/2"	5/16"	11"
'L3'	L6x4x1/2	3/8"x4"x0'-8" EMBED PL w/(2) 3/4" DIA x 0'-5" HSA@ 4'-0" O.C. (MAX)	1/2"	8"	3/8"	13"
'L4'	L6x4x9/16	3/8"x4"x0'-8" EMBED PL w/(2) 3/4" DIA x 0'-5" HSA@ 4'-0" O.C. (MAX)	1/2"	9.1/2"	3/8"	22"
'L5'	L6x4x9/16	3/8"x4"x0'-8" EMBED PL w/(2) 3/4" DIA x 0'-5" HSA@ 4'-0" O.C. (MAX)	1/2"	11"	3/8"	25"

NOTES:
1. SCHEDULE APPLIES TO DECK LEDGERS AT ROOF AND FLOOR UNLESS NOTED OTHERWISE IN DETAILS.
2. CONTRACTOR OPTION: OMIT SPLICE PL AND PROVIDE FULL PENETRATION WELD AT SPLICE.
3. ALL LEDGERS SHALL HAVE A MINIMUM OF (2) WELD PLATES OR ANCHOR BOLTS AS NOTED.
4. WELD PLATES OR ANCHOR BOLTS SHALL BE LOCATED NOT LESS THAN 6" NOR MORE THAN 1'-4" FROM THE END OF THE LEDGER OR LEDGER SPLICE.
5. SEE DETAIL 6/S701 FOR LEDGER ANGLE TO EMBED CONNECTION & THIS DETAIL FOR EMBED CONFIGURATION.



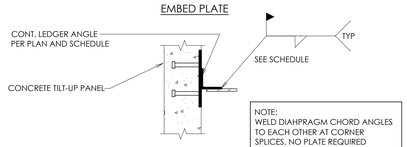
SPLICE PL AT PANEL OFFSET



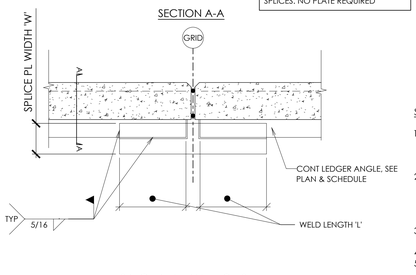
AT PANEL CORNER



EMBED PLATE



SECTION A-A



SPLICE PL AT PANEL OFFSET

17 LEDGER SCHEDULE
5004 SCALE: N.T.S.

STEEL COLUMN SCHEDULE

COLUMN MARK	COLUMN SIZE	STEEL BASE PLATE	STEEL CAP PLATE	COMMENTS
SC-5A	HSS5x5x5/16	3/4" (SBP-2)	1/2" SCP-2	
SC-5B	HSS5x5x3/8	3/4" (SBP-1)	1/2" SCP-1	
SC-5C	HSS5x5x1/2	3/4" (SBP-1)	1/2" SCP-1	
SC-6A	HSS6x6x1/2	1" (SBP-1)	1/2" SCP-1	
SC-6B	HSS6x6x1/2	1" (SBP-2)	1/2" SCP-2	
SC-6C	HSS6x6x5/8	1" (SBP-1)	1/2" SCP-1	
SC-6D	HSS6x6x5/8	1" (SBP-4)	1/2" SCP-2	
SC-8A	HSS8x8x1/4	1" (SBP-2)	1/2" SCP-2	
SC-8B	HSS8x8x5/16	1" (SBP-2)	1/2" SCP-2	
SC-10A	HSS10x10x5/16	1" (SBP-1)	1/2" SCP-1	

STEEL COLUMN NOTES:
1. TYPICAL ANCHOR RODS SHALL MEET THE FOLLOWING REQUIREMENTS, UNO:
   A. ANCHOR BOLTS SHALL PROJECT 3" MINIMUM ABOVE TOP OF THE BASE PLATE.
   B. ANCHOR EMBEDMENT INTO FOOTING SHALL BE 12x ANCHOR BOLT DIAMETER.
   C. EMBEDDED ENDS SHALL HAVE 3" MINIMUM HOOKS.
2. TYPICAL ANCHOR BOLTS SHALL BE INSTALLED WITH HARDENED WASHERS BENEATH NUT. ANY HOLES LARGER THAN THE BOLT DIAMETER PLUS 5/16" SHALL HAVE 5/16" PLATE WASHERS INSTALLED BENEATH HARDENED WASHERS.
   A. TYPICAL BASE PLATE ANCHOR HOLES SHALL BE PER AISC SPECIFICATION (5/16" MAX OVERSIZE).
3. IF DESIRED SPLICE LOCATIONS DIFFER FROM THOSE LEVELS SHOWN ON PLAN, NOTIFY STRUCTURAL ENGINEER PRIOR TO FABRICATION. WRITTEN APPROVAL REQUIRED.
4. NON-SHRINK GROUT UNDER BASE PLATES SHALL BE 1 1/2" THICK U.N.O.
5. FLOOR ELEVATIONS SHOWN ARE FOR INFORMATION ONLY. CONTRACTOR TO CONFIRM WITH ARCHITECTURAL.
6. ALL CAP PLATES/BASE PLATES SHALL WELD TO COLUMN WITH 5/16" FILLET WELD, U.N.O.
7. REFER TO DETAILS FOR ANCHOR BOLT LAYOUT. MODIFICATIONS TO ANCHOR BOLT LAYOUT MAY BE USED WITH WRITTEN APPROVAL.
8. ANCHOR BOLTS SHALL NOT BE WELDED (INCLUDING TACK WELDS).
9. SEE GENERAL STRUCTURAL NOTES FOR MATERIALS AND OTHER REQUIREMENTS.

PLATE LEGEND
'CO' = 1/2" MINIMUM
'ED' = 1 1/2" MINIMUM.
'BC' = BEAM OR GIRDER GAGE
'W' = WHICHEVER IS GREATER:
BEAM OR GIRDER GAGE +1"
OR
BEAM OR GIRDER GAGE +3"
OR
COLUMN WIDTH +1"

6 STEEL COLUMN SCHEDULE
5004 SCALE: N.T.S.

METAL DECK SCHEDULE

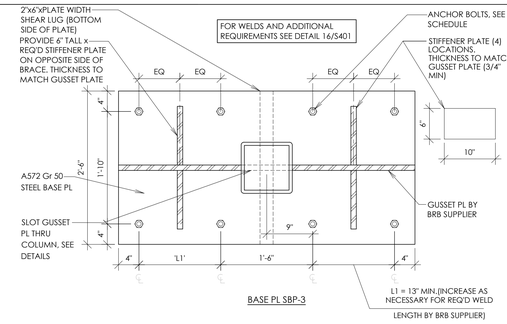
AREA	DECK TYPE: DEPTH	DECK TYPE: TYPE	DECK TYPE: GAUGE	FASTENERS: FASTENER TYPE	FASTENERS: AT SUPPORTS PERP. TO FLUTES	FASTENERS: AT SUPPORTS PARALLEL TO FLUTES	SIDE SEAM CONNECTION: TYPE	SIDE SEAM CONNECTION: SPACING	MIN SHEAR CAPACITY [CAPACITY/MAX DECK SPAN]
TYP ROOF	1.1/2"	B'	22	3/4" DIA PUDDLE WELD	36/7	12" O.C.	1.1/2" TSW	8" O.C.	1030 PLF/6-6
				3/4" DIA PUDDLE WELD	36/7	12" O.C.	PUNCHLOK II	8" O.C.	
				HILTI X-HSN 24	36/7	10" O.C.	PUNCHLOK II	6" O.C.	

NOTES:
1. PROVIDE 2" MIN BEARING AT ALL SUPPORTS. ALL DECK WITH A PROFILES WITH A DEPTH OF 2" OR LESS SHALL HAVE NESTED OR TELESCOPED END LAPS.
2. USE INTERLACKING SIDE SEAMS FOR ALL DECK TYPES.
3. TOP SEAM WELDS SHALL BE 1 1/2" LONG AND SHALL BE ACCORDING TO SDI STANDARDS.
4. MINIMUM SHEAR CAPACITY IS THE CAPACITY REQUIRED FOR ALTERNATE SYSTEMS, SEE GSN.
5. SUBMIT CURRENT ICC APPROVAL FOR ALL DECKS.
6. SEE GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

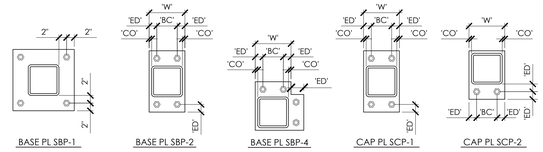
FASTENING PATTERNS

PATTERN : 36/7

5 METAL DECK SCHEDULE
S004 SCALE: N.T.S.



BASE PL SBP-3



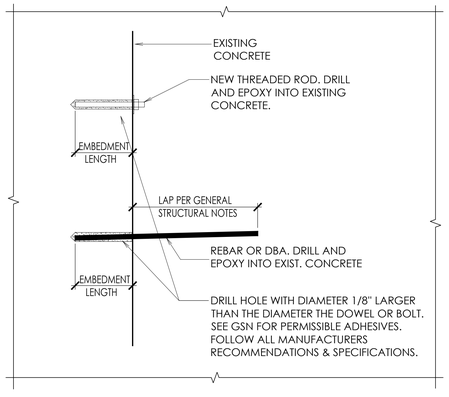
BASE PLATE LAYOUTS

CAP PLATE LAYOUTS

EMBEDMENT OF ADHESIVE ANCHORS

REBAR DOWEL DIAMETER	ANCHOR BOLT DIAMETER	EMBEDMENT LENGTH
#4	1/2"	6"
#5	5/8"	7"
#6	3/4"	10"
#7	7/8"	13"
#8	1"	16"

NOTES:
1. EMBEDMENT LENGTHS SHALL BE ADJUSTED WHEN EXISTING WALL IS OF EQUAL OR OF LESS THICKNESS THAN SCHEDULE REQUIRES. IN THESE CASES THE EMBEDMENT LENGTH SHALL BE THE WALL THICKNESS MINUS 1.1/2".
2. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
3. EMBEDMENT LENGTH IS INTO STRUCTURE, NOT VENEER, U.N.O.

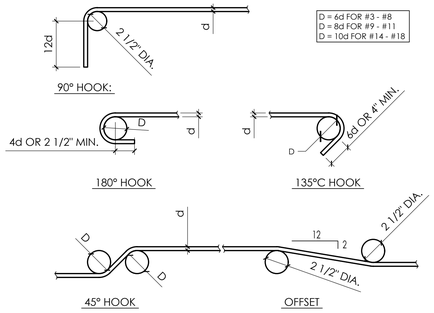


16 POST-INSTALLED ANCHOR EMBEDMENT DETAIL
5004 SCALE: N.T.S.

REINFORCING LAP SPICE SCHEDULE

BAR SIZE	f'c = 3000 PSI REGULAR CLASS A	f'c = 3000 PSI REGULAR CLASS B	f'c = 3000 PSI TOP CLASS A	f'c = 3000 PSI TOP CLASS B	f'c = 4000 PSI REGULAR CLASS A	f'c = 4000 PSI REGULAR CLASS B	f'c = 4000 PSI TOP CLASS A	f'c = 4000 PSI TOP CLASS B	f'c = 5000 PSI REGULAR CLASS A	f'c = 5000 PSI REGULAR CLASS B	f'c = 5000 PSI TOP CLASS A	f'c = 5000 PSI TOP CLASS B	f'c = 6000 PSI REGULAR CLASS A	f'c = 6000 PSI REGULAR CLASS B	f'c = 6000 PSI TOP CLASS A	f'c = 6000 PSI TOP CLASS B
#3	13"	17"	17"	21"	12"	16"	16"	21"	12"	16"	16"	21"	12"	16"	16"	21"
#4	17"	22"	22"	28"	15"	19"	19"	25"	13"	17"	17"	22"	12"	16"	16"	21"
#5	21"	27"	27"	35"	18"	24"	24"	31"	16"	21"	21"	27"	15"	19"	19"	25"
#6	27"	36"	36"	46"	24"	31"	31"	40"	21"	28"	28"	36"	20"	25"	25"	33"
#7	37"	48"	48"	63"	32"	42"	42"	54"	29"	38"	38"	49"	27"	34"	34"	44"
#8	49"	64"	64"	82"	42"	55"	55"	71"	38"	49"	49"	64"	35"	45"	45"	58"
#9	62"	80"	80"	104"	54"	70"	70"	90"	48"	62"	62"	81"	44"	57"	57"	74"
#10	78"	102"	102"	132"	68"	88"	88"	115"	61"	79"	79"	102"	56"	72"	72"	94"
#11	96"	125"	125"	162"	83"	108"	108"	141"	76"	97"	97"	126"	68"	88"	88"	115"

NOTES:
1. THESE NOTES SHALL BE USED FOR ALL SPLICES, UNLESS NOTED OTHERWISE.
2. CLASS 'A' SPLICES MAY BE USED ONLY IN CASES WHERE 50% OR LESS OF THE BARS ARE SPLICED WITHIN THE LAP SPLICE LENGTH.
3. CLASS 'B' SPLICES SHALL BE USED FOR ALL SPLICES UNLESS THE REQUIREMENTS OF NOTE #2 ABOVE ARE MET.
4. TIES AND STIRRUPS SHALL NOT BE SPLICED.
   a. FOR BUNDLED BARS OF THREE OR LESS, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.2.
   b. FOR BUNDLED BARS OF FOUR OR MORE, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 1.33.
   c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP.
   d. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED.
5. FOR ALL LIGHTWEIGHT CONCRETE, LAP LENGTHS SHALL BE MULTIPLIED BY 1.3.
6. FOR ALL EPOXY COATED BARS, LAP LENGTHS SHALL BE MULTIPLIED BY 1.3 FOR TOP BARS AND 1.5 FOR REGULAR BARS.
7. TOP BARS ARE CLASSIFIED AS HORIZONTAL BARS WHERE 12" (OR MORE) OF FRESH CONCRETE IS CAST BELOW THE REINFORCING BAR.



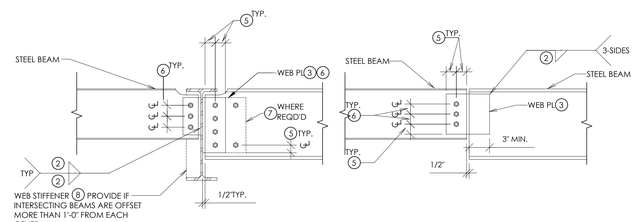
12 REINFORCING LAP SPLICE SCHEDULE & BAR BENDING DIAGRAMS
5004 SCALE: N.T.S.

A-325 BOLT SCHEDULE

MAXIMUM BEAM SIZE IN EACH BEAM DEPTH GROUP	A-325N BOLTS: No. PER BEAM	A-325N BOLTS: SIZE
W8	2	3/4" DIA.
W10	2	3/4" DIA.
W12	3	3/4" DIA.
W14	3	3/4" DIA.
W16	4	3/4" DIA.
W18	5	3/4" DIA.
W21	6	3/4" DIA.
W24	6	3/4" DIA.
W27	7	3/4" DIA.
W30	8	3/4" DIA.

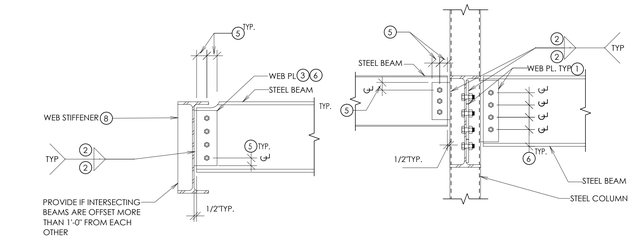
1. HSS COLUMN SHALL HAVE A MINIMUM 1/4" THICKNESS FOR 3/8" SHEAR TABS AND MINIMUM 3/8" THICKNESS FOR 1/2" SHEAR TABS.
2. FILLET WELDS SHALL BE AS FOLLOWS:
   ONE SIDE: PLATE THICKNESS MINUS 1/16" (1/4" MIN.)
   TWO SIDES: 1/2" PLATE THICKNESS PLUS 1/16" (1/4" MIN.) EACH SIDE
3. BEAM WEB CONNECTION PLATE THICKNESS EQUALS BEAM WEB THICKNESS PLUS 1/8" (3/8" MIN.).
4. STIFFENER PL THICKNESS EQUALS BEAM FLANGE THICKNESS OF THE BEAM FRAMING INTO COLUMN (3/8" MIN.).
5. BOLT EDGE DISTANCE SHALL BE EQUAL TO 2X THE DIAMETER OF THE BOLT (1 1/2" MIN.) AT ALL EDGES.
6. VERTICAL BOLT SPACING SHALL BE 3" O.C. TYP., FULL HT OF WEB. SPACING MAY BE REDUCED TO 3X THE DIAMETER OF THE BOLT IF REQ'D TO MAINTAIN A SINGLE ROW OF BOLTS (SINGLE ROW OF BOLTS IS PREFERRED).
7. WHEN MORE THAN ONE COLUMN OF BOLTS IS REQUIRED, THE COLUMN OF BOLTS SHALL BE COMPLETE WITH THE REMAINDER OF THE BOLTS PLACED IN THE SECOND COLUMN.
8.

STEEL BEAM STIFFENER PLATES: FLANGE WIDTH	STIFFENER THICKNESS	WELD SIZE
LESS THAN 8 1/4"	1/4"	3/16"
8 1/4" TO 12 1/4"	3/8"	1/4"
12 1/4" TO 16 1/2"	1/2"	5/16"
16 1/2" TO 20 3/4"	5/8"	3/8"



BEAM TO BEAM - WEB PLATE CONNECTION

BEAM TO PARALLEL BEAM - WEB PLATE CONNECTION



BEAM TO BEAM - WEB PLATE CONNECTION

BEAM TO TUBE STEEL COLUMN - WEB CONNECTION

8 BOLT SCHEDULE FOR TYP. STEEL CONNECTIONS
5004 SCALE: N.T.S.

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PROFESSIONAL ENGINEER No. 11906329 TYSON ALDEN STATE OF UTAH
08/30/2021

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☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
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AMERICAN FORK OFFICE/WAREHOUSE
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AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	06/02/2021
2	PLAN REVIEW 3	06/30/2021

AE2020.283
STRUCTURAL SCHEDULES

DATE: 06/15/2021

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SHEET #:
S003

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STRUCTURAL ☐ PLUMBING
MECHANICAL ☐ ENERGY
ELECTRICAL ☐ ACCESSIBILITY ☐ FIRE
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Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

OVERALL FOOTING & FOUNDATION PLAN

DATE: 06/15/2021

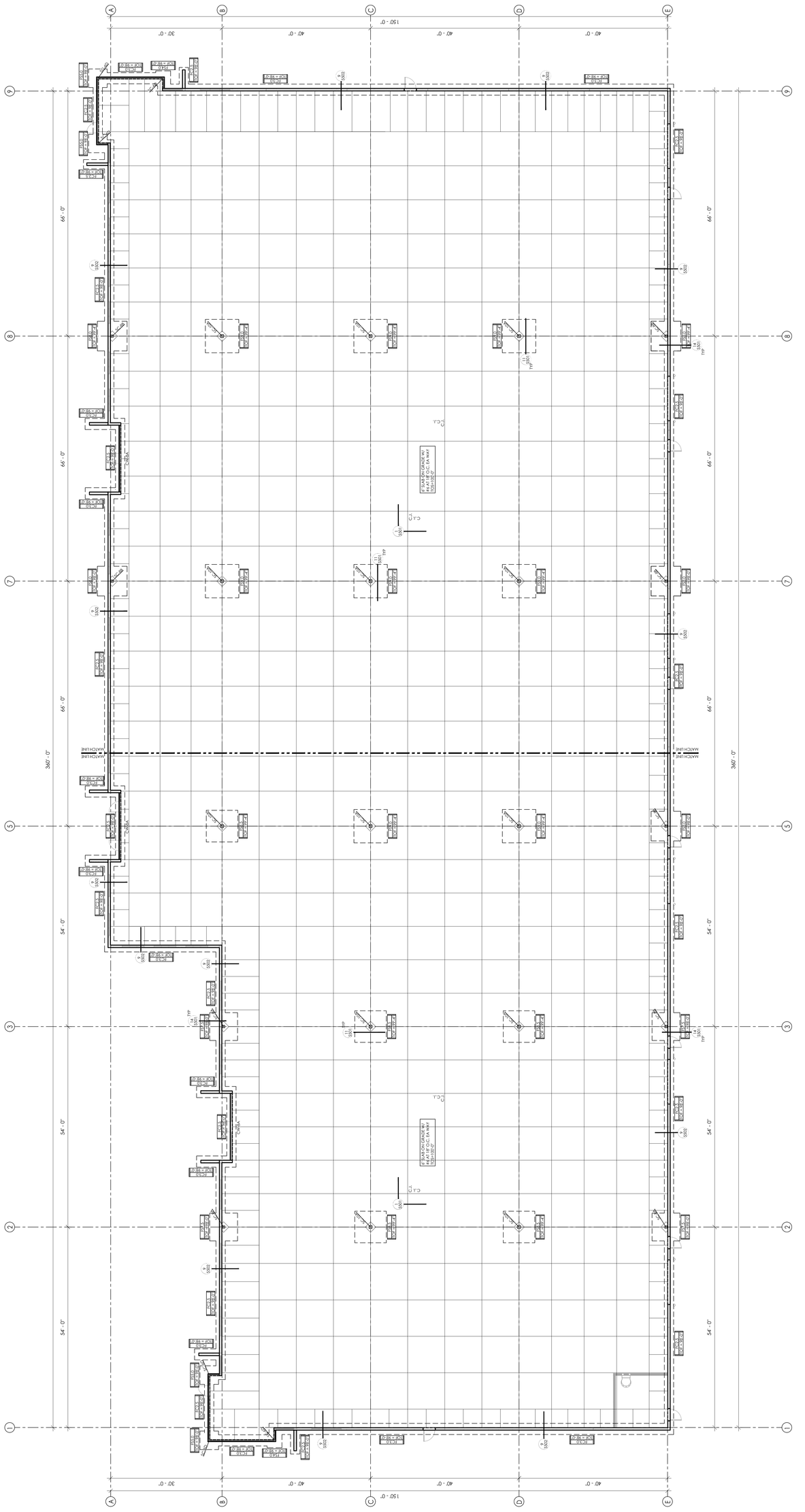
SHEET #: S101

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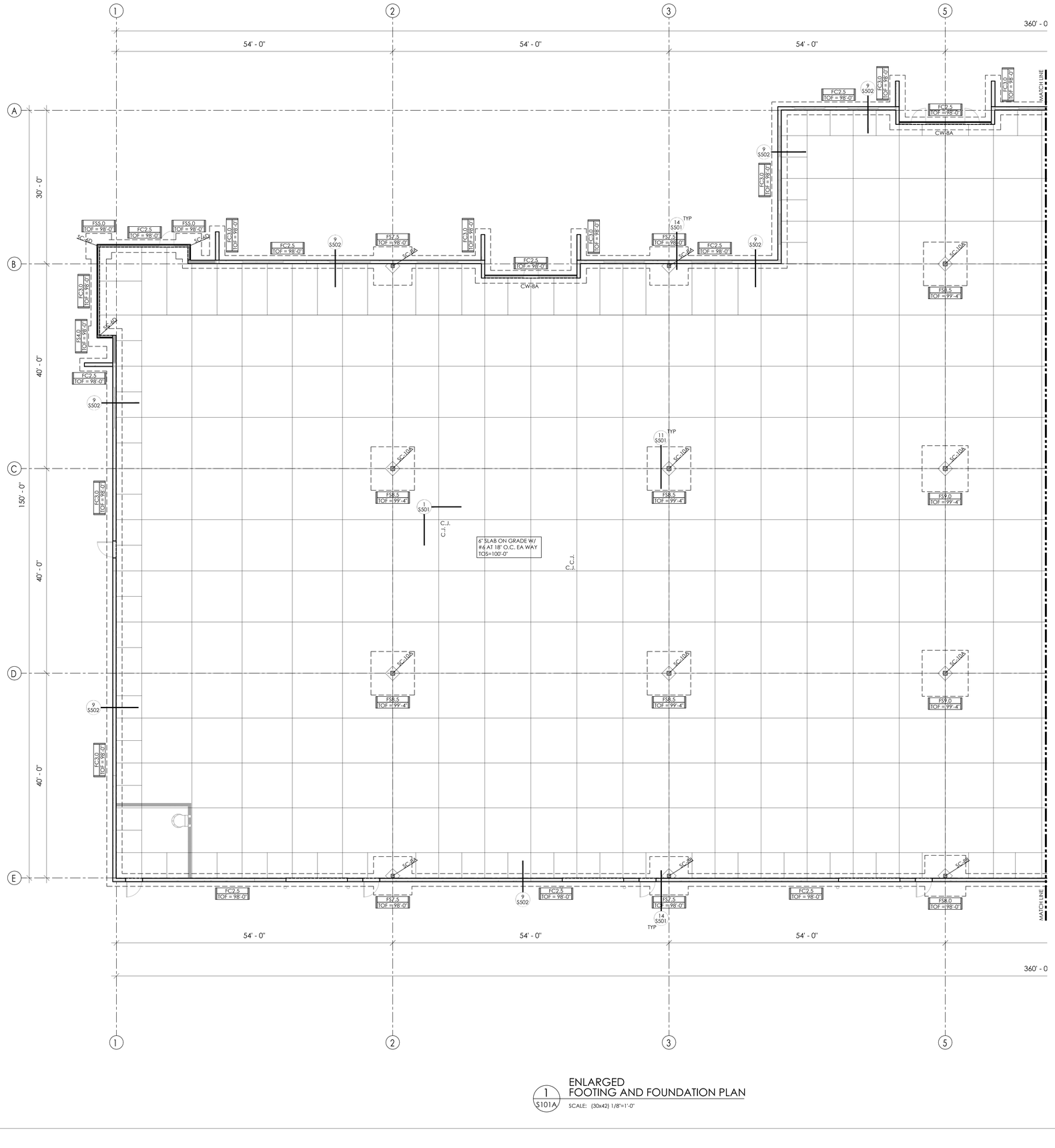
NORTH

GRAPHIC SCALE 0 4' 8' 16'



1 OVERALL FOOTING AND FOUNDATION PLAN
S101 SCALE: (30x42) N.T.S.

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1 S101A — ENLARGED FOOTING AND FOUNDATION PLAN

SCALE: (30x42) 1/8"=1'-0"

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				COMMENTS
				NO.	SIZE	LENGTH	SPACING	NO.	SIZE	LENGTH	SPACING	
FC2.0	2'-0"	CONT	1'-0"	-	# 5	1'-6"	14" O.C.	2	#5	CONT	EQ	
FC2.5	2'-6"	CONT	1'-0"	-	# 5	2'-0"	14" O.C.	3	#5	CONT	EQ	
FC3.0	3'-0"	CONT	1'-0"	-	# 5	2'-6"	14" O.C.	3	#5	CONT	EQ	
FC3.5	3'-6"	CONT	1'-0"	-	# 5	3'-0"	14" O.C.	4	#5	CONT	EQ	
FC4.0	4'-0"	CONT	1'-2"	-	# 6	3'-6"	16" O.C.	4	#6	CONT	EQ	
FC4.5	4'-6"	CONT	1'-2"	-	# 6	4'-0"	16" O.C.	4	# 6	CONT	EQ	
FC5.0	5'-0"	CONT	1'-4"	-	# 6	4'-6"	16" O.C.	4	# 6	CONT	EQ	
FS5.0	5'-0"	5'-0"	1'-0"	5	#5	4'-6"	EQ	5	#5	4'-6"	EQ	
FS6.0	6'-0"	6'-0"	1'-0"	6	#5	5'-6"	EQ	6	#5	5'-6"	EQ	
FS7.0	7'-0"	7'-0"	1'-3"	6	#6	6'-6"	EQ	6	#6	6'-6"	EQ	
FS8.0	8'-0"	8'-0"	1'-6"	8	#6	7'-6"	EQ	8	#6	7'-6"	EQ	
FS8.5	8'-6"	8'-6"	1'-6"	8	#6	8'-0"	EQ	8	#6	8'-0"	EQ	

1. SEE GENERAL STRUCTURAL NOTES FOR CONCRETE STRENGTH, REINFORCING, AND OTHER REQUIREMENTS

STEEL COLUMN SCHEDULE

COLUMN MARK	COLUMN SIZE	STEEL BASE PLATE	STEEL CAP PLATE	COMMENTS
SC-5A	HSS5x5x5/16	3/4" (SBP-2)	1/2" SCP-2	
SC-5B	HSS5x5x3/8	3/4" (SBP-1)	1/2" SCP-1	
SC-5C	HSS5x5x1/2	3/4" (SBP-1)	1/2" SCP-1	
SC-6A	HSS6x6x1/2	1" (SBP-1)	1/2" SCP-1	
SC-6B	HSS6x6x1/2	1" (SBP-2)	1/2" SCP-2	
SC-6C	HSS6x6x5/8	1" (SBP-1)	1/2" SCP-1	
SC-6D	HSS6x6x5/8	1" (SBP-4)	1/2" SCP-2	
SC-8A	HSS8x8x1/4	1" (SBP-2)	1/2" SCP-2	
SC-8B	HSS8x8x5/16	1" (SBP-2)	1/2" SCP-2	
SC-10A	HSS10x10x5/16	1" (SBP-1)	1/2" SCP-1	

FOUNDATION NOTES

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. DO NOT USE CONCRETE CONTROL JOINTS AS DIMENSION LINES OR TO LOCATE BUILDING ELEMENTS.
2. COORDINATE LOCATION OF DEPRESSED SLABS, SLOPED SLABS, FLOOR DRAINS, AND PLUMBING AT SLAB ON GRADE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
3. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO ALL STEEL COLUMNS. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
4. CONCRETE CONTROL JOINTS - AS SHOWN ON PLAN INDICATES LOCATION OF EITHER KEYED OR SAWCUT CONTROL JOINTS IN SLAB ON GRADE AT CONTRACTORS OPTION. SEE GENERAL STRUCTURAL NOTES AND DETAIL 1/S501.
5. ALL SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS (UNO).
6. SEE SHEET S501 FOR TYPICAL FOOTING AND FOUNDATION DETAILS.

LEGEND

FSX.X = INDICATES SPOT FOOTING, SEE SCHEDULE ON THIS SHEET.

FCX.X = INDICATES CONTINUOUS FOOTING, SEE SCHEDULE ON THIS SHEET.

SC-x = INDICATES STEEL COLUMN, SEE SCHEDULE ON SHEET S004

S ——— S = INDICATES FOOTING STEP, SEE DETAIL 12/S501

C.J. = INDICATES CONTROL JOINT LOCATION, SEE DETAIL 1/S501

FCX.X / TOF = XX'-X" = INDICATES FOOTING DESIGNATION / INDICATES TOP OF FOOTING ELEVATION

MSW-xx = INDICATES METAL STUD SHEARWALL SEE SCHEDULE ON SHEET S602

S/HDU2 = INDICATES METAL STUD HOLDOWN, SEE 11/S602

= INDICATES POURBACK STRIP, SEE DETAIL 9/S502

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PROFESSIONAL ENGINEER — No. 11906329 — TYSON ALDEN — STATE OF UTAH

08/30/2021

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MECHANICAL ☑ PLUMBING ☑
ELECTRICAL ☑ ENERGY ☐
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Revision Schedule		
MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

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ENLARGED FOOTING & FOUNDATION PLAN

DATE: **06/15/2021**

SHEET #:

S101A

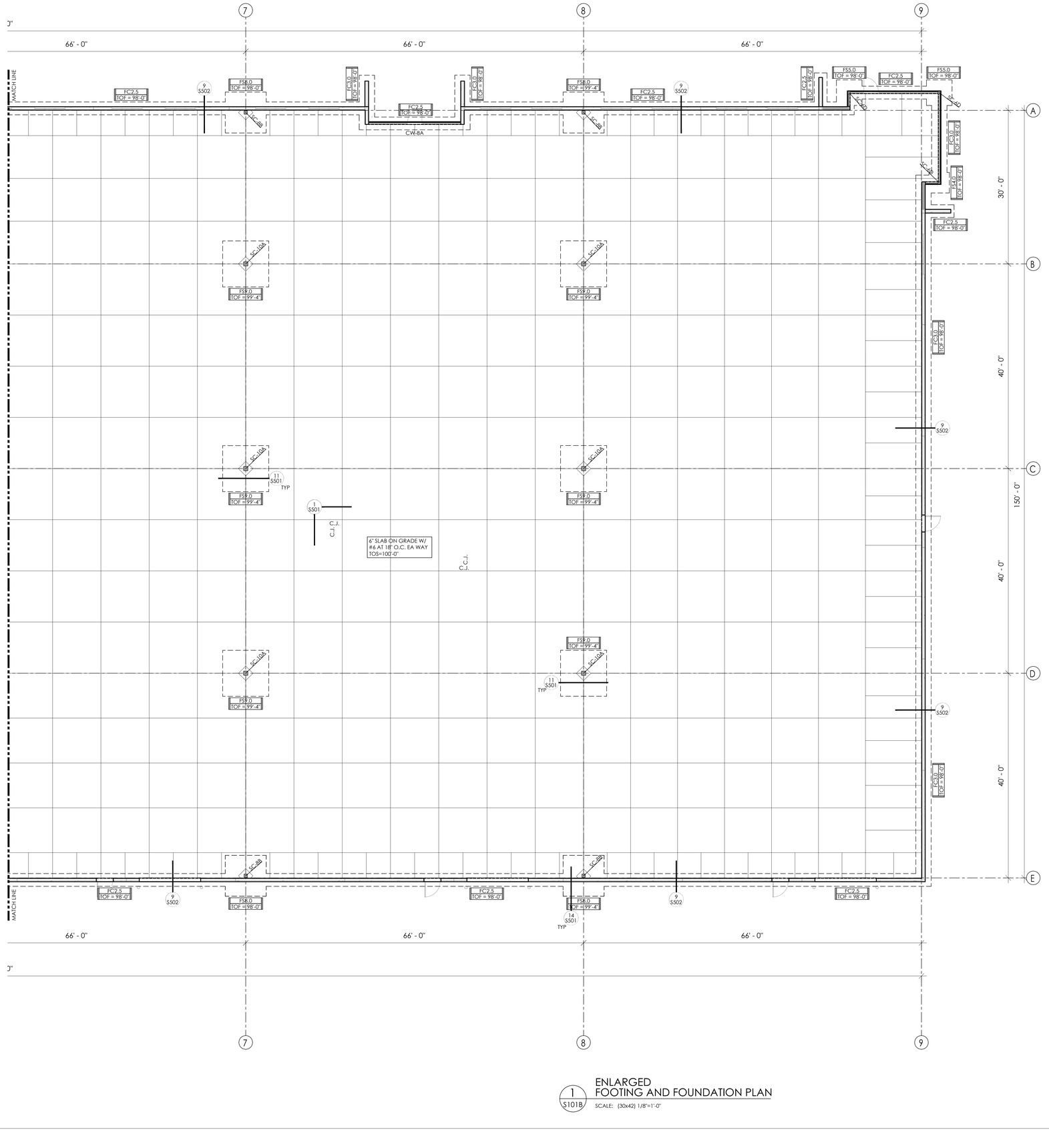
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GRAPHIC SCALE 0 4' 8' 16'

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1 S101B ENLARGED FOOTING AND FOUNDATION PLAN

SCALE: (30x42) 1/8"=1'-0"

FOOTING SCHEDULE

MARK	WIDTH	LENGTH	DEPTH	REINFORCING CROSSWISE				REINFORCING LENGTHWISE				COMMENTS
				NO.	SIZE	LENGTH	SPACING	NO.	SIZE	LENGTH	SPACING	
FC2.0	2'-0"	CONT	1'-0"	-	# 5	1'-6"	14" O.C.	2	#5	CONT	EQ	
FC2.5	2'-6"	CONT	1'-0"	-	# 5	2'-0"	14" O.C.	3	#5	CONT	EQ	
FC3.0	3'-0"	CONT	1'-0"	-	# 5	2'-6"	14" O.C.	3	#5	CONT	EQ	
FC3.5	3'-6"	CONT	1'-0"	-	# 5	3'-0"	14" O.C.	4	#5	CONT	EQ	
FC4.0	4'-0"	CONT	1'-2"	-	# 6	3'-6"	16" O.C.	4	#6	CONT	EQ	
FC4.5	4'-6"	CONT	1'-2"	-	# 6	4'-0"	16" O.C.	4	# 6	CONT	EQ	
FC5.0	5'-0"	CONT	1'-4"	-	# 6	4'-6"	16" O.C.	4	# 6	CONT	EQ	
FS5.0	5'-0"	5'-0"	1'-0"	5	#5	4'-6"	EQ	5	#5	4'-6"	EQ	
FS6.0	6'-0"	6'-0"	1'-0"	6	#5	5'-6"	EQ	6	#5	5'-6"	EQ	
FS7.0	7'-0"	7'-0"	1'-3"	6	#6	6'-6"	EQ	6	#6	6'-6"	EQ	
FS8.0	8'-0"	8'-0"	1'-6"	8	#6	7'-6"	EQ	8	#6	7'-6"	EQ	
FS8.5	8'-6"	8'-6"	1'-6"	8	#6	8'-0"	EQ	8	#6	8'-0"	EQ	

1. SEE GENERAL STRUCTURAL NOTES FOR CONCRETE STRENGTH, REINFORCING, AND OTHER REQUIREMENTS

STEEL COLUMN SCHEDULE

COLUMN MARK	COLUMN SIZE	STEEL BASE PLATE	STEEL CAP PLATE	COMMENTS
SC-5A	HSS5x5x5/16	3/4" (SBP-2)	1/2" SCP-2	
SC-5B	HSS5x5x3/8	3/4" (SBP-1)	1/2" SCP-1	
SC-5C	HSS5x5x1/2	3/4" (SBP-1)	1/2" SCP-1	
SC-6A	HSS6x6x1/2	1" (SBP-1)	1/2" SCP-1	
SC-6B	HSS6x6x1/2	1" (SBP-2)	1/2" SCP-2	
SC-6C	HSS6x6x5/8	1" (SBP-1)	1/2" SCP-1	
SC-6D	HSS6x6x5/8	1" (SBP-4)	1/2" SCP-2	
SC-8A	HSS8x8x1/4	1" (SBP-2)	1/2" SCP-2	
SC-8B	HSS8x8x5/16	1" (SBP-2)	1/2" SCP-2	
SC-10A	HSS10x10x5/16	1" (SBP-1)	1/2" SCP-1	

FOUNDATION NOTES

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. DO NOT USE CONCRETE CONTROL JOINTS AS DIMENSION LINES OR TO LOCATE BUILDING ELEMENTS.
2. COORDINATE LOCATION OF DEPRESSED SLABS, SLOPED SLABS, FLOOR DRAINS, AND PLUMBING AT SLAB ON GRADE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
3. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO ALL STEEL COLUMNS. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
4. CONCRETE CONTROL JOINTS - AS SHOWN ON PLAN INDICATES LOCATION OF EITHER KEYED OR SAWCUT CONTROL JOINTS IN SLAB ON GRADE AT CONTRACTORS OPTION. SEE GENERAL STRUCTURAL NOTES AND DETAIL 1/S501.
5. ALL SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS (UNO).
6. SEE SHEET S501 FOR TYPICAL FOOTING AND FOUNDATION DETAILS.

LEGEND

FSX.X = INDICATES SPOT FOOTING, SEE SCHEDULE ON THIS SHEET.

FCX.X = INDICATES CONTINUOUS FOOTING, SEE SCHEDULE ON THIS SHEET.

SC-x = INDICATES STEEL COLUMN, SEE SCHEDULE ON SHEET S004

S ——— S = INDICATES FOOTING STEP, SEE DETAIL 12/S501

C.J. = INDICATES CONTROL JOINT LOCATION, SEE DETAIL 1/S501

FCX.X TOF = XX'-X" = INDICATES FOOTING DESIGNATION INDICATES TOP OF FOOTING ELEVATION

MSW-XX = INDICATES METAL STUD SHEARWALL SEE SCHEDULE ON SHEET S602

S/HDU2 = INDICATES METAL STUD HOLDOWN, SEE 11/S602

= INDICATES POURBACK STRIP, SEE DETAIL 9/S502

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PROFESSIONAL ENGINEER No. 11906329 TYSON ALDEN STATE OF UTAH

08/30/2021

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Revision Schedule		
MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

ENLARGED FOOTING & FOUNDATION PLAN

DATE: **06/15/2021**

SHEET #:

S101B

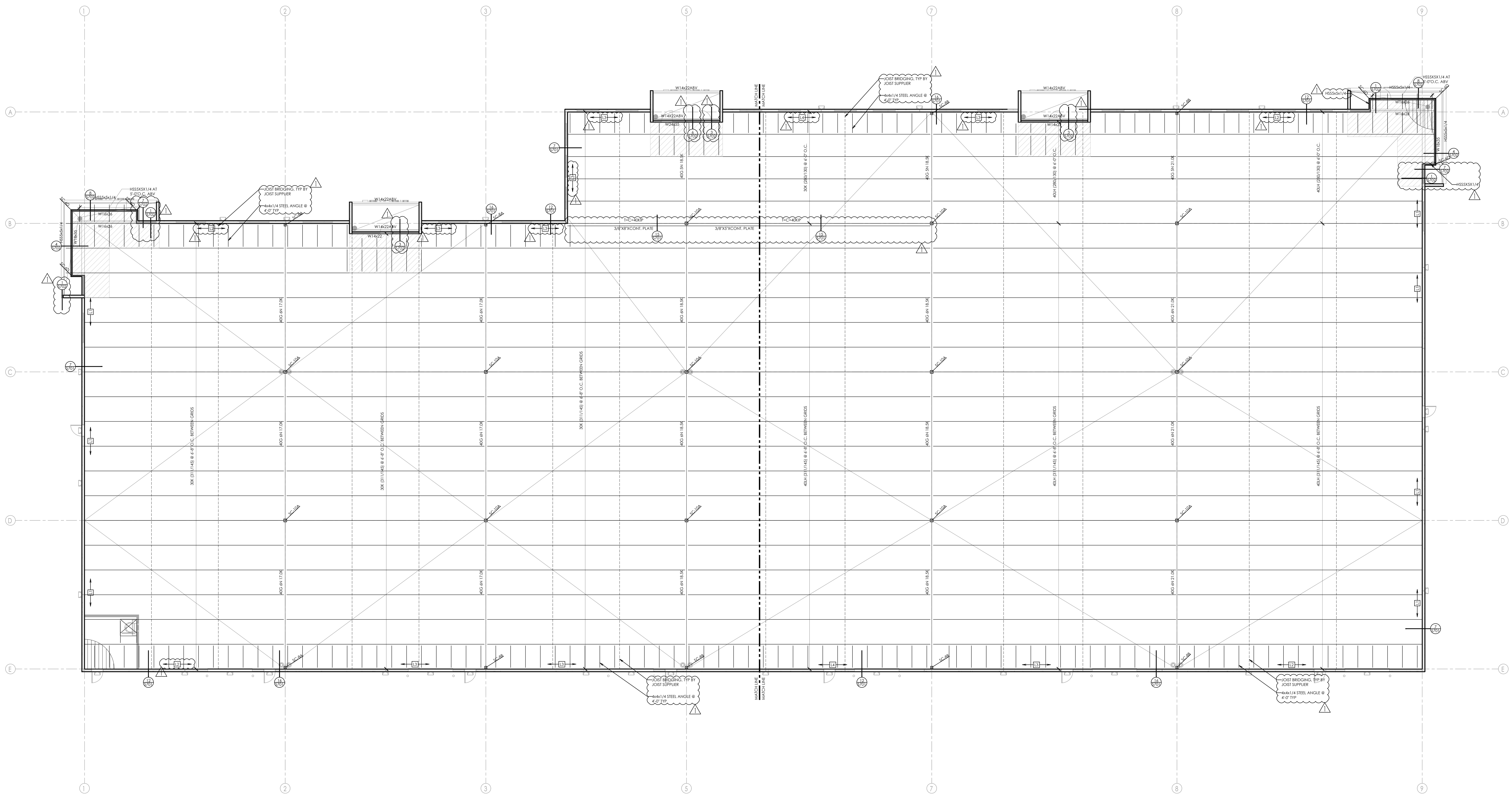
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0 4' 8' 16'
GRAPHIC SCALE

NORTH

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1 / S103 — OVERALL ROOF FRAMING PLAN

SCALE: (30x42) N.T.S.

0 4' 8' 16'

GRAPHIC SCALE

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☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
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Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

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OVERALL ROOF FRAMING PLAN

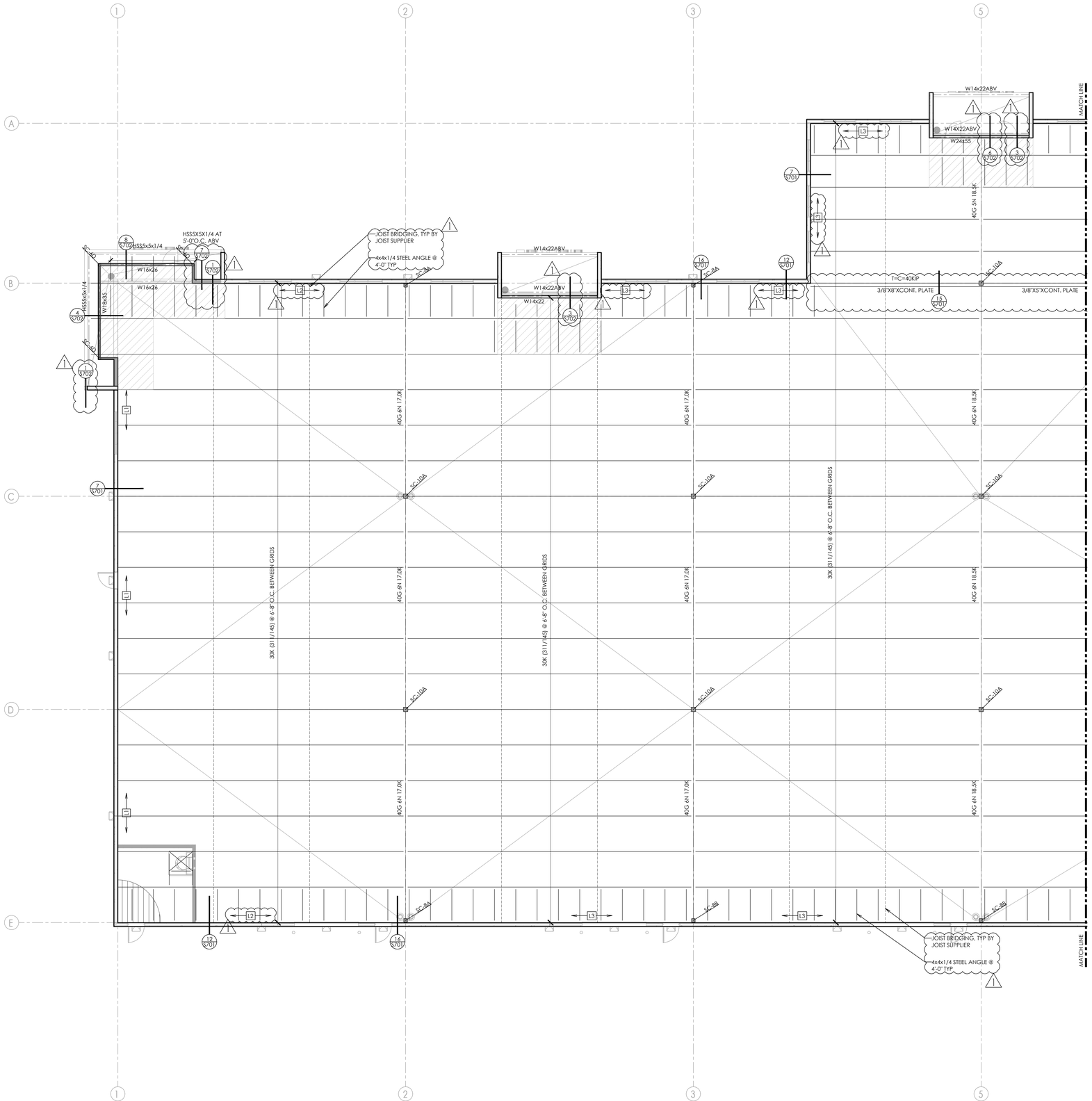
DATE: 06/15/2021

PERMIT SET

SHEET #:

S103

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1 S103A ENLARGED ROOF FRAMING PLAN

SCALE: (30x42) 1/8"=1'-0"

STEEL COLUMN SCHEDULE				
COLUMN MARK	COLUMN SIZE	STEEL BASE PLATE	STEEL CAP PLATE	COMMENTS
SC-5A	HSS5x5x5/16	3/4" (SBP-2)	1/2" SCP-2	
SC-5B	HSS5x5x3/8	3/4" (SBP-1)	1/2" SCP-1	
SC-5C	HSS5x5x1/2	3/4" (SBP-1)	1/2" SCP-1	
SC-6A	HSS6x6x1/2	1" (SBP-1)	1/2" SCP-1	
SC-6B	HSS6x6x1/2	1" (SBP-2)	1/2" SCP-2	
SC-6C	HSS6x6x5/8	1" (SBP-1)	1/2" SCP-1	
SC-6D	HSS6x6x5/8	1" (SBP-4)	1/2" SCP-2	
SC-8A	HSS8x8x1/4	1" (SBP-2)	1/2" SCP-2	
SC-8B	HSS8x8x5/16	1" (SBP-2)	1/2" SCP-2	
SC-10A	HSS10x10x5/16	1" (SBP-1)	1/2" SCP-1	

ROOF FRAMING NOTES:

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. ROOF ELEVATIONS, WHERE SHOWN, ARE TO BE PROVIDED AND VERIFIED BY THE ARCHITECT.
2. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO STEEL COLUMNS AND TYPICAL DIMENSIONS.
3. SEE SHEET S701 FOR ALL TYPICAL ROOF DETAILS.
4. SCHEDULED MARK DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
5. FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITION.
6. FOR CLARITY, ROOF OPENINGS MAY NOT BE SHOWN ON PLANS. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
7. VERIFY EXACT SIZE, WEIGHT AND LOCATIONS OF ALL EQUIPMENT ON AND HANGING FROM ROOF WITH MECHANICAL DRAWINGS. NOTIFY EOR WHERE ANY RTU PLACED ABOVE OR BELOW ROOF DECK THAT IS NOT SHOWN ON THIS SHEET WEIGHS MORE THAN 100 LBS.
8. JOIST BRIDGING SHOWN IS FOR REPRESENTATION ONLY. JOIST MANUFACTURER IS RESPONSIBLE TO DESIGN THE LOCATION, QUANTITY, SIZE, AND TYPE OF JOIST BRIDGING TO BE USED AND SHALL CONFORM TO 'SJI' REQUIREMENTS.
9. WHERE MECHANICAL UNITS, DUCTS, OR SKYLIGHTS INTERRUPT JOIST BRIDGING CONTRACTOR SHALL PROVIDE STANDARD DIAGONAL BRIDGING EA SIDE OF CONFLICT.
10. ALL OPEN-WEB ROOF JOISTS SHALL HAVE 5" DEEP JOIST BEARING ENDS. ALL OPEN-WEB GIRDERS SHALL HAVE 7 1/2" DEEP BEARING ENDS.
11. JOIST DESIGN PER ALLOWABLE STRESS DESIGN (ASD)
12. JOIST MANUFACTURER TO DESIGN TO TRANSFER 9850 LBS (SEISMIC, ASD) AXIAL LOAD THROUGH ALL JOISTS & GIRDER SHOES, UNO. (FORCES GIVEN INCLUDE OVER STRENGTH FACTOR PER ASCE 12.11.2.2.2)
13. JOIST MANUFACTURER TO DESIGN ROOF JOISTS AND GIRDERS FOR A TOTAL NET UPLIFT: .6 (WIND UPLIFT) - .6 (ROOF DL) = 8 PSF (NET UPLIFT, ASD)

SNOW DRIFT LEGEND

= SNOW DRIFTING (AROUND PARAPET/WALLS)

51 PSF ADDED DRIFT LOAD

STANDARD DEAD & LIVE LOADS, SEE S001

19'-6"

1

LEGEND

* = INDICATES JOISTS TO BE DESIGNED FOR AN ADDITIONAL 500 LBS VERTICAL POINT AT ANY POINT ON JOIST

= INDICATES METAL ROOF DECK, FOR TYPE, GAUGE, AND ATTACHMENT REQUIREMENTS SEE DECK SCHEDULE ON SHEET S004

Lx = INDICATES DECK LEDGER ANGLE TYPE, SEE SCHEDULE ON SHEET S004

SC-x = INDICATES STEEL COLUMN, SEE SCHEDULE ON SHEET S004

– – – – – = INDICATES JOIST BRIDGING, SEE NOTE 7.

RTU = xx = INDICATES ROOF TOP UNIT WEIGHT IN LBS, VERIFY LOCATION & WEIGHT W/MECH

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PROFESSIONAL ENGINEER No. 11190632 TYSON ALDEN STATE OF UTAH

08/30/2021

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH APPLICABLE CONSTRUCTION CODES AS NOTIFIED BELOW:
BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
☑ ELECTRICAL ☐ ENERGY
☑ ACCESSIBILITY ☐ FIRE
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WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

ENLARGED ROOF FRAMING PLAN

DATE: 06/15/2021

PERMIT SET

SHEET #:

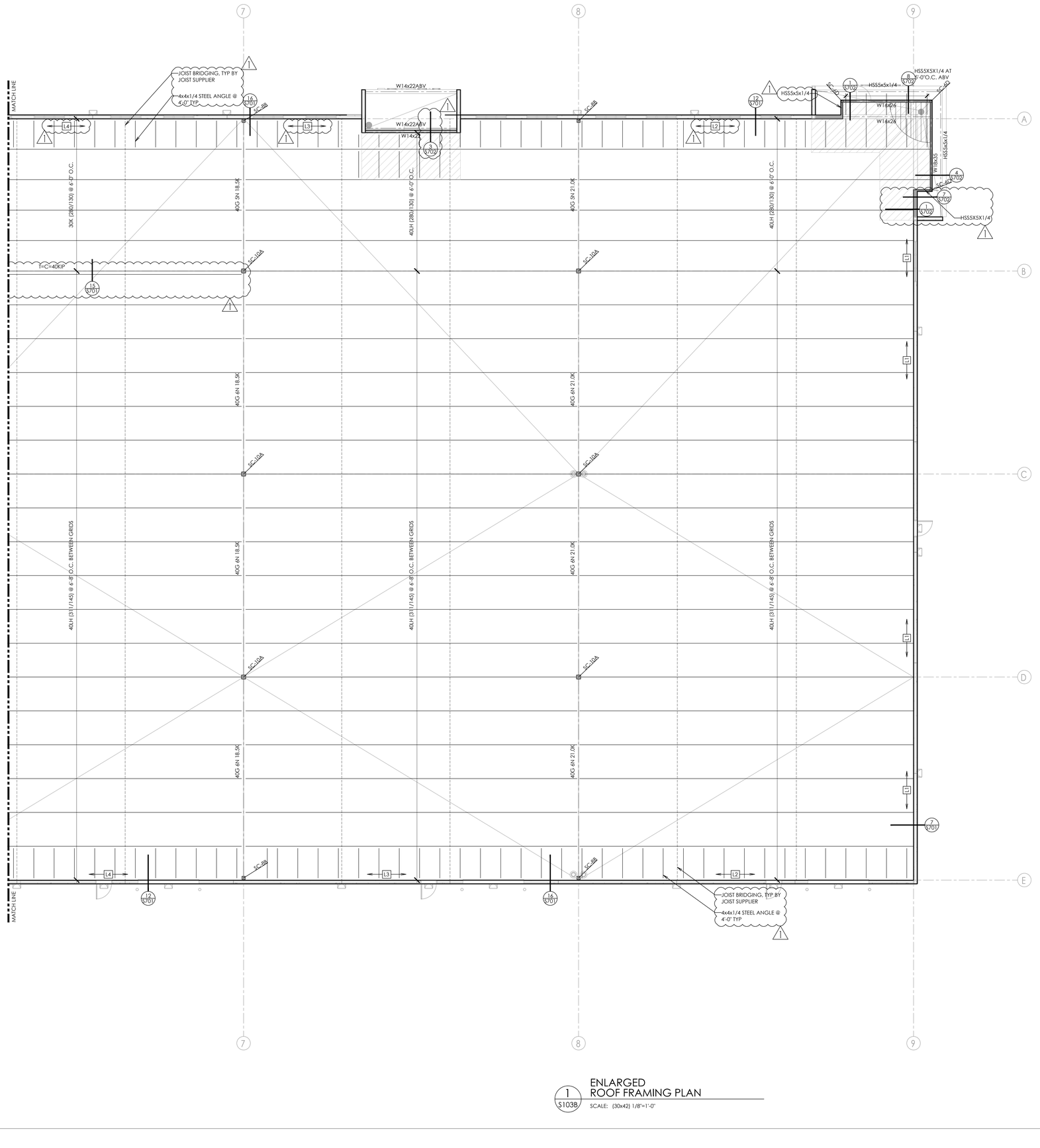
S103A

GRAPHIC SCALE 0 4' 8' 16'

NORTH

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1 S103B ENLARGED ROOF FRAMING PLAN

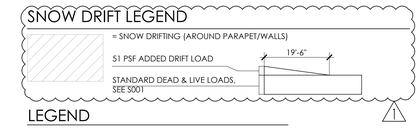
SCALE: (30x42) 1/8"=1'-0"

STEEL COLUMN SCHEDULE				
COLUMN MARK	COLUMN SIZE	STEEL BASE PLATE	STEEL CAP PLATE	COMMENTS
SC-5A	HSS5x5x5/16	3/4" (SBP-2)	1/2" SCP-2	
SC-5B	HSS5x5x3/8	3/4" (SBP-1)	1/2" SCP-1	
SC-5C	HSS5x5x1/2	3/4" (SBP-1)	1/2" SCP-1	
SC-6A	HSS6x6x1/2	1" (SBP-1)	1/2" SCP-1	
SC-6B	HSS6x6x1/2	1" (SBP-2)	1/2" SCP-2	
SC-6C	HSS6x6x5/8	1" (SBP-1)	1/2" SCP-1	
SC-6D	HSS6x6x5/8	1" (SBP-4)	1/2" SCP-2	
SC-8A	HSS8x8x1/4	1" (SBP-2)	1/2" SCP-2	
SC-8B	HSS8x8x5/16	1" (SBP-2)	1/2" SCP-2	
SC-10A	HSS10x10x5/16	1" (SBP-1)	1/2" SCP-1	

ROOF FRAMING NOTES:

1. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS. ROOF ELEVATIONS, WHERE SHOWN, ARE TO BE PROVIDED AND VERIFIED BY THE ARCHITECT.
2. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS TO STEEL COLUMNS AND TYPICAL DIMENSIONS.
3. SEE SHEET S701 FOR ALL TYPICAL ROOF DETAILS.
4. SCHEDULED MARK DESIGNATIONS ARE TYPICAL TO THE PROJECT AND MAY NOT NECESSARILY BE FOUND ON THIS PLAN.
5. FOR CLARITY, DETAILS MAY SHOW ONLY ONE SIDE OF FRAMING CONDITION.
6. FOR CLARITY, ROOF OPENINGS MAY NOT BE SHOWN ON PLANS. FOR EXACT SIZE, NUMBER AND LOCATION OF OPENINGS, SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
7. VERIFY EXACT SIZE, WEIGHT AND LOCATIONS OF ALL EQUIPMENT ON AND HANGING FROM ROOF WITH MECHANICAL DRAWINGS. NOTIFY EOR WHERE ANY RTU PLACED ABOVE OR BELOW ROOF DECK THAT IS NOT SHOWN ON THIS SHEET WEIGHS MORE THAN 100 LBS.
8. JOIST BRIDGING SHOWN IS FOR REPRESENTATION ONLY. JOIST MANUFACTURER IS RESPONSIBLE TO DESIGN THE LOCATION, QUANTITY, SIZE, AND TYPE OF JOIST BRIDGING TO BE USED AND SHALL CONFORM TO 'SJI' REQUIREMENTS.
9. WHERE MECHANICAL UNITS, DUCTS, OR SKYLIGHTS INTERRUPT JOIST BRIDGING CONTRACTOR SHALL PROVIDE STANDARD DIAGONAL BRIDGING EA SIDE OF CONFLICT.
10. ALL OPEN-WEB ROOF JOISTS SHALL HAVE 5" DEEP JOIST BEARING ENDS. ALL OPEN-WEB GIRDERS SHALL HAVE 7 1/2" DEEP BEARING ENDS.
11. JOIST DESIGN PER ALLOWABLE STRESS DESIGN (ASD)
12. JOIST MANUFACTURER TO DESIGN TO TRANSFER 9850 LBS (SEISMIC, ASD) AXIAL LOAD THROUGH ALL JOISTS & GIRDER SHOES, UNO. (FORCES GIVEN INCLUDE OVER STRENGTH FACTOR PER ASCE 12.11.2.2.2)
13. JOIST MANUFACTURER TO DESIGN ROOF JOISTS AND GIRDERS FOR A TOTAL NET UPLIFT: .6 (WIND UPLIFT) - .6 (ROOF DL) = 8 PSF (NET UPLIFT, ASD)

SNOW DRIFT LEGEND



LEGEND

* = INDICATES JOISTS TO BE DESIGNED FOR AN ADDITIONAL 500 LBS VERTICAL POINT AT ANY POINT ON JOIST

= INDICATES METAL ROOF DECK, FOR TYPE, GAUGE, AND ATTACHMENT REQUIREMENTS SEE DECK SCHEDULE ON SHEET S004

Lx = INDICATES DECK LEDGER ANGLE TYPE, SEE SCHEDULE ON SHEET S004

SC-x = INDICATES STEEL COLUMN, SEE SCHEDULE ON SHEET S004

– – – – – = INDICATES JOIST BRIDGING, SEE NOTE 7.

RTU = xx = INDICATES ROOF TOP UNIT WEIGHT IN LBS, VERIFY LOCATION & WEIGHT W/MECH

GRAPHIC SCALE 0 4' 8' 16'

NORTH

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PROFESSIONAL ENGINEER No. 11190632 TYSON ALDEN STATE OF UTAH

08/30/2021

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AMERICAN FORK, UT

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1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

ENLARGED ROOF FRAMING PLAN

DATE: 06/15/2021

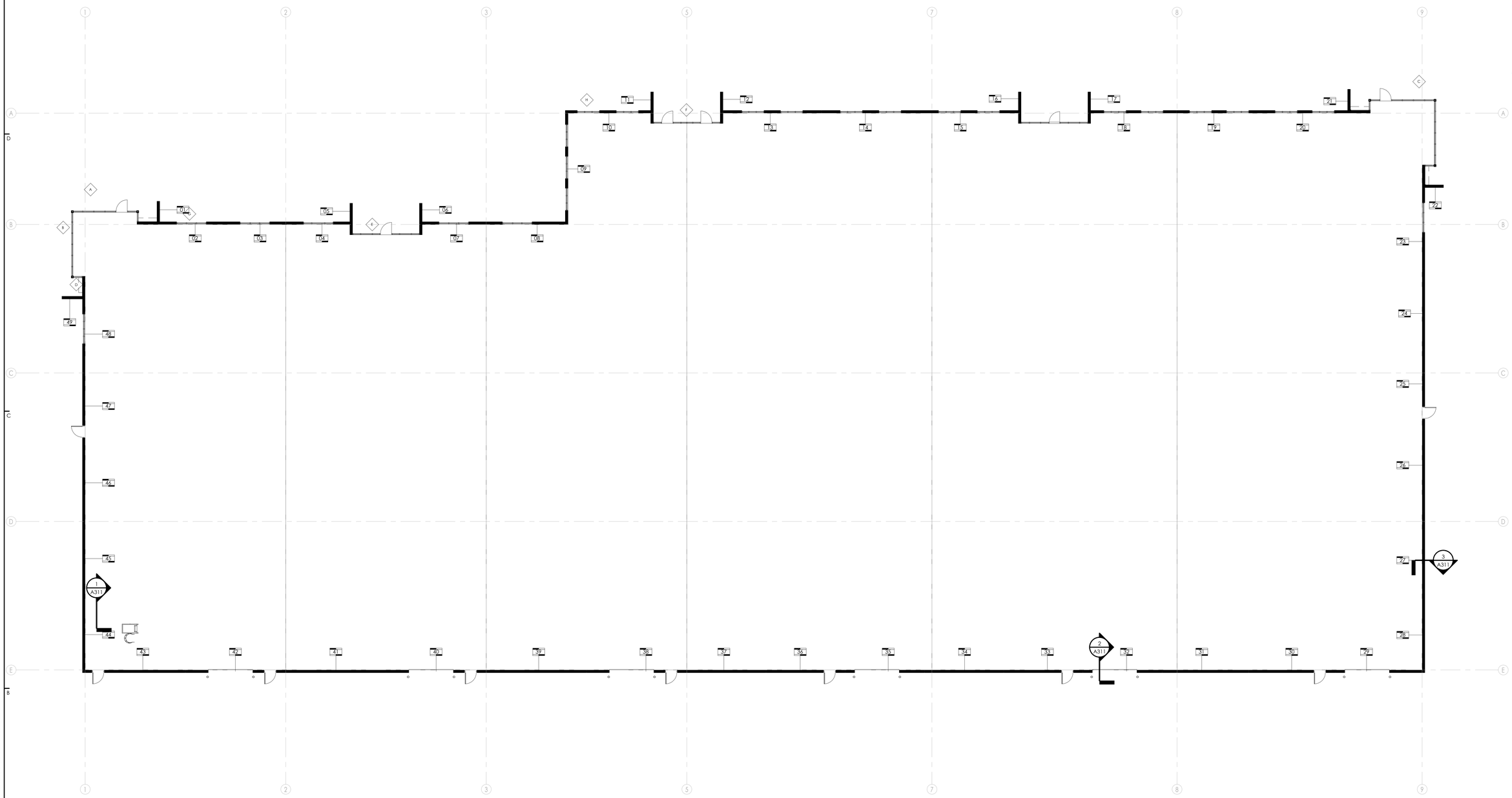
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SHEET #:

S103B

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1 S201 **LEVEL 01 PANEL PLAN**
3/32" = 1'-0"

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PROFESSIONAL ENGINEER
No. 11866339
TYSON ALDER
STATE OF UTAH
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AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date

AE2020.283

PANEL FLOOR PLAN

DATE: **03/10/2021**

SHEET #:

S201

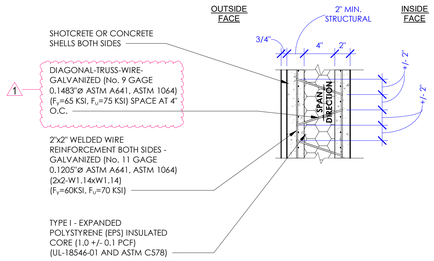
DESIGN DEVELOPMENT

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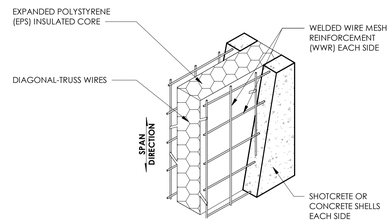
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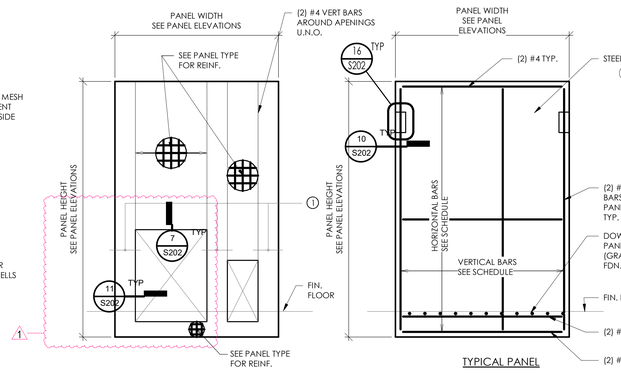
13 S202 N.T.S

TYPICL INNSTRUCT PANEL



9 S202 1 1/2" = 1'-0"

INNSTRUCT PANEL ISOMETRIC



PANEL NOTES
1. SEE PANEL ELEVATIONS AND DETAILS 7/S202 FOR JAMB REINFORCING & SCHEDULE.
2. FOR HEADER/LINTEL BEAM REINFORCING, SEE DETAIL 16/S202.
3. FOR PANEL REINFORCING, SEE SCHEDULE BELOW AND DETAIL 15/S202. ALL PANELS ARE REBAR PANEL TYPE 'A' U.N.O.
4. FOR TYPICAL PANEL JOINT DETAILS SEE 20/S201.
5. FOR REQUIRED CHORD ANGLE, SEE PLANS.
6. SEE ADDITIONAL DETAILS ON OTHER SHEETS AS APPLICABLE.
7. SEE 4/S201 FOR MESH EDGE SHAPES

PANEL REBAR SCHEDULE				
PANEL TYP.	PANEL THICKNESS	VERTICAL REBAR	HORIZONTAL REBAR	CLEARANCE
A	2 3/4" EXTERIOR STRUCT + 4" INSUL + 2" STRUCT	#4 @ 24" O.C. E.F.		SEE 13/S201

NOTE: PROVIDE ADDITIONAL REBAR FOR LIFTING AS REQUIRED, TYP

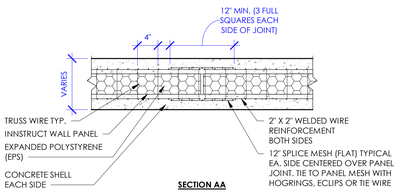
EF=EACH FACE
HORIZONTAL STEEL TO CONTINUE THROUGH PIER/JAMB U.N.O.
*HORIZONTAL BARS TO HAVE HOOKED ENDS.

OPTION: CONTINUE STRAIGHT HORIZONTAL BARS SO THEY EXTEND INTO FULL WIDTH OF JAMBS @ EACH END AND OMIT HOOKED ENDS. PROVIDED JAMB WIDTH IS SUFFICENT TO DEVELOP HORIZ. BARS.

5 S202 N.T.S

PANEL REINF & SCHEDULE - TYPICAL

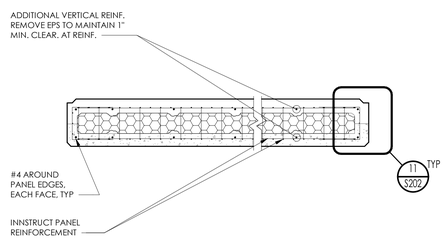
NOTE:
TIE ADDITIONAL REINFORCEMENT TO MESH TO HOLD IN POSITION AT FACE MESH WHEN PANEL IS PLACED INTO CONCRETE



SECTION AA

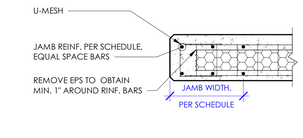
14 S202 1" = 1'-0"

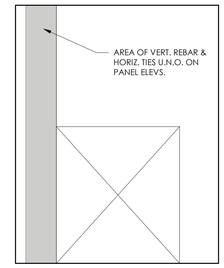
INNSTRUCT PANEL SPLICE



10 S202 1" = 1'-0"

TYPICAL PANEL REINFORCING LAYOUT





JAMBS		
SCHEDULED MARK	JAMB WIDTH	VERTICAL REINFORCING
J1	2'-6" MAX.	(3) #4 BARS E.F.
J2	FULL WIDTH	(5) #4 BARS E.F.
J3	FULL WIDTH	(6) #4 BARS E.F.
J4	FULL WIDTH	(8) #4 BARS E.F.
J5	FULL WIDTH	(9) #4 BARS E.F.
J6	FULL WIDTH	(11) #4 BARS E.F.
J7	FULL WIDTH	(5) #5 BARS E.F.
J8	FULL WIDTH	(6) #5 BARS E.F.
J9	FULL WIDTH	(7) #5 BARS E.F.
J10	FULL WIDTH	(8) #5 BARS E.F.
J11	1'-6" SOLID CONC.	(4) #5 BARS E.F.

NOTES:
1. EXTEND LINTEL REINFORCING BEYOND EDGE OF THE OPENING 4'-0" MINIMUM. WHERE NOT POSSIBLE, EXTEND TO THE EDGE OF PANEL AND TERMINATE WITH A STANDARD 90° HOOK, OR HEADED BAR FOR MULTIPLE OPENINGS. RUN LINTEL REINFORCING CONTINUOUS.
2. SEE ARCHITECTURAL FOR PANEL ELEVATIONS AND OPENING LOCATIONS.
3. SEE DETAILS ON THIS SHEET FOR REINFORCING PLACEMENT DIAGRAMS (WALL, LINTEL, AND JAMB COLUMN REINFORCING DIAGRAM).
4. AT PANEL WITH KNOCKOUT PANELS, REINFORCE AROUND KNOCKOUT AS PER THIS SCHEDULE.
5. WHEN (4) BARS ARE REQUIRED, PLACE (2) BARS PER ROW.
6. REINFORCING TO BE CONTINUOUS FROM EDGE OF PANEL TO EDGE OF PANEL, FOR LARGE OPENINGS.
7. PROVIDE ADDITIONAL REINFORCING FOR LIFTING AS REQUIRED.

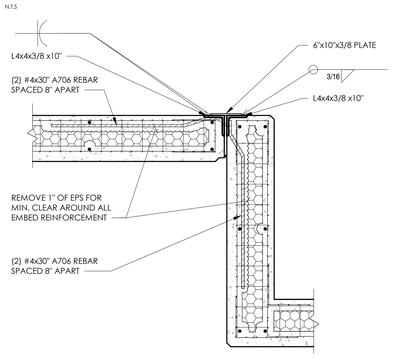
2 S202 N.T.S

TYPICAL JAMB REINF. SCHEDULE

NOTE:
INSTALL CONCRETE SCREWS AFTER PLACEMENT OF INNSTRUCT INSULATED PANEL SYSTEM IN THE TIL-UP FORM AND BEFORE THE CONCRETE SETS

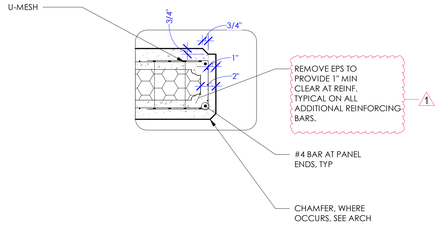
15 S202 N.T.S

JAMB REINFORCING DETAIL



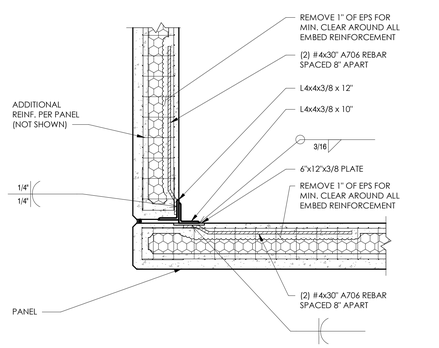
16 S202 1" = 1'-0"

TYP. CONC TILT UP INSTERSECTION CONNECTION



11 S202 N.T.S

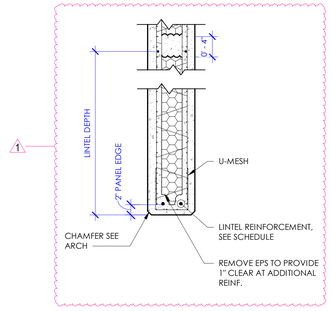
TYPICAL PANEL EDGE CONDITION



8 S202 N.T.S

CONC. TILT-UP PANEL-TO-PANEL CONNECTION

CONCRETE LINTEL SCHEDULE				
BEAM TYPE	LINTEL REINFORCING			*NOTES
	DEPTH	HORIZ. REINF.	STIRRUPS	ADDITIONAL SHEAR REINF.
CB-01	24"	(2) #4 BOT & (2) #4 TOP	N/R	
CB-02	36"	(2) #5 BOT & (2) #5 TOP	N/R	

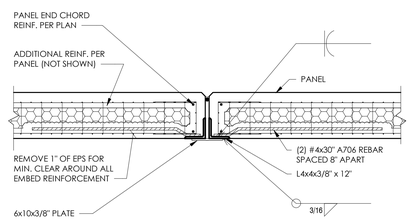


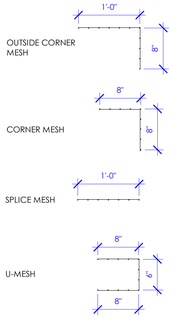
NOTES:
1. EXTEND LINTEL REINFORCING BEYOND EDGE OF THE OPENING 4'-0" MINIMUM. WHERE NOT POSSIBLE, EXTEND TO THE EDGE OF PANEL AND TERMINATE WITH A STANDARD 90° HOOK, OR, HEADED BAR. FOR MULTIPLE OPENINGS, RUN LINTEL REINFORCING CONTINUOUS.
2. SEE ARCHITECTURAL FOR PANEL ELEVATIONS AND OPENING LOCATIONS.
3. SEE DETAILS ON THIS SHEET FOR REINFORCING PLACEMENT DIAGRAMS (WALL, LINTEL, AND JAMB COLUMN REINFORCING DIAGRAM).
4. AT PANEL WITH KNOCKOUT PANELS, REINFORCE AROUND KNOCKOUT AS PER THIS SCHEDULE.
5. WHEN (4) BARS ARE REQUIRED, PLACE (2) BARS PER ROW.
6. REINFORCING TO BE CONTINUOUS FROM EDGE OF PANEL TO EDGE OF PANEL, FOR LARGE OPENINGS.
7. PROVIDE ADDITIONAL REINFORCING FOR LIFTING AS REQUIRED.

7 S202 N.T.S

TYPICAL LINTEL SCHEDULE

NOTE:
OPTIONAL FOR PANEL ERECTION ONLY UNLESS NOTED OTHERWISE ON PANEL ELEVATIONS.





4 S202 N.T.S

TYPICAL CONNECTION MESH AND REINFORCEMENT

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PROFESSIONAL ENGINEER
No. 11866339
TYSON ALDER
STATE OF UTAH
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AMERICAN FORK OFFICE/WAREHOUSE

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AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

TYPICAL PANEL DETAILS

DESIGN DEVELOPMENT

DATE: 03/10/2021

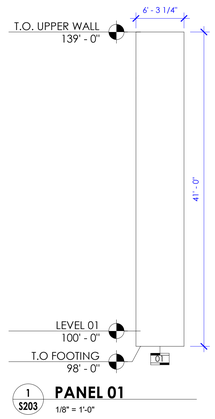
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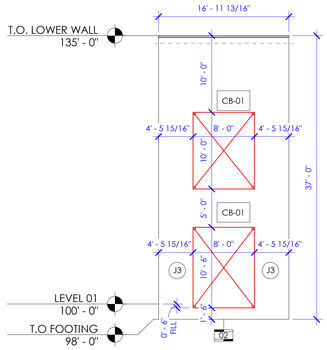
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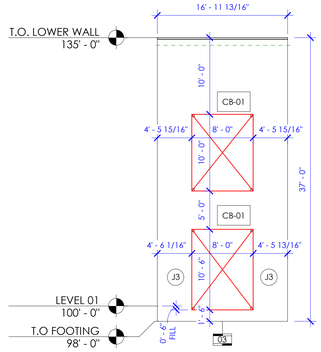
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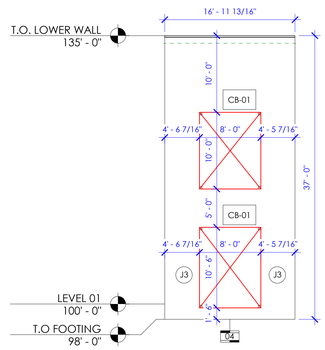
1 S203 **PANEL 01**
1/8" = 1'-0"



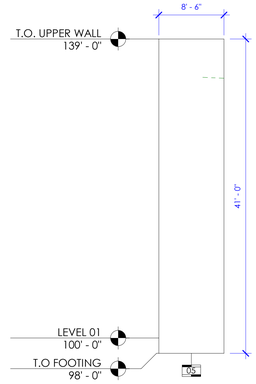
2 S203 **PANEL 02**
1/8" = 1'-0"



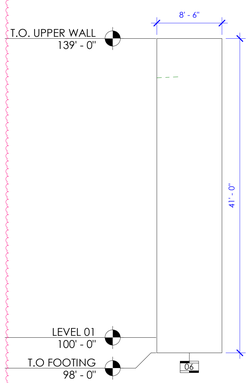
3 S203 **PANEL 03**
1/8" = 1'-0"



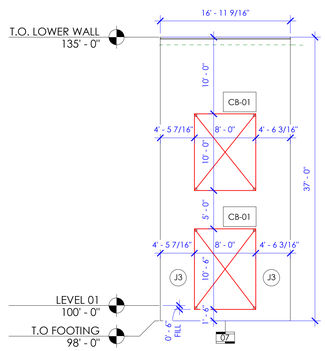
4 S203 **PANEL 04**
1/8" = 1'-0"



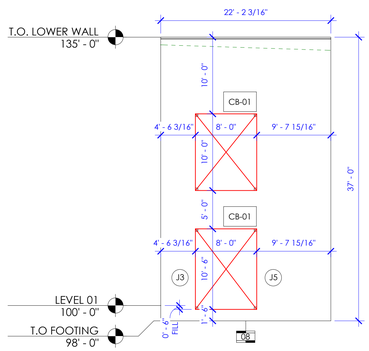
5 S203 **PANEL 05**
1/8" = 1'-0"



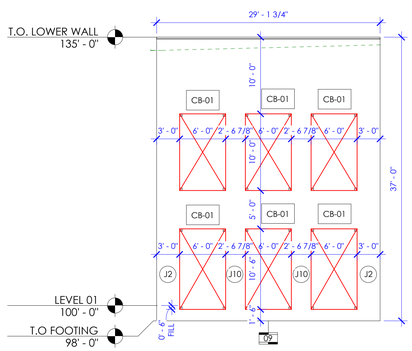
6 S203 **PANEL 06**
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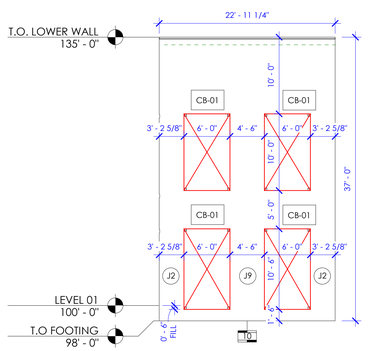
7 S203 **PANEL 07**
1/8" = 1'-0"



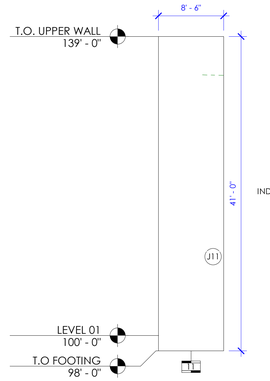
8 S203 **PANEL 08**
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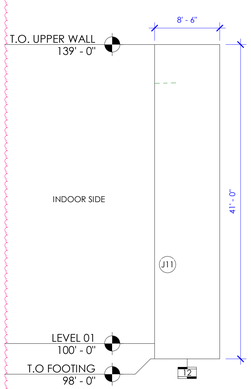
9 S203 **PANEL 09**
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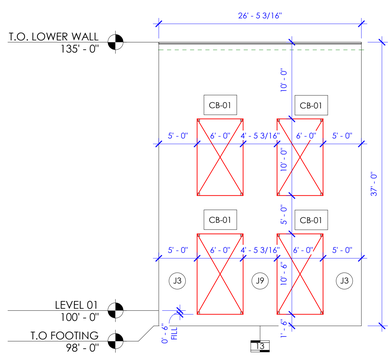
10 S203 **PANEL 10**
1/8" = 1'-0"



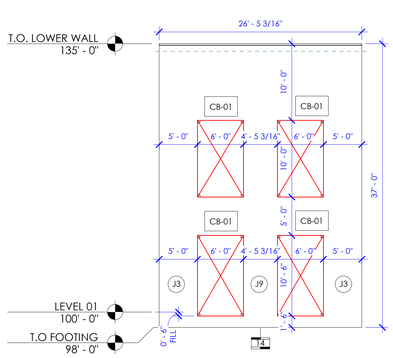
11 S203 **PANEL 11**
1/8" = 1'-0"



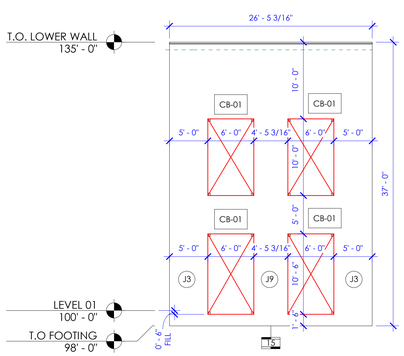
12 S203 **PANEL 12**
1/8" = 1'-0"



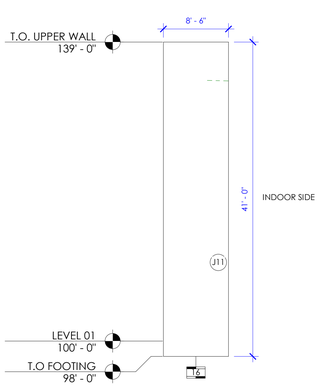
13 S203 **PANEL 13**
1/8" = 1'-0"



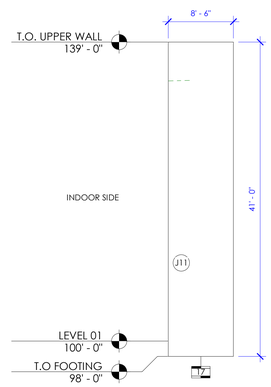
14 S203 **PANEL 14**
1/8" = 1'-0"



15 S203 **PANEL 15**
1/8" = 1'-0"



16 S203 **PANEL 16**
1/8" = 1'-0"



17 S203 **PANEL 17**
1/8" = 1'-0"

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PROFESSIONAL ENGINEER
No. 11866339
TYSON ALDER
STATE OF UTAH
8/30/2021 9:52:29 AM

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH APPLICABLE CONSTRUCTION CODES AS CERTIFIED BELOW:
☑ BUILDING ☑ STRUCTURAL
☑ MECHANICAL ☑ PLUMBING
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BY: DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

PANEL ELEVATIONS

DATE: **03/10/2021**

SHEET #:

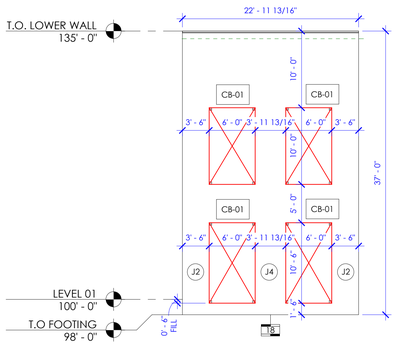
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DESIGN DEVELOPMENT

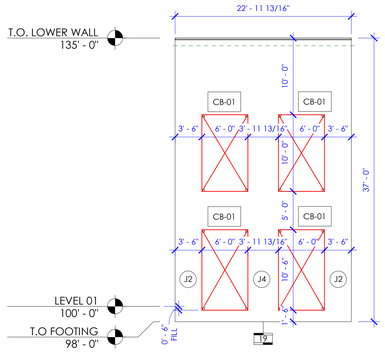
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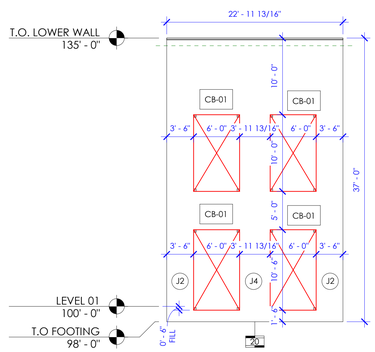
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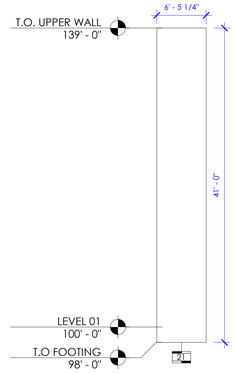
1 S204 **PANEL 18**
1/8" = 1'-0"



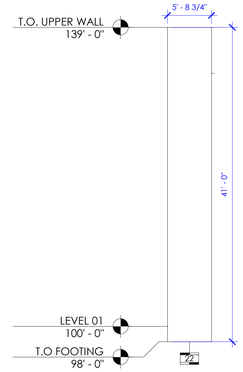
2 S204 **PANEL 19**
1/8" = 1'-0"



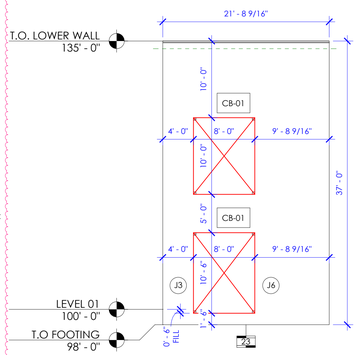
3 S204 **PANEL 20**
1/8" = 1'-0"



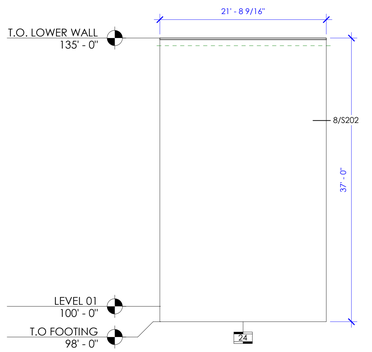
4 S204 **PANEL 21**
1/8" = 1'-0"



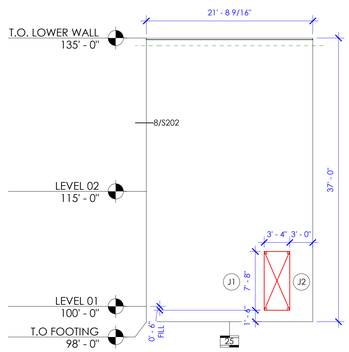
5 S204 **PANEL 22**
1/8" = 1'-0"



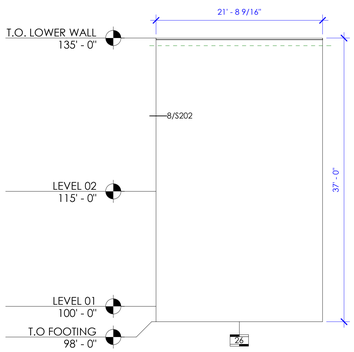
6 S204 **PANEL 23**
1/8" = 1'-0"



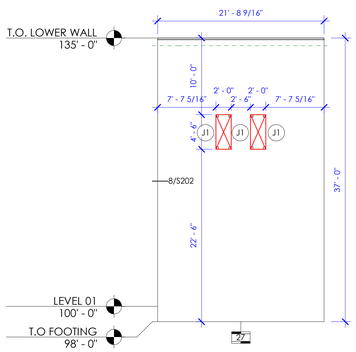
7 S204 **PANEL 24**
1/8" = 1'-0"



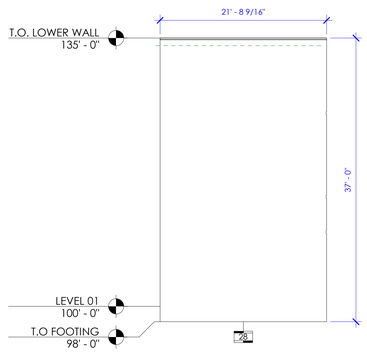
8 S204 **PANEL 25**
1/8" = 1'-0"



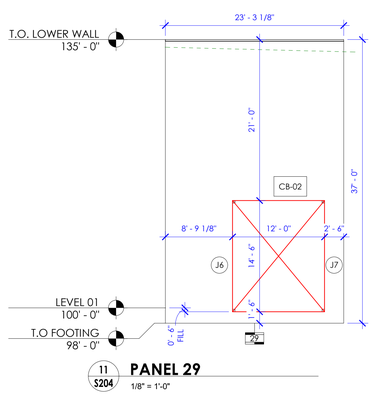
16 S204 **PANEL 26**
1/8" = 1'-0"



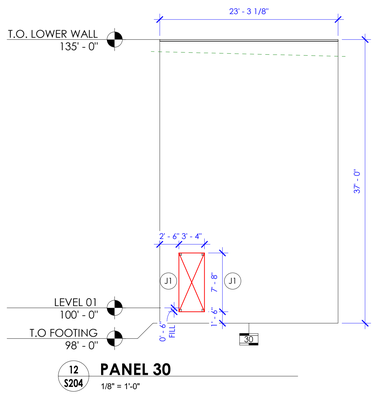
9 S204 **PANEL 27**
1/8" = 1'-0"



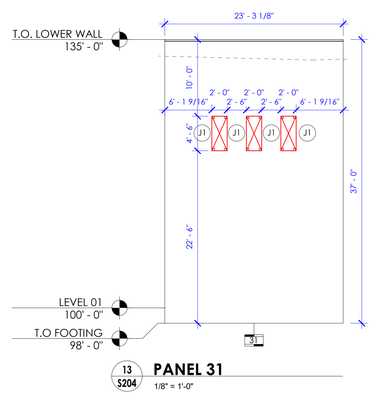
10 S204 **PANEL 28**
1/8" = 1'-0"



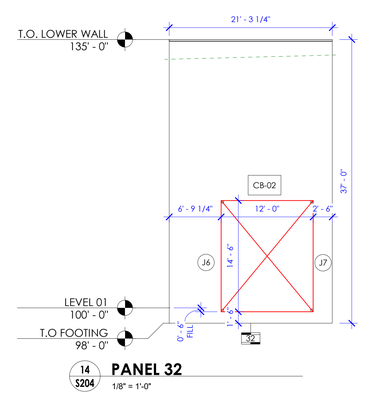
11 S204 **PANEL 29**
1/8" = 1'-0"



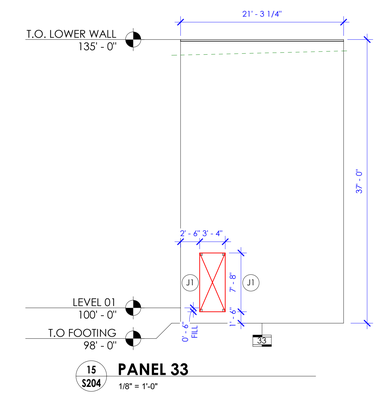
12 S204 **PANEL 30**
1/8" = 1'-0"



13 S204 **PANEL 31**
1/8" = 1'-0"



14 S204 **PANEL 32**
1/8" = 1'-0"



15 S204 **PANEL 33**
1/8" = 1'-0"

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PROFESSIONAL ENGINEER
No. 11866339
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FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS CERTIFIED BELOW:
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BY: _____ DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

PANEL ELEVATIONS

DATE: **03/10/2021**

DESIGN DEVELOPMENT

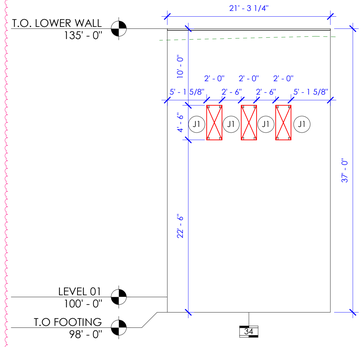
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S204

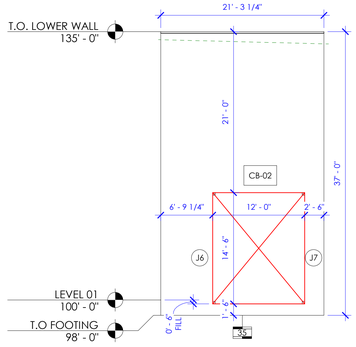
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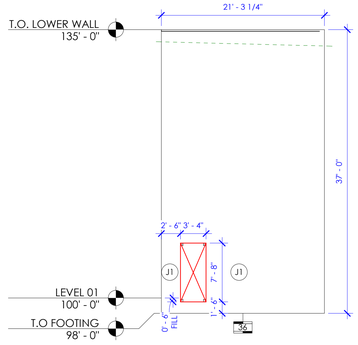
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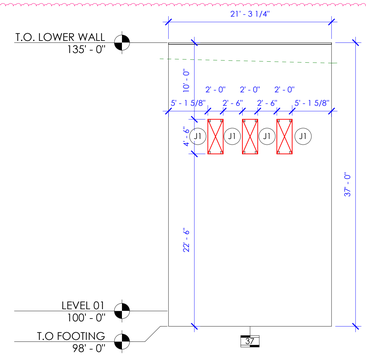
1 S205 **PANEL 34**
1/8" = 1'-0"



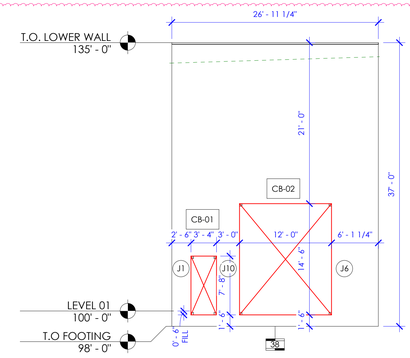
2 S205 **PANEL 35**
1/8" = 1'-0"



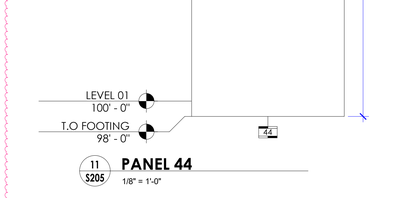
3 S205 **PANEL 36**
1/8" = 1'-0"



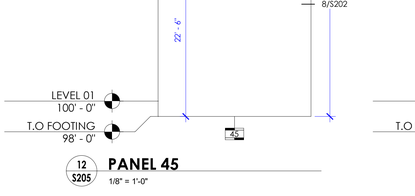
4 S205 **PANEL 37**
1/8" = 1'-0"



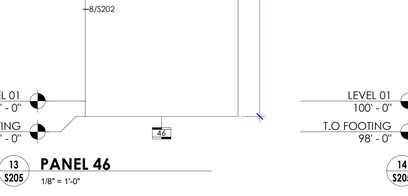
5 S205 **PANEL 38**
1/8" = 1'-0"



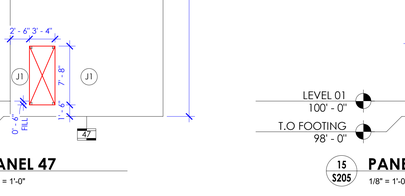
6 S205 **PANEL 39**
1/8" = 1'-0"



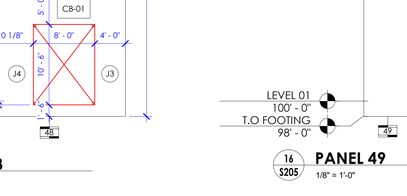
7 S205 **PANEL 40**
1/8" = 1'-0"



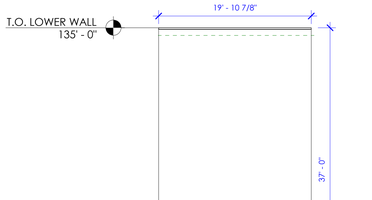
8 S205 **PANEL 41**
1/8" = 1'-0"



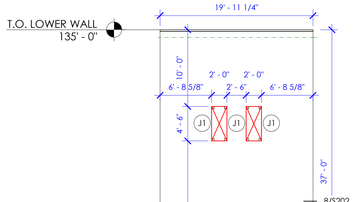
9 S205 **PANEL 42**
1/8" = 1'-0"



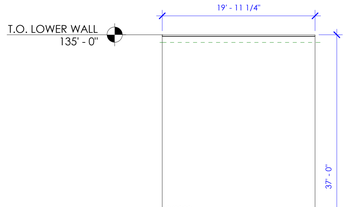
10 S205 **PANEL 43**
1/8" = 1'-0"



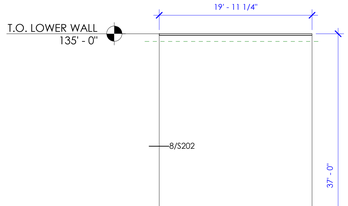
11 S205 **PANEL 44**
1/8" = 1'-0"



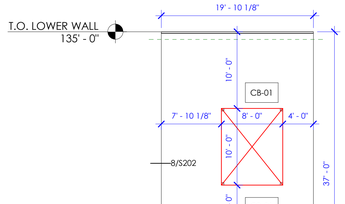
12 S205 **PANEL 45**
1/8" = 1'-0"



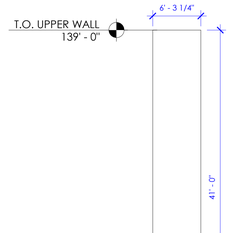
13 S205 **PANEL 46**
1/8" = 1'-0"



14 S205 **PANEL 47**
1/8" = 1'-0"



15 S205 **PANEL 48**
1/8" = 1'-0"



16 S205 **PANEL 49**
1/8" = 1'-0"

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PROFESSIONAL ENGINEER
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Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	07/12/2021

AE2020.283

PANEL ELEVATIONS

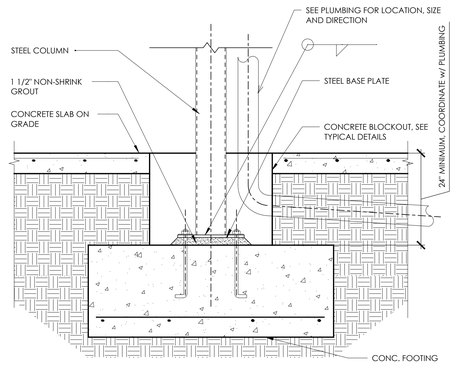
DATE: 03/10/2021

SHEET #:

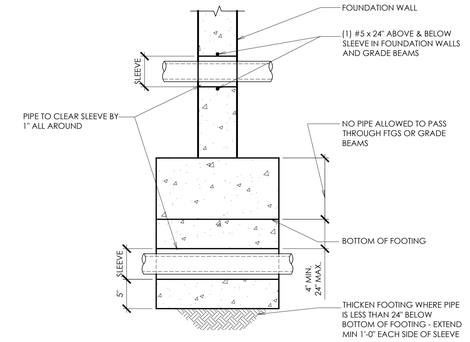
S205

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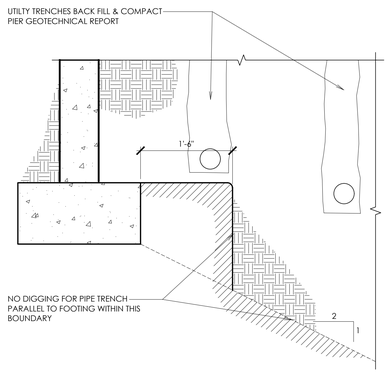
C:\Users\Michael\Documents\AE2020.283 - DAVIES DESIGN BUILD- A.F.Office Warehouse - 2021 Central - SHELL ONLY Mikael@aeurbia.com.rvt
8/30/2021 9:52:35 AM

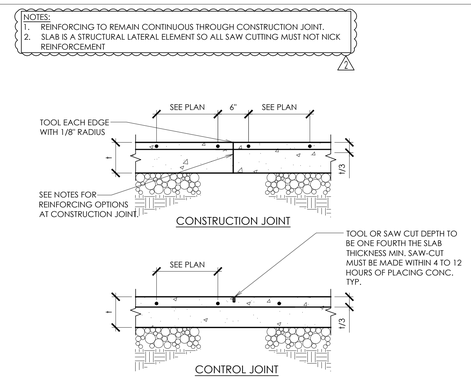


13 S501 STEEL COLUMN FOOTING W/ DOWN SPOUT
SCALE: N.T.S.

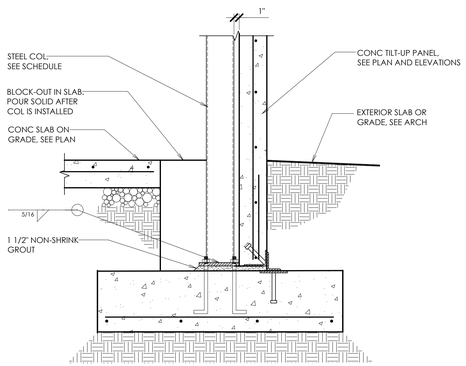


9 S501 PIPE THROUGH FOOTING DEATIL
SCALE: N.T.S.

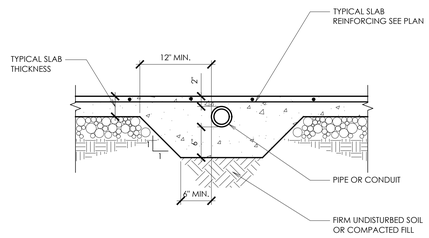




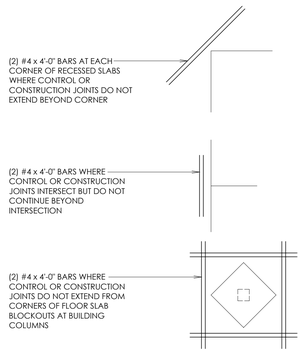
1 S501 TYPICAL SLAB JOINT DETAIL
SCALE: N.T.S.



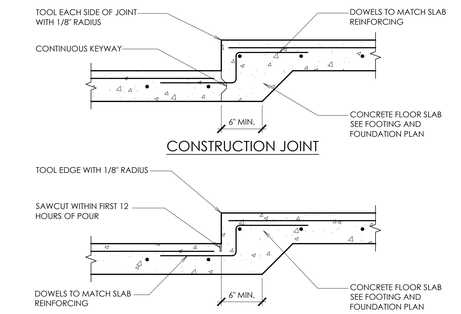
14 S501 TYPICAL STEEL COLUMN TO FOOTING CONNECTION AT CONCRETE TILT-UP PANEL
SCALE: N.T.S.



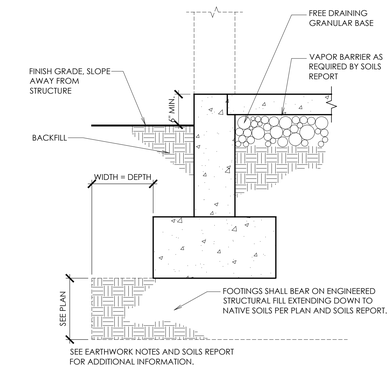
10 S501 SLEEVE FOR PIPE AT SLAB
SCALE: N.T.S.



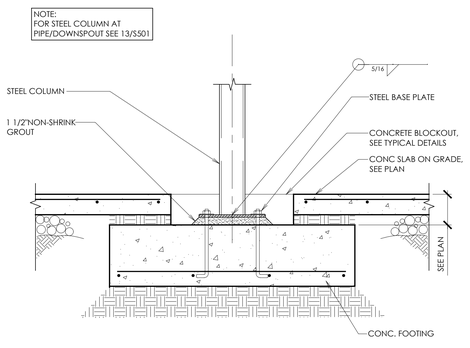
6 S501 SLAB REINFORCING DETAIL - TYP.
SCALE: N.T.S.



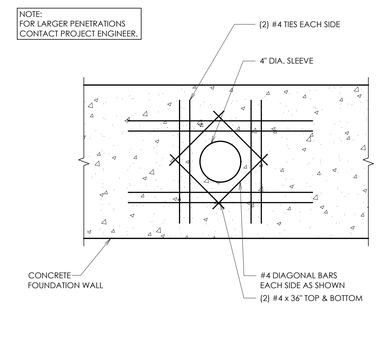
2 S501 TYPICAL SLAB DEPRESSION DETAIL
SCALE: N.T.S.



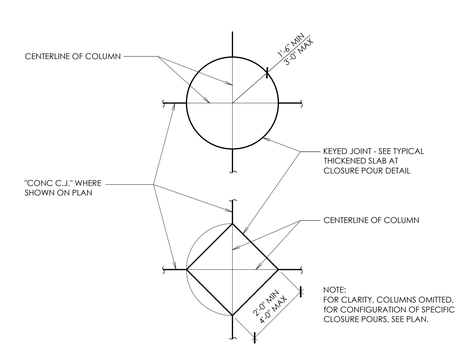
15 S501 TYPICAL ENGINEERED FILL DETAIL
SCALE: N.T.S.



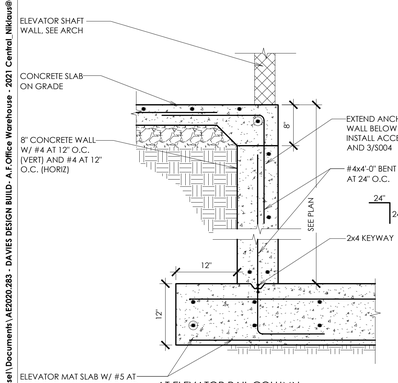
11 S501 STEEL COLUMN AT INTERIOR SPOT FOOTING
SCALE: N.T.S.



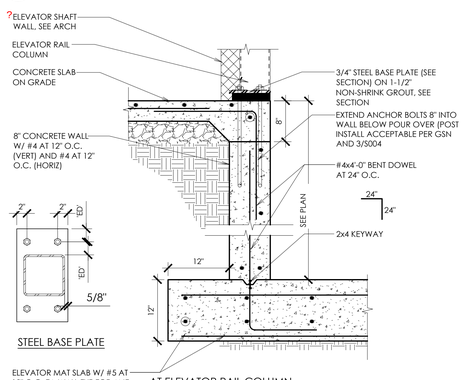
7 S501 TYPICAL WALL PENETRATION DETAIL
SCALE: N.T.S.

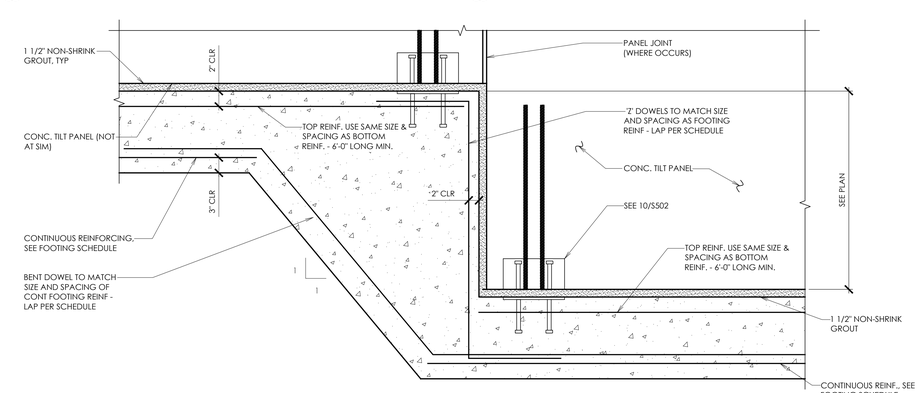


3 S501 TYPICAL CONCRETE BLOCKOUT AT COLUMNS
SCALE: N.T.S.

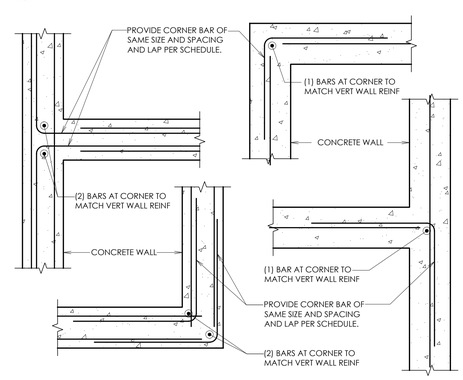


20 S501 ELEVATOR PIT DETAIL
SCALE: N.T.S.





12 S501 FOOTING STEP AT PANEL JOINT
SCALE (24x36): N.T.S.



4 S501 TYPICAL CORNER WALL REINF. DETAIL
SCALE: N.T.S.

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PROFESSIONAL ENGINEER
No. 11096339
TYSON ALDEN
STATE OF UTAH
08/30/2021

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS NOTIFIED BELOW:
BUILDING, MECHANICAL, ELECTRICAL, ACCESSIBILITY, STRUCTURAL, PLUMBING, ENERGY, FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

FOOTING & FOUNDATION DETAILS

DATE: 06/15/2021

PERMIT SET

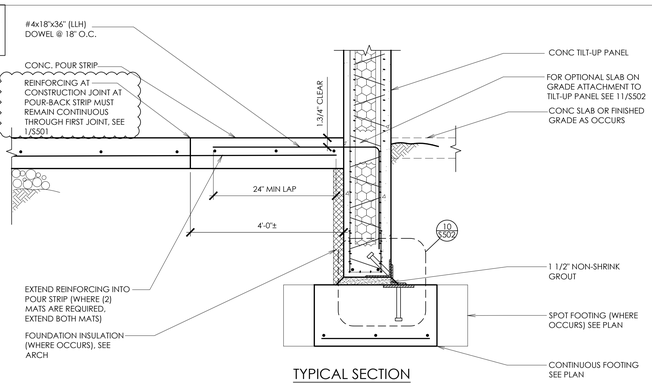
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S501

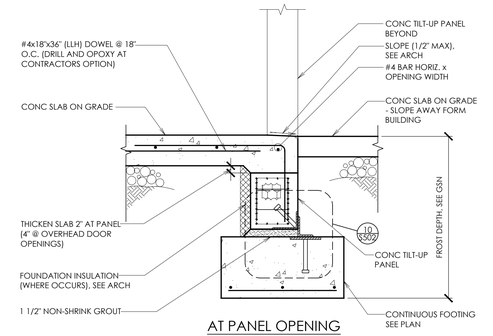
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NOTE:
AT CONTRACTORS OPTION THE PANEL CONNECTION TO THE FTG MAY BE MADE FROM THE INSIDE



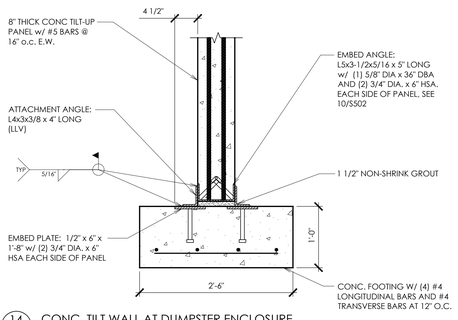
TYPICAL SECTION



AT PANEL OPENING

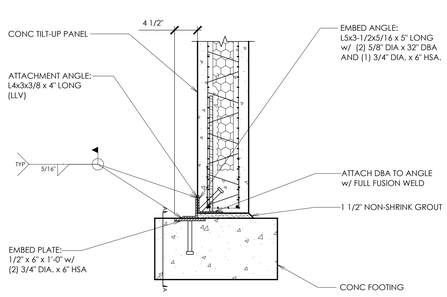
9 S502 TYPICAL CONC-TILT UP WALL AT FOOTING DETAIL
SCALE (24x36): N.T.S.

NOTES:
1. AFTER ERECTION OF PANELS, AND WELDING OF CONNECTIONS COAT ALL STEEL PLATES AND ANGLE w/ 1/8" MINIMUM BITUMINOUS CEMENT, TYPICAL



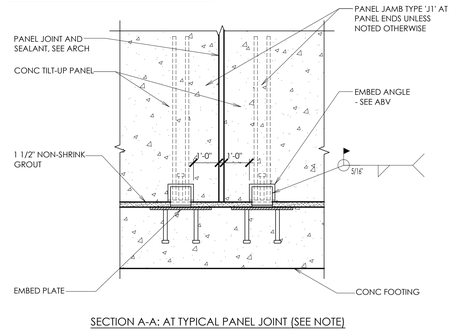
14 S502 CONC. TILT WALL AT DUMPSTER ENCLOSURE
SCALE (24x36): N.T.S.

NOTES:
1. AFTER ERECTION OF PANELS, AND WELDING OF CONNECTIONS COAT ALL STEEL PLATES AND ANGLE w/ 1/8" MINIMUM BITUMINOUS CEMENT, TYPICAL
2. PROVIDE TYPICAL PANEL JOINT EMBED AT ALL PANEL JOINTS, PANEL ENDS, AND WINDOW/DOOR JAMBS.
3. FOR OPTIONAL CONNECT - EZ TO FOOTING CONNECTOR SEE 7/S502

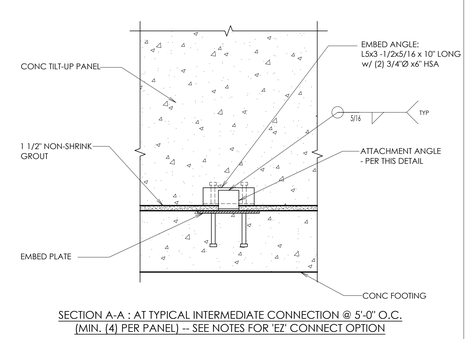


10 S502 TYP. CONCRETE TILT-UP PANEL TO FOOTING CONNECTION DETAIL
SCALE (24x36): N.T.S.

NOTE:
PROVIDE TYPICAL PANEL JOINT EMBED AT ALL PANEL JOINTS AND PANEL ENDS UNLESS NOTED OTHERWISE ON PANEL ELEVATIONS.

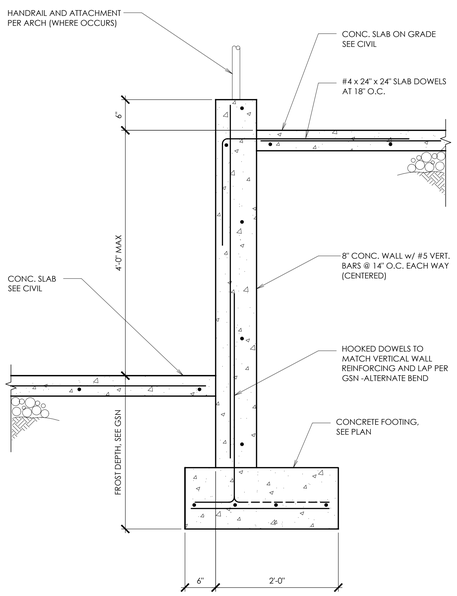


SECTION A-A: AT TYPICAL PANEL JOINT (SEE NOTE)

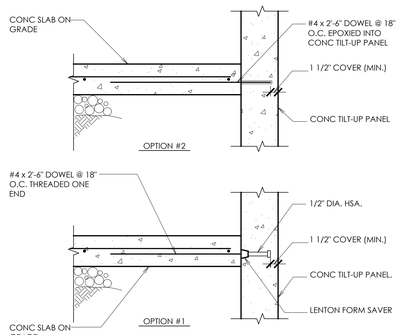


SECTION A-A : AT TYPICAL INTERMEDIATE CONNECTION @ 5'-0" O.C. (MIN. (4) PER PANEL) -- SEE NOTES FOR 'EZ' CONNECT OPTION

NOTE: SEE DETAIL 12/S502 FOR OPTIONAL TILT-PANEL RETAINING WALL DETAIL

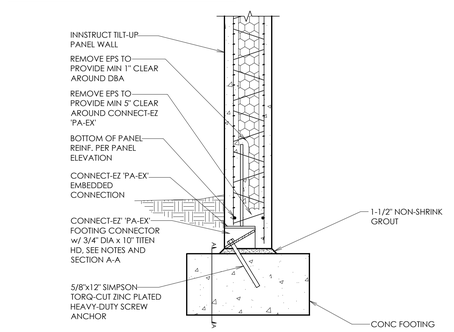


16 S502 CONC WALL AT DOCK RAMP
SCALE (24x36): N.T.S.

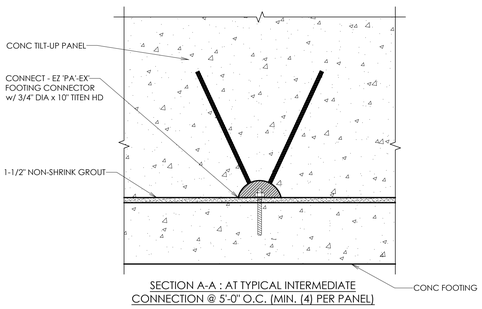


11 S502 OPTIONAL TILT-UP PANEL TO SLAB ON GRADE CONNECTION
SCALE (24x36): N.T.S.

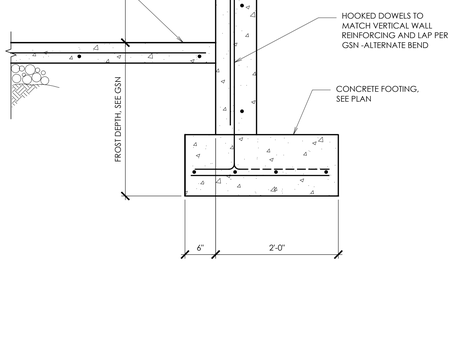
NOTE:
1. PROVIDE CONNECT - EZ 'PA-EX' AT INTERMEDIATE PANEL CONNECTIONS ONLY, UNO (SEE 10/S502 FOR TYPICAL EMBED AT PANEL ENDS)



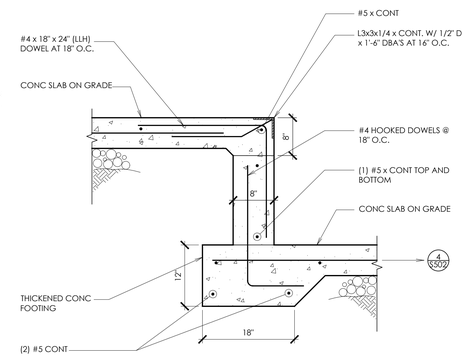
7 S502 CONNECT - EZ TO FOOTING CONNECTOR
SCALE (24x36): N.T.S.



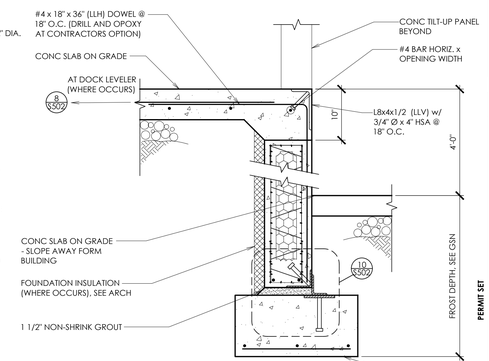
SECTION A-A : AT TYPICAL INTERMEDIATE CONNECTION @ 5'-0" O.C. (MIN. (4) PER PANEL)



12 S502 OPTIONAL CONCRETE TILT PANEL RETAINING
SCALE: N.T.S.



8 S502 TYPICAL DOCK LEVELER PIT DETAIL
SCALE: N.T.S.



4 S502 TYP OPENING THRU CONC TILT-UP PANEL AT DOCK DOOR
SCALE (24x36): N.T.S.

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TYSON ALDEN
STATE OF UTAH

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BY: DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN
AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	06/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

FOOTING & FOUNDATION DETAILS

DATE: **06/15/2021**

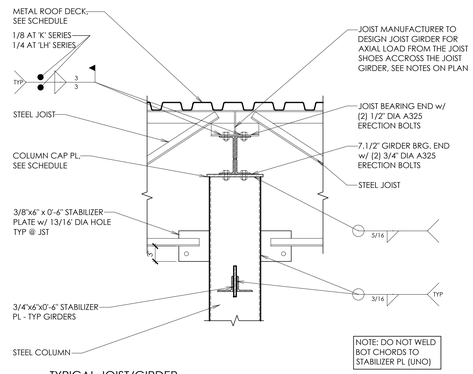
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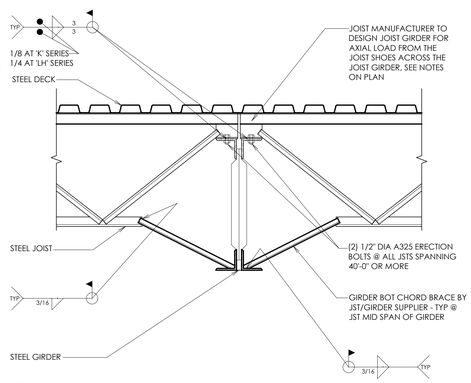
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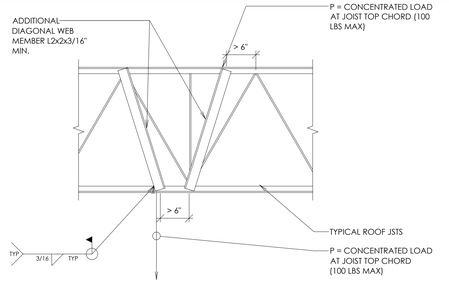


NOTE: DO NOT WELD BOT CHORDS TO STABILIZER PL (UNO)

13 S701 TYPICAL JOIST/GIRDER BEARING AT STEEL COLUMN DETAIL
SCALE (24x36): N.T.S.

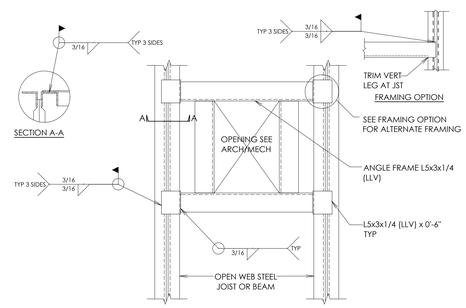


9 S701 TYP JOIST BEARING AT GIRDER DETAIL
SCALE (24x36): N.T.S.



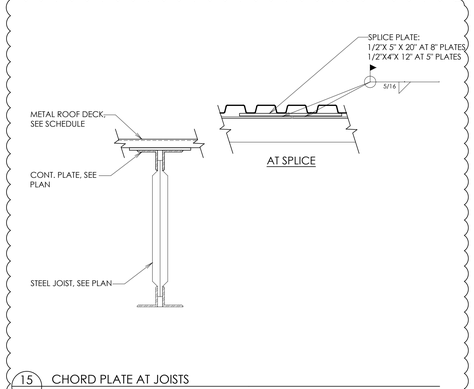
NOTE: WHERE CONCENTRATED LOADS ON OPEN WEB JSTS ARE LOCATED MORE THAN 6" FROM THE PANEL POINTS, ADDITIONAL DIAGONAL WEB MEMBERS SHALL BE FURNISHED AND INSTALLED @ THE LOCATION OF THE CONCENTRATED LOAD.

5 S701 TYPICAL JOIST REINFORCING DETAIL
SCALE (24x36): N.T.S.



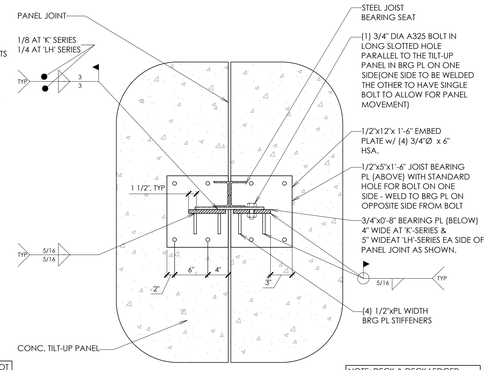
NOTES:
1. SEE DETAIL 4/S701 FOR OPENINGS LESS THAN 12" IN DIAMETER
2. SEE TYPICAL ROOF TOP MECHANICAL UNIT SUPPORT DETAIL FOR FRAMIES UNDER MECHANICAL UNITS
3. ROOF DECK SHALL BE WELDED TO ANGLE FRAMING.

1 S701 TYPICAL ROOF OPENING DETAIL [PLAN VIEW]
SCALE (24x36): N.T.S.



NOTE: DO NOT WELD BOT CHORDS TO STABILIZER PLATE - TYP (U.N.O.)

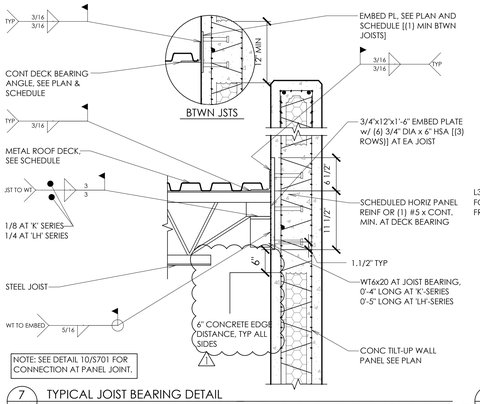
14 S701 TYPICAL JOIST/GIRDER BEARING AT STEEL COLUMN DETAIL
SCALE (24x36): N.T.S.



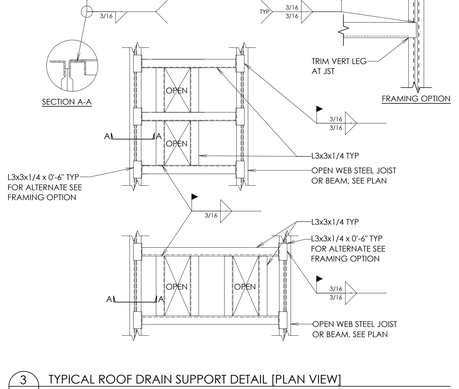
NOTE: DECK & DECK LEDGER ANGLE NOT SHOWN FOR CLARITY

10 S701 TYPICAL JOIST BEARING AT PANEL JOINT
SCALE (24x36): N.T.S.

NOTE: WHERE MECHANICAL UNIT WEIGHS LESS THAN 300 LBS, USE 'UNISTRUT TO SUPPORT THE UNIT INSTEAD OF (2)L5x3x1/4 (LLV)



6 S701 TYPICAL HANGING MECHANICAL UNIT SUPPORT DETAIL
SCALE (24x36): N.T.S.



NOTES:
1. SOLID BLOCK STEEL DECK FLUTES BENEATH THE CURB OF THE MECHANICAL UNITS W/ HSS1.1/2x1.1/2x3/16x0'-6" TACK WELDED TO THE STEEL DECK OR USE BLOCKING CONNECTED TO THE STEEL DECK.
2. ROOF DECK SHALL BE WELDED TO ANGLE FRAMING.

2 S701 TYPICAL ROOF TOP MECHANICAL UNIT SUPPORT DETAIL [PLAN VIEW]
SCALE (24x36): N.T.S.

15 S701 CHORD PLATE AT JOISTS
SCALE (24x36): N.T.S.

NOTE: SEE DETAIL 10/S701 FOR CONNECTION AT PANEL JOINT.

7 S701 TYPICAL JOIST BEARING DETAIL
SCALE (24x36): N.T.S.

3 S701 TYPICAL ROOF DRAIN SUPPORT DETAIL [PLAN VIEW]
SCALE (24x36): N.T.S.

20 S701 TYPICAL ANGLE BRACE AT OPEN WEB JOIST
SCALE (24x36): N.T.S.

NOTE: DO NOT WELD BOT CHORDS TO STABILIZER PL (UNO)

16 S701 TYPICAL GIRDER BEARING AT STEEL COLUMN
SCALE (24x36): N.T.S.

12 S701 TYPICAL STEEL BRACE TO TILT-UP WALL PANEL DETAIL
SCALE (24x36): N.T.S.

8 S701 JOIST BEARING DETAIL
SCALE (24x36): N.T.S.

4 S701 TYPICAL PIPE THRU DECK (OPENING LESS THAN 12" DIA)
SCALE (24x36): N.T.S.

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PROFESSIONAL ENGINEER No. 11096330 TYSON ALDEN STATE OF UTAH

08/30/2021

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☑ ELECTRICAL ☑ ENERGY
☑ ACCESSIBILITY ☐ FIRE
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AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN

AMERICAN FORK, UT

Revision Schedule		
MARK	DESCRIPTION	Revision Date
1	CITY REVIEW COMMENTS	08/02/2021
2	PLAN REVIEW 3	08/30/2021

AE2020.283

ROOF FRAMING DETAILS

DATE: 06/15/2021

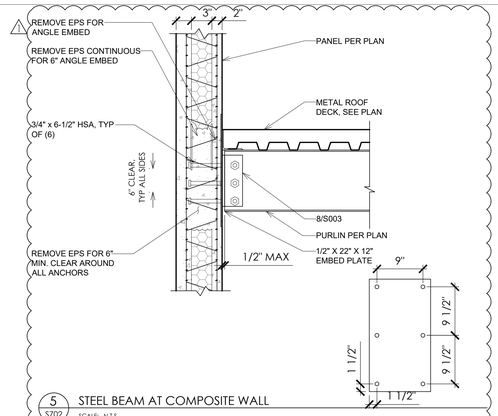
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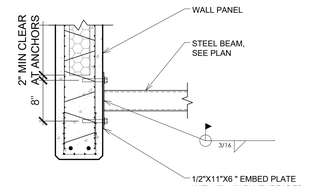
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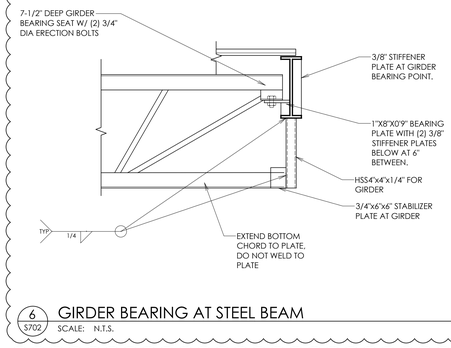
5 S702 STEEL BEAM AT COMPOSITE WALL

SCALE: N.T.S.



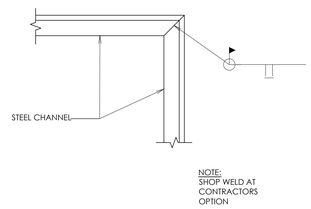
1 S702 HSS BEAM TO COMPOSITE PANEL

SCALE: N.T.S.



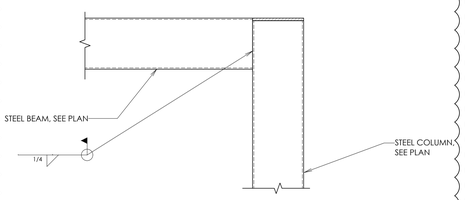
6 S702 GIRDER BEARING AT STEEL BEAM

SCALE: N.T.S.



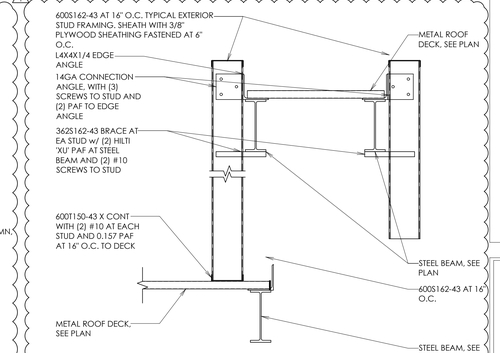
2 S702 STEEL CHANNEL AT STEEL CHANNEL

SCALE: N.T.S.



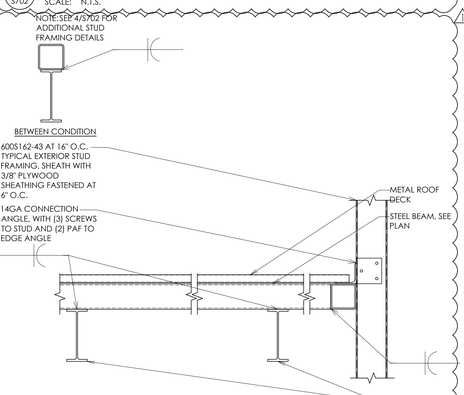
7 S702 HSS BEAM TO COLUMN CONNECTION

SCALE: N.T.S.



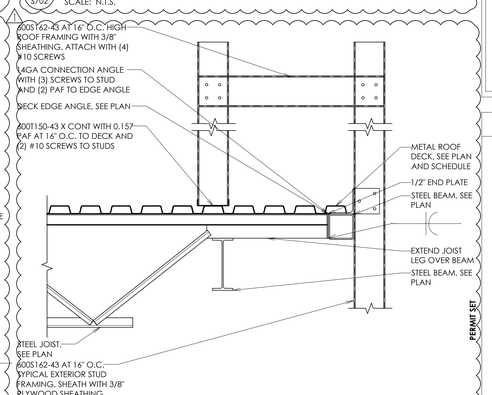
3 S702 HIGH CANOPY FRAMING DETAIL

SCALE: N.T.S.



8 S702 ROOF JOIST CANTILEVER EDGE

SCALE: N.T.S.



4 S702 ROOF JOIST CANTILEVER EDGE

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08/30/2021

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20x12	NEW RECTANGULAR DUCTWORK
20x12	EXISTING TO REMAIN RECTANGULAR DUCTWORK
20x12	EXISTING TO BE REMOVED RECTANGULAR DUCTWORK
20x12	NEW INSULATED RECTANGULAR DUCTWORK (SIZE SHOWN IS INSIDE CLEAR)
20x12	NEW LINED RECTANGULAR DUCTWORK (SIZE SHOWN IS INSIDE CLEAR)
20/12	NEW FLAT OVAL DUCTWORK
20/12	EXISTING TO BE REMOVED FLAT OVAL DUCTWORK
20x12	RECTANGULAR SUPPLY DOWN
20x12	RECTANGULAR SUPPLY UP
20x12	RECTANGULAR RETURN DOWN
20x12	RECTANGULAR RETURN UP
20x12	RECTANGULAR EXHAUST DOWN
20x12	RECTANGULAR EXHAUST UP
20/12	FLAT OVAL SUPPLY UP
20/12	FLAT OVAL SUPPLY DOWN
20Ø	NEW ROUND DUCTWORK
20Ø	EXISTING TO REMAIN ROUND DUCTWORK
20Ø	EXISTING TO BE REMOVED ROUND DUCTWORK
20Ø	NEW INSULATED ROUND DUCTWORK (SIZE SHOWN IS INSIDE CLEAR)
20Ø	ROUND FLEX DUCT
20/12	EXISTING TO REMAIN FLAT OVAL DUCTWORK
20/12	NEW INSULATED FLAT OVAL DUCTWORK (SIZE SHOWN IS INSIDE CLEAR)
20Ø	ROUND SUPPLY DOWN
20Ø	ROUND SUPPLY UP
20Ø	ROUND RETURN DOWN
20Ø	ROUND RETURN UP
20Ø	ROUND EXHAUST DOWN
20Ø	ROUND EXHAUST UP
20/12	FLAT OVAL RETURN UP
20/12	FLAT OVAL RETURN DOWN

NEW SUPPLY DIFFUSER/GRILLE

NEW RETURN DIFFUSER/GRILLE

NEW EXHAUST DIFFUSER/GRILLE

S-1 12x12 — DIFFUSER/GRILLE SCHEDULE MARK
525 CFM — DIFFUSER/GRILLE CFM
DIFFUSER/GRILLE NECK SIZE
DIFFUSER/GRILLE TAG

20x12 — CONNECT NEW TO EXISTING

20x12 — REMOVE FROM EXISTING

20x12 — MANUAL VOLUME DAMPER REQUIRED AT ALL BRANCH TAKE-OFFS (RECTANGULAR AND ROUND DUCTWORK)

HVAC Sheet List

Sheet Number	Sheet Name	Current Revision	Current Revision Date
M000	HVAC MECHANICAL TITLE SHEET		
M001	SEISMIC DETAILS AND INFORMATION		
M101	HVAC MAIN FLOOR		
M501	HVAC DETAILS AND SCHEDULES		
M901	HVAC ISOMETRIC		

HVAC GENERAL NOTES:

1. ALL DUCT DIMENSIONS ARE INSIDE DIMENSIONS OF DUCT. CONTRACTOR RESPONSIBLE TO INCREASE DUCT DIMENSIONS WHEN INSULATION LINER IS USED.
2. MECHANICAL CONTRACTOR SHALL FIELD COORDINATE ALL DIFFUSER AND GRILL LOCATIONS WITH LATEST ARCHITECTURAL CEILING PLANS AND ALL TRADES AS REQUIRED PRIOR TO INSTALLATION. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL GRILLES TO MATCH CEILING TYPE AS SPECIFIED BY LATEST ARCHITECTURAL DRAWINGS. INSIDES OF DUCTWORK VISIBLE THRU GRILLES, REGISTERS AND DIFFUSERS SHALL BE PAINTED FLAT BLACK.
3. ALL RIGID ROUND DUCTWORK AND RECTANGULAR DUCTWORK SHALL RECEIVE FIBERGLASS DUCT WRAP OR DUCT LINER ACCORDING TO 2018 IECC GUIDELINES FOR LOCAL SITE ENVIRONMENTAL CONDITIONS AND INSTALLED DUCT LOCATION. TRIM AND SEAL ALL JOINTS. ALL INSULATION TO MEET NFPA 90 PER UL 181-CLASS 1.
4. LOW PRESSURE ROUND FLEXIBLE DUCT SHALL BE UL 181 LISTED, R-6 MINIMUM INSULATED AND A MAXIMUM OF 5 FT. LONG.
5. MECHANICAL CONTRACTOR SHALL USE THE CURRENT REVISION OF SMACNA STANDARDS ON ALL DUCTWORK. LOW PRESSURE DUCTWORK IS TO BE SEAL CLASS "B".
6. ALL MECHANICAL EQUIPMENT SHALL BE BALANCED PER PLAN. MECHANICAL CONTRACTOR SHALL PROVIDE A COMPLETE TEST AND BALANCE REPORT TO THE SPECIFYING ENGINEER FOR REVIEW PRIOR TO JOB COMPLETION.
7. NAMES GIVEN TO MECHANICAL EQUIPMENT ARE FOR IDENTIFICATION ON THIS PLAN ONLY AND MAY DIFFER FROM THOSE USED ON ELECTRICAL AND CONTROL SYSTEM DOCUMENTS. MECHANICAL CONTRACTOR SHALL COORDINATE EQUIPMENT REQUIREMENTS WITH OTHER TRADES PRIOR TO INSTALLATION.
8. SMOKE DETECTORS TO BE PROVIDED AND INSTALLED IN RETURN AIR DUCT ON FAN SYSTEMS OVER 2,000 CFM AND IN SUPPLY DUCT ON FAN SYSTEMS OVER 15,000 CFM. REFER TO ELECTRICAL DRAWINGS FOR SMOKE DETECTOR INTERLOCK WIRING REQUIREMENTS. SMOKE DETECTOR INTERLOCK WIRING BY DIV. 16.
9. ALL WORK SHALL MEET THE REQUIREMENTS OF THE 2018 IBC, 2018 IMC, 2018 IPC, 2018 IFC, 2018 IECC, LOAD CALCULATIONS PERFORMED ACCORDING TO ASHRAE 183 AS REQUIRED BY CODE.
10. AUTOMATIC CONTROLS FOR FREEZE PROTECTION AS REQUIRED BY IECC 2018 SHALL BE PROVIDED.
11. ALL SUPPLY AIR LOW PRESSURE TAKE OFFS TO A DIFFUSER, AND OR GRILL TO HAVE A MANUAL BALANCING DAMPER.
12. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL FIRE DAMPERS FOR ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES AS IDENTIFIED BY ARCHITECTURAL DRAWINGS. INSTALLATION AND INTERLOCK OF FIRE/SMOKE RATED DAMPERS TO BE COORDINATED WITH ELECTRICAL CONTRACTOR AND DICTATED BY FIRE ASSEMBLY RATING AND CODE REQUIREMENTS. WIRING OF FIRE/SMOKE DAMPERS BACK TO FIRE ALARM PANEL BY DIV. 16.
13. MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL ALL NECESSARY SEISMIC RESTRAINTS AND BRACING FOR THE NON-STRUCTURAL MECHANICAL AND PLUMBING ELEMENTS ACCORDING TO ASCE 7-10 CH. 13 AND ACCORDING TO SEISMIC CLASSIFICATION IDENTIFIED BY STRUCTURAL ENGINEER.
14. PROVIDED INSULATED SUBBASES FOR ALL ROOM HEATING AND COOLING THERMOSTATS MOUNTED ON EXTERIOR WALLS AND WALLS ADJACENT TO NON-CONDITIONED SPACES.
15. PROVIDE AIR TURNING VANES IN ALL SQUARE ELBOWS.
16. ALL THERMOSTATS TO BE IECC 2018 COMPLIANT.
17. MECHANICAL CONTRACTOR RESPONSIBLE TO MATCH THE APPROPRIATE GRILLE MOUNTING FRAME TO EACH INDIVIDUAL GRILLE.
18. ALL EQUIPMENT TO BE PROVIDED AT PROJECT SITE ELEVATION AND ALL ROOF TOP UNITS TO BE PROVIDED WITH A POWERED CONVENIENCE OUTLET THAT GETS ITS POWER FROM THE ROOF TOP UNIT POWER SUPPLY.
19. MECHANICAL CONTRACTOR SHALL INSPECT SITE TO BECOME FAMILIAR WITH THE SCOPE OF THE WORK. THESE DOCUMENTS DO NOT REFLECT AS-BUILT CONDITIONS. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND THE ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION PRIOR TO BID PRICING. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.
20. PROVIDED ACCESS PANELS IN DUCTWORK AND CEILINGS WHERE REQUIRED FOR OPERATION AND MAINTENANCE OF ALL FANS, DAMPERS, AIR-DEFLECTING DEVICES AND OTHER MECHANICAL EQUIPMENT. PANELS SHALL HAVE A FIRE RATING EQUAL TO THAT OF THE CEILING.
21. SEISMIC AND SWAY BRACING REQUIREMENTS TO BE INCLUDED AS PART OF THE BID PACKAGE. SEISMIC AND SWAY BRACING SOLUTION TO BE PROVIDED THROUGH GRIPPLE SEISMIC.
22. ECONOMIZER ASSEMBLY, POWER EXHAUST ASSEMBLY AND ROOF CURB ASSEMBLY TO BE COMPLIANT WITH ALL CURRENT CODE REVISIONS.
23. ONLY COMMERCIALLY RATED AND SMACNA APPROVED SPIRAL RIGID DUCTWORK AND RECTANGULAR DUCTWORK RATED TO SPECIFIED PRESSURE CLASS TO BE USED.

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HVAC MECHANICAL TITLE SHEET

DATE: 07 JUN, 2021

SHEET #:

M000

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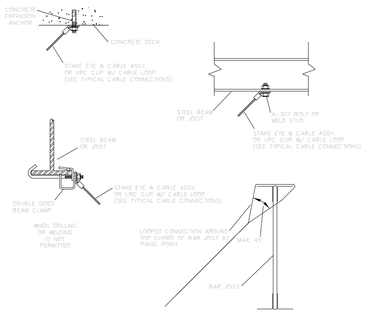
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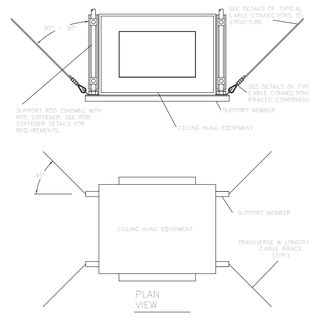
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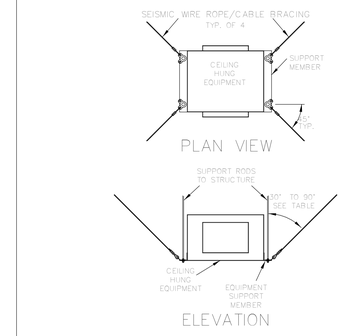
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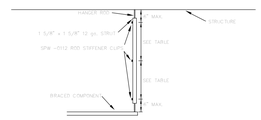
TYPICAL CABLE CONNECTIONS TO STRUCTURE



TRANSVERSE and LONGITUDINAL (4-WAY) BRACE FOR CEILING HUNG EQUIPMENT



4-WAY SWAY BRACING OF CEILING HUNG EQUIPMENT



MAXIMUM LENGTH OF 12 ga. 1-5/8" X 1 5/8" ROD STIFFENER STRUT IS 9 ft.

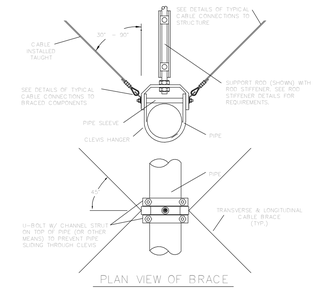
MAX. ROD LENGTH W/O STIFFENER	
ROD DIA.	MAX. LENGTH
3/8"	16"
1/2"	22"
5/8"	28"
3/4"	34"
7/8"	40"
1"	46"
1-1/8"	52"
1-1/4"	58"

MAX. SPACING OF ROD STIFFENER CLIPS	
ROD DIA.	MAX. SPACING
3/8"	13"
1/2"	18"
5/8"	23"
3/4"	28"
7/8"	33"
1"	38"
1-1/8"	43"
1-1/4"	48"

ROD STIFFENER DETAILS AND REQUIREMENTS (AT SWAY BRACE LOCATIONS ONLY)

LISTED

SEISMIC WIRE ROPE/CABLE BRACING



TRANSVERSE and LONGITUDINAL (4-WAY) BRACE FOR INSULATED or UNINSULATED PIPE ON CLEVIS TYPE HANGERS

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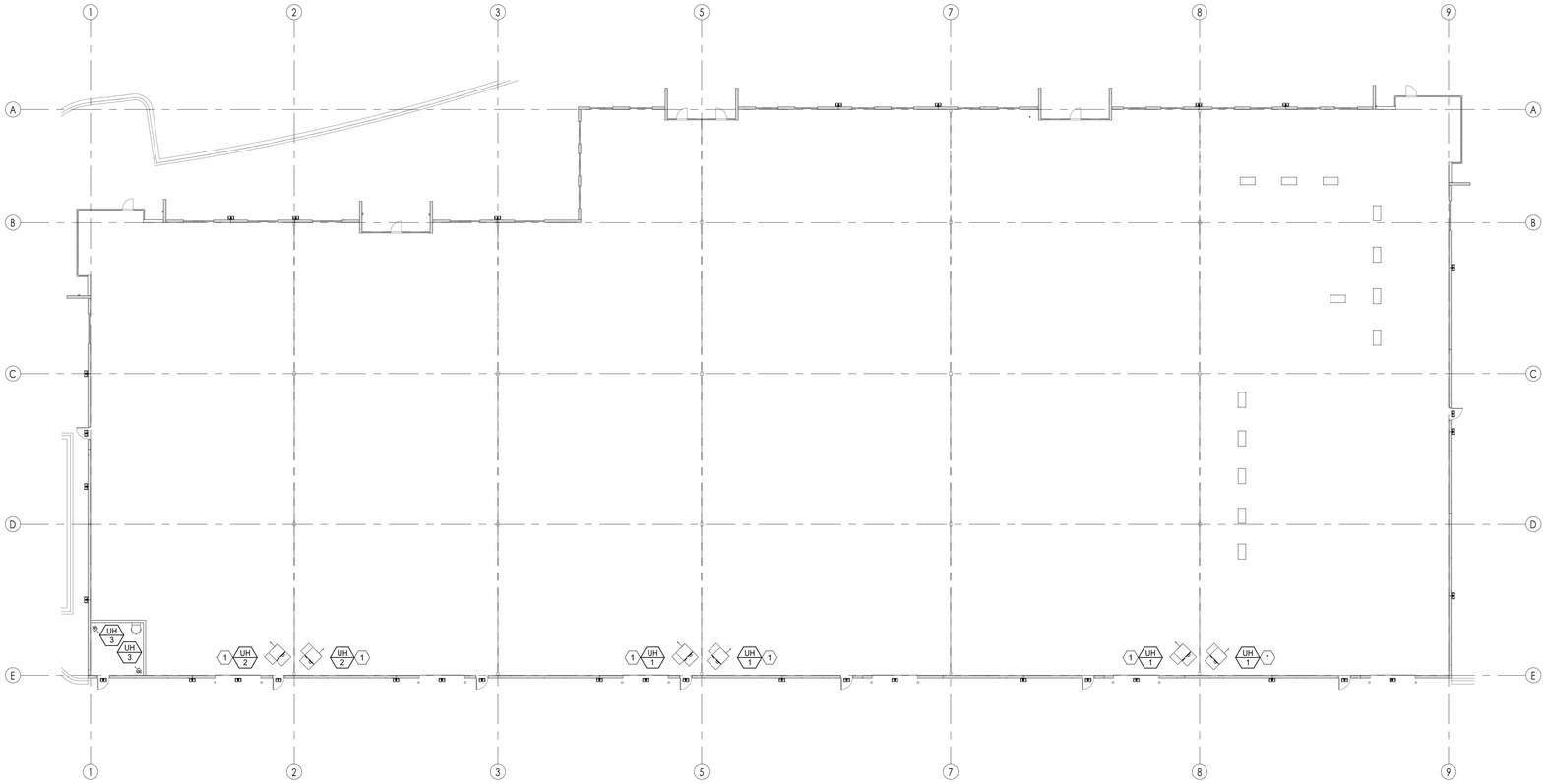
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1 HVAC MAIN FLOOR
1/16" = 1'-0"

KEYED NOTES:

1. 6 INCH FLUE UP THROUGH ROOF.

SHEET NOTES:

- SEE SHEET M901 FOR HVAC ISO-METRIC

- ALL THERMOSTATS TO BE PROVIDED WITH THERMAL BASES AS REQUIRED DEPENDING ON EXACT LOCATION IN WHICH THERMOSTAT IS TO BE MOUNTED

- ALL THERMOSTATS TO BE IECC 2018 COMPLIANT

- MECHANICAL CONTRACTOR RESPONSIBLE TO MATCH THE APPROPRIATE GRILLE MOUNTING FRAME TO EACH INDIVIDUAL GRILLE

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HVAC MAIN FLOOR

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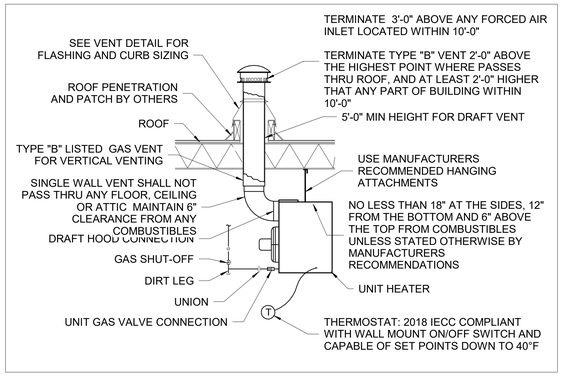
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7 UNIT HEATER INSTALLATION
NO SCALE

UNIT HEATER

GENERAL INFORMATION			HEATING DATA					FAN SECTION						ELECTRICAL DATA						WEIGHT	REMARKS
PLAN CODE	MANUFACTURER	MODEL NUMBER	FUEL TYPE	MBH IN	MBH OUT	PIPE SIZE	KW	FAN CFM	FAN QTY/DIA	FAN TYPE	SP	FAN HP	RPM	VOLT	PH	Hz	MCA	FLA	FUSE		
UH-1	REZNOR	UDX	NG	400	332	3/4	-	5123	1/-	PROP	-	1/2	-	120	1	60	-	11	20	360	(1)(2)(3)(4)(5)(8)(9)(10)
UH-2	REZNOR	UDX	NG	300	249	3/4	-	3843	1/-	PROP	-	1/2	-	120	1	60	-	11	20	325	(1)(2)(3)(4)(5)(8)(9)(10)
UH-3	REZNOR	EGHB	ELEC	-	-	-	7.5	700	-	PROP	-	-	-	480	3	60	-	-	-	50	(1)(2)(6)(7)(9)

(1) OR EQUAL AS APPROVED BY SPECIFYING ENGINEER
(2) MC TO PROVIDE AND INSTALL ASHRAE 90.1 COMPLIANT THERMOSTAT FOR EACH UNIT HEATER MOUNTED AT 4 FEET AFF. MOUNT OF 4x4 BOX WITH ISOLATION BASE. ROUTE CONDUIT UP WALL TO UNIT HEATER.
(3) MC TO PROVIDE AND INSTALL WIND RESISTANT VENT CAP AT VENT TERMINATION.
(4) MC TO PROVIDE AND INSTALL OUTSIDE AIR AND FLUE CONNECTIONS ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND REQUIREMENTS. VENT UNIT HEATERS THROUGH ROOF.
(5) AS SPECIFIED, THE UNIT HEATER IS SHOWN AS 83% EFFICIENT BY THE MANUFACTURER.
(6) UH TO BE MOUNTED USING MANUFACTURER PROVIDED WALL BRACKET.
(7) MOUNT UNIT AT 10 FEET AFF AND VANES BLOWING DOWN TO FLOOR AT APPROXIMATELY A 30 DEG ANGLE.
(8) MOUNT UNIT AS HIGH AS POSSIBLE WHILE MAINTANING MINUMUM CLEARANCE REQUIREMENTS. UNIT TO BE INSTALLED WITH 60 DEG. DOWNTURN NOZZLE BY MANUFACTURER.
(9) CONTRACTOR TO VERIFY SITE CONDITIONS AND CONFRIM THAT SITE VOLTAGE MATCHES THE VOLTAGE SPECIFIED. REPORT ANY DISCREPANCIES TO SPECIFYING ENGINEER.
(10) STEP DOWN TRANSFORMERS FROM LINE VOLTAGE TO 120 VAC TO BE PROVIDED BY INSTALLING ELECTRICAL CONTRACTOR.

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500 E. AUTOMALL DR. AMERICAN FORK, UT

Revision Schedule		
MARK	DESCRIPTION	Revision Date

HVAC DETAILS AND SCHEDULES

DATE: 07 JUN, 2021

SHEET #:

M501

DESIGN BUILD GROUP
CONSULTING ENGINEERS

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AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN BUILD

500 E. AUTOMALL DR. AMERICAN FORK, UT

REVIEWED FOR CODE COMPLIANCE
DEPARTMENT OF COMMERCE
CONSTRUCTION CODES SECTION
ARCHITECTURAL
STRUCTURAL
MECHANICAL
ELECTRICAL
ACCESSIBILITY
PLUMBING
ENERGY
BY: _____ DATE: 12/14/22
PLANS MUST COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES
PERMIT ISSUED AT THE TIME OF PLAN REVIEW DOES NOT PROHIBIT THE APPLICATION OF
FEDERAL, STATE, LOCAL REGULATIONS
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Revision Schedule		
MARK	DESCRIPTION	Revision Date

HVAC ISOMETRIC

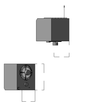
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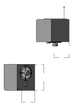
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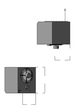
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AMERICAN FORK OFFICE/WAREHOUSE

500 E. AUTOMALL DR. AMERICAN FORK, UT

PLUMBING SYSTEMS PIPING

SANR	WASTE WATER PIPING
V	WASTE VENT
GREASE	GREASE/SAND/OIL WASTE WATER PIPING
CW	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER PIPING
HWR	DOMESTIC HOT RECIRC WATER PIPING
NG	NATURAL GAS/FUEL PIPING
RD	ROOF DRAIN PIPING
OD	ROOF DRAIN OVERFLOW PIPING
CA	COMPRESSED AIR

MECHANICAL/HVAC SYSTEMS PIPING

CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
TWS	COOLING TOWER WATER SUPPLY
TWR	COOLING TOWER WATER RETURN
CON	CONDENSATE DRAIN WATER
DSUC	DX SUCTION LINE
DLIQ	DX LIQUID LINE

MEDICAL GAS SYSTEMS PIPING

VAC	MEDICAL VACUUM LINE
O	OXYGEN LINE
MA	MEDICAL AIR LINE

CONNECT NEW TO EXISTING

REMOVE FROM EXISTING

PIPING SYSMBOLS

4"Ø	NEW PIPING DOUBLE LINE
4"Ø	NEW PIPING SINGLE LINE
4"Ø	EXISTING TO REMAIN DOUBLE LINE
4"Ø	EXISTING TO REMAIN SINGLE LINE
4"Ø	EXISTING TO BE REMOVED DOUBLE LINE
4"Ø	EXISTING TO BE REMOVED SINGLE LINE
4"Ø	NEW PIPING WITH INSULATION DOUBLE LINE (SEE PIPING SCHEDULE)
4"Ø	NEW PIPING WITH INSULATION SINGLE LINE (SEE PIPING SCHEDULE)
	FLEX PIPING
4"Ø	PIPE DOWN DOUBLE LINE
4"Ø	PIPE DOWN SINGLE LINE
4"Ø	PIPE UP DOUBLE LINE
4"Ø	PIPE UP SINGLE LINE
4"Ø 4"Ø	PIPING TEE DOWN DOUBLE LINE
4"Ø 4"Ø	PIPING TEE DOWN SINGLE LINE
4"Ø 4"Ø	PIPING TEE UP DOUBLE LINE
4"Ø 4"Ø	PIPING TEE UP SINGLE LINE

PIPING VALVES

- BALL VALVE
- GATE VALVE
- CHECK VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- GLOBE VALVE
- 2-WAY MOTORIZED CONTROL VALVE (M)
- 2-WAY SOLENOID CONTROL VALVE (S)
- 3-WAY MOTORIZED CONTROL VALVE (M)
- PRESSURE RELIEF VALVE

Plumbing Sheet List

Sheet Number	Sheet Name	Current Revision	Current Revision Date
P000	PLUMBING TITLE SHEET		
P001	PLUMBING CALCULATIONS		
P002	PLUMBING CALCULATIONS		
P003	PLUMBING CALCULATIONS		
P101	WASTE WATER PIPING PLAN		
P102	DOMESTIC WATER PIPING PLAN		
P103	NATURAL GAS PIPING PLAN		
P121	ROOF DRAIN PIPING PLAN		
P501	PLUMBING DETAILS		
P601	PLUMBING SCHEDULES		
P901	WASTE WATER ISOMETRIC		
P902	DOMESTIC WATER ISOMETRIC		
P903	NATURAL GAS ISOMETRIC		
P904	ROOF DRAIN ISOMETRIC		

PLUMBING/PIPING GENERAL NOTES:

1. ALL PIPING INSULATION AND COVERINGS SHALL HAVE AN ASTM FLAME SPREAD RATING OF 25 OR LESS AND AN ASTM SMOKE DEVELOPED RATING OF 50 OR LESS
2. ELASTOMERIC INSULATIONS, WHICH MEET THESE RATINGS, MAY BE USED AS A SUBSTITUTE FOR FIBERGLASS.
3. PROVIDE 1" INSULATION AND A VAPOR BARRIER COVERING ON ALL ROOF DRAIN, RAIN LEADER AND COLD WATER PIPING.
4. PROVIDE A COVERING FOR ALL INSULATION EXPOSED TO SIGHT WITHIN THE BUILDING.
5. THESE PLANS ARE SCHEMATIC AND DO NOT SHOW EXACT ROUTING OR EVERY OFFSET WHICH MAY BE REQUIRED. THE PLUMBING CONTRACTOR IS TO COORDINATE WITH ALL OTHER TRADES AND IS TO VERIFY ALL CLEARANCES BEFORE COMMENCING WORK.
6. MATERIALS, METHODS AND INSTALLATION SHALL COMPLY WITH THE PROVISIONS OF THE 2018 EDITION OF THE INTERNATIONAL PLUMBING CODE.
7. ALL PIPE SIZES NOTED ON DRAWINGS ARE MINIMUMS.
8. SLOPE ALL RAIN LEADERS, STORM, AND WASTE WATER PIPING AT 2% UNLESS OTHERWISE NOTED ON DRAWINGS. OBTAIN APPROVAL FROM CODE AUTHORITY BEFORE INSTALLING PIPING AT LESS THAN 2% (EVEN IF LESSER SLOPE IS INDICATED ON DRAWINGS).
9. PIPING PENETRATIONS OF FIRE RATED WALLS OR FLOORS SHALL BE SLEEVED AND FIRE STOPPED WITH LISTED MATERIALS SO AS TO MAINTAIN THE INTEGRITY AND RATING OF THE FLOOR OR WALL.
10. FOR EXACT ROUGH-IN LOCATIONS AND ELEVATIONS OF PLUMBING FIXTURES REFER TO ARCHITECTURAL DRAWINGS.
11. CLEANOUTS SHALL BE INSTALLED SO THEY ARE EASILY ACCESSIBLE.
12. SERVICE HOT WATER PIPING SHALL BE INSULATED AS REQUIRED BY 2018 IECC 404.5. AS REQUIRED BY 2018 IECC, INSULATION TO HAVE A CONDUCTIVITY NOT EXCEEDING 0.27 BTU/IN/(H*SQ. FT*DEF.F). DOMESTIC HOT WATER PIPING OF 140 DEG. F OR LESS REQUIRES 1 INCH OF INSULATION WHEN CONVEYED THROUGH PIPING OF 1.5 INCHES OR LESS IN DIAMETER.
13. FIRST 8'-0" OF PIPE OFF ALL WATER HEATERS SHALL BE INSULATED AS REQUIRED BY IECC 2018
14. ALL STORAGE TANKS REQUIRE HEAT TRAPS ON BOTH INLET AND OUTLET AS REQUIRED BY IECC 2018
15. WATER HAMMER ARRESTORS TO BE PROVIDED AND INSTALLED ON ALL QUICK CLOSING VALVES. SEE 2018 IPC SECTION 604.9
16. PROVIDE TRAP PRIMERS AS REQUIRED BY IPC 2018. ALL FLOOR DRAINS TO BE SUPPLIED AS TRAP PRIMER READY.
17. INSTALLATION MATERIALS AND METHODS FOR DOMESTIC WATER, WASTE WATER AND NATURAL GAS PIPING TO BE AS REQUIRED BY LOCAL CODE.
18. HOT WATER SUPPLY FIXTURES TO BE INSTALLED WITH A UL LISTED TEMPERING VALVE TO ENSURE DELIVERY OF 'TEMPERED WATER' AS REQUIRED BY CODE. SEE SECTION 607 OF IPC 2018 FOR CODE REQUIREMENTS AND SHEET P501 FOR INSTALLATION DETAIL.
19. PLUMBING CONTRACTOR SHALL INSPECT SITE TO BECOME FAMILIAR WITH THE SCOPE OF THE WORK. THESE DOCUMENTS DO NOT REFLECT AS-BUILT CONDITIONS. ANY DISCREPANCIES BETWEEN THESE DOCUMENTS AND THE ACTUAL CONDITIONS SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION PRIOR TO BID PRICING. NO EXTRAS WILL BE ALLOWED DUE TO LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.
20. PLUMBING CONTRACTOR RESPONSIBLE TO MATCH ALL VALVE INSTALLATION ORIENTATION TO THE APPLICATION TO WHICH IT IS BEING INSTALLED. ALL NON-MOTORIZED VALVES TO BE SUBMITTED IDENTIFYING EXPECTED ORIENTATION OF INSTALLATION, ASSOCIATED Cv VALUES, PRESSURE DROP AND ASSOCIATED MINIMUM AND MAXIMUM ALLOWABLE FLOW RATES. NO VALVES ARE TO BE INSTALLED PRIOR TO THIS DOCUMENTATION BEING SUBMITTED AND REVIEWED.

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- [x] ELECTRICAL
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AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN BUILD
500 E. AUTOMALL DR. AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date

PLUMBING TITLE SHEET

DATE: 07 JUN, 2021

SHEET #: **P000**

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Waste Water Drainage Sizing

Project Name: American Fork Office/Warehouse

Waste Branch: Typical Tenant - Estimated

Quantity	Fixture Type	Drainage Fixture Unit Value as Load Factors (dfu)	Minimum Size of Trap (inches)	Total Fixture Unit Value as Load Factors (dfu)
0	Automatic Clothes Washers, Commercial	3	2	0
0	Automatic Clothes Washers, Residential	2	2	0
0	Bathroom Group as defined in Section 202 (1.6 gpf water closet)	5	-	0
0	Bathroom Group as defined in Section 202 (water closet flushing...	6	-	0
0	Bathtub (with or without overhead shower or whirlpool attachements)	2	1 1/2	0
0	Bidet	1	1 1/4	0
0	Combination sink and tray	2	1 1/2	0
0	Dental lavatory	1	1 1/4	0
0	Dental unit or cuspidor	1	1 1/4	0
0	Dishwashing machine, domestic	2	1 1/2	0
1	Drinking fountain	1/2	1 1/4	0.5
5	Emergency floor drain	0	2	0
0	Floor drains	2	2	0
0	Floor sinks	3	2	0
1	Kitchen sink, domestic	2	1 1/2	2
0	Kitchen sink, domestic with food waste grinder and/or dishwasher	2	1 1/2	0
0	Laundry tray (1 or 2 compartments)	2	1 1/2	0
8	Lavatory	1	1 1/4	8
0	Shower (5.7 gpm or less)	2	1 1/2	0
0	Shower (5.7 gpm to 12.3 gpm)	3	2	0
0	Shower (12.3 gpm to 25.8 gpm)	5	3	0
0	Shower (25.8 gpm to 55.6 gpm)	6	4	0
1	Service Sink	2	1 1/2	2
0	Sink	2	1 1/2	0
2	Urinal	4	2	8
0	Urinal, 1 gallon per flush or less	2	2	0
0	Urinal, nonwater supplied	1/2	2	0
0	Wash sink (circular or multiple) each set of faucets	2	1 1/2	0
6	Water closet, flushometer tank, public or private	4	3	24
0	Water closet, private (1.6 gpf)	3	3	0
0	Water closet, private (flushing greater than 1.6 gpf)	4	3	0
0	Water closet, public (1.6 gpf)	4	3	0
0	Water closet, public (flushing greater than 1.6 gpf)	6	3	0
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
				44.5

Slope of Waste Water Piping = 1/8 inch inch

Minimum Size of Primary Waste Water Piping = 4 inch

Waste Water Drainage Sizing

Project Name: American Fork Office/Warehouse

Waste Branch: Building Total - Estimated

Quantity	Fixture Type	Drainage Fixture Unit Value as Load Factors (dfu)	Minimum Size of Trap (inches)	Total Fixture Unit Value as Load Factors (dfu)
0	Automatic Clothes Washers, Commercial	3	2	0
0	Automatic Clothes Washers, Residential	2	2	0
0	Bathroom Group as defined in Section 202 (1.6 gpf water closet)	5	-	0
0	Bathroom Group as defined in Section 202 (water closet flushing...	6	-	0
0	Bathtub (with or without overhead shower or whirlpool attachements)	2	1 1/2	0
0	Bidet	1	1 1/4	0
0	Combination sink and tray	2	1 1/2	0
0	Dental lavatory	1	1 1/4	0
0	Dental unit or cuspidor	1	1 1/4	0
0	Dishwashing machine, domestic	2	1 1/2	0
7	Drinking fountain	1/2	1 1/4	3.5
36	Emergency floor drain	0	2	0
0	Floor drains	2	2	0
0	Floor sinks	3	2	0
7	Kitchen sink, domestic	2	1 1/2	14
0	Kitchen sink, domestic with food waste grinder and/or dishwasher	2	1 1/2	0
0	Laundry tray (1 or 2 compartments)	2	1 1/2	0
56	Lavatory	1	1 1/4	56
0	Shower (5.7 gpm or less)	2	1 1/2	0
0	Shower (5.7 gpm to 12.3 gpm)	3	2	0
0	Shower (12.3 gpm to 25.8 gpm)	5	3	0
0	Shower (25.8 gpm to 55.6 gpm)	6	4	0
7	Service Sink	2	1 1/2	14
0	Sink	2	1 1/2	0
14	Urinal	4	2	56
0	Urinal, 1 gallon per flush or less	2	2	0
0	Urinal, nonwater supplied	1/2	2	0
0	Wash sink (circular or multiple) each set of faucets	2	1 1/2	0
42	Water closet, flushometer tank, public or private	4	3	168
0	Water closet, private (1.6 gpf)	3	3	0
0	Water closet, private (flushing greater than 1.6 gpf)	4	3	0
0	Water closet, public (1.6 gpf)	4	3	0
0	Water closet, public (flushing greater than 1.6 gpf)	6	3	0
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
-	Additional Fixture (Type Here)	-	-	-
				311.5

Slope of Waste Water Piping = 1/8 inch inch

Minimum Size of Primary Waste Water Piping = 6 inch

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Domestic Water Sizing

Project Name: American Fork...

Dom. Wtr Branch: Typical Tenant - Estimated

Quantity	Fixture Type	Occupancy	Type of Supply Control	Load Values in Water Supply Fixture Units (wsfu) Cold	Hot	Total	Minimum sizes of Fixture Water Supply Pipes (Table 604.5)
0	Bathroom Group	Private	Flush Tank	0	0	0	-
0	Bathroom Group	Private	Flushometer Valve	0	0	0	-
0	Bathtub	Private	Faucet	0	0	0	1/2
0	Bathtub	Public	Faucet	0	0	0	1/2
0	Bidet	Private	Faucet	0	0	0	3/8
0	Combination Fixture	Private	Faucet	0	0	0	1/2
0	Dishwashing Machine	Private	Automatic	-	0	0	1/2
1	Drinking fountain	Offices, etc.	3/8" valve	0.25	-	0.25	3/8
1	Kitchen Sink	Private	Faucet	1	1	1.4	1/2
0	Kitchen Sink	Hotel/Restaurant	Faucet	0	0	0	3/4
0	Laundry tray (1 to 3 compartments)	Private	Faucet	0	0	0	1/2
8	Lavatory	Private	Faucet	4	4	5.6	3/8
0	Lavatory	Public	Faucet	0	0	0	3/8
1	Service Sink	Offices, etc.	Faucet	2.25	2.25	3	1/2
0	Shower Head	Public	Mixing Valve	0	0	0	1/2
0	Shower Head	Private	Mixing Valve	0	0	0	1/2
0	Urinal	Public	1" Flushometer Valve	0	-	0	1
2	Urinal	Public	3/4" Flushometer Valve	10	-	10	3/4
0	Urinal	Public	Flush Tank	0	-	0	1/2
0	Washing Machine (8 lbs)	Private	Automatic	0	0	0	1/2
0	Washing Machine (8 lbs)	Public	Automatic	0	0	0	1/2
0	Washing Machine (15 lbs)	Public	Automatic	0	0	0	3/4
0	Water Closet	Private	Flushometer Valve	0	-	0	1
6	Water Closet	Private	Flush Tank	13.2	-	13.2	3/8
0	Water Closet	Public	Flushometer Valve	0	-	0	1
0	Water Closet	Public	Flush Tank	0	-	0	3/8
0	Water Closet	Public or Private	Flushometer Tank	0	-	0	3/8
0	Water Closet	Private	Flush Tank	0	-	0	3/8
0	Hose Bibb	Public or Private	3/4" Valve	0	-	0	3/4
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
					7.25	33.45	wsfu

DCW wsfu into GPM =	24.9	GPM	** Used GPM for 35 wsfu
DCW Distribution Pipe Size Rqrd from Figure E103.3(2) =	1.5	inch	** Based on Flow rate of 5-8 Feet per Second maximum

Domestic Water Sizing

Project Name: American Fork...

Dom. Wtr Branch: Building Total - Estimated

Quantity	Fixture Type	Occupancy	Type of Supply Control	Load Values in Water Supply Fixture Units (wsfu) Cold	Hot	Total	Minimum sizes of Fixture Water Supply Pipes (Table 604.5)
0	Bathroom Group	Private	Flush Tank	0	0	0	-
0	Bathroom Group	Private	Flushometer Valve	0	0	0	-
0	Bathtub	Private	Faucet	0	0	0	1/2
0	Bathtub	Public	Faucet	0	0	0	1/2
0	Bidet	Private	Faucet	0	0	0	3/8
0	Combination Fixture	Private	Faucet	0	0	0	1/2
0	Dishwashing Machine	Private	Automatic	-	0	0	1/2
7	Drinking fountain	Offices, etc.	3/8" valve	1.75	-	1.75	3/8
7	Kitchen Sink	Private	Faucet	7	7	9.8	1/2
0	Kitchen Sink	Hotel/Restaurant	Faucet	0	0	0	3/4
0	Laundry tray (1 to 3 compartments)	Private	Faucet	0	0	0	1/2
56	Lavatory	Private	Faucet	28	28	39.2	3/8
0	Lavatory	Public	Faucet	0	0	0	3/8
7	Service Sink	Offices, etc.	Faucet	15.75	15.75	21	1/2
0	Shower Head	Public	Mixing Valve	0	0	0	1/2
0	Shower Head	Private	Mixing Valve	0	0	0	1/2
0	Urinal	Public	1" Flushometer Valve	0	-	0	1
14	Urinal	Public	3/4" Flushometer Valve	70	-	70	3/4
0	Urinal	Public	Flush Tank	0	-	0	1/2
0	Washing Machine (8 lbs)	Private	Automatic	0	0	0	1/2
0	Washing Machine (8 lbs)	Public	Automatic	0	0	0	1/2
0	Washing Machine (15 lbs)	Public	Automatic	0	0	0	3/4
0	Water Closet	Private	Flushometer Valve	0	-	0	1
42	Water Closet	Private	Flush Tank	92.4	-	92.4	3/8
0	Water Closet	Public	Flushometer Valve	0	-	0	1
0	Water Closet	Public	Flush Tank	0	-	0	3/8
0	Water Closet	Public or Private	Flushometer Tank	0	-	0	3/8
0	Water Closet	Private	Flush Tank	0	-	0	3/8
0	Hose Bibb	Public or Private	3/4" Valve	0	-	0	3/4
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
-	Additional Fixture (Type Here)	-	-			-	
					50.75	234.15	wsfu

DCW wsfu into GPM =	75	GPM	** Used GPM for 250 wsfu
DCW Distribution Pipe Size Rqrd from Figure E103.3(2) =	3	inch	** Based on Flow rate of 5-8 Feet per Second maximum
DCW Maximum Devloped Pipe Length to Farthest Fixture =	500	Feet	** Measured on architectural plans
BLDG Minimum Size of Water Meter (if needed) =	2	inch	** Based on Table E201.1 (30-39 psi)
Peak Domestic Cold Water Flow	75	GPM	
Average Daily Flow	1125	GPD	** Based on typical 10 hr work day

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AMERICAN FORK OFFICE/WAREHOUSE

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Natural Gas Sizing

Project Name: American Fork Office/Warehouse (Grid 1-2)

Quantity	Fixture Type	Heat Input (MBH - Sea Level)	Total Fixture Unit Value as Load Factors	Natural Gas Branch Size to Each Fixture (inch)
1	UH-2	300	300	1
1	Future	1000	1000	1 1/2
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
			1300	MBH

Project Location = American Fork, UT

Deration Factor =	868	Btu/cu. Ft.
Derated volumetric Input =	1497.7	CFH
System Pressure =	2	Lbs
Maximum Developed Length =	600	Feet
Pipe Diameter at Meter =	1.5	inches

Natural Gas Sizing

Project Name: American Fork Office/Warehouse (Grid 2-3)

Quantity	Fixture Type	Heat Input (MBH - Sea Level)	Total Fixture Unit Value as Load Factors	Natural Gas Branch Size to Each Fixture (inch)
1	UH-2	300	300	1
1	Future	1000	1000	1 1/2
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
			1300	MBH

Project Location = American Fork, UT

Deration Factor =	868	Btu/cu. Ft.
Derated volumetric Input =	1497.7	CFH
System Pressure =	2	Lbs
Maximum Developed Length =	600	Feet
Pipe Diameter at Meter =	1.5	inches

Natural Gas Sizing

Project Name: American Fork Office/Warehouse (Grid 3-5)

Quantity	Fixture Type	Heat Input (MBH - Sea Level)	Total Fixture Unit Value as Load Factors	Natural Gas Branch Size to Each Fixture (inch)
1	UH-1	400	400	1
1	Future	1000	1000	1 1/2
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
			1400	MBH

Project Location = American Fork, UT

Deration Factor =	868	Btu/cu. Ft.
Derated volumetric Input =	1612.9	CFH
System Pressure =	2	Lbs
Maximum Developed Length =	600	Feet
Pipe Diameter at Meter =	1.5	inches

Natural Gas Sizing

Project Name: American Fork Office/Warehouse (Grid 5-7)

Quantity	Fixture Type	Heat Input (MBH - Sea Level)	Total Fixture Unit Value as Load Factors	Natural Gas Branch Size to Each Fixture (inch)
1	UH-1	400	400	1
1	Future	1000	1000	1 1/2
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
			1400	MBH

Project Location = American Fork, UT

Deration Factor =	868	Btu/cu. Ft.
Derated volumetric Input =	1612.9	CFH
System Pressure =	2	Lbs
Maximum Developed Length =	600	Feet
Pipe Diameter at Meter =	1.5	inches

Natural Gas Sizing

Project Name: American Fork Office/Warehouse (Grid 7-8)

Quantity	Fixture Type	Heat Input (MBH - Sea Level)	Total Fixture Unit Value as Load Factors	Natural Gas Branch Size to Each Fixture (inch)
1	UH-1	400	400	1
1	Future	1000	1000	1 1/2
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
			1400	MBH

Project Location = American Fork, UT

Deration Factor =	868	Btu/cu. Ft.
Derated volumetric Input =	1612.9	CFH
System Pressure =	2	Lbs
Maximum Developed Length =	400	Feet
Pipe Diameter at Meter =	1.5	inches

Natural Gas Sizing

Project Name: American Fork Office/Warehouse (Grid 8-8.5)

Quantity	Fixture Type	Heat Input (MBH - Sea Level)	Total Fixture Unit Value as Load Factors	Natural Gas Branch Size to Each Fixture (inch)
1	UH-1	400	400	1
1	Future	1000	1000	1 1/2
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
			1400	MBH

Project Location = American Fork, UT

Deration Factor =	868	Btu/cu. Ft.
Derated volumetric Input =	1612.9	CFH
System Pressure =	2	Lbs
Maximum Developed Length =	300	Feet
Pipe Diameter at Meter =	1.5	inches

Natural Gas Sizing

Project Name: American Fork Office/Warehouse (Grid 8.5-9)

Quantity	Fixture Type	Heat Input (MBH - Sea Level)	Total Fixture Unit Value as Load Factors	Natural Gas Branch Size to Each Fixture (inch)
1	Future	1000	1000	1 1/2
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
-	Additional Fixture (Type Here)	-	-	
			1000	MBH

Project Location = American Fork, UT

Deration Factor =	868	Btu/cu. Ft.
Derated volumetric Input =	1152.1	CFH
System Pressure =	2	Lbs
Maximum Developed Length =	300	Feet
Pipe Diameter at Meter =	1.5	inches

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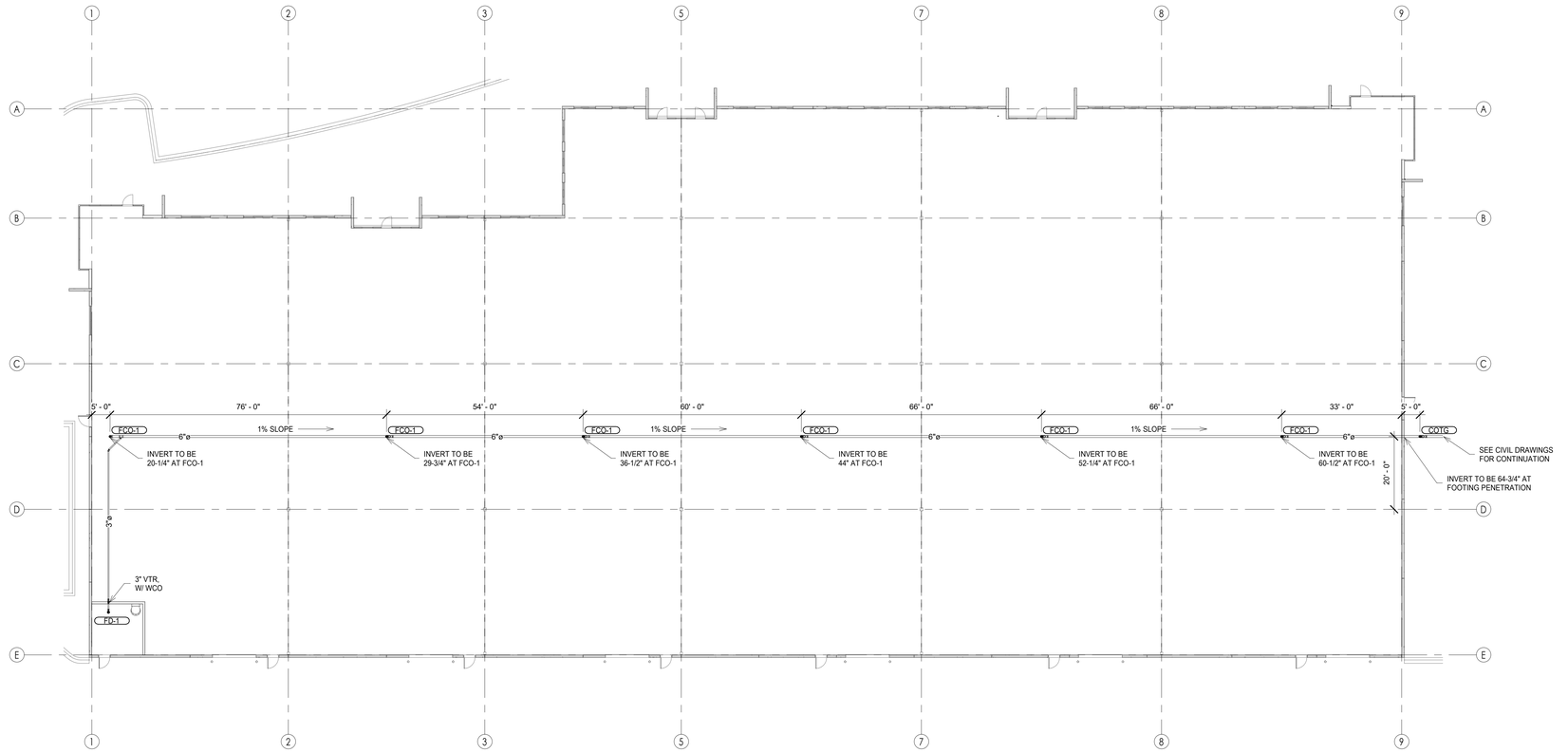
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1 WASTE WATER PIPING
1/16" = 1'-0"

KEYED NOTES: (#)

SHEET NOTES:

- PROVIDE TRAP PRIMERS AS REQUIRED BY IPC 2018

- INSTALLATION MATERIALS AND METHODS FOR DOMESTIC WATER, WASTE WATER AND NATURAL GAS PIPING TO BE AS REQUIRED BY LOCAL CODE.

- HOT WATER SUPPLY FIXTURES TO BE INSTALLED WITH A UL LISTED TEMPERING VALVE TO ENSURE DELIVERY OF 'TEMPERED WATER' AS REQUIRED BY CODE. SEE SECTION 607 OF IPC 2018 FOR CODE REQUIREMENTS AS SHEET P501 FOR INSTALLATION DETAIL

- PLUMBING CONTRACTOR TO PROVIDE RATED BOXES AND/OR PENETRATIONS FOR PIPING ROUTED THROUGH RATED WALLS

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WASTE WATER PIPING PLAN

DATE: 07 JUN, 2021

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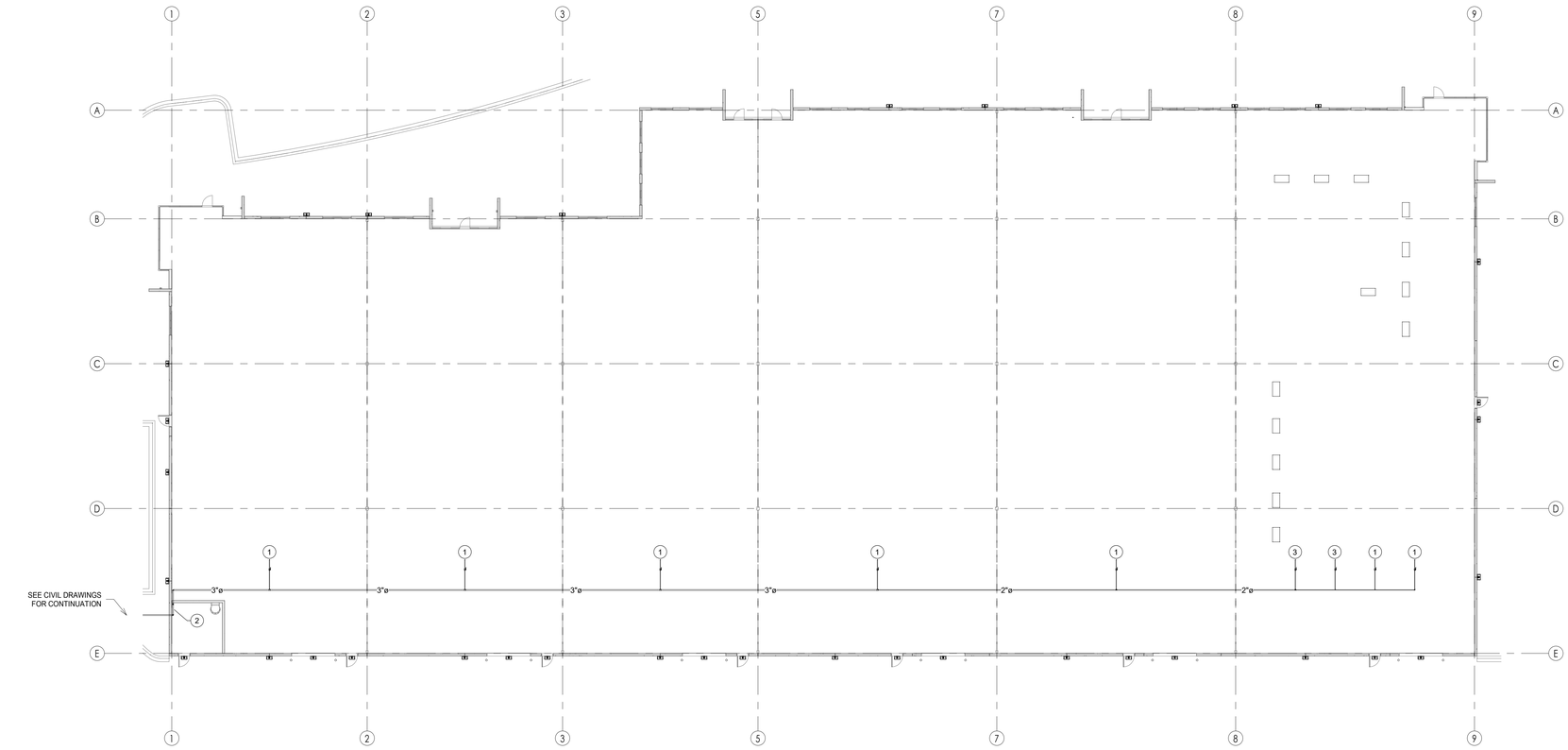
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1 DOMESTIC WATER PIPING
1/16" = 1'-0"

KEYED NOTES: (#)

1. 1-1/2 INCH DOMESTIC WATER STUB FOR FUTURE WITH ISOLATION VALVE.

2. 2 INCH PRV ASSEMBLY AND BUILDING ISOLATION VAVLE. PRV TO BE MINIMUM 2 STAGE WITH BYPASS. PRIMARY PRV TO BE 2 INCH, SECONDART PRV TO BE 1 INCH WITH 2 INCH BYPASS. PLEASE NOTE THAT A 2 INCH METER IS REQUIRED WITH 3 INCH DISTRIBUTION AS SHOWN. REFER TO CIVIL DRAWINGS FOR METER AND VAULT LOCATION.

3. 1-1/4 INCH DOMESTIC WATER STUB FOR FUTURE WITH ISOLATION VALVE.

SHEET NOTES:

- PROVIDE TRAP PRIMERS AS REQUIRED BY IPC 2018

- INSTALLATION MATERIALS AND METHODS FOR DOMESTIC WATER, WASTE WATER AND NATURAL GAS PIPING TO BE AS REQUIRED BY LOCAL CODE.

- HOT WATER SUPPLY FIXTURES TO BE INSTALLED WITH A UL LISTED TEMPERING VALVE TO ENSURE DELIVERY OF 'TEMPERED WATER' AS REQUIRED BY CODE. SEE SECTION 607 OF IPC 2018 FOR CODE REQUIREMENTS AS SHEET P501 FOR INSTALLATION DETAIL

- PLUMBING CONTRACTOR TO PROVIDE RATED BOXES AND/OR PENETRATIONS FOR PIPING ROUTED THROUGH RATED WALLS

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500 E. AUTOMALL DR. AMERICAN FORK, UT

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Revision Schedule		

DOMESTIC WATER PIPING PLAN

DATE: 07 JUN, 2021

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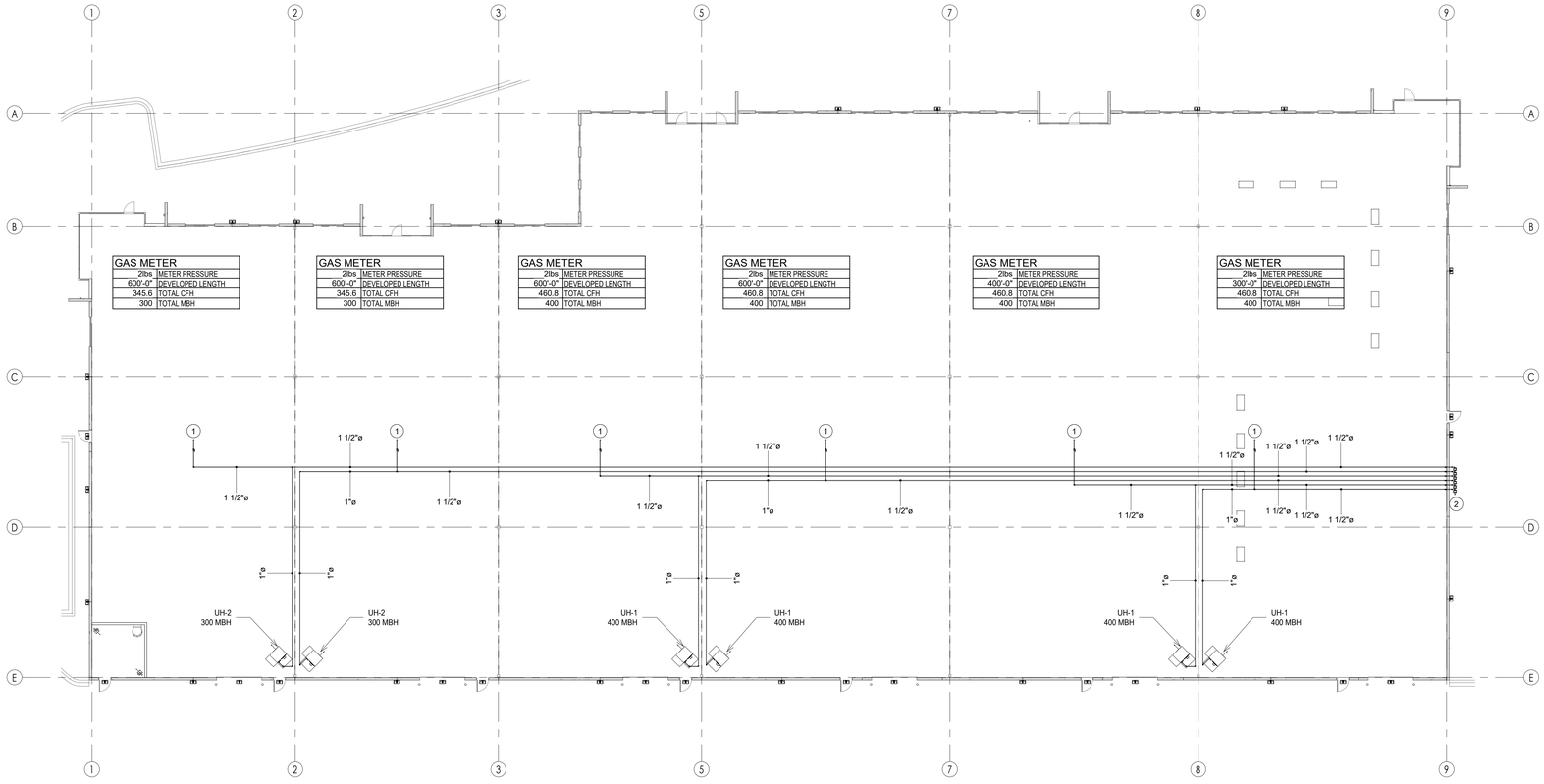
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1 NATURAL GAS PIPING
1/16" = 1'-0"

KEYED NOTES: (#)

1. 1-1/2 INCH NATURAL GAS STUB FOR FUTURE WITH ISOLATION VALVE.

2. POTENTIAL FUTURE GAS METERS DEPENDING ON FINAL LAYOUT OF TENANT SPACES. ALL DISCIPLINES TO MAINTAIN NECESSARY CLEARANCES UNTIL TENANT LAYOUT IS APPROVED BY OWNER.

SHEET NOTES:

- INSTALLATION MATERIALS AND METHODS FOR DOMESTIC WATER, WASTE WATER AND NATURAL GAS PIPING TO BE AS REQUIRED BY LOCAL CODE.

- PLUMBING CONTRACTOR TO PROVIDE RATED BOXES AND/OR PENETRATIONS FOR PIPING ROUTED THROUGH RATED WALLS

-PLUMBING CONTRACTOR TO PROVIDE AND INSTALL PRESSURE REDUCING VALVE, ISOLATION VALVE, AND DIRT LEG AT ALL APPLIANCES (MINIMUM). REFER TO GAS CONNECTION DETAIL ON SHEET P501 FOR ALL ACCESSORIES REQUIRED AT EACH APPLIANCE. VENT PRESSURE REDUCING VALVES AS REQUIRED.

-ALL GAS PIPING TO BE INSTALLED ACCORDING TO 2018 IFGC REQUIREMENTS FOR PIPE SIZE, LOCATION AND PRESSURE.

-PLUMBING CONTRACTOR TO PROVIDE AND INSTALL A UNION, AND ISOLATION VALVE AT EACH BRANCH TAKE OFF THROUGHOUT THE SYSTEM.

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NATURAL GAS PIPING PLAN

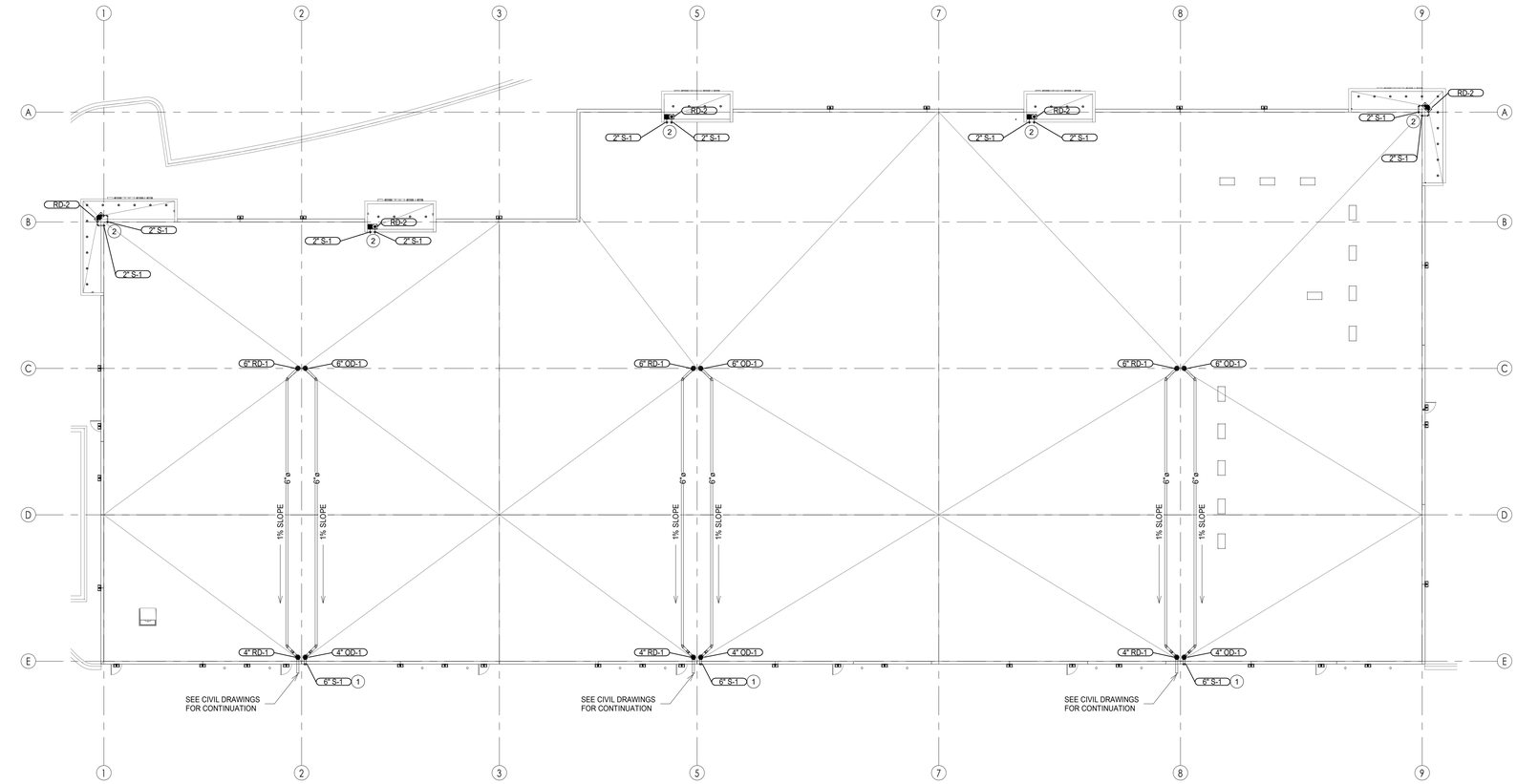
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1 ROOF DRAIN PIPING
1/16" = 1'-0"

KEYED NOTES: (#)

1. WALL SCUPPER TO BE MOUNTED ON FOUNDATION WALL IN TRUCK DOCK. LOCATE SCUPPER BETWEEN TRUCK DOCKS SO THAT SCUPPER DOES NOT INTERFERE WITH DOCK OR VEHICLE OPERATION. SCUPPER TO BE MOUNTED AT 18" ABOVE FINISHED GRADE. WHERE SCUPPER DISCHARGE IS INTO LANDSCAPING, SCUPPER TO BE MOUNTED AT 6" ABOVE FINISHED GRADE.

2. CANOPY DRAINAGE TO DISCHARGE ONTO MAIN ROOF. SCUPPERS TO DISCHARGE ONTO SPLASH BLOCK FOR PROTECTION OF ROOF MEMBRANE. PLUMBING CONTRACTOR TO PROVIDE OWNER AND MEMBRANE INSTALLER APPROVED SPLASH BLOCK. SPLASH BLOCK IS REQUIRED FOR BOTH PRIMARY AND SECONDARY DRAINS/SCUPPERS.

SHEET NOTES:

- PROVIDE TRAP PRIMERS AS REQUIRED BY IPC 2018

- INSTALLATION MATERIALS AND METHODS FOR DOMESTIC WATER, WASTE WATER AND NATURAL GAS PIPING TO BE AS REQUIRED BY LOCAL CODE.

- HOT WATER SUPPLY FIXTURES TO BE INSTALLED WITH A UL LISTED TEMPERING VALVE TO ENSURE DELIVERY OF 'TEMPERED WATER' AS REQUIRED BY CODE. SEE SECTION 607 OF IPC 2018 FOR CODE REQUIREMENTS AS SHEET P501 FOR INSTALLATION DETAIL

- PLUMBING CONTRACTOR TO PROVIDE RATED BOXES AND/OR PENETRATIONS FOR PIPING ROUTED THROUGH RATED WALLS

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ROOF DRAIN PIPING PLAN

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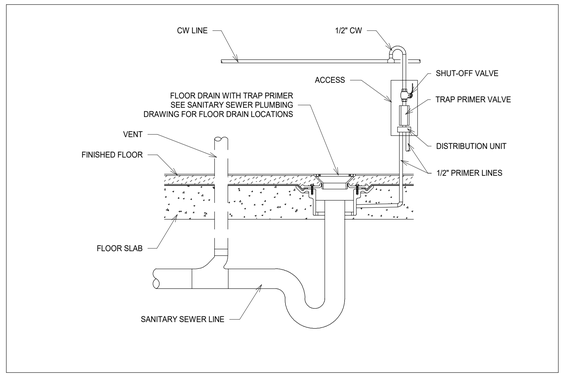
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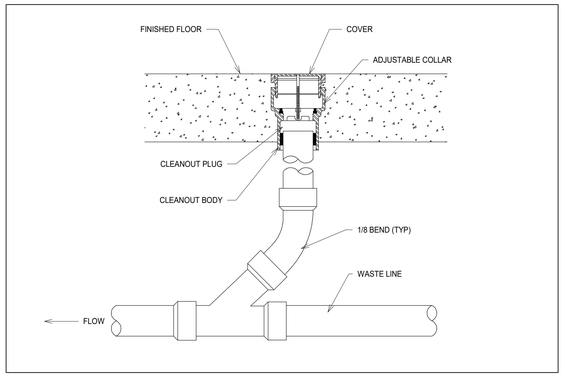
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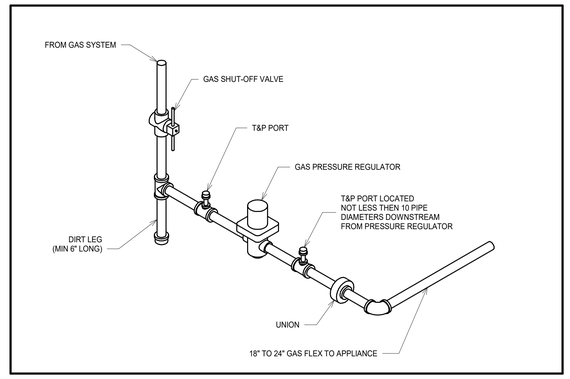
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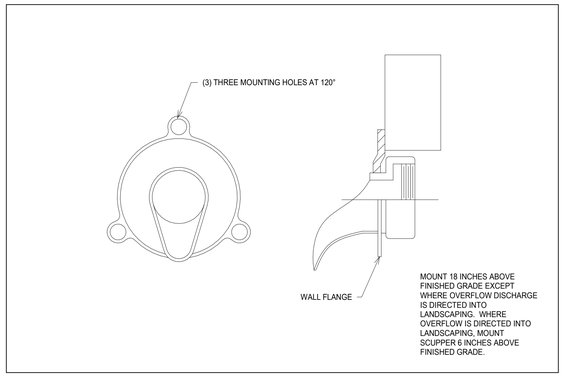
3 22 13 00 FLOOR DRAIN/TRAP PRIMER DETAIL
NO SCALE



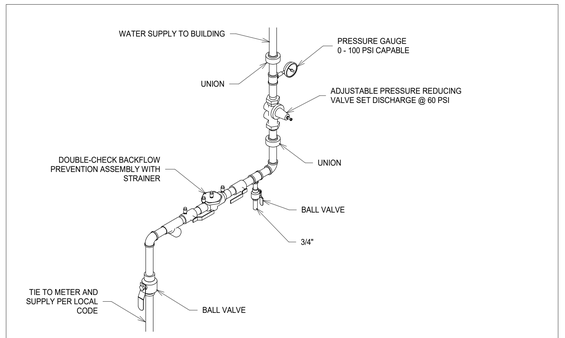
2 22 13 00 FLOOR CLEANOUT
NO SCALE



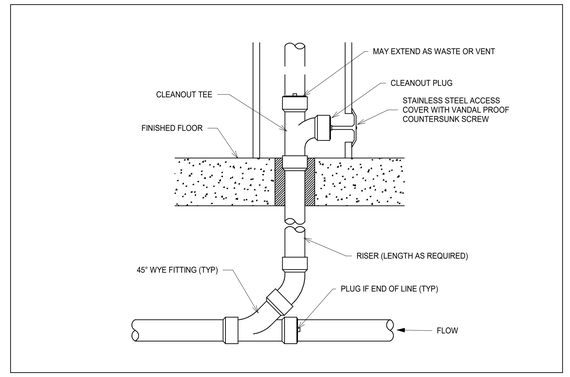
1 23 11 00 GAS PIPING TO APPLIANCE
NO SCALE



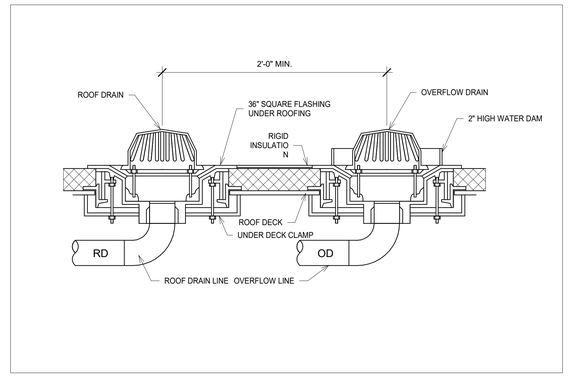
6 22 14 00 WALL SCUPPER
12" = 1'-0"



5 22 11 00 VERTICAL WATER PRV STATION
12" = 1'-0"



4 22 13 00 WALL CLEANOUT
NO SCALE



7 22 14 26 ROOF DRAIN DETAIL
12" = 1'-0"

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500 E. AUTOMALL DR. AMERICAN FORK, UT

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PLUMBING DETAILS

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PLUMBING FIXTURE

GENERAL INFORMATION			TYPE OF PLUMBING FIXTURE	PIPING SIZES				WEIGHT	REMARKS
PLAN CODE	MANUFACTURER	MODEL NUMBER		COLD WATER	HOT WATER	WASTE WATER	VENT LINE		
FD-1	WATTS	FD-100-A	FLOOR DRAIN	-	-	2"	-	-	(1)(2)(4)
FCO-1	WATTS	CO-200-R	FLOOR CLEAN OUT	-	-	-	-	-	(1)(4)
RD-1/OD-1	WATTS	RD-300	15" ROOF DRAIN / OVERFLOW DRAIN	-	-	PLAN	-	-	(1)(3)
RD-2	ZURN	Z-165	8-3/8" ROOF DRAIN / OVERFLOW DRAIN COMBO	-	-	PLAN	-	-	(1)(3)
S-1	ARKMANN	PDN	PVC DOWNSPOUT NOZZLE	-	-	PLAN	-	-	(1)

(1) OR EQUAL AS APPROVED BY SPECIFYING ENGINEER
(2) FLOOR DRAIN TO BE PROVIDED AS TRAP PRIMER READY
(3) OPTIONS - NO-HUB, UNDERDECK CLAMP, ROOF SUMP RECEIVER, 2" HIGH INTERNAL WATER DAM ON OVERFLOW.
(4) PLUMBING CONTRACTOR RESPONSIBLE TO ENSURE THAT FIXTURE IS FLUSH WITH FINISHED FLOOR AND IS RESPONSIBLE FOR ANY DEVIATIONS.

PIPE AND FITTING MATERIAL SCHEDULE

SYSTEM	PIPE			FITTINGS	REMARKS
	GRADE LEVEL	MATERIAL	SCH	TYPE	
DOMESTIC HOT AND COLD WATER	ABOVE GRADE	COPPER	TYPE L	BRAZED WROUGHT COPPER	
	BELOW GRADE	COPPER	TYPE K	BRAZED WROUGHT COPPER	
WASTE WATER	ABOVE GRADE	ABS PLASTIC	SCH 40	SOLVENT WELD	THRU FLOOR TO HORIZONTAL
	BELOW GRADE	ABS PLASTIC	SCH 40	SOLVENT WELD	HORIZONTAL PIPING ONLY
VENT	ABOVE GRADE	ABS PLASTIC	SCH 40	SOLVENT WELD	THRU FLOOR TO HORIZONTAL
	BELOW GRADE	ABS PLASTIC	SCH 40	SOLVENT WELD	HORIZONTAL PIPING ONLY
INDIRECT WASTE	ABOVE GRADE	COPPER	TYPE M	BRAZED WROUGHT COPPER	CONDENSATE DRAIN
	BELOW GRADE	COPPER	TYPE M	BRAZED WROUGHT COPPER	CONDENSATE DRAIN WRAPPED
NATURAL GAS	INSIDE	BLACK STEEL	SCH 40	THREADED MALLEABLE BLACK IRON	
	OUTSIDE	BLACK STEEL	SCH 40	THREADED MALLEABLE BLACK IRON	WEATHER PROTECTED
ROOF DRAINS	INSIDE	PVC	SCH 40	SOLVENT WELD	
	OUTSIDE	PVC	SCH 40	SOLVENT WELD	
VACUUM	INSIDE	PVC	SCH 40	SOLVENT WELD	
	OUTSIDE	PVC	SCH 40	SOLVENT WELD	
COMPRESSED AIR	INSIDE	COPPER	TYPE K	BRAZED WROUGHT COPPER	
	OUTSIDE	COPPER	TYPE K	BRAZED WROUGHT COPPER	
MED GASES	ABOVE GRADE	COPPER	TYPE K	BRAZED WROUGHT COPPER	TO MEET NFPA 99 REQUIREMENTS
	BELOW GRADE	COPPER	TYPE K	BRAZED WROUGHT COPPER	TO MEET NFPA 99 REQUIREMENTS

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DAVIES DESIGN BUILD

500 E. AUTOMALL DR. AMERICAN FORK, UT

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PLUMBING SCHEDULES

DATE: **07 JUN, 2021**

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DATE 6/24/22
FOR PARTS NOT REVIEWED OR DOCUMENTED ON THE APPROVED PLANS, SEE FED BUILDING, PLUMBING, MECHANICAL, ELECTRICAL, ENERGY CONSERVATION CODES AND STATE, LOCAL REGULATIONS
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500 E. AUTOMALL DR. AMERICAN FORK, UT

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WASTE WATER ISOMETRIC

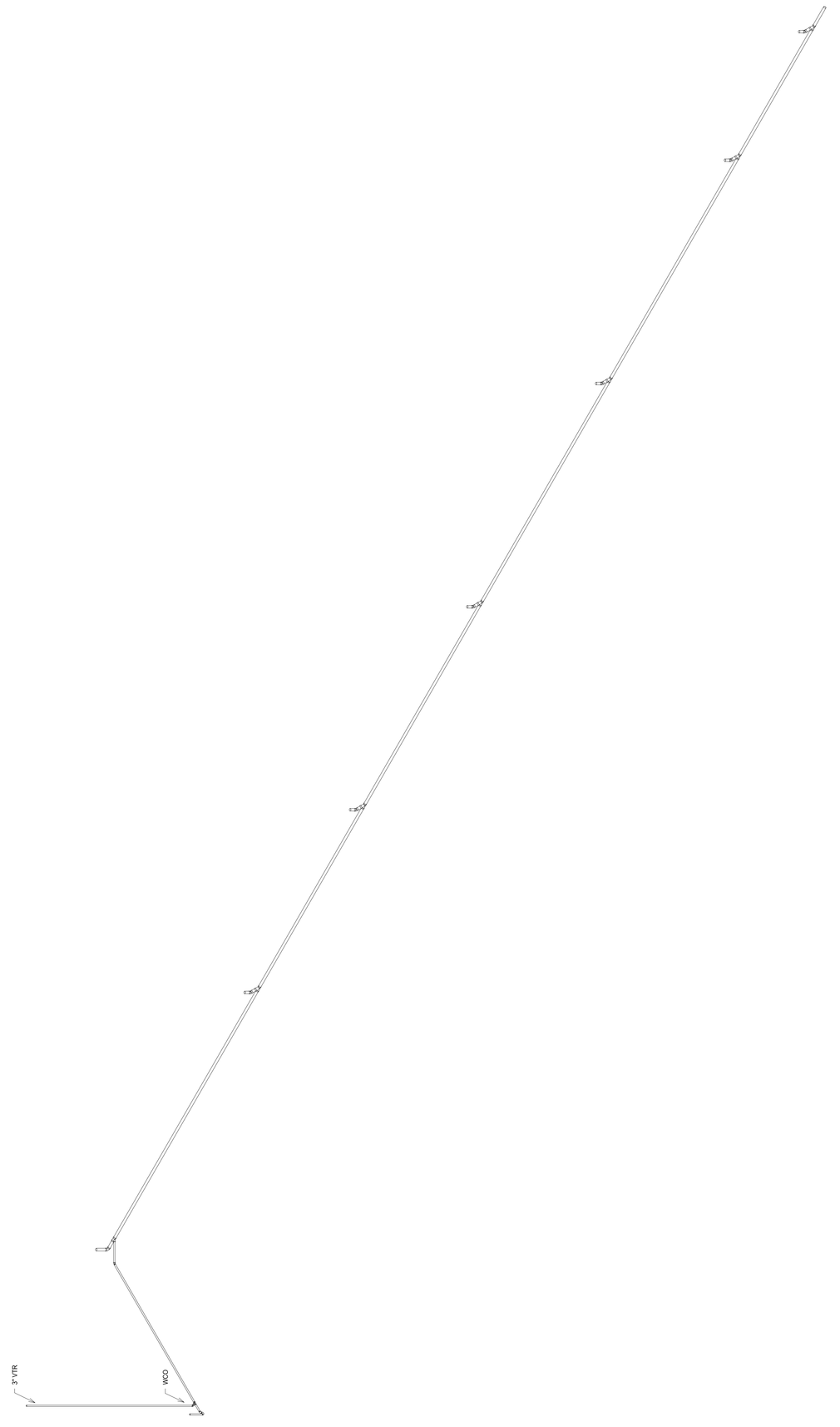
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ELECTRICAL
PLUMBING
FIRE PROTECTION
BY: _____ DATE: 12/14/22
PERMIT # _____
WEST FOUNTAIN CORE EXPANSION - PARTS, AND

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DOMESTIC WATER ISOMETRIC

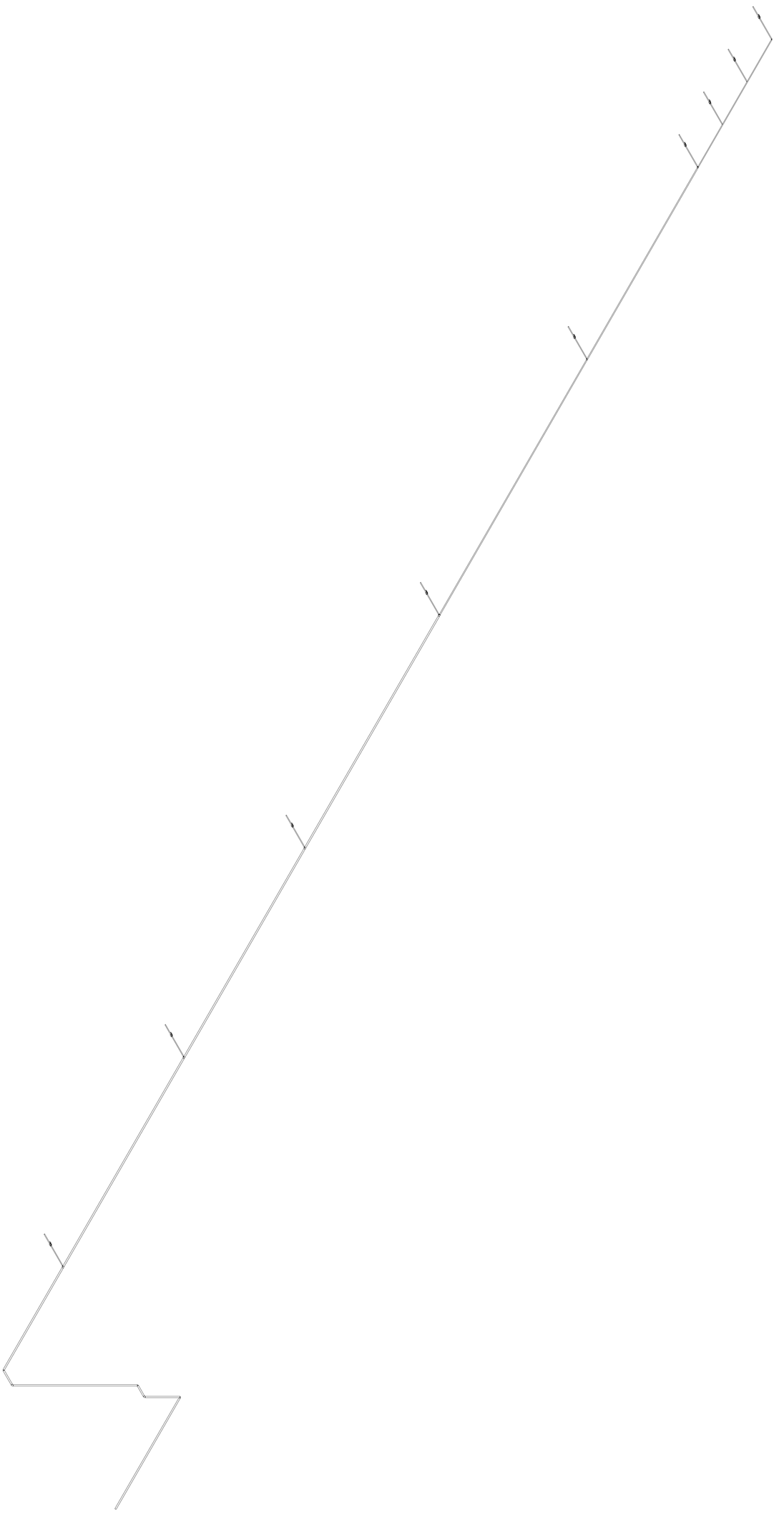
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APPROVED BY: [signature] DATE: 7/20/2022
PLANS MUST COMPLY WITH ALL CODES ADOPTED BY THE AUTHORITY HAVING JURISDICTION AT THE TIME OF PERMIT APPLICATION, INCLUDING STATE, LOCAL AND FEDERAL CODES.
MUST COMPLY WITH CONDITIONS NOTED

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NATURAL GAS ISOMETRIC

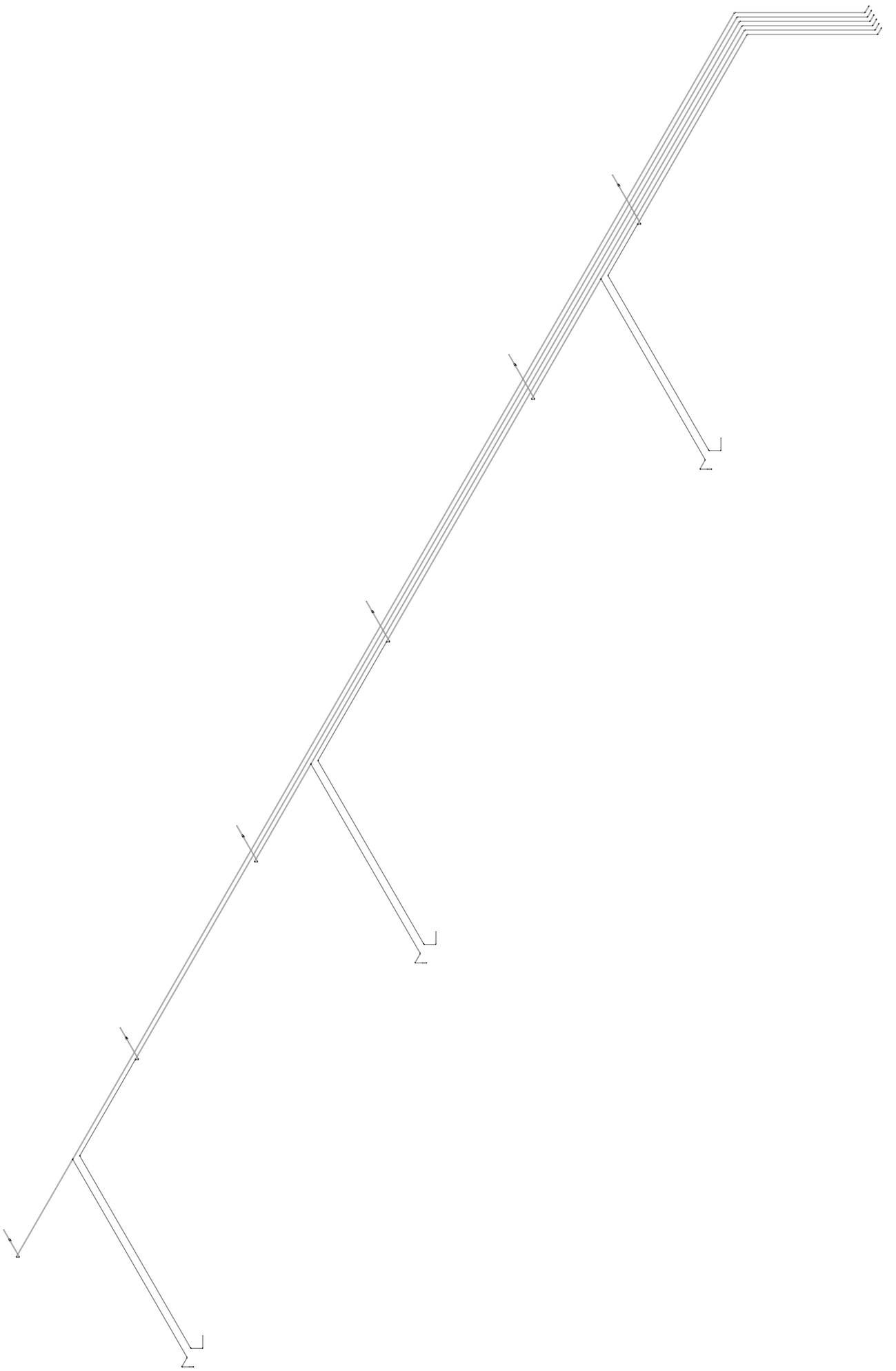
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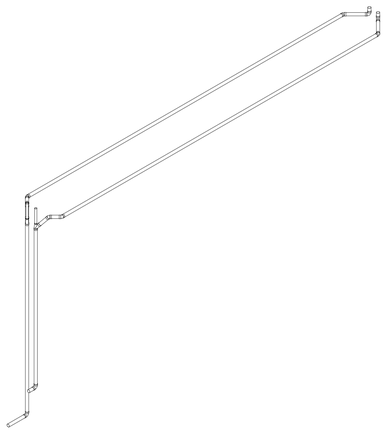
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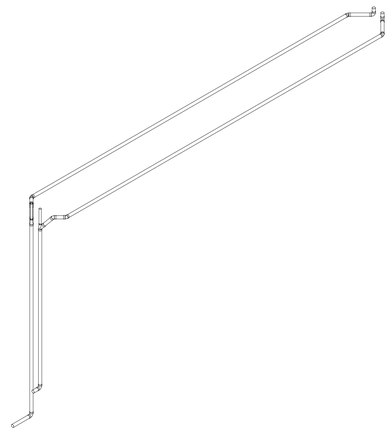
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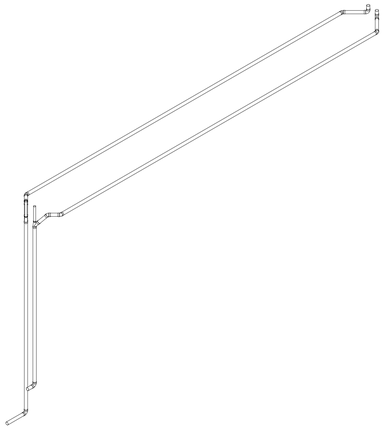
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MARK	DESCRIPTION	Revision Date

Revision Schedule

ROOF DRAIN ISOMETRIC

DATE: 07 JUN, 2021

SHEET #:

P904

DESIGN BUILD GROUP
CONSULTING ENGINEERS

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GENERAL SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION	REMARKS
(3)	KEYED NOTE	
(X)	EQUIPMENT STATUS NOTE	(E) = EXISTING EQUIPMENT. (F) FUTURE EQUIPMENT, NOT TO BE INSTALLED ON THIS DRAWINGS, BUT SHOWN FOR REFERENCE PURPOSES.
"A"	WIRING DEVICE ELEVATION	MOUNT WIRING DEVICE 6" ABOVE COUNTERTOP OR BACK SPLASH, WHICHEVER IS HIGHER.
XY-Z	HOME RUN CIRCUITING DESIGNATION	(X) = PANEL VOLTAGE DESIGNATION; H = 277 AND/OR 480 VOLTS. (Y) = SPECIFIC PANEL IDENTIFIER, I.E., A, B, C, ETC. (Z) = PANEL CIRCUIT NUMBER.
E-1	DETAIL REFERENCE	TOP NUMBER INDICATES DETAIL NUMBER; BOTTOM LETTER-NUMBER INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN. WHERE NOT SPECIFICALLY REFERENCED, DETAIL IS GENERAL IN NATURE AND SHALL APPLY WHERE APPLICABLE.
2 E-2	ELEVATION REFERENCE	TOP NUMBER INDICATES ELEVATION NUMBER; BOTTOM LETTER-NUMBER INDICATES WHERE ELEVATION IS SHOWN.
3 E-3	SECTION REFERENCE	TOP NUMBER INDICATES SECTION NUMBER; BOTTOM LETTER NUMBER INDICATES WHERE SECTION IS SHOWN.
ROOM 100	ARCHITECTURAL ROOM NAME AND NUMBER	VARIES BY ARCHITECT. IDENTIFIES ROOM NAME AND NUMBER.
AHU 1	EQUIPMENT NAME / NUMBER	TOP NUMBER ABBREVIATES EQUIPMENT NAME OR TYPE. BOTTOM NUMBER INDICATES EQUIPMENT NUMBER. REFER TO EQUIPMENT SCHEDULE.
1	REVISION NUMBER	USED TO DENOTE CHANGES EITHER ISSUED BY ADDENDUM OR DURING CONSTRUCTION AND TO DENOTE RECORD DRAWING CHANGES.
BREAKLINE	BREAKLINE	SYMBOL USED TO SHOW BREAK IN LARGE DRAWINGS.

GEAR AND CONTROL SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
S_T	MANUAL STARTER WITH THERMAL OVERLOAD(S)	AT EQUIPMENT	
M	ELECTRIC MOTOR	AS SHOWN	
F	NON-FUSED DISCONNECT SWITCH	+60" OR AS NOTED.	
F	NON-FUSED DISCONNECT SWITCH	+60" OR AS NOTED.	
CB	CIRCUIT BREAKER AND ENCLOSURE	+60" OR AS NOTED.	
M	MAGNETIC STARTER	+60" OR AS NOTED.	
F M	COMBINATION MAGNETIC STARTER / NON-FUSED DISCONNECT	+60" OR AS NOTED.	
F M	COMBINATION MAGNETIC STARTER / FUSED DISCONNECT	+60" OR AS NOTED.	
MCP	COMB. MAGNETIC STARTER / MOTOR CIRCUIT PROTECTOR (MCP)	+60" OR AS NOTED.	
VFD	VARIABLE FREQUENCY DRIVE (VFD)	FLOOR OR WALL AS SPECIFIED	TOP DISCONNECT AT +72" IF WALL MOUNTED
RVSS	REDUCED VOLTAGE SOFT STARTER (RVSS)	FLOOR OR WALL AS SPECIFIED	TOP DISCONNECT AT +72" IF WALL MOUNTED
	LOAD CENTER (SURFACE-MOUNTED)	WALL	14"W X 3"D. TOP DISCONNECT AT +72"
	LOAD CENTER (FLUSH-MOUNTED)	WALL	14"W X 3"D. TOP DISCONNECT AT +72"
	LIGHTING AND APPLIANCE PANELBOARD (SURFACE-MOUNTED)	WALL	20"W X 6"D. TOP DISCONNECT AT +72"
	LIGHTING AND APPLIANCE PANELBOARD (FLUSH-MOUNTED)	WALL	20"W X 6"D. TOP DISCONNECT AT +72"
	POWER DISTRIBUTION PANELBOARD	WALL OR FLOOR	THESE SYMBOLS ARE GENERAL IN NATURE AND MAY VARY IN SIZE AND SHAPE TO SUIT APPLICATION. MOUNT WITH TOP DISCONNECT NO HIGHER THAN AT 72" AFF.
	SWITCHBOARD	FLOOR	
	SERVICE ENTRANCE METER BASE	TOP AT +72"	
	OPEN - STOP - CLOSE SWITCH	+60"	FURNISH SWITCH UNLESS FURNISHED BY EQUIPMENT SUPPLIER. INSTALL AND CONNECT COMPLETE.
	PUSHBUTTON	+60" OR AS NOTED.	PURPOSE SHALL BE NOTED.
	HAND - OFF - AUTO SWITCH		
T	HVAC THERMOSTAT	+60"	PROVIDED BY MECHANICAL
	COMMUNICATION/DATA BOX	TOP AT +72"	PROVIDED BY MECHANICAL

LIGHTING SYMBOLS

1. LIGHT FIXTURE SYMBOLS ARE GENERAL IN NATURE AND MAY BE SHOWN ON THE DRAWINGS IN VARIOUS SIZES AND SHAPES. REFER TO THE LIGHT FIXTURE SCHEDULE FOR SPECIFICATION AND SPECIFIC INFORMATION.
2. ARROWS INDICATE AIMING DIRECTION.

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	SINGLE-HEAD LIGHT FIXTURE AND POLE	AS SPECIFIED	
	DOUBLE-HEAD LIGHT FIXTURE AND POLE	AS SPECIFIED	
	POST-TOP SINGLE-HEAD, LIGHT FIXTURE AND POLE	AS SPECIFIED	
	WALL-MOUNTED LIGHT FIXTURE	AS SPECIFIED	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT/OR ELECTRICAL SITE PLAN.
	LIGHT BOLLARD	AS SPECIFIED	
	FLOOD LIGHT	AS SPECIFIED	
	RECESSED WALL FIXTURE OR STEP LIGHT	AS SPECIFIED	
a b c	LIGHT FIXTURES	AS SPECIFIED	SIZE/SHAPE REFERS TO ACTUAL FOOTPRINT. SEE FIXTURE SCHEDULE FOR ACTUAL FIXTURE SPECIFICATIONS. SUBSCRIPT "a" REPRESENTS SWITCHING CIRCUIT.
	WALL-MOUNTED LINEAR LIGHT FIXTURE	AS SPECIFIED	
	LINEAR WALL WASH LIGHT FIXTURE	AS SPECIFIED	
	RECESSED DOWN LIGHT	AS SPECIFIED	
	RECESSED WALL-WASHER OR DIRECTIONAL DOWNLIGHT	AS SPECIFIED	ARROW INDICATES AIMING DIRECTION
	SURFACE OR PENDANT-MOUNTED LIGHT FIXTURE	AS SPECIFIED	
	WALL-MOUNTED LIGHT FIXTURE	AS SPECIFIED	REFER TO ARCHITECTURAL EXTERIOR ELEVATIONS FOR MOUNTING HEIGHT/OR ELECTRICAL SITE PLAN.
	TRACK OR MONO-POINT LIGHT FIXTURE	AS SPECIFIED	ARROW INDICATES AIMING DIRECTION
	WALL SCONCE LIGHT FIXTURE	AS SPECIFIED	
EM	EGRESS LIGHT FIXTURE	AS SPECIFIED	THIS IS AN EXAMPLE OF AN EGRESS LIGHT FIXTURE. EGRESS LIGHT FIXTURES ARE HALF-SHADED DIAGONALLY.
	CEILING MOUNTED EXIT SIGN	CEILING	DARKENED PORTION OF SIGN INDICATES FACE(S). ARROW(S) INDICATE CHEVRON DIRECTION(S)
	WALL-MOUNTED EXIT SIGN	WALL	
	WALL-MOUNTED EXIT SIGN W/ EMERGENCY LIGHT FIXTURE	WALL	
	EMERGENCY LIGHT FIXTURE (BUG-EYE)	AS NOTED	
TC	TIME CLOCK		
P	ELECTRIC PHOTOCELL	N/A	MOUNT ON ROOF FACING NORTH SKY
T-1	LIGHT FIXTURE CALLOUT (LETTER DENOTES FIXTURE TYPE)		

FIRE ALARM SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
FACP	FIRE ALARM CONTROL PANEL (FACP)	TOP OF PANEL AT 72".	
H	AUDIO HORN	WALL MOUNT, MOUNT AT LESSOR OF EITHER 80" AFF OR 6" BELOW CEILING. CEILING MOUNT, MOUNT ON CEILING.	SUBSCRIPT 'UP' INDICATES THAT A WEATHER PROOF BACK BOX IS REQUIRED. NUMERIC SUBSCRIPT INDICATES CANDELLA RATING OF STROBE (I.E. - 15, 75, 110)
	FIRE ALARM VISUAL STROBE		
H	FIRE ALARM AUDIO/VISUAL HORN/STROBE		
	FIRE ALARM AUDIO SPEAKER		
	FIRE ALARM AUDIO/VISUAL SPEAKER/STROBE		
	FIRE PROTECTION SPRINKLER RISER BELL	+90"	SUBSCRIPT 'UP' INDICATES THAT A WEATHER PROOF BACK BOX IS REQUIRED. NUMERIC SUBSCRIPT INDICATES CANDELLA RATING OF STROBE (I.E. - 15, 75, 110) CLEAR STROBE. EXCEPT PROVIDE BLUE STROBE FOR PROVO CITY.
BDT	BEAM DETECTOR - TRANSMITTER	WALL NEAR CEILING.	INSTALL TRANSMITTER AND RECEIVER TO PROVIDE CLEAR VIEW OF EACH DEVICE.
BDR	BEAM DETECTOR - RECEIVER	WALL NEAR CEILING.	
H	HEAT DETECTOR	CEILING	
S	SMOKE DETECTOR	CEILING	
S D	DUCT SMOKE DETECTOR	SIDE OF DUCT	
F	FIRE ALARM MANUAL STATION	+48"	
T	FIRE SPRINKLER TAMPER SWITCH	NEAR FIRE SPRINKLER VALVE	
FA	FIRE SPRINKLER WATER FLOW INDICATOR	ON FIRE RISER	
M	CONTROL MODULE	AT DEVICE(S) TO BE CONTROLLED	
I	MONITOR MODULE	AT DEVICE(S) TO MONITOR	
R	FAN SHUTDOWN RELAY	AT FAN CONTROL PANEL	
H	MAGNETIC DOOR HOLDER	FLOOR OR WALL	COORDINATE WITH DOOR INSTALLER.
FSD	FIRE/SMOKE DAMPER	TOP OF DISCONNECT SWITCH AT 72"	COORDINATE LOCATION WITH MECHANICAL.
EOL	END OF LINE DEVICE	PER MANUFACTURER RECOMMENDATIONS	
WF	WATER FLOOD INDICATOR	FLOOR	

WIRING DEVICE SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
$	SINGLE-POLE TOGGLE SWITCH	+48"	
$^a	SINGLE-POLE TOGGLE SWITCH	+48"	SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
$_2	DOUBLE-POLE TOGGLE SWITCH	+48"	
$_3	THREE-WAY TOGGLE SWITCH	+48"	
$_4	FOUR-WAY TOGGLE SWITCH	+48"	
$_P	SINGLE-POLE TOGGLE SWITCH WITH PILOT LIGHT	+48"	
$_K	KEY-OPERATED SINGLE-POLE TOGGLE SWITCH	+48"	
$_dim	DIMMER SWITCH	+48"	LINE VOLTAGE + RATE DIMMER SWITCH FOR MAXIMUM POSSIBLE WATTAGE
$_tim	TIMER SWITCH	+48"	
$^a_lv	LOW VOLTAGE MOMENTARY CONTACT SWITCH	+48"	SUBSCRIPT KEYS SWITCH TO FIXTURES CONTROLLED.
C/M	OCCUPANCY SENSOR	AS NOTED	CEILING MOUNTED WITH SUBSCRIPT 'C' WALL-MOUNTED WITH SUBSCRIPT 'W'
	SPLIT-WIRED DUPLEX RECEPTACLE	+18" OR AS NOTED	
	SIMPLEX RECEPTACLE	+18" OR AS NOTED	
	DUPLEX RECEPTACLE	+18" OR AS NOTED	
	FOURPLEX RECEPTACLE	+18" OR AS NOTED	
	125/250V RECEPTACLE	+18" OR AS NOTED	RANGE = NEMA 14-50R DRYER = NEMA 14-30R
	GROUND FAULT CIRCUIT INTERRUPTER (GFCI) DUPLEX RECEPTACLE	+18" OR AS NOTED	
	GROUND FAULT SIMPLEX RECEPTACLE PROTECTED WITH A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKER	+18" OR AS NOTED	PROVIDE A GFCI CIRCUIT BREAKER IN PANEL TO PROTECT RECEPTACLE
	EMERGENCY DUPLEX RECEPTACLE	+18" OR AS NOTED	
	EMERGENCY FOURPLEX RECEPTACLE	+18" OR AS NOTED	
	MULTI-OUTLET ASSEMBLY	4" ABOVE BACKSPLASH	POWER/DATA DEVICES SHOWN AS REQUIRED.
	POWER / TELEPHONE POLE	FLOOR/CEILING	
	CORD DROP WITH DUPLEX RECEPTACLE	CEILING	REFER TO NOTE
(5-20R)	SPECIAL PURPOSE OUTLET	+18"	SUBSCRIPT IN PARENTHESIS INDICATES NEMA CONFIGURATION IF SHOWN. OTHERWISE REFER TO NOTE. ALSO, REFER TO DRAWINGS AND/OR EQUIPMENT SCHEDULES. CONFIRM EXACT CONFIGURATION WITH OWNER PRIOR TO INSTALLATION.

TELEPHONE / DATA SYMBOLS

SYMBOL	DESCRIPTION	MOUNTING	REMARKS
	TELEPHONE OUTLET	+18"	
	DATA OUTLET	+18"	
	ELECTRONIC SYSTEM TERMINAL BOARD	TOP AT 72"	

BRANCH CIRCUITING SYMBOLS

SYMBOL	DESCRIPTION	REMARKS
	1 CIRCUIT, 2 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	ARROWS: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS REQUIRED. NEUTRAL AND EQUIPMENT GROUND CONDUCTORS: NEUTRAL AND EQUIPMENT GROUND CONDUCTORS ARE NOT SHOWN, BUT ARE REQUIRED AS NOTED ON THE DRAWINGS.
	1 CIRCUIT, 2 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	
	1 CIRCUIT, 2 WIRE BRANCH CIRCUIT HOME RUN TO PANEL	
	BRANCH CIRCUITING SHOWING CONTINUATION	
	CONDUIT STUB-IN	CAP AND IDENTIFY FOR FUTURE USE BY OWNER.
	BRANCH CIRCUITING TURNED UP OR TOWARDS OBSERVER.	
	BRANCH CIRCUITING TURNED DOWN OR AWAY FROM OBSERVER.	
	INCOMING ELECTRICAL SERVICE	
	JUNCTION BOX	MOUNT AT NOTES.

REFERENCE NOTES

1. ACCEPTABLE INTERIOR CONDUIT METHODS SHALL BE ELECTRICAL METALLIC TUBING (EMT) CONDUIT WITH THHN CONDUCTORS OR METAL CLAD CABLE (MC CABLE). WHERE EXPOSED TO WEATHER UTILIZE RMC (RIGID METALLIC CONDUIT) MC (INTERMEDIATE METALLIC CONDUIT) OR EMT CONDUIT, THHN/THWN CONDUCTORS WITH WEATHER TIGHT FITTINGS, UNLESS NOTED OTHERWISE.
2. ALL 15 AMP, 3 POLE CIRCUITS SHALL CONSIST OF (3) #12 PHASE CONDUCTOR WITH A #12 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE.
3. ALL 20 AMP, 1 POLE CIRCUITS SHALL CONSIST OF (1) #12 PHASE CONDUCTOR, (1) #12 NEUTRAL CONDUCTOR WITH A #12 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE.
4. ALL 20 AMP, 2 POLE CIRCUITS SHALL CONSIST OF (2) #12 PHASE CONDUCTOR, (1) #12 NEUTRAL CONDUCTOR WITH A #12 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE. NEUTRAL CONDUCTOR MAY BE OMITTED IS NOT REQUIRED FOR EQUIPMENT.
5. ALL 20 AMP, 3 POLE CIRCUITS SHALL CONSIST OF (3) #12 PHASE CONDUCTOR WITH A #12 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE.
6. ALL 25 AMP, 1 POLE CIRCUITS SHALL CONSIST OF (1) #10 PHASE CONDUCTOR (1) #10 NEUTRAL CONDUCTOR WITH A #10 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE.
7. ALL 25 AMP, 2 POLE CIRCUITS SHALL CONSIST OF (2) #10 PHASE CONDUCTOR, (1) #10 NEUTRAL CONDUCTOR WITH A #10 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE.
8. ALL 30 AMP, 1 POLE CIRCUITS SHALL CONSIST OF (1) #10 PHASE CONDUCTOR, (1) #10 NEUTRAL CONDUCTOR WITH A #10 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE.
9. ALL 30 AMP, 2 POLE CIRCUITS SHALL CONSIST OF (2) #10 PHASE CONDUCTOR (1) #10 NEUTRAL CONDUCTOR WITH A #10 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE. NEUTRAL CONDUCTOR MAY BE OMITTED IS NOT REQUIRED FOR EQUIPMENT.
10. ALL 40 AMP, 2 POLE CIRCUITS SHALL CONSIST OF (2) #8 PHASE CONDUCTOR WITH A #10 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE.
11. ALL 50 AMP, 2 POLE CIRCUITS SHALL CONSIST OF (2) #6 PHASE CONDUCTOR WITH A #10 GROUND CONDUCTOR, UNLESS NOTED OTHERWISE.
12. ACCEPTABLE CONDUIT METHODS FOR EXTERIOR APPLICATIONS, SHALL BE RIGID METALLIC CONDUIT (RMC), INTERMEDIATE METAL CONDUIT (IMC) RIGID POLYVINYL CHLORIDE (PVC SCHEDULE 40), OR ELECTRICAL METALLIC TUBING (EMT) CONDUIT, USE WEATHER TIGHT FITTINGS FOR EMT CONDUIT. RMC, IMC AND PVC CONDUIT IS PERMITTED ONLY FOR UNDERGROUND INSTALLATIONS. ACCEPTABLE CONDUCTOR METHOD SHALL BE THHN/THWN CONDUCTORS, UNLESS NOTED OTHERWISE.

ELECTRICAL DRAWING INDEX:

DRAWING NUMBER:	DRAWING NAME:
E1Ø1	ELECTRICAL SYMBOL SCHEDULES AND SHEET LEGEND
E1Ø2	ELECTRICAL DETAILS
E1Ø3	ELECTRICAL SCHEDULES AND ONELINE DIAGRAM
E1Ø4	PANEL SCHEDULES
E2Ø1	ELECTRICAL SITE PLAN
E3Ø1	OVERALL LIGHTING PLAN - LEVEL Ø1
E4Ø1	OVERALL POWER PLAN - LEVEL Ø1
E5Ø1	MODEL ENERGY CODE CALCULATIONS

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PROFESSIONAL ENGINEER
No. 376238
KEVIN G. POWELL
06/19/2021
STATE OF UTAH

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS CERTIFIED BELOW:
- [x] BUILDING
- [x] MECHANICAL
- [x] ELECTRICAL
- [x] ACCESSIBILITY
- [x] STRUCTURAL
- [x] PLUMBING
- [x] ENERGY
- [ ] FIRE

PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN BUILD
500 E. AUTOMALL DR. AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	City Review Comments	07/19/2021

CITY SUBMITTAL SET

AE2019.031

ELECTRICAL SYMBOL SCHEDULE & DRAWING INDEX

DATE: **06-14-2021**

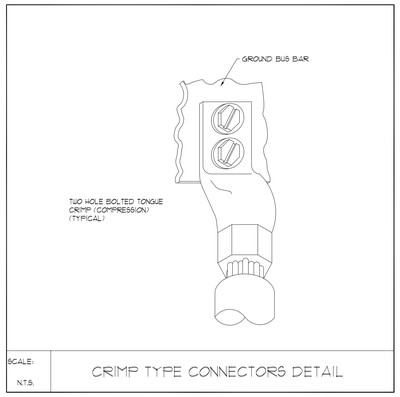
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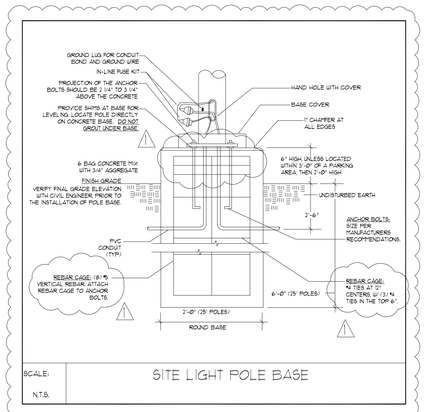
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REFERENCE NOTES



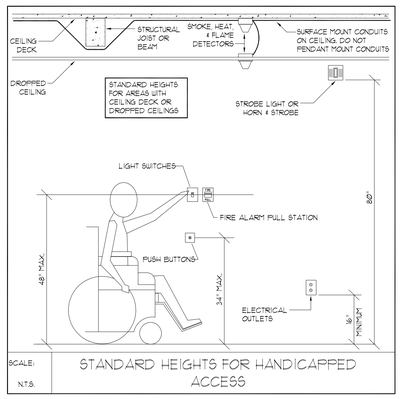
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CRIMP TYPE CONNECTORS DETAIL



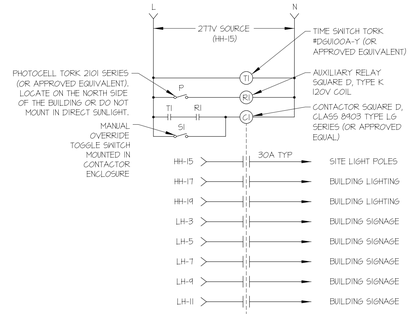
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SITE LIGHT POLE BASE



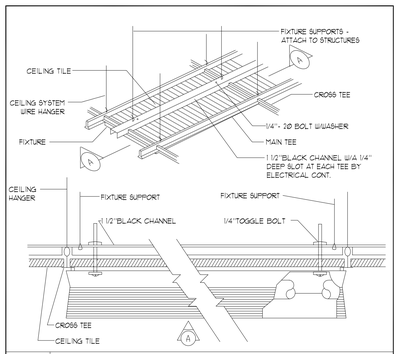
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STANDARD HEIGHTS FOR HANDICAPPED ACCESS



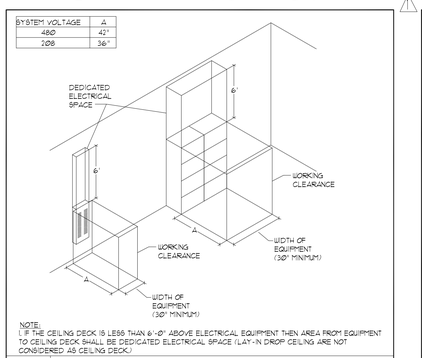
SITE LIGHTING CONTACTOR DETAIL

SCALE: NONE



SCALE: N.T.S.

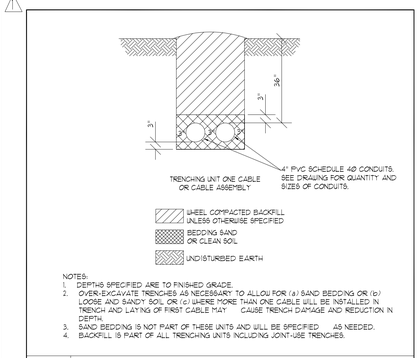
TYPICAL SURFACE FIXTURE MOUNTING DETAIL



NOTE:
1. IF THE CEILING DECK IS LESS THAN 6'-0" ABOVE ELECTRICAL EQUIPMENT THEN AREA FROM EQUIPMENT TO CEILING DECK SHALL BE DEDICATED ELECTRICAL SPACE (LAY-IN DROP CEILING ARE NOT CONSIDERED AS CEILING DECK)

SCALE: N.T.S.

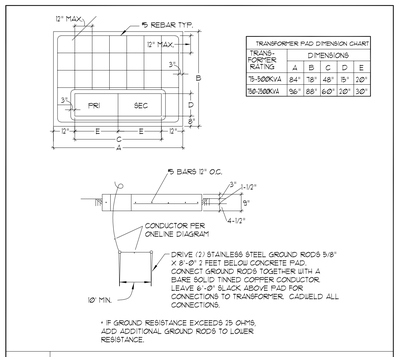
TYPICAL PANELBOARD CLEARANCE REQUIREMENTS



NOTES:
1. DEPTHS SPECIFIED ARE TO FINISHED GRADE.
2. OVER-EXCAVATE TRENCHES AS NECESSARY TO ALLOW FOR (a) SAND BEDDING OR (b) LOOSE AND SANDY SOIL OR (c) WHERE MORE THAN ONE CABLE WILL BE INSTALLED IN TRENCH AND LAYING OF FIRST CABLE MAY CAUSE TRENCH DAMAGE AND REDUCTION IN DEPTH.
3. SAND BEDDING IS NOT PART OF THESE UNITS AND WILL BE SPECIFIED AS NEEDED.
4. BACKFILL IS PART OF ALL TRENCHING UNITS INCLUDING JOINT-USE TRENCHES.

SCALE: N.T.S.

UTILITY TRENCH DETAIL

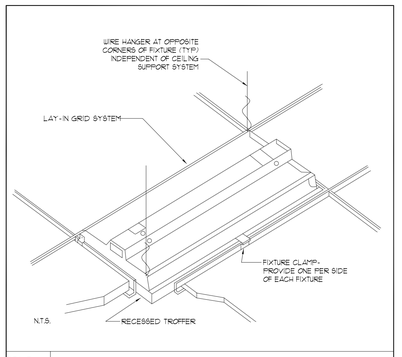


TRANSFORMER PAD DIMENSION CHART

TRANSFORMER RATING	DIMENSIONS				
	A	B	C	D	E
75-500KvA	84"	78"	48"	15"	20"
750-2500KvA	96"	88"	60"	20"	30"

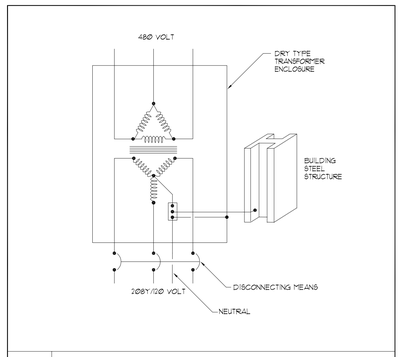
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TRANSFORMER PAD DETAIL



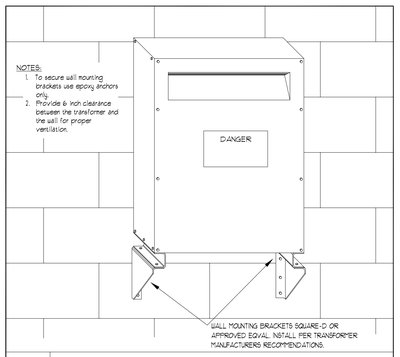
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TYPICAL RECESSED FIXTURE MOUNTING DETAIL



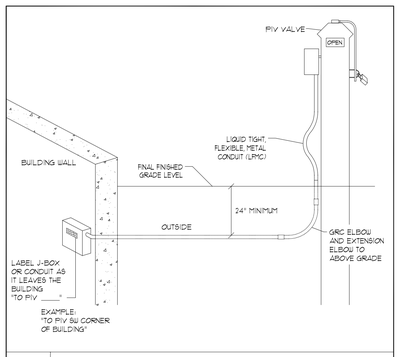
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DRY TYPE TRANSFORMER GROUNDING



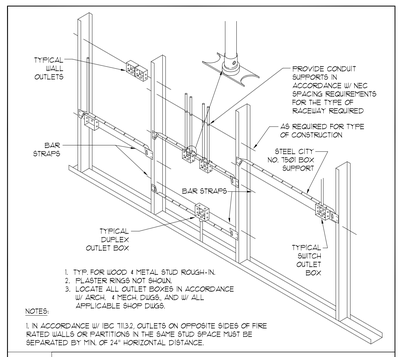
SCALE: N.T.S.

WALL MOUNTED TRANSFORMER



SCALE: N.T.S.

PIV CONNECTION DETAIL



NOTES:
1. TYP. FOR WOOD & METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE W/ ARCH. & MECH. DWGS. AND W/ ALL APPLICABLE SHOP DWGS.

NOTES:
1. IN ACCORDANCE W/ IBC 1133, OUTLETS ON OPPOSITE SIDES OF FIRE RATED WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY MIN. OF 24" HORIZONTAL DISTANCE.

SCALE: N.T.S.

TYPICAL ROUGH-IN REQUIREMENTS DETAIL

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10/19/2004
STATE OF UTAH

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS CERTIFIED BELOW:
- [x] BUILDING
- [x] MECHANICAL
- [x] ELECTRICAL
- [x] ACCESSIBILITY
- [x] STRUCTURAL
- [x] PLUMBING
- [x] ENERGY
- [ ] FIRE

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BY: _____ DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN BUILD

500 E. AUTOMALL DR. AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	City Review Comments	07/19/2021

CITY SUBMITTAL SET

AE2019.031

ELECTRICAL DETAILS

DATE: **06-14-2021**

SHEET #:

E102

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ELECTRICAL LOAD CONDUCTOR TABLE (120 VOLTS)

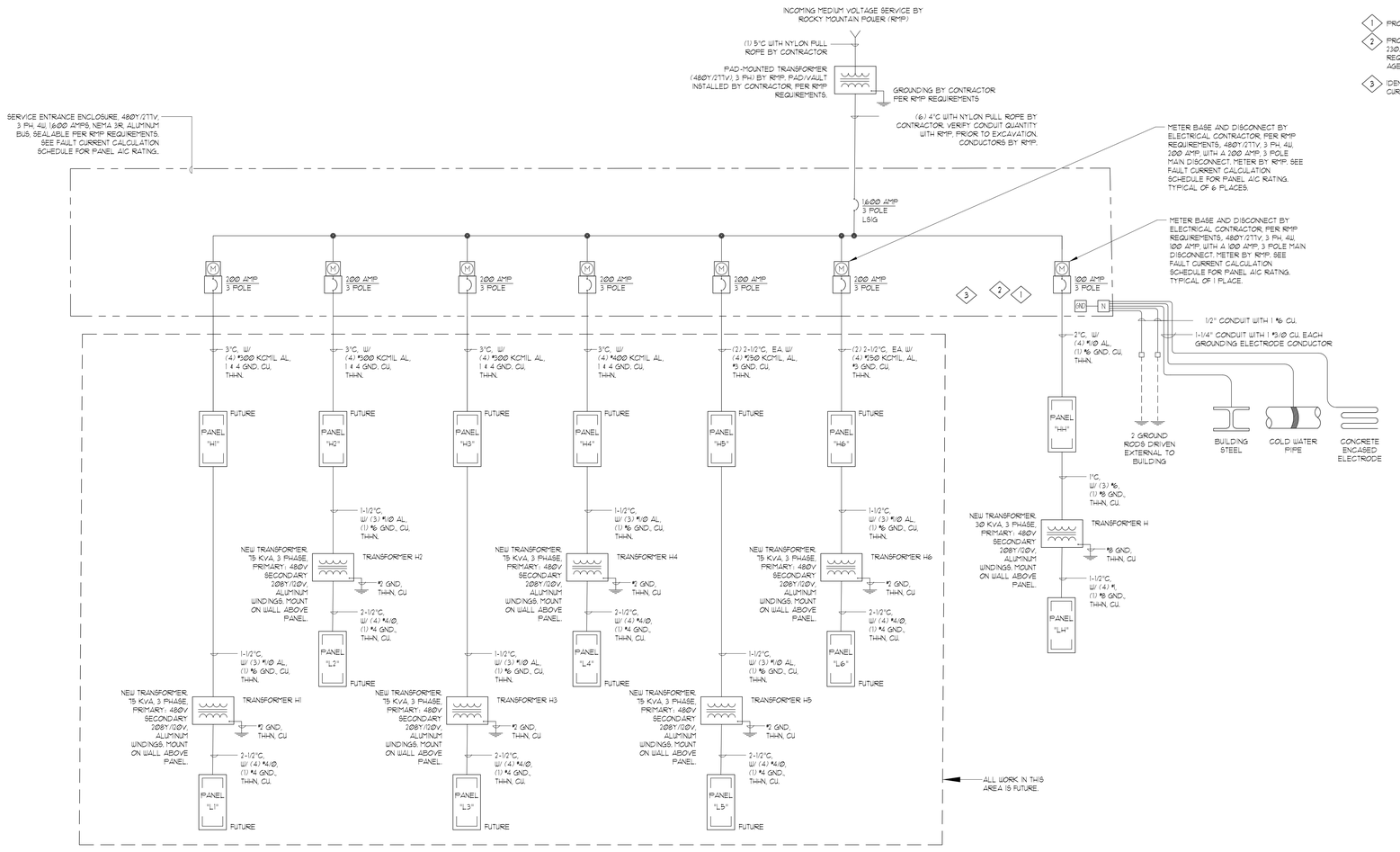
ELECTRICAL LOAD (IN WATTS)	CONDUCTOR SIZE (LENGTH IN FEET)				
	12	10	8	6	4
200 WATTS (1.7 AMPS)	650	1050			
400 WATTS (3.3 AMPS)	325	540	800	1250	
600 WATTS (5 AMPS)	210	350	525	825	1250
800 WATTS (6.7 AMPS)	150	250	400	625	950
1000 WATTS (8.3 AMPS)	130	210	325	500	750
1100 WATTS (9.2 AMPS)	115	195	290	450	690
1200 WATTS (10 AMPS)	110	180	270	410	625
1300 WATTS (10.8 AMPS)	100	165	250	380	580
1400 WATTS (11.7 AMPS)	90	155	230	350	540
1500 WATTS (12.5 AMPS)	85	140	210	330	500
1600 WATTS (13.3 AMPS)	80	135	200	310	460
1700 WATTS (14.2 AMPS)	75	125	190	290	440
1800 WATTS (15 AMPS)	70	120	180	275	420

NOTE: ALL CONDUCTOR TYPES ARE THHN, CU CONDUCTORS (80% POWER FACTOR).

ELECTRICAL LOAD CONDUCTOR TABLE (277 VOLTS)

ELECTRICAL LOAD (IN WATTS)	CONDUCTOR SIZE (LENGTH IN FEET)				
	12	10	8	6	4
2000 WATTS (7.2 AMPS)	350	575	850	1300	
2500 WATTS (9 AMPS)	275	450	675	1050	
3000 WATTS (10.8 AMPS)	230	380	575	875	1350
3500 WATTS (12.6 AMPS)	200	330	490	750	1100
4000 WATTS (14.4 AMPS)	175	285	430	650	1000

NOTE: ALL CONDUCTOR TYPES ARE THHN, CU CONDUCTORS (80% POWER FACTOR).



ONE-LINE DIAGRAM

SCALE: NONE

Fault Current Calculation Schedule

	Utility Company Transformer Configuration	Transformer (KVA)	Transformer Impedance (%Z)	Available Fault Current from Utility	
	480Y/277 Volts, 3 Phase, Aluminum Windings	1500	4	Assume Infinity	

Configuration					Feeder				System Configuration								
From		To		Length (feet)	Feeder Size	Feeders per Phase	Feeder Material	Wire Constant "C"	Line to Line Voltage (System or Transformer Primary	Transformer Secondary Volts	Phase	KVA	%Z	Large Motor Loads	Fault Current at Equipment Connection Point (Amps)	Full or Series Rated System	Minimum Symmetrical Equipment Rating (AIC)
Transformer	Utility	Panelboard	Service	50	400	8	AL	5838	15 KV	480	3	1500	4	N/A	42,806	Full	50,000
Panelboard	Service	Panelboard	H1	160	300	1	AL	13910	N/A	N/A	N/A	N/A	N/A	N/A	15,426	Full	18,000
Panelboard	H1	Panelboard	L1	10	4/0	1	CU	15082	480	208	3	75	3	N/A	5,813	Full	10,000
Panelboard	Service	Panelboard	H2	215	300	1	AL	13910	N/A	N/A	N/A	N/A	N/A	N/A	12,647	Full	18,000
Panelboard	H2	Panelboard	L2	10	4/0	1	CU	15082	480	208	3	75	3	N/A	5,612	Full	10,000
Panelboard	Service	Panelboard	H3	270	300	1	AL	13910	N/A	N/A	N/A	N/A	N/A	N/A	10,716	Full	18,000
Panelboard	H3	Panelboard	L3	10	4/0	1	CU	15082	480	208	3	75	3	N/A	5,424	Full	10,000
Panelboard	Service	Panelboard	H4	330	400	1	AL	16671	N/A	N/A	N/A	N/A	N/A	N/A	10,559	Full	18,000
Panelboard	H4	Panelboard	L4	10	4/0	1	CU	15082	480	208	3	75	3	N/A	5,406	Full	10,000
Panelboard	Service	Panelboard	H5	390	250	2	AL	12122	N/A	N/A	N/A	N/A	N/A	N/A	12,294	Full	18,000
Panelboard	H5	Panelboard	L5	10	4/0	1	CU	15082	480	208	3	75	3	N/A	5,581	Full	10,000
Panelboard	Service	Panelboard	H6	470	250	2	AL	12122	N/A	N/A	N/A	N/A	N/A	N/A	10,726	Full	18,000
Panelboard	H6	Panelboard	L6	10	4/0	1	CU	15082	480	208	3	75	3	N/A	5,425	Full	10,000
Panelboard	Service	Panelboard	HH	140	1/0	1	AL	5777	N/A	N/A	N/A	N/A	N/A	N/A	9,033	Full	18,000
Panelboard	HH	Panelboard	LH	10	1	1	CU	7293	480	208	3	75	3	N/A	5,211	Full	10,000

Notes:
1. Transformer information obtained from local utility. If transformer size or impedance changes, consult engineer as soon as possible.
2. Distances shown are minimums and only used for fault calculation purposes only. Contractor shall verify exact distance prior to ordering equipment and materials.
3. The electrical contractor shall provide identification tags on all equipment, to indicate available fault current, per the National Electrical Code (NEC), Articles 110.9, 110.10 and 100.24.
4. The service entrance feeders, if available from the local utility, are used in the calculations. If different service entrance feeders sizes or quantities are installed, contact the engineer as soon as possible.

3 Phase calculations

Panels	H1	L1	H2	L2	H3	L3	H4	L4	H5	L5	H6	L6	HH	HL
Distance	160	10	215	10	270	10	330	10	390	10	470	10	140	10
Volts	480	208	480	208	480	208	480	208	480	208	480	208	480	208
VA	225	225	225	225	225	225	225	225	113	225	113	225	100	100
Watts	186,840	80,964	186,840	80,964	186,840	80,964	186,840	80,964	93,420	80,964	93,420	80,964	83,040	35,984
Amps	225	225	225	225	225	225	225	225	113	225	113	225	100	100
PF	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Wire	300	4/0	300	4/0	300	4/0	400	4/0	250	4/0	250	4/0	1/0	1
Conductor Material (CU or AL)	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU
Table	150	136	150	136	150	136	122	136	173	136	173	136	353	292
Parallel Feeders	1	1	1	1	1	1	1	1	2	1	2	1	1	1
Vdrop	5.40	0.31	7.26	0.31	9.11	0.31	9.06	0.31	7.59	0.31	9.15	0.31	4.94	0.29
%Vdrop	1.13	0.15	1.51	0.15	1.90	0.15	1.89	0.15	1.58	0.15	1.91	0.15	1.03	0.14

LIGHT FIXTURE SCHEDULE

SYM	MANUF.	CATALOG No.	LAMPS	DESCRIPTION
T-1E	GE LIGHTING	ABV3-0-18-A-57-1D-B-V-42-K-Q-W- WITH EMERGENCY BATTERY PACK	LED - 109 WATTS 18,000 LUMENS	CHAIN MOUNTED LED HIGH BAY LIGHT FIXTURE, WHITE, DIFFUSE ACRYLIC LENS, STANDARD EFFICIENCY, MULTI-VOLTAGE, 0-10V DIMMING, INTEGRAL OCCUPANCY SENSOR, 5000K LED COLOR, 70 CRI. MOUNT BOTTOM OF FIXTURE AT 28' ABOVE FLOOR. PROVIDE WITH FACTORY INSTALLED EGRESS BATTERY PACK.
T-2	PHILIPS	FBS-4-40L-840-UNV-DIM	LED - 31 WATTS 4,000 LUMENS	4' CHAIN HUNG LED LIGHT FIXTURE, MULTI-VOLT, 4000K LED COLOR, CHAIN HANG FROM STRUCTURE.
T-2E	PHILIPS	FBS-4-40L-840-UNV-DIM- EMLED	LED - 31 WATTS 4,000 LUMENS	4' CHAIN HUNG LED LIGHT FIXTURE, MULTI-VOLT, 4000K LED COLOR, CHAIN HANG AT 10'-0" AFG, FROM STRUCTURE ABOVE. PROVIDE WITH EGRESS LIGHTING BATTERY PACK.
T-3	LUMARK	XTOR6B-5000K-CBA	LED - 58 WATTS 6,129 LUMENS	WALL MOUNTED LED LIGHT FIXTURE, 120/277V, COLOR BY ARCHITECT, 5000K LIGHT COLOR. PROVIDE ESCUTCHEON PLATE (AS NEEDED).
T-3E	LUMARK	XTOR6B-CBP-5000K-CBA	LED - 58 WATTS 6,129 LUMENS	WALL MOUNTED LED LIGHT FIXTURE, 120/277V, COLOR BY ARCHITECT, 5000K LIGHT COLOR. PROVIDE ESCUTCHEON PLATE (AS NEEDED). PROVIDE WITH COLD WEATHER BATTERY PACK (CBP) FOR EGRESS OPERATION.
T-4	LUMARK	XTOR2B-5000K-CBA	LED - 81 WATTS 8,504 LUMENS	WALL MOUNTED LED LIGHT FIXTURE, 120/277V, COLOR BY ARCHITECT, 5000K LIGHT COLOR. PROVIDE ESCUTCHEON PLATE (AS NEEDED).
T-5	VISIONAIRE LIGHTING	HEAD: VLX-XL/T4L/55L/5K/UNV/AM/CC/ USC-40/RPP4/WHS POLE: RNT6-4R-T-25'-12BC-136-51-CC-RBC	LED - 139 WATTS 36,141 LUMENS	6ITE LIGHT POLE, SINGLE HEAD, LED, 5000K, 120/277V, WITH A 4" ROUND, NON-TAPED POLE. COLOR BY ARCHITECT. PROVIDE WITH HOUSE SIDE SHIELD TO ELIMINATE LIGHT BEHIND LIGHT FIXTURE.
	DUAL-LITE	SESGUE	LED - 2.1 WATTS	UNIVERSAL MOUNTED EXIT SIGN, WHITE HOUSING, GREEN LETTERS, DUAL VOLTAGE, WITH EMERGENCY BATTERY.

REFERENCE NOTES

1. PROVIDE PANEL WITH A MAIN GROUNDING BUS BAR.
2. PROVIDE PERFORMANCE TESTING OF THE MAIN BREAKER PER NEC 230.95. (C). GROUND-FAULT PROTECTION OF EQUIPMENT. THE CITY REQUIRED TESTING BE PERFORMED BY A CITY APPROVED TESTING AGENCY.
3. IDENTIFY SERVICE ENTRANCE GEAR WITH MAXIMUM AVAILABLE FAULT CURRENT, PER NEC 110.24. (A).

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DEC. 19, 2006
STATE OF UTAH

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BY: DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE

DAVIES DESIGN BUILD

500 E. AUTOMALL DR. AMERICAN FORK, UT

Revision Schedule		
MARK	DESCRIPTION	Revision Date
	City Review Comments	07/19/2021

CITY SUBMITTAL SET

AE2019.031

POWER AND LIGHTING SCHEDULES

DATE: 06-14-2021

SHEET #:

E103

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REFERENCE NOTES

PANEL MDP

AL OR CU Bus
See Fault Current Calculation Schedule for AIC rating.
See Oneline Diagram for Additional Information

NEMA: 3R | 480Y/277 3Ø | PANEL SCHEDULE CIRCUIT

CKT. NO.	AMPS	POLE	DESCRIPTION	VOLT AMPS CONT. LOAD	VOLT AMPS NON CONT. LOAD	LOAD A	LOAD B	LOAD C	VOLT AMPS NON CONT. LOAD	VOLT AMPS CONT. LOAD	DESCRIPTION	POLE	AMPS	CKT. NO.
1				0	0	60			16714	0				2
3	200	3	PANEL H1	0	0		67		18490	0	PANEL HH	3	100	4
5				0	0			72	19850	0				6
7				0	0	0			0	0				8
9	200	3	PANEL H2	0	0		0		0	0	PANEL H5	3	200	10
11				0	0			0	0	0				12
13				0	0	0			0	0				14
15	200	3	PANEL H3	0	0		0		0	0	PANEL H6	3	200	16
17				0	0			0	0	0				18
19				0	0	0			0	0				20
21	200	3	PANEL H4	0	0		0		0	0	BLANK			22
23				0	0			0	0	0				24
						60	**67**	**72**						Total AMPS
			Subtotal Watts	**0**					**55054**		Subtotal Watts			
			Total Watts	**55053.8**					**66**		Average Amps			

PANEL HH (HOUSE)

AL OR CU Bus
See Fault Current Calculation Schedule for AIC rating.

NEMA: 1 | 480Y/277 3Ø | PANEL SCHEDULE CIRCUIT | 100A MAIN LUG ONLY

CKT. NO.	AMPS	POLE	DESCRIPTION	VOLT AMPS CONT. LOAD	VOLT AMPS NON CONT. LOAD	LOAD A	LOAD B	LOAD C	VOLT AMPS NON CONT. LOAD	VOLT AMPS CONT. LOAD	DESCRIPTION	POLE	AMPS	CKT. NO.
1	20	1	LIGHTS - FIRE RISER 107	62	0	10			2500	100				2
3	20	1	LIGHTS TENANT SPACE 101	660	0		12		2500	0	UNIT HEATER (UH-3)	3	20	4
5	20	1	LIGHTS TENANT SPACE 102	659	0			12	2500	0				6
7	20	1	LIGHTS TENANT SPACE 103	768	0	13			2500	100				8
9	20	1	LIGHTS TENANT SPACE 104	877	0		13		2500	0	UNIT HEATER (UH-3)	3	20	10
11	20	1	LIGHTS TENANT SPACE 105	877	0			13	2500	0				12
13	20	1	LIGHTS TENANT SPACE 106	879	0	4			0	0	SPARE	1	20	14
15	20	1	SITE LIGHTING	695	0		3		0	0	SPARE	1	20	16
17	20	1	BUILDING EXTERIOR LIGHTING	1784	0			8	0	0	SPARE	1	20	18
19	20	1	BUILDING EXTERIOR LIGHTING	1158	0	5			0	0	SPARE	1	20	20
21	20	1	SPARE	0	0		0		0	0	SPARE	1	20	22
23	20	1	SPARE	0	0			0	0	0	SPARE	1	20	24
25				0	7880	28			0	0	SPARE	1	20	26
27	60	3	TRANSFORMER HH	0	10700		39		0	0	SPARE	1	20	28
29				0	10700			39	0	0	SPARE	1	20	30
						60	**67**	**72**						Total AMPS
			Subtotal Watts	**39803.8**					**15250**		Subtotal Watts			
			Total Watts	**55053.8**					**66**		Average Amps			

PANEL HX (FUTURE)

AL OR CU Bus
See Fault Current Calculation Schedule for AIC rating.

NEMA: 1 | 480Y/277 3Ø | PANEL SCHEDULE CIRCUIT | 225A MAIN LUG ONLY

CKT. NO.	AMPS	POLE	DESCRIPTION	VOLT AMPS CONT. LOAD	VOLT AMPS NON CONT. LOAD	LOAD A	LOAD B	LOAD C	VOLT AMPS NON CONT. LOAD	VOLT AMPS CONT. LOAD	DESCRIPTION	POLE	AMPS	CKT. NO.
1	20	1	SPARE	0	0	0			0	0	SPARE	1	20	2
3	20	1	SPARE	0	0		0		0	0	SPARE	1	20	4
5	20	1	SPARE	0	0			0	0	0	SPARE	1	20	6
7	20	1	SPARE	0	0	0			0	0	SPARE	1	20	8
9	20	1	SPARE	0	0		0		0	0	SPARE	1	20	10
11	20	1	SPARE	0	0			0	0	0	SPARE	1	20	12
13	20	1	SPARE	0	0	0			0	0	SPARE	1	20	14
15	20	1	SPARE	0	0		0		0	0	SPARE	1	20	16
17	20	1	SPARE	0	0			0	0	0	SPARE	1	20	18
19	20	1	SPARE	0	0	0			0	0	SPARE	1	20	20
21	20	1	SPARE	0	0		0		0	0	SPARE	1	20	22
23	20	1	SPARE	0	0			0	0	0	SPARE	1	20	24
25	20	1	SPARE	0	0	0			0	0	SPARE	1	20	26
27	20	1	SPARE	0	0		0		0	0	SPARE	1	20	28
29	20	1	SPARE	0	0			0	0	0	SPARE	1	20	30
31	20	1	SPARE	0	0	0			0	0	SPARE	1	20	32
33	20	1	SPARE	0	0		0		0	0	SPARE	1	20	34
35	20	1	SPARE	0	0			0	0	0	SPARE	1	20	36
37				0	0	0			0	0	SPARE	1	20	38
39	110	3	TRANSFORMER HX	0	0		0		0	0	SPARE	1	20	40
41				0	0			0	0	0	SPARE	1	20	42
						0	**0**	**0**						Total AMPS
			Subtotal Watts	**0**					**0**		Subtotal Watts			
			Total Watts	**0**					**0**		Average Amps			

PANEL LH (HOUSE)

AL OR CU Bus
See Fault Current Calculation Schedule for AIC rating.

NEMA: 1 | 480Y/277 3Ø | PANEL SCHEDULE CIRCUIT | 100A MAIN LUG ONLY

CKT. NO.	AMPS	POLE	DESCRIPTION	VOLT AMPS CONT. LOAD	VOLT AMPS NON CONT. LOAD	LOAD A	LOAD B	LOAD C	VOLT AMPS NON CONT. LOAD	VOLT AMPS CONT. LOAD	DESCRIPTION	POLE	AMPS	CKT. NO.
1	20	1	CO - FIRE RISER 107	0	180	6			500	0	FACP - FIRE RISER 107	1	20	2
3	20	1	BUILDING SIGNAGE	1200	0		29		0	1600	TELEPHONE BOARD - FIRE RISER 107	1	20	4
5	20	1	BUILDING SIGNAGE	1200	0			29	0	1600				6
7	20	1	BUILDING SIGNAGE	1200	0	26			0	1320	UNIT HEATER (UH-2)	1	20	8
9	20	1	BUILDING SIGNAGE	1200	0		26		0	1320	UNIT HEATER (UH-2)	1	20	10
11	20	1	BUILDING SIGNAGE	1200	0			26	0	1320	UNIT HEATER (UH-1)	1	20	12
13	20	1	ROLLUP DOOR (TENANT SPACE 101)	0	1200	24			0	1320	UNIT HEATER (UH-1)	1	20	14
15	20	1	ROLLUP DOOR (TENANT SPACE 102)	0	1200		24		0	1320	UNIT HEATER (UH-1)	1	20	16
17	20	1	ROLLUP DOOR (TENANT SPACE 103)	0	1200			24	0	1320	UNIT HEATER (UH-1)	1	20	18
19	20	1	ROLLUP DOOR (TENANT SPACE 104)	0	1200	10			0	0	SPARE	1	20	20
21	20	1	ROLLUP DOOR (TENANT SPACE 105)	0	1200		10		0	0	SPARE	1	20	22
23	20	1	ROLLUP DOOR (TENANT SPACE 106)	0	1200			10	0	0	SPARE	1	20	24
25	20	1	SPARE	0	0	0			0	0	SPARE	1	20	26
27	20	1	SPARE	0	0		0		0	0	SPARE	1	20	28
29	20	1	SPARE	0	0			0	0	0	SPARE	1	20	30
31	20	1	SPARE	0	0	0			0	0	SPARE	1	20	32
33	20	1	SPARE	0	0		0		0	0	SPARE	1	20	34
35	20	1	SPARE	0	0			0	0	0	SPARE	1	20	36
37	20	1	SPARE	0	0	0			0	0	SPARE	1	20	38
39	20	1	SPARE	0	0		0		0	0	SPARE	1	20	40
41	20	1	SPARE	0	0			0	0	0	SPARE	1	20	42
						66	**89**	**89**						Total AMPS
			Subtotal Watts	**14880**					**14400**		Subtotal Watts			
			Total Watts	**29280**					**81**		Average Amps			

PANEL LX (FUTURE)

AL OR CU Bus
See Fault Current Calculation Schedule for AIC rating.

NEMA: 1 | 120/208 3Ø | PANEL SCHEDULE CIRCUIT | 225A MAIN BREAKER

CKT. NO.	AMPS	POLE	DESCRIPTION	VOLT AMPS CONT. LOAD	VOLT AMPS NON CONT. LOAD	LOAD A	LOAD B	LOAD C	VOLT AMPS NON CONT. LOAD	VOLT AMPS CONT. LOAD	DESCRIPTION	POLE	AMPS	CKT. NO.
1	20	1	SPARE	0	0	0			0	0	SPARE	1	20	2
3	20	1	SPARE	0	0		0		0	0	SPARE	1	20	4
5	20	1	SPARE	0	0			0	0	0	SPARE	1	20	6
7	20	1	SPARE	0	0	0			0	0	SPARE	1	20	8
9	20	1	SPARE	0	0		0		0	0	SPARE	1	20	10
11	20	1	SPARE	0	0			0	0	0	SPARE	1	20	12
13	20	1	SPARE	0	0	0			0	0	SPARE	1	20	14
15	20	1	SPARE	0	0		0		0	0	SPARE	1	20	16
17	20	1	SPARE	0	0			0	0	0	SPARE	1	20	18
19	20	1	SPARE	0	0	0			0	0	SPARE	1	20	20
21	20	1	SPARE	0	0		0		0	0	SPARE	1	20	22
23	20	1	SPARE	0	0			0	0	0	SPARE	1	20	24
25	20	1	SPARE	0	0	0			0	0	SPARE	1	20	26
27	20	1	SPARE	0	0		0		0	0	SPARE	1	20	28
29	20	1	SPARE	0	0			0	0	0	SPARE	1	20	30
31	20	1	SPARE	0	0	0			0	0	SPARE	1	20	32
33	20	1	SPARE	0	0		0		0	0	SPARE	1	20	34
35	20	1	SPARE	0	0			0	0	0	SPARE	1	20	36
37	20	1	SPARE	0	0	0			0	0	SPARE	1	20	38
39	20	1	SPARE	0	0		0		0	0	SPARE	1	20	40
41	20	1	SPARE	0	0			0	0	0	SPARE	1	20	42
						0	**0**	**0**						Total AMPS
			Subtotal Watts	**0**					**0**		Subtotal Watts			
			Total Watts	**0**					**0**		Average Amps			

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10/19/2021
STATE OF UTAH

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS CERTIFIED BELOW:
- [x] BUILDING
- [x] MECHANICAL
- [x] ELECTRICAL
- [x] ACCESSIBILITY
- [x] STRUCTURAL
- [x] PLUMBING
- [x] ENERGY
- [ ] FIRE

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BY: _____ DATE: 12/04/22
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AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN BUILD
500 E. AUTOMALL DR. AMERICAN FORK, UT

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PANEL SCHEDULES

DATE: 06-14-2021

SHEET #:

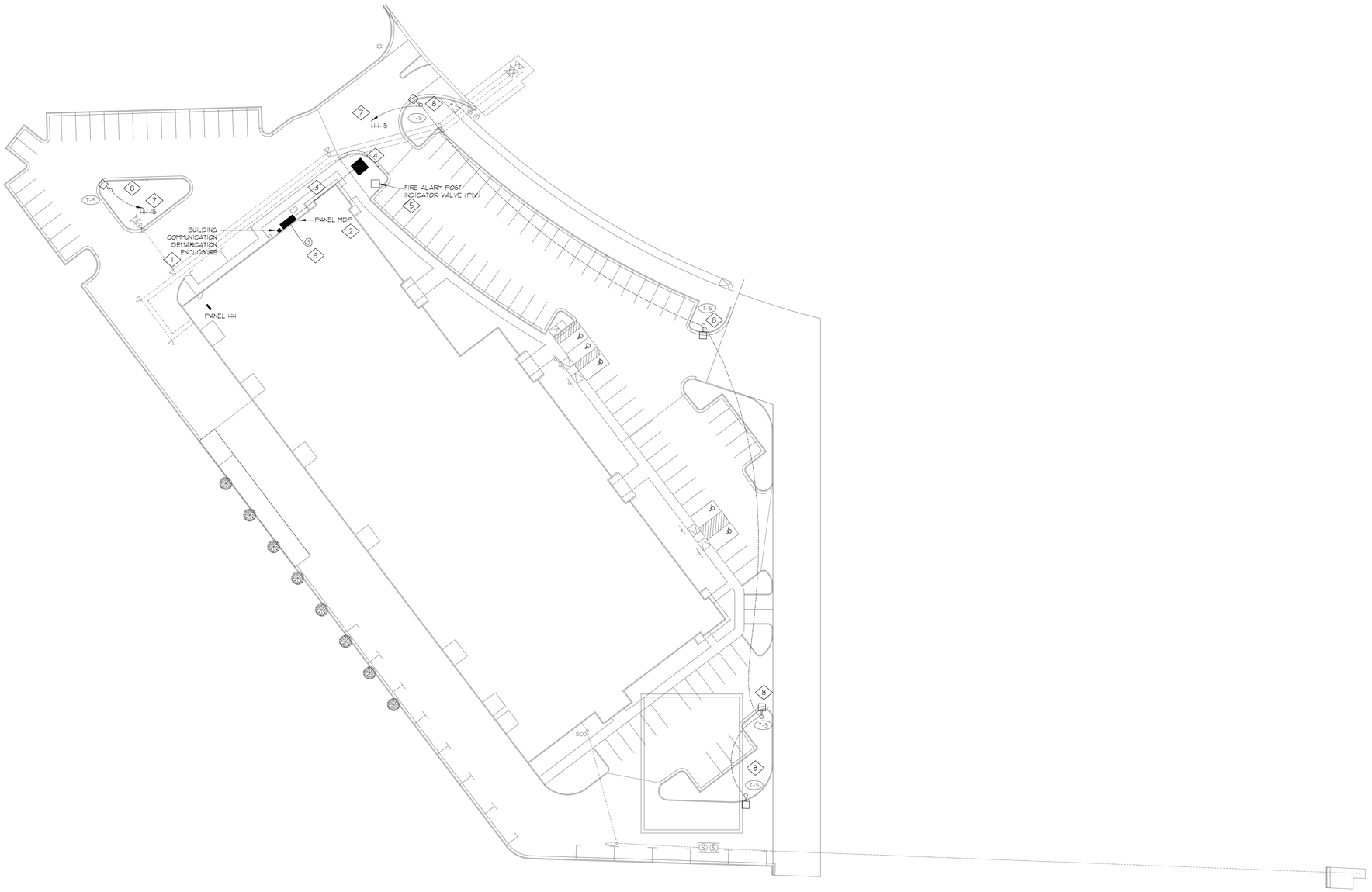
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REFERENCE NOTES

1. BUILDING COMMUNICATION DEMARCATION ENCLOSURE. PROVIDE A 4' WIDE, 4' HIGH BY 1'7" DEEP BOX. NEMA 3R BOX. LOCATE BOTTOM OF BOX, 36" AFG. EXTEND A 4"C. FROM THE ENCLOSURE, TO BOTH THE TELEPHONE AND DATA SERVICE PROVIDER DEMARCATION LOCATIONS. VERIFY DEMARCATION LOCATIONS, WITH THE BUILDING OWNER.
2. PANEL MDP. SEE ONELINE DIAGRAM FOR ADDITIONAL INFORMATION.
3. FOR CONDUIT REQUIREMENTS, SEE ONELINE DIAGRAM FOR ADDITIONAL INFORMATION. DEPTH OF CONDUITS PER ROCKY MOUNTAIN POWER REQUIREMENTS.
4. ROCKY MOUNTAIN POWER TRANSFORMER. SEE ONELINE DIAGRAM FOR ADDITIONAL INFORMATION.
5. FIRE ALARM POST INDICATOR VALVE (PIV). VERIFY EXACT LOCATION IN THE FIELD. EXTEND A 1"C. WITH REQUIRED CONDUCTORS, FROM THE PIV TO THE FIRE ALARM CONTROL PANEL. SEE PIV CONNECTION DETAIL ON SHEET E1@2, FOR ADDITIONAL INFORMATION.
6. CONCRETE ENCASED ELECTRODE (UFER) GROUNDING SYSTEM. INSTALL ENCASED IN CONCRETE PER NEC 250.52, (A), (3).
7. EXTEND A 1"C. (3) #2, #2 GND, THHN, FROM THE LIGHT POLES, THROUGH THE SITE LIGHTING CONTROLLER TO THE PANEL.
8. LIGHT POLES BASE. SEE SHEET E1@2, FOR THE SITE LIGHT POLE BASE DETAIL.



1 E2.1 **ELECTRICAL SITE PLAN**
1" = 30'-0"

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ELECTRICAL SITE PLAN

DATE: **06-14-2021**

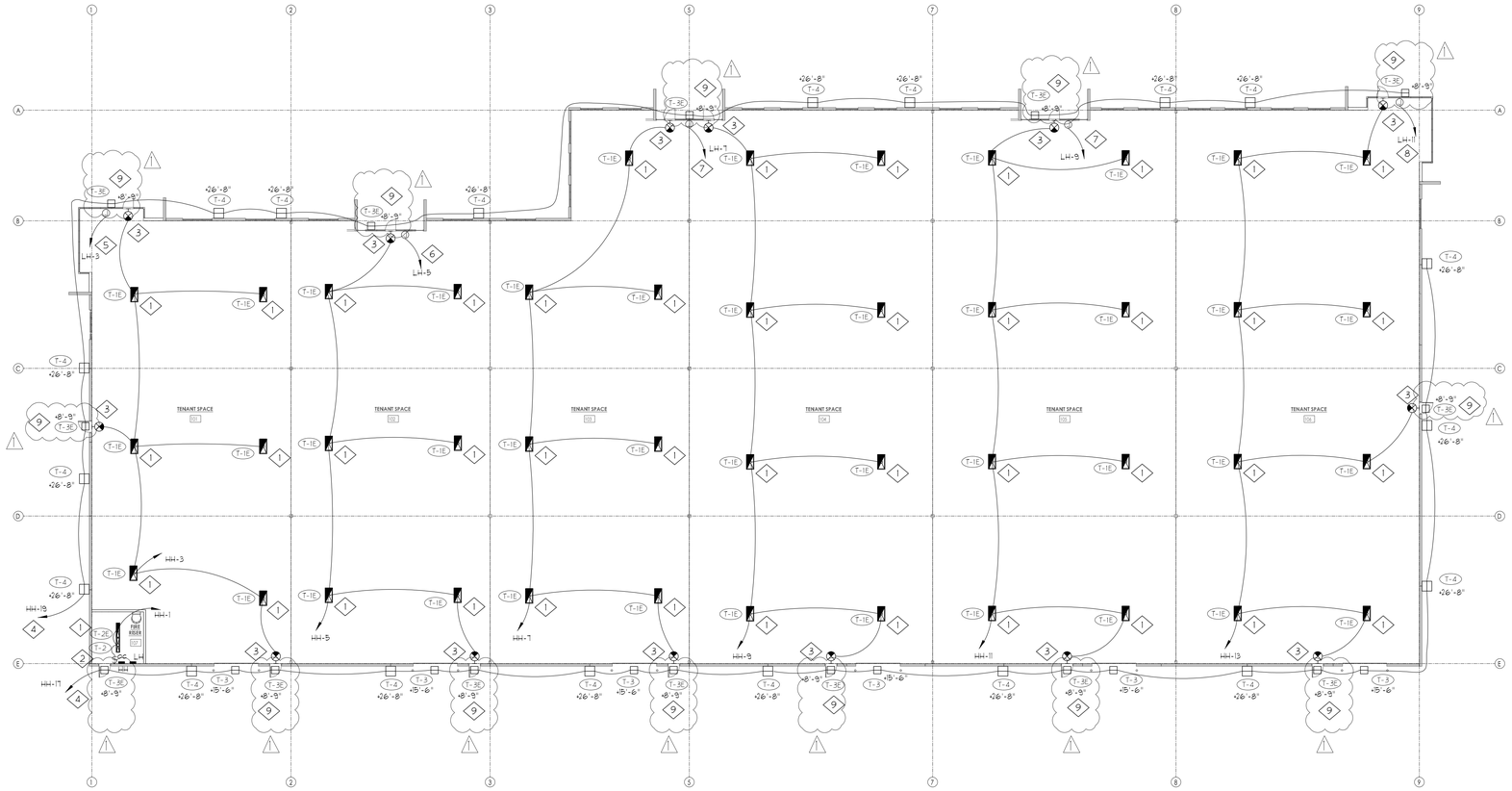
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1 E301 OVERALL LIGHTING PLAN - LEVEL 01

1/16" = 1'-0"

REFERENCE NOTES

1. PROVIDE LIGHT FIXTURE WITH AN EMERGENCY BATTERY PACK. CONNECT BATTERY PACK TO THE UNSWITCHED LIGHTING CONDUCTOR.
2. PROVIDE A WATTSTOPPER #DSW-301, OR EQUIVALENT, WALL MOUNTED OCCUPANCY SENSOR.
3. EXIT SIGN. CONNECT TO THE UNSWITCHED LIGHTING CIRCUIT, AS SHOWN.
4. EXTEND (2) #8, #8 GND, THHN, CU, FROM THE LIGHT FIXTURES, THROUGH THE SITE LIGHTING CONTACTOR, TO THE PANEL.
5. BUILDING SIGNAGE JUNCTION BOX. MOUNT BOX ON INSIDE WALL OF BUILDING, BEHIND WHERE FUTURE SIGN WILL BE INSTALLED. EXTEND (2) #8, #8 GND, THHN, CU, FROM THE BOX, THROUGH THE SITE LIGHTING CONTACTOR, TO THE PANEL.
6. BUILDING SIGNAGE JUNCTION BOX. MOUNT BOX ON INSIDE WALL OF BUILDING, BEHIND WHERE FUTURE SIGN WILL BE INSTALLED. EXTEND (2) #8, #8 GND, THHN, CU, FROM THE BOX, THROUGH THE SITE LIGHTING CONTACTOR, TO THE PANEL.
7. BUILDING SIGNAGE JUNCTION BOX. MOUNT BOX ON INSIDE WALL OF BUILDING, BEHIND WHERE FUTURE SIGN WILL BE INSTALLED. EXTEND (2) #6, #6 GND, THHN, CU, FROM THE BOX, THROUGH THE SITE LIGHTING CONTACTOR, TO THE PANEL.
8. BUILDING SIGNAGE JUNCTION BOX. MOUNT BOX ON INSIDE WALL OF BUILDING, BEHIND WHERE FUTURE SIGN WILL BE INSTALLED. EXTEND (2) #4, #8 GND, THHN, CU, FROM THE BOX, THROUGH THE SITE LIGHTING CONTACTOR, TO THE PANEL.
9. PROVIDE EXTERIOR LIGHT FIXTURE WITH AN EMERGENCY BATTERY PACK. CONNECT BATTERY PACK TO THE UNSWITCHED LIGHTING CONDUCTOR.
10. SEE SHEET E601 FOR THE SITE LIGHTING CONTACTOR DETAIL.

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OVERALL LIGHTING PLAN - LEVEL 01

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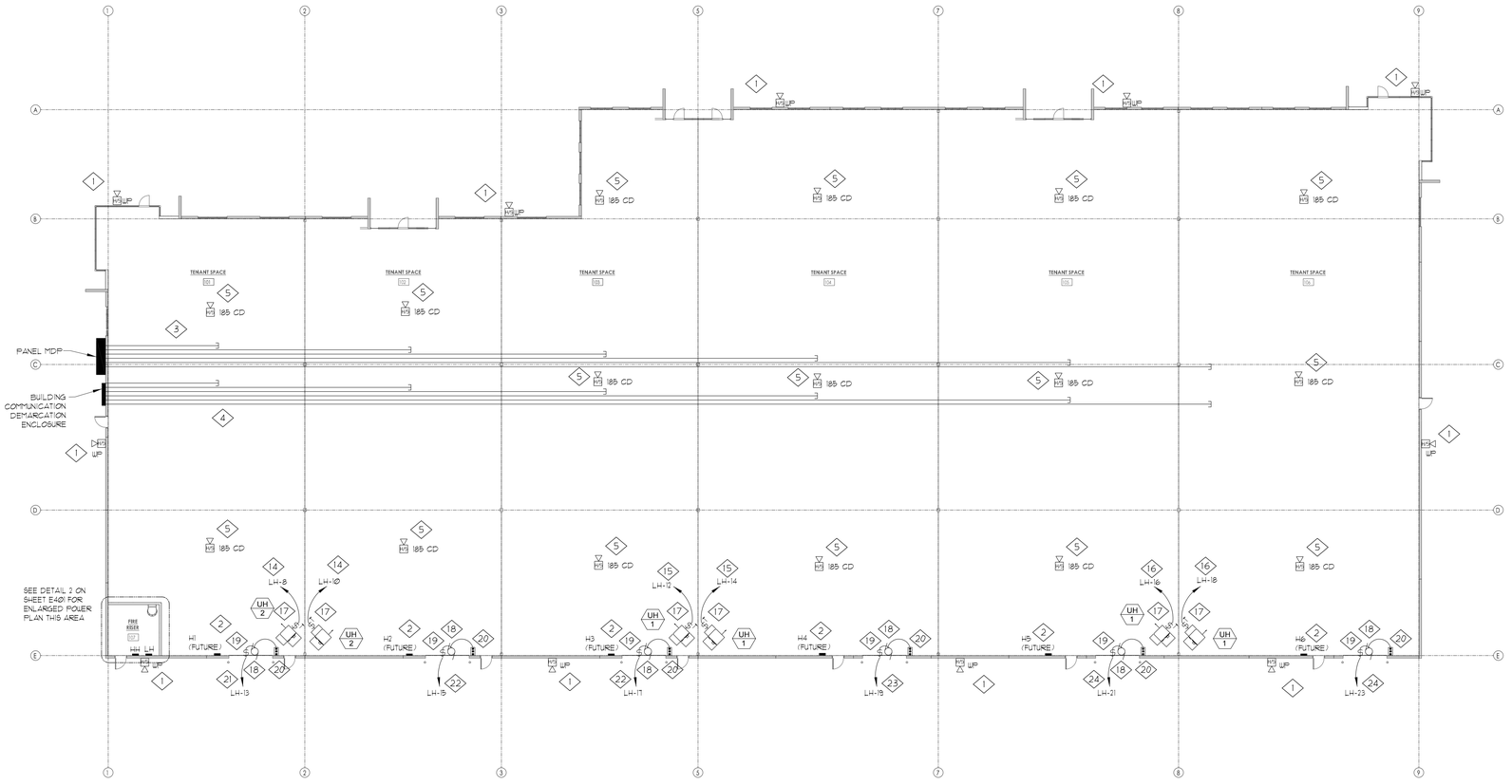
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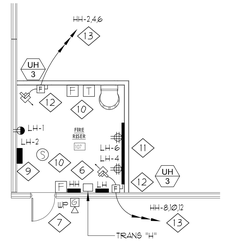
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1 OVERALL POWER PLAN - LEVEL 01
E401 — 1/16" = 1'-0"



2 ENLARGED POWER PLAN - LEVEL 01 - EQUIP ROOM
E401 — 1/8" = 1'-0"

REFERENCE NOTES

1. EXTERIOR FIRE ALARM HORN STROBE. LOCATE ON WALL, AS SHOWN. CONNECT DEVICE TO THE BUILDING FIRE ALARM CONTROL PANEL, PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL EQUIPMENT REQUIRED FOR A COMPLETE FIRE ALARM NOTIFICATION SYSTEM.
2. PROPOSED LOCATION OF FUTURE PANEL. VOLTAGE DROP AND COORDINATION CALCULATION ARE IN COMPLIANCE WITH NATIONAL ELECTRIC CODE AND INDUSTRY STANDARDS. WHEN PANELS ARE INSTALLED IN THIS AREA, IT IS ASSUMED THAT ALL CONDUITS ARE ROUTED AT RIGHT ANGLES, WITH RESPECT TO THE BUILDING WALLS.
3. ROUTE POWER PANEL CONDUITS, INTO EACH SPACE. SEE THE ONELINE DIAGRAM ON SHEET E103 FOR ADDITIONAL INFORMATION.
4. ROUTE A 2"C. COMMUNICATION CONDUIT, INTO EACH SPACE. PROVIDE A NYLON PULLSTRING IN EACH CONDUIT.
5. FIRE ALARM HORN STROBE. SUSPEND FROM CEILING AT 28'-0" AFF, AS SHOWN. CONNECT DEVICE TO THE BUILDING FIRE ALARM CONTROL PANEL, PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL EQUIPMENT REQUIRED FOR A COMPLETE FIRE ALARM NOTIFICATION SYSTEM.
6. ELECTRICAL PANEL. PROVIDE CLEARANCES AROUND PANEL PER THE NATIONAL ELECTRICAL CODE REQUIREMENTS.
7. FIRE ALARM SYSTEM GONG. PROVIDE CIRCUITING FROM GONG, TO THE FIRE ALARM PANEL, PER THE FIRE ALARM SYSTEM MANUFACTURER'S RECOMMENDATIONS.
8. ELECTRIC HEATER, 120V, 1 PHASE, 500 WATTS WITH INTEGRAL THERMOSTAT. EXTEND (2) #2, #2 GND, THHN CU FROM THE ELECTRIC HEATER TO A 20A/1P CIRCUIT BREAKER, IN PANEL LH, SPACE #4.
9. FIRE ALARM CONTROL PANEL (FACP) LABEL CIRCUIT BREAKER FEEDING PANEL AS "FACP" AND IDENTIFY WITH RED PAINT. LOCATE FIRE ALARM SMOKE DETECTOR, ABOVE THE FIRE ALARM PANEL. EXTEND A 1"C. FROM THE TELEPHONE BOARD, TO THE FIRE ALARM CONTROL PANEL FOR FIRE ALARM COMMUNICATION.
10. PROVIDE SMOKE DETECTOR FIRE ALARM FLOW, TAMPER AND PULL STATION MONITOR MODULES TO MONITOR THE FIRE SPRINKLER SYSTEM. PROVIDE CIRCUITING FROM DEVICES, TO THE FIRE ALARM PANEL, PER THE FIRE ALARM SYSTEM MANUFACTURER'S RECOMMENDATIONS.
11. TELEPHONE BOARD. PROVIDE A 4' BY 8' BY 3/4" PLYWOOD BOARD, PAINT WITH WHITE, FIRE RETARDANT PAINT.
12. UNIT HEATER DISCONNECT. PROVIDE A 480, 3 POLE, 30 AMP, NON-FUSED DISCONNECT, IN A NEMA 1 ENCLOSURE. COORDINATE LOCATE OF THE DISCONNECT WITH THE ROOFTOP EQUIPMENT.
13. EXTEND (3) #2, #2 GND, THHN CU, FROM THE UNIT HEATER, THROUGH THE DISCONNECT, TO THE PANEL.
14. EXTEND (2) #2, #2 GND, THHN CU, FROM THE UNIT HEATER, THROUGH THE DISCONNECT SWITCH, TO THE PANEL.
15. EXTEND (2) #0, #0 GND, THHN, CU, FROM THE UNIT HEATER, THROUGH THE DISCONNECT SWITCH, TO THE PANEL.
16. EXTEND (2) #6, #0 GND, THHN, CU, FROM THE UNIT HEATER, THROUGH THE DISCONNECT SWITCH, TO THE PANEL.
17. UNIT HEATER DISCONNECT. PROVIDE A SQUARE D, #9GI, MOTOR STARTER WITH OVERLOADS. PROVIDE OVERLOADS RATED UPON THE MOTOR FULL LOAD AMPS.
18. ROLLUP DOOR MOTOR. VERIFY EXACT LOCATION WITH ROLLUP DOOR INSTALLER.
19. DOOR MOTOR DISCONNECT. PROVIDE A SQUARE D, #9GI, MOTOR STARTER WITH OVERLOADS. PROVIDE OVERLOADS RATED UPON THE MOTOR FULL LOAD AMPS.
20. ROLLUP DOOR PUSHBUTTON STATION. COORDINATE WITH DOOR INSTALLER. EXTEND A 1/2"C WITH (4) #2, #2 GND, THHN, CU, FROM THE PUSHBUTTON STATION TO THE MOTOR/MOTOR CONTROLLER.
21. EXTEND (2) #2, #0 GND, THHN, CU, FROM THE MOTOR/MOTOR CONTROLLER, THROUGH THE DISCONNECT SWITCH, TO THE PANEL.
22. EXTEND (2) #0, #0 GND, THHN, CU, FROM THE MOTOR/MOTOR CONTROLLER, THROUGH THE DISCONNECT SWITCH, TO THE PANEL.
23. EXTEND (2) #8, #0 GND, THHN, CU, FROM THE MOTOR/MOTOR CONTROLLER, THROUGH THE DISCONNECT SWITCH, TO THE PANEL.
24. EXTEND (2) #6, #0 GND, THHN, CU, FROM THE MOTOR/MOTOR CONTROLLER, THROUGH THE DISCONNECT SWITCH, TO THE PANEL.

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PROFESSIONAL ENGINEER
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- [x] BUILDING
- [x] MECHANICAL
- [x] ELECTRICAL
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AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN BUILD
500 E. AUTOMALL DR. AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	City Review Comments	07/19/2021

CITY SUBMITTAL SET

AE2019.031

OVERALL POWER PLAN - LEVEL 01

DATE: 06-14-2021

SHEET #:

E401

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REFERENCE NOTES

COMcheck Software Version 4.1.5.1

Interior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2013) Standard
Project Title: Davies Design Build
Project Type: New Construction

Construction Site:
500 E. Automall Dr.
American Fork, UT

Owner/Agent:
Davies Design Build
5000 E. Automall Dr.
American Fork, UT

Designer/Contractor:
Kevin Powell
Powell Engineering, LLC
555 West 1930 North
Orem, UT 84057
801-722-5806
kgpowell@xmission.com

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Riser Room (Common Space Types:Electrical/Mechanical)	196	0.42	82
2-101 (Warehouse:Fine Material Storage)	6278	0.95	5964
3-102 (Warehouse:Fine Material Storage)	6420	0.95	6099
4-103 (Warehouse:Fine Material Storage)	7398	0.95	7028
5-104 (Warehouse:Fine Material Storage)	9873	0.95	9379
6-105 (Warehouse:Fine Material Storage)	9843	0.95	9351
7-106 (Warehouse:Fine Material Storage)	9903	0.95	9408
		Total Allowed Watts =	47312

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Riser Room (Common Space Types:Electrical/Mechanical)				
LED 1: T-2: LED Linear 33W:	1	2	31	62
2-101 (Warehouse:Fine Material Storage)				
LED 2: T-1: LED Panel 110W:	1	6	109	654
3-102 (Warehouse:Fine Material Storage)				
LED 2 copy 1: T-1: LED Panel 110W:	1	6	109	654
4-103 (Warehouse:Fine Material Storage)				
LED 2 copy 2: T-1: LED Panel 110W:	1	7	109	763
5-104 (Warehouse:Fine Material Storage)				
LED 2 copy 3: T-1: LED Panel 110W:	1	8	109	872
6-105 (Warehouse:Fine Material Storage)				
LED 2 copy 4: T-1: LED Panel 110W:	1	8	109	872
7-106 (Warehouse:Fine Material Storage)				
LED 2 copy 5: T-1: LED Panel 110W:	1	8	109	872

Total Proposed Watts = 4743

Interior Lighting PASSES: Design 90% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Kevin Kevin G. Powell, P.E. 06/14/2021
Name - Title Signature Date

COMcheck Software Version 4.1.5.1

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2013) Standard
Project Title: Davies Design Build
Project Type: New Construction
Exterior Lighting Zone 2 (Neighborhood business district)

Construction Site:
500 E. Automall Dr.
American Fork, UT

Owner/Agent:
Davies Design Build
5000 E. Automall Dr.
American Fork, UT

Designer/Contractor:
Kevin Powell
Powell Engineering, LLC
555 West 1930 North
Orem, UT 84057
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kgpowell@xmission.com

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Main Entry (Main entry)	365 ft of	20	Yes	7300
Parking Area (Parking area)	88901 ft2	0.06	Yes	5334
			Total Tradable Watts (a) =	12634
			Total Allowed Watts =	12634
		Total Allowed Supplemental Watts (b) =		600

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Main Entry (Main entry 365 ft of door width): Tradable Wattage				
LED 2 copy 1: T-3: LED Roadway-Parking Unit 54W:	1	5	58	290
LED 3 copy 1: T-4: LED Roadway-Parking Unit 82W:	1	7	81	567
Parking Area (Parking area 88901 ft2): Tradable Wattage				
LED 1: T-5: LED Roadway-Parking Unit 130W:	1	5	139	695
LED 2: T-3: LED Roadway-Parking Unit 54W:	1	14	58	812
LED 3: T-4: LED Roadway-Parking Unit 82W:	1	12	81	972
			Total Tradable Proposed Watts =	3336

Exterior Lighting PASSES: Design 75% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Kevin Kevin G. Powell, P.E. 06/14/2021
Name - Title Signature Date

COMcheck Software Version 4.1.5.1

Inspection Checklist

Energy Code: 90.1 (2013) Standard

Requirements: 100.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
4.2.2, 8.4.1.1, 8.4.1.2, 8.7 [PR6][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include connectors sized in accordance with approved plans and branch circuits sized for maximum drop of 3%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
4.2.2, 9.4.3, 9.7 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.7 [PR8][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
8.4.2 [EL10][1]	At least 50% of all 125 volt 15- and 20-Amp receptacles are controlled by an automatic control device.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Space type is not private office, open office, or computer classroom.
9.4.1.1 [EL1][1]	Automatic control requirements prescribed in Table 9.6.1, for the appropriate space type, are installed. Mandatory lighting controls (labeled as 'REQ') and optional choice controls (labeled as 'ADD1' and 'ADD2') are implemented.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.4.1.1 [EL2][1]	Independent lighting controls installed per approved lighting plans and all manual controls readily accessible and visible to occupants.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.4.1.2 [EL11][1]	Parking garage lighting is equipped with required lighting controls and daylight transition zone lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
9.4.1.1f [EL13][1]	Daylight areas under skylights and roof monitors that have more than 150 W combined input power for general lighting are controlled by photocontrols.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
9.4.1.4 [EL3][1]	Automatic lighting controls for exterior lighting installed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.4.1.3 [EL4][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.6.2 [EL8][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
8.7.1 [FI16][1]	Furnished as-built drawings for electric power systems within 30 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
8.7.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
9.2.2.3 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
9.4.2 [FI19][1]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Exterior Lighting fixture schedule for values.*

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Kevin G. Powell, P.E.
POWELL ENGINEERING L.L.C.
555 W. 1930 N.
OREM, UTAH 84057
(801) 722-5806
KGPOWELL@XMISSION.COM

PROFESSIONAL ENGINEER
No. 376258
KEVIN G. POWELL
06/19/2021
STATE OF UTAH

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES AS CERTIFIED BELOW:
- ☑ BUILDING
- ☑ MECHANICAL
- ☑ ELECTRICAL
- ☑ ACCESSIBILITY
- ☑ STRUCTURAL
- ☑ PLUMBING
- ☑ ENERGY
- ☐ FIRE

PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 12/04/22
WEST COAST CODE CONSULTANTS, INC.

AMERICAN FORK OFFICE/WAREHOUSE
DAVIES DESIGN BUILD
500 E. AUTOMALL DR. AMERICAN FORK, UT

Revision Schedule

MARK	DESCRIPTION	Revision Date
1	City Review Comments	07/19/2021

CITY SUBMITTAL SET

AE2019.031

MODEL ENERGY CODE CALCULATIONS

DATE: 06-14-2021

SHEET #:

E501

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THESE DRAWINGS AND THE DESIGN SHOWN HAVE BEEN PREPARED FOR THIS SPECIFIC DESIGN BUILD PROJECT ONLY, REMAIN THE SOLE PROPERTY OF POWELL ENGINEERING, LLC. ANY REPRODUCTION, COPYING OR USE OTHER THAN FOR THIS SPECIFIC PROJECT IS PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT OF POWELL ENGINEERING, LLC

F:\Side Work\Aeurbia\Davis Design\cad\City Submittal Changes - 07-19-2021\elec\Davis Design - E - City Review Comments.dwg, 7/19/2021 10:30:11 PM, Bluebeam PDF - E Size.pc3

AMERICAN FORK CITY **MEETING DATE:** October 19th, 2022
PLANNING COMMISSION STAFF REPORT

AGENDA TOPIC:

Review and action on a Site Plan for Reagan Digital Signs, for the upgrade of an existing billboard to an electronic billboard sign, in the GC-2 Zone, located at 854 E Sam White Lane

BACKGROUND INFORMATION		
Location:		854 East Same White Lane
Project Type:		Site Plan
Applicants:		Guy Larson, Reagan Outdoor Advertising
Existing Land Use:		Planned Community
Proposed Land Use:		N/A
Surrounding Land Use:	North	Planned Community
	South	Major Transportation Facilities
	East	Planned Community
	West	Major Transportation Facilities
Existing Zoning:		GC-2
Proposed Zoning:		N/A
Surrounding Zoning:	North	GC-2
	South	PF
	East	GC-2, PF
	West	PF

BACKGROUND:

The applicant is applying for site plan approval for Reagan Digital Signs, for the upgrade of an existing billboard in the GC-2 (Planned Commercial) zone, located at 854 E Sam White Lane. The proposal consists of 1 parcel for upgrading an existing billboard to an electronic billboard and the entire development parcel consists of 2.24 acres.

Sec 17.6.101 Administrative Site Plan Review

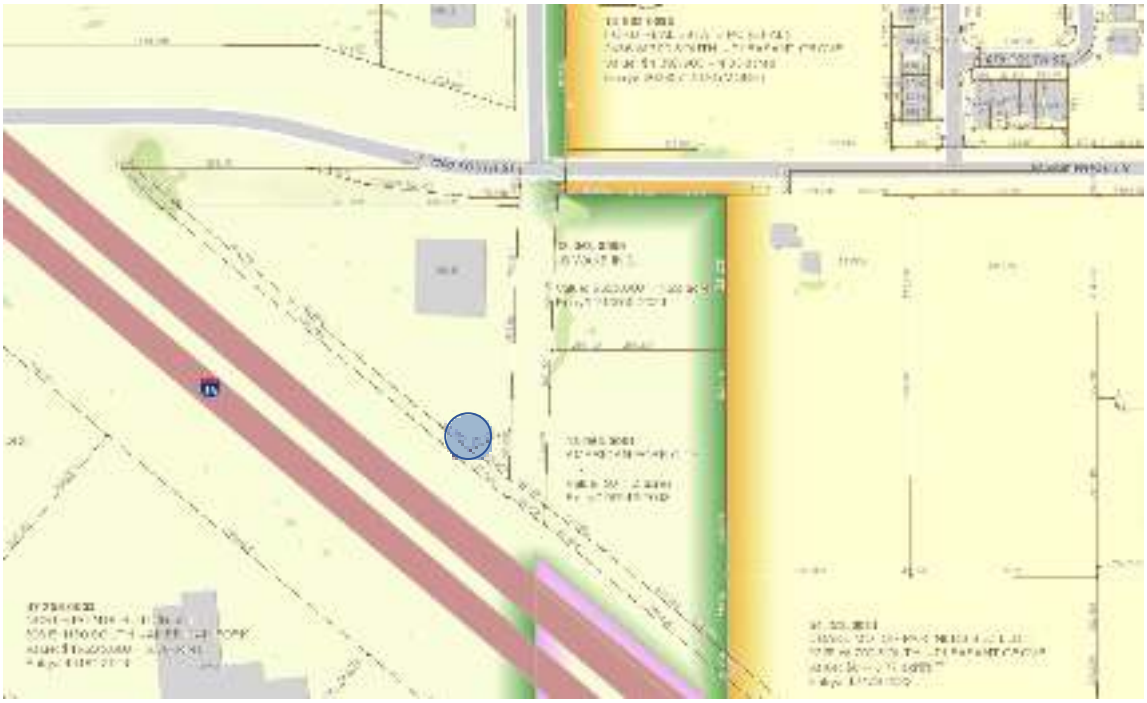
Wherever the terms of this code require submission and approval of a site plan, such review shall be conducted in accordance with the following provisions.

1. Planning commission to approve. The planning commission, acting in an administrative capacity, shall have the function, duty and power to approve or

disapprove a project plan and to attach such modifications or conditions as may be deemed appropriate to improve the layout, to ensure that the project will not pose any detrimental effect to persons or property, or to protect the health, safety, and general welfare of the citizens of the city.

2. Application required. Application for site plan approval shall be submitted on forms provided by the city and shall be accompanied by maps and drawings showing the following:
    1. The location of all existing and proposed buildings and structures on the site, with full dimensions showing the distance between buildings and distances from buildings to adjacent property lines.
    2. The location of all parking spaces, driveways, and points of vehicular ingress and egress.
    3. A landscaping plan showing the location, types, and initial sizes of all planting materials to be used together with the location of fences, walls, hedges, and decorative materials.
    4. Preliminary elevations of main buildings showing the general appearance and types of external materials to be used.
    5. The locations of solid waste receptacles and trash pick-up areas.
3. Appeals permitted. Any person aggrieved by a determination of the planning commission may request a hearing before the city council who shall have the authority to reverse, affirm or modify any decision of said commission. Any such appeal shall be filed within ten days of the determination of the planning commission.
4. Issuance of a permit. A building permit shall not be issued for any building or structure or external alterations thereto until the provisions of this section have been complied with. Any construction not in conformance with an approved site plan shall be considered a violation of this code. Any building permit issued shall ensure that development is undertaken and completed in conformity with the plans as approved.

PROJECT MAP:



STANDARD CONDITIONS OF APPROVAL:

APPLICANT is responsible and shall submit/post/obtain all necessary documentation and evidence to comply with these Standard Conditions of Approval prior to any platting, permitting, or any other form of authorization by the City including plat recording or other property conveyance to the City and prior to scheduling a pre-construction meeting. All recording shall take place at the Utah County Recorder's Office.

1. **Title Report:** Submit an updated Title Report not older than 30 days or other type of appropriate verification that shows all dedications to the City are free and clear of encumbrances, taxes, or other assessments.
2. **Property Taxes and Liens:** Submit evidence that all the property taxes, for the current and/or previous years, liens, and agricultural land use roll over fees have been paid in full.
3. **Water Rights:** Submit evidence that all the required water rights have been conveyed to American Fork City.
4. **Performance Guarantee:** Post a performance guarantee for all required public and essential common improvements.
5. **Easements and Agreements:** Submit/record a long-term Storm Water Pollution Prevention Maintenance Agreement signed and dated by the property owner and any required easement documentation.
6. **Land Disturbance Permit:** Obtain a Land Disturbance Permit.

7. **Compliance with the Plan Review Comments:** All plans and documents shall comply with all the Technical Review Committee comments and the City Engineer's final review.
8. **Commercial Structure:** Record an Owner Acknowledgment and Utility Liability Indemnification if the proposed building is a multi-unit commercial structure served by a single utility service.
9. **Sensitive Lands:** Record all applicable documents required for compliance with the City's Sensitive Lands Ordinance.
10. **Utility Notification Form:** Submit a Subdivision Utility Notification Form.
11. **Professional Verification:** Submit final stamped construction documentation by all appropriate professionals.
12. **Fees:** Payment of all development, inspection, recording, streetlight, and other project related fees.
13. **Mylar:** Submit a Mylar. All plats will receive final verification of all formats, notes, conveyances, and other items contained on the plat by City staff (recorder, legal, engineer, GIS, planning).

STAFF RECOMMENDATION:

The site plan application meets the requirements of Section 17.6.101 and the staff recommends APPROVAL.

POTENTIAL MOTIONS – Site Plan

APPROVAL

Mr. Chairman, I move that we recommend approval on the site plan for Reagan Digital Signs, for the upgrade of an existing billboard to an electronic billboard sign, in the GC-2 Zone, located at 854 E Sam White Lane, subject to any conditions found in the Staff Report.

DENIAL

Mr. Chairman, I move that we deny the site plan for Reagan Digital Signs, for the upgrade of an existing billboard to an electronic billboard sign, in the GC-2 Zone, located at 854 E Sam White Lane.

TABLE

Mr. Chairman, I move that we table action on the site plan for Reagan Digital Signs, for the upgrade of an existing billboard to an electronic billboard sign, in the GC-2 Zone, located at 854 E Sam White Lane, and instruct the developer/staff to _____.

AMERICAN FORK CITY – Development Services

275 EAST 200 NORTH, AMERICAN FORK UT 84003
Phone: 801-763-3060 Email: ap)americanfork.gov

American Fork City
Technical Review Committee

SUBDIVISION PRELIMINARY PLAT | SU ON FINAL PLAT
AMENDED FINAL PLAT | COMM TE PLAN
Development Review Committee

Submittal Typ No Comments y P

☐Amended Final Plat ☒

If applying for preliminary and final subdivision plats concurrently, mark both boxes

Engineering Division
Reviewed
lburr 09/19/2022

Fire Department
Reviewed
M. Sacco 09/26/2022

PLANNING AND ZONING
TVANEKELENBURG
9/28/22

Project Name: Conversion of two Digital Billboard Faces on one Sign Structure

Location: 854 East Sam White Lane

Utah County Parcel No(s): 13:063:0074 13:063:0075

Property Owner Name: JB Wake Inc

Property Owner or Authorized Representative Contact Information: (I
communication from the City regarding the project will be directed to

Name: Reagan Outdoor Advertising / Guy Larson

Address: 1775 North Warm Springs Road Salt Lake City Utah 84116

Email: guy@reaganusa.com

Telephone: 801 301-4083 Fax: 801 521-9741

My application meets the requirements of the _____ zone.

Submit the following to applications@americanfork.gov

1. **ELECTRONIC** submittal including plans and all reports in a **One Drive or Dropbox link, or on a USB submitted to the Development Services, Public Works Dept, 275 East 200 North**:
   a. A full plan set in one (1) single pdf
   b. An electronic design file AutoCAD 2009 format (N.A.D. 83 Coordinates)
   c. Reports (Drainage report, Geotechnical report, Title report, etc.) each in a separate pdf. **LABEL EACH SEPERATE FILE WITH THE NAME OF THE CORRELATING ITEM.**
2. **Development Services Plan Review Fee:**
   a. Subdivision Preliminary Plat: $500.00
   b. Subdivision Final Plat: $250.00
   c. Amended Final Plat: $250.00
   d. Subdivision Preliminary & Final Plats $750.00
   e. Commercial Site Plan: $500.00
3. **Preparer/Engineer/Surveyor/Consultant/Designer Affirmation Statement** – Required from each Professional Engineer stamping and signing submitted documents.
4. **Engineering Division Review Fees – Development review and inspection fees are billed per hour during the course of the project review and construction** (see Resolution No. 2019-06-21R). These fees include time for city personnel as well as 3rd party consultants that complete plat reviews, water rights transfers and reviews, engineering reviews, utility modeling, field inspections, recording fees, permit fees, street light costs, and all other applicable fees which are billed as they occur.

I understand that I am responsible for submitting a complete application including all required documents that meet city code. I acknowledge that this application will not be accepted or reviewed until deemed complete by the City. I also accept responsibility for all fees and costs associated with my development as detailed above. I acknowledge that a building permit will not be issued until the untreated gravel base has been placed and graded, sewer, and storm drain lines and water lines, and inlet boxes completed and tested per Section 15.01.230 of the American Fork City Code.

AMERICAN FORK CITY – Development Services
275 EAST 200 NORTH, AMERICAN FORK UT 84003
Phone: 801-763-3060 Email: applications@americanfork.gov

Property Owner or Authorized Representative Signature (if applicable): Guy Larson

Date: 9/8/2022

I authorize American Fork City personnel to enter the property for the purposes of evaluating this application.

Property Owner Signature: AUTHORIZED AGENT

Date: 9/8/2022

The following table summarizes the items required for each application type in order to be deemed a complete application. **By acknowledging and initialing the following items, the Applicant certifies that the application is complete and meets American Fork City requirements.**

Preliminary Plat	Final Plat/ Amended Final Plat	Commercial Site Plan	Item for Completion (Section 17.7/8.202)	Applicant Acknowledgement (Initial)	Staff Verification (Initial by City Staff)
☒	☒	☒	**ALTA Survey (identify Geodetic Datum used)**		
☒	☒	☒	**American Fork Standard Details**	GL	
☒	☒	☒	**Application Fees**		
☐	☐	☒	**Building Elevations (with dimension height) and Renderings**	GL	
☒	☒	☒	**Cover Sheet**	GL	
☒	☒	☒	**Drainage Report**		
☒	☒	☒	**Erosion Control Plan**		
☒	☒	☒	**General Notes**	GL	
☒	☒	☒	**Geotechnical Report**		
☒	☒	☒	**Grading and Drainage Plan**		
☐	☐	☒	**Landscaping Plan**		
☐	☒	☒	**Plan and Profile (all new public infrastructure)**		
☐	☐	☒	**Site Plan**	GL	
☒	☒	☐	**Subdivision Plat**		
☐	☐	☒	**Timpanogos Special Service District Form**		
☒	☒	☒	**Title Report**	GL	
☒	☒	☒	**Traffic Impact Study** As required by City Engineer or as follows: Residential>100 Units Office>80,000 s.f. Retail>25,000 s.f. Industrial>100,000		
☒	☒	☒	**Utility Plan (including Street Lights)**	GL NONE	

AMERICAN FORK CITY – Development Services
275 EAST 200 NORTH, AMERICAN FORK UT 84003
Phone: 801-763-3060 Email: applications@americanfork.gov

Preliminary Plat	Final Plat/ Amended Final Plat	Commercial Site Plan	Item for Completion (Section 17.7/8.202)	Applicant Acknowledgement (Initial)	Staff Verification (Initial by City Staff)
Depending on site location, these items may also be required:					
☒	☒	☒	Is any portion of the project accessing a UDOT road? ☐ Yes ☑ No If Yes, provide UDOT details as applicable.		

AMERICAN FORK CITY – Development Services
275 EAST 200 NORTH, AMERICAN FORK UT 84003
Phone: 801-763-3060 Email: applications@americanfork.gov

Sensitive Lands Requirements (where applicable):

Preliminary Plat	Final Plat/ Amended Final Plat	Commercial Site Plan	Item for Completion	Applicant Acknowledgement (Initial)	Staff Verification (Initial by City Staff)
☒	☒	☒	Is any portion of the project located within or near an area of potential Wetlands? ☐ Yes ☑ No If Yes, provide necessary submittals per the Sensitive Lands Ordinance.		
☒	☒	☒	Is any portion of the project located within the 100-year flood plain? ☐ Yes ☑ No If Yes, provide necessary submittals per the Sensitive Lands Ordinance.		
☒	☒	☒	Does any portion of the project contain ground water that is less than eight (8) feet below the ground surface at any time during the year? ☐ Yes ☑ No If Yes, provide necessary submittals per the Sensitive Lands Ordinance.		
☒	☒	☒	Is any portion of the project located within a high liquefaction hazard area? ☐ Yes ☑ No If Yes, provide necessary submittals per the Sensitive Lands Ordinance.		
☒	☒	☒	Does any portion of the project fall under any other identified Sensitive Lands condition as listed in Section 3-1-13 of the Sensitive Lands Ordinance or as shown on the maps in the ordinance? ☐ Yes ☑ No If Yes, provide necessary submittals per the Sensitive Lands Ordinance.		

Additional Resources:
American Fork City Code https://library.municode.com/ut/american_fork/codes/code_of_ordinances
APWA Standards http://utah.apwa.net/
Development Review Process https://afcity.org/964/Development-Review-Process
Engineering Division Page (General Plans, Standards, etc.) https://afcity.org/719/Engineering-Services
Planning Department Page https://afcity.org/276/Planning-Department
Private Development Forms and Checklists https://afcity.org/932/Private-Development
Timpanogos Special Service District Form **submitted to and completed by TSSD** (https://timpssd.org/pretreatment) Submit the form to shawn.parker@timpssd.org or david.land@timpssd.org

AMERICAN FORK CITY – Development Services
275 EAST 200 NORTH, AMERICAN FORK UT 84003
Phone: 801-763-3060 Email: applications@americanfork.gov

Affirmation Statement

"I, the undersigned, hereby certify that I have read the American Fork City Code of Ordinances, Standards and Specifications requirements. I also certify the submittals prepared by me meet current code requirements.

COMPLETED BY: PE #: _____ (if applicable)

SIGNATURE: _____ PRINTED NAME: Guy Larson

COMPANY: Reagan Outdoor Advertising EMAIL: guy@reaganusa.com

ADDRESS: 1775 North Warm Springs Road PHONE: 801 301-4083

DOCUMENTS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION:

American Fork City
275 East 200 North
American Fork Utah 84003

RE: Static Face/Digital Conversion

September 7, 2022

To whom it may concern:

Reagan outdoor Advertising owns and operates an off-premise sign (billboard) located at 854 East Sam White Lane adjacent to I-15. We are applying to replace two static faces on the existing sign with two new digital faces. The sign was originally installed in 2010 and it was engineered to hold two digital faces at some point in the future. Submitted with this cover letter is the site plan, engineering of existing sign, the engineering of the proposed digital faces, an elevation drawing of the sign and the electrical requirements to illuminate the digital faces.

If you have any questions, please do not hesitate to contact me at 801 301-4083.

Sincerely,

Guy Larson
Real Estate Manager
Reagan Outdoor Advertising


ADDRESS: 854 E SAM WHITE LANE
PARCEL#: 13:063:0074, 13:063:0075
OWNER: JB WAKE INC
Mountain Land Collection
Stewart's RV
Veterans Memorial Hwy
EXISTING SIGN
PROPOSED
DIGITAL FACES

Utah County
HEART of UTAH

ABSTRACT INFORMATION FOR SERIAL # 13:063:0075

Main Menu

Owner Name: JB WAKE INC
Property Address:
Mailing Address: 854 E 1100 S - AMERICAN FORK, UT 84003-3326
Tax Legal Description: COM S 409.12 FT & W 410.17 FT FR E 1/4 COR. SEC. 25, T5S, R1E, SLB&M.; S 2 DEG 15' 20" W 69.99 FT; N 52 DEG 36' 51" W 71.75 FT; N 66 DEG 11' 35" E 65.33 FT TO BEG. AREA 0.047 AC.

Newest to Oldest (Reverse Order)

Grantor ..Grantee Comments	Entry No Book Page Kind of Inst	Inst Date Rec Date Rec Time	Consideration Satisfaction Tie Entry No
CENTRAL BANK ..MOUNTAIN WEST SMALL BUSINESS FINANCE	42200-2022 0 AGR	03/31/2022 04/04/2022 04:01 pm	$0 -
MOUNTAIN WEST SMALL BUSINESS FINANCE ..WHOM OF INTEREST	42199-2022 0 RC	03/31/2022 04/04/2022 04:01 pm	$0 X Entry 210962 Year 2021 -
MOUNTAIN WEST SMALL BUSINESS FINANCE ..SMALL BUSINESS ADMINISTRATION THE	42198-2022 0 AS	03/31/2022 04/04/2022 04:01 pm	$0 A Entry 42175 Year 2022 -
JB WAKE INC ..MOUNTAIN WEST SMALL BUSINESS FINANCE	42175-2022 0 TR D	03/31/2022 04/04/2022 03:51 pm	$1,245,000 A Entry 42198 Year 2022 -
JB WAKE INC ..CENTRAL BANK	210962-2021 0 D TR	12/15/2021 12/21/2021 04:58 pm	$2,714,515 -
SRV HOLDINGS LLC ..JB WAKE INC	210955-2021 0 WD	12/20/2021 12/21/2021 04:54 pm	$10 -
ALTABANK TEE ..SRV HOLDINGS LLC	134463-2019 0 REC	12/18/2019 12/18/2019 01:32 pm	$0 R Entry 122921 Year 2017 -
BANK OF AMERICAN FORK TEE ..STEWART'S RV INC	15391-2018 0 REC	02/15/2018 02/15/2018 11:47 am	$0 R Entry 52976 Year 2014 -
SRV HOLDINGS LLC ..BANK OF AMERICAN FORK	122921-2017 0 D TR	12/11/2017 12/12/2017 09:29 am	$1,000,000 R Entry 134463 Year 2019 -
STEWART, CHARLES W & KELLY L TEE (ET AL) ..SRV HOLDINGS LLC	23666-2017 0 WD	08/29/2016 03/10/2017 10:56 am	$10 -
UTAH COUNTY	84542-2014	10/28/2014	$0

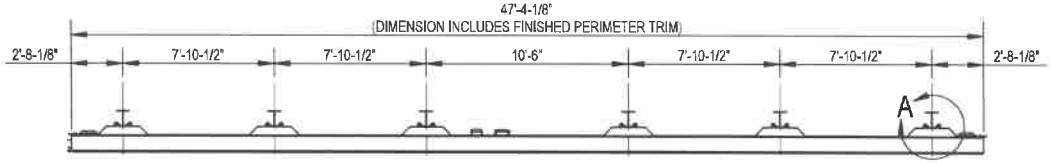
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STATE OF UTAH ..WHOM OF INTEREST	84540-2014 0 CT	11/19/2014 11/24/2014 08:34 am	$0 0 0
UTAH COUNTY ..WHOM OF INTEREST	84539-2014 0 N	10/28/2014 11/24/2014 08:34 am	$0 0 0
WELLS FARGO BANK NORTHWEST TEE ..STEWART, CHARLES W & KELLY L TEE (ET AL)	61925-2014 0 REC	08/15/2014 08/29/2014 03:40 pm	$0 R Entry 753 Year 2012 -
STEWART'S RV INC ..STEWART, CHARLES W & KELLY L TEE (ET AL)	52978-2014 0 WD	07/18/2014 07/31/2014 11:09 am	$10 -
STEWART'S RV INC ..BANK OF AMERICAN FORK	52977-2014 0 ASSIGN	07/18/2014 07/31/2014 11:09 am	$0 -
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WELLS FARGO BANK NORTHWEST TEE ..STEWART, CHARLES W & KELLY L TEE	80910-2011 0 REC	11/03/2011 11/09/2011 03:35 pm	$0 R Entry 120044 Year 2009 -
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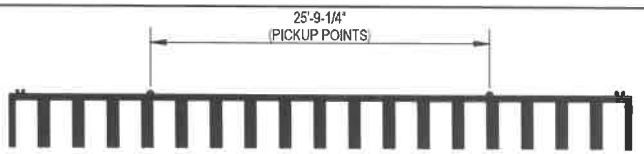
Additional Information

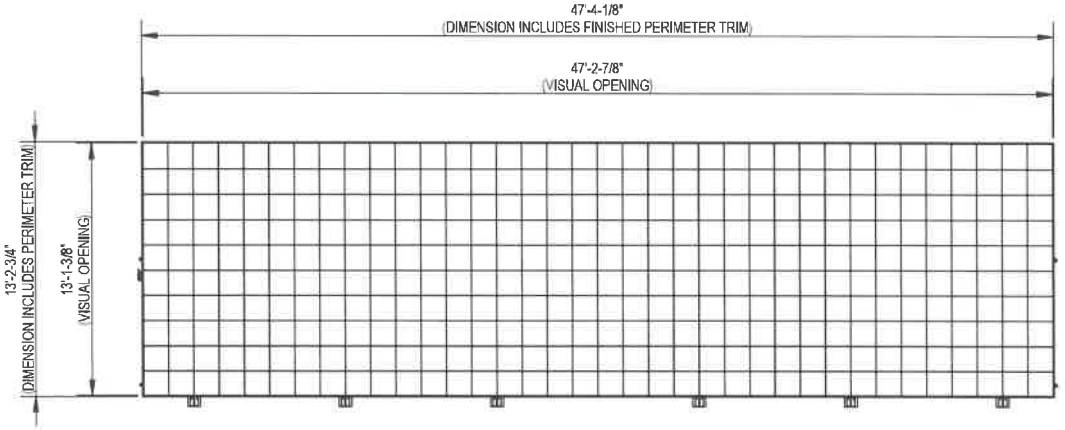
Main Menu

Comments or Concerns on Value/Appraisal - Assessor's Office
Documents/Owner/Parcel information - Recorder's Office
Address Change for Tax Notice

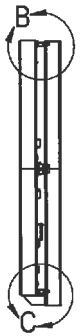
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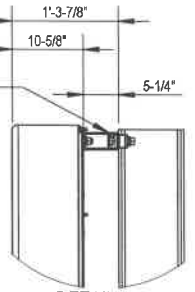




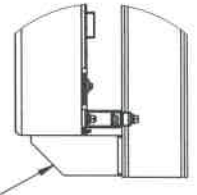


WEIGHT OF LED DISPLAY APPROX. 8900lbs





DETAIL B
SCALE 1 : 18



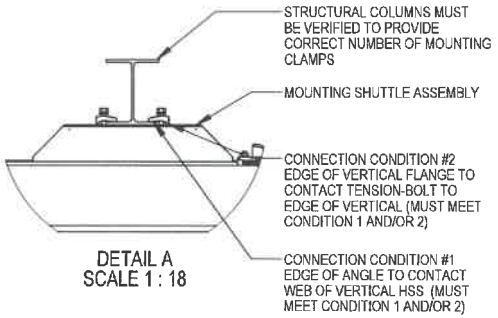
DETAIL C
SCALE 1 : 18

DISPLAY SPECIFICATIONS

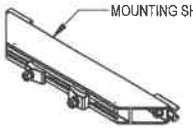
- DISPLAY IS ALL ALUMINUM CONSTRUCTION.
- DISPLAY IS FRONT AND REAR ACCESSIBLE.
- DISPLAY SHIPS IN TWO SECTIONS.

DISPLAY INSTALLATION OBLIGATORY CONDITIONS

- CUSTOMER IS RESPONSIBLE FOR DESIGNING AND CERTIFYING THE SUPPORT STRUCTURE.
- CUSTOMER IS RESPONSIBLE FOR OBTAINING LOCAL CERTIFICATION FOR THE STEEL MOUNTING STRUCTURE.
- CUSTOMER IS RESPONSIBLE FOR SUPPLYING EQUIPMENT WITH SUITABLE SAFETY FACTOR TO LIFT DISPLAY.
- CUSTOMER IS RESPONSIBLE FOR CONFIRMING THE STRUCTURAL VERTICAL QUANTITY AND SIZE.
- LED DISPLAY IS TO BE SUPPORTED EVENLY ACROSS ALL LEDGERS. SUPPORTING LEDGERS SHOULD NOT EXCEED 1/16" TOLERANCE ON THE ELEVATIONS. ENSURE AN EVENLY DISTRIBUTED LOAD APPLICATION OF SHIMS WHERE NECESSARY.



DETAIL A
SCALE 1 : 18



NOTES:
1. MOUNT SIGN TO STRUCTURE USING 5/8" Ø BOLTS, A563 NUTS & F436 WASHERS
2. TORQUE FASTENERS TO 75 LB-FT, MAXIMUM 100 LB-FT

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DIMENSIONS ARE IN mm's (INCHES shown in brackets)
TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC	± 0.2
1 PL DEC	± 0.1
2 PL DEC	± 0.01
3 PL DEC	± 0.005
ANGLES	± 1°
SURFACE ROUGHNESS	32 µ in

NOTES:
1. MATERIAL: * THICK
2. FINISH:
3. COATING:

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CUSTOMER:
PROJECT: 20mm 10H x 36W RGB SF w/Cellular & Webcam

DRAWN BY	R. YORK	DATE 7/1/2019
CHECKED BY	TROY NACAVELIA	DATE 7/1/2019
APPROVED	TROY NACAVELIA	DATE 7/1/2019

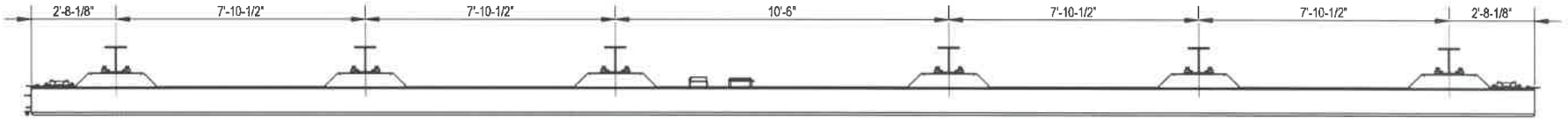
MEDIA RESOURCES INTERNATIONAL
1387 CORNWALL ROAD OAKVILLE ONTARIO
TEL: 1.800.667.4554 FAX: 1.905.337.9531

TITLE
14' x 48' DIGITAL BILLBOARD
10 MODULES HIGH x 36 MODULES WIDE
HIGHWAY SERIES

SIZE	DRAWING NO	REVISION
B	14x48 General Arrangement	

WORK ORDER NO: X | SCALE: 1:75 | WEIGHT: lbs | SHEET 1 OF 6

SHUTTLES MAY NOT BE IN EXACT LOCATION SHOWN UPON ARRIVAL DUE TO SHIPPING BRACKETS. ONCE LED DISPLAY IS OFF-LOADED PLEASE LOOSEN BOLTS ON SHUTTLES AND ADJUST TO SITE CONDITION



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SURFACE ROUGHNESS	32 µ in

NOTES:
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2. FINISH:
3. COATING:

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CUSTOMER

PROJECT: 20mm 10H x 36W RGB SF w/Cellular & Webcam

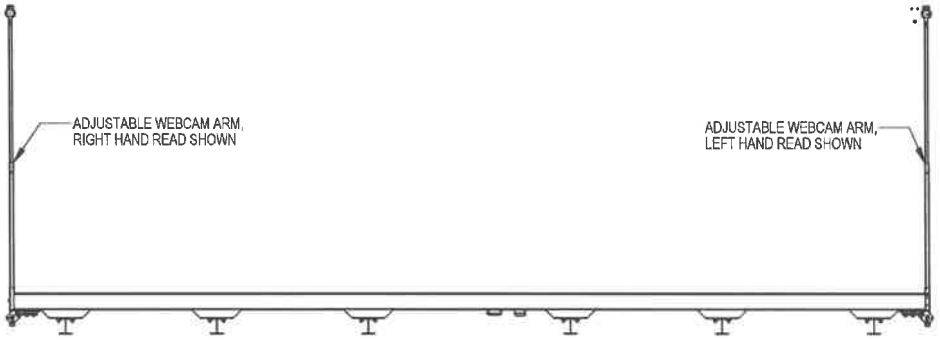
DRAWN BY	R. YORK	DATE 7/1/2019
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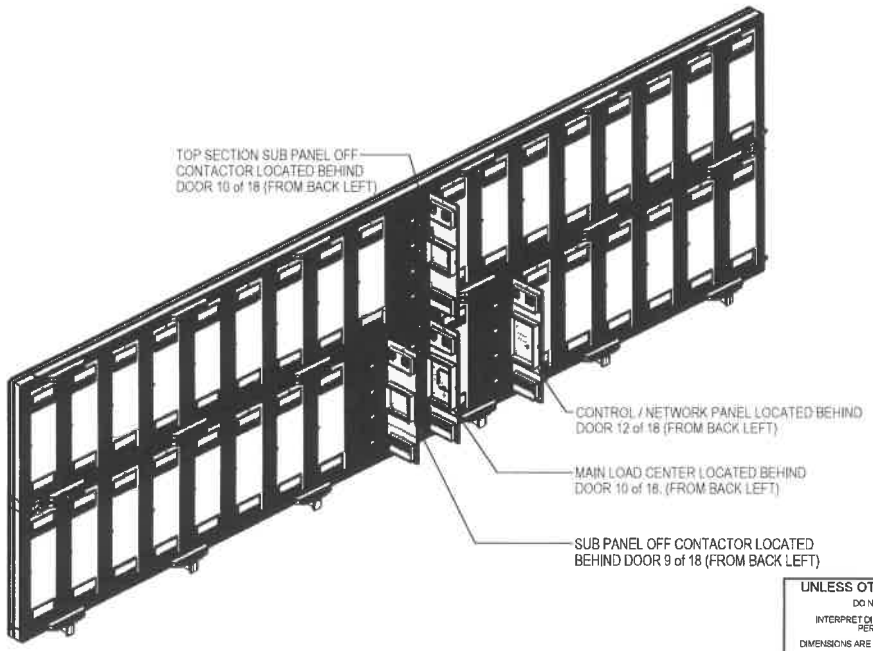
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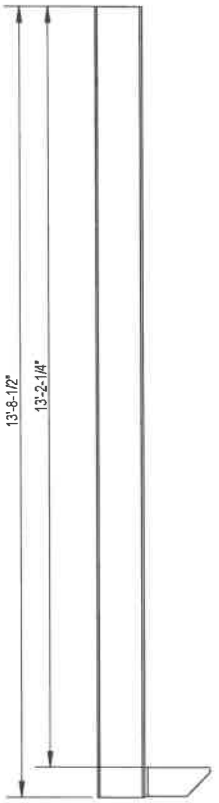
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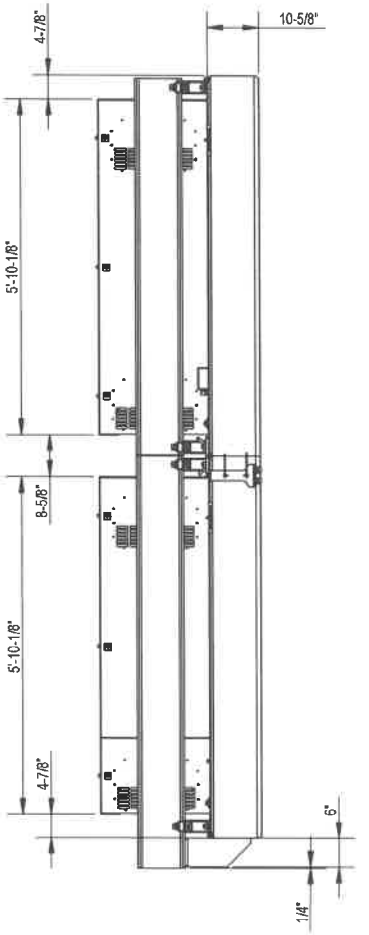
SIZE: B | DRAWING NO: **14x48 General Arrangement** | REVISION

WORK ORDER NO: X | SCALE: 1:40 | WEIGHT: lbs | SHEET 2 OF 6









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ANGLES	± .1°
SURFACE ROUGHNESS	32 µ in

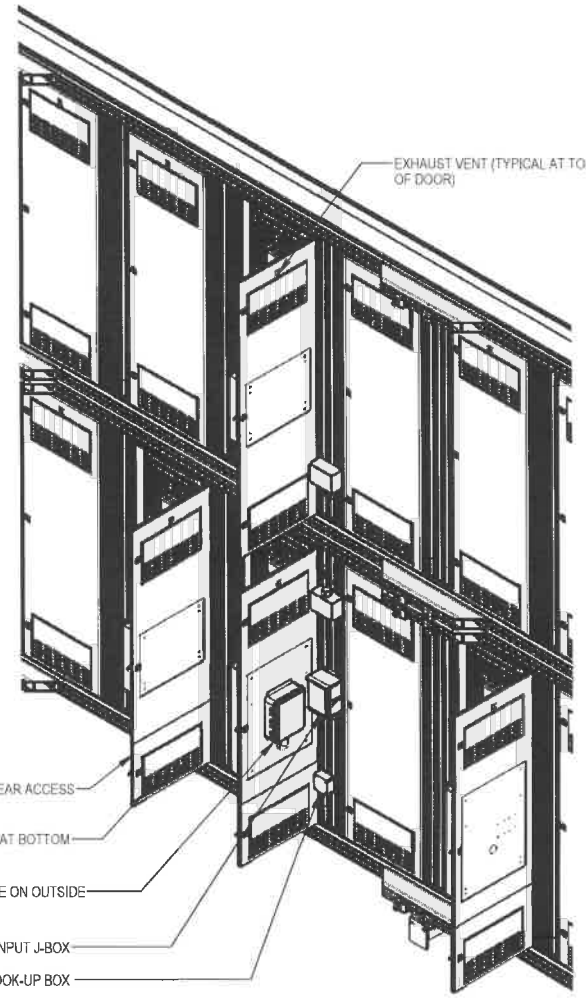
NOTES:
1. MATERIAL: " THICK
2. FINISH:
3. COATING:

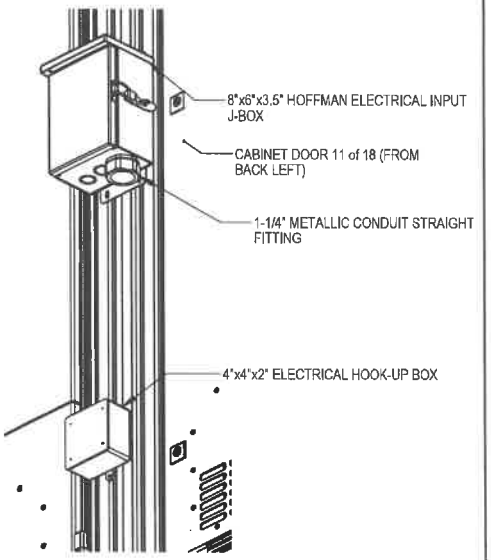
CUSTOMER
PROJECT: 20mm 10H x 36W RGB SF w/Cellular & Webcam
DRAWN BY: R. YORK — DATE: 7/1/2019
CHECKED BY: TROY MACAVELIA — DATE: 7/1/2019
APPROVED: TROY MACAVELIA — DATE: 7/1/2019

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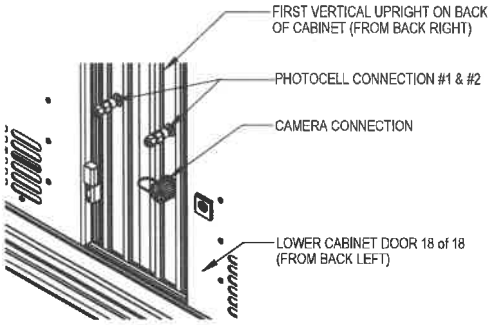
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14' x 48' DIGITAL BILLBOARD
10 MODULES HIGH x 36 MODULES WIDE
HIGHWAY SERIES

SIZE: B
DRAWING NO: 14x48 General Arrangement
REVISION:
WORK ORDER NO: X
SCALE: 1:65
WEIGHT: lbs
SHEET 3 OF 6





ISOMETRIC - REAR ELEVATION



ISOMETRIC - REAR ELEVATION

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ANGLES	± .1°
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1. MATERIAL: " THICK
2. FINISH:
3. COATING:

CUSTOMER

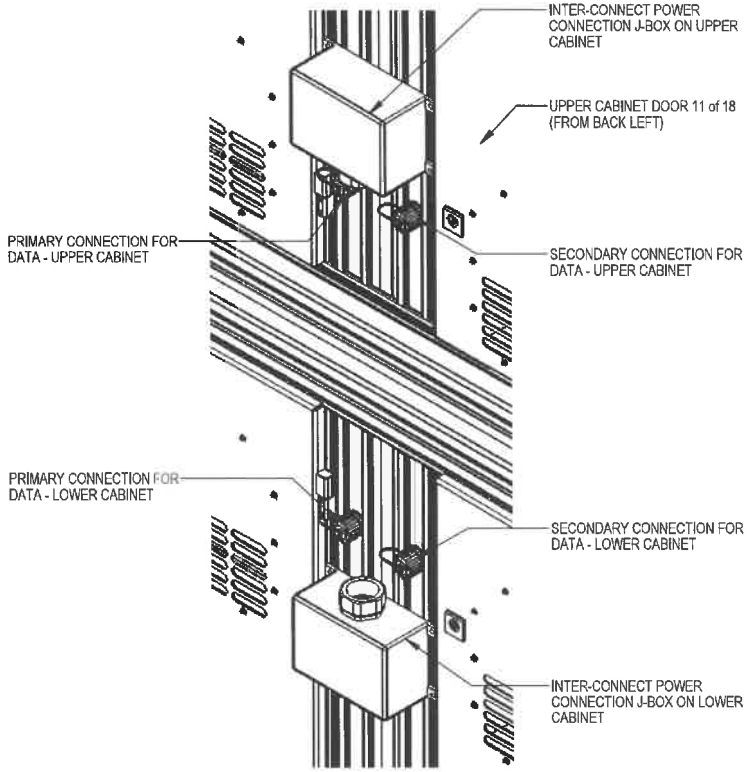
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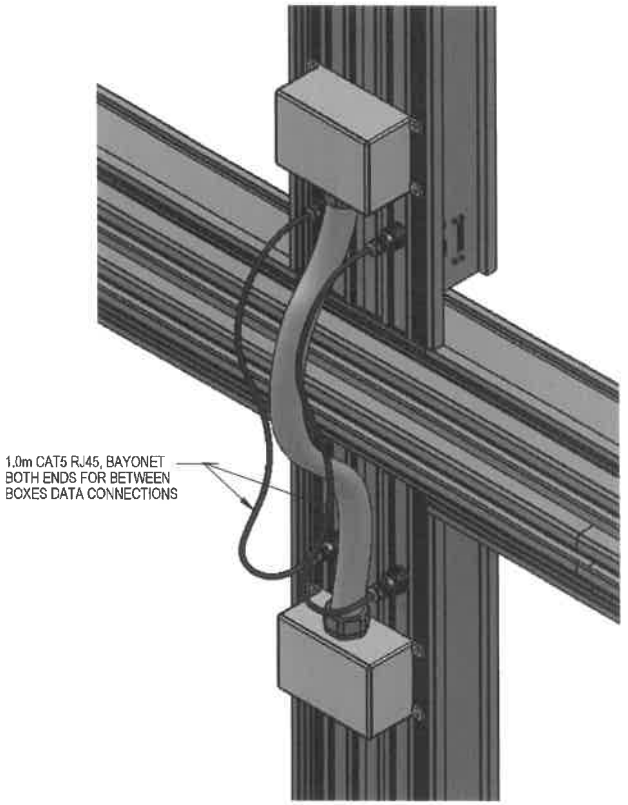
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10 MODULES HIGH x 36 MODULES WIDE
HIGHWAY SERIES

SIZE: B | DRAWING NO: 14x48 General Arrangement | REVISION:
WORK ORDER NO: X | SCALE: 1:25 | WEIGHT: lbs | SHEET 4 OF 6



ISOMETRIC - REAR ELEVATION



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NOTES:
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2. FINISH:
3. COATING:

CUSTOMER
PROJECT: 20mm 10H x 36W RGB SF w/Cellular & Webcam

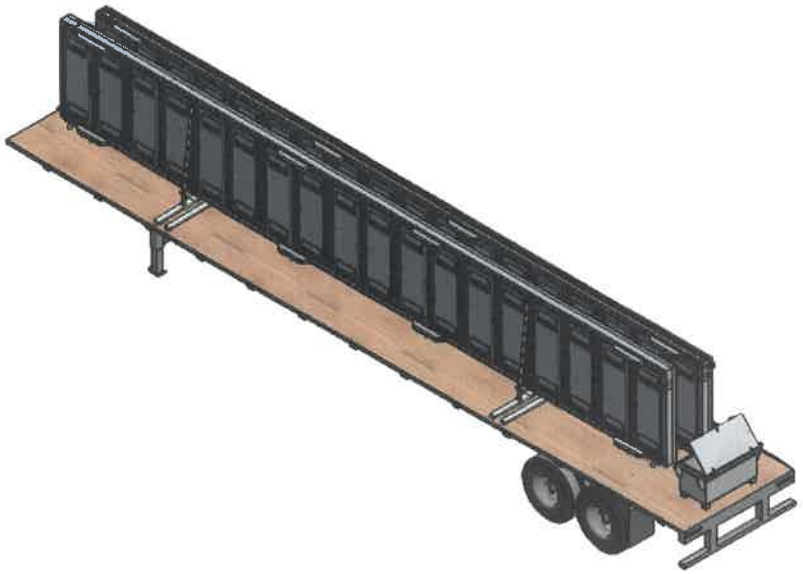
DRAWN BY	R. YORK	DATE 7/1/2019
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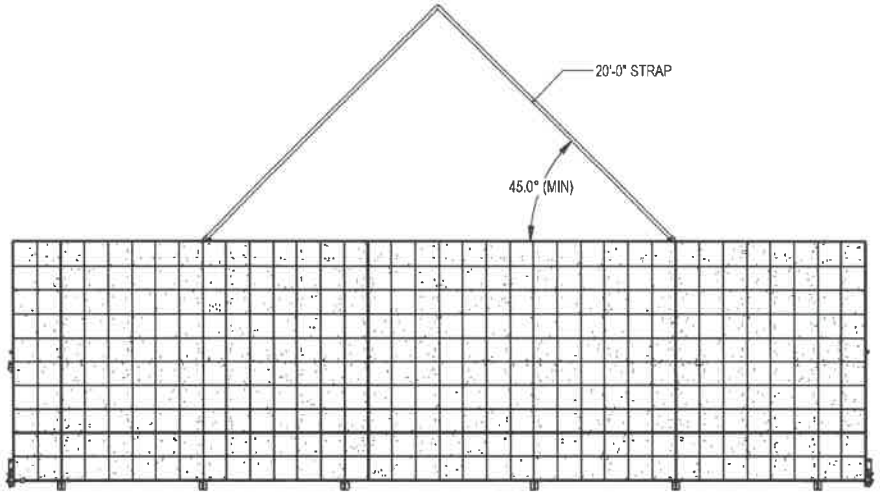
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10 MODULES HIGH x 36 MODULES WIDE
HIGHWAY SERIES

SIZE: B | DRAWING NO: 14x48 General Arrangement | REVISION

WORK ORDER NO: X | SCALE: 1:6 | WEIGHT: lbs | SHEET 5 OF 6



SHIPPING WEIGHT OF LED DISPLAY APPROX. 9400lbs



WEIGHT OF LED DISPLAY APPROX. 8900lbs

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SURFACE ROUGHNESS	32 µ in

NOTES:
1. MATERIAL: " THICK
2. FINISH:
3. COATING:

CUSTOMER
PROJECT: 20mm 10H x 36W RGB SF w/Cellular & Webcam

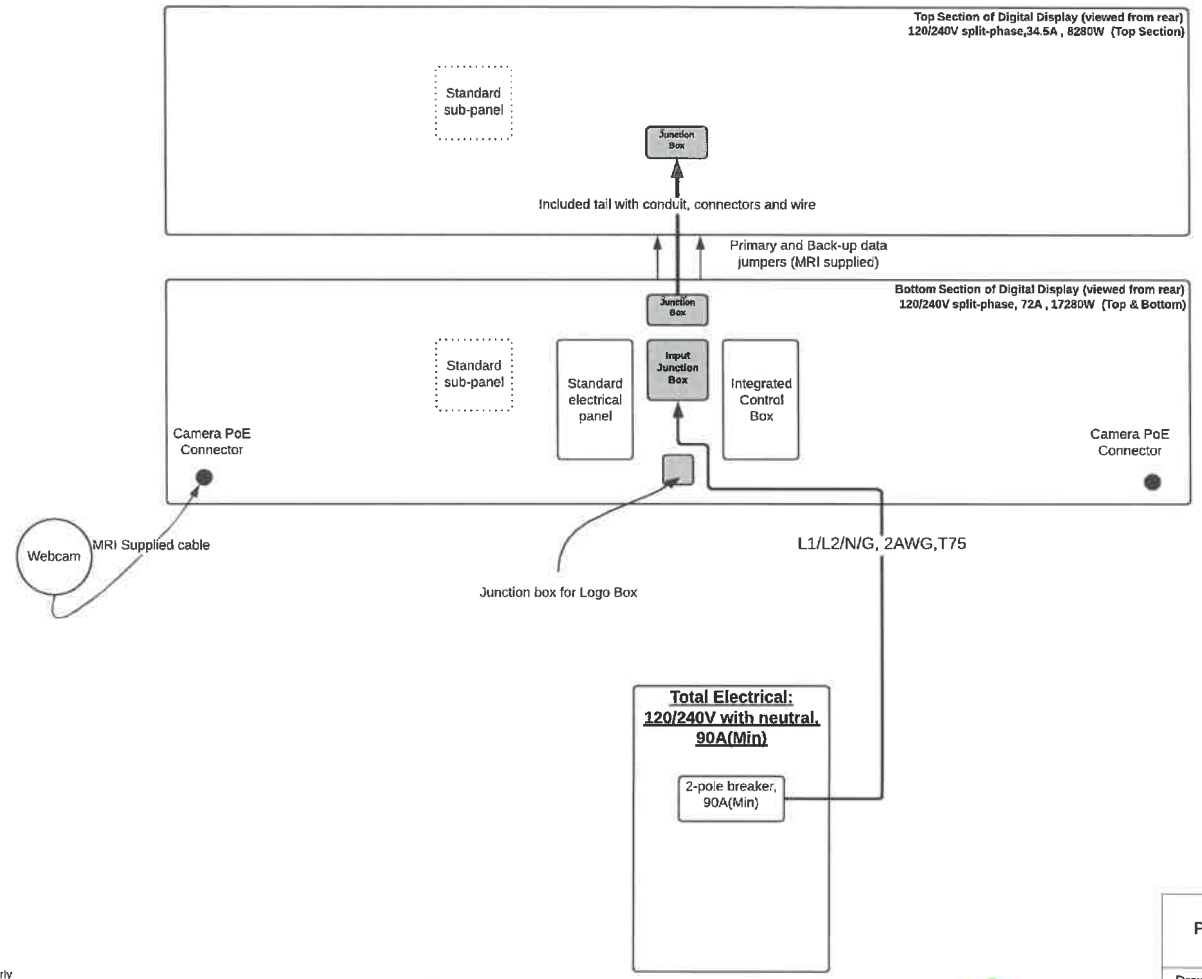
DRAWN BY	R. YORK	DATE 7/1/2019
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14' x 48' DIGITAL BILLBOARD
10 MODULES HIGH x 36 MODULES WIDE
HIGHWAY SERIES

SIZE	DRAWING NO	REVISION
B	14x48 General Arrangement	

WORK ORDER NO: X | SCALE: 1:80 | WEIGHT: lbs | SHEET 6 OF 6



*Note: Structure must be properly grounded with grounding plate or stake.

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Display Electrical Requirements for 120V/240V Split Phase: 400mm 16.67mm Standrad Series Digital Bulletin. (14x48)

Drawn by: Seb (09 April 2020)

SIZE	CAGE CODE	DWG NO.	REV
B			A
SCALE		SHEET	1/1

AMERICAN FORK CITY **MEETING DATE:** October 19th, 2022
PLANNING COMMISSION STAFF REPORT

AGENDA TOPIC:

Review and action of a Final Plat for Pando Lake City, requesting approval for a warehouse development, in the PC (Planned Community) Zone located in the area of 860 E 930 S.

BACKGROUND INFORMATION		
Location:		860 E 930 S
Project Type:		Final Plat
Applicants:		PEPG Consulting, MDP Land LLC
Existing Land Use:		Planned Community
Proposed Land Use:		N/A
Surrounding Land Use:	North	Planned Community
	South	Planned Community
	East	Pleasant Grove Territory
	West	Planned Community, Design Commercial
Existing Zoning:		PC
Proposed Zoning:		N/A
Surrounding Zoning:	North	PC
	South	PI-1
	East	Pleasant Grove Territory
	West	PC, PI-1

BACKGROUND:

The applicant is applying for final plat approval for Pando Lake City, for the development of an office and flexible-use warehouse development in the PC (Planned Community) zone, located at 860 East 930 S. The proposal consists of 5 parcels to be consolidated for the development, and all parcels approximately consist of 6.29 acres. This development is part of a master planned community development project within American Fork City and has a development agreement between the developer and the City.

Sec 17.7.210 Staff Submits Final Plan/Plat And Supporting Materials To Planning Commission

Upon completion of the technical review conference and subject to a finding that the project materials are in a form suitable for action by the planning commission, the final plans/plats and supporting materials shall be placed on the agenda of the planning commission.

Sec 17.7.211 Planning Commission Acts On Final Plan/Plat And Supporting Materials

When the final plan/plat and supporting materials required for approval have been completed in final form, the plan/plat and supporting materials shall be placed on the agenda of the planning commission and the commission may act to recommend approval of the final plan/plat upon a finding that:

1. The final plan/plat and supporting materials conform with terms of the preliminary approval.
2. The final plan/plat 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.
4. The estimates of cost of constructing the required improvements are realistic.
5. The water rights conveyance documents have been provided.

Upon a finding of approval, the chairman shall be authorized to sign the final subdivision plats, where applicable.

PROJECT MAP:



STANDARD CONDITIONS OF APPROVAL:

APPLICANT is responsible and shall submit/post/obtain all necessary documentation and evidence to comply with these Standard Conditions of Approval prior to any platting, permitting, or any other form of authorization by the City including plat recording or other property conveyance to the City and prior to scheduling a pre-construction meeting. All recording shall take place at the Utah County Recorder's Office.

1. **Title Report:** Submit an updated Title Report not older than 30 days or other type of appropriate verification that shows all dedications to the City are free and clear of encumbrances, taxes, or other assessments.
2. **Property Taxes and Liens:** Submit evidence that all the property taxes, for the current and/or previous years, liens, and agricultural land use roll over fees have been paid in full.
3. **Water Rights:** Submit evidence that all the required water rights have been conveyed to American Fork City.
4. **Performance Guarantee:** Post a performance guarantee for all required public and essential common improvements.
5. **Easements and Agreements:** Submit/record a long-term Storm Water Pollution Prevention Maintenance Agreement signed and dated by the property owner and any required easement documentation.
6. **Land Disturbance Permit:** Obtain a Land Disturbance Permit.
7. **Compliance with the Plan Review Comments:** All plans and documents shall comply with all the Technical Review Committee comments and the City Engineer's final review.
8. **Commercial Structure:** Record an Owner Acknowledgment and Utility Liability Indemnification if the proposed building is a multi-unit commercial structure served by a single utility service.
9. **Sensitive Lands:** Record all applicable documents required for compliance with the City's Sensitive Lands Ordinance.
10. **Utility Notification Form:** Submit a Subdivision Utility Notification Form.
11. **Professional Verification:** Submit final stamped construction documentation by all appropriate professionals.
12. **Fees:** Payment of all development, inspection, recording, streetlight, and other project related fees.
13. **Mylar:** Submit a Mylar. All plats will receive final verification of all formats, notes, conveyances, and other items contained on the plat by City staff (recorder, legal, engineer, GIS, planning).

STAFF RECOMMENDATION:

The final plat application meets the requirements of Section 17.7.210 and Section 17.7.211. Staff recommends APPROVAL.

POTENTIAL MOTIONS – Final Plat

APPROVAL

Mr. Chairman, I move that we recommend approval on the final plat for Pando Lake City, for the development of an office and flexible-use warehouse project in the PC (Planned Community) zone, located at 860 East 930 South, subject to any conditions found in the Staff Report.

DENIAL

Mr. Chairman, I move that we deny the final plat for Pando Lake City, for the development of an office and flexible-use warehouse project in the PC (Planned Community) zone, located at 860 East 930 South

TABLE

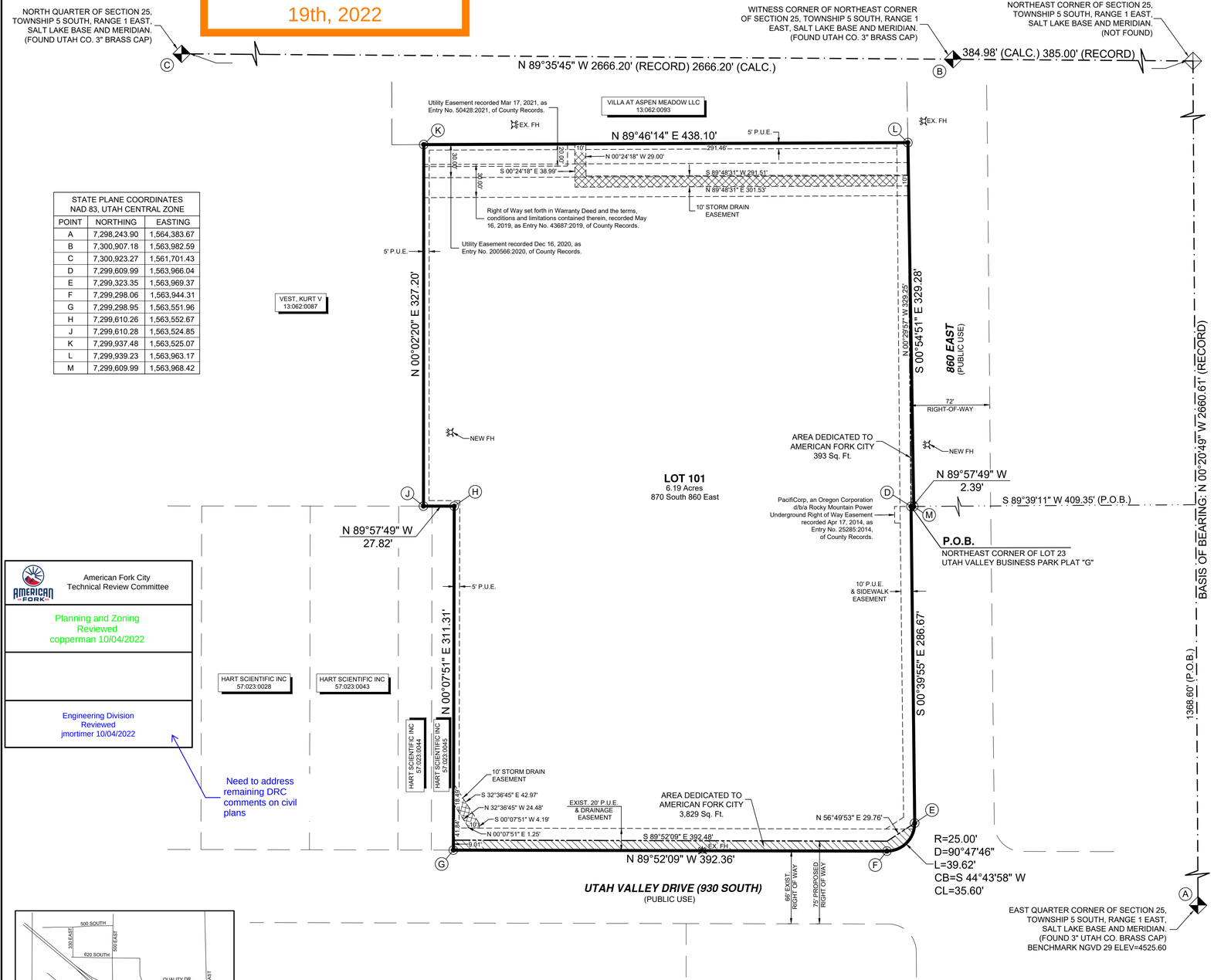
Mr. Chairman, I move that we table action on the final plat for Pando Lake City, for the development of an office and flexible-use warehouse project in the PC (Planned Community) zone, located at 860 East 930 South, and instruct the developer/staff to _____.

NEXT STEP:

Approved as Conditioned
Proceed to Planning
Commission on October
19th, 2022

PANDO LAKE CITY SUBDIVISION

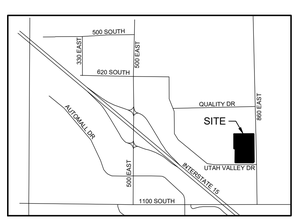
AMENDING LOTS 23, 24, 25, AND A PORTION OF LOT 26 OF THE UTAH VALLEY BUSINESS PARK PLAT "G" ENTRY: 4161 MAP #5893
LOCATED IN THE NORTHEAST QUARTER OF SECTION 25, TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE & MERIDIAN.
CITY OF AMERICAN FORK CITY, COUNTY OF UTAH,
STATE OF UTAH



STATE PLANE COORDINATES NAD 83, UTAH CENTRAL ZONE		
POINT	NORTHING	EASTING
A	7,298,243.90	1,564,383.67
B	7,300,907.18	1,563,982.59
C	7,300,923.27	1,561,701.43
D	7,299,609.99	1,563,966.04
E	7,299,323.35	1,563,969.37
F	7,299,298.06	1,563,944.31
G	7,299,298.95	1,563,551.96
H	7,299,610.26	1,563,552.67
J	7,299,610.28	1,563,524.85
K	7,299,937.48	1,563,525.07
L	7,299,939.23	1,563,963.17
M	7,299,609.99	1,563,968.42

American Fork City Technical Review Committee
Planning and Zoning Reviewed copperman 10/04/2022
Engineering Division Reviewed jmortimer 10/04/2022

Need to address remaining DRC comments on civil plans



VICINITY MAP

N

50 0 50 100

SCALE IN FEET
1" = 50'

LEGEND

- BOUNDARY LINE
- LOT LINE
- SECTION LINE
- ADJOINING PARCELS
- EASEMENT LINE
- SET 5/8" REBAR WITH BLUE PLASTIC CAP OR PIN STAMPED "PEPG" LS #9679988

UTILITY NOTES

1. CULINARY WATER, SECONDARY WATER, SEWER, AND STORM WATER FACILITIES WITHIN THIS SITE PLAN ARE CONSIDERED PRIVATE AND THE DEVELOPER IS RESPONSIBLE TO ENSURE PROPER CONSTRUCTION, REPLACEMENT, REPAIR, OPERATION, AND MAINTENANCE ACCORDING TO CITY AND STATE STANDARDS DURING CONSTRUCTION AND UNTIL THE EXPIRATION OF THE DURABILITY PERIOD AND FINAL INSPECTION.

2. DEVELOPER ACKNOWLEDGES THE RIGHT OF THE CITY TO INSPECT, TESTING OF THESE FACILITIES, MAKING NECESSARY REPAIRS AND OR OTHER ACTIONS WHEN THE DEVELOPMENT FAILS TO DO SO DURING CONSTRUCTION AND UNTIL THE EXPIRATION OF THE DURABILITY PERIOD AND FINAL INSPECTION. THE DEVELOPMENT WILL BE CHARGED FOR THESE ACTIONS FROM THE PERFORMANCE GUARANTEE BOND.

3. CULINARY WATER FACILITIES ARE CONSIDERED PART OF THE CITY'S PUBLIC WATER SYSTEM FOR THE PURPOSES OF TESTING AND REPORTING AS REQUIRED BY THE UTAH STATE DIVISION OF DRINKING WATER AS SET FORTH R309-550-8."

GENERAL NOTES

1. HISTORICAL DEPTH OF HIGH WATER TABLE AND ELEVATION OF OF LOWEST FLOOR SLAB ELEVATION MUST BE A MINIMUM OF 3 FEET ABOVE WATER LEVEL MEASURED DURING SPRING SEASON.

2. OFF-SET PINS TO BE PLACED IN THE BACK OF THE CURB AND 5/8" BY 24" REBAR WITH NUMBERED SURVEY CAP TO BE PLACED AT ALL LOTS REAR CORNERS PRIOR TO OCCUPANCY.

3. BUILDING PERMITS WILL NOT BE ISSUED FOR ANY HOME UNTIL
1) ASPHALT PAVING IS INSTALLED AND
2) FIRE HYDRANTS ARE INSTALLED, APPROVED BY THE FIRE MARSHALL AND CHARGED WITH CULINARY WATER.

SENSITIVE LAND OVERLAY ZONE NOTES

1. THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE AMERICAN FORK CITY SENSITIVE LAND OVERLAY ZONE ORDINANCE AND ITS LATEST AMENDMENT.

2. ALL GROUNDWATER DRAINS WITHIN THIS PROJECT ARE PRIVATELY OWNED AND MAINTAINED BY THE OWNER OR THE PROPERTY OWNER IT SERVES.

3. EACH LOT REQUIRES A SITE SPECIFIC SPECIAL INSPECTION BY THE CITY ENGINEER AND THE PROJECT'S GEOTECHNICAL ENGINEER TO EVALUATE ANY POTENTIAL NEGATIVE IMPACTS OF THE GROUNDWATER TABLE AT THE TIME OF ISSUING A BUILDING PERMIT.

4. EACH LOT TO CONFORM TO THE PRECISE GRADING SHEET AS APPROVED BY THE ENGINEERING DIVISION AND FILED WITH THE BUILDING DIVISION.

5. NO FOOTING, EAVES, WINDOW WELLS OR OTHER IMPROVEMENTS CONNECTED TO STRUCTURES ARE ALLOWED TO BE PLACED WITHIN THE PUBLIC UTILITY EASEMENT.

6. THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE RECOMMENDATIONS FROM THE GEOTECHNICAL REPORT SUBMITTED FOR REVIEW AND APPROVAL.

FLOOD ZONE

SUBJECT PROPERTY LIES WITHIN ZONE X WHICH IS DEFINE AS AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN ACCORDING TO FLOOD RATE INSURANCE MAP NUMBER 4955170120 B EFFECTIVE DATE: JULY 17, 2002

ZONING

PC - PLANNED COMMUNITY

SURVEYOR'S CERTIFICATE

I, ROBERT LAW, DO HEREBY CERTIFY THAT I AM A PROFESSIONAL LAND SURVEYOR AND THAT I HOLD CERTIFICATE NO. 9679988 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH IN ACCORDANCE WITH TITLE 58, CHAPTER 22, PROFESSIONAL LAND SURVEYORS LICENSING ACT. I FURTHER CERTIFY BY AUTHORITY OF THE OWNER(S), I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW IN ACCORDANCE WITH SECTION 17-23-17 AND HAVE VERIFIED ALL MEASUREMENTS AND HAVE PLACED MONUMENTS AS REPRESENTED ON THIS PLAT,

BOUNDARY DESCRIPTION

BEGINNING AT NORTHEAST CORNER OF LOT 23, UTAH VALLEY BUSINESS PARK PLAT "G" SUBDIVISION ON FILE AND OF RECORD AT THE UTAH COUNTY RECORDERS OFFICE (ENTRY: 4161 MAP #5893); SAID POINT BEING NORTH 00°20'49" WEST, ALONG THE SECTION LINE, 1368.60 FEET AND SOUTH 89°39'11" WEST, 409.35 FEET FROM THE EAST QUARTER CORNER OF SECTION 25, TOWNSHIP 5 SOUTH, RANGE 1 EAST; SALT LAKE BASE AND MERIDIAN; AND RUNNING THENCE SOUTH 00°39'55" EAST, 286.67 FEET TO A POINT ON A 25.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE 39.62 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 90°47'46" TO A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF 930 SOUTH (CHORD BEARS SOUTH 44°43'58" WEST, 35.60 FEET); THENCE NORTH 89°52'09" WEST, ALONG SAID NORTHERLY RIGHT OF WAY LINE, 392.36 FEET; THENCE NORTH 00°07'51" EAST, 311.31 FEET TO A POINT ON THE NORTHERLY BOUNDARY LINE OF SAID PLAT "G"; THENCE NORTH 89°57'49" WEST, ALONG SAID NORTHERLY BOUNDARY LINE, 27.82 FEET; THENCE NORTH 00°02'20" EAST, 327.20 FEET; THENCE NORTH 89°46'14" EAST, 438.10 FEET TO A POINT ON THE WESTERLY RIGHT OF WAY LINE OF THE VEST ROAD DEDICATION PLAT ON FILE AND OF RECORD AT THE UTAH COUNTY RECORDERS OFFICE (ENTRY: 54716:2019 MAP #16589); THENCE SOUTH 00°54'51" EAST, ALONG SAID WESTERLY RIGHT OF WAY LINE, 329.28 FEET TO A POINT ON THE NORTHERLY BOUNDARY LINE OF SAID PLAT "G"; THENCE NORTH 89°57'49" WEST, ALONG SAID NORTHERLY BOUNDARY LINE, 2.39 FEET TO THE POINT OF BEGINNING.

CONTAINS: 6.29 ACRES (1 LOT)

ROBERT LAW (SEE SEAL BELOW)

OWNER'S DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED OWNER(S) OF ALL OF THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS PLAT, HAVE CAUSED A SURVEY AND THIS PLAT TO BE MADE OF THE PROPERTY AND HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, BLOCKS, STREETS AND EASEMENTS, AND DO HEREBY DEDICATE THE STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS HEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ____DAY OF _____, A.D. 20__

OWNER OWNER

OWNER OWNER

ACKNOWLEDGMENT

STATE OF UTAH } S.S.
COUNTY OF UTAH }

ON THE _____ DAY OF _____, A.D. 20_____, PERSONALLY APPEARED BEFORE ME THE SIGNERS OF THE FOREGOING CERTIFICATE AND DEDICATION WHO DULY ACKNOWLEDGED TO ME THAT THEY DID EXECUTE THE SAME IN THE CAPACITY INDICATED.

Commission Number _____ Signed (A Notary Public Commissioned in Utah)

Commission Expires _____ Print Name of Notary

ACCEPTANCE BY LEGISLATIVE BODY

THE CITY OF AMERICAN FORK CITY, COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS_____DAY OF_____, A.D. 20____.

MAYOR CITY COUNCIL MEMBER

CITY COUNCIL MEMBER CITY COUNCIL MEMBER

CITY COUNCIL MEMBER CITY COUNCIL MEMBER

APPROVED: _____ CITY ENGINEER ATTEST: _____ CLERK - RECORDER

PLANNING COMMISSION APPROVAL

APPROVED THIS_____DAY OF_____ 20____ BY THE AMERICAN FORK CITY PLANNING COMMISSION

CITY PLANNER PLANNING COMMISSION CHAIRMAN

SEWER/WATER AUTHORITY APPROVAL

APPROVED THIS _____DAY OF_____ 20____ BY THE AMERICAN FORK CITY PUBLIC WORKS.

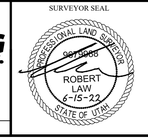
SEWER/WATER AUTHORITY

PREPARED BY:

PEPG CONSULTING LLC
9270 SOUTH 300 WEST • SANDY, UT 84070
PHONE: (801) 562-2521 • FAX: (801) 562-2551

DATE: JUNE 15, 2022 | FILE: 6077.2014/DWG/FPLAT-01

SURVEYOR SEAL



CLERK-RECORDER SEAL

RECORDING INFORMATION

PANDO LAKE CITY SUBDIVISION

AMENDING LOTS 23, 24, 25, AND A PORTION OF LOT 26 OF THE
UTAH VALLEY BUSINESS PARK PLAT "G" ENTRY: 4161 MAP #5893
LOCATED IN THE NORTHEAST QUARTER OF SECTION 25,
TOWNSHIP 5 SOUTH, RANGE 1 EAST,
SALT LAKE BASE & MERIDIAN.
CITY OF AMERICAN FORK CITY, COUNTY OF UTAH,
STATE OF UTAH