NOTICE OF REGULAR MEETING OF THE CITY COUNCIL OF THE CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH

Public Notice

Public notice is hereby given that the City Council of the City of St. George, Washington County, Utah, will hold a regular meeting in the City Council Chambers at the St. George City Offices located at 175 East 200 North, St. George, Utah, on Thursday, February 20, 2025, commencing at 5:00 p.m.

The agenda for the meeting is as follows:

Call to Order
Invocation
Flag Salute

1. **Mayor's recognitions and updates.**

2. **Consent Calendar.**

   a. **Consider approval of a Transportation Improvement Program Funds (TIF) Cooperative Agreement between St. George City and UDOT for the 700 East Roadway Improvements.**

   BACKGROUND and RECOMMENDATION: The 700 East Cycle Track and Pedestrian Improvements project will design and construct a two-way protected bike lane (trail) and pedestrian improvements on 700 East from 600 South to the beginning of the existing Temple Springs trail at approximately 200 North. The project intent is to improve pedestrian safety along the corridor and provide trail access within existing public right of way. The City was awarded a UDOT grant to fund 60% of the project with a 40% local match. The cooperative agreement describes the scope of work and matching funds required by the City.

   b. **Consider approval of a Landscape Maintenance Agreement between the City of St. George and Utah Tech University for landscaping on 700 East.**

   BACKGROUND and RECOMMENDATION: As part of the 700 East Cycle Track and Pedestrian Improvements project, a planted median will be installed from 600 S to 100 S on the east side of the roadway separating the multi-use path and vehicle traffic. The City has coordinated with Utah Tech University to maintain the addition of landscaped areas within the median.

   c. **Consider approval of a UDOT Local Government Contract with UDOT and Horrocks Engineers for the design of the SR-7 Exit 5 Interchange Project.**

   BACKGROUND and RECOMMENDATION: This agreement is for the design of the Exit 5 Interchange on SR-7. The proposed interchange will connect the 3000 E corridor (Southern Hills Dr) on the north of SR-7 and also Rimrunner Dr on the south. UDOT will be administering the project. The project will be funded by federal dollars and local match funds. The design of the interchange is estimated at $1,728,104.90.

3. **Public hearing and consideration of Ordinance No. 2025-012 approving the vacation of a public utility and drainage easement as described in Doc. No. 20170025075.**

BACKGROUND and RECOMMENDATION: This easement was granted to the City of St. George as public use across parcel SG-6-3-12344 by Doc. No. 20170025075, recorded on the 19th day of June, 2017. The Joint Utilities Commission recommended approval.

4. **Public hearing and consideration of Ordinance No. 2025-013 approving the vacation of a portion of an existing public cross access and municipal utility easement, and also a drainage easement located on Lots 5, 6, and 7 of The Fields at Mall Drive Phase 2 Partial Amendment A.**

BACKGROUND and RECOMMENDATION: The subdivision plat for The Fields at Mall Drive Phase 2 Partial Amendment A was approved by the City of St. George Land Use Authority on the 12th day of July, 2024 and recorded in the Office of the Washington County Recorder on the 1st day of August, 2024. The Joint Utilities Commission recommended approval.

5. **Public hearing and consideration of Ordinance No. 2025-014 approving the vacation of a portion of an existing municipal utility easement located between Lots 58 and 59 of Cottam Cove Phase 5.**

BACKGROUND and RECOMMENDATION: The subdivision plat for Cottam Cove Phase 5 was approved by the City of St. George Land Use Authority on the 20th day of September, 2022 and recorded in the Office of the Washington County Recorder on the 23rd day of September, 2022.

6. **Consider approval of Ordinance No. 2025-015 amending an approved PD-C (Planned Development Commercial) zone on approximately 0.43 acres located east of River Road and south of 900 south, with conditions from the Planning Commission. (2025-PDA-001 - 951 S River Road Commercial)**

BACKGROUND and RECOMMENDATION: The subject property is in a PD-C (Planned Development Commercial) Zone. When the PD-C zone was approved by the City Council in 2006, the approval was to allow all uses listed in the AP (Administrative Professional) zone. The project includes a 5,000 square foot building on a 0.43 acre site. The Planning Commission held a public hearing on the request on January 28, 2025 and recommend approval of the amendment with conditions.

7. **Consider approval of Ordinance No. 2025-016 re-approving the Flats at Grand View PD-R (Planned Development Residential) zone on approximately 8.93 acres to amend the approved Flats at Grand View development with conceptual site plan and elevations, located generally at 1600 West and Skyrocket Road., with a condition from the Planning Commission. (Case No. 2025-PDA-007 - Flats at Grand View at Green Valley)**

BACKGROUND and RECOMMENDATION: In February of 2021, Grand Views was granted PD zoning allowing a total of 431 units. Additionally, the initial 240 apartment units were also approved at that time. In September of 2021, City Council approved a zone change on the subject property which allowed 50 units which was later updated to 60 units. The applicant allowed the approvals to lapse and is now

ready to move forward. As such, the applicant is requesting reapproval of the PD approvals. The Planning Commission held a public hearing on January 28, 2025 and voted 6-0 to forward a positive recommendation with a condition.

8. **Consider approval of Ordinance No. 2025-017 amending the existing Rillisante Villas at Divario PD-R (Planned Development Residential) zone on approximately 24.10 acres to amend the approved Rillisante Villas development with conceptual site plan and elevations located generally on the west side of the intersection of Canyon View Drive and Gap Canyon Parkway, with conditions from the Planning Commission. (Case No. 2025-PDA-006 - Rillisante Villas)**

BACKGROUND and RECOMMENDATION: In April of 2021, the City Council voted to approve a zone change on the property from R-1-10 to PD-R. In November of 2023, some minor amendments to the site and architecture were made and approved by the City Council. The current applications makes further changes to the site layout and building elevations. The Planning Commission held a public hearing on the request on January 28, 2025 and recommend approval of the amendment with conditions.

9. **Appointments to Boards and Commissions of the City.**

10. **Reports from Mayor, Councilmembers, and City Manager.**

11. **Request a closed meeting to discuss litigation, security, property acquisition or sale or the character and professional competence or physical or mental health of an individual.**

Christina Fernandez, City Recorder

February 14, 2025
Date

REASONABLE ACCOMMODATION: The City of St. George will make efforts to provide reasonable accommodations to disabled members of the public in accessing City programs. Please contact the City Human Resources Office, 627-4674, at least 24 hours in advance if you have special needs.

Agenda Date: 02/20/2025 **Agenda Item Number:** 2a

Subject:

Consider approval of a Transportation Improvement Program Funds (TIF) Cooperative Agreement between St. George City and UDOT for the 700 East Roadway Improvements.

Item at-a-glance:

Staff Contact: Cameron Cutler

Applicant Name: City of St. George

Reference Number: N/A

Address/Location:

700 E from 600 S to St. George Blvd

Item History (background/project status/public process):

The 700 East Cycle Track and Pedestrian Improvements project will design and construct a two-way protected bike lane (trail) and pedestrian improvements on 700 East from 600 South to the beginning of the existing Temple Springs trail at approximately 200 North. The project intent is to improve pedestrian safety along the corridor and provide trail access within existing public right of way. The City was awarded a UDOT grant to fund 60% of the project with a 40% local match. The cooperative agreement describes the scope of work and matching funds required by the City.

Staff Narrative (need/purpose):

The state grant that was awarded to the City is more than what is needed for the project based on the project estimate. The project estimate is 1,450,000 (State funds 870,000, local funds 580,000). State grant awarded is up to 1,362,079.20. Staff does not feel that the full state grant, and the corresponding local match, will be needed for the project.A demonstration for the cycle track on 700 E occurred in 2021 to determine feasibility followed by a corridor pedestrian study in 2022. Prior to the grant application, project concepts were presented to Council in a work meeting in July 2023. Design is near completion with an estimated construction of summer 2025. The trail will be located on the E side of 700 E, separated by a planted median from 600 S to 100 S. Also to be included on the agenda will be a separate item to consider approval of a landscape maintenance agreement with Utah Tech University wherein the university agrees to maintain the proposed landscaping.

Name of Legal Dept approver: Daniel Baldwin

Budget Impact:

Cost for the agenda item: Up to 2,270,132 (State - 1,362,079.20, Local - 908,052.8)

Amount approved in current FY budget for item: 600,000

If not approved in current FY budget or exceeds the budgeted amount, please explain

funding source:

Staff feels that the full amount of state grant and local match will not be needed. Based on the project estimate, local funds needed on the project will be approx. 580,000, which will be covered in the existing budget. A budget amendment will still need to be approved since the City will be receiving the state grant (60% of project costs), which was not in the adopted budget.

Description of funding source:

City transportation improvement fund (TIF), Street Impact Fees, and State Grant

Recommendation (Include any conditions):

Staff recommends approval of the grant agreement.

TRANSPORTATION INVESTMENT PROGRAM FUNDS (TIF)

COOPERATIVE AGREEMENT

This Transportation Investment Program Funds ("TIF") Cooperative Agreement (the "Agreement") is entered to be effective as of _____, by and between the Utah Department of Transportation ("UDOT"), an agency of the State of Utah, and **St George City** ("the Agency"), a Utah **municipal corporation** of the State of Utah. UDOT and the Agency are collectively referred to as "Parties" and each may be referred to individually as "Party."

RECITALS

WHEREAS, the Utah State Legislature appropriated money for the TIF Program ("Program") pursuant to Utah Code Section 72-2-124, and Program funds must be administered by UDOT when a scope of work has been approved by the Utah Transportation Commission pursuant to Utah Code 72-2-124 and 72-1-304; and

WHEREAS, the Agency requested the project that is described in this Agreement (the "Project"), and the Agency has committed a local match amount as required by Utah Code Section 72-2-124, and the funding was approved pursuant to the Utah Transportation Commission Policy UTC 01-01 on **June 28, 2024**.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing Recitals (which are incorporated into this Agreement by this reference), the mutual covenants and agreements hereafter set forth, the mutual benefits to the Parties to be derived, and for other valuable consideration, the receipt and sufficiency of which the Parties acknowledge, it is hereby agreed as follows:

1. Objective and Scope of Work. This Agreement is entered to govern Program funding for the Project, which is further described as follows:

   The 700 East Cycle Track and Pedestrian Improvements project will design and construct a cycle track (two-way protected bike lane) and pedestrian improvements on 700 E from 600 S to the beginning of the existing Temple Springs trail at approximately 200 N. The project will be constructed within existing City of St George right of way. Improvements include modifications to the existing roadway cross section, asphalt grinding and surface treatments to remove existing striping, constructing and painting the median-separated cycle track, modifications to signal detection of bicycles and pedestrians, improving corridor ADA access, lighting, and curb bulb-outs at key intersections. If funding allows, landscaping will be planted within the medians created by the tack-on curb. This project does not include improvements on St. George Blvd.

   The Agency agrees to use the funding provided hereunder solely to construct the Project described above in compliance with this Agreement and other applicable requirements.

Other applicable requirements include the terms of this Agreement, the approved UDOT Funding Application, UDOT's Award, and all legal requirements associated with such funding. The Agency further agrees that the scope of work to be performed, estimated costs, and estimated schedule must remain consistent with UDOT's award to the Agency. UDOT must give prior written approval for any material modifications to the scope of work for the duration of the Project or they will not be acceptable for funding. Program Funds can only be used to pay for expenses that are stated in the Project's approved scope of work, and the Agency shall not use Program Funds to pay for any expense that is not part of the approved scope of work.

2. Local Match Amount and Payment Schedule. The Agency commits to fund a local match amount of **$908,052.80** in order to receive the eligible Program fund amount of **$1,362,079.20** for the Project (the "Program Funds"). UDOT will deliver the Program Funds to the Agency in reimbursement payment(s). The Agency must apply Program Funds and matching funds on a pro-rata basis (40%/60%) to expenses within the approved Project scope of work as they are paid. Upon UDOT's request, the Agency will provide UDOT with an itemized list of all spending for the activities described in the approved Project scope of work that includes all funding sources, Project costs, and dates of expenditure. The following chart is included to identify the Program Funds, local match funding, and other funding approved for the Project over the life of the Project:

Fund	Prior	FY 2025	FY 2026	Total	State Aid	Other	Percent
Local Match	$0.00	$908,052.80	$0.00	$908,052.80	$0.00	$0.00	40%
ST_TIF_ACT	$0.00	$1,362,079.20	$0.00	$1,362,079.20	$0.00	$0.00	60%
Total	$0.00	$2,270,132.00	$0.00	$2,270,132.00	$0.00	$0.00	100%

The following sources may be used for local matching funds: Non-UDOT administered State funding, local funding, county funding, federal funding, right-of-way contribution, in-kind contributions.

3. Progress & Final Report. The Agency will submit to UDOT a brief, one (1) -page progress report and photos of the Project for each quarter of the calendar year during which the Agency is holding unexpended Program Funds. The quarterly progress report will be submitted within thirty (30) days after the end of each quarter and shall include the following:

   A. A brief description of the progress and tasks completed for the approved scope of work for the Project, and any photos of the Project or the site.
   B. A summary of all funds expended and budget remaining (showing all funding sources, Project costs, and projected dates of expenditure.

Upon completion of the Project, the Agency will submit a brief one (1)-page final report and shall include the following:

A. A brief description of the completed Project.
B. The itemized report detailing where the funds have been spent that is required by Paragraph 6 below.
C. Photos, exhibits, or videos of the completed Project.

4. Additional Information. The Agency will cooperate with all of UDOT's requests for information or status concerning the Project and will promptly respond to them. The Agency acknowledges that the Agency and UDOT may be asked to submit reports or respond to inquiries about Program Funds for the Utah State Legislature and the Utah Governor's Office.

5. Adoption of Project. After the Project is complete, the Agency agrees to promptly implement or start the process to implement the results of the Project (such as by allowing public use of the Project).

6. Use and Residual Funds. Upon completing the Project or expending all of the Program Funds, the Agency will provide UDOT with an itemized report detailing where all funds have been spent and also showing all funding sources, the costs for the full Project, and dates of expenditure. If any Program Funds remain unexpended after the completion of the approved scope of work, the Agency shall return the unexpended Program Funds to UDOT within sixty (60) days, with or without a request by UDOT. Program Funds and matching funds must be expended on the Project on a pro-rata basis, and the amount to be returned must be the unexpended pro-rata portion of the Program Funds provided for the Project.

7. No Additional Funds. Unless specifically agreed to in a written amendment to this Agreement, UDOT will not be required to contribute additional funds to the Project. If the Agency decides to cancel or abandon the Project before it is complete, or the approved scope of work cannot be completed for any reason, the Program Funds and the Agency funds must bear expenses for completed portions of the approved scope of work pro-rata (40%/60%), and the Agency shall return to UDOT the unexpended pro-rata portion (40%/60%) of the Program Funds within sixty (60) days (with or without request by UDOT).

8. Funds Provided Without Risk to UDOT. UDOT is only providing awarded funding to the Agency under this Agreement, and this Agreement is without risk to UDOT. The Agency agrees that the Agency is solely responsible to properly administer and spend the Program Funds. The Agency acknowledges that UDOT needs to obtain information concerning the Project and the use of the Program Funds from time to time, and that UDOT may need to pursue a recovery of the Program Funds or stop an abuse of Program Funds if necessary. The Agency agrees to cooperate with UDOT and to provide for a proper administration and use of the Program Funds.

9. Term. The Parties agree that this Agreement shall remain in full force and effect until **June 30, 2026** unless otherwise agreed to by the Parties in an amendment to this Agreement. At the end of **June 30, 2026**, if any Program Funds have not been expended for the approved Project scope of work, the Agency shall return to UDOT the unexpended pro-rata portion (40%/60%) of the Program Funds within sixty (60) days, with or without a request by UDOT. If the Agency cannot complete the Project within the given time frame

the Agency may request an extension. The request must be sent in writing to UDOT six (6) months prior to the Agreement end date.

10. Termination and Remedies. In the event that UDOT determines the Agency has not complied with the requirements of this Agreement, UDOT will provide written notice of the non-compliance. The Agency agrees to cooperate with any inquiries or investigations conducted by UDOT. If the Agency does not remedy the breach stated in UDOT's written notice of non-compliance within the time period stated in the notice, UDOT may terminate the Agreement. In the event of termination for non-compliance, the Agency agrees that within sixty (60) days it will pay to UDOT all unexpended Program Funds that it held on the date of the notice, and it will also repay to UDOT the amount of any Program Funds that were spent on unapproved expenses (with or without additional requests by UDOT). The Agency agrees that it does not have the right to possess funds that are misapplied and that the same are immediately due and payable to UDOT so UDOT can return them to the state of Utah. UDOT has the right to all remedies available by law.

11. The Agency's Compliance. The Agency hereby represents to UDOT that it has complied and will continue to comply with the requirements necessary for the award of the funding provided under this Agreement, including but not limited to, the moderate income housing and other obligations set forth in Utah Code 72-2-124.

12. Miscellaneous.

A. Any party may give a written notice under this Agreement by delivering it to the following physical address (an email may be used in addition as a courtesy), and notice is effective upon delivery when delivered by hand or by overnight delivery service with confirmation of delivery (or, if placed in the U.S. mail, notice is effective three days after such notice receives a postmark):

To UDOT:	To Agency:
UDOT 4501 South 2700 West Box 143600 Salt Lake City, UT 84114 Attention: _____ With a copy to: Assistant Attorney General (UDOT) 4501 South 2700 West Box 143600 Salt Lake City, UT 84114	St. George City 175 East 200 North St. George, UT 84770

B. The parties agree to undertake and perform all further acts that are reasonably necessary (except when expressly prohibited by law) to carry out the intent and

purpose of the Agreement and to assist UDOT with maintaining compliance with the legal requirements applicable to UDOT after receiving a written notice that explains the need for such action.

C. No part of this Agreement may be waived, whether by a party's failure to insist on strict performance of this Agreement or otherwise, except in a writing signed by an authorized representative of the party waiving. Neither party may assign or delegate this Agreement and actions required by it without the other party's prior written authorization, and any purported assignment or delegation to the contrary is void. This Agreement does not create any agency, joint venture, partnership, or other relationship among the parties, and it is intended only for the parties hereto and does not create any third-party beneficiaries. This Agreement is governed by Utah law without reference to choice or conflict of law provisions. Jurisdiction for any judicial action brought in connection with this Agreement shall be brought in a court in Salt Lake County, Utah, and ALL PARTIES KNOWINGLY AND VOLUNTARILY WAIVE THEIR RIGHTS TO A JURY TRIAL. Time is of the essence. This Agreement (or, if any part hereof is invalidated by law, this Agreement's remaining provisions) shall be construed to enforce its terms to the fullest extent allowed under applicable law to give effect to the intent of the parties. This Agreement will not be construed under an assumption to interpret it against a drafter. Before taking any legal action in connection with this Agreement, each party agrees to first advise the other of a dispute and to meet to discuss it in good faith in an effort to resolve it. All remedies in this Agreement are cumulative and nonexclusive, they survive a termination of this Agreement, and they do not limit any other remedies available to the parties. Nothing in this Agreement shall be construed to limit UDOT's governmental powers and authority. This Agreement may only be amended in a written document that is signed by an authorized representative of each party. This is the entire agreement of the parties with respect to the subject matter hereof and it shall supersede all prior negotiations, understandings, and agreements with respect to such subject matter. Each party warrants that all of its representatives who are necessary to make this Agreement fully binding against the party (and its successors and assigns, if any) have signed below with the party's authorization, and that this Agreement's terms do not violate laws, contracts, or commitments that apply to the party. This Agreement may be signed in counterparts and signed electronically.

(Signature Page to Follow)

IN WITNESS WHEREOF, the Parties have entered into this Agreement effective as of the date first set forth herein.

RECOMMENDED FOR APPROVAL

By:_____
Title: UDOT Region 4 Project Manager

Date:_____

UTAH DEPARTMENT OF TRANSPORTATION

By: _____
Title: UDOT Region Director (Kirk Thornock)

Date:_____

UTAH COMPTROLLER'S OFFICE

By:_____
Title: Contract Administrator, Kristi Barney

Date: _____

ST. GEORGE CITY

By:_____

Title: _____

Date: _____

Approved as to form: _____

Attest (Recorder):

_____

Agenda Date: 02/20/2025 **Agenda Item Number:** 2b

Subject:

Consider approval of a Landscape Maintenance Agreement between the City of St. George and Utah Tech University for landscaping on 700 East.

Item at-a-glance:

Staff Contact: Cameron Cutler

Applicant Name: City of St. George

Reference Number: N/A

Address/Location:

700 E from 600 S to St. George Boulevard

Item History (background/project status/public process):

As part of the 700 East Cycle Track and Pedestrian Improvements project, a planted median will be installed from 600 S to 100 S on the east side of the roadway separating the multi-use path and vehicle traffic. The City has coordinated with Utah Tech University to maintain the addition of landscaped areas within the median.

Staff Narrative (need/purpose):

The project will use Utah Tech's irrigation system. Planted areas will use desert landscaping and rock mulch with areas that require site distance (intersections and pedestrian crossings) having stamped concrete.

Name of Legal Dept approver: Daniel Baldwin

Budget Impact: No Impact

Recommendation (Include any conditions):

Staff recommends approval of the landscape maintenance agreement.

UNIVERSITY AVENUE (700 EAST) LANDSCAPE MAINTENANCE AGREEMENT BETWEEN UTAH TECH UNIVERSITY AND THE CITY OF ST. GEORGE

THIS MAINTENANCE AGREEMENT ("**Agreement**") is made and entered into as of the _____ day of _____, 2025, by and between **CITY OF ST. GEORGE,** a Utah municipal corporation (the "**City**"), and **UTAH TECH UNIVERSITY** ("**UT**") (individually "Party", collectively "Parties").

RECITALS

WHEREAS, the City is constructing a median within the public right-of-way of University Avenue (700 East) from approximately 600 S. to St. George Boulevard (the "**Project**"); and

WHEREAS, the City and UT desire to install certain landscaping within the median portion of the Project (the "**Landscape Improvements**") in the University Avenue (700 East) public right-of-way from approximately 600 South to 100 South, as more particularly depicted on Exhibit 1 attached hereto (the "**Landscape Area**"); and

WHEREAS, the City is willing to facilitate installation of the Landscape Improvements within the Landscape Area, subject to UT's agreement to maintain the Landscape Improvements; and

WHEREAS, the Parties desire to reduce their agreements and understandings to writing;

AGREEMENTS

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the City and UT hereby agree as follows:

1. **Maintenance of Landscape Improvements.** UT hereby agrees to provide, or to have provided, as applicable, lawn and grounds care maintenance services for the Landscape Improvements and to generally maintain the Landscape Improvements in an attractive and good condition, to the reasonable satisfaction of UT and the City. UT agrees that upon 90 days written notice from the City, UT will remove, or modify in accordance with City Code, any landscape feature which may interfere with or impede public safety, including traffic. The Parties further agree that the City shall retain the right to remove any landscape feature at any time which the City deems to have created an emergency situation that interferes with or impedes public safety.

1.1. During UT's maintenance of the Landscape Improvements, UT shall not allow any equipment or materials on the public roadway that would hinder the free flow of vehicle traffic. If UT requires the use of a portion of the roadway for its maintenance of the Landscape Improvements, then UT shall submit to the City an application for an encroachment permit with an appropriate Traffic Control

Plan which the City must approve before UT may commence any work.

1.2. UT may not interfere with any utility which may be located in the Landscape Area.

1.3. UT shall remove or address noxious weeds, litter, insects, and debris within the Landscape Area.

1.4. No storm drain intake or system in the Landscape Area shall be impaired by the Landscape Improvements.

1.5. Any landscape lighting within the Landscape Area shall comply with the City Code and lighting regulations.

1.6. Any signage within the Landscape Area shall comply with the City Code and signage regulations.

1.7. Any usage costs for water, power, or other utilities utilized to maintain the Landscape Improvements shall be borne solely by UT.

1.8. UT shall be required to comply with future revisions of landscape ordinances that the City makes for the purpose of mandating water-saving or water-wise landscaping, but only if those future revisions are applied equally throughout the City and to other property owners that are similarly situated to UT.

2. **Repair and Replacement.** The City shall retain all rights over the entire road right-of-way and shall maintain the roadway, asphalt, curb and gutter, other physical infrastructure, and its utilities at its sole cost and expense. The City shall notify UT in writing at least 90 days before performing any such maintenance or repair work on the roadway, infrastructure, or utilities. In consultation with UT, the City shall replace or repair any damage to the Landscape Area that results from the City's maintenance or repair work. UT shall have the right to repair and replace any Landscape Improvements in the Landscape Area. UT shall replace or repair any damage to City improvements or infrastructure inside the Landscape Area that results from UT's maintenance of Landscape Improvements.

3. **Indemnity.** UT will indemnify and hold harmless the City from any claims caused by the negligent acts of UT, its employees or agents related to this Agreement. Likewise, the City will indemnify and hold harmless UT from any claims caused by the negligent acts of the City, its employees, officers, elected officials, or agents related to the Agreement. Neither Party shall be liable for losses or damages to the extent attributable to the other Party's negligence.

4. **Termination.** This Agreement, UT's perpetual license, and the City's grant of access may only be terminated for cause and only after the terminating Party gives the other Party ninety (90) days written notice and an opportunity to cure. If the non-terminating Party cures or begins and continues a reasonable effort to cure any alleged cause within ninety (90) days after receiving notice, then this Agreement shall not be terminated.

5. **Choice of Law.** This Agreement is to be governed by and construed in accordance with Utah law. Time is of the essence. The failure of a person to insist upon strict performance of any of the terms, covenants, conditions, or agreements contained herein will not be deemed a waiver of any rights or remedies and will not be deemed a waiver of any subsequent breach or default.

6. **No Partnership.** This Agreement does not constitute—and must not be construed to create—a partnership, public-private partnership, agency, joint venture, or employment relationship. Nothing in this Agreement gives one Party the right, power, or authority to bind the other. This Agreement does not create any right in, or inure to the benefit of, any third parties.

7. **Notice.** Any notices, requests, and demands required or desired to be given hereunder shall be in writing and shall be served personally upon the Party for whom intended, or if mailed, by certified mail, return receipt requested, postage prepaid, to such Party at its address shown below:

To the City:	City of St. George Attn: City Manager 175 North 200 East St. George, UT 84770
To UT:	Utah Tech University Attn: Facilities Management 225 South 700 East Facilities Management Bldg. St. George, UT 84770

Either Party may change its address for notice by giving written notice to the other Party in accordance with the provisions of this section.

8. **Severability.** If any portion of this Agreement is held to be unenforceable or invalid for any reason by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

9. **Entire Agreement.** This Agreement contains the entire agreement and understanding of the Parties with respect to the subject matter hereof and supersedes any prior negotiations, promises, inducements, representations, or agreements pertaining to the subject matter hereof which are not set forth herein.

10. **Amendment.** This Agreement may only be amended in writing signed by the Parties hereto.

11. **Binding Effect.** The covenants set forth herein shall be binding upon the officers, employees, agents, representatives, assigns, and successors in interest of the Parties hereto. It is expressly agreed by the Parties that UT may contract with third parties to perform its duties and responsibilities hereunder.

12. **Counterparts.** This Agreement may be executed in counterparts, all of which, when taken together, shall constitute one and the same document.

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

"**CITY"**
CITY OF ST. GEORGE,
A Utah municipal corporation

ATTEST:

By:_____
Christina Fernandez, City Recorder — Michele Randall, Mayor

"UT"
UTAH TECH UNIVERSITY

Approved as to form:

By:_____
Daniel Baldwin, Asst. City Attorney
Name (Print):_Paul Morris_____
Its: Vice President of Administrative Affairs

CITY ACKNOWLEDGMENT

STATE OF UTAH)

ss.

County of Washington)

On the _____ day of _____ 20__, before me, _____, a notary public, personally appeared _____ proved on the basis of satisfactory evidence to be the person whose name is subscribed to in this document, and acknowledged he/she executed the same voluntarily for its stated purpose.

_____

Notary Public

UT ACKNOWLEDGMENT

STATE OF UTAH)

ss.

County of Washington)

On the _____ day of _____ 20__, before me, _____, a notary public, personally appeared _____ proved on the basis of satisfactory evidence to be the person whose name is subscribed to in this document, and acknowledged he/she executed the same voluntarily for its stated purpose.

_____

Notary Public



MAINLINE ENGINEERING	MAINLINE ENGINEERING 321 N. MALL DRIVE, SUITE T101 ST. GEORGE, UT 84790	700 EAST CYCLE TRACK AND PEDESTRIAN IMPROVEMENTS LANDSCAPE MAINTENANCE EXHIBIT	EXHIBIT 1

Agenda Date: 02/20/2025 **Agenda Item Number:** 2c

Subject:

Consider approval of a UDOT Local Government Contract with UDOT and Horrocks Engineers for the design of the SR-7 Exit 5 Interchange Project.

Item at-a-glance:

Staff Contact: Cameron Cutler

Applicant Name: City of St. George

Reference Number: N/A

Address/Location:

SR-7 at Exit 5 Interchange

Item History (background/project status/public process):

This agreement is for the design of the Exit 5 Interchange on SR-7. The proposed interchange will connect the 3000 E corridor (Southern Hills Dr) on the north of SR-7 and also Rimrunner Dr on the south. UDOT will be administering the project. The project will be funded by federal dollars and local match funds. The design of the interchange is estimated at $1,728,104.90.

Staff Narrative (need/purpose):

Staff is still working through our federal congresswoman, Celeste Maloy, to move the federal CPF (community project funding) dollars from 1450 S to the Exit 5 Interchange project. This agreement will move the design portion of the project forward. Funding for the design of this project is already in the adopted FY25 budget.

Name of Legal Dept approver: Daniel Baldwin

Budget Impact: No Impact

Recommendation (Include any conditions):

Staff recommends approval of the UDOT local government contract.

LOCAL GOVERNMENT CONTRACT

STATE OF UTAH
LOCAL GOVERNMENT
CONSULTANT SERVICES
STREAMLINED SOLICITATION
COST PLUS FIXED FEE

CONTRACT NO. _____
EFFECTIVE DATE _____
TRACKING NO. _____

Project No.: F-0007(30)4
PIN Description: SR-7; Exit 5
FINET Prog No.: 5649915D
PIN No.: 21559
Work Discipline: Preconstruction Engineering

1. **CONTRACTING PARTIES:** This contract is between City of St George, referred to as LOCAL AUTHORITY and

   Horrocks Engineers Llc
   2162 West Grove Pkwy Ste 100
   Pleasant Grove, UT 84062

   Legal Status of Consultant: For Profit Corporation

   Fed ID No.: 87-0296502

   referred to as CONSULTANT, and approved by the Utah Department of Transportation, referred to as DEPARTMENT.

2. **WORK DISCIPLINE:** The CONSULTANT is professionally qualified in Preconstruction Engineering services as further described in Attachment C.

3. **SCOPE OF WORK / CONTRACT PERIOD:** The Scope of Work will end December 31, 2026 and the Contract will terminate December 31, 2027, unless otherwise extended or canceled in accordance with the terms and conditions of this contract.

4. **CONTRACT COSTS:** The CONSULTANT will be paid a maximum of $1,728,104.90 for costs authorized by this contract as further described in Attachment D.

5. **ATTACHMENTS INCLUDED AS PART OF THIS CONTRACT:**
   - Attachment A – Certification of Consultant and Local Authority
   - Attachment B – Standard Terms and Conditions
   - Attachment C – Services Provided by the Consultant
   - Attachment D – Fees
   - Attachment E – Insurance

The parties below hereto agree to abide by all the provisions of this contract. IN WITNESS WHEREOF, the parties sign and cause this contract to be executed.

Approved As to Form:_____

CONSULTANT - Horrocks Engineers Llc

By: _____ _____
Title: Date
Printed Name:

LOCAL AUTHORITY - City of St George

By: _____ _____
Title: Date
Printed Name:

Attest:_____

UTAH DEPARTMENT OF TRANSPORTATION

By: _____ _____
Title: Deputy Director Date

DEPARTMENT Comptroller's Office

By: _____ _____
Title: Contract Administrator Date

CERTIFICATION OF CONSULTANT

By signing this contract on behalf of the CONSULTANT, I hereby certify I am a duly authorized representative of Horrocks Engineers Llc and that neither I nor the above CONSULTANT I hereby represent has:

(a) employed or retained for commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above CONSULTANT) to solicit or secure this contract,

(b) agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or

(c) paid, or agreed to pay to any firm, organization or person (other than a bona fide employee working solely for me or the above CONSULTANT) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the contract; except as hereby expressly stated (if any):

I understand that I am providing this certificate to the Utah Department of Transportation and agencies of the U.S. Department of Transportation regarding this contract. Payment of my fees under this contract may involve Federal-aid Funds. Therefore, my work under this contract is subject to applicable State and Federal laws, both criminal and civil.

Each person signing this Contract represents and warrants that they are duly authorized and have legal capacity to execute and deliver this Contract and bind the parties hereto. Each signatory represents and warrants to the other that the execution and delivery of the Contract and the performance of each party's obligations hereunder have been duly authorized and that the Contract is a valid and legal agreement binding on the parties and enforceable in accordance with its terms. Further, that CONSULTANT is registered with the Utah Department of Commerce and is in good standing.

The parties sign and cause this contract to be executed. This contract is not fully executed until the State of Utah Approving Authorities have signed this contract.

CERTIFICATION OF LOCAL AUTHORITY

By signing this contract on behalf of the LOCAL AUTHORITY, I hereby certify I am the duly authorized representative of City of St George and that the above CONSULTANT or its representative has not been required, directly or indirectly as an express or implied condition in connection with obtaining or carrying out this contract, to:

(a) employ or retain, or agree to employ or retain, any firm or person, or

(b) pay, or agree to pay, to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind; except as hereby expressly stated (if any):

I understand that I am providing this certificate to the Utah Department of Transportation and agencies of the U.S. Department of Transportation regarding this contract. Money the LOCAL AUTHORITY receives under this contract may involve federal-aid funds, thus making the LOCAL AUTHORITY a subrecipient of federal aid funds. Therefore, all work performed under this contract by employees of the LOCAL AUTHORITY or its CONSULTANTS or SUBCONSULTANTS is subject to applicable State and Federal laws, both criminal and civil.

This contract is not fully executed until the State of Utah Approving Authorities have signed this contract.

LOCAL GOVERNMENT
CONSULTANT SERVICES CONTRACT
STANDARD TERMS AND CONDITIONS

1. **AUTHORITY:** The Utah Transportation Code § 72-1-202(2) and Utah Admin. Code Rule r907-66 provide authority to execute this contract.

2. **CONFLICT OF TERMS:** No other terms and conditions will apply to this Contract, including terms listed or referenced on the CONSULTANT's website, quotation/sales order, purchase orders, or invoice. In the event of any conflict in the contract terms and conditions, the order of precedence is: (a) additional required federal terms, if any, (b) this Attachment B; (c) DEPARTMENT's Contract Signature Page(s); (d) State of Utah's Additional Terms and Conditions, if any. Attachment B will be given precedence over any provisions including, limitation of liability, indemnification, standard of care, insurance, or warranty, and will not be nullified by or exception created by more specific terms elsewhere in this Contract.

3. **CONTRACT JURISDICTION AND COMPLIANCE WITH THE PROFESSIONAL STANDARD OF CARE, APPLICABLE LAWS, AND THE DEPARTMENT'S STANDARD SPECIFICATIONS AND STANDARD DRAWINGS:** Should another section of this contract conflict with this section 3, the terms of this section will control. The provisions of this contract will be governed by the laws of the State of Utah. As to all services provided under this contract, the CONSULTANT will furnish services by skilled and experienced personnel and under the supervision of skilled and experienced professionals licensed in Utah, as applicable, and will exercise a degree of care and diligence in the performance of these services following the customary professional standards currently practiced by firms in Utah and will comply with any and all applicable codes, laws, ordinances, administrative rules, federal regulations and the DEPARTMENT'S Standard Specifications and Standard Drawings currently in effect, and this contract (the Standard of Care).

   As to any drawings, plans, specifications, or other documents or materials provided or prepared by the CONSULTANT or its sub-consultants, the CONSULTANT agrees to comply with all applicable laws, statutes, administrative rules, federal regulations, building codes, and the DEPARTMENT'S Standard Specifications and Standard Drawings currently in effect.

   All professional design services and associated products or instruments of those services provided by the CONSULTANT will comply with all applicable codes, laws, administrative rules, and regulations of any state or federal governmental entity, including, but not limited to, the United States Department of Transportation with the LOCAL AUTHORITY and the DEPARTMENT serving as the interpreter of the intent and meaning of any other applicable code or rule.

4. **RECORDS ADMINISTRATION:** The CONSULTANT must maintain all books, papers, documents, accounting records and other evidence to support costs billed for under this contract. These records must be retained by the CONSULTANT for a period of at least seven (7) years after the contract terminates, or until all audits initiated within the seven years have been completed, whichever is later. These records must be made available at all reasonable times during the seven-year period for audit and inspection by the LOCAL AUTHORITY or the DEPARTMENT and other authorized State or Federal auditors. The CONSULTANT'S records supporting the cost proposal must also be retained and made available for review by authorized Federal or State staff. Copies of requested records must be furnished to the LOCAL AUTHORITY or the DEPARTMENT upon request.

5. **CONFLICT OF INTEREST:** The CONSULTANT certifies that none of its officers or employees are officers or employees of the State of Utah unless disclosure has been made in accordance with Utah Code § 67-16-7. The CONSULTANT certifies that no engineer, attorney, appraiser, inspector, surveyor or survey crew, or other person performing services for the CONSULTANT has, directly or indirectly, a financial or other personal interest, other than their employment or retention by the LOCAL AUTHORITY or the DEPARTMENT through this contract, in any contract or subcontract in connection with this project (Reference 23 C.F.R. § 1.33 (2022)).

   The CONSULTANT further warrants that it has no financial or other interest in the outcome of the work performed under the contract other than its fees.

6. **EMPLOYMENT OF DEPARTMENT EMPLOYEES:** The CONSULTANT agrees not to engage in any way on this contract the services of any present or former DEPARTMENT employee who was involved as a decision-maker in the selection or approval processes or who negotiated or approved billings or contract modification for this contract.

7. **CONSULTANT, AN INDEPENDENT CONTRACTOR:** The CONSULTANT must be an independent contractor, and as such, may not have authority, express or implied to bind the LOCAL AUTHORITY or the DEPARTMENT to any agreement, settlement, liability, or understanding whatsoever; and agrees not to perform any acts as agent for the LOCAL AUTHORITY, except as specifically authorized and set forth herein. Persons employed by the LOCAL AUTHORITY and acting under the direction of the LOCAL AUTHORITY may not be deemed to be employees or agents of the CONSULTANT. Compensation provided to the CONSULTANT for its services herein will be the total compensation payable hereunder by the LOCAL AUTHORITY.

8. **INDEMNITY - LIABILITY:**

   (a) The CONSULTANT must hold harmless and indemnify the DEPARTMENT and the LOCAL AUTHORITY, their officers, authorized agents and employees from and against claims, suits and cost, including reasonable attorneys' fees, for injury or damage to the extent caused by the negligent acts, errors, omissions, or willful misconduct of the CONSULTANT, or its subconsultants when acting within the scope of their subcontract, or their respective agents, employees or representatives.

   (b) The CONSULTANT is an independent contractor contracted with the LOCAL AUTHORITY and approved by the DEPARTMENT. Any periodic plan and specification review or construction inspection performed by the LOCAL AUTHORITY or DEPARTMENT arising out of the performance of the contract, does not relieve the CONSULTANT of its duty in the performance of the contract, or ensure compliance with the Standard of Care.

   (c) No party to this contract will be liable to the other party or any third party claiming through the other respective party, for any special, incidental, indirect, punitive, liquidated, delay or consequential damages of any kind including but not limited to lost profits or use of property, facilities or resources, that may result from this contract, or out of any goods or services furnished hereunder.

9. **SEVERABILITY:** The declaration by any court, or other binding legal source, that any provision of this contract is illegal and void and will not affect the legality and enforceability of any other provision of this contract, unless said provisions are mutually dependent.

10. **LIABILITY INSURANCE:** Services to be provided by the CONSULTANT under this contract are required to be covered by insurance. The CONSULTANT must furnish the LOCAL AUTHORITY and the DEPARTMENT a Certificate of Insurance for each type of insurance required, to be approved by the DEPARTMENT and the LOCAL AUTHORITY, before the CONSULTANT begins work under this contract.

    In the event any work is subcontracted, the CONSULTANT is responsible for determining whether to require its subconsultants to maintain the same minimum coverages as the prime, or to assume the risk for subconsultant services under its own policies.

    Any insurance coverage required herein written on a "claims made" form rather than an "occurrence" form will: provide full prior acts coverage or have a retroactive date effective before execution of this contract; and, be maintained in force until all activities which are required by this contract or as changed by contract modification are completed and accepted by the LOCAL AUTHORITY and the DEPARTMENT and for a period of at least three (3) years following the end of the term of the contract or contain a comparable "extended discovery" clause (on construction phase contracts or modifications for construction engineering management, the insurance must remain in effect for one (1) year after completion of the contracted services). Evidence of current extended discovery coverage and the purchase options available upon policy termination will be provided to the LOCAL AUTHORITY and the DEPARTMENT.

The following policies of insurance will be issued by insurance companies licensed to do business in the State of Utah and must: be either currently rated "A" or better by A.M. Best Company and have an A.M. Best Company financial size category rating of not less than VIII; or, listed in the United States Treasury Department's current Listing of Approved (Department Circular 570), as amended.

Standard Required Insurance Policies

(a) *Commercial General Liability*: The CONSULTANT will secure and maintain General Liability insurance with limits of not less than $1,000,000 per occurrence and $3,000,000 aggregate.

(b) *Commercial Automobile Liability*: The CONSULTANT will secure and maintain commercial automobile insurance that provides coverage for owned, hired, and non-owned automobiles with a combined single limit of not less than $1,000,000 per occurrence OR $500,000 liability per person, $1,000,000 per occurrence, and $250,000 Property Damage.

(c) *Worker's Compensation and/or Employer's Liability*: The CONSULTANT will secure and maintain worker's compensation and employer's liability insurance sufficient to cover all of the CONSULTANT's employees pursuant to Utah law, unless a waiver of coverage is allowed and acquired pursuant to Utah law. If covered by the Workers Compensation Fund of Utah, then the A.M. Best rating is not required in this area.

(d) *Professional Liability*: The CONSULTANT will secure and maintain professional liability insurance with limits of not less than $1,000,000 per occurrence and $3,000,000 aggregate.

Non-standard Insurance Policies

(e) *Valuable Papers & Records Coverage and/or Electronic Data Processing (Data and Media)*: Valuable papers and records coverage and/or electronic data processing (data and media) coverage for the physical loss or destruction of the work product including drawings, plans, specifications, and electronic data and media. Such insurance must be of a sufficient limit to protect the CONSULTANT, its subconsultants, the LOCAL AUTHORITY, and the DEPARTMENT from the loss of said information.

(f) *Watercraft/Protection & Indemnity (P&I) and Aircraft Liability*: If the CONSULTANT will use its own watercraft/aircraft or employs watercraft/aircraft in connection with the services provided in this contract, watercraft/aircraft liability insurance with limits of not less than $1,000,000 per occurrence and $5,000,000 aggregate is required.

(g) *Unmanned Aerial Systems (UAS) Liability*: If the CONSULTANT will use UAS (e.g. drones) with the services provided in this contract, UAS liability insurance with limits of not less than $1,000,000 per occurrence, and $3,000,000 aggregate is required.

(h) *High Risk Blasting Liability*: If the CONSULTANT will perform high risk blasting as part of the services provided in this contract, high risk blasting insurance equal to 75% of the Engineer's Construction Estimate, and with limits not less than $5,000,000 is required.

(i) *Data Integrity Liability*: If the CONSULTANT has access to or has on its own computer system any sensitive personal or financial information regarding DEPARTMENT employees or any party doing business with the DEPARTMENT, data integrity insurance with a limit of not less than $3,000,000 is required. Data Integrity insurance specifically covers privacy liability and network security liability for any personal information stolen from any computer or network and used against that individual in any way.

All required certificates and policies will provide that coverage thereunder will not be canceled or modified without providing thirty (30) days prior written notice to the DEPARTMENT in a manner approved by the Assistant Attorney General for the DEPARTMENT, either by the insurance carrier or the named insured.

In the event that governmental immunity limits are subsequently altered by legislation or judicial opinion, the CONSULTANT must provide a new certificate of insurance within thirty (30) days after being notified

thereof in writing by the DEPARTMENT certifying coverage in compliance with the modified limits or, if no limits are specified, in an amount acceptable to the DEPARTMENT.

If coverage limits are different for this contract, it will be designated in Attachment E.

Policies referred to in 10(a), 10(b), 10(f), 10(g), and 10(i) above must have endorsements which include language for Additional Insureds stating that the policies are amended to include an organization whom the CONSULTANT has agreed to add as an Additional Insured by contract, and must state the coverage is afforded on a primary and noncontributory basis.

Policies referred to in 10(a) and 10(b) limits can be covered either with the insurance policy alone, or a combination of the insurance policy and an umbrella insurance policy.

All required policies, endorsements, insurance companies issuing same, and self-insured programs are subject to review and approval by the State of Utah, Risk Manager.

11. QUALIFIED HEALTH COVERAGE: The CONSULTANT agrees that if the CONSULTANT has an initial contract of $2,000,000 or more, or the contract and modifications are anticipated in good faith to exceed $2,000,000, or the CONSULTANT has a subcontract at any tier that involves a sub-consultant that has an initial subcontract of $1,000,000 or more, and/or the CONSULTANT has a subcontract at any tier that is anticipated in good faith to exceed $1,000,000; hereby certifies the following.

(a) The CONSULTANT and all applicable sub-consultants have and will maintain an offer of qualified health coverage for their employees, as defined in Utah Code § 26-40-115 for the employees who live and/or work within the State of Utah, along with their dependents, during the duration of the contract.

(b) Employee, for purposes of these requirements, must be no broader than the use of the term employee for purposes of State of Utah Workers' Compensation requirements.

The CONSULTANT must demonstrate its compliance with this part and Utah Code § 72-6-107.5 at the time this contract is executed, and its continued compliance is subject to audit by the DEPARTMENT or the Office of the Legislative Auditor General. The CONSULTANT and all applicable sub-consultants must be subject to all applicable penalties. The CONSULTANT will provide these same requirements in all applicable subcontracts at every tier.

12. PROGRESS:

(a) The CONSULTANT may not begin the work governed by this contract prior to receiving an official Notice to Proceed from the DEPARTMENT. The CONSULTANT must prosecute the work diligently and to the satisfaction of the LOCAL AUTHORITY and the DEPARTMENT. If Federal Funds are used on this contract the work will be subject to periodic review by agencies of the U.S. Department of Transportation.

(b) Any one of the three parties may request a progress meeting; to be held at the office of any, or at a place designated by the DEPARTMENT. The CONSULTANT will prepare and present written information and studies to the LOCAL AUTHORITY and the DEPARTMENT so it may evaluate the features and progress of the work. The meetings must also include inspection of the CONSULTANT'S services and work products when requested by the LOCAL AUTHORITY or the DEPARTMENT.

(c) The CONSULTANT will be required to perform such additional work as may be necessary to correct the failure to meet the Standard of Care caused by the CONSULTANT’S breach of its Standard of Care in the work required under the contract without undue delays and without additional cost to the LOCAL AUTHORITY and the DEPARTMENT.

(d) At any time, the CONSULTANT determines the contract work cannot be completed within the specified time or budget, the CONSULTANT must immediately notify in writing that the CONSULTANT cannot meet specified time or budget requirements and why. The LOCAL

AUTHORITY and the DEPARTMENT may, at their sole discretion, agree to modify the contract in writing.

(e) The LOCAL AUTHORITY or the DEPARTMENT may terminate this contract in accordance with the termination provisions of this contract including failure of the CONSULTANT to make satisfactory progress on the contract work, or failure to provide satisfactory work product quality.

(f) Should the LOCAL AUTHORITY or the DEPARTMENT desire to suspend the work, but not terminate the contract, the LOCAL AUTHORITY or the DEPARTMENT will notify the CONSULTANT verbally to suspend work immediately. The LOCAL AUTHORITY or the DEPARTMENT will follow this verbal notification with a written confirmation within two (2) business days. When the LOCAL AUTHORITY or the DEPARTMENT provides verbal notification to the CONSULTANT to suspend work the CONSULTANT agrees to comply immediately or as directed by the LOCAL AUTHORITY or the DEPARTMENT. The work may be reinstated upon 30-days advance written notice from the LOCAL AUTHORITY or the DEPARTMENT.

(g) Unless extended or terminated in writing, this contract will terminate on the Contract Expiration Date.

13. REVIEW AND INSPECTION OF WORK: It is expressly understood and agreed that authorized representatives of the LOCAL AUTHORITY, DEPARTMENT and, when Federal Funds are used, the agencies of the U.S. Department of Transportation will have the right to review and inspect the work in process, and the CONSULTANT'S facilities, at any time during normal business hours or by appointment.

14. NON DISCRIMINATION PROVISIONS: The CONSULTANT agrees to abide by the provisions of the Utah Anti-discrimination Act, Utah Code §§34a-5-101 - 112 , and Titles VI and VII of the Civil Rights Act of 1964 (42 USC §§ 2000e – 2000e-17), which prohibit discrimination against any employee or applicant for employment, or any applicant or recipient of services, on the basis of race, religion, color, or national origin; and further agrees to abide by Executive Order No. 11246 entitled "Equal Employment Opportunity," as amended by Executive Orders 11375 and 13665 and as supplemented in Department of Labor Regulations (41 C.F.R. Part 60), which prohibits discrimination on the basis of age; 29 U.S.C. § 794, which prohibits discrimination on the basis of disability; and Executive Order 13672, Further Amendments to Executive Order 11478, Equal Employment Opportunity in the Federal Government, and Executive Order 11246, Equal Employment Opportunity.

The CONSULTANT agrees to abide by the provisions of Title 42 U.S.C Chapter 21F. Prohibiting Employment Discrimination on the Basis of Genetic Information.

The CONSULTANT agrees to abide by Utah's Executive Order, dated June 30, 1989, which prohibits sexual harassment in the workplace. Sections 49 C.F.R. 21 through Appendix C (2022) and 23 C.F.R. 710.405(b) (2022) are applicable by reference in all contracts and subcontracts financed in whole or in part with Federal-aid highway or transit funds. The CONSULTANT further agrees to furnish documentation to the LOCAL AUTHORITY or DEPARTMENT upon request for the purpose of determining compliance with these statutes identified in this section. The CONSULTANT must comply with the Americans with Disabilities Act (ADA).

The CONSULTANT must not discriminate in the performance of this contract on the basis of race; color; sex; pregnancy, childbirth, or pregnancy-related conditions; age, if the individual is 40 years of age or older; religion; national origin; disability, sexual orientation, or gender identity. The CONSULTANT must carry out applicable requirements of 49 C.F.R. Part 26 (2022) in the award and administration of federal-aid contracts. Failure by the CONSULTANT to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the DEPARTMENT deems appropriate. During the performance of this contract, the CONSULTANT, for itself, its assignees and successors in interest agrees to abide by ***41 CFR 60-1.4(a) (1 – 8) Equal opportunity clause (the "EEO clause"),*** which is incorporated by reference. Where the EEO clause uses contractor substitute CONSULTANT. Where the EEO clause uses the recipient substitute DEPARTMENT.

Where Title VI **APPENDICES A** and **E** in the remainder of this section use contractor, substitute CONSULTANT. Where the Title VI **APPENDICES A** and **E** in the remainder of this section use the recipient, substitute DEPARTMENT.

APPENDIX A: During the performance of this contract, for itself, its assignees and successors in interest (hereinafter in referred to as the “contractor”) agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), Federal Transit Administration (FTA), or Federal Aviation Administration (FAA) as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Nondiscrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA, FTA, or FAA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the FHWA, FTA, or FAA, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the FHWA, FTA, or FAA may determine to be appropriate, including, but not limited to:

   a. withholding payments to the contractor under the contract until the contractor complies; and/or

   b. canceling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the FHWA, FTA, or FAA may direct as a means of enforcing such provisions including sanctions for A non-compliance. Provided that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX E – During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

15. CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS: By signing this contract, the CONSULTANT certifies that to the best of their knowledge and belief that it or its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had civil judgment against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or Local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or Local) with commission of any of the offenses enumerated in subparagraph 15(b) of this certification; and

(d) Have not within a three-year period preceding this contract had one or more public transactions (Federal, State, or Local) terminated for cause or default.

Where the CONSULTANT is unable to certify to any of the statements in this certification, the CONSULTANT must provide an explanation to accompany this contract. Exceptions will not necessarily result in denial of award but will be considered in determining CONSULTANT'S responsibility. Any exceptions noted must identify to whom it applies, the initiating agency, and dates of the action. Providing false information may result in criminal prosecution or administrative sanctions.

The CONSULTANT must include this Certification Regarding Debarment, Suspension and Other Responsibility Matters requirement in its contracts with subconsultants.

16. BACKGROUND CHECKS: The DEPARTMENT may require the CONSULTANT and all employees of the CONSULTANT to undergo a background investigation, to be conducted by the Attorney General or the Bureau of Criminal Investigation, to the satisfaction of the DEPARTMENT. The background investigation will consist of a review of, but may not be limited to, criminal conduct including the use of controlled substances. The CONSULTANT represents that its employees assigned to work under this contract are competent in their respective fields, licensed if applicable, as required by the State of Utah, and are legally able to fulfill their work obligations.

17. CERTIFICATION OF COMPLIANCE ON LOBBYING RESTRICTIONS: The CONSULTANT agrees to conform to the lobbying restrictions established by the Byrd Amendment, 31 U.S.C. § 1352, for contracts exceeding $100,000 in Federal Funds. The CONSULTANT certifies, by signing this contract, to the best of its knowledge and belief, that:

(a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned must complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which the DEPARTMENT relied when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352. Any person who fails to file the required certification will be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The CONSULTANT also agrees by signing this contract it will require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such sub-recipients must certify and disclose accordingly.

18. CERTIFICATION OF COMPLIANCE ON DRUG AND ALCOHOL TESTING: The CONSULTANT hereby certifies by executing this Contract that the CONSULTANT will comply with all applicable provisions of Utah Admin. Code Rule R916-6 - Drug and Alcohol Testing in State Construction Contracts and Utah Code § 63G-6a-1303 throughout the term of this Contract, unless the CONSULTANT is exempted from these provisions by state or federal law. The CONSULTANT must provide this requirement in its contracts with subconsultants.

19. **COMPLIANCE WITH THE JOHN S. MCCAIN NATIONAL DEFENSE AUTHORIZATION ACT:** The CONSULTANT certifies conformance and continued conformance with Public Law 115-232, § 889 and 2 C.F.R. § 200.216.

20. **CONSULTANT COST CERTIFICATION:** The CONSULTANT hereby certifies by executing this Contract, that the CONSULTANT has previously submitted a CONSULTANT certification of final indirect costs in accordance with the 2 C.F.R. Part 200 Subpart E Cost Principles, 48 C.F.R. Part 31 Federal Acquisition Regulations (FAR) in compliance with 23 USC § 112(b)(2)(B), if so required, and in the DEPARTMENT Financial Screening Application.

21. **OWNERSHIP OF WORK PRODUCTS PROCURED OR DEVELOPED UNDER THIS CONTRACT:** All intellectual property rights (including, without limitation, copyrights and trade secrets) to information and materials developed or owned by the LOCAL AUTHORITY and disclosed or supplied to the CONSULTANT while performing the services under this Contract will belong exclusively to the LOCAL AUTHORITY ("the LOCAL AUTHORITY'S Work"). All intellectual property rights (including, without limitation, copyrights and trade secrets) to the work product of CONSULTANT, whether developed by CONSULTANT before or in the course of providing the services ("the CONSULTANT'S Work"), will belong exclusively to the CONSULTANT, provided that such intellectual property rights of the CONSULTANT will not extend to any portion of the LOCAL AUTHORITY'S Work which is incorporated into the CONSULTANT'S Work. The LOCAL AUTHORITY will retain ownership of any information specific to its employees or operations contained in the CONSULTANT'S Work, any LOCAL AUTHORITY confidential information that is incorporated into the CONSULTANT'S Work, and any conclusions or recommendations therein that are specific to the LOCAL AUTHORITY and not of general utility. Except as otherwise provided in this Section, all Deliverables produced by the CONSULTANT and covered by this Contract will be owned by the LOCAL AUTHORITY. To the extent that any of the CONSULTANT'S intellectual property is embedded in Deliverables provided to the LOCAL AUTHORITY under this Contract, the CONSULTANT hereby grants to LOCAL AUTHORITY a non-exclusive, irrevocable, perpetual, and royalty-free license to use such intellectual property for business purposes to the extent necessary to permit the LOCAL AUTHORITY to utilize the CONSULTANT'S Work under this Contract. At the CONSULTANT's request, the LOCAL AUTHORITY will incorporate any proprietary notice the CONSULTANT may reasonably include for any intellectual property contained in a Deliverable in all copies the LOCAL AUTHORITY makes of that Deliverable. If the CONSULTANT incorporates into the CONSULTANT'S Work any information to which the CONSULTANT'S obligations of confidentiality under this Contract apply, the incorporated information will remain subject to such obligations of confidentiality.

The LOCAL AUTHORITY grants to the CONSULTANT a non-exclusive license for non-commercial, internal, educational and research use of work products developed or produced by the CONSULTANT under this contract, subject to the provisions of this contract. The use of physical products is subject to availability. Physical products will be transported and maintained at the expense of the CONSULTANT, should transportation and maintenance be necessary in conjunction with this use.

The CONSULTANT may secure through patents or trademarks, the right, title, or interest throughout the world of any invention that may be created or developed under this contract, as provided in 37 C.F.R. 401.14, except for Section 401.14(g). The LOCAL AUTHORITY will be entitled to the same rights granted to the Federal Government under 37 C.F.R. 401.14 and adopts that regulation for that purpose. The CONSULTANT will retain all rights provided for the LOCAL AUTHORITY in this clause, and the LOCAL AUTHORITY will not, as part of the consideration for awarding this contract, obtain rights in the CONSULTANT'S subject inventions. The LOCAL AUTHORITY will be granted a non-exclusive, irrevocable, royalty-free license to use, practice, employ, or have practiced for or on behalf of the LOCAL AUTHORITY the subject invention throughout the world. These license provisions will be considered one of the deliverables due under this contract. When federal transportation funds make up all or part of the remuneration under this contract (as documented elsewhere in these Special Provisions), the United States Department of Transportation must also be named as a grantee, along with the LOCAL AUTHORITY, in the license provisions described above.

The CONSULTANT may secure copyrights on information, designs, analyses, processes, reports, and the intellectual innovations that may be created or developed under this contract, subject to the provisions of this contract, including the provisions of the "Publication or Use of Work Product Outside of This

Contract" clause.

The LOCAL AUTHORITY reserves a non-exclusive, irrevocable, royalty-free license to reproduce, publish, distribute, disclose, modify, implement, or otherwise use, and to authorize others to use, the copyright in any Deliverables under this contract, and any rights of copyright to which the CONSULTANT purchases ownership under this contract.

The right of the CONSULTANT to apply for patents, copyrights or trademarks must be limited to the statutory period defined by United States Code and other applicable Federal regulations.

It is further specifically agreed between the parties executing this contract that the above provisions must be interpreted and administered in accordance with State and Federal non-disclosure and disclosure laws, rules, regulations and policies governing patents, copyrights, trademarks, rights of privacy and freedom of public information.

22. **RIGHT OF FUTURE DEVELOPMENT:** The parties agree that the LOCAL AUTHORITY and the DEPARTMENT and third parties that may be under separate contract to the LOCAL AUTHORITY or the DEPARTMENT may perform future additional developments or enhancements to information, designs, analyses, computer elements, devices, data, test results, reports, graphics, presentations, visual aids, intellectual innovations that are derived from the work products developed and delivered under this contract. Neither the LOCAL AUTORITY nor the DEPARTMENT will be obligated to obtain the services of the CONSULTANT to perform these additional developments or enhancements. Likewise, the CONSULTANT, after completion of this contract, may perform future additional developments or enhancements to the work products produced and delivered under this contract without the necessity of granting the LOCAL AUTHORITY or the DEPARTMENT a license of use for these additional developments or enhancements. Any reuse, misuse, or use of modified or incomplete deliverables will be at the sole risk of the LOCAL AUTHORITY or the DEPARTMENT or the third party in possession of CONSULTANT'S deliverable and the CONSULTANT makes no representation to any third party with respect to any good or service performed under this contract and will not be liable for any reuse, misuse, or use of modified or incomplete deliverables under any theory of recovery.

23. **PUBLICATION OR USE OF WORK PRODUCT OUTSIDE OF THIS CONTRACT:** During the entire term of this contract the CONSULTANT must not issue, offer, publish, or submit for publication any document, report, paper, technical notes, documentation, specification, graphic, or other media products produced in connection with the work of this contract without first submitting the Deliverables required by this contract to the LOCAL AUTHORITY and the DEPARTMENT for their review, and notifying the LOCAL AUTHORITY and the DEPARTMENT of the intent to publish.

In the event CONSULTANT wishes to publish research results prior to the submission of contract deliverables, CONSULTANT must first provide to LOCAL AUTHORITY and the DEPARTMENT written notice of CONSULTANT'S intent to publish and a draft of such publication. Unless waived by the LOCAL AUTHORITY and the DEPARTMENT, the LOCAL AUTHORITY and the DEPARTMENT will have thirty (30) days after receipt of the draft publication to request in writing the removal of portions deemed by LOCAL AUTHORITY or the DEPARTMENT to contain confidential or patentable material owned by the LOCAL AUTHORITY or THE DEPARTMENT, or to request a delay in submission of the draft for publication pending CONSULTANT'S submission of overdue contract deliverables or LOCAL AUTHORITY's or the DEPARTMENT's application for patent protection. If CONSULTANT does not receive the LOCAL AUTHORITY's or the DEPARTMENT's written response to the notice of intent to publish within the thirty (30) day period, then the LOCAL AUTHORITY or the DEPARTMENT will be deemed to have consented to such publication. If DEPARTMENT requests a delay in submission of publication for patent protection, CONSULTANT will have no obligation to delay publication for longer than three (3) months following delivery of CONSULTANT'S notice of intent to publish. If the LOCAL AUTHORITY or the DEPARTMENT requests a delay in submission of publication due to overdue deliverables, submission of publication by the CONSULTANT prior to completing those contract deliverables will be grounds for termination of this contract. Student reports, theses, and dissertations, published internally by the CONSULTANT will not be subject to these delay provisions.

If this contract is terminated by the LOCAL AUTHORITY or the DEPARTMENT, the CONSULTANT agrees to the publication restrictions stated above for a period of six (6) months following the date of termination.

Information supplied by LOCAL AUTHORITY or the DEPARTMENT to CONSULTANT and identified by the LOCAL AUTHORITY or the DEPARTMENT as proprietary, confidential, protected or security-sensitive information must not be included in any material published by CONSULTANT without prior written consent of the LOCAL AUTHORITY or the DEPARTMENT.

The restrictions and procedures described in this provision will apply to the release of any information or documents to the media. The CONSULTANT must inform the UDOT point of contact of all media inquiries.

24. PUBLIC INFORMATION: CONSULTANT agrees that this Contract, related purchase orders, related pricing documents, and invoices will be public documents and may be available for public and private distribution in accordance with the State of Utah's Government Records Access and Management Act (GRAMA). CONSULTANT gives the DEPARTMENT, the LOCAL AUTHORITY, and the State of Utah express permission to make copies of this Contract, related sales orders, related pricing documents, under section 63G-2-309 and expressly approved by DEPARTMENT, CONSULTANT also agrees that the CONSULTANT'S solicitation responses will be public records, and copies may be given to the public as permitted under GRAMA. The DEPARTMENT, the LOCAL AUTHORITY and the State of Utah are not obligated to inform CONSULTANT of any GRAMA requests for disclosure of this Contract, related purchase orders, related pricing documents, or invoices.

Requests from the media or other members of the public for records that have not already been issued, published, or submitted for publication must be addressed in accordance with the GRAMA, Utah Code Title 63G, Chapter 2.

CONSULTANT agrees to cooperate and assist the LOCAL AUTHORITY and the DEPARTMENT to respond to requests it receives pursuant to the GRAMA by searching for and producing records belonging to LOCAL AUTHORITY or the DEPARTMENT in a timely manner and consistent with the requirements of the GRAMA.

25. USE OF PATENTED, COPYRIGHTED OR TRADEMARKED ITEMS: The CONSULTANT will be fully responsible for the legal use and the related payment of any royalties or fees for any materials, products, devices, processes, computer elements, designs, specifications, publications, graphics, visual media, etc., that are protected by patents, copyrights or trademarks, or that are owned by third parties to this contract, in conjunction with CONSULTANT's execution of its work in this contract. In the event that any of the above items are to be incorporated into the deliverables or products which will be provided to the LOCAL AUTHORITY or the DEPARTMENT as a result of the work of this contract, whether owned by the CONSULTANT before entering into this contract or not, such use must be specifically authorized in this contract or by prior written approval from the LOCAL AUTHORITY or the DEPARTMENT. When the LOCAL AUTHROITY or DEPARTMENT provides such authorization, the CONSULTANT will secure the rights of use of these patented, copyrighted or trademarked items for the LOCAL AUTHORITY or the DEPARTMENT, at the LOCAL AUTHORITY's or DEPARTMENT's expense. An original executed copy of the right-to-use agreement will be delivered to and approved by the LOCAL AUTHORITY and the DEPARTMENT before commencing use of these item(s). The CONSULTANT will be responsible for paying all royalties and fees for said use during the entire term of this contract. To the extent that these royalties and fees are incurred exclusively and specifically for this contract and are shown in Attachment C of this contract, these costs are allowable expenses to the contract. The CONSULTANT must indemnify, save harmless and release the LOCAL AUTHORITY and the DEPARTMENT from claims of DEPARTMENT's or LOCAL AUTHORITY's direct, non-willful patent, copyright or trademark infringement, or for directly-resulting costs, expenses, penalties and damages that may be obligated by reason of a direct, non-willful infringement by DEPARTMENT or LOCAL AUTHORITY resulting from the work performed, services rendered or deliverables furnished under this contract which are caused by the negligence of the CONSULTANT. When Federal funds make up all or part of the remuneration under this contract, the United States Department of Transportation must be named along with the LOCAL AUTHORITY and the DEPARTMENT in all legal agreements covering use of patented, copyrighted or trademarked items.

26. CONFIDENTIALITY: If, in order to perform the work under this contract, the CONSULTANT is given access to confidential, protected, security-sensitive or proprietary business, technical or financial information regarding persons, materials, products, devices, processes, plans, designs, computer

elements, analyses, data, etc., the CONSULTANT agrees to treat such information as confidential and must not appropriate such information to its own use or disclose it to third parties at any time, neither during the term of this contract nor after contract termination, without specific written authorization by the LOCAL AUTHORITY and the DEPARTMENT to do so unless, except to the extent such disclosure is required by law, rule, regulation, court order, government investigation or whistleblower subpoena. The LOCAL AUTHORITY or DEPARTMENT will clearly identify those items as confidential at the time they are transmitted or disclosed to the CONSULTANT and they may be listed in Attachment C of this contract if known at the time of contract execution. The CONSULTANT must require adherence by its officers, agents, volunteers, employees and subcontractors to these confidentiality provisions.

The foregoing obligations will not apply if the said confidential, security-sensitive or proprietary information:

(a) Is found to be in the public domain at the time of receipt by the CONSULTANT;
(b) Is published or otherwise becomes part of the public domain after receipt by and through no fault of the CONSULTANT;
(c) Was in possession of the CONSULTANT at the time of receipt and was not acquired by CONSULTANT directly or indirectly from the DEPARTMENT or an agency of the State of Utah; or
(d) Was or is later received by the CONSULTANT from a third party other than an agency of the State of Utah, which did not require the CONSULTANT to hold such information in confidence.

27. ASSIGNMENT AND SUBCONTRACTING: The CONSULTANT must not subcontract any of the work required by this contract, or assign monies to be paid to the CONSULTANT hereunder, without the prior written approval of the LOCAL AUTHORITY or the DEPARTMENT. The amount billed to the LOCAL AUTHORITY and the DEPARTMENT for subconsultant costs will be the same amount the CONSULTANT actually pays the subconsultant for services required by this contract. All payments made by the CONSULTANT to the subconsultant for services required by this contract will be subject to audit by the LOCAL AUTHORITY or the DEPARTMENT. All subcontracts must be in writing and include all the same terms and conditions and provisions included in this contract. However, the prime CONSULTANT is responsible for ensuring that all work performed by sub-consultants is insured under their insurance policy, or they require that the sub-consultants meet the insurance provisions required under this contract.

The CONSULTANT must perform work valued at not less than 30% of the total contract amount with its own staff. (*Provision revised 2/15/2023.*)

28. PERSONNEL/STAFFING PLAN: For any change in key personnel from that specifically identified in Attachment C of this contract, the CONSULTANT must provide an equivalent or better qualified replacement subject to DEPARTMENT approval.

29. DISPUTES: Claims for services, materials, or damages not clearly authorized by the contract, or not ordered by the LOCAL AUTHORITY and the DEPARTMENT by prior written authorization, will not be paid. The CONSULTANT must notify the LOCAL AUTHORITY and the DEPARTMENT in writing, and wait for written approval, before it begins work not previously authorized. If such notification and approval is not given or the claim is not properly documented, the CONSULTANT will not be paid the extra compensation. Proper documentation alone will not prove the validity of the claim. The parties agree to use arbitration or mediation, as mutually agreed by the parties, after exhausting applicable administrative reviews to resolve disputes arising out of this contract where the sole relief sought is monetary damages $100,000 or less, exclusive of interest and costs.

30. CLAIMS - DELAYS AND EXTENSIONS: The CONSULTANT agrees to proceed with the work previously authorized by the contract, or in writing, continually and diligently, and will make no charges or claims for extra compensation for delays or hindrances to the extent such delays or hindrances were caused by CONSULTANT. The LOCAL AUTHORITY and the DEPARTMENT may allow an extension of time for the contract, for a reasonable period as agreed by the parties, should a delay or hindrance occur. The LOCAL AUTHORITY or the DEPARTMENT will not waive any of its rights under the contract by permitting the CONSULTANT to proceed with the contract after the established completion date. The CONSULTANT will not be responsible for delays due to causes beyond CONSULTANT's reasonable control.

31. CONSULTANT'S ENDORSEMENT ON PLANS, ETC.: The CONSULTANT (if a firm, the responsible principal) is required to endorse and appropriately apply its seal to plans, reports, and engineering data furnished to the LOCAL AUTHORITY and the DEPARTMENT under this contract.

32. CONTRACT MODIFICATIONS: This contract may be amended, modified, or supplemented, as it is mutually agreed to by the parties by written contract modification, executed by the parties hereto and attached to the original signed contract.

Claims for services furnished by CONSULTANT, not specifically authorized by this contract or by appropriate modification, will not be paid by the LOCAL AUTHORITY or the DEPARTMENT. When a contract modification has been agreed to by the parties no claim for the extra work done or material furnished must be made by the CONSULTANT until the written modification has been fully executed. Any verbal agreements not confirmed in writing are non-binding.

33. TERMINATION: This contract may be terminated as follows:

(a) By mutual agreement of the parties; in writing and signed by the parties.

(b) By any party for failure of another party to fulfill its obligations, as set forth with the provisions of this contract and in particular with Attachment C, "Services Provided by the CONSULTANT" or Section 52, "Duties of the LOCAL AUTHORITY and the DEPARTMENT". Reasonable allowances will be made for circumstances beyond the control of the CONSULTANT and the LOCAL AUTHORITY or the DEPARTMENT. Written notice of intent to terminate is required and must specify the reasons supporting termination.

(c) By the DEPARTMENT for the convenience of the State upon written notice to the CONSULTANT.

(d) By the LOCAL AUTHORITY or the DEPARTMENT, if the LOCAL AUTHORITY or the DEPARTMENT determines that the performance of the CONSULTANT is not satisfactory, the DEPARTMENT may notify the CONSULTANT of the deficiency with the requirement that the deficiency be corrected within a specified time; but not less than 10 days. Otherwise the contract will be terminated at the end of such time.

(e) By the LOCAL AUTHORITY or the DEPARTMENT, if the LOCAL AUTHORITY or the DEPARTMENT requires termination of the contract for reasons other than unsatisfactory performance of the CONSULTANT, the DEPARTMENT will notify the CONSULTANT of such termination, with instructions as to the effective date of work stoppage or specify the stage of work at which the contract is to be terminated.

(f) If the contract is terminated before performance is completed, the CONSULTANT will be paid for the work satisfactorily performed up through the date of termination. Payment is to be on the basis of substantiated costs, not to exceed an amount which is the same percentage of the contract price as the amount of work satisfactorily completed is a percentage of the total work called for by the contract.

(g) The LOCAL AUTHORITY and the DEPARTMENT reserve the right to cancel and terminate this contract in the event the CONSULTANT or any employee or agent of the CONSULTANT is convicted for any crime arising out of or in conjunction with any work being performed by the CONSULTANT for or on behalf of the LOCAL AUTHORITY or the DEPARTMENT, without penalty. It is understood and agreed that in the event of such termination, all data acquired and work product produced under this contract will be turned over to the LOCAL AUTHORITY and the DEPARTMENT within seven (7) calendar days. The LOCAL AUTHORITY and the DEPARTMENT reserve the right to terminate or cancel this contract in the event the CONSULTANT will be placed in either voluntary or involuntary bankruptcy or an assignment be made for the benefit of creditors. The LOCAL AUTHORITY and the DEPARTMENT further reserve the right to suspend the qualifications of the CONSULTANT to do business with the LOCAL AUTHORITY or the DEPARTMENT upon any such conviction.

(h) Upon satisfactory completion of required contract services.

(i) On termination of this contract all accounts and payments will be processed in accordance with contract terms. An appraisal of the value of work performed to the date of termination must be made to establish the amount due to or from the CONSULTANT. If the contract fee type is Cost-Plus-Fixed-Fee-With-Fixed-Total-Additive-Rate and the contract is terminated for reasons other than paragraph 33(h), the final fixed fee amount will be paid in proportion to the percentage of work completed as reflected by the periodic invoices as of the date of termination of the contract. Upon determining the final amount due the CONSULTANT, or to be reimbursed by the CONSULTANT, in the manner stated above, the final payment will be processed in order to close out the contract.

34. REMEDIES: Any of the following events will constitute cause for the DEPARTMENT or LOCAL AUTHORITY to declare CONSULTANT in default of this Contract: (i) CONSULTANT'S non-performance of its contractual requirements and obligations under this Contract; or (ii) CONSULTANT'S material breach of any term or condition of this Contract. The DEPARTMENT may issue a written notice of default providing a ten (10) day period in which CONSULTANT will have an opportunity to cure. Time allowed for cure will not diminish or eliminate CONSULTANT'S liability for damages. If the default remains after CONSULTANT has been provided the opportunity to cure, the DEPARTMENT may do one or more of the following: (i) exercise any remedy provided by law or equity; (ii) terminate this Contract; (iii) impose liquidated damages, if liquidated damages are listed in this Contract; (iv) debar/suspend CONSULTANT from receiving future contracts from the DEPARTMENT or the State of Utah; or (v) demand a full refund of any payment that the DEPARTMENT has made to CONSULTANT under this Contract for Services that do not conform to this Contract.

35. ERRORS AND OMISSIONS: The CONSULTANT will, without additional compensation, correct or revise any failure to meet the Standard of Care in its design, drawings, specifications and other services which are caused by a breach of the CONSULTANT'S Standard of Care. The CONSULTANT is required to follow UDOT Policy 08-07 Errors and Omissions on Projects which is hereby incorporated by reference.

36. POLLUTION CONTROL: The CONSULTANT agrees to comply with applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671g) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). The DEPARTMENT must report violations to the applicable Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

37. ELECTRONIC DESIGN SUBMISSION: The CONSULTANT will adhere to the current DEPARTMENT model development and CADD standards on the DEPARTMENT's website. The CONSULTANT will provide all plans, specifications, surveys, electronic files and associated data in the DEPARTMENT acceptable electronic formats into the DEPARTMENT's content management system with the correct attributes assigned. The CONSULTANT will organize all project data in the DEPARTMENT'S project directory structure as specified in the DEPARTMENT'S current CADD Standards. The CONSULTANT will be aware of and comply with applicable DEPARTMENT CADD standards. The DEPARTMENT CADD standards are available at the CADD Support sub-page of the DEPARTMENT website www.udot.utah.gov/go/cadd.

Computer Aided Drafting and Design acceptable formats are as follows:

(a) Drafting: MicroStation Design format (.dgn) by Bentley Systems Inc., version 8.9 or higher (v8 file format).

(b) Civil Design: InRoads by Bentley Systems Inc. version 8.9 or higher acceptable formats are as follows: Geometry files (.alg), Surface or digital terrain models (.dtm), Template libraries (.itl), Roadway Designer files (.ird), and Open Roads technology files (.dgn).

(c) Survey and Photogrammetry: InRoads Survey format (.fwd) or Open Roads technology file format (.dgn) by Bentley Systems Inc. version 8.8 or higher. Raw survey files will be in ASCII format, (point number, Northing, Easting, Elevation and code). Survey points will be coded using the DEPARTMENT feature codes located in the DEPARTMENT preference file (.xin) and Raster Images (aerial photos) will be in MicroStation compatible formats. Design and Survey work will adhere to the DEPARTMENT CADD Standards and "Survey and Geomatics Standard Manual" Guide.

(d) Plotting: For the project to be republished by the DEPARTMENT, the CONSULTANT will prepare a file to direct the DEPARTMENT's plotting software, InterPlot, by Bentley Systems Inc. to produce the correct output. This is the InterPlot Organizer's plot-set file (filename.ips). This file contains specifications for each sheet in the plan set and controls the order and name of each sheet as they will appear in the PDF plan set. Instructions for preparing this file can be found at the DEPARTMENT CADD Support website as stated above.

(e) Responsibility: Region Designers/Consultants, Action - When submitting electronic files for project milestones and advertising, Region or consultant designers must deliver to the DEPARTMENT the design files in the DEPARTMENT's content management system in the established project directory structure. The following files must be included in the submittal: 1) Major design files, including roadway design, structure, striping, signing, signals, and profiles (Microstation format), 2) Existing topography and existing utilities (Microstation format), 3) Existing and proposed surfaces (dtm or dgn format), 4) InRoads alignments (alg or dgn format), templates (itl), roadway designer files (ird or dgn format) and preference files (xin or dgnlib format), 5) Configuration and resource files including font and linestyle resource files.

(f) Placement: Action – Project data must be delivered to the DEPARTMENT in the DEPARTMENT's document management system in the established project directory structure. All documents must be attributed correctly in the system at the time of delivery. All files must have the references and links re-established when delivered into the content management system using the Scan References and Link Sets tool.

(g) Digital Delivery: Projects designated as Digital Delivery will have varying file format delivery requirements. Digital Delivery is an evolving technology and file formats may change based on the DEPARTMENT's stage of Digital Delivery development. Unless the Project Manager scopes the project differently, files will be attributed and delivered as Legal with a .dgn extension including the reference files. In addition, .alg, .icm, iModels, .dtm and other file formats will be delivered as For Information Only (FIO). The DEPARTMENT Project Manager will determine if plan sets are required on the project (as FIO) or if a traditional plan set will be required, see the Work Plan in ATTACHMENT C: SERVICES PROVIDED BY THE CONSULTANT of this contract.

The CONSULTANT will be responsible for the accuracy of any translated data.

38. REQUIREMENTS FOR COMPUTER ELEMENTS:

Hardware, firmware and/or software elements that the CONSULTANT procures, furnishes, licenses, sells, integrates, creates and/or enhances for the LOCAL AUTHORITY and the DEPARTMENT under this contract must achieve the specific objectives specified in the work plan. These elements must be free of defects, or "bugs," that would prevent them from achieving the objectives specified in the Work Plan in ATTACHMENT C: SERVICES PROVIDED BY THE CONSULTANT of this contract.

Computer software and applications created and/or enhanced under this contract will include as deliverables; user instructions, program documentation, program listings, source code and executables in specified compiled formatted files. The program documentation must include flow charts and detailed treatment of decision algorithms and their technical basis. Appropriate LOCAL AUTHORITY individuals will review "user instructions" and "program documentation" for acceptability. Formal sign-offs will record such events and be part of the project repository. Software development and operating system platforms must be approved by the LOCAL AUTHORITY and the DEPARTMENT and specified in the work plan. Changes to these platforms may only be allowed by written authorization by the LOCAL AUTHORITY and the DEPARTMENT.

39. COST PRINCIPLES: Regardless of the funding source, the costs allowable for reimbursement will be governed by the 2 C.F.R. Part 200 Subpart E and 48 C.F.R. Part 31 Federal Acquisition Regulations (FAR) in compliance with 23 U.S.C. § 112(b)(2)(B), as modified by Utah State law, administrative rules, and regulations on contract provisions.

40. CORONAVIRUS PANDEMIC RECOVERY: This section applies only if: (i) this Contract, or a subcontract, is a cost-plus-fixed-fee contract; (ii) the CONSULTANT (or the subconsultant with that subcontract)

received a loan under the federal Paycheck Protection Program or similarly, received a credit, loan or other relief in 2020, or thereafter, from a federal program enacted to provide relief during the Coronavirus pandemic, such as the CARES Act, the FFCRA, or other similar federal legislation (collectively a "PPP Loan"); and (iii) any portion of the PPP Loan was forgiven, or applicable law similarly requires the recipient to provide a refund, repayment, credit, or reimbursement to the DEPARTMENT. If this section applies, the CONSULTANT, for itself and its subconsultants, must comply with this section to provide for a PPP Loan recovery in compliance with 48 C.F.R. 31.201-5, Utah Code § 72-2-113(3), and other applicable law and guidance. Those legal obligations require calculation of a PPP Loan credit which must be included in the Indirect Cost Rate (referred to in this section as an "Impacted Rate"). Under this Contract, an accepted Impacted Rate will apply during the CONSULTANT's (or subconsultant's) "Recovery Period," which is the shorter of the following time periods: (i) the time period necessary to recover the required credit amount of the CONSULTANT's (or the subconsultant's) forgiven PPP Loan (or other repayment obligation); or (ii) 365 days after the date when the DEPARTMENT approved the CONSULTANT's (or the subconsultant's) Impacted Rate.

This Contract is written to include the CONSULTANT's "Unimpacted Rate" (which is the CONSULTANT's accepted rate without the PPP Loan credit). The CONSULTANT has also included subconsultant costs on that basis. But notwithstanding those or any other provisions of this Contract to the contrary, the CONSULTANT agrees as follows: (i) During the CONSULTANT's Recovery Period, each of its invoices will provide to the DEPARTMENT a "Recovery Credit," which is an amount that is equal to the difference between the CONSULTANT's overhead and fixed fee calculated at the Unimpacted Rate, and the CONSULTANT's overhead and fixed fee calculated at the Impacted Rate. The CONSULTANT will show its Recovery Credit, as calculated, using the UDOT OH & FF Credit Adjustment Template" document, and the CONSULTANT will include the template and calculation as part of its support documentation for each invoice. (ii) During a subconsultant's Recovery Period, the CONSULTANT's costs charged for a subconsultant will include the Recovery Credit for that subconsultant. The CONSULTANT will require the subconsultant to show its Recovery Credit, as calculated, using the UDOT OH & FF Credit Adjustment Template document, and the CONSULTANT will include the subconsultant's template and calculation as part of the CONSULTANT's support documentation for each invoice.

When the CONSULTANT or any subconsultant reaches the end of its Recovery Period, the CONSULTANT must submit a notification to the DEPARTMENT Project Manager stating the date that is claimed for when recovery was complete ("Recovery Date"). If the Recovery Date claimed by the CONSULTANT or the subconsultant is less than 365 days after the date when the DEPARTMENT approved the CONSULTANT's or subconsultant's Impacted Rate, then the notification must also include documentation that demonstrates full recovery (subject to the DEPARTMENT's verification). When submitting invoices to the DEPARTMENT, the CONSULTANT will not include Recovery Credits for itself or any subconsultants once the CONSULTANT or a subconsultant has reached its Recovery Date.

If upon review the DEPARTMENT is unable to verify that the CONSULTANT's (or a subconsultant's) required PPP Loan recovery was met on the Recovery Date claimed by the CONSULTANT (or a subconsultant), the DEPARTMENT will require, and the CONSULTANT agrees to pay, the amount of any Recovery Credit that should have been credited to the DEPARTMENT under the requirements of this section. The CONSULTANT further agrees that the DEPARTMENT can take such payment from any amount that the DEPARTMENT owes to the CONSULTANT.

The CONSULTANT agrees that the amounts which are, or should be, credited to the DEPARTMENT as part of the CONSULTANT's (or a subconsultant's) Recovery Credit will be deducted from the Contract's maximum-not-to-exceed amount at the time of Contract closure and are not eligible for payment to the CONSULTANT.

The PPP Loan recovery requirements are a federal obligation that is required at every Contract level. The CONSULTANT must pass down applicable requirements to its subconsultants. (*Provision revised 2/15/2023.*)

41. RIGHT OF WAY SUBMITTAL REQUIREMENTS: Submission of right of way acquisition packages are required to follow the UDOT Right of Way ProjectWise Guide, as amended, which is incorporated herein by this reference.

42. GOVERNMENT RECORDS ACCESS AND MANAGEMENT ACT: Pursuant to the Government Records Access and Management Act, Utah Code §§ 63G-2-101 through 63G-2-901, the CONSULTANT understands that if it believes that any records it submits to the DEPARTMENT or the LOCAL AUTHORITY should be considered confidential for business purposes under Utah Code § 63G-2-309, it must provide with the record(s) a written claim of business confidentiality, and a concise statement of reasons supporting the claim of business confidentiality that satisfy the requirements of §§ 63G-2-305(1) and (2), and 309 to the DEPARTMENT. The CONSULTANT understands that the DEPARTMENT and the LOCAL AUTHORITY will not treat any such record as confidential absent such written notification. Additionally, pursuant and subject to Utah Code §§ 63G-2-101 through 901 the CONSULTANT will take no action, legal or otherwise against the State of Utah, the DEPARTMENT, LOCAL AUTHORITY, or any employee, agent or representative of the State of Utah, DEPARTMENT, or the DEPARTMENT if the State Records Committee or a court orders the DEPARTMENT or LOCAL AUTHORITY to publicly disclose any record the CONSULTANT considers confidential, or believes should be considered protected, private, or controlled.

43. WORK ACCEPTANCE:

(a) Subject to the Standard of Care, work performed under this contract must be performed in accordance with applicable Standards, Specifications, Manuals, Guides, Manuals of Instruction, Policies and Procedures established by the DEPARTMENT. Work must be subject to the approval of the LOCAL AUTHORITY and the DEPARTMENT through its designated representatives.

(b) Reviews and Quality Assurance: All contracts require a quality control / quality assurance (QC/QA) plan and checklist. For design projects specifically, the CONSULTANT must provide a project specific QC/QA plan that meets or exceeds the DEPARTMENT'S standard QC/QA plan located on the DEPARTMENT web page at www.udot.utah.gov/go/qcqa which is hereby incorporated by reference into this contract. If the CONSULTANT elects to use its own QC/QA plan, that plan must be approved by the DEPARTMENT'S Project Manager. The CONSULTANT will meet all document retention requirements and schedules.

44. GENERAL CONTROL AND INSPECTIONS: The CONSULTANT may be represented at progress review meetings as may be scheduled by the LOCAL AUTHORITY or the DEPARTMENT. The CONSULTANT must accompany LOCAL AUTHORITY or the DEPARTMENT personnel and other representatives on field inspections and at conferences as may be required.

45. INSPECTION OF INTELLIGENT TRANSPORTATION SYSTEMS (ITS) AND ELECTRICAL CONSTRUCTION:

To ensure complete impartiality in the performance of construction inspection, any consultant engineering companies who are concurrently performing or bidding on ITS or electrical construction work for the LOCAL AUTHORITY or the DEPARTMENT will not be considered eligible to perform construction inspection of ITS or electrical work on any projects as part of a consultant contract.

Consultants who are selected to do ITS or electrical construction inspection as part of a consultant contract will be requested to affirm that they currently are not performing or bidding on any electrical or ITS construction work for LOCAL AUTHORITY or the DEPARTMENT and will not for the duration of the relevant consulting contract.

For the purposes of this provision, ITS or electrical construction is defined as follows:

Work involving the installation or repair of underground electrical conduit, electrical cables, fiber-optic cable, or any other construction work involving 120-volt (or greater) current for which a state electrician's license is required. Field work taking place inside an electrical cabinet, or involving low voltage detection or data circuits, will *not* be considered ITS or electrical construction. Diagnosis, testing, calibration, aiming, re-splicing, or repair of low voltage detection circuits, fiber-optic cable, or detection equipment will *not* be considered ITS or electrical construction.

Consultant engineering companies who also perform ITS or electrical construction work under contract to LOCAL AUTHORITY or the DEPARTMENT *will* be eligible to perform the following types of consulting

work, provided that the work is on completely different projects, with no possibility for conflict of interest: design work, ITS system integration, software development.

46. **NO THIRD-PARTY BENEFICIARIES**: The parties enter into this contract for the sole benefit of the parties, in exclusion of any third party, and no third-party beneficiary is intended or created by the execution of this contract.

47. **COORDINATION WITH DEPARTMENT DISCIPLINE MANAGERS**: To ensure programmatic consistency, if the project requires, the CONSULTANT will coordinate decisions with the Region and/or Central Discipline Managers in addition to the DEPARTMENT Project Manager. It is important for consultants to seek input into decisions from the technical experts within the DEPARTMENT.

The CONSULTANT is required to obtain the DEPARTMENT Communications Office written approval prior to sending a press release or using the DEPARTMENT's name.

48. **COORDINATION WITH UTAH DEPARTMENT OF TECHNOLOGY SERVICES (DTS)**: The CONSULTANT will comply with the Utah Technology Governance Act, Utah Code §§ 63A-16-101 through 63A-16-903.

After execution of the contract, and prior to commencing any information technology (IT) related activities as defined in Utah Code § 63A-16-102, the CONSULTANT will:

(a) Coordinate with and receive written approval from the DEPARTMENT and the DTS IT Director assigned to the DEPARTMENT, or

(b) Have previously obtained written approval from the DTS IT Director assigned to the DEPARTMENT for the IT related activities which must be detailed in the Scope of Work and included in the terms of this base contract.

In addition, the DEPARTMENT will not consider modifying this contract to include or alter IT elements without coordination and written approval from the DTS IT Director assigned to the DEPARTMENT.

49. **CONSULTANT JOB VACANCIES:** CONSULTANT agrees, for the duration of the contract, to provide CONSULTANT'S name, contact information, and information about CONSULTANT's job vacancies on the PROJECT to the Utah Department of Workforce Services to facilitate job inquiries by the public pursuant to Utah Code Subsections 63G-6a-107.7(4) and 35A-2-203(5)(b). This requirement does not apply when CONSULTANT fills a vacancy with a current employee and does not preclude CONSULTANT from advertising job openings in other forums throughout the state.

50. **USE OF STATE SEAL AND DEPARTMENT LOGO:** The CONSULTANT will not misrepresent their employees as State of Utah employees. The CONSULTANT will not use the Utah State Seal or DEPARTMENT logo on business cards for their employees nor use Utah or DEDPARTMENT letterhead on correspondence signed by their employees with the following exception: the CONSULTANT may incorporate the DEPARTMENT logo on their business cards stating, "In partnership with UDOT" in addition to the CONSULTANT'S own logo. The CONSULTANT may prepare correspondence for the approval and signature of appropriate State of Utah employees.

51. **ASSIGNMENT OF ANTITRUST CLAIMS:** The CONSULTANT and the DEPARTMENT recognize that in actual economic practice, overcharges by the CONSULTANT'S suppliers resulting from violations of state or federal antitrust laws are in fact borne by the LOCAL AUTHORITY. As part of the consideration for the award of the Contract, and intending to be legally bound, the CONSULTANT assigns to the LOCAL AUTHORITY and the DEPARTMENT and the state of Utah all right, title and interest in and to any claims the CONSULTANT now has, or may acquire, under state or federal antitrust laws relating to the products and services which are the subject of this Contract.

52. **DUTIES OF THE LOCAL AUTHORITY AND THE DEPARTMENT:**

(a) Guarantee Access: The LOCAL AUTHORITY or the DEPARTMENT will guarantee access to and make all provisions for the CONSULTANT to enter upon all lands, both public and private

which in the judgment of the parties hereto are necessary to carry out such work as may be required.

(b) Prompt Consideration: The LOCAL AUTHORITY and the DEPARTMENT will give prompt consideration to all reports, plans, proposals and other documents presented by the CONSULTANT.

(c) Documents: The DEPARTMENT will furnish Standards, Specifications, Manuals of Instruction, Policies and Procedures, and other available information, including any material previously prepared for this work. Specific materials related to this contract that will be furnished by the LOCAL AUTHORITY and the DEPARTMENT.

(d) Services: The LOCAL AUTHORITY and the DEPARTMENT will perform standard services relating to this contract.

53. FORCE MAJEURE: Neither party will be liable for failure to perform this agreement when such failure is due to “force majeure.” “Force majeure” means acts of God, strikes, lockouts, or industrial disputes or disturbances, civil disturbances, arrests and restraints, interruptions by government or court orders, acts of the public enemy, terror events, wars, riots, insurrections, incidences of disease or other illness that reaches epidemic, endemic, or pandemic proportions, fires, explosions, inability to obtain easements, right-of-way, or other interests in realty, or any other cause, whether of the kind here enumerated or otherwise, not reasonably within the control of the party claiming “force majeure.” Events of “force majeure” must be remedied with all reasonable dispatch.

SERVICES PROVIDED BY THE CONSULTANT

1. SCOPE SUMMARY:

The Consultant will design a new diamond interchange including structures, ramps, and mainline tie-ins on SR-7 at Exit 5. The Consultant will also complete an environmental re-evaluation of the 2005 EIS.

2. SCOPE DOCUMENTS:

Following are the scope items contained in this attachment:

(a) Approval Memo

(b) Executive Summary

(c) Detailed Work Plan

(d) Personnel/Staffing Plan

(e) Schedule

(1) Completion: All work must be completed by December 31, 2026. If additional time is required beyond the Scope of Work Completion Date, the CONSULTANT must submit a "Contract Date Extension Modification" to the LOCAL AUTHORITY and the DEPARTMENT'S Project Manager for approval and processing.

(2) Contract Period: The contract will terminate December 31, 2027, unless otherwise extended or canceled in accordance with the terms and conditions of this contract.

UDOT Consultant Services
Contract Approval Memo
Memo Printed on: January 27, 2025 1:00 PM

PM Approval Date: January 24, 2025 **UDOT PM:** Taylor Ricks (Acting as UDOT)

The Project Manager has reviewed and approved the contract/modification consultant documents: Executive Summary, Work Plan, Staffing Plan, Work Schedule, and Cost Proposal.

PROJECT INFORMATION

PIN:	21559
Project No.:	F-0007(30)4
Job/Proj:	5649915D
PIN Description:	SR-7; Exit 5

CONTRACT INFORMATION

CS Admin:	Philip R. Ellsworth (Acting as UDOT)
Contract No.:	New Preliminary Engineering for new interchange on SR-7 at MP 5
Mod No.:	
SOW Completion Date:	December 31, 2026
Contract/Mod Amount:	$1,728,104.90
Fee Type:	COST PLUS FIXED FEE
Selection Method:	STREAMLINED SOLICITATION
Period:	2022-2025 GE POOL
Phase:	PRELIMINARY ENGINEERING
Disciplines:	PRECONSTRUCTION ENGINEERING

CONTACTS

Consultant	Local Government
HORROCKS ENGINEERS LLC	City of St George
Justin A. Beddoes	Cameron Cutler
2162 WEST GROVE PKWY STE 100 PLEASANT GROVE, UT 84062	175 E 200 N CITY OFFICE , ST GEORGE, UT 84770 (435) 674-4287 CAMERON.CUTLER@SGCI

UDOT CMS Contract Executive Summary

Contract Number:	NEW	Mod:		Project Number:	F-0007(30)4	PIN:	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Brief Description

The Utah Department of Transportation (UDOT) and City of St George (SG) has retained the team of Horrocks (H), Michael Baker International (MBI) and Gerhart Cole (GC) to prepare plans, specifications, estimates, and other necessary construction documents for a new grade-separated interchange located at SR-7, Exit 5 (Southern Hills Drive). in the City of St Geroge, in Washington County Utah. This scope of work includes design of exit and entrance ramps, Southern Hills Drive; approximately 500 feet beyond ramp terminals, a new bridge structure on Southern Hills Drive going over SR-7, and retaining walls as needed. The Horrocks team will provide roadway design, structures, drainage, hydraulics, geotechnical, traffic, utility coordination, public involvement, survey, right-of-way (ROW), and environmental services for this project.

Project Team

This document and attachments encompass the scope of services for the entire Horrocks team including subconsultants:

- Horrocks Engineers (Prime)
- Michael Baker (Subconsultant - Design)
- Gerhart Cole (Subconsultant - Geotechnical)

Assumptions

Assumptions

1. Horrocks team will perform design services using Open Roads Designer and in accordance with 2025 UDOT design standards and specifications
2. No pavement design included in this contract. Ramps will be similar to Exit 4 and Exit 5; City will provide pavement section for Southern Hills Drive.
3. The existing alignment and grade of SR-7 will not be changed, design hours in this contract are for ramps, and cross-street going over SR-7. If design requirements cannot be met, a cross-street profile option will be evaluated to see what it would take to meet design requirements, however, if the profile of SR-7 needs to be changed, this will be done by contract mod.
4. No design required for betterments, any design work for betterments will by contract mod
5. No project aesthetics plan (activity 3A1) will be developed. Project elements will consist of baseline treatments (standard form liners and colors, plantings and seedings, rock mulch, etc.) and match similar existing SR-7 interchanges in SG
6. Horrocks team will provide MOT requirements that will be included in the specifications, the Contractor will be required to develop MOT plans
7. Horrocks team will provide existing Right-of-Way basemap, no ROW design included in this contract.
8. No ROW Appraisals or Acquisition services provided
9. No Utility test holes will be performed
10. Horrocks team will perform an environmental re-evaluation
11. UDOT will provide Utility agreements and utility design authorization letters, if needed
12. Water Quality - efforts to meet water quality requirements will be made within the existing ROW. For example, dispersion of runoff over fill slopes, deeper riprap in channels, and wider swales for water retention. If it is determined that more needs to be done to meet water quality a contract mod will be needed to design a basin outside of the ROW.
13. Typical type selection process will be followed for the new bridge. For this scope and the associated fee, the following is assumed:
    a. One Bridge, Southern Hills Drive over SR-7
    b. Two-span concrete girder on deep foundations
    c. Constructed in a single phase
14. One structures plan set for retaining walls. All retaining walls are assumed to be MSE walls. The assumed wall locations are:
    a. at each bridge abutment
    b. a wall supporting the roadway near the power transmission pole
        i. This wall will support the roadway, not the power transmission pole
    c. a wall to avoid extending D 842 (SR-7 over Mesa Wash)
    d. If additional walls are needed to minimize a fill limit or a cut limit will be added by contract modification.
15. Noise Walls - a noise analysis will be performed as part of this contract, design noise walls will be by contract modification
16. No Construction Oversight activities are included. These activities will be added by contract modification when requested by UDOT.
17. MSE wall design assumes only minor adjustments to top of wall and bottom of wall profiles during the PS&E phase.
18. MSE wall design assumes that only 3 typical MSE wall sections will be needed.

Phasing

It’s anticipated there will be no phasing for this project.

Fee Type

The fee type for this project is a Cost-Plus-Fixed-Fee. This fee type is typical of design projects and will meet the project needs.

UDOT CMS Contract Work Plan

Contract Number:	NEW	Mod:		Project Number:	F-0007(30)4	PIN:	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Activity: 1Z1 - PROJECT OVERSIGHT

1Z1 Project Oversight

Overview

This activity is for the Project Manager oversight of the project through the entire design phase and into post advertising. This activity is used to manage all of the aspects of the project, including scope, schedule and budget.

References

Project Financial Management Guide

Team UDOT Guide

UDOT Project Manager Guide

Consultant Services Manual of Instruction

Deliverables & Tasks

I. PROJECT OVERSIGHT

A. Read, Understand, and Become Familiar with the UDOT Project Manager Guide

1. This will help experienced and new PMs understand PM processes and expectations.

2. It will acquaint PMs with their roles and responsibilities along with the skills and knowledge required to deliver a successful project.

B. Read, Understand, and Become familiar with the Team UDOT Guide

1. This brings together team building tools, tips, strategies and steps to help improve project success by:

Improving Project Delivery

Enhancing communication and collaboration

Reaching milestones on time and under budget

Generating innovative ideas and solutions

II. PROJECT SCOPE

A. Project Setup and then Continue following this Guideline to Aid in the Delivery of a Successful Project

1. See activity 1Z2

III. PROJECT SCHEDULE

A. Update/Review Schedule in UDOT Scheduling Software

1. Discipline Leads are responsible to update the schedule in UDOT scheduling software for their activities.

2. This task is to review updates and project status in the scheduling software.

3. The PM is responsible for making sure the project is on schedule, within allocated resources (budget and staff), and within scope.

4. Coordinate with Discipline Leads to address projected needs that will exceed the schedule, resources, and scope.

IV. PROJECT BUDGET

A. Read, Understand, and Become Familiar with Project Financial Management Guide

1. The goal for this guide is to provide an overview of the Project Finance Life Cycle and to give tools to minimize the project's financial risk and make best use of the budget.

2. The Project Financial Life Cycle serves as budget milestones and checkpoint opportunities to validate projected cost estimates, account for actual expenditures, confirm project phase budgets, and ensure budget risk cost controls are in place.

3. The Project Financial Management Guide includes the following chapters which describe how a project is initiated (well before the PDN process is started on a project), to how a project is closed out, including:

Introduction

Basic Project Accounting

Project PIN Creation Process

Concept Development (CD) Process

Preconstruction Process

Advertise Construction Process

B. Develop and Monitor the Budget with Coordination and Input from the Discipline Leads

C. Actively Track, Monitor, Refine, Update the Project Budget

D. Manage Contracts and Contract Modifications

1. Set up contracts with consultants when needed to deliver the scope of the project. (See Activity 1Z3 for further guidance)

2. Request contract modifications when they are justified.

3. Review all consultant invoices to see that they are consistent with the contract documents and then submit for payment. Invoices should be reviewed and approved or rejected within 30 days of submittal.

1Z1 - Project Management

Tasks Not Used

1. Project Oversight
2. Project Scope

Tasks Modified

1. Project Schedule - Prepare MS Project schedule, monitor and update schedule monthly
    a. Consultant PM 4 hours for schedule setup and an average 0.5 hour per month
    b. Discipline leads an average 0.5 hour each per month

Tasks Added

1. Project Meetings
    a. Prepare for and participate in monthly **project team meetings** and prepare meeting notes
        i. Eight (8) meetings @ 1.5 hours per meeting
        ii. This will consist of management and discipline leads
    b. Prepare for and participate in bi-weekly **management update meetings** with UDOT & SG

i. Twenty (20) meetings @ 0.5 hour per meeting

ii. This meeting will consist of UDOT PM, SG PM, and Consultant Team PM

c. Prepare for and participate in bi-weekly internal **design meetings**

i. Twenty (20) meetings @ 1.0 hour per meeting with an average of 10 staff

ii. This meeting will consist of PM, discipline leads, and designers.

2. Create and review monthly invoices and progress status reports
   a. Consultant PM, accountant, and administrator an average of 1 hour each per month
3. Direct and monitor activities of project team
   a. Consultant PM an average of 2 hours per week
4. Develop a Risk Register and update/review monthly
   a. Consultant PM 2 hours for setup and an average 1 hour per month
   b. Discipline leads an average 0.5 hour each per month
5. Upload and maintain all project documentation, design files, meeting materials, project notes, etc. to the UDOT ProjectWise server monthly
   a. Discipline leads and average 0.5 hour each per month
6. Convert/Coordinate design files to GIS so UDOT can post on U-Plan
   a. Consultant PM 2 hours for oversight
   b. Discipline leads and average 1 hour each at the end of the project
7. Develop and Maintain Project Dashboard
   a. Consultant PM 1 hour for setup
   b. SharePoint administrators 4 hours for setup and an average of 3 hours for monthly maintenance

Assumptions:

1. Project duration for these tasks will be from February through December

Deliverables:

1. Meeting summaries/minutes for all project meetings and workshops
2. Monthly invoices
3. Monthly project status reports
4. Risk Register
5. Data uploaded to UDOT ProjectWise

Activity: 1V1 - KICKOFF MEETING

1V1 Kickoff Meeting

Overview

Prepare for and hold the initial project team meeting. The purpose of the meeting is to introduce team members, familiarize the team with the project, review the proposed project scope, schedule, and budget, and to commit to the project's success.

References

· Team UDOT Guide

Deliverables

1. Kickoff Meeting Agenda

Tasks

- Develop Meeting Agenda
- Invite Meeting Attendees
- Hold Meeting

2. Kickoff Meeting Notes

Task

- Compile Meeting Notes

3. Project Communications Plan

Task

- Develop/Revise Project Communications Plan

4. Draft Project Definition Document (PDD)

Task

- Develop/Revise Project Definition Document (PDD)

Develop Meeting Agenda

Plan the time and location. Identify and schedule resources such as vehicles and drivers. Prepare and distribute the agenda for review **before** the meeting. The following are potential agenda items and materials:

- Field Visit
- Team Member Introductions Including Role on the Project
- Project Location
- Concept Report
- Scope, Schedule, and Budget
- Risk Register
- Aesthetics and Landscape Assessment
- Maintenance of Traffic
- Problem area identified by Maintenance
- Project Communication Plan
- UDOT QC/QA Documentation
- Draft Project Definition Document (PDD)
- Lessons Learned from Previous Projects

Invite Meeting Attendees

Invite all potential project team members. Include the following with the invitation:

- Meeting Agenda
- Proposed Scope, Schedule, and Budget
- Draft PDD
- Concept Report (if available)

Hold Meeting

Conduct the meeting according to the agenda.

- Provide the following at the meeting:
  - Concept Report
  - Project Location Mapping such as USGS Quads, GoogleEarth, and As-Builts
  - Draft Project Definition Document (PDD)

Compile Meeting Notes

Develop meeting notes and distribute them to all invitees. Include the following:

- Decisions
- Action Items
- Revisions to Draft PDD
  - Scope, Objective Statement, Schedule, Budget, and Risk Register
- Communication expectations

Develop/Revise Project Communications Plan

Based on discussions at the Kickoff Meeting, establish the communications plan. This should include a commitment to how the team members will communicate with each other throughout the project. (See Team UDOT Team Building Guide, Plan Your Communication section for suggestions.)

Develop/Revise Project Definition Document (PDD)

Based on discussions at the Kickoff Meeting, update the draft PDD to reflect the appropriate scope, schedule, budget, and risks associated with the project. Update the MS Project Schedule and Risk Register to reflect these discussions.

If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes and distributes them after the meeting.

1V1 - Kickoff Meeting

Tasks Not Used

1. Updated Scheduling Software and Risk Register (included in Activity 1Z1)

Assumptions:

1. Includes Activity 1V2 Scoping Meeting
2. Meeting will be held at the UDOT Hurricane office

3. One 3-hour meeting (combined in-person and virtual with 4 H & 2 MBI staff attending in person), plus travel.
4. Third hour will be for a site visit for those who attend in person

Activity: 1B1 - DEVELOP BASE MAPPING/EXISTING SURFACE

1B1 Develop Base Mapping/Existing Surface

Overview

Obtain base mapping and topography for the entire project area.

References

- Geo-Referencing MicroStation Seed File DTY_File.pdf
- UDOT CADD Standards
- UDOT Survey & Geomatics Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation

Deliverables

1. Survey Control Sheet (includes .dgn and .pdf files)

   Tasks
   - Establish Survey Control
   - Establish Geo-referenced Seed File (.dgn)
   - Complete Survey Control Plan Sheets
2. Base Mapping (includes .dgn file)

   Tasks
   - Perform Topographical Survey of Existing Features in Project Area
   - Develop Base Mapping
   - Develop DTM of the Existing Surface
3. Additional Base Mapping

   Tasks
   - Determine Extent of Additional Surveying Needs
   - Develop Additional Base Mapping and DTM
4. Base Mapping File Certification

   Task
   - Complete Certification
5. Original Field Data

   Task
   - Provide Original Field Data
6. QC Documentation

   Task
   - Perform QC Review

Establish Survey Control

Establish Survey control (basis of bearing) using North American Datum of 1983 (NAD 83) (USC 57-10-1) projected into a North, Central and South State Plane Coordinate Zone , however, units of length will be displayed in U.S. Survey Feet rather than meters. As a minimum, horizontal coordinates should be carried out to .001 foot, unless greater accuracies are specified in the projects requirements.

- Determine the type of survey based on the current UDOT Survey & Geomatics Standards, UDOT Survey Standards Manual Supplement, and project requirements as established at preliminary meeting with surveyor, the project manager, and design lead.
- The basis for the survey should include the following:
  - Section Corners
  - Existing ROW Markers
  - USGS Monuments
  - State Plane Coordinate System
  - Local Survey Monuments
  - Project Specific Control Monuments
  - Latitude, Longitude, and Height
  - Project Coordinates
  - Section, Township, and Range
  - Description of found Monuments
- Control points need to have northing, easting, and elevation with equivalents in the State Plane Coordinate System.
- If appropriate, include a paragraph describing the project parameters or the basis of bearing with primary control monuments.
- Identify the bearing and distance between found section corners.
- Clearly identify the units and the level of accuracy. (Standard unit is the U.S. Survey Foot)

Establish Geo-referenced Seed File (.dgn)

Develop project specific geographic coordinate system and create project geo-referenced seed file. Perform all work in MicroStation and according to UDOT CADD Standards.

Complete Survey Control Plan Sheets

Conform to UDOT CADD Standards, UDOT Plan Sheet Development Standards, and UDOT Survey & Geomatics Standards to complete the Survey Control Plan Sheet(s). The Control Summary Sheet shall be complete and delivered at the scoping phase of the project, including certification by a Utah Professional Land Surveyor. The sheet will be delivered to the Region Surveyor for a quality assurance check.

- Conform to the General Plan Sheet Requirements
- Conform to the Title Sheet and Sheet 1’s requirements
- Include all necessary notes, callouts, dimensions, and symbols
- Use identifiable symbols and line styles

Perform Topographical Survey of Existing Features in Project Area

Prior to the base mapping survey being performed, a meeting between the surveyor, the project manager, and design lead will be held in order to anticipate the needs for the project.

Some topics for the meeting could include but is not limited to:

- Schedule
- Survey needs
- Recommended type of survey method
- Accuracy requirements based on project type. (e.g. Automated Machine Guidance, 3D Engineered Models, Pavement, Structures, etc.)
- Project Definition Document Discussion
- Extents of project survey
- Features needed for survey
- Other needs determined by the project manager, designer, or surveyor
- Past projects with developed control systems

Provide a text file, including survey point numbers, northing and easting coordinates, elevations, and descriptions. Provide a geo-referenced MicroStation file with survey point numbers, elevations, anddescriptions displayed. Provide a copy of all field notes made during the survey. Perform all work according to UDOT CADD Standards.

Develop Base Mapping

Perform all work in a geo-referenced MicroStation file and according to UDOT CADD Standards and UDOT Survey & Geomatics Standards.

Develop DTM of the Existing Surface

Perform all work in InRoads and MicroStation according to UDOT CADD Standards and UDOT Survey & Geomatics Standards.

Determine Extent of Additional Surveying Needs

Coordinate with project team members to determine additional surveying needs.

Develop Additional Base Mapping and DTM

Revise or provide additional base mapping and DTM following instructions above.

Complete Base Mapping File Certification

Provide Original Field Data

Provide all data in accordance to UDOT Survey & Geomatics Standards Manual.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Survey/Mapping QC Checklist **before** distribution.

- Provide the Licensed Land Surveyor with the certification
- Complete all necessary corrections from the QC check.
- Upload all QC documentation, including completed checklist and required signed certification into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

1B1 - Develop Base Mapping/Existing Surface - (H)

Assumptions:

1. A combination of ground-based LiDAR survey, traditional methods, and aerial photogrammetry will be used to perform surveys, verify existing conditions, and to tie into existing control from previous projects.
2. Survey will be performed for the project area approximately 6,500 feet along SR-7 and 2,600 feet along Southern Hills Drive

Activity: 1C1 - ASSESS INTELLIGENT TRANSPORTATION SYSTEMS (ITS) NEEDS

1C1 Assess ITS (ATMS) Needs

Overview

Review the existing conditions, ITS Strategic Plan, and project objectives to develop recommendations to meet ITS needs.

References

- Project ITS Scoping Summary Form
- UDOT QC/QA Documentation

Deliverables

1. Project ITS Scoping Summary

   Tasks
   - Complete Project ITS Scoping Summary
   - Provide ITS Summary to Design Leader and Project Manager
   - Estimate ITS Improvements Cost
2. QC Documentation

   Task
   - Perform QC Review

Complete Project ITS Scoping Summary

Review the State ITS Strategic Plan if it exists to determine what components are needed in the project area. Coordinate with the ITS groups and ITS Program Manager to determine the project scope and complete the Project ITS Scoping Summary.

- Locate all existing ITS elements in the general vicinity of the project. Generate a location map with the elements mapped.
- Coordinate project needs, future needs, and recommendations for the following ITS elements with all interested groups:

- CCTV
  - Control Room Manager
  - Signal Timing Systems Engineer
  - TMD Traffic Operations Engineer
- Variable Message Signs (VMS)
  - Control Room Manager
  - TMD Traffic Operations Engineer
- Traffic Monitoring Stations (TMS)
  - TMD Traffic Mobility Engineer
  - TMD Traffic Operations Engineer
  - TMD Signal Systems Engineer
  - Systems Planning and Programming
- Traffic Signal Interconnect
  - TMD Signal Systems Engineer
  - TMD Traffic Operations Engineer
- Ramp Meters
  - Region Traffic Operations Engineer (TOE)
  - TMD Traffic Operations Engineer
- Remote Weather Information System (RWIS)
  - TMD RWIS Program Manager
- Highway Advisory Radio (HAR)
  - Control Room Manager
  - TMD Traffic Operations Engineer
- Fiber Optics and Communications
  - TMD Fiber Business Manager
- Automatic Traffic Recorder (ATR) Monitoring Stations
  - Program Development Division - Traffic Monitoring Unit

· Prioritize the recommended improvements in the final recommendation summary.

· Include the estimated cost for all recommended improvements.

Provide ITS Summary to Design Leader and Project Manager

Estimate ITS Improvements Cost

Estimate the costs of proposed ITS improvements.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the ITS (ATMS) Design QC Checklist **before** distribution.

· Provide the Checker with a check print of each deliverable and supporting documentation.

· Complete all necessary corrections from the QC check.

- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 1G1 - CONDUCT PRELIMINARY GEOTECHNICAL INVESTIGATION

1G1 Conduct Preliminary Geotechnical Investigation

Overview

Identify potential issues that may affect the design and construction of the project. Identify preliminary mitigations and develop a plan to select and design appropriate mitigations.

References

- UDOT Geotechnical Manual of Instruction (G-MOI)
- UDOT QC/QA Geotechnical Procedures

Deliverables

1. Preliminary Geotechnical Investigation

   Tasks
   - Conduct Preliminary Geotechnical Investigation
   - Develop Potential Mitigation Strategies
2. Preliminary Work Plan (Scope)

   Tasks
   - Develop Geotechnical Work Plan (Scope)
3. QC Documentation

   Tasks
   - Perform QC Review

Conduct Preliminary Geotechnical Investigation

Locate any information about the project area that could include but is not limited to the following:

- Previous Geotechnical/Geological Investigations/Reports
- Previous Construction Plans/As-Builts
- Construction Monitoring Data
- Research Reports
- Geologic Mapping
- Landslide/Rock fall evaluations and studies
- Seismic Studies (including site specific analysis)
- Determine preliminary liquefaction/lateral spread potential
- Conduct field visit and identify issues that may impact or affect the project design, construction, and performance
  - Coordinate with maintenance to discuss maintenance history and existing conditions

- Site accessibility and potential traffic problems
- Topography
- Potential geotechnical subsurface investigation utility conflicts
- Surface water
- Erosion patterns
- Geologic structure and soil/rock profiles
- Additional surface features
- Information regarding the soil and bedrock
- Landslide/Rockfall potential

Develop Potential Mitigation Strategies

- Develop a preliminary strategy to mitigate identified issues
- Develop preliminary costs to implement mitigations

Develop Geotechnical Work Plan (Scope)

Develop a geotechnical work plan (scope) for obtaining the necessary information and completing the geotechnical design. Include the following items as part of the work plan:

- A brief summary of the preliminary geotechnical findings and assumptions.
- Identify the information needed to verify assumptions and complete the geotechnical design.
- Develop a plan, cost, and schedule to obtain the information needed to conduct the geotechnical investigation
- Develop a plan, cost, and schedule to complete the geotechnical design

Perform QC Review

Perform the QC Review following the UDOT Geotechnical QC/QA Procedures and the Geotechnical Manual of Instruction **before** distribution.

- Provide the Checker with a project document cover sheet, check print of each deliverable and supporting documentation.
- Follow the UDOT Geotechnical QC/QA Procedures for checking and auditing.
- Upload all QC documentation of quality procedures into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

1G1 - Conduct Preliminary Geotechnical Investigation - (GC)

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. Assess geologic risks identified in mapping.
2. Complete a site visit to observe and document interchange conditions, potential bedrock outcrops, drill rig access, traffic control, and identify preferred locations for test holes, test pits, and geophysics.

Assumptions

1. Gerhart Cole (GC) will retain a subconsultant (Rosenberg and Associates) to coordinate field study logistics and logging of test holes and test pits.
2. GC will coordinate drilled test hole and test pit subcontractors, Blue Stakes, and traffic control.
3. GC will provide and coordinate encroachment permits and traffic control plans.
4. Any bonding, permits, and access, beyond our annual UDOT bond are not needed to drill / excavate the planned test hole and test pit locations.
5. Test holes will be drilled and test pits excavated from the roadway shoulder and we have assumed that these areas are accessible and workable for drilling and excavator equipment.
6. Bridge will be constructed on deep foundations (drilled shafts with limited embedment in bedrock) and 200-ft or less of MSE retaining walls at the abutments.
7. GSEP for fills along the ramps (no cuts) and approaching up to 25 feet near the bridge structure.
8. Deliverables:
    a. GSEP
    b. QC documentation

Activity: 1J1 - IDENTIFY EXISTING RIGHT-OF-WAY

1J1 Identify Existing Right-of-Way

Overview

Identify existing right-of-way along the project and adjacent ownerships.

References

- ePM
- UDOT CADD Standards
- UDOT QC/QA Documentation
- UDOT Right-of-Way Division Website
- UDOT Standard and Supplemental Drawings

Deliverables

1. Existing ROW MicroStation File (ex_row.dgn)

   Tasks

   - Research Existing ROW and Property Boundaries for Project Area
   - Develop Existing ROW Mapping and MicroStation Files

2. Property Owner Spreadsheet

Tasks

- Develop Property Owner Spreadsheet
- Identify Potential Impacts

3. QC Documentation

Task

- Perform QC Review

Research Existing ROW and Property Boundaries for Project Area

Do the following for the entire project limits:

- Identify all property owners
- Obtain existing UDOT ROW plans
- Obtain tax Ids
- Obtain vesting deeds and documents
- Obtain county ownership plat maps
- Obtain mining claims
- Obtain subdivision plats
- Obtain Record of Survey plats
- Obtain Utility maps and deed to identify utility easements and right-of-ways
- Other documents as may be necessary to complete the task

Develop Existing ROW Mapping and MicroStation Files

Comply with current UDOT CADD Standards to develop the ex_row.dgn file.

- Create the ex_row.dgn from the geo-referenced seed file for the project from task 1B1. Develop all line work in MicroStation and adhere to CADD standards.
- Convert existing right-of-way information into the geo-referenced ex_row.dgn in correct project coordinate system.
- Identify boundary gaps and overlaps and other inconsistencies or ambiguities that will need to be cleaned up if further action is required on the parcels.
- Assign a UDOT Ownership number to each ownership south to north or west to east beginning at #100 typically. (Do not number up one side of the highway and back the other but stagger the numbering.)

Develop Property Spreadsheet

Develop a spreadsheet containing all owner names beginning with the lowest UDOT ownership number assigned, property addresses, mailing address, tax ID numbers, size of overall owenership, property type, and other pertinent property or ownership data. Provide the ROW acquisition team with the spreadsheet and upload to the Right-of-Way folder in ProjectWise.

Identify Potential Impacts

Identify potential ROW and easement impacts of all types. Identify the level of risk, source (roadway, utilities, drainage, etc), and possible mitigations of each impact if possible.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the ROW Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

If Local Government Project

- Identify critical parcels early in the process.
- Prepare Cost Estimates.
- Prepare preliminary Right-of-Way Plans and Ownership Records
- Review Right-of-Way documents when the project impacts a city or county road and the property to be acquired is in the city or county's name.
- Develop Coop Modification for Right-of-Way (CAMROW)
- Prepare Resource Plan
- Process CAMROW and R-709 form

1J1 - Identify Existing Right-Of-Way - (H)

Assumptions:

1. Identify Highway right-of-way line and added to the ExROW file
2. Identify parcels within the project limits and added to the ExROW file

Activity: 1Q1 - ASSESS DRAINAGE NEEDS & SCOPE

1Q1 Assess Existing Drainage Conditions

Overview

Review existing conditions and develop recommendations for improvements.

References

- UDOT Drainage Manual of Instruction
- UDOT QC/QA Documentation

Deliverables

1. Preliminary Drainage Summary

Tasks

- Request ProjectWise Folder
- Obtain As-Built Info
- Conduct Drainage Conditions Field Review
- Coordinate with Maintenance Team
- Develop Drainage Design Criteria
- Recommend Drainage Improvements
- Estimate Drainage Improvements Cost
- Provide Preliminary Drainage Summary for Scoping Meeting

2. QC Documentation

Task

- Perform QC Review

Request ProjectWise Folder

Obtain As-Built Info

Obtain as-built and master plan information from the following possible sources:

- Local government infrastructure
- County
- Irrigation companies
- UDOT
- Other available sources

Conduct Drainage Conditions Field Review

Assess the location, material type, geometry, and condition of existing drainage structures. Evaluate the following:

- Existing drainage patterns
  - Outfall locations
  - Offsite flows to the project area
- Existing drainage problems
  - Ponding
  - Excessive spread
  - Erosion
- Bridges
  - Approach slab drains
  - Channel stability and scour
- Culverts and Storm Drain systems
  - Determine the following
    - Capacity

        - § Connectivity
        - § Condition
            - Suitability for extension
            - Suitability for rehabilitation
            - Need for replacement
- Water quality and Flood Control features
    - Detention/retention ponds
    - Swales
    - Structural controls
- Ditches
    - Determine the following
        - § Capacity
        - § Stability
        - § Locations with scour or erosion problems
        - § Energy dissipaters
- Irrigation facilities and connectivity
    - Obtain information regarding the irrigation system operation and connectivity by meeting with irrigation company officials or ditch masters.
    - Identify locations of diversion structures and flow measurement elements.
    - Obtain operational flows if available and design criteria.
    - Determine requirements for agreements.
- Permitting concerns

Coordinate with Maintenance Team

Meet with maintenance personnel to identify drainage problems. This meeting may occur at Kickoff but if not, coordinate with maintenance and other disciplines to schedule an on-site meeting.

Develop Drainage Design Criteria

Determine the governing criteria for the project's hydraulic design by referring to UDOT's Drainage Manual of Instruction. Consider the following:

- Hydrology
- Roadway Drainage
- Storm Drains
- Culverts
- Under Drains
- Irrigation Systems
- Ditches
- Major Structures - bridge and box culverts
- Clear Zone Design Constraints
- Water Quality/Flood Control Features

- FEMA Flood Mapping

Recommend Drainage Improvements

- Evaluate existing drainage facilities for suitability to convey calculated flows.
- Identify possible deficiencies due to the proposed project.
- Recommend improvements based on the capacity and physical condition of existing facilities.
- Estimate the approximate size and location of new facilities needed to address deficiencies.

Estimate Drainage Improvements Costs

Estimate the costs of proposed drainage improvements. Carefully evaluate reasonable costs, risks, and contingency. Use best engineering practices to find a balance between probable costs and risk.

Provide Preliminary Drainage Summary for Scoping Meeting

The Preliminary Drainage Summary will include the following:

- Existing drainage conditions summary
- Preliminary location and size of recommended improvements
- Priority of recommended improvements
- Consider construction phasing and limitations
- Preliminary drainage cost estimate
- Updated design schedule
- Drainage Design Criteria

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Drainage Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 1R1 - DEVELOP ROADWAY SCOPE

1R1 Develop Roadway Scope

Overview

Determine the preliminary project footprint.

References

- 13 Critical Elements
- AASHTO, A Policy on Geometric Design of Highways and Streets
- NATCO, Urban Street Design Guide
- Project Development Business System (PDBS)
- UDOT Additional Design Criteria
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)

Deliverables

1. Preliminary Footprint Review Drawing

   Tasks

   - Assess Existing Conditions
   - Develop Strategy to Address Deficiencies
   - Review Multi-Modal Needs
   - Develop Preliminary Typical Section
   - Determine Preliminary Project Footprint
   - Prepare Preliminary Project Footprint Review Drawing

2. Preliminary Roadway Cost Estimate

   Task

   - Develop Preliminary Roadway Cost Estimate

3. QC Documentation

   Task

   - Perform QC Review

Assess Existing Conditions

- Conduct a field review to assess existing roadway conditions.
- Attend the Maintenance/Preconstruction site-visit (see 1Y2)
- Obtain as-built information.
- Request and obtain an Operational Safety Report (OSR) and identify safety needs.
- Meet with maintenance on-site and identify existing deficiencies.
  - Geometric
  - Signing and Striping
  - Safety
  - Drainage

Develop Strategy to Address Deficiencies

- Identify roadway related deficiencies.
- Identify improvements to correct deficiencies.

Review Multi-Modal Needs

Review the Bicycle and Pedestrian Accommodations Form completed during concept.

- Coordinate with Bicycle and Pedestrian Coordinator to do the following if no concept was completed:
  - Consider multi-modal needs.
  - Review Master Plans.
  - Coordinate with local municipalities and UTA as needed.
  - Develop cost estimate for proposed improvements.

Develop Preliminary Typical Section

Develop preliminary typical section to identify the roadway footprint.

- Conform to the Project Design Criteria (PDC).
- Show the existing and proposed roadway width.

Determine Preliminary Project Footprint

Following the PDC and project concept, do the following:

- Determine Preliminary Project Footprint
  - Use the concept report, existing conditions, and preliminary project scope.
  - Use the preliminary typical sections to determine preliminary estimated cut/fill lines (e.g. Offset 20 feet from preliminary edge of pavement).
- Coordinate with the following disciplines to identify potential impacts.
  - Environmental
  - Right-of-Way
  - Hydraulics
  - Structures
  - Utilities
  - Traffic and Safety
- Develop preliminary horizontal and vertical alignments of main and secondary roads if possible.
- Follow design standards (See 2R1 for more information).

Prepare Preliminary Project Footprint Review Drawing

Prepare drawing in the format determined by the Project Manager showing the preliminary roadway footprint.

- Include the proposed preliminary project footprint.
- Include known existing topography.
- Include known ROW and easements (existing and proposed).
- Include available preliminary horizontal and vertical alignments.

- Include additional relevant information to facilitate reviews.
- Label items necessary for clarity or to highlight for discussion.

Develop Preliminary Roadway Cost Estimate

- Compile initial roadway bid items and quantities.
  - Use UDOT standard bid items
- Develop unit costs for each item.
  - Use appropriate resources for developing unit costs such as PDBS and local contractors
  - Document unit cost development and assumptions
  - Account for project specific factors
- Use lump sum pricing only when appropriate.
  - Consider contractor risk due to unknown quantity
  - Consider difficulty in pricing per unit
  - Consider all materials and labor involved

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

1R1 ¿ Develop Roadway Scope

Assumptions:

1. None

Activity: 1S1 - IDENTIFY PRELIMINARY STRUCTURE TYPE

1S1 Identify Preliminary Structure Type

Overview

Review the existing conditions and determine the physical requirements for structures work (bridge, culvert/headwall, rehabilitation, retaining walls, overhead sign/VMS structure). Develop a range of alternative structure types to fulfill the requirements.

References

- AASHTO LRFD Bridge Design Specifications
- Railroad Company Guidelines

- BNSF-UPRR Guidelines for Railroad Grade Separation Projects
- UTS Light Rail Design Criteria
- UTA Commuter Rail Design Criteria

- UDOT ABC Decision Making Process Template
- UDOT Standard and Supplemental Drawings
- UDOT Structure Type Selection Report Template
- UDOT Structures Design and Detailing Manual (SDDM)
- UDOT Structures QC/QA Procedures

Deliverables

1. Draft Structure Type Selection Report

   Tasks

   - Review Available Existing Structures Information
   - Meet with UDOT Structures Project Engineer
   - Evaluate Feasible Alternatives
   - Coordinate with Railroad Companies (if applicable)

2. Documentation of Quality Procedures

   Task

   - Perform Required Quality Procedures

Review Available Existing Structures Information

- Request as-built drawings
- Request for Structural Inventory & Appraisal Sheets (SI&A)
- Request for Structures Scope and Estimate Report or Concept Reports
- Request for Structures Plan for Every Structure (PFES)
- Assure that as-built drawings accurately reflect the existing conditions (i.e., account for rehabilitations and/or widenings).

Meet with UDOT Structures Project Engineer

- Perform a field inspection of the structure and document pertinent existing conditions.
- Review and confirm the current structure conditions.
- Review the recommended strategy and achieve concurrence on the work to be performed.

Evaluate Feasible Alternatives

- Complete ABC Decision Making Process template.
- Evaluate possible traffic impacts and assess possible ABC techniques (incorporate user costs assessment).
- Determine if a structures design exception, design waiver or deviation is required.
- Identify items that may require additional study, creative design approaches, etc.
- Determine the construction phasing and maintenance of traffic limitations.
- Develop preliminary aesthetic concepts with the Aesthetics/Landscape group.

- Review commitments from the Environmental Document (if applicable).
- Review UPLAN or the applicable long range plan for the proposed location.
- Evaluate right-of-way requirements and easements.
- Coordinate with the involved disciplines for any special needs (relocations, etc.).
- ATMS conduits
- Utility accommodations
- Sign panel attachments
- Develop an evaluation matrix for all alternatives.
- Provide analysis / reasoning for eliminating or advancing alternatives.
- Document decisions and rationale.
- Establish the initial structural quantities, unit costs, and construction cost estimate.
- Provide cost estimates for feasible alternatives.

For a new bridge and/or widening, do the following:

- Identify hydraulic considerations (e.g., scour and channel migration).
- Identify the number of spans.
- Determine the preliminary span lengths.
- Determine the preliminary girder type.
- Take into account the project schedule and material availability
- Determine the preliminary structure depth.
- Determine minimum horizontal and vertical clearances.
- Determine the preliminary bent and abutment locations.
- Determine the preliminary abutment types.

For new culvert/headwall and/or extensions, do the following:

- Determine the preliminary box culvert type and size.
- Determine the preliminary headwall layout.

For rehabilitation, do the following:

- Determine the preliminary work items.
- Develop a rehabilitation strategy.
- Determine scour countermeasure needs (if applicable).

For retaining walls, do the following:

- Determine feasible wall types.

For overhead sign/VMS, do the following:

- Determine the preliminary sign structure type.

Coordinate with Railroad Companies (if applicable)

Work with the Region Utility and Railroad Leader to coordinate project details with the railroad companies. Early coordination with the railroad companies is critical.

Perform Required Quality Procedures

Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and the UDOT Structures Design and Detailing Manual before distribution.

- Provide the Checker with a project document cover sheet, check print, and supporting documentation for the draft Structure Type Selection Report.
- Follow the UDOT Structures QC/QA Procedures for checking and auditing.
- Upload required documentation of quality procedures into ProjectWise before the Scoping Meeting. Refer to SDDM, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

1S1: Identify Preliminary Structure Type - (H)

Tasks Not Used

I. D. 17 - No box culvert extension.

I. D. 18 - No rehabilitation.

I. D. 20 - No overhead signs.

I. E - No railroad coordination.

Tasks Modified - None

Tasks Added

1. Complete existing condition evaluation memo.

Assumptions:

- Assumes two engineers will perform site visit
- Desk review indicates there is one large, buried structure (D 842) within the project limits
  - ¿ Assumes existing condition memo will be required to document evaluation
  - ¿ Assumes condition will be determined using visual observation, non-destructive testing (i.e. Concrete sounding), and review of any available past inspection data
  - ¿ Assumes no widening of the structure will be necessary
  - ¿ Assumes additional fill will not exceed the max fill currently over the box

Activity: 1Y1 - DEVELOP PROJECT DESIGN CERTIFICATION (PDC)

1Y1 Develop Project Design Criteria (PDC)

Overview

Develop the Project Design Criteria (PDC).

References

- AASHTO, A Policy on Geometric Design of Highways and Streets
- Additional Design Criteria
- Critical Elements
- NATCO, Urban Street Design Guide
- UDOT Project Design Criteria Website
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)

Deliverables

1. PDC Form

   Task

   - Develop PDC

2. QC Documentation

   Task

   - Perform QC Review

3. Signed PDC Form

   Task

   - Coordinate with Region Preconstruction Engineer for PDC Approval

Develop PDC

Develop the PDC following guidelines in the UDOT Roadway Design Manual of Instruction. Obtain information including design speed, design vehicle, design year, terrain, and Project Traffic Report or review from the Concept Report. Use this data to complete the PDC for the project. Develop criteria for critical elements and design waivers using the form.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Coordinate with Region Preconstruction Engineer for PDC Approval

Work with the Preconstruction Engineer to ensure the PDC meets the proper standards and requirements and submits the form to the Region Preconstruction Engineer for approval.

Activity: 1Y2 - PREPARE/COMPILE SCOPING REVIEW PACKAGE

1Y2 Prepare/Compile Scoping Review Package

Overview

Prepare and compile all discipline review materials to produce the Scoping Review Package.

References

- UDOT QC/QA Documentation

Deliverables

1. Scoping Review Package

   Tasks

   - Compile Initial Total Project Cost Estimate
   - Prepare Scoping Review Package

2. Maintenance/Preconstruction Site Visit Certification Form

   Tasks

   - Schedule Maintenance/Preconstruction Site Visit
   - Conduct Maintenance/Preconstruction Site Visit

3. Maintenance/Preconstruction Site Visit Comment Resolution Form (if used)

   Task

   - Address Maintenance/Preconstruction Site Visit Comments

4. Project Definition Document (PDD)

   Task

   - Compile Projects Definition Document (PDD)

5. QC Documentation

   Task

   - Perform QC Review

Compile Initial Total Project Cost Estimate

Obtain each discipline's cost estimate and compile them into one document.

Prepare Scoping Review Package

Compile all review materials from each discipline, including the following:

- Discipline summary reports
- Initial Project Cost Estimate
- Project estimate ePM Screen 505
- Initial Preliminary Typical Section
- Design Review Drawing

Distribute the package to all meeting attendees and reviewers a minimum of one week before the Scoping Meeting (1V2).

Schedule Maintenance/Preconstruction Site Visit

Contact the District Engineer to determine which Maintenance Station(s) are located in the project area. Contact the Maintenance Station Foreman and schedule the maintenance/preconstruction site visit. If you cannot reach the Maintenance Station Foreman, contact the Project Manager for assistance.

It is ideal to schedule the site visit between the Kickoff Meeting and the Scoping Meeting. If the site visit cannot occur before the Scoping Meeting, schedule the site visit as early as possible, but no later than the Plan-in-Hand Review Meeting.

Conduct Maintenance/Preconstruction Site Visit

The purpose of the site visit is for the Design Leader along with the Maintenance Station Supervisor to assess relevant maintenance issues to the project area, and identify potential items to be included in the project scope.

Information to discuss during the meeting includes:

- Soft spot locations
- Drainage Issues
- Culvert Inspections
- Safety
- Structures
- Maintenance Management Quality Assurance (MMQA) grades and concerns
- Top three issues provided by the maintenance station
- Any other relevant concerns of the maintenance station

Complete the Maintenance/Preconstruction Site Visit Certification Form and obtain necessary signatures. Follow the instructions on the certification form to scan and upload onto ProjectWise the signed certification form and comment resolution form (if used).

Address Maintenance/Preconstruction Site Visit Comments

It is recommended to compile and address all comments and concerns from the site visit into a Milestone Comment Resolution Form (Form F1).

Discuss the site visit comments with the Project Manager. Identify the following:

- Items that already fit within the proposed project scope.
- Items that cannot be addressed by the project.
- Items that warrant further discussion and potential scope alterations.

Assist the Project Manager addressing potential scope alterations. Complete the comment resolution form if being used.

Discuss with the maintenance station foreman the maintenance items that will be included in the project, as needed.

Compile Project Definition Document (PDD)

Complete the Project Definition Document (PDD) using the following information:

- Brief Objective Statement
- High level project goals and metrics to determine success
- Project scope to support the goals
- Project delivery method
- Major risks
- Budget estimates from ePM Screen 505
- Proposed Advertisement Date and Anticipated Construction Completion

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

If Local Government Project

The Local Government Representative is responsible for monitoring the progress of the design activities to ensure that the design process remains on schedule and within budget. Any reduction of project scope or additional funding must be approved by UDOT Project Manager. The Local Government Representative should request frequent status updates from the Design Leader.

Activity: 1V2 - SCOPING MEETING

1V2 Scoping Meeting

Overview

This meeting is to develop a clear project scope, schedule, and budget to which all team members agree. Renew commitments so they all concur with the new scope, schedule, and budget. Identify any changes to the initial first cut geometry and all ensuing alterations to other disciplines based on those modifications. Review, negotiate, and set MS Project durations.

References

- Qualitative Risk Worksheet (Developed in separate Risk Assessment Meeting 1Z6)

Deliverables

1. Scoping Meeting Agenda

   Task

   - Prepare Meeting Agenda

2. Scoping Review Material

   Task

   - Distribute Review Material

3. Scoping Meeting Notes

   Tasks

   - Hold Meeting
   - Compile Meeting Notes

4. Risk Register

   Task

   - Develop Risk Register

5. Mitigation Strategies

   Task

   - Develop Mitigation Strategies

6. Revised Project Scope, Schedule, and Budget

   Tasks

   - Revise PDD
   - Review/Update MS Project Schedule

7. Internal Preconstruction Engineering (PE) Budget

   Task

   - Set Internal PE Budget

8. Project Definition Document

   Task

   - Finalize the PDD for Signature

Prepare Meeting Agenda

Arrange for the location and time of the meeting. Prepare the meeting agenda. Below are suggested agenda items:

- Project Definition Document (PDD)
- Duration, hours, and logic in MS Project Schedule
- Constructability issues that may impact project costs, project schedule, and construction phasing
- Preliminary Cost Estimate
- Transportation Management Plan (1Z3)
- Project Design Criteria (PDC)
- Problem areas identified by Maintenance
- Multi-modal needs
- Design exceptions
- Innovative contracting opportunities such as lane rental, P+T, and incentive/disincentive
- Project schedule, including milestones and Submit for Advertising Date in MS Project

- Possible schedule impacts, budget changes, or additional design effort
- Schedule for team meetings
- UDOT QC/QA Documentation

Distribute Review Material

Invite all project team members and others as needed. Distribute all review materials and meeting agenda at least **one week** before Scoping Meeting

Hold Meeting

Hold the meeting according to the Agenda.

Compile Meeting Notes

Assign a team member to compile the meeting notes. Send the meeting notes to all team members and meeting attendees for approval.

Develop Risk Register

Using the tool identified in the Project Management Decision Tree (refer to the Instructions for Using the Qualitative Risk Worksheet), develop a comprehensive risk register. Update the register as appropriate for the project. Depending on the size and scope of the project, this can be developed in the Scoping Meeting or in a stand-alone meeting (1Z6).

Develop Mitigation Strategies

Identify mitigation strategies to minimize and/or eliminate risks from the risk register. Incorporate into the project documents as appropriate. Retire risks that have been eliminated.

Revise PDD

Revise project scope, schedule, and budget based on discussions at the Scoping Meeting.

Review/Update MS Project Schedule

Confirm that all disciplines have updated the MS Project Schedule durations according to discussions at the Scoping Meeting. Evaluate project completion and milestone meeting dates. Evaluate resource allocation.

Set Internal PE Budget

Review scope and individual discipline projected hours to set the PE budget for the project.

Finalize the PDD for Signature

Submit PDD for appropriate signatures.

If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes, and distributes them after the meeting.

Activity: 1Z6 - CONDUCT RISK WORKSHOP

This activity is not being used as part of this contract but it cannot be removed from the PDN network because it is an activity that is no longer used. (Per Phil Ellsworth)

1Z6 Conduct Risk Workshop

Overview

This activity is to be used to conduct the appropriate risk analysis workshop for the project.

References

- Risk Management Tools website

Deliverables

1. Risk Register

   Task

   - Develop Risk Register

2. Mitigation Strategies

   Task

   - Develop Mitigation Strategies

Develop Risk Register

Using the tool identified in the Project Management Decision Tree (refer to the Instructions for Using the Qualitative Risk Worksheet), develop a comprehensive risk register. Update the register as appropriate for the project.

Develop Mitigation Strategies

Identify mitigation strategies to minimize and/or eliminate risks from the risk register. Incorporate into the project documents as appropriate. Retire risks that have been eliminated.

Activity: 2A1 - DEV PROJ AESTHETICS BUDGET; DEV & SUBMIT PROJ AESTHETICS PLA

2A1 Develop Project Aesthetics Budget; Develop & Submit Project Aesthetic Plan

Overview

Determine the Project Aesthetics Budget, as per UDOT Aesthetic Guidelines Manual. Coordinate with other disciplines and participating LG(s) to incorporate features that enhance the project aesthetics. Develop Project Aesthetics Plan that may be submitted to the UDOT LA.

References

UDOT Aesthetic Guidelines Manual

UDOT Digital Delivery Website

UDOT CADD Standards

UDOT QC/QA Documentation

Deliverables & Tasks

I. PROJECT AESTHETICS PLAN

A. Establish Project Aesthetics Budget

1. Follow UDOT Aesthetic Guidelines Manual to determine the Project Aesthetic Budget. Coordinate with UDOT PM and LA for any project specific UDOT Aesthetic Goals before coordinating with local government.

B. Coordinate with Local Government

1. Determine if the participating local government recommends possible project aesthetics, including any landscape improvements.

Review with the LG the Project Aesthetic Budget, UDOT Aesthetic Guidelines Manual and when a LG suggested Aesthetic Enhancement may require betterment funded by the LG.

Clearly define the local government's long term responsibilities for maintenance and water supply of any landscape improvements and begin the process to obtain necessary agreement.

Obtain a letter of commitment for betterments from the local government.

C. Develop Project Aesthetics Plan

1. Follow UDOT Aesthetic Guidelines Manual to develop Project Aesthetics Plan.

D. Submit Project Aesthetics Plan

1. Submit Project Aesthetics Plan to UDOT LA for initial review.

2. Incorporated any UDOT LA comments to the Project Aesthetics Plan.

II. QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the Aesthetics/Landscaping Design QC Checklist before distribution.

Provide the Checker with a check print of each deliverable and supporting documentation.

Complete all necessary corrections from the QC checklist.

Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

2A1 - Develop Project Aesthetics Budget; Develop & Submit Project Aesthetic Plan - (H)

Tasks Not Used

1. Develop Project Aesthetic Plan
2. Submit Project Aesthetic Plan

Tasks Added

1. Document Aesthetic Treatments

a. Prepare a summary of treatments that will be used for form liners and colors

Assumptions:

1. Project Aesthetics will be similar to other existing SR-7 interchanges in SG
    a. Re-seed the disturbed area
    b. Form liner and coloring of bridge features such as parapet, walls, and exterior girders

Activity: 2Q1 - DEVELOP INITIAL DRAINAGE DESIGN

2Q1 Develop Initial Drainage Design

Overview

Develop preliminary drainage design.

References

- Preliminary Drainage Summary (1Q1)
- UDOT CADD Standards
- UDOT Drainage Manual of Instruction
- UDOT QC/QA Documentation

Deliverables

1. Initial Drainage Design Layout (for Initial Roadway Model 2R1)

    Tasks

    - Perform Hydrologic Analysis
    - Perform Hydraulic Analysis
    - Develop Preliminary Drainage Layout
    - Develop Preliminary Water Quality and Flood Control Features
    - Develop Preliminary Irrigation Layout
    - Conduct Conflict Analysis
    - Coordinate with Roadway Design Team
    - Coordinate with Environmental Team
    - Coordinate with Survey Team
    - Coordinate with Utilities Team

2. Preliminary Drainage Cost Estimate

    Task

    - Update Preliminary Drainage Cost Estimate

3. QC Documentation

    Task

    - Perform QC Review

Perform Hydrologic Analysis

Identify methodologies to estimate design flows for each feature. Determine the following:

- Design storm frequency and intensity.
- Time of concentration

Perform Hydraulic Analysis

Identify methodologies for hydraulic analysis. Based upon drainage design criteria for the project, do the following:

- Identify all necessary drainage features based on proposed and existing conditions of the roadway elements such as recommended horizontal/vertical alignments and existing drainage systems.
- Identify conveyance methods (e.g., sheet flow, ditch, storm drain facility).

Develop Preliminary Drainage Layout

Determine and evaluate any constraints that could affect the layout of drainage features.

Develop Preliminary Water Quality and Flood Control Features

Evaluate needs and determine layout of features.

Develop Preliminary Irrigation Layout

Determine and evaluate any constraints that could affect the layout of irrigation features.

Conduct Conflict Analysis

- Identify potential conflicts with other design elements.
- Identify potential conflicts with existing and proposed utilities.
- Identify design elements inside roadway clear zone.
- Identify design elements outside the project ROW.

Coordinate with Roadway Design Team

Coordinate with the roadway designer to determine recommended roadway horizontal and vertical alignments that accommodate the necessary drainage features.

Coordinate with Environmental Team

Coordinate with the Environmental Team to address environmental impacts, commitments, and requirements.

Coordinate with Survey Team

Coordinate with the Survey Team if additional data is needed.

Coordinate with Utilities Team

Coordinate with the utility designer to request additional utility data if needed.

Develop Preliminary Drainage Cost Estimate

- Compile initial drainage bid items and quantities
  - Use UDOT standard bid items
- Develop unit costs for each item
  - Use appropriate resources for developing unit costs such as PDBS or local contractors
  - Document unit cost development and assumptions
  - Account for project specific factors
- Use lump sum pricing only when appropriate
  - Consider contractor risk due to unknown quantity
  - Consider all materials and labor involved

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Drainage Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

2Q1 - Assess Existing Conditions & Develop Initial Drainage Design - (MBI)

Task Not Used

2C7 - Determine and evaluate any constraints that could affect the layout of irrigation features.

Tasks Modified

1Q1, 2D1 - Statement of whether the project is required to retain the 80th percentile, 24-hour storm volume

Tasks Added - None

Assumptions:

1. Includes tasks 1Q1& 2Q1
2. Project runoff will discharge to existing outfalls and downstream channels.

3. Existing outfalls and downstream washes/channels have sufficient capacity to handle storm runoff from proposed project.
4. No new modeling or analysis of the drainage basin/watershed is required. No FEMA flood zone map revisions and/or hydraulic modeling or analysis will be included.
5. The condition of existing culverts is satisfactory and can be extended without any other rehabilitation.
6. Same drainage design criteria that were established for the original SR-7 design in this area will be used for this project.
7. There are not any known gravity irrigation systems that will be impacted by the project.
8. Drainage layout and design is based on maintaining the general existing drainage patterns and cross culverts within the existing/proposed ROW and assumes Southern Hills Drive will go over SR-7.
9. Existing channels along the east side of SR-7 will be rerouted along the ramps to convey offsite flows. Existing cross culverts will be extended as needed for the new ramps, with culverts discharging into existing downstream washes/channels. Minor realignment of downstream channels may be needed within the ROW to connect back into the natural channels outside of the ramps.
10. Local drainage from the interchange area and Southern Hills Drive will discharge into the Mesa Canyon Wash.

Activity: 2R1 - MODEL INITIAL ROADWAY DESIGN

2R1 Model Initial Roadway Design

Overview

Determine the recommended horizontal and vertical alignments by developing the initial roadway model.

References

- 13 Critical Elements
- AASHTO, A Policy on Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- Design Exception, Design Waivers, and Deviation from Standards Forms
- NATCO, Urban Street Design Guide
- Project Design Criteria (PDC)
- Project Development Business System (PDBS)
- UDOT Additional Design Criteria
- UDOT CADD Standards
- UDOT QC/QA Documentation
- UDOT Standard and Supplemental Drawings
- UDOT Roadway Design Manual of Instruction (R-MOI)

Deliverables

1. Maintenance/Preconstruction Site Visit Certification Form

   Tasks
   - Site Visit with Maintenance Representative
   - Complete and Sign Certification Form
2. Recommended Alignments Review Drawing

Tasks

- Determine Recommended Horizontal and Vertical Alignments
- Develop Initial Roadway Model
- Analyze Roadway Design
- Prepare Recommended Alignments Review Drawing

3. Design Exceptions, Design Waivers, and Deviation from Standards Forms (if necessary)

Task

- Submit Design Exceptions, Design Waivers, and Deviation from Standard Forms

4. Roadway Cost Estimate

Task

- Update Roadway Cost Estimate

5. QC Documentation

Tasks

- Perform QC Review

Site Visit with Maintenance Representative

Complete and Sign Certification Form

Determine Recommended Horizontal and Vertical Alignments

Determine the recommended horizontal and vertical alignments based on discussions with reviewers, input from other disciplines, and the initial roadway model. The final horizontal and vertical alignments design is iterative and may require multiple revisions during the development of the roadway model. Do the following to determine the horizontal and vertical alignments:

- Coordinate with the following disciplines to determine potential conflicts, deficiencies, and impacts.
  - Environmental
  - Right-of-Way
  - Hydraulics
  - Structures
  - Utilities
  - Traffic and Safety
- Conform to horizontal alignment design standards.
  - Adhere to 13 Critical Elements
  - Adhere to UDOT Additional Design Criteria
  - AASHTO, A Policy on Geometric Design of Highways and Streets Chapter 3
  - Minimum radius requirements
  - Roadway Design Manual of Instruction Section 7
  - Stationing goes from south to north or west to east and reads left to right
  - New alignment is based off ROW markers or common tie points between the existing alignment and the proposed alignment for alignments that follow an existing alignment
- Conform to vertical alignment design standards.
  - Adhere to the Roadway Design Manual of Instruction Section 7

- Adhere to hydraulic requirements
- Consult with Region Hydraulics Engineer on all possible trouble locations

Develop Initial Roadway Model

- Develop templates to represent specific project circumstances. These should include, but are not limited to, the following:
  - Number of lanes and width
  - Superelevations
  - Turn bays (based on assumed lengths)
  - Shoulders and bike lanes
  - Curb and gutter
  - Sidewalks and park strips
  - Sideslope treatments
    - § Clear zones
    - § Retaining walls
- Develop the roadway model based on templates.
  - Create design surfaces
  - Identify preliminary cut/fill lines
    - § Identify potential ROW impacts
    - § Identify potential utility impacts
- Evaluate initial cross sections.
- Calculate preliminary earthwork.
- Modify the model based on input from other disciplines as necessary.
- Develop the model to a level at which the horizontal and vertical alignments can be established to reduce risk to other disciplines' design work.
- Produce a clean version of the roadway design in MicroStation.

Analyze Roadway Design

- Compliance with the PDC.
  - Identify additional design exceptions and waivers
- Surface drainage
  - Coordinate with drainage design
  - Reverse superelevations
  - Analyze flat spots
- Feasibility of driveway connections
- Traffic signal sight distance

2R1 - Develop Roadway Scope & Model Initial Roadway Design - (MBI)

Assumptions:

1. Initial Tight Diamond Interchange design by others meets UDOT and WC requirements and will be the only interchange type considered.

2. Southern Hills Drive will go over SR-7 and the existing SR-7 profile will not be modified.
3. Design of Southern Hills Drive will be limited to 500 feet beyond ramp terminal intersections; the Southern Hills Drive cross-section will be determined by SG.
4. Design will utilize the 2021 UDOT RDM, 2023 DM Drawings and 2025 UDOT Standard Drawings in conjunction with the SR-7 Development Standards and SG standards.
5. Digital Delivery will not be utilized.
6. A shared use path will run along Southern Hills Drive; It is understood that a shared used path is being designed as a separate project and this project will coordinate with that design.
7. Intersections are not signalized.

Tasks not used

N/A

Tasks Modified

1. Analyze roadway design
    a. The following are not applicable to this project:
        i. Feasibility of driveway connections.
        ii. Traffic signal sight distance.
        iii. Coordination with region materials engineer

Tasks Added

1. Develop initial horizontal alignments and vertical profiles for the interchange configuration designed by others
2. Conduct a cross-street evaluation with planning-level cost estimates to determine the most cost-efficient design that minimizes drainage, utility, and row impacts.
3. Coordinate design of southern hills drive with firm designing the remaining sections of southern hills drive
4. Include active transportation elements in roadway modeling

· Material availability identification
    - Identify commercial material sources
    - Identify state-owned pits
    - Investigate quality of material from the possible materials sources (if applicable)
    - Identify clearances necessary to use the possible materials sources (if applicable)

Prepare Recommended Alignments Review Drawing

The review drawing provides reviewers with the initial roadway design, specifically the recommended horizontal and vertical alignments. Prepare the drawing in the format requested by reviewers and a format appropriate for the Geometry Review Meeting. Provide the review drawing to the Design Leader for distribution to all reviewers.

Only information required for a review of the recommended alignments and initial roadway design is recommended at this time. Consider the following information for inclusion on the review drawing.

- Roadway plan view:
  - Show existing topography in proper grayscale
  - Labelexisting features as needed for clarity
  - Include all street names
  - Include north arrow and scale
  - Include proposed horizontal alignments and annotation
  - Show preliminary cut/full lines
  - Show known existing and proposed ROW
  - Label and clarify all geometric design information
  - Consider striping sheets to show lane widths, etc.
- Roadway profile view:
  - Proposed vertical alignments and annotation
  - Existing ground
  - Existing and proposed elevations profile grid
  - Intersected streets, railroads, grade-separated structures, culverts, streams, etc.

Submit Design Exceptions, Design Waivers, and Deviation from Standards Forms

Complete and submit design exception, design waivers, and deviation from standards forms. Work with the Region Preconstruction Engineer to obtain approvals.

Update Roadway Cost Estimate

- Update roadway bid items and quantities.
- Update roadway unit costs (see 1R1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 2U1 - UTILITY & RAILROAD IDENTIFICATION

2U1 Utility & Railroad Identification

Overview

Begin this activity as soon as possible. Early utility and railroad identification and coordination are critical to the success of the project. Identify all utility and railroad companies and complete an accurate depiction of existing utility facilities within the project limits.

References

- Administrative Rule R930-7 Utility Accommodation
- UDOT CADD Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Utility Coordination Manual of Instruction

Deliverables

1. Utility and Railroad Companies Contact List

   Tasks

   - Identify Utility and Railroad Companies within Project Limits

2. Depiction of Utility Facilities/Subsurface Utility Engineering (SUE) Level B,C, and D

   Tasks

   - Notify Utility Companies of Project and Request Utility Records/Plans
   - Hold Scoping Meeting with Utility Companies (as needed)
   - Coordinate with Survey Team
   - Develop Subsurface Utility Engineering (SUE) level B,C, and D
   - Review Horizontal Locations with Utility Owner

3. Authorization for Design Expenditures

   Tasks

   - Issue Authorization for Design Expenditures

4. Documentation of Railroad Diagnostic Review (as necessary)

   Tasks

   - Obtain Diagnostic Review (For At-Grade Railroad Crossings Only)

5. QC Documentation

   Tasks

   - Perform QC Review

Identify Utility and Railroad Companies within Project Limits

- Identify all utility and railroad companies within the project limits.
- Identify point of contact for each company for project design coordination.
- Develop a Utility and Railroad Companies Contact List that includes each contact’s name, phone number, address, and email.

Notify Utility Companies of Project and Request Utility Records/Plans

Contact each utility and railroad company within the project limits. Provide each company with the following:

- Project area and description.
- Request the records and plans of their facilities within the project limits and easements or other land rights documentation that may be affected by the project. Coordinate with ROW Lead for UDOT records/research for utility easements and/or land rights.
- Invitation to scoping meeting at least 30 days prior to the meeting (as applicable).

Hold Utility Scoping Meeting with Utility Companies (as needed)

Set up a utility scoping meeting to discuss the project if appropriate. Include all potentially affected utility companies in one meeting. Provide an agenda before the meeting. Finalize the meeting by providing meeting notes of all decisions and important discussions.

- Discuss project scope and schedule.
- Discuss coordination/communication plan.
- Discuss design alternatives that may avoid conflicts.
- Discuss utility relocation partnering between utilities such as potential of sharing trenches.
- Discuss future improvement plans and schedules. Determine if anything needs to happen before the current project.
- Discuss utility relocation review and relocation schedules.

Coordinate with Survey Team

Coordinate with the Survey Team to gather all overhead and surface utility facilities within the project limits. Good communication with the Survey Team is extremely important to ensure repeat visits are not required. Clearly identify all utility facilities that are needed including the underground facilities that will need to be dipped. Provide plans and records to the Survey Team as appropriate to assist their efforts in locating facilities and understanding what is required.

Develop Subsurface Utility Engineering (SUE) Level B, C, and D

Use utility company records, field observations, and collected survey information to develop Subsurface Utility Engineering (SUE) Level B, C, and D as applicable to the needs of the project (typically quality level B is only provided by a SUE consultant). Provide a complete depiction of the utility facilities within the project limits. Follow UDOT CADD standards and provide the information in the appropriate project CADD file format.

Review Horizontal Location with Utility Owner

- Provide maps showing the horizontal utility location for all utility owners to review.
- Address utility owners' review comments and resolve issues with the horizontal locations.
- Provide updated maps based on comments.

Issue Authorization for Design Expenditures

Prepare and issue authorization letters. The Consultant may prepare the letters but they must be signed and issued by the Region Utility and Railroad Leader. Include a Project Scoping Meeting invitation with each authorization letter.

Obtain Diagnostic Review (For At-Grade Railroad Crossings Only)

The diagnostic team decides and formalizes track configuration commitments for grade separation structures.

- Region Utility and Railroad Leader contacts Chief Railroad Engineer to initiate diagnostic review.
- Chief Railroad Engineer provides diagnostic review. Refer to rule R930-5: Establishment and Regulation of At-Grade Railroad Crossings.
    - Provide the railroad company 30 days notice before diagnostic review.
        - Notify the railroad company of the impending construction and request their updated facility plans. Provide a project area map and description. Develop a railroad reviews plan.
- The Chief Railroad Engineer uses Form R-709 to request Railroad Crossing Safety Funds for eligible at-grade crossings.
- The Chief Railroad Engineer provides the funding estimate to the Region Utility and Railroad Leader.
- The diagnostic review provides at-grade crossing design preparation recommendations.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Utility Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

2U1 Utility & Railroad Identification - (H)

Tasks Not Included:

1. Hold Utility Scoping Meeting
2. Documentation of Railroad diagnostic Review (As Necessary)

Tasks Modified

1. Send the Design Authorization Letter (DAL) to each of the utility companies identified on the project
    a. A notification letter or project announcement letter replaces DAL on Local Government projects
2. Develop Subsurface Utility Engineering (SUE) Level B, C, and D
    a. Subsurface Utility Engineering (SUE) field investigation and survey will not be completed
    b. Horizontal location of utility facilities will be based only on mapping received from Utility Owners (SUE Quality Level D)

Assumptions:

1. Project surveyor will pick up any surface utility features, which can be included in the base utility mapping
2. Team will write Project Notification Letters

Deliverables:

1. Utility Contact List
2. Project Notification Letters to each utility owner
3. Utility Base Map (DGN format)

Activity: 2Y1 - PREPARE/COMPILE GEOMETRY REVIEW PACKAGE

2Y1 Prepare/Compile Geometry Review Package

Overview

Compile project cost estimate and all discipline deliverables into one Geometry Review Package.

References

- UDOT QC/QA Documentation

Deliverables

1. Geometry Review Package

   Tasks

   - Compile Project Cost Estimate
   - Review PDC
   - Prepare Geometry Review Package

2. QC Documentation

   Task

   - Perform QC Review

Compile Project Cost Estimate

Obtain each discipline's cost estimate and compile them into one document.

Review PDC

Review the PDC based on comments from the scoping review.

Prepare Geometry Review Package

Compile all review materials from each discipline into one review package.

- Project Cost Estimate
- Review Drawings (in approved formats)
- Other discipline review materials
- Submit Maintenance/Preconstruction Site Visit Certification Form (if complete and not submitted with the Scoping Review Package) (see 1Y2)

Distribute the review package to all meeting attendees and reviewers a minimum of one week before the Geometry Review Meeting (2V1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

2Y1 Prepare/Compile Geometry Review Package - (H & MBI)

Assumptions: -

1. Project is not digital delivery; CADD Validation will not be performed

Activity: 2V1 - GEOMETRY REVIEW MEETING

2V1 Geometry Review Meeting

Overview

This meeting is to review the recommended roadway alignments consistency, accuracy, and constructability within the project scope and discuss available funding.

References

- Form F1 - Milestone Review Comment Resolution Form
- UDOT QC/QA Documentation

Deliverables

1. Geometry Review Meeting Agenda

   Task

   - Prepare Meeting Agenda
2. Geometry Review Package

   Task

   - Distribute Review Package
3. Geometry Review Meeting Notes

   Tasks

   - Hold Meeting
   - Compile Meeting Notes
   - Update the PDD
4. Geometry Review Comment Resolution Form

Task

- Compile Geometry Review Comments and Submit Initial Dispositions and Responses

Prepare Meeting Agenda

Arrange for the location and time of the meeting. Prepare the meeting agenda. Below are suggested agenda items:

- Project Definition Document (PDD)
- Action items from previous milestone review meetings
- Project Design Criteria (PDC)
- Design exceptions, design waivers, or deviations from standards
- Design conflicts between disciplines
- Constructability issues
- Project phasing and Maintenance-of-Traffic (MOT)
- Project Cost Estimate
- Risk Register and Mitigation Strategies
- Innovative contracting opportunities such as lane rental, P+T, and incentive/disincentive
- Project schedule, milestones and Submit for Advertising Date
- ROW strategy
- UDOT QC/QA Documentation
- Project commitments

Distribute Review Material

Invite all project team members and others as needed. Distribute all review materials and meeting agenda at least **one week** before Geometry Review Meeting.

Hold Meeting

Conduct the meeting according to the agenda.

Compile Meeting Notes

Capture all decisions made and create an action item list. Distribute the meeting notes to all meeting invitees.

Update the PDD

The Project Manager should revise the project information in the PDD based on any changes identified during the Geometry Review Meeting.

Compile Geometry Review Comments and Submit Initial Dispositions and Responses

The Design Leader compiles all reviewer comments into one Geometry Review Comment Resolution Form. Each Discipline Lead provides an initial disposition and response to comments related to their design and deliverables. Refer to UDOT QC/QA Documentation for more information about completing the Milestone Review Comment Resolution Form.

The Design Leader submits the Geometry Review Comment Resolution Form to all reviewers and team members once all comments have an initial disposition and response.

If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes and distributes them after the meeting.

2V1 Geometry Review Meeting - (H & MBI)

Assumptions:

1. Meeting will be held at the UDOT Hurricane office with MS Teams/Google Meet option
2. One 2-hour meeting with (combined in-person and virtual with 3 H, 2 MBI, & X GC staff attending in person), plus travel.
3. Includes travel time for 4 Consultant Team staff

Activity: 3C1 - DEVELOP ITS COMPONENTS DESIGN

3C1 Develop ITS Components Design

Overview

Refine the ITS device locations and preliminary ITS Cost Estimate determined in the 1C1 phase of the PDN.

References

UDOT CADD Standards

UDOT Plan Sheet Development Standards

UDOT Digital Delivery Website

UDOT ITS Design Manual

UDOT Standard Drawings

UDOT QC/QA Documentation

Deliverables & Tasks

I. PRELIMINARY ITS PLAN SHEETS

A. Identify Locations of Device Placement

1. Identify all ITS device locations and connections. Coordinate with the ITS Project Manager to meet all TMD requirements.
2. Possible elements to include in this summary include the following:

Fiber Optic - Conduit or New Network Infrastructure

The ITS Project Manager assigned to your Region will coordinate with the TMD Fiber Team to:

Identify connection locations

Identify size and number of ducts

Identify strand count

Traffic Signal Interconnect

Coordinate with the Region Traffic Signal Engineer

Identify each device as wireless or fiber optic

CCTV Camera

For Signal Operations, coordinate with the TMD Signal Systems Engineer

For Freeway Operations, coordinate with the ITS Project Manager assigned to your Region who will coordinate with the TMD Traffic Operations Engineer, ITS Maintenance, and the Region Traffic Operations Engineer to:

- Determine location, height, and verify line of sight
- Identify static and lowering poles
- Ensure that a CCTV camera is placed to read each Variable Message Sign (VMS)

Road Weather Information System (RWIS)

Coordinate with the ITS Project Manager assigned to your Region who will coordinate the TMD Weather Team

Variable Message Sign (VMS)

Coordinate with the ITS Project Manager assigned to your Region who will coordinate with the TMD Traffic Operations Engineer and Region Traffic Operations Engineer to:

- Meet sight distance requirements
- Identify the type of VMS for each location
- Identify structure type for each sign
- Place ITS cabinet in view of the VMS message
- Verify each VMS is visible by a CCTV camera

Ramp Metering

Coordinate with the ITS Project Manager assigned to your Region who will coordinate with the Region Traffic Operations Engineer and TMD Freeway Operations Manager to:

- Evaluate vehicle storage length and number of lanes for each location
- Evaluate acceleration lanes for each location
- Evaluate locations for advanced warning devices
- Determine mainline and ramp vehicle detection needs

Traffic Monitoring Station (TMS)

Coordinate with the ITS Project Manager assigned to your Region who will coordinate with the TMD Freeway Operations Manager to:

- Determine TMS needs and device locations
- Coordinate with Systems Planning and Programming to consolidate/supplement the CCS system with the TMS system

Continuous Count Station (CCS)

Coordinate with Systems Planning and Programming

Identify existing locations

Plan for how to keep existing locations in operation during construction

Identify new locations

Connected and Automated Vehicle (CAV) Infrastructure

Coordinate with the ITS Project Manager assigned to your Region who will coordinate with the TMD Transportation Technology team to determine CAV infrastructure needs.

Other ITS/Electrical/Electronic Devices and Infrastructure Not Specifically Identified in this Document

Coordinate with the ITS Project Manager assigned to your Region who will coordinate with all necessary parties associated with these devices and infrastructure.

3. Locate all facilities within the proposed ROW

Coordinate additional ROW with the ROW design team if necessary.

Coordinate all necessary easements, including aerial and temporary easements, with the ROW design team.

4. Locate all facilities outside the clear zone or use adequate protective measures
5. Identify access points and facilities for maintenance
6. Identify and propose mitigation for potential environmental conflicts
7. Locate the power source

Coordinate and receive approval from Region Utility Coordinator and Power Company for connection

8. Identify and propose mitigation for potential utility conflicts.

Place each device to minimize conflicts

Coordinate with utility team

9. Identify communications connection.

Identify each device as getting connected to fiber optic communications or wireless communications

Identify connection locations

Coordinate and receive approval from the Third Party Communications Company (if needed)

Coordinate with the ITS Project Manager assigned to your Region who will coordinate with and receive approval from the TMD Fiber Optic Communications Manager

B. Review Signal Design for Interconnect Needs

1. Review the device locations and needs

C. Prepare Preliminary ITS Plan Sheets

1. Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website to develop preliminary plan sheets for review.
2. These sheets are to provide a review of the proposed locations of all ITS devices.
3. All information on the sheets must go through the QC review procedure before distribution.
4. Combine plan sheets with other designs when appropriate.

Conform to General Plan Sheet Requirements of the UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website.

Follow and maintain CADD Standards on each sheet.

Include all information necessary for review such as callouts and notes.

II. REFINED ITS COST ESTIMATE

A. Develop ITS Cost Estimate

1. Compile ITS bid items and quantities

Use UDOT standard bid items

2. Develop unit costs for each item

Use appropriate resources for developing unit costs such as Masterworks and local contractors

Document unit cost development and assumptions

Account for project specific factors (see below)

3. Use lump sum pricing only when appropriate

Consider contractor risk due to unknown quantity

Consider difficulty in pricing per unit

Consider all materials and labor involved

4. Project Specific Unit Price Factors

Location

Specialty Equipment

Limitations of Operations

Quantity of Item

Current Bidding Environment

Availability of Materials

Familiarity of Process

Time of Year of Advertising

Risk to Contractor

Inflation

Construction Schedule

Constructability

III. QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the ITS Design QC Checklist before distribution.

Provide Checker with check prints of each deliverable and supporting documentation.

Complete all necessary corrections from the QC checklist.

Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

3C1 - DEVELOP ITS COMPONENTS DESIGN

Assumptions:

1. Existing conduit and fiber parallels SR-7 will need to be relocated outside the ramps

Activity: 4E2 - OBTAIN CATX APPROVAL

This activity is not being used as part of this contract but it cannot be removed from the PDN network because it is an activity that is no longer used. (Per Phil Ellsworth)

4E2 Obtain Categorical Exclusion Approval

Overview

Submit complete Categorical Exclusion to region for review and approval.

References

- UDOT Environmental Process Manual of Instruction
- UDOT Environmental Web Page
- UDOT QC/QA Documentation

Deliverables

1. Approved Categorical Exclusion

   Tasks

   - Submit Categorical Exclusion for Review and Approval

2. QC Documentation

   Task

   - Perform QC Review

Submit Categorical Exclusion for Review and Approval

Submit the completed Categorical Exclusion for review. Incorporate comments based on reviews from the region environmental staff and resubmit as necessary. Obtain an approved Categorical Exclusion.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Environmental Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 3G1 - CONDUCT GEOTECHNICAL INVESTIGATION

3G1 Conduct Geotechnical Investigation

Overview

Conduct subsurface exploration for all cuts, fills, retaining walls, drainage, and structural designs. Coordinate with the design engineers to identify the locations of the subsurface exploration. Refer to the UDOT Geotechnical Manual of Instruction for guidance.

References

- UDOT Geotechnical Manual of Instruction (G-MOI)
- UDOT Geotechnical QC/QA Procedures

Deliverables

1. Subsurface Exploration Plan

   Tasks

   - Conduct Field Review
   - Determine Access and Layout of Subsurface Explorations
   - Develop a Traffic Control Plan for Subsurface Exploration
   - Obtain Clearances and Permits for Subsurface Exploration

- Submit Exploration Plan for Review to UDOT Geotechnical Oversight Engineer

2. Subsurface Exploration Location Sketch

Tasks

- Subsurface Exploration and Sampling
- Prepare Field Subsurface Exploration Logs
- Prepare Subsurface Exploration Location Sketch

3. Submit Samples for Testing

Tasks

- Sort and Submit Samples for Laboratory Testing
- Request Survey for Subsurface Exploration Locations

4. QC Documentation

Tasks

- Perform QC Review

Conduct Field Review

Evaluate site conditions for subsurface exploration.

Determine Access and Layout of Subsurface Exploration

Coordinate with appropriate designers to do the following:

- Obtain/evaluate cut and fill slopes and cross-sections.
- Obtain structure foundation locations and sizes.
- Establish a conceptual settlement or slope stability mitigation plan.
- Establish a subsurface exploration and soil testing plan for settlement, slope stability, liquefaction/lateral spread investigation, foundation, and retaining wall design.
- Establish a field reconnaissance plan (include exposed rock mapping if required).
- Obtain a map of environmental resources/potential environmentally sensitive sites.

Develop a Traffic Control Plan for Subsurface Exploration

Coordinate with the roadway designer to develop a traffic control plan as necessary.

Obtain Clearances and Permits for Subsurface Exploration

Submit Exploration Plan for Review to UDOT Geotechnical Oversight Engineer

Submit the exploration plan to the UDOT Geotechnical Oversight Engineer prior to performing subsurface exploration. Include the following items:

- Proposed subsurface exploration location map
  - Identify all proposed exploration locations (station, offset, and elevation)

- Purpose for each exploration location
- Estimated depths of purposed exploration
- Traffic Control Plan
- Justification for deviations from the Geotechnical Manual of Instruction

Subsurface Exploration and Sampling

Conduct the subsurface explorations and soil sampling necessary to provide proper geotechnical design recommendations for settlement, slope stability; liquefaction/lateral spread investigation, foundation, and retaining wall design.

Prepare Field Subsurface Exploration Logs

Prepare Subsurface Exploration Location Sketch

Sort and Submit Samples for Laboratory Testing

Request Survey for Subsurface Exploration Locations (Horizontal Coordinates and Elevations)

Perform QC Review

Perform the QC Review following the UDOT Geotechnical QC/QA Procedures and the Geotechnical Manual of Instruction **before** distribution.

- Provide the Checker with a project document cover sheet, check print of each deliverable and supporting documentation.
  - Subsurface Exploration Plan
  - Field Subsurface Exploration Logs
  - Subsurface Exploration Location Sketch
- Follow the UDOT Geotechnical QC/QA Procedures for checking and auditing.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

3G1 - Conduct Geotechnical Investigation - (GC)

Tasks Not Used

N/A

Tasks Modified

N/A

Tasks Added

1. Coordinate and procure a traffic control plan for field studies.
2. Complete geophysical field studies to evaluate soil and bedrock conditions:
   a. Complete up to 2 seismic refraction lines along the proposed ramps to profile bedrock (up to 2 days of geophysical testing).

b. Geophysical study to also include shear wave profiling with depth to establish a design Vs30 profile for use in developing seismic site class / design parameters.

Assumptions

1. Our 3G1 scope includes test hole locations and depths to address a two span bridge alternative with roadway cuts of less than 5 feet near the bridge. If the interchange concept of going over SR-7 is revised, then we will need to revise our SOW as part of a contract modification.
2. All environmental / archaeological clearances of our work areas / access roads are completed prior to mobilizing drilling equipment.
3. Work is completed within the UDOT ROW; if test holes have to be located outside of UDOT's ROW then all permitting / access agreements will be completed by Horrocks and we will proceed with a contract mod to address additional costs.
4. Survey of test hole locations provided by Horrocks.
5. All private utilities and permits are the responsibility of UDOT and property owners; GC is not responsible for damages or delays of any unmarked utilities.
6. Figure 1 plots preliminary locations of the planned geophysics, test pits, and test holes.
7. All work completed in a single mobilization per activity.
8. Any potential subsurface contamination will be negligible, thus not requiring any special equipment, handling procedures, or disposal methods.
9. Drill, core, and sample a total of 6 test holes (TH) to support design efforts for the bridge.
    a. Drill up to 3 test holes for the bridge foundations up to 75 feet deep using a combination of:
        i. Mud rotary or percussive drilling (ODEX) methods in soil deposits.
        ii. Wireline rock coring in bedrock.
    b. Drill up to 3 test holes for the retaining walls up to 40 feet deep using a combination of:
        i. Hollow-stem auger, mud rotary, or percussive drilling (ODEX) methods in soil deposits.
        ii. Wireline rock coring in bedrock.
    c. Up to 6 shifts of drilling; if additional shifts are needed we would proceed with a contract modification.
    d. Sample site soils with split spoon and possibly oversized (e.g., California) samplers.
    e. Near continuous sampling in the upper 10 feet, 5 ft intervals / core runs from 10 to 75 feet, or where judged during drilling.
    f. Collect rock core samples; place and identify by depth in core boxes.
    g. Record groundwater levels at time of drilling (if found) prior to TH completion; install a single temporary piezometer to measure groundwater at the site.
    h. Complete / backfill TH with bentonite chips.
    i. Transport bedrock and soil samples to GC laboratory.
10. Excavate and sample up to 14 test pits (TP) along the roadway ramps using a track mounted excavator to observe excavatability of bedrock for roadway cuts, collect subsurface data/samples for pavement design, and identify a bedrock contact for potential shaft caps.
    a. For budgetary purposes we have assumed up to 2 days of test pit field work.
    b. Complete dynamic cone penetration (DCP) testing near each test pit and observe indications of gypsiferous layers in test pits.
    c. Excavate TP up to 10 feet deep (or practical refusal in the bedrock).
    d. Collect grab samples of site soils from excavations.
    e. Record groundwater levels at time of excavation (if found) prior to TP completion.
    f. TPs will be backfilled with excavated materials tamped into place with the excavator bucket (no specified compaction requirements).

i. Please note that this method of closure does not constitute a structural backfill, as such we recommend these locations besurveyed, tracked, and incorporated into future construction plans so the areas can be replaced with engineered fill.

g. Transport collected bedrock and soil samples to GC laboratory.

11. Complete Dynamic Cone Penetration (DCP) testing for locations depicted in Figure 1 along interchange on/off-ramps and Southern Hills drive for reference in pavement design. For budgetary purposes, we have assumed the following:
    a. DCP of up to 13 locations near those shown in Figure 1.
    b. DCP to be completed to a depth of up to 2.5-ft or where practical refusal is found with equipment.
12. Costs include traffic control for shoulder closures for TH and TP (no traffic control planned for geophysics); for budgetary purposes we have assumed up to 6 days of drilling / shoulder closures and favorable working hours from UDOT (7am to 7pm).
    a. If additional closures or lane closures are required given limited site access / extended travel, we will need to proceed with a contract modification.
13. Drill spoils will be disposed of onsite.
14. Excludes:
    a. Drilling associated with any detention/drainage basins, pavements, or custom sign foundations.
    b. Site specific utility locations, vac truck, services if needed.
    c. Containment and off-site disposal of drilling fluid / water. We have assumed drilling fluids can be discharged on-site.
    d. Retaining walls longer than 200 feet at each abutment; if walls are extended beyond these lengths/locations then additional test holes will be required.
15. Deliverables:
    a. TH and TP logs will be completed, compiled and summarized with draft and final geotechnical deliverable.
    b. Geophysical survey data / memo will be provided with final geotechnical deliverable.
    c. QC documentation.

Activity: 3G2 - CONDUCT GEOTECHNICAL TESTING

3G2 Conduct Geotechnical Testing

Overview

Conduct laboratory soil testing and prepare the soil test summary.

References

- UDOT Geotechnical Manual of Instruction (G-MOI)
- UDOT Geotechnical QC/QA Procedures

Deliverables

1. Individual Soil Test Results

Tasks

- Develop Testing Program
- Prepare Soil Testing Samples

- Conduct Laboratory Tests
- Prepare Individual Soil Testing Results

2. Soil Test Summary

Task

- Prepare Soil Test Summary

3. QC Documentation

Task

- Perform QC Review

Develop Testing Program

Identify tests necessary for design analysis according to the G-MOI and AASHTO/AMRL standards.

Prepare Soil Test Samples

Prepare the necessary samples for AASHTO testing procedures for each testing program.

Conduct Laboratory Tests

Conduct laboratory soil testing to aid in settlement, slope stability, liquefaction/lateral spread investigation, foundation, and retaining wall design.

Prepare Individual Soil Testing Results

- Prepare charts and graphs (as necessary) showing results of individual tests.
- Note any irregularities or compromised samples.

Prepare Soil Test Summary

Prepare a summary of test data. Include the following information:

- Summary table containing results
- Note any irregularities or compromised samples

Perform QC Review

Perform the QC Review following the UDOT Geotechnical QC/QA Procedures and the Geotechnical Manual of Instruction **before** distribution.

- Provide individual soil tests and soil test summary to the Geotechnical Laboratory Manager for review.
- Provide the Checker with a project document cover sheet, check print of each deliverable and supporting documentation.
- Follow the UDOT Geotechnical QC/QA Procedures for checking and auditing.
- Upload all QC documentation (including Laboratory QC/QA and QSM) into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

3G2 - Conduct Geotechnical Testing - (GC)

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. Photograph recoverable rock core and include with test hole logs.

Assumptions

1. Soil samples will be disposed of following submittal of our final geotechnical report unless other arrangements are made to store soil samples by UDOT.
2. Complete laboratory testing. Planned testing will depend on material collected. Envisioned testing includes:
    a. Index testing (moisture content, Atterberg limits, particle size distributions)
    b. Strength testing: unconsolidated undrained, point-load testing, and unconfined compression testing of rock core.
    c. California Bearing Ratio (CBR) testing for up to three locations.
    d. Consolidation / collapse / swell testing for settlement assessments.
    e. Resistivity and soil chemical testing for corrosion and concrete degradation assessments.
3. Deliverables:
    a. Laboratory data will be reduced, compiled, and summarized with our final deliverables.

Activity: 3Q1 - COMPLETE DRAINAGE DESIGN

3Q1 Complete Drainage Design

Overview

Complete design of the roadway drainage and open channel drainage features.

References

- UDOT CADD Standards
- UDOT Drainage Manual of Instruction
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Standard and Supplemental Drawings

Deliverables

1. Drainage Design

Tasks

- Address Geometry Review Comments
- Finalize Hydraulic Analysis
- Complete Storage Facility Design
- Complete Storm Inlet Design
- Complete Storm Drain Design
- Complete Culvert Design
- Complete Irrigation Design
- Identify Potential Design Conflicts

2. Preliminary Drainage Plan and Profile Sheets

Task

- Prepare Preliminary Drainage Plan and Profile Sheets

3. Drainage Cost Estimate

Task

- Update Drainage Cost Estimate

4. QC Documentation

Task

- Perform QC Review

Address Geometry Review Comments

Complete the roadway drainage portions of the Geometry Review Comment Resolution Form.

- Respond to each drainage related comment.
- Make revisions to the design and deliverables in accordance with the responses.
- Conduct QC Review and Verification of all comments.

See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Finalize Hydraulic Analysis

Complete Storage Facility Design

Complete storage facility design in accordance with UDOT's Drainage Manual of Instruction.

- Perform routing of check flood
- Complete the storage facility design
  - Develop inflow hydrograph
  - Calculate storage volume breakout
  - Develop grading and depth requirements
  - Identify outlet locations
  - Analyze release rate
  - Design control structures

- Identify provisions for maintenance (such as berms and access ramps)

- Evaluate the earthwork

Complete Storm Inlet Design

The following should be considered in completing the storm inlet design in accordance with UDOT's Drainage Manual of Instruction.

- Time of concentration
- Spread width
- Bypass flow
- Access spacing
- Major sag locations
- Debris and clogging of storm drain inlet
- Grate inlet type

Complete Storm Drain Design

The following should be considered in completing the storm drain design in accordance with UDOT's Drainage Manual of Instruction.

- Drainage pipe velocity
- Drainage pipe sized
- Hydraulic grade lines (HGLs)
- Drainage pipe material
- Energy dissipation
- Flood inundation of storm drain system (Design Check)
- Environmental restrictions of water quality for outfall
- Vertical profile of storm drain and ditches
- Earthwork

Complete Culvert Design

The following should be considered in completing the culvert design according to UDOT's Drainage Manual of Instruction.

- Culvert capacity and freeboard
- Placement of headwall and end-sections
- Culvert material
- Energy dissipation
- Earthwork

Complete Irrigation Design

- Establish rim elevations for diversion structures based on operating head of the system
- Establish vertical profile of irrigation pipes and ditches

- Re-establish diversion points. Obtain written notification from ditch master if diversions are being abandoned
- Determine appropriate storm drain material type based on corrosiveness of native material
- Ensure all irrigation culverts extend from one ROW boundary to the other

Identify Potential Design Conflicts

Identify design conflicts such as utilities, roadway, and ROW with proposed drainage features. Coordinate with other disciplines to evaluate design alterations to mitigate conflicts. Coordinate with the Region Utility and Railroad Coordinator and Utility Designer to identify all potential utility conflicts and potential SUE Level A.

Prepare Preliminary Drainage Plan and Profile Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to develop preliminary plan sheets for review. These sheets are to provide a review of the final designs. It is recommend that only the information required for review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. All information on the sheets must go through the QC review procedure **before** distribution. Combine plan sheets with other designs when appropriate.

- Conform to General Plan Sheet Requirements of the UDOT Plan Sheet Development Standards.
- Follow and maintain CADD standards on each sheet.
- Include all information necessary for review including callouts and notes.

Update Drainage Cost Estimate

- Update drainage bid items and quantities.
- Update drainage unit costs (see 2Q1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Drainage Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

3Q1 - Complete Drainage Design - (MBI)

Tasks Not Used - None

Tasks Modified - None

Tasks Added - None

Assumptions:

1. Includes Tasks 3Q1
2. Tasks in 3Q1 are only applicable to drainage features per the assumptions and analysis in Activity 2Q1

Activity: 3R1 - COMPLETE ROADWAY DESIGN

3R1 Complete Roadway Design

Overview

Finalize the roadway model and design. Modify the design based on reviewer comments and continued coordination with project team members. Modify the design as necessary to include other discipline needs like drainage facilities, utilities, signal, signs, and ATMS. Create preliminary roadway plan sheets.

References

- 13 Critical Elements
- AASHTO, A Policy on Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- Design Exception, Design Waivers, and Deviation from Standards Forms
- NATCO, Urban Street Design Guide
- Project Design Criteria (PDC)
- Project Development Business System (PDBS)
- Test Level 5 Barrier Warrants/Approval Request Form
- UDOT Additional Design Criteria
- UDOT CADD Standards
- UDOT Median Barrier Selection Process
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Standard and Supplemental Drawings

Deliverables

1. Preliminary Roadway Plan and Profile Sheets

   Tasks
   - Address Geometry Review Comments
   - Coordinate with Project Team Members
   - Complete Roadway Design
   - Develop Preliminary Roadway Plan and Profile Sheet
2. Preliminary Typical Section Plan Sheets

   Task
   - Develop Preliminary Typical Section Plan Sheets
3. Design Exceptions, Design Waivers, and Deviation from Standards Forms (if necessary)

Task

- Submit Design Exceptions, Design Waivers, and Deviation from Standard Forms for Approval

4. Test Level 5 Barrier Warrants/Approval Request Form (if necessary)

Task

- Submit Test Level 5 Barrier Warrants/Approval Request Form

5. Roadway Cost Estimate

Task

- Update Roadway Cost Estimate

6. QC Documentation

Task

- Perform QC Review

Address Geometry Review Comments

Complete the roadway portions of the Geometry Review Comment Resolution Form.

- Respond to each roadway related comment.
- Make revisions to the design and deliverables in accordance with the responses.
- Conduct QC Review and Verification of all comments.

Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Coordinate with Project Team Members

Continually coordinate with project team members. Discuss aspects of the model and design with appropriate disciplines to ensure compliance with standards, with other designs, and address fatal flaws. Coordinate and mitigate project design conflicts, impacts, and deficiencies.

Complete Roadway Design

Refer to AASHTO and UDOT design standards to finalize the roadway design.

- Finalize templates including, but not limited to, the following:
  - Pavement section
  - Superelevation
  - Transitions
    - Gore areas
    - Lane widening
- Finalize the roadway model based on templates.
  - Grading
    - Accommodate guardrail/barrier
    - Driveways/approaches
    - Curb returns

        - Cross streets
        - Accommodate drainage
        - Overhead sign locations
        - Retaining walls
        - Major and minor structures
    - Create design surfaces
    - Evaluate the cut/fill lines
        - Identify any additional ROW, utility, and other impacts
- Design miscellaneous features including, but not limited to, the following:
    - Maintenance access
    - Geotechnical instrumentation accommodations
    - Driveways
    - Fences
    - Fire hydrants
    - Flatwork
    - Mailboxes
    - Pedestrian access ramps
    - Raised islands
    - Removals
    - Trails
- Evaluate clear zone hazards and appropriate protection devices.
    - Design guardrail/barrier
    - Select median barrier (see UDOT Median Barrier Selection Process)
    - Complete UDOT Test Level 5 Barrier Warrants/Approval Request Form (if necessary)
- Consider construction phasing and limitations.
- Produce a clean version of the roadway design in MicroStation.
    - Roadway file
    - Typical sections
    - Profiles
    - Superelevation diagrams
- Calculate quantities.

Develop Preliminary Roadway Plan and Profile Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to develop roadway plan and profile sheets for review. These sheets are to provide a review of the final roadway design. It is recommend that only the information required for final roadway design review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review is required before distribution for all labels, callouts, notes, and information found on the plan sheets.

- Do the following for all plan sheets:
    - Follow the UDOT Plan Sheet Development Standards for General Plan Sheet Requirements when generating plan sheets, drafting, referencing, and callouts
    - Provide all information needed for review such as type of curb and gutter, cut/fill lines, and alignment annotation

- Label all streets and important existing features
- Ensure all existing features are displayed in proper grayscale

· Do the following for roadway plan sheets:
- Include all roadway design and roadway related features such as cut/fill and ROW
- Annotate all alignments
- Label all new roadway work items, including miscellaneous design features listed above, overhead sign locations, guard rails/barrier, retaining walls, and other important design features such as type of curb and gutter and curb radius

· Do the following for roadway profile sheets:
- Follow the UDOT Plan Sheet Development Standards for Roadway Profile Sheet Requirements
  - § Superelevation
  - § Label transition point station and rate
  - § Show and label the existing ground

Develop Preliminary Typical Section Plan Sheets

Create typical section plan sheets and include all typical sections. Use the following to develop the preliminary typical section plan sheets:

· General Plan Sheet Requirements
· Typical Sections Sheet Requirements
· Label all typical section features
· Label each typical section start and end station
· Include all necessary notes, callouts, dimensions, and symbols
· Make sure all symbols and line styles are identifiable

Submit Design Exceptions, Design Waivers, and Deviation from Standards Forms for Approval (if necessary)

Complete and submit design exception, design waivers, and deviation from standards forms. Work with the Region Preconstruction Engineer to obtain approvals.

Submit Test Level 5 Barrier Warrants/Approval Request Form (if necessary)

Complete and submit Test Level 5 Barrier Warrants/Approval Request Form.

Update Roadway Estimate

· Update roadway bid items and quantities.
· Update roadway unit costs (see 1R1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

· Provide the Checker with a check print of each deliverable and supporting documentation.

- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

3R1 - Complete Roadway Design - (MBI)

Tasks Not Used - None

Tasks Modified - None

Tasks Added ¿ None

Activity: 3R2 - COMPLETE SIGNING & STRIPING DESIGN

3R2 Complete Signing and Striping Design

Overview

Using the roadway model as a guide, develop the signing and striping design for the project. Locate appropriate sites for placement of overhead sign structures (if applicable). Develop Maintenance-of-Traffic (MOT) design. Develop preliminary signing, striping, and MOT plan sheets.

References

- AASHTO Roadside Design Guide
- Manual on Uniform Traffic Control Devices (MUTCD)
- NATCO, Urban Street Design Guide UDOT Sign Manual
- Project Development Business System (PDBS)
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Sign Manual
- UDOT Standard and Supplemental Drawings
- UDOT Structures Design and Detailing Manual (SDDM)

Deliverables

1. Preliminary Signing and Striping Plan Sheets

   Tasks

   - Develop Signing and Striping Design
   - Create Preliminary Signing and Striping Plan Sheets

2. Overhead Sign Locations (as necessary)

   Tasks

   - Identify Overhead Sign Locations

- Determine Cantilever or Full Span
- Produce Cross-Section to Determine Vertical Clearance
- Determine Barrier Needs/Foundation Protection
- Determine Power Requirements for Lighting the Overhead Sign

3. Preliminary MOT Plan Sheets

Tasks

- Complete MOT Design
- Obtain Closure Approvals (if necessary)
- Create Preliminary MOT Plan Sheets

4. Signing, Striping, and MOT Cost Estimates

Task

- Develop Signing, Striping, and MOT Cost Estimate

5. QC Documentation

Task

- Perform QC Review

6. Region and State Approvals (as necessary)

Task

- Obtain Region and State Approvals

Develop Signing and Striping Design

Using UDOT Standard Drawings as well as the Federal Highway Administration (FHWA) and UDOT approved Manual of Uniform Traffic Control Devices (MUTCD) as references, develop signing and striping design.

- Do the following for signing design:
  - Coordinate with the Region Traffic Engineer for approval of interstate guide signs by the Central Traffic and Safety Division
  - Review for compliance with MUTCD
  - Consider signs that may be required outside of the project limits
  - Replace, modify, or upgrade existing signs where necessary
- Do the following for striping design:
  - Base the striping plan on capacity analysis
  - Design lane widths and intersection layouts from previous phases
  - Note pavement marking type

Create Preliminary Signing and Striping Plan Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to create signing and striping plan sheets for review. These sheets are to provide a review of the final signing and striping design. It is recommend that only the information required for final signing and striping design review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review is required before distribution for all labels, callouts, notes, and information found on the plan sheets.

- Do the following for all plan sheets:

- Follow the UDOT Plan Sheet Development Standards for General Plan Sheet Requirements for sheet generation, drafting, referencing, and callouts
- Provide all information needed for review
- Include the street names
- Show the proposed design without cut/fill lines
- Show the new alignment, stationing, and curve data
- Ensure all existing features are displayed in proper grayscale

· Do the following for striping plan sheets:
- Label pavement marking type

· Do the following for signing plan sheets:
- Correctly call out the proposed sign locations.

· Overhead Sign Locations
- Show on roadway plan sheets and signing and striping plan sheets
- Correctly call out the proposed foundation locations on Roadway Plan Sheets

Identify Overhead Sign Locations

Refer to the MUTCD and UDOT Sign Manual to determine the locations of overhead sign needs.

Determine Cantilever or Full Span

Determine the placement and type of structure based on recommendations from the structural design engineer and the Structures Division requirements found in the Structures Design and Detailing Manual.

Produce Cross-Section to Determine Vertical Clearance

Provide vertical clearances according to the Structures Division requirements. These requirements can be found in the Structures Design and Detailing Manual.

Determine Barrier Needs/Foundation Protection

Evaluate the clear zone requirements and need for barrier/foundation protection.

Determine Power Requirements for Lighting the Overhead Sign

Determine the lighting and power needs for overhead signs and coordinate with the Lighting Designer (3R3).

Complete MOT Design

Using resources that include the UDOT Standard and Supplemental Drawings TC series, FHWA, MUTCD, and the Work Zone Safety and Mobility Policy UDOT 08-05, develop the MOT design. Consider the following:

- Coordinate the detour routes with stakeholders to minimize impacts. These stakeholders could include state agencies, local agencies, property owners, and the traveling public.
- Coordinate with the Design Leader to determine user costs.
- Evaluate the detour alternatives.
- Review the preferred alternatives with the Region Traffic Engineer.
- Design project specific custom signs, including dimensions, color, message, and letter size.
- Determine the VMS sign placement and proposed message.
- Design the static information sign.
- Consider the overhead VMS and HAR radio sites.
- Consider the need to model traffic impacts due to traffic pattern modifications.
- Coordinate signal timing adjustments with the TOC.
- If closures are required, do the following:
    - Develop the detour plan for each closure
    - Place VMS in each direction seven days prior to the closure
    - Get approval from the Region Operations Engineer and Region Director

Obtain Closure Approvals (if necessary)

Initiate and obtain approval from local agencies or FHWA when applicable.

Create Preliminary MOT Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to create preliminary MOT plan sheets for review. These sheets are to provide a review of the preliminary MOT layout. It is recommend that only the information required for the review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review of all labels, callouts, notes, and information found on the plan sheets is required before distribution.

- Follow the UDOT Plan Sheet Development Standards for general plan sheet requirements for sheet generation, drafting, referencing, and callouts
- Include the street names
- Show the MOT design
- Label/call out all necessary items

Develop Signing, Striping, and MOT Cost Estimate

Refer to the R-MOI Estimating section.

- Develop signing and striping bid items and quantities.
- Coordinate with the Structural Engineer to develop overhead sign structure bid items and quantities.
    - Use UDOT standard bid items
- Develop unit costs for each item.
    - Use appropriate resources for developing unit costs such as PDBS and local contractors
    - Document unit cost development, assumptions, etc.

- Account for project specific factors

- Use lump sum pricing only when appropriate.
  - Consider contractor risk due to unknown quantity
  - Consider difficulty in pricing per unit
  - Consider all materials and labor involved

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Obtain State and Region Approval

Submit review materials to the Region Traffic Engineer and Central Traffic Engineer. Address comments as necessary to obtain design approval.

3R2 - Complete Signing & Striping Design - (MBI)

Assumptions:

1. No Overhead sign/ structure will be required

Tasks not used

II. Overhead Sign Locations

Tasks modified

N/A

Tasks added

N/A

Activity: 3R3 - COMPLETE SIGNAL & LIGHTING LAYOUT DESIGNS

3R3 Complete Signal and Lighting Layout Designs

Overview

Complete the signal layout design according to the UDOT Design of Signalized Intersections Manual. Create preliminary signal plan sheets. Develop the lighting design according to the AASHTO Roadway Lighting Design Guide. Create preliminary plan sheets.

References

- AASHTO Roadside Design Guide

- AASHTO Roadway Lighting Design Guide
- NATCO, Urban Street Design Guide
- Project Development Business System (PDBS)
- UDOT CADD Standards
- UDOT Design of Signalized Intersections Manual
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Standard and Supplemental Drawings

Deliverables

1. Preliminary Signal Plan Sheets

   Tasks
   - Identify Signal Requirements
   - Layout Signal Design
   - Create Preliminary Signal Plan Sheet
2. Preliminary Lighting Plan Sheets

   Tasks
   - Identify Lighting Requirements
   - Layout Lighting Design
   - Create Preliminary Lighting Plan Sheet
3. Cooperative Agreements (if applicable)

   Task
   - Assist PM to Develop Cooperative Agreements
4. Request for ROW

   Task
   - Request Additional ROW (if needed)
5. Signal and/or Lighting Cost Estimate

   Tasks
   - Develop Signal Cost Estimate
   - Develop Lighting Cost Estimate
6. QC Documentation

   Tasks
   - Perform QC Review
7. Design Acceptance

   Tasks
   - Obtain Signal Design Acceptance
   - Obtain Lighting Design Acceptance

Identify Signal Requirements

- Avoid conflicts by coordinating with other disciplines, including utility, roadway, drainage, signing and striping.

- Identify signal phasing based on the capacity analysis and warrant study.
- Identify the sight distance concerns and coordinate with other disciplines.
- Coordinate ATMS needs with the TOC.
- Ensure the Americans with Disabilities Act (ADA) accessibility requirements are addressed.
- Coordinate power source needs and impacts with the local utilities.

Layout Signal Design

Develop the signal design according to the UDOT Design of Signalized Intersections Manual.

Create Preliminary Signal Plan Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to create preliminary signal plan sheets for review. These sheets are to provide a review of the preliminary signal layout. It is recommend that only the information required for the review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review of all labels, callouts, notes, and information found on the plan sheets is required before distribution.

- Follow the UDOT Plan Sheet Development Standards for general plan sheet requirements for sheet generation, drafting, referencing, and callouts.
- Include the street names.
- Show the preliminary signal layout.
- Call out signal head types.
- Provide all information needed to review the design.

Identify Lighting Requirements

- Determine the lighting type required by UDOT and the local jurisdiction.
- Determine luminaire spacing. Verify illumination through AGI32 lighting software.
- Identify the ROW needs.
- Determine power source needs and impacts with the local utilities.

Layout Lighting Design

Develop the lighting design according to the AASHTO Roadway Lighting Design Guide.

Create Preliminary Lighting Plan Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to create preliminary lighting plan sheets for review. These sheets are to provide a review of the preliminary lighting layout. It is recommend that only the information required for the review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review of all labels, callouts, notes, and information found on the plan sheets is required before distribution.

- Follow the UDOT Plan Sheet Development Standards for general plan sheet requirements for sheet generation, drafting, referencing, and callouts.
- Include the street names.
- Show the lighting layout.
- Provide all information needed to review the design.

Assist PM Develop Cooperative Agreement

Assist the PM in developing a cooperative agreement with the local jurisdiction. Refer to Policy and Procedure 06C-06 for maintenance and power cost responsibilities.

Request Additional ROW (if needed)

Identify the ROW needs and coordinate with the ROW team.

Develop Signal and/or Lighting Estimate

Refer to the R-MOI Estimating section.

- Develop signal bid items and quantities.
  - Use UDOT standard bid items
- Identify State Furnished and Contractor Furnished bid items.
- Identify betterment bid items.
- Develop unit costs for each item.
  - Use appropriate resources for developing unit costs such as PDBS or local contractors
  - Document unit cost development and assumptions
  - Account for project specific factors
- Use lump sum pricing only when appropriate.
  - Consider contractor risk due to unknown quantity
  - Consider difficulty in pricing per unit
  - Consider all materials and labor involved

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Obtain Signal and/or Lighting Design Acceptance

Send the signal and/or lighting designs to the Region Traffic and Safety Engineer for review. Submit to Central Traffic and Safety for review and comment.

3R3 - Complete Signal & Lighting Layout Designs - (H)

Assumptions:

1. Standard interchange lighting will be designed for the SR-7 Exit 5 interchange (exit ramp diverge areas, entrance ramp merge areas, and ramp terminal intersections) only
2. Signals will not be installed at the ramp intersections; installation of signal underground infrastructure (boxes and conduits) to accommodate future signalization will be provided.

Activity: 3S1 - DEVELOP STRUCTURE TSR& SEISMIC DESIGN STRATEGY REPORT

3S1 Develop Structure Type Selection Report (TSR) and Seismic Design Strategy Report

Overview

Determine bridge layout and geometry for new bridge/widening design. Determine treatments for rehabilitations. Finalize the Structure Type Selection Report and develop the Seismic Design Strategy Report (Preliminary), as applicable.

A Structure Type Selection Report is only required for retaining walls when the complexity warrants evaluation of multiple types.

A Structure Type Selection Report is not required for headwalls or overhead sign/VMS structure.

References

- AASHTO Guide Specifications for LRFD Seismic Bridge Design
- AASHTO LRFD Bridge Design Specifications
- Railroad Company Guidelines
  - BNSF-UPRR Guidelines for Railroad Grade Separation Projects
  - UTS Light Rail Design Criteria
  - UTA Commuter Rail Design Criteria
- UDOT ABC Decision Making Process Template
- UDOT Seismic Design Strategy Report Template
- UDOT Standard and Supplemental Drawings
- UDOT Structural Design Criteria Deviation Template
- UDOT Structure Type Selection Report Template
- UDOT Structures Design and Detailing Manual (SDDM)
- UDOT Structures QC/QA Procedures

Deliverables

1. Structure Type Selection Report (TSR)

   Tasks

- Develop Structure Design Criteria
- Develop Structure Cross-Section
- Develop Preliminary Layout and Finalize Type Section Report
- Develop Structure Rehabilitation Strategies and Finalize Type Selection Report
- Coordinate with Railroad Companies (if applicable)
- Develop Preliminary Cost Estimate

2. Seismic Design Strategy Report (Preliminary)

Task

- Develop Seismic Design Strategy Report (Preliminary)

3. Documentation of Quality Procedures

Task

- Prepare Structural Design Criteria Deviation Request (if applicable)

Develop Structure Design Criteria

See the UDOT Structures Design and Detailing Manual for design requirements.

Develop Structure Cross-Section

See the UDOT Structures Design and Detailing Manual for design requirements.

Develop Preliminary Layout and Finalize Type Selection Report

- Refer to the Structure Type Selection Report Template for required content.
- Coordinate with Geotechnical Engineer and Hydraulic Engineer.
- Update the draft Type Selection Report.
- Include advantages and disadvantages of the bridge types evaluated.
- Document decisions and rationale.
- Recommend structure type.
- Include advantages and disadvantages of the wall types evaluated and recommend a wall type, when a Type Selection Report is warranted for retaining walls.
- Do not prepare a Type Selection Report for headwalls.
- Do not prepare a Type Selection Report for overhead sign/VMS structure.

Develop Structure Rehabilitation Strategies and Finalize Type Selection Report

- Refer to the Structure Type Selection Report Template for required content.
- Update the draft Type Selection Report.
- Include advantages and disadvantages of rehabilitation strategies evaluated.
- Document decisions and rationale.
- Recommend rehabilitation strategy.

Coordinate with Railroad Companies (if applicable)

Work with the Region Utility and Railroad Leader to coordinate project details with the railroad companies. Early coordination with the railroad companies is critical.

- Prepare the preliminary layout to show the existing track configuration and the spacing perpendicular to the tracks.
- Discuss requirements with respect to the following items (other items may apply):
  - Vertical and horizontal clearances
  - Corrected track separations and future tracks
  - Structure type
  - Crash walls
  - Fencing and understructure lighting
  - Construction phasing, shoring, soil stabilization, etc.

Develop Preliminary Cost Estimate

- Include preliminary costs for the proposed structure and/or the repairs to the existing structure as applicable.
- Compile initial structures bid items and quantities.
  - Verify bid items match UDOT standard bid items exactly as much as possible
- Develop unit costs for each item.
  - Use appropriate resources for developing unit costs (PDBS, local contractors, etc.)
  - Document unit cost development, assumptions, etc.
  - Account for project specific factors
- Use lump sum pricing only when appropriate.
  - Consider contractor risk due to unknown quantity
  - Consider difficulty in pricing per unit
  - Consider all materials and labor involved

Develop Seismic Design Strategy Report (Preliminary)

- Refer to the Structures Division Seismic Design Strategy Report Template for required content.
- Describe the design strategy for resisting the design seismic event.
- Include descriptions of expected damage, locations of plastic hinging, the redistribution forces, the mobilization of backfills, and the functions of bearings, as appropriate.
- Evaluate the need to retrofit existing structure (if applicable).

Prepare Structural Design Criteria Deviation Request (if applicable)

- Refer to the Structures Division Structural Design Criteria Deviation Request Template for required content.
- Submit for review and approval before beginning design.

3S1 - Develop Structure TSR & Seismic Design Strategy Report - (H)

Tasks Not Used

I. E - No Structure Rehabilitation

I. F - No railroad coordination

Tasks Modified - None.

Tasks Added - None.

Assumptions:

1. TSR and Seismic Design Strategy Report will be developed and submitted for the Southern Hills Drive bridge over SR-7.

Activity: 3S4 - DEVELOP SITUATION & LAYOUT (S&L) FOR RETAINING WALLS

3S4 Develop Situation & Layout (S&L) For Retaining Walls

Overview

Develop the Situation and Layout (S&L) plan sheets for each wall, fully coordinating with the roadway, grading, and geotechnical requirements.

Refer to the UDOT Structures Design and Detailing Manual (SDDM) for plan content and organization.

References

AASHTO Guide Specifications for LRFD Seismic Bridge Design

AASHTO LRFD Bridge Design Specifications

Railroad Company Guidelines

BNSF-UPRR Guidelines for Railroad Grade Separation Projects

UTA Light Rail Design Criteria

UTA Commuter Rail Design Criteria

Structural Design Criteria Deviation Request Template

UDOT Standard Drawings and Standard Specifications

UDOT Structures Design and Detailing Manual (SDDM)

UDOT Structures QC/QA Procedures

Deliverables & Tasks

I. S&L PLAN SHEETS

A. Request Structure Number

1.Submit a structure number request for retaining walls through the Structures Division on the UDOT website.

B. Develop S&L Plan Sheets

1. Develop S&L plan sheets.

Refer to UDOT SDDM

2. Coordinate with the Roadway Engineer and the Geotechnical Engineer.

3. Obtain retaining wall alignment and elevation view from Roadway Engineer for sheet development.

4. Consider the type of wall to be used, the treatment at the top of the wall required (e.g., moment slab, coping, or fence), and its proximity and interaction to adjacent structures and waterways.

C. Provide Constructability Review

1. Verify that the structure can be reasonably constructed and determine a plausible construction sequence.

D. Submit S&L Plan Sheets to Region Utility and Railroad Leader (if applicable)

1. Coordinate with the Region Utility and Railroad Leader.
2. Submit the S&L plan sheets showing the required railroad information.
3. Submit additional information required by the railroad companies.

Refer to the respective railroad company's guidelines for additional submittal content.

II. S&L SHEET GUIDELINES & CHECKLIST FOR A RETAINING WALL

A. Complete S&L Sheet Guidelines and Checklist for a Retaining Wall

1. See the S&L Sheet Guidelines and Checklist for a Retaining Wall for instructions on completing.

III. DOCUMENTATION OF QUALITY PROCEDURES

A. Defined in Chapter 5 of the UDOT SDDM

1. QC cover sheets for all deliverables
2. Form: AUD-QA: Project QA Audit
3. Form: ALT-ATH: Alternate QC/QA Procedures Authorization (if applicable)
4. Form: DEV-APP: Structural Design Criteria Deviation Approval (if applicable)

B. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and the UDOT SDDM before distribution.

Provide the Checker with the applicable cover sheets, a check print of each deliverable and supporting documentation.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload all required documentation of quality procedures into ProjectWise before distribution of the milestone review package.

Refer to the UDOT SDDM, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

C. Prepare Structural Design Criteria Deviation Request (if applicable)

1. Refer to the Structures Division Structural Design Criteria Deviation Request Template for required content.
2. Submit for review and approval before beginning design.

3S4 - Develop Situation & Layout (S&L) for Retaining Walls - (H)

Tasks Not Used

I. D - No railroad coordination.

II. - No S&L sheet guidelines and checklist for a retaining wall.

Tasks Modified - None

Tasks Added - None

Assumptions:

1. S&L's will be developed and submitted for retaining walls required

a. Near Mesa Canyon box culvert
b. At the power pole, north of SR-7
c. Walls around the two abutments for the Southern Hills Drive bridge over SR-7.

2. No Structural Design Criteria Deviation Request is anticipated. There do not appear to be limitations that would necessitate a deviation

Activity: 3S5 - DEVELOP SITUATION & LAYOUT (S&L) FOR BRIDGE

3S5 Develop Situation and Layout (S&L) for Bridge

Overview

Develop the S&L plan sheets to ensure the compatibility between the structures and roadway design.

References

- AASHTO Guide Specifications for LRFD Seismic Bridge Design
- AASHTO LRFD Bridge Design Specifications
- Railroad Company Guidelines
  - BNSF-UPRR Guidelines for Railroad Grade Separation Projects
  - UTS Light Rail Design Criteria
  - UTA Commuter Rail Design Criteria
- UDOT Railroad Notes and Clearances (WS-01)
- UDOT Standard and Supplemental Drawings
- UDOT Structures Design and Detailing Manual (SDDM)
- UDOT Structures QC/QA Procedures

Deliverables

1. S&L Plan Sheets

   Tasks
   - Obtain Draft Hydraulic/Scour Report (if applicable)
   - Request Structure Number
   - Develop S&L Plan Sheets
   - Provide Constructability Review
   - Submit S&L Plan Sheets to Region Utility and Railroad Leader (if applicable)

2. S&L Sheet Guidelines and Checklist for a New Bridge or Widening

   Task
   - Complete S&L Sheet Guidelines and Checklist for a New Bridge or Widening

3. Documentation of Quality Procedures

   Tasks
   - Perform Required Quality Procedures
   - Prepare Structural Design Criteria Deviation Request (if applicable)

Obtain Draft Hydraulic/Scour Report (if applicable)

Obtain draft hydraulic/scour report from the Hydraulics Engineer.

Request Structure Number

Submit a structure number request for a new bridge or a structure drawing number request for a bridge widening through the UDOT Structures Design and Bridge Management website.

Develop S&L Plan Sheets

- Develop S&L plan sheets.
- Submit S&L plan sheets and preliminary structure foundation loads to the Geotechnical Engineer.
- Consider need for scour protection, rip rap, etc.

Provide Constructability Review

Verify that the structure can be reasonably constructed and determine a plausible construction sequence.

Submit S&L Plan Sheets to Region Utility and Railroad Leader (if applicable)

- Coordinate with the Region Utility and Railroad Leader.
- Submit the Situation and Layout (S&L) plan sheets showing the required railroad information.
- Include the project specific Railroad Notes and Clearances sheet in the submittal.
- Submit additional information required by the railroad companies. (Refer to the respective railroad company's guidelines for additional submittal content.)

Complete S&L Sheet Guidelines and Checklist for a New Bridge or Widening

See the S&L Sheet Guidelines and Checklist for a New Bridge or Widening for instructions.

Perform Required Quality Procedures

Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and the UDOT Structures Design and Detailing Manual **before** distribution.

- Provide the Checker with the applicable cover sheets, a check print of each deliverable and supporting documentation.
- Follow the UDOT Structures QC/QA Procedures for checking and auditing.
- Upload all required documentation of quality procedures into ProjectWise before distribution of the milestone review package. Refer to the SDDM, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

Prepare Structural Design Criteria Deviation Request (if applicable)

- Refer to the Structures Division Structural Design Criteria Deviation Request Template for required content.
- Submit for review and approval before beginning design.

3S5 - Develop Situation and Layout (S&L) For Bridge - (H)

Tasks Not Used

I. A - A bridge hydraulics report is not needed

I. E - No railroad coordination

Tasks Modified - None

Tasks Added

1. 3S6 Situation & Layout (S&L) Authorization

Assumptions:

1. Activity Includes 3S6
2. An S&L will be developed and submitted for the Southern Hills Drive bridge over SR-7.

Activity: 3U1 - IDENTIFY POTENTIAL UTILITY CONFLICTS

3U1 Identify Potential Utility Conflicts

Overview

Identify potential utility conflicts through coordination with utility owners and designers. Obtain preliminary relocation costs from utility owners.

References

- Administration Rule R930-7 Utility Accommodation
- UDOT CADD Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Standard Design Drawing 018
- UDOT Utility Coordination Manual of Instruction

Deliverables

1. Preliminary Utility Conflict Matrix/Summary

Tasks

- Evaluate Potential Utility Conflicts
- Coordinate Utility Information Meeting
- Hold Utility Information Meeting

2. Initial Utility Company Cost Estimate(s)

Tasks

- Compile Initial Utility Company Cost Estimate(s)

3. QC Documentation

Tasks

- Perform QC Review

Evaluate Potential Utility Conflicts

Determine all potential utility conflicts and organize in a matrix summary using the current design files.

- Meet with project team designers to discuss potential conflict locations and determine reasonable design modifications to avoid or minimize utility impacts.
- Develop a preliminary utility conflict matrix summary based on design modifications.

Coordinate Utility Information Meeting

- Submit the preliminary utility conflict matrix summary to affected utility companies.
- Submit appropriate design files to affected utility companies for review.
- Schedule a utility owner meeting. Meet on site to discuss potential conflicts and relocations.

Hold Utility Information Meeting

This meeting is to discuss each utility conflict and determine the resolution for each. Send the following to each utility owner before the meeting:

- Utility Information Meeting notification letter
- Utility conflict matrix
- Applicable project design files
- Meeting Agenda (use the following discussion topics as needed)
  - Review the project scope and schedule
  - Discuss all potential conflicts
  - Discuss relocation efforts and schedules
  - Discuss utility outage windows and limitations
  - Discuss partnering opportunities
  - Discuss alternative designs to avoid or limit relocations
  - Discuss locations needing vertical identification
  - Potential Utility Betterment

Develop meeting notes and include all decisions, important discussions, action items, and schedule. Circulate the meeting notes to all attendees to assure all decisions and discussions were recorded correctly.

Compile Initial Utility Company Cost Estimate(s)

Obtain initial utility relocation cost estimates from each impacted utility. Provide cost estimate(s) to the Design Leader for inclusion in the total project cost estimate.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Utility Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package

3U1 - Identify Potential Utility Conflict - (H)

Tasks Not Used:

1. Initial Utility Company Cost Estimates(s)

Tasks Modified:

1. Hold individual Utility Information Meetings as follows:
    a. Dixie Power
    b. St. George Water Services
    c. Combined meeting with additional utility owners discovered during Blue Stakes mapping request

Assumptions:

1. Utility Information Meetings will each be 1.5 hours in duration with 4 staff in attendance
2. Utility Information Meetings will be held via MS Teams or Google Meet

Activity: 3U4 - COMPLETE UTILITY AND RAILROAD DESIGNS

3U4 Complete Utility and Railroad Designs

Overview

Complete utility relocation designs for all utility relocations for which UDOT is responsible. Develop preliminary utility relocation plan sheets and cost estimate. Develop at grade railroad crossing plans and verify Diagnostic Report and railroad company guidelines compliance. (Refer to Structures Discipline Track for grade separation structure design tasks)

References

- Administrative Rule R930-7 Utility Accommodation
- Railroad Company Standards and Specifications
- UDOT CADD Standards

- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Standard and Supplemental Drawings
- UDOT Standard Design Drawing 018
- UDOT Utility Coordination Manual of Instruction
- Utility Owner Standard and Specifications

Deliverables

1. Preliminary Utility Relocation Plan Sheets

   Tasks

   - Coordinate with Project Team Members
   - Complete Utility Relocation Design
   - Develop Preliminary Utility Plan Sheets
   - Coordinate with Utility Owner

2. Grade Separation Structure 30% S&L Submittal Package

   Task

   - Submit Structure 30% S&L Submittal Package to Railroad Companies (if applicable)

3. At-Grade Railroad Crossing Surface and Warning Device Plans

   Tasks

   - Develop At-Grade Railroad Crossing Design
   - Prepare Preliminary At-Grade Railroad Crossing Sheets
   - Submit 100% At-Grade Railroad Crossing Sheets and Forms for Railroad Company Review

4. Utility Relocation/At-Grade Railroad Crossing Cost Estimate

   Task

   - Develop Utility Relocation/At-Grade Railroad Crossing Cost Estimate

5. QC Documentation

   Task

   - Perform QC Review

Coordinate with Project Team Members

Continually coordinate with project team members. Discuss aspects of the model and design with appropriate disciplines to ensure compliance with standards, with other designs, and address fatal flaws. Coordinate and mitigate project design conflicts, impacts, and deficiencies.

Complete Utility Relocation Design

Refer to the utility owner’s standards and specifications to complete the utility relocation design.

- Assist other disciplines evaluate possible design modifications to avoid or minimize utility impacts.
- Conform to all applicable depth of bury, utility separation, clear zone, and ROW accommodation requirements.

- Conform to UDOT Standard and Supplemental Drawings.
- Design horizontal and vertical ties.
- Include utility betterment designs when applicable.
- Coordinate relocation designs with other disciplines.
- Conform to UDOT CADD Standards.

Develop Preliminary Utility Plan Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to develop preliminary utility relocation plan sheets for review. These sheets are to provide a review of the utility relocation design. It is recommended that only the information required for final utility design review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review is required before distribution for all labels, callouts, notes, and information found on the plan sheets.

- For all utility relocation sheets, do the following:
  - Combine with other sheets whenever possible.
  - Follow the UDOT Plan Sheet Development Standards General Plan Sheet Requirements when generating plan sheets, drafting, referencing, and callouts.
  - Follow the UDOT Plan Sheet Development Standards Utility and Utility Relocation Sheet Requirements.
    - § Provide all information needed for review including size, type, and material.
    - § Label all streets and important existing features.
    - § Ensure all existing features are displayed in proper grayscale.
- If more detailed utility relocation sheets are required:
  - Use applicable requirements from UDOT Plan Sheet Development Standards Roadway Plan & Profile Sheet Requirements.
  - Provide all callouts and labels necessary to review the relocation design.

Coordinate with Utility Owner

Coordinate a review of the utility relocation design with the utility owner. Address all review comments and make necessary revisions.

Submit Structure 30% S&L Submittal Package to Railroad Companies (if applicable)

Review for content and submit the Structure 30% S&L submittal package prepared by the Structural Design Engineer to the railroad companies' local representative Refer to the respective railroad company's guidelines for submittal content. Content may include the following:

- Design Plans
- Project Specification and Special Provisions
- Drainage Report
- Shoofly Design (if applicable)
- Construction Phasing Plans

Inform the railroad companies that they will have an opportunity for a final review of the S&L plan sheets with the 100% submittal. However, consensus must be reached on overall geometry at this time. It is important that the railroad companies are kept informed in the earlier

stages to avoid impacts to the project schedule.

Develop At-Grade Railroad Crossing Design

- Develop the proposed at grade crossing including, but not limited to, the following:
  - Warning Device design
  - Grading
  - Pavement section
  - Lane transitions
  - Cut/fill lines
    - § Identify additional ROW impacts
    - § Identify additional utility impacts
  - Maintenance Access
  - Fences

o Pedestrian Access

  - Raised Islands
  - Removals
  - Trails
  - Preliminary Signing
- Evaluate clear zone hazards and appropriate protection devices.
- Conform to Railroad Company standards.
- Conform to UDOT standards.
  - Roadway Manual of Instruction
  - UDOT Standard and Supplemental Drawings
- Calculate quantities

Prepare Preliminary At-Grade Railroad Crossing Plan Sheets

Follow current Railroad Company requirements and standards and UDOT CADD Standards and UDOT Plan Sheet Development Standards to create railroad crossing plan sheets.

- Create all necessary sheets for a railroad crossing review.
- Label all important design features.
- Include utility, ROW, and drainage information.
- Include all Railroad Company required information.

Submit 100% At-Grade Railroad Crossing Sheets and Forms for Railroad Company Review

Follow the current Railroad Company requirements to complete and submit all required forms.

- Prepare all forms and documents the Railroad Company requires for review.
- Submit review plans and forms to the Chief Railroad Engineer.
- Submit plans and forms to the railroad company for review and comments.

- Request the preliminary surface and signal cost estimate form Union Pacific Railroad for their facility modifications.
- Incorporate facility modification requests from UTA or other private owners into the schedule and cost estimate.

Develop Utility Relocation/At-Grade Railroad Crossing Cost Estimate

- Compile utility relocation and railroad crossing bid items and quantities.
  - Use UDOT standard bid items
- Develop unit costs for each item.
  - Use appropriate resources for developing unit costs such as PDBS and local contractors
  - Document unit cost development and assumptions
  - Account for project specific factors
- Use lump sum pricing only when appropriate.
  - Consider contractor risk due to unknown quantity
  - Consider difficulty in pricing per unit
  - Consider all materials and labor involved

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Utility Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

3U4 - Complete Utility & Railroad Designs - (H)

Tasks Not Used:

1. Grade Separation Structure 30% S&L Situation and Layout (S&L) Submittal Package
2. 100% At-Grade Railroad Crossing Surface & Warning Device Plans
3. Utility Relocation/At-Grade Railroad Crossing Cost Estimate

Tasks Modified:

1. Utility Relocation Plan Sheets
   a. Includes coordination with project team members
   b. Includes Preliminary Utility Plans (UT Sheets)
   c. Includes coordination with utility owners
   d. Does not include Complete Utility Relocation Design

Deliverables:

1. Preliminary Utility Plan Sheets (UT Sheets)
2. Utility Conflict Matrix

3. Utility QC Documentation
4. Utility QA Documentation

Activity: 3Y1 - PREPARE/COMPILE PLAN-IN-HAND REVIEW PACKAGE

3Y1 Prepare/Compile Plan-in-Hand Review Package

Overview

Compile Geometry Review comment resolution form, project cost estimate, and all discipline deliverables into one Plan-in-Hand review package.

Resources

- Milestone Review Comment Resolution Form
- Price + Time Bidding (P+T)
- UDOT QC/QA Documentation

Deliverables

1. Geometry Review Comment Resolution Form

   Task

   - Finalize Geometry Review Comment Resolution Form
2. User Costs (for Price + Time Bidding)

   Tasks

   - Determine Traffic Control Restrictions
   - Coordinate with the TMD
   - Finalize User Costs
3. Plan-in-Hand Review Package

   Tasks

   - Review PDC
   - Compile Project Cost Estimate
   - Prepare Plan-in-Hand Review Package
4. QC Documentation

   Task

   - Perform QC Review

Finalize Geometry Review Comment Resolution Form

Coordinate with team members to address and verify all Geometry Review comments. Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Determine Traffic Control Restrictions

Coordinate with the project team to determine the following:

- Construction phasing
  - Schedule
  - Phasing limits
- Unique traffic control or maintenance of traffic issues
- Preliminary MOT design
- Construction limitations

Coordinate User Cost Analysis with the TMD

Coordinate with the Traffic Management Division (TMD) to determine the user costs.

Finalize User Costs

Coordinate, as necessary, with the project team to adjust traffic control, maintenance of traffic, and construction restrictions and methods to reduce user costs and construction related delays. Determine the final estimated user costs.

Review PDC

Review and update the PDC based on comments from the geometry review.

Update Project Cost Estimate

Obtain each discipline's cost estimate and compile them into one document.

Prepare Plan-in-Hand Review Package

Prepare Plan-in-Hand Review Package:

- Geometry Review Comment Resolution Form
- All Preliminary Plan Sheets
- Typical Sections
- Project Cost Estimate
- Project estimate ePM Screen 505

Distribute the package to all meeting attendees and reviewers a minimum of two weeks before the Plan-in-Hand Meeting (3V1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

If Local Government Project

The Local Government Representative is responsible for monitoring the progress of the design activities to ensure that the design process remains on schedule and within budget. Any reduction of project scope or additional funding must be approved by UDOT Project Manager. The Local Government Representative should request frequent status updates from the Design Leader.

3Y1 Prepare/Compile Plan-in-Hand Review Package - (H & MBI)

Assumptions:

1. Project is not digital delivery; CADD Validation task will not be performed

Activity: 3V1 - PLAN-IN-HAND REVIEW MEETING

3V1 Plan-in-Hand Review Meeting

Overview

The Plan-in-Hand review is the review of all major roadway, hydraulic, drainage, ITS, utility, geotechnical, and ROW designs. The meeting should include reviews of available funding, along with design consistency, accuracy, and constructability within the project scope.

References

- Form F1 - Milestone Review Comment Resolution Form
- UDOT QC/QA Documentation

Deliverables

1. Plan-in-Hand Meeting Agenda

   Task
   - Prepare Meeting Agenda
2. Plan-in-Hand Review Package

   Task
   - Distribute Review Package
3. Plan-in-Hand Meeting Notes

   Tasks
   - Hold Meeting
   - Compile Meeting Notes
4. Plan-in-Hand Review Comment Resolution Form

   Task
   - Compile Plan-in-Hand Review Comments and Submit Initial Dispositions and Responses

Prepare Meeting Agenda

Arrange for the location and time of the meeting. Prepare the meeting agenda. Below are suggested agenda items:

- Field visit
- Project Definition Document (PDD)
- Action items from previous milestone review meetings
- Comment resolution form
- Project Design Criteria (PDC)
- Design exceptions, design waivers, and deviations from standards
- Plan sheet responsibilities
- Design conflicts between disciplines
- Constructability issues
- Project phasing and Maintenance-of-Traffic
- Limitations of operations
- Environmental, ROW, Utility,and PI commitments
- Engineer's Estimate
- Risk Register and Mitigation Strategies
- Innovative contracting opportunities such as lane rental, P+T, and incentive/disincentive
- Project schedule, including milestones and Submit for Advertising Date in MS Project
- ROW strategy
- UDOT QC/QA Documentation

Distribute Review Package

Invite all project team members and others as needed. Distribute Plan-in-Hand Review Package (including the completed Geometry Review Comment Resolution Form) and meeting agenda at least **two weeks** before the Plan-in-Hand Review Meeting.

Hold Meeting

Conduct the meeting according to the agenda.

Compile Meeting Notes

Capture all decisions made and create an action item list. Distribute the meeting notes to all meeting invitees

Compile Plan-in-Hand Review Comments and Submit Initial Dispositions and Responses

The Design Leader compiles all reviewer comments into one Plan-in-Hand Review Comment Resolution Form. Each discipline provides an initial disposition and response to comments related to their design and deliverables. Refer to UDOT QC/QA Documentation for more information about completing the Milestone Review Comment Resolution Form.

The Design Leader submits the Plan-in-Hand Review Comment Resolution Form to all reviewers and team members once all comments have an initial disposition and response.

If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes, and distributes them after the meeting.

3V1: Plan-In-Hand Review Meeting - (H & MBI)

Assumptions:

1. Meeting will be held in person with a Teams Meeting option
    a. One 3-hour meeting with (combined in-person and virtual with 4 H and 2 MBI, &1 GC staff attending in person), plus travel.
    b. Includes 8 hours for a constructability review from Alan Preston

Activity: 4A1 - COMPLETE EROSION & SEDIMENT CONTROL PLANS & DOCUMENTS

4A1 Complete Erosion & Sediment Control Plans and Documents

Overview

Develop the project erosion and sediment control design, plans, and summaries. Prepare and assemble erosion and sediment control project documents including plans, special provisions, and Engineer's Estimate in PDBS.

References

- Acceptance and Documentation Guide (A&D)
- Measurement and Payment (M&P)
- Project Development Business System (PDBS)
- UDOT CADD Standards
- UDOT Erosion and Sediment Control Field Guide
- UDOT Erosion and Sediment Control Manual
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Specification Writer's Guide
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications
- UDOT Storm Water Information and Permitting Website

Deliverables

1. Erosion and Sediment Control Plans

    Tasks

    - Design Erosion and Sediment Control Elements
    - Complete Erosion and Sediment Control Plan Sheets
    - Complete Erosion and Sediment Control Detail Sheets
    - Complete Erosion and Sediment Control Summary Sheets

2. Erosion and Sediment Control Cost Estimate

    Tasks

- Finalize Erosion and Sediment Control Cost Estimate
- Enter Erosion and Sediment Control Cost Estimate into PDBS

3. Erosion and Sediment Control Project Documents

Task

- Prepare Erosion and Sediment Project Documents

4. QC Documentation

Task

- Perform QC Review

Design Erosion and Sediment Control Elements

- Design the location of erosion and sediment control elements using UDOT's Erosion and Sediment Control Field Guide to stabilize disturbed soil during construction and to capture and remove sediment from storm water runoff.
- Comply with UPDES requirements.
- Evaluate the erosion and sediment control needs for all construction phases.
- Select temporary erosion and sediment control measures.
- Develop locations for erosion and sediment control best management practices (BMPs).
- Use UDOT standard BMPs as much as possible.
- Coordinate with Region Landscape Architect to determine the need for an Environmental Control Supervisor.
- Determine areas requiring seeding and develop appropriate seeding schedule based on soils, precipitation, and elevation.

Complete Erosion and Sediment Control Plan Sheets

- Complete all erosion and sediment control plans according to UDOT standards.
  - Conform to UDOT CADD Standards
  - Conform to UDOT Plan Sheet Development Standards
    - § General plan sheet requirements
- Maintain CADD standards on each sheet such as line styles shown and cell scaling.
- Include all necessary notes, callouts, and legends.
- Identify and reference standard drawings and details.
- Clearly organize all information.
- Place a legend on each sheet.
- Identify all temporary erosion and sediment control measures.
- Include all necessary permanent stabilization requirements as indicated below and identify locations on erosion and sediment control plans or on other appropriate plans.
  - Topsoil - include depth, limits, and total area
  - Seed - include limits (shown graphically and total area)
  - Mulch - include limits
  - Erosion control blanket - include limits (shown graphically and total area)
  - Rock of fabric-lined ditches/swales - include limits (shown graphically and total area)
- Match all pay item callouts exactly with the cost estimate.

Complete Erosion and Sediment Control Detail Sheets

Develop all non-standard details necessary for construction and detail plan sheets.

- Conform to UDOT Standards
  - UDOT Erosion and Sediment Control Manual
  - UDOT CADD Standards
  - UDOT Erosion and Sediment Control Field Guide
  - UDOT Standard and Supplemental Drawings
- Prepare detail plan sheets in accordance with UDOT Plan Sheet Development Standards.
  - General Plan Sheet Requirements
  - Detail Sheet Requirements
  - Include all necessary notes, callouts, dimensions, and symbols
  - Use identifiable symbols and line styles

Complete Erosion and Sediment Control Summary Sheets

- Prepare summary sheets according to UDOT Plan Sheet Development Standards and Summary Sheet CADD Standards.
  - General Plan Sheet Requirements (Department or Region)
  - Summary Sheet Requirements
- Use UDOT Excel spreadsheets and customize for the project.
  - Include all erosion and sediment control related pay items and necessary non-pay items
  - Include names, alignment designations, stations, offsets, units, and quantities
  - Show enough detail to support calculations
- Use UDOT standard summary plan sheets.
  - Export all summaries from Excel to MicroStation

Finalize Erosion and Sediment Control Cost Estimate

- Update bid items and quantities
- Update unit costs

Enter Erosion and Sediment ControlCost Estimate into PDBS

Prepare Erosion and Sediment Control Documents

- Provide all special provisions required for project construction.
  - General Special Provisions
  - Project Specific Special Provisions
  - Use UDOT Specification Writer’s Guide
  - Include local municipality specifications
- Generate Measurement and Payment (M&P) for all bid items.
  - Develop M&P for all non-standard bid items
  - Use the current M&P

- Include accurate description for all effort and materials required for construction
- M&P pay items must match plan sheet pay items exactly

· Generate Acceptance and Documentation Guide (A&D) for all standard pay items.

- Use the current A&D
- Coordinate with the RE to develop the A&D for non-standard items

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Aesthetics/Landscaping Design QC Checklist **before** distribution.

· Provide the Checker with a check print of each deliverable and supporting documentation.

· Complete all necessary corrections from the QC check.

· Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 4A2 - COMPLETE AESTHETICS, LANDSCAPE & IRRIGATION PLANS & DOCS

4A2 Complete Aesthetics, Landscape & Irrigation Plans & Documents

Overview

Revise design based on Plan-in-Hand review and UDOT Aesthetic Committee (3A1) comments. Complete landscape and irrigation plans and documents. Finalize the aesthetic cost estimates.

References

UDOT Aesthetic Guidelines Manual

AASHTO Construction Stormwater Field Guide

UDOT Standard Drawings and Standard Specifications

Masterworks

UDOT CADD Standards

UDOT Plan Sheet Development Standards

UDOT Digital Delivery Guidelines

UDOT Specification Writer's Guide

UDOT QC/QA Documentation

Deliverables & Tasks

I. LANDSCAPE & IRRIGATION PLAN SHEETS

A. Address Plan-in-Hand Review and UDOT Aesthetic Committee Comments

1. Complete the aesthetic Plan-in-Hand Review Comment Resolution Form.

Make revisions to the design and deliverables in accordance with the responses.

Conduct QC Review and Verification of all comments.

2. Incorporate any UDOT Aesthetic Committee review comments into project plans.

3. Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

B. Complete Plan Sheets

1. Generate the landscape plan sheets following the current UDOT CADD Standards or the UDOT Digital Delivery Website and UDOT Plan Sheet Development Standards.

2. Develop irrigation sheets for the project if applicable.

Combine sheets when appropriate.

3. For all plan sheets:

Conform to UDOT Plan Sheet Development Standards General Plan Sheet Requirements.

Maintain CADD standards on each sheet such as line styles shown correctly and cell scaling.

Provide sheets at appropriate scale to clearly identify sheet symbols.

Include all necessary notes, callouts, and legends.

Identify and reference standard drawings and details.

Identify all proposed and existing facilities.

Clearly organize all information.

Match all pay item callouts exactly with the cost estimate.

Reference appropriate project files.

4. For landscape plan sheets:

Identify surface treatments such as mulch, seeding, and pavement

Clearly label and provide a legend for landscape materials

Include Grading - contours, slopes, and drainage.

Include Planting plan - symbols.

Include Plant legends - symbol, plant identification key, botanical and common name, size, and quantity.

Include Topsoil depths.

Include seed schedule.

5. For irrigation plan sheets:

Clearly label and provide a legend for irrigation components:

NOTE: Irrigation system design and components must be designed and approved by LG.

Water point of connection - water meter, well, or tap and responsibility

Power point of connection - electrical meter or source and responsibility

Stop and waste valve

Backflow preventer

Filter and pressure reducer

Controller

Control valves - include valve number and flow rate

Mainline - include sizing

Laterals - include sizing

Sleeves - include sizing

Heads - include nozzle size and flow rate

Drip zones

Emitters and bubblers - include flow rate

Provide an irrigation legend - symbols, description, and quantity.

C. Complete Detail Sheets

1. Develop all non-standard details necessary for construction and detail plan sheets.

Conform to UDOT Standards

UDOT CADD Standards

AASHTO Construction Stormwater Field Guide

UDOT Standard Drawings and Standard Specifications

Prepare detail plan sheets according to UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website

Conform to General Plan Sheet Requirements.

Conform to Detail Sheet Requirements.

Include all necessary notes, callouts, dimensions, and symbols.

Use identifiable symbols and line styles.

D. Complete Summary Sheets

1. Prepare summary sheets according to UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website and Summary Sheet CADD Standards.

Conform to General Plan Sheet Requirements (Department or Region)

Conform to Summary Sheet Requirements

2. Use UDOT Excel spreadsheets and customize for the project.

Include all roadway/multimodal related pay items and necessary non-pay items

Include names, alignment designations, stations, offsets, units, and quantities

Show enough detail to support calculations

3. Use UDOT standard summary plan sheets.

Export all summaries from Excel to MicroStation

II. LANDSCAPE & IRRIGATION PLAN COST ESTIMATE

A. Finalize Landscape and Irrigation Plan Cost Estimate

1. Update bid items and quantities.

2. Update unit costs.

B. Enter Landscape and Irrigation Plan Cost Estimate into Masterworks

III. LANDSCAPE & IRRIGATION PLAN DOCUMENTS

A. Prepare Landscape and Irrigation Plan Documents

1. Provide all special provisions required for project construction.

General Special Provisions

Project Specific Special Provisions

Use UDOT Specification Writer’s Guide

Include local municipality specifications

2. Generate Measurement and Payment (M&P) for all bid items.

Develop M&P for all non-standard bid items

Use the current M&P

Include accurate description for all effort and materials required for construction

M&P pay items must match plan sheet pay items exactly

IV. QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the Aesthetics/Landscaping Design QC Checklist before distribution.

Provide the Checker with a check print of each deliverable and supporting documentation.

Complete all necessary corrections from the QC checklist.

Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

4A2 - Complete Aesthetics, Landscape & Irrigation Plans & Documents

Assumptions:

1. No Irrigation plans will be included
2. Only sheets for re-seeding will be required

Activity: 4C1 - COMPLETE ITS PLANS & DOCUMENTS

4C1 Complete ITS Plans & Documents

Overview

Complete the ITS plans and project documents and finalize the ITS cost estimate.

References

Masterworks

UDOT ITS Design Manual

UDOT CADD Standards

UDOT Signalized Intersection Design Manual

UDOT Plan Sheet Development Standards

UDOT Digital Delivery Website

UDOT Specification Writer’s Guide

UDOT Standard Drawings and Standard Specifications

UDOT QC/QA Documentation

Deliverables & Tasks

I. ITS PLAN SHEETS

A. Address Plan-in-Hand Review Comments

1. Complete the ITS portions of the Plan-in-Hand Review Comment Resolution Form.

Respond to each ITS related comment.

Make revisions to the design and deliverables according to the responses.

Conduct QC Review and Verification of all comments.

2. See for more information about completing a Milestone Review Comment Resolution Form.

B. Revise ITS Design

1. Complete all ITS designs

Conform to UDOT CADD Standards and UDOT Standard Drawings.

Consult the UDOT ITS Design Manual for design recommendations.

Complete the electrical layout from the power supply

Locate all facilities within the proposed ROW.

Locate all facilities outside the clear zone or provide adequate protection.

Locate all facilities outside the snow plow zone or provide adequate protection.

Provide maintenance access points and infrastructure for all devices.

Obtain device manufacturer's specifications and stay within device performance limits.

Maintain line of sight for all wireless devices.

Coordinate the design with the ITS Project Manager assigned to your Region who will coordinate with the appropriate teams for all ITS design elements.

If Traffic Signal work is included in the project, coordinate this work and associated plans and other documentation with your Region’s Signal Engineer.

C. Complete ITS Plan Sheets

1. Complete all ITS plan sheets according to UDOT and Federal standards.

Conform to UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website

General plan sheet requirements

Maintain UDOT CADD Standards on each sheet such as line styles shown correctly and cell scaling

Conform to design guidelines in the ITS Design Manual

Identify all existing ITS facilities

Call out ITS devices that will remain as “Keep in Service”

Coordinate with the TMD through the ITS Project Manager assigned to your Region all disconnections and clearly state the requirements

Show cut/fill lines for mainline, ramps, and any side streets

Include all necessary notes, callouts, legends, etc.

Call out splice points

Provide general location of ITS devices

Optimize the location of the CCTV camera

Include street names on the mainline and cross streets

Show the electrical layout from the power supply to the power disconnect

Show the communications layout from demarcation to the ITS device

Include note to contact the TMD Fiber Optic Communications Manager to obtain splicing details 30 days before beginning splice work

Identify and reference standard drawings and details correctly

Clearly organize all information

Make all symbols and line styles identifiable

Match pay item callouts exactly with the cost estimate

Indicate and provide mitigation measures for all utility conflicts on both the plan and profile sheets

D. Complete ITS Detail Sheets

1. Complete all details necessary for construction of the project

Conform to UDOT CADD Standards

Prepare detailplan sheets following UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website

General Plan Sheet Requirements

Detail Sheet Requirements

Include all necessary notes, callouts, dimensions, and symbols

Use identifiable symbols and line styles

E. Complete ITS Summary Sheets

1. Prepare summary sheets according to UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website and Summary Sheet CADD Standards

General Plan Sheet Requirements

Summary Sheet Requirements

2. Use UDOT Excel spreadsheets and customize for the project

Include all roadway/multimodal related pay items and necessary non-pay items

Include names, alignment designations, stations, offsets, units, and quantities

Show enough detail to support calculations

3. Use UDOT standard summary plan sheets

Export all summaries from Excel to MicroStation

II. ITS COST ESTIMATE

A. Finalize ITS Cost Estimate

1. Update ITS bid items and quantities

2. Update ITS unit costs (see 3C1)

B. Enter ITS Cost Estimate into Masterworks

III. ITS PROJECT DOCUMENTS

A. Prepare ITS Project Documents

1. Provide all special provisions required for project construction

General Special Provisions

Project Specific Special Provisions

Use UDOT Specification Writer's Guide

2. Use Masterworks to generate Measurement and Payment (M&P) for all bid items.

Develop M&P for all non-standard bid items

Include accurate description for all effort and materials required for construction.

M&P pay items must match plan sheet pay items exactly

IV. QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the ITS Design Checklist before distribution.

Provide Checker with check prints of each deliverable and supporting documentation.

Complete all necessary corrections from the QC checklist.

Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

4C1 - Complete ITS Plans & Documents - (H)

Assumptions:

1. Existing conduit and fiber parallels SR-7 will need to be relocated outside the ramps

Activity: 4E1 - OBTAIN ENVIRONMENTAL DOCUMENT APPROVAL

4E1 Obtain Environmental Document Approval

Overview

Submit completed environmental document to Region Environmental Manager for review and approval.

References

UDOT Environmental Process Manual of Instruction

UDOT Environmental Web Page

NEPA Assignment Program QA/QC Plan

Categorical Exclusion QA Review Checklist

UDOT QC/QA Documentation

Deliverables & Tasks

I. APPROVED ENVIRONMENTAL DOCUMENT

1. Submit Environmental Document for Review and Approval

2. Submit the completed environmental document for review.

Incorporate comments based on reviews from the region environmental staff and resubmit as necessary.

3. Obtain an approved environmental document from the Region Environmental Manager.

II. QA/QC DOCUMENTATION (DOCUMENTED CATEGORICAL EXCLUSIONS ONLY)

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the Environmental Design QC Checklist before distribution.

Complete all necessary corrections from the QA/QC checklist.

Upload all QA/QC documentation into ProjectWise.

2. For Documented Categorical Exclusions, the Region Environmental Manager will perform a QA/QC review per the 327 NEPA Assignment QA/QC Plan and coordinate the QA/QC review and approval with an assigned Environmental Program Manager.

4E1 - Obtain Environmental Document Approval - (H)

Assumptions:

1. Includes tasks 1E1, 2E1, 3E1, 4E1, & 4E2
2. Reevaluation will be in letter format
3. The re-evaluation will be for the SR-7 interchange area, including 500 feet of Southern Hills Drive north and south of the ramp terminal intersections (it excludes any connecting road facilities).
4. The re-evaluation will not address the following resources: historic properties, Section 4(f), Section 6(f), and air quality.
5. Air quality redetermination will not be required.
6. No formal consultation with USFWS will be required.
7. No Public Hearing will be required as part of the reevaluation.
8. Noise balloting is not included in this scope of work.

Tasks Added:

1. Review project scope and previous environmental documentation and commitments. Determine, document, and track how previous commitments will be fulfilled.
2. Coordinate with UDOT Central Environmental and Region 4 Staff to communicate the anticipated project schedule and to develop the re-evaluation study area.
3. Cultural Resources
    a. Obtain fieldwork authorization.
    b. Conduct Class III Inventory only in non-disturbed areas or areas not previously surveyed that fall within the re-evaluation study area limits.
    c. Prepare report
    d. Determine impacts (assume a finding of no historic properties affected: no cultural resources present).
4. Paleontological
    a. Obtain a Paleontological clearance letter from the Utah Geological Survey. Assume there are no known paleontological localities in the APE and that the formations in the APE have a low potential for containing fossil remains.
5. Threatened & Endangered (T&E) Species
    a. Complete a field survey to determine the presence or absence of suitable habitat.
    b. Determine the presence or absence of T&E plant species and document impacts.
    c. Determine the presence or absence of Desert Tortoise.
    d. Assume no species-specific surveys will be required.
    e. Prepare a Biological Assessment update memo.
    f. Analyze potential impacts on migratory birds.
    g. Coordinate with UDOT (UDOT to initiate USFWS informal consultation).
6. Noise Analysis
    a. Prepare a Noise Monitoring Memo to document methodologies, fieldwork, and models that will be used during the analysis
    b. Identify noise-sensitive areas. Conduct field visit to verify land use activities
    c. Perform field noise measurements to obtain existing Leq noise levels at sensitive receptor locations (assume 4 locations)
    d. Build TNM 2.5 model for existing conditions
    e. Determine Design Year Traffic Noise Impacts
    f. Build TNM 2.5 model for the interchange design
    g. Identify noise impacts as a result of the interchange design
    h. Examine & Evaluate Traffic Noise Abatement Measures
    i. Assume two noise walls will be evaluated
    j. Assume that noise walls are feasible and reasonable and that noise wall balloting is required.
    k. Identify Construction Noise Impacts ¿ evaluate the potential for noise impacts due to construction activities
    l. Produce Technical Noise Report to document the noise study results and recommendations
    m. Review the Noise Report with UDOT and make revisions.
7. Hazardous Waste
    a. Review available online databases (EPA EnviroMapper, DEQ Utah Environmental Interactive Map) to determine existing hazardous waste sites within the study area.
8. Wetlands and Water Resources
    a. Prepare a water resources memo. Assume no need to perform a field visit and that all washes present are non-jurisdictional.
9. Coordinate the Preparation of the Re-evaluation Document with UDOT
    a. Document information included about this area in previous environmental studies.

b. Prepare information about the current project and how it aligns with the previous studies. Note where the proposed action and area of impact differ from previous studies.

c. Prepare maps and figures that illustrate any proposed changes.

d. Prepare a re-evaluation.

10. Perform QC review and QA audit

a. Submit the re-evaluation document to UDOT for review and comment.

11. Address comments received and re-submit the re-evaluation document to UDOT for final approval.

Deliverables:

1. Project Commitment List
2. Cultural Resources Report (archaeological)
3. Paleontological Clearance Letter
4. T&E / Wildlife documentation, Biological Assessment update memo
5. Noise Analysis
6. Hazardous Waste Memo
7. Water Resources Memo
8. Re-evaluation document
9. QC/QA documentation

Activity: 4G1 - COMPLETE GEOTECHNICAL DESIGN AND DRAFT REPORT

4G1 Complete Geotechnical Design and Draft Report

Overview

Perform the geotechnical design for settlement, slope stability, liquefaction/lateral spread investigation, foundation, and retaining wall design and develop the draft geotechnical report for peer review.

References

- UDOT Geotechnical Manual of Instruction (G-MOI)
- UDOT Geotechnical QC/QA Procedures

Deliverables

1. Geotechnical Design

   Tasks

   - Prepare Subsurface Exploration Logs for Soil Data Sheets
   - Conduct Geotechnical Analyses
   - Develop Recommendations

2. Draft Geotechnical Report

   Task

   - Prepare Draft Report

3. QC Documentation

Task

- Perform QC Review

4. Independent Report Review

Task

- Distribute for Peer Review

Prepare Subsurface Exploration Logs for Soil Data Sheets

Prepare geotechnical subsurface exploration logs according to the Geotechnical Manual of Instruction. Generate the logs in a graphical format that is compatible with MicroStation. Provide the MicroStation compatible draft logs to the structure draftsman for inclusion in structure plans.

Conduct Geotechnical Analyses

Conduct geotechnical analysis according to the Geotechnical Manual of Instruction. Perform the geotechnical design for settlement, slope stability, liquefaction/lateral spread investigation, foundation, and retaining wall design. Develop an instrumentation plan for construction and long-term monitoring.

Develop Recommendations

Develop foundation and earthwork recommendations. Provide preliminary recommendations to the roadway and structure design engineers as required.

Prepare Draft Report

Prepare the draft the report and include recommendations, design parameters, and data according to the Geotechnical Manual of Instruction.

- Include preliminary project documents in the draft report (see 4G2)
  - Draft soil data sheets
  - Draft special provisions
  - Draft geotechnical detail plan sheets

Perform QC Review

Perform the QC Review following the UDOT Geotechnical QC/QA Procedures and the Geotechnical Manual of Instruction **before** distribution.

- Provide the Checker with a project document cover sheet, check print of each deliverable and supporting documentation
  - Data sheets
  - Calculations
  - Computer program input print outs
  - Draft report
- Follow the UDOT Geotechnical QC/QA Procedures for checking and auditing.

- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Distribute for Peer Review

Provide the draft report to the Chief Geotechnical Engineer, Structures Design Engineer, and peer review committee for review. Provide an Independent Technical Review to be circulated with the draft report.

4G1 - Geotechnical Design and Draft Report - (GC)

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

Reduce and compile field and laboratory data.

Assumptions:

1. Characterize existing embankment and foundation materials and develop geotechnical model(s) for planned geotechnical analysis including:
    a. Seismic characterization and design parameters,
    b. Liquefaction and lateral spread risk assessments,
    c. Foundation resistances of deep foundations, and
    d. Assess construction related geotechnical risks in foundation construction.
2. Develop retaining wall design parameters for up to five fill retaining walls (anticipated to be MSE)
    a. Two walls located near the bridge structure
    b. Two walls near the existing box culvert supporting SR-7 to the east of the interchange (lengths less than 50 feet and fill heights of 5 feet or less)
    c. An additional wall along Southern Hills Drive supporting the roadway to avoid impacts to the power pole (length of 130 feet or less and fill heights on the order of 15 feet).
3. GC to provide P-Y geotechnical design parameters (soil and rock) for reference in lateral foundation design that will be completed by the structural engineer (Horrocks).
4. Horrocks to provide a figure showing limits / depths of structure excavation prior to GC beginning draft geotechnical design report.
5. Seismic design to be completed consistent with the 2nd edition of the LRFD Seismic Bridge Design specifications consistent with the current SDDM.
6. Excludes:
    a. Assessment of rock cuts; no rock excavation planned. If later needed, we would proceed with a contract modification.
7. Deliverables:
    a. Draft geotechnical report will be submitted to the project team for comment and review in PDF format; no hardcopies will be provided.
    b. QC documentation

Activity: 4G2 - DEVELOP GEOTECHNICAL PROJECT DOCUMENTS

4G2 Develop Geotechnical Project Documents

Overview

Finalize geotechnical plan sheets, special provisions, and other documents required for the advertisement of the project.

References

UDOT CADD Standards

UDOT Geotechnical Manual of Instruction (GMOI)

UDOT Structures QC/QA Procedures

UDOT Plan Sheet Development Standards

UDOT Digital Delivery Website

UDOT Specification Writer's Guide

UDOT Standard Drawings and Standard Specifications

Deliverables & Tasks

I. GEOTECHNICAL SOIL DATA SHEETS (IF APPLICABLE)

A. Finalize Geotechnical Soil Data Sheets (if applicable)

1. Coordinate with the structural design engineer (or drafter) to complete the soil data sheets.

2. Sign and seal the soil data sheets after the quality procedures are complete.

II. GEOTECHNICAL SPECIAL PROVISIONS (IF APPLICABLE)

A. Finalize Geotechnical Special Provisions (if applicable)

1. Provide all necessary special provisions and revisions to specifications required for project construction.

2. Follow the UDOT Specification Writer's Guide to complete all necessary specifications.

III. GEOTECHNICAL DETAIL PLAN SHEETS (IF APPLICABLE)

A. Finalize Geotechnical Details for Plan Sheets (if applicable)

1. Finalize geotechnical details to be included in plan sheets if necessary. Coordinate with the structural design engineer (drafter) or the roadway designer.

2. Plan sheets follow the UDOT CADD Standards and UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website.

General Plan Sheet Requirements

Detail Sheet Requirements

Include all necessary notes, callouts, dimensions, symbols, etc.

Make sure all symbols and line styles are identifiable

Sign and seal plan sheets

IV. DOCUMENTATION OF QUALITY PROCEDURES (Defined in Chapter 5 of GMOI)

A. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and UDOT GMOI before distribution.

Provide the Checker with a project document cover sheet, check print, and supporting documentation for the individual deliverables.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload required documentation of quality procedures into ProjectWise.

Refer to UDOT GMOI, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

4G2 - Develop Geotechnical Project Documents - (GC)

Tasks Not Used

1. N/A

Tasks Modified

a. N/A

Tasks Added

N/A

Assumptions:

Soil data test hole logs will be provided in PDF format for Horrocks to incorporate into project drawings.

Check Print soil data sheets will be developed by Horrocks.

GC will electronically sign soil data sheets provided by Horrocks.

Horrocks will develop the soil data sheets with needed borders and information.

Excludes:

Special provision development ¿ if needed we will proceed with a contract modification.

Deliverables:

Geotechnical Soil Data Plan Sheets in PDF format; no hardcopies will be provided.

QC documentation

Activity: 4G3 - FINALIZE GEOTECHNICAL REPORT

4G3 Finalize Geotechnical Report

Overview

Conduct peer review, incorporate review comments, and produce the final geotechnical report.

References

- Form F2: Discipline Review Comment Resolution Form
- UDOT Geotechnical Manual of Instruction (G-MOI)
- UDOT Geotechnical QC/QA Procedures

Deliverables

1. Geotechnical Comment Resolution Form (as needed)

   Tasks

   - Conduct Peer Review Meeting
   - Address Review Comments
   - Revise Geotechnical Report

2. QC Documentation

   Task

   - Perform QC Review

3. Final Geotechnical Report

   Tasks

   - Finalize Report
   - Distribute Final Report

Conduct Peer Review Meeting

Discuss all significant review comments.

Address Review Comments

Address all peer review comments. Complete a Discipline Review Comment Resolution Form as needed to document all peer review comments and responses. Refer to UDOT Geotechnical QC/QA Procedures for more information about completing a Discipline Review Comment Resolution Form. Submit the completed Discipline Review Comment Resolution Form to the Peer Review Committee members for review and acceptance of comment resolutions.

Revise Geotechnical Report

Revise the Geotechnical Report according to review comments.

Perform QC Review

Perform the QC Review following the UDOT Geotechnical QC/QA Procedures and the Geotechnical Manual of Instruction **before** distribution.

- Provide the Checker with a project document cover sheet, check print of each deliverable and supporting documentation.
  - Final Geotechnical Report
  - Revised Soil Data Sheets with Location Maps
  - Revised Special Provisions and Specification Revisions
  - Revised Detail Plan Sheets
  - Revised Calculations and Computer Input Printouts
- Follow the UDOT Geotechnical QC/QA Procedures for checking and auditing.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Finalize Report

Include engineering stamp and signatures.

Distribute Final Geotechnical Report

Distribute the Final Geotechnical Report to the Chief Geotechnical Engineer, Structural Design Engineer, Roadway Design Team, Peer Review Committee, and geotechnical folder on ProjectWise.

4G3 - Finalize Geotechnical Report - (GC)

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. N/A

Assumptions:

1. Address one complete set of review comments from the UDOT project team.
2. Comment resolution meeting to be held virtually or by teleconference.
3. Deliverables:
    a. Final Geotechnical report and associated QC documentation prepared by licensed professionals in PDF format; no hardcopies will be provided.
    b. QC documentation

Activity: 4P1 - REVISE/IMPLEMENT PUBLIC INVOLVEMENT PLAN

4P1 Revise/Implement Public Involvement Plan

Overview

Enhance or implement the project's PI plan to prepare for design based on the project needs. Activities during this phase set the stage for efficient and effective public outreach.

References

Public Involvement Resources and Templates

UDOT Project Outreach Planner (POP)

UDOT Team Building Guide

UDOT QC/QA Documentation

UDOT Public Participation Plan

Deliverables & Tasks

I. REVISED PI PLAN

A. Update POP and PI Plan

1. Working closely with the Region Communications Manager, update the project POP and project PI plan.

2. Coordinate with the Project Manager, Design Lead, Right-of-Way Lead, and Region Utility and Railroad Leader to determine the anticipated level of impact to the stakeholders (e.g. traffic control, property impacts, utility stakeholders, key project milestones).

3. Update the following elements as needed based on the revised scope:

Project type

Design target dates

Design contacts

Brief project description including:

An overview of other projects in the area

Milestones

Any commitments made from previous project phases

Design elements of considerations that could be

influenced by PI.

Sidewalks, Driveway locations, Crosswalks, etc.

Communication plan, include the following at a minimum

Background, challenges and goal

Key messages

Internal communications plan

Public Notification & Participation Plan, focusing on Title VI requirements

How comments will be collected and addressed

Address other communication needs

A list and schedule for PI activities (see above for details)

A list of group and individual project stakeholders

B. Update Media Outreach Plan

1. Keep in mind that all media and social media outreach is under the direction of, and coordinated with, the Region Communications Manager.

2. Update media outlets and primary contacts, including non-English speaking news outlets.

3. Revise the level of media outreach required.

Review need for press releases

Review need to purchase advertising

C. Draft and Distribute Press Release (as needed)

1. Keep in mind that all media and social media outreach is under the direction of, and coordinated with, the Region Communications Manager.

2. Assist with creating and distributing press release information to local and regional media, including non-English-speaking media..

Draft the press release that notifies the public of the start of the project and provides project team contact information as needed.

Have press releases translated into different languages, as needed.

Distribute to the Region Communications Manager or the UDOT Communications office to be distributed to publications.

3. Identify local and regional print, television, and radio contacts, including non-English-speaking media, for project information distribution.

D. Update Stakeholders List

1. Update the stakeholders list based on new information.

Coordinate with the ROW Design team to determine if any stakeholders have changed.

Coordinate with the Design Leader to determine if any stakeholders are to be eliminated or added to the list based on design updates.

Identify underserved populations and languages and make sure they are included in the stakeholder databases.

Identify key stakeholders.

Update stakeholder comments and concerns.

E. Update PI Activities Schedule

1. Update the PI activities schedule based on decisions and updates to the project design:

Update the list of tasks for the project based on the revised scope of work.

Update/identify target groups for each task.

Update/determine the purpose/goal of each task.

Update/determine the completion date/time frame of each task.

Update the level of stakeholder involvement.

Make sure the region Communications Manager is updated on all of the above.

F. Develop Project Identity and Branding

1. Under the direction of the region Communications Manager, develop project identity and branding according to UDOT's latest standards and guidelines based on POP level.

2. Verify all information is correct before production.

Develop a project logo

Develop project identity templates

Develop project business/contact cards

Develop other outreach and branding materials such as door hangers, fact sheets, magnets, or postcards

Develop materials in as many different languages as is deemed necessary through stakeholder identification.

Develop materials for the visually impaired.

G. Develop Project Website and/or Summary Page

1. Under the direction of the region Communications Manager, develop a project website that is ADA compliant and link to the appropriate web pages and servers.

2. Send regular updates to UDOT personnel (affected RCM(s) and Central Communications) if no website is required.

H. Develop Stakeholder Committee (if needed)

1. Include region Communications Manager in discussions with PM to determine whether some type of stakeholder committee would be appropriate for the project.

Determine potential members, with a focus on diversity, equity and inclusion.

Ensure inclusion of associated specifications within the design plan set.

Develop a plan for meetings.

Invite members and aid in establishing their roles, including voting for any committee leadership.

I. Develop and Distribute Project Outreach Materials

1. Develop all project outreach materials in accordance with UDOT's latest style guide and standards.

Develop and hand out information sheets to stakeholders in as many different languages as is deemed appropriate through stakeholder identification.

Develop materials for the visually impaired.

Develop and send electronic news updates to news agencies such as local papers or special publications.

Develop and mail newsletters to stakeholders.

Verify all materials and messages are consistent with each other.

Verify the design is the latest version if the project design is used.

J. Attend Public Activities and Meetings to Provide Project Information

1. Prepare and present project information to city councils, chambers of commerce, and neighborhood meetings.

K. Communicate with Stakeholders

1.Constant communication with stakeholders is necessary for a successful project.

Respond to and document stakeholder comments.

Follow up on commitments made to the stakeholders; document follow up actions.

Provide updates for project milestones to interested stakeholders/general public.

Hold one-on-one meetings with stakeholders, as needed.

Keep the region Communications Manager up-to-date with stakeholder communications and comments.

II. PI TRANSITION HANDOFF PACKAGE (PS&E STAGE ONLY)

A. Compile PI Transition Handoff Package

1. If the PI team will change from design phase to construction phase, a smooth transition is crucial to maintaining the reputation and relationships cultivated between stakeholders and UDOT.

2. Compile all developed PI items, tools, and information to be handed over to the construction PI personnel.

3. Prepare the package so that the construction PI personnel will understand the PI decisions, communications, and work done during the design process.

4. Include the following:

List of PI contacts for utilities

Alllocal government contacts that may be performing

work in the area

Stakeholder contact list, including identification of underserved populations and Limited English Proficiency (LEP) needs.

Final Design Phase PI Report

Applicable ROW records

MOT plans

III. QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the Public Involvement QC Checklist before distribution.

Provide the Checker with a check print of each deliverable and supporting documentation.

Complete all necessary corrections from the QC checklist.

Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

4P1 - Implement Public Involvement Plan -- (H)

Tasks Not Used

1. Update PI Plan
2. Update Media Outreach Plan
3. Draft & Distribute Press Release
4. Update Stakeholders List
5. Update PI Activities
6. Develop Project Identity and Branding
7. Develop Project Website
8. Develop Stakeholders Committee
9. Communicate with Stakeholders
10. PI Transition Handoff Package

Tasks Modified

1. Develop and Distribute Project Outreach Materials
    a. Prepare flyers for public open house
2. Prepare for and attend one (1) Public Meeting to Provide Project Information
    a. Prepare materials for and attend public open house

Assumptions:

1. One in-person 2-hour meeting with 3 Horrocks staff members to attend, and travel time
2. Meeting will be held near project location
3. Mailers will be delivered to nearby residents and businesses

Deliverables:

1. Flyers
2. Public Meeting
    a. Event plan
    b. Content package
    c. Presentation/boards
    d. Scroll plots
    e. FAQ sheet
    f. Handouts
    g. Sign-in sheets
    h. Comment forms
    i. Name tags
    j. Directional signage
    k. Meeting report

Activity: 4Q1 - COMPLETE DRAINAGE PLAN SHEETS & DOCUMENTS

4Q1 Complete Drainage Plan Sheets and Documents

Overview

Revise the drainage design based on the plan-in-hand review. Complete drainage plan set and documents. Finalize the drainage report.

References

- Acceptance and Documentation Guide (A&D)
- Measurement and Payment (M&P)
- UDOT CADD Standards
- UDOT Drainage Manual of Instruction
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Specification Writer's Guide
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications

Deliverables

1. Drainage Plan Sheets

   Tasks
   - Address Plan-in-Hand Review Comments
   - Revise Drainage Design
   - Complete Drainage Plan and Profile Sheets
   - Complete Drainage Detail Sheets
   - Complete Drainage Summary Sheets

2. Drainage Cost Estimate

   Tasks
   - Finalize Drainage Cost Estimate
   - Enter Drainage Cost Estimate into PDBS

3. Drainage Project Documents

   Task
   - Complete Drainage Project Documents

4. Drainage Report

   Task
   - Complete Drainage Report

5. QC Documentation

   Task
   - Perform QC Review

Address Plan-in-Hand Review Comments

Complete the drainage portions of the Plan-in-Hand Review Comment Resolution Form.

- Respond to each drainage related comment.
- Make revisions to the design and deliverables in accordance with the responses.
- Conduct QC Review and Verification of all comments.

See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Revise Drainage Design

Based on review comments and coordination with other disciplines, revise the drainage design as needed.

Complete Drainage Plan and Profile Sheets

Complete all drainage plan and profile sheets according to UDOT and Federal standards.

- Conform to UDOT Plan Sheet Development Standards.
  - General plan sheet requirements.
- Maintain CADD standards on each sheet such as line styles shown correctly and cell scaling.
- Include all necessary notes, callouts, and legends.
  - Identify all existing drainage facilities
    - § Existing water features ¿ river, stream, creek, lake, canals, ditches, and pipes
    - § Call out all protect-in-place existing facilities
  - Identify all proposed drainage facilities
    - § Provide drainage structure grate/rim elevations
    - § Provide station and offset information necessary for construction
    - § Identify and number all pipes, culverts, and inlets
    - § Identify all proposed conveyance methods
    - § Identify all slopes
    - § Call out all sizes or cross sections
    - § Design flows and velocities
    - § Hydraulic grade line
    - § Inflow and outflow elevations
    - § Energy dissipation locations and methods
    - § Vertical profiles for each conveyance method
      - Profiles follow the individual alignment (not the roadway)
  - Identify and reference standard drawings and details correctly
  - Clearly organize all information
  - Make sure all symbols and line styles used are identifiable
  - Make sure pay item callouts match the cost estimate exactly
  - Indicate all utility conflicts on both the plan and profile

Complete Drainage Detail Sheets

- Complete all details necessary for construction of the project.
  - Conform to UDOT Standards
- Prepare detail plan sheets.
  - General Plan Sheet Requirements.

- Detail Sheet Requirements
- Include all necessary notes, callouts, dimensions, and symbols
- Use identifiable symbols and line styles

Complete Drainage Summary Sheets

- Prepare summary sheets according to UDOT Plan Sheet Development Standards and Summary Sheet CADD Standards.
  - General Plan Sheet Requirements (Department or Region)
  - Summary Sheet Requirements
- Use UDOT Excel spreadsheets and customize for the project
  - Include all roadway related pay items and necessary non-pay items
  - Include names, alignment designations, stations, offsets, units, and quantities
  - Show enough detail to support calculations
- Use UDOT standard summary plan sheets.
  - Export all summaries from Excel to Microstation

Finalize Drainage Cost Estimate

- Update drainage bid items and quantities.
- Update drainage unit costs (see 2Q1).

Enter Drainage Cost Estimate into PDBS

Complete Drainage Project Documents

- Provide all special provisions required for project construction.
  - General Special Provisions
  - Project Specific Special Provisions
  - Use UDOT Specification Writer's Guide.
- Use PDBS to generate M&P for all bid items.
  - Develop M&P for all non-standard bid items
  - Use the current M&P
  - Include accurate description for all effort and materials required for construction
  - M&P pay items must match plan sheet pay items exactly
- Use PDBS to generate A&D for all standard pay items.
  - Use the current A&D
  - Coordinate with the RE to develop A&D for non-standard items

Complete Drainage Report

Complete Drainage report and include necessary drainage elements and data for the project.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Drainage Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

4Q1 - Complete Drainage Plan Sheets & Documents - (MBI)

Tasks Not Used ¿ None

Tasks Modified ¿ None

Tasks Added - None

Assumptions:

1. Includes Tasks 4A1
2. Tasks in 4Q1 are only applicable to drainage features impacted by the project per the assumptions and analysis in Activity 2Q1.

Activity: 4R1 - COMPLETE ROADWAY PLANS & DOCUMENTS

4R1 Complete Roadway Plans and Documents

Overview

Following UDOT Plan Sheet Development Standards, complete the roadway plan and profile sheets and create roadway plan summaries, details, and additional plan sheets. Prepare and assemble roadway project documents. Finalize roadway cost estimate.

References

- AASHTO, A Policy on Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- Acceptance and Documentation Guide (A&D)
- Measurement and Payment (M&P)
- NATCO, Urban Street Design Guide
- Project Development Business System (PDBS)
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Specification Writer’s Guide
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications

Deliverables

1. Roadway Plan and Profile Sheets

   Tasks

   - Address Plan-in-Hand Review Comments
   - Finalize Roadway Design
   - Complete Roadway Plan and Profile Sheets
   - Complete Typical Section Sheets
   - Complete Roadway Detail Sheets
   - Complete Grading Plan Sheets
   - Complete Roadway Summary Sheets

2. Roadway Cost Estimate

   Tasks

   - Finalize Roadway Cost Estimate
   - Enter Roadway Cost Estimate into PDBS

3. Roadway Project Documents

   Task

   - Develop Roadway Project Documents

4. QC Documentation

   Task

   - Perform QC Review

Address Plan-in-Hand Review Comments

Complete the roadway portions of the Plan-in-Hand Review Comment Resolution Form.

- Respond to each roadway related comment.
- Make revisions to the design and deliverables in accordance with the responses.
- Conduct QC Review and Verification of all comments.

See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Finalize Roadway Design

Finalize the roadway design based on review comments and coordination with team members. Refer to 3R1 as needed.

Complete Roadway Plan and Profile Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to complete the roadway plan and profile sheets.

- Do the following for all plans sheets:
  - Follow the UDOT Plan Sheet Development Standards for General Plan Sheet. Requirements for generating plan sheets, drafting, referencing, and callouts.

- Provide all necessary information.

- Do the following for roadway plan sheets:
  - Revise/update information labeled in previous review submittals as necessary.
  - Follow the UDOT Plan Sheet Development Standards for Roadway Plan Sheet Requirements.
  - Include all quantities and start/end stations.
  - Verify that the callouts are correctly placed and labeled.
- For roadway profile sheets, do the following:
  - Revise/update information as needed.
  - Follow the UDOT Plan Sheet Development Standards for Roadway Profile Sheet Requirements.
    - § Superelevation
    - § Label transition point station and rate.
    - § Show and label the existing ground.

Complete Typical Section Sheets

Finalize all typical sections and complete the plan sheets. Revise typical sections as needed based on review comments and roadway design revisions.

Complete Roadway Detail Sheets

- Complete all details necessary for construction of the project.
  - Conform to UDOT Standards.
- Prepare detail sheets.
  - General Plan Sheet Requirements
  - Detail Sheet Requirements
  - Include all necessary notes, callouts, dimensions, and symbols
  - Use identifiable symbols and line styles.

Complete Grading Plan Sheets

- Complete grading design necessary for construction of the project.
  - Conform to UDOT Standards.
- Prepare grading plan sheets.
  - General Plan Sheet Requirements
  - Grading Sheet Requirements
  - Include all necessary notes, callouts, dimensions, and symbols
  - Use identifiable symbols and line styles.

Complete Roadway Summary Sheets

- Prepare summary sheets according to UDOT Plan Sheet Development Standards and Summary Sheet CADD Standards.
  - General Plan Sheet Requirements (Department or Region).
  - Summary Sheet Requirements

- Use UDOT Excel spreadsheets and customize for the project.
  - Include all roadway related pay items and necessary non-pay items.
  - Include names, alignment designations, stations, offsets, units, and quantities.
  - Show enough detail to support calculations.
- Use UDOT standard summary plan sheets.
  - Export all summaries from Excel to MicroStation.

Finalize Roadway Cost Estimate

- Update roadway bid items and quantities.
- Update roadway unit prices (see 1R1).

Enter Roadway Cost Estimate into PDBS

Develop Roadway Project Documents

- Provide all special provisions required for project construction.
  - General Special Provisions.
  - Project Specific Special Provisions.
  - Use UDOT Specification Writer's Guide.
- Generate M&P for all bid items.
  - Develop M&P for all non-standard bid items.
  - Use the current M&P.
  - Include accurate description for all effort and materials required for construction.
  - M&P pay items must match plan sheet pay items exactly.
- Generate A&D for all standard pay items.
  - Use the current A&D.
  - Coordinate with the RE to develop A&D for non-standard items.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

4R1 - Complete Roadway Plans and Documents - (MBI)

Tasks Not Used ¿ None

Tasks Modified ¿ None

Tasks Added - None

Activity: 4R2 - COMPLETE SIGNING & STRIPING PLANS & DOCUMENTS

4R2 Complete Signing and Striping Plans and Documents

Overview

Following UDOT CADD and Plan Sheet Standards, finalize the signing and striping plan set and create summary sheets. Finalize the Maintenance-of-Traffic (MOT) design and plans. Prepare and assemble the signing, striping, and MOT project documents, including measurement and payment, special provisions, A&D, and final cost estimate.

References

- AASHTO, A Policy on Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- Acceptance and Documentation Guide (A&D)
- Manual on Uniform Traffic Control Devices (MUTCD)
- Measurement and Payment (M&P)
- NATCO, Urban Street Design Guide
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Specification Writer's Guide
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications

Deliverables

1. Signing and Striping Plan Sheets

   Tasks

   - Address Plan-in-Hand Review Comments
   - Design Overhead Sign Layout (if necessary)
   - Finalize Signing and Striping Design
   - Complete Signing and Striping Plan Sheets
   - Complete Signing and Striping Detail Sheets
   - Complete Signing and Striping Summary Sheets

2. MOT Plan Sheets

   Tasks

   - Finalize MOT Design
   - Complete MOT Plan Sheets

3. Signing, Striping, and MOT Cost Estimate

   Tasks

   - Finalize Signing, Striping, and MOT Cost Estimate
   - Enter Signing, Striping, and MOT Cost Estimate into PDBS

4. Signing, Striping, and MOT Project Documents

Task

- Develop Signing, Striping, and MOT Project Documents

5. QC Documentation

Task

- Perform QC Review

6. Overhead Sign Approval

Task

- Obtain Overhead Sign Approval

Address Plan-in-Hand Review Comments

Complete the signing and striping portions of the Plan-in-Hand Review Comment Resolution Form.

- Respond to each signing and striping related comment.
- Make revisions to the design and deliverables according to the responses.
- Conduct QC Review and Verification of all comments.

See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Design Overhead Sign Layout (if necessary)

- Layout the sign message.
- Determine the lighting requirements.
- Submit the sign layout to Central Traffic and Safety Division for approval.
- Coordinate with the Central Structures for sign structure design.
- Finalize electrical power needs for lighting and overhead signs.

Finalize Signing and Striping Design

Finalize the signing and striping design based on review comments and coordination with team members. Refer to 3R3 as needed.

Complete Signing and Striping Plan Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to finalize the plan sheets.

- Combine signing and striping plan sheets when possible.
- Update/revise all labels for items labeled in 3R2.
- Do the following for **str**iping plan sheets:
  - Follow the Striping Sheet Requirements
  - Callout all items necessary to construct
    - Lane widths
    - Taper locations

        - § Taper widths
        - § Striping types and sizes
        - § Beginning and ending of all striping
- Do the following for **signin**g plan sheets:
    - o Follow the Signing Sheet Requirements
    - o Callout all items necessary to construct
        - § Callout existing sign removals and relocations
    - o For each proposed sign
        - § Pay item description
        - § MUTCD code
        - § Station and offset
        - § Reference number
- Include all notes, legends, and title block information.
- Verify that the callouts are correctly placed and labeled.

Complete Signing and Striping Detail Sheets

- Complete all details necessary to construct signing and striping design.
    - o Conform to UDOT Standards
    - o Include all overhead sign details
- Prepare detail sheets.
    - o General Plan Sheet Requirements
    - o Detail Sheet Requirements
    - o Include all necessary notes, callouts, dimensions, symbols, etc.
    - o Use identifiable symbols and line styles

Complete Signing and Striping Summary Sheets

- Prepare summary sheets in accordance with UDOT Plan Sheet Development Standards
    - o General Plan Sheet Requirements
    - o Summary Sheet Requirements
- Use UDOT Excel spreadsheets and customize for the project.
    - o Include all roadway related pay items and necessary non-pay items.
    - o Include names, alignment designations, stations, offsets, units, and quantities.
    - o Show enough detail to support calculations.
- Use UDOT standard summary plan sheets.
    - o Export all summaries from Excel to MicroStation.

Finalize MOT Design

Finalize the MOT design based on review comments and coordination with team members.

- Refer to 3R2 tasks as needed.

- Determine the detour signs, warning signs, and VMS required for MOT.
- Conform to all design standards including the MUTCD, R-MOI, and UDOT Plan Sheet Development Standards ¿ MOT Sheet Requirements.

Complete MOT Plan Sheets

- Follow the UDOT Plan Sheet Development Standards.
  - General Plan Sheet Requirements
  - MOT Sheet Requirements
- Callout all bid items.
- Include all proposed MOT sign layouts.
- Include all necessary notes.

Finalize Signing, Striping, and MOT Cost Estimate

- Update signing, striping, and MOT bid items and quantities.
- Update the signing, striping, and MOT unit prices.

Enter Signing, Striping, and MOT Cost Estimate into PDBS

Develop Signing, Striping, and MOT Project Documents

- Provide all special provisions required for project construction.
  - General Special Provisions
  - Project Specific Special Provisions
  - Use UDOT Specification Writer’s Guide.
- Generate M&P for all bid items.
  - Develop M&P for all non-standard bid items.
  - Use the current M&P.
  - Include accurate description for all effort and materials required for construction.
  - M&P pay items must match plan sheet pay items exactly.
- Generate A&D for all standard pay items.
  - Use the current A&D.
  - Coordinate with the RE to develop A&D for non-standard items.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Obtain Overhead Sign Approval

Submit overhead sign layout to Central Traffic and Safety for approval. Make any revisions required and obtain final approval.

4R2 - Complete Signing & Striping Plans & Documents - (MBI)

Assumptions:

1. No Overhead sign/ structure will be required

Tasks not used

B. Design Overhead Sign Layout

Tasks modified

N/A

Tasks added

N/A

Activity: 4R3 - COMPLETE SIGNAL & LIGHTING PLANS & DOCUMENTS

4R3 Complete Signal and Lighting Plans and Documents

Overview

Following UDOT CADD Standards and UDOT Plan Sheet Development Standards and using templates found on the UDOT Signal and Lighting Design website, complete the signal and lighting plan sheets.

References

- AASHTO Roadway Lighting Design Guide
- Acceptance and Documentation Guide (A&D)
- Manual on Uniform Traffic Control Devices (MUTCD)
- Measurement and Payment (M&P)
- Signal and Lighting Design Files
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Signalized Intersection Design Guidelines
- UDOT Specification Writer’s Guide
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications

Deliverables

1. Signal Plan Sheets

Tasks

- Address Plan-in-Hand Review Comments
- Finalize Signal Layout Design
- Complete Signal Plan Sheets
- Complete Signal Circuit Design and Plan Sheets
- Complete Signal Schedule Sheets

2. Lighting Plan Sheets

Tasks

- Finalize Lighting Layout Design
- Complete Lighting Plan Sheets
- Complete Lighting Detail Sheets
- Complete Lighting Schedule Sheets

3. Signal and Lighting Cost Estimate

Tasks

- Finalize Signal and/or Lighting Cost Estimate
- Enter Signal and/or Lighting Estimate into PDBS

4. Signal and Lighting Project Documents

Task

- Develop Signal and/or Lighting Project Documents

5. QC Documentation

Task

- Perform QC Review

6. Signal and Lighting Design Approval

Task

- Obtain Signal and/or Lighting Design Approval

Address Plan-in-Hand Review Comments

Complete the signal and lighting portions of the Plan-in-Hand Review Comment Resolution Form.

- Respond to each signal and lighting related comment.
- Make revisions to the design and deliverables in accordance with the responses.
- Conduct QC Review and Verification of all comments.

Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Finalize Signal Layout Design

Finalize the signal layout design based on review comments and coordination with team members. Conform to the UDOT Signalized Intersection Design Guidelines. Refer to 3R3 tasks as needed.

Complete Signal Plan Sheets

Follow the current UDOT Signalized Intersection Design Guidelines and UDOT Plan Sheet Development Standards to complete the plan sheets.

- Callout items necessary for construction.
- Include proposed signs.
- Include pole schedule, signal signs, signal head types and placement.
- Include all callouts, labels, and notes necessary to construct the signal design.

Complete Signal Circuit Design and Plan Sheets

Follow the current UDOT Signalized Intersection Design Guidelines to complete the signal circuit designs and plan sheets.

- Develop circuit designs necessary for construction of the project.
  - Detection Plans
  - Circuit Diagrams
    - Signal Circuits
    - Push Button Circuits
    - Lighting Circuits
- Prepare circuit design plan sheets.
  - General Plan Sheet Requirements
  - Detail Sheet Requirements
  - Identify conduits, cables, schedules, etc.
  - Identify locations, alignments, etc.
  - Include all necessary notes, callouts, dimensions, and symbols
  - Use identifiable symbols and line styles

Complete Signal Schedule Sheets

- Use UDOT Excel spreadsheets and customize for the project.
- Use the Signal and Lighting Design File to develop the Signal Schedule Sheets.
  - General Plan Sheet Requirements
  - Signal Schedule Sheet Requirements
- Include all bid items, units, and quantities.
- Include names, alignment designations, stations, and offsets.
- Export all schedules from Excel to MicroStation.

Finalize Lighting Layout Design

Finalize the lighting layout design based on review comments and coordination with team members. Coordinate with the signal design. Refer to 3R3 asneeded.

Complete Lighting Plan Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to finalize the lighting plan sheets.

- Follow the UDOT Plan Sheet Development Standards General Plan Sheet Requirements.
- Callout all bid items.
- Include all notes necessary to construct the lighting design.

Complete Lighting Detail Sheets

Conform to UDOT Standards to complete the lighting details and plan sheets.

- Develop details necessary for construction of the project.
- Prepare detail plan sheets.
    - General Plan Sheet Requirements
    - Detail Sheet Requirements
    - Include all necessary notes, callouts, dimensions, and symbols
    - Make sure all symbols and line styles are identifiable

Complete Lighting Schedule Sheets

- Use UDOT Excel spreadsheets and customize for the project (Signal and Lighting Design Files).
- Prepare schedule sheets in accordance with UDOT Plan Sheet Development Standards.
    - General Plan Sheet Requirements
    - Summary Sheet Requirements
- Include all bid items, units, and quantities.
- Include names, alignment designations, stations, and offsets.
- Export all schedules from Excel to MicroStation.

Finalize Signing and/or Lighting Cost Estimate

- Update signal and lighting bid items and quantities.
- Complete the state furnished materials request form.
- Update signal and lighting unit prices.

Enter Signal and/or Lighting Cost Estimate into PDBS

Develop Signal and/or Lighting Project Documents

- Provide all special provisions required for project construction.
    - General Special Provisions
    - Project Specific Special Provisions
    - Use UDOT Specification Writer’s Guide.
- Generate M&P for all bid items.
    - Develop M&P for all non-standard bid items.
    - Use the current M&P.

- Include accurate description for all effort and materials required for construction.
- M&P pay items must match plan sheet pay items exactly.

· Generate A&D for all standard pay items.

- Use the current A&D.
- Coordinate with the RE to develop A&D for non-standard items.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

· Provide the Checker with a check print of each deliverable and supporting documentation.

· Complete all necessary corrections from the QC check.

· Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Obtain Signal and/or Lighting Design Approval

Submitsignal and lighting design to Traffic Operations Center for approval. Make any revisions required and obtain final approval.

4R3 - Complete Signal & Lighting Plans & Documents - (H)

Assumptions:

1. Includes Lighting Design for Interchange SR-7 & Southern Hills Drive.
2. No complete signal design included, only underground conduit and junction boxes for future signals

Activity: 4S3 - DESIGN & DETAIL RETAINING WALLS

4S3 Design & Detail Retaining Walls

Overview

Design, detail, and check the retaining walls based on the approved S&Ls and the structural design criteria. Incorporate design requirements and the preliminary information from the draft geotechnical report and/or the hydraulic report.

References

AASHTO LRFD Bridge Design Specifications

Railroad Company Guidelines

BNSF-UPRR Guidelines for Railroad Grade Separation Projects

UTA Light Rail Design Criteria

UTA Commuter Rail Design Criteria

Structural Design Criteria Deviation Request Template

UDOT Standard Drawings and Standard Specifications

UDOT Structures Design and Detailing Manual (SDDM)

UDOT Structures QC/QA Procedures

Deliverables & Tasks

I. WALL DESIGN CALCULATIONS

A. Coordinate with Roadway and Geotechnical Engineers

1. Coordinate details with the roadway and geotechnical engineers.

B. Design Wall

1. See the UDOT SDDM for design requirements.

II. WALL PLANS

A. Develop Wall Plans

1. Based on approved S&L, roadway profiles, and the geotechnical report, progress development of the wall plans.

2. Consider the treatments required at the top of the wall, including moment slabs, fences, and coping as well as tying the wall into an adjacent structure.

3. Conform to the UDOT SDDM for developing and completing structure plan sheets.

III. S&L SHEET GUIDELINES AND CHECKLIST FOR A RETAINING WALL

A. Complete S&L Sheet Guidelines and Checklist for a Retaining Wall

1. Update the S&L checklist from Plan-in-Hand (Stage 3).

See the S&L Sheet Guidelines and Checklist for a Retaining Wall for instructions.

IV. SUBMIT DOCUMENTS FOR RAILROAD COMPANY REVIEW

A. Submit Documents for Railroad Company Review

1. Coordinate with the Region Utility and Railroad Leader.

2. Prepare and submit to the Region Utility and Railroad Leader the 60% Railroad Company Submittal Package for structures supporting the Railroad.

Refer to the respective railroad company’s guidelines for submittal content.

Content may include the following items:

60% design plans.

60% design calculations.

Special provisions.

Geotechnical report.

Additional information required by the railroad companies.

V. DOCUMENTATION OF QUALITY PROCEDURES

A. Include the following, defined in Chapter 5 of the UDOT SDDM:

1. QC cover sheets for all deliverables

2. Form: AUD-QA: Project QA Audit

3. Form: ALT-ATH: Alternate QC/QA Procedures Authorization (if applicable)

4. Form: DEV-APP: Structural Design Criteria Deviation Approval (if applicable)

B. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and the UDOT SDDM before distribution.

Provide the Checker with the applicable cover sheets, a check print of each deliverable and supporting documentation.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload all required documentation of quality procedures into ProjectWise before distribution of the milestone review package.

Refer to UDOT SDDM, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

C. Prepare Structural Design Criteria Deviation Request (if applicable)

1. Refer to the Structures Division Structural Design Criteria Deviation Request Template for required content.
2. Submit for review and approval before beginning design.

4S3 - Design & Detail Retaining Walls - (H)

Tasks Not Used

I. B - Wall designed by wall manufacturer.

III - S&L sheet guidelines and checklist for a retaining wall.

IV - no railroad coordination.

Tasks Modified - None

Tasks Added - None

Assumptions:

1. None

Activity: 4S4 - COMPLETE STRUCTURE PROJECT DOCUMENTS

4S4 Complete Structure Project Documents

Overview

Finalize the special provisions, measurement and payment, and estimate.

References

- Acceptance and Documentation Guide (A&D)
- Deviation from UDOT Standards Form
- Measurement and Payment Document (M&P)
- Railroad Company Guidelines
  - BNSF-UPRR Guidelines for Railroad Grade Separation Projects
  - UTS Light Rail Design Criteria
  - UTA Commuter Rail Design Criteria
- UDOT Bridge Management Manual
- UDOT Specification Writer’s Guide
- UDOT Standard and Supplemental Drawings

- UDOT Standard and Supplemental Specifications
- UDOT Structures Design and Detailing Manual (SDDM)
- UDOT Structures QC/QA Procedures

Deliverables

1. Engineer's Estimate

   Tasks

   - Finalize Structures Engineer's Estimate
   - Enter Cost Estimate into PDBS

2. Structure Project Documents

   Tasks

   - Coordinate Specifications with Plan Sheets
   - Develop Special Provisions
   - Develop Measurement and Payment (M&P)
   - Develop Acceptance and Documentation (A&D)
   - Complete Deviation from UDOT Standards Form

3. Railroad Company Submittal Package (if applicable)

   Task

   - Submit Documents for Railroad Company Review

4. Documentation of Quality Procedures

   Task

   - Perform Required Quality Procedures

Finalize Structures Engineer's Estimate

Update bid items, quantities, and unit prices. (see 3S1)

Enter Cost Estimate into PDBS

Match Engineer's Estimate bid items and plan sheet bid items exactly.

Coordinate Specifications with Plan Sheets

Verify specifications accurately reflect design intent and details on plan sheets.

Develop Special Provisions

Provide all special provisions required for project construction not covered in the standard specifications.

- Division Special Provisions
- Project Specific Special Provisions
- Use UDOT Specification Writer's Guide

Develop Measurement and Payment (M&P)

- Use PDBS to generate M&P for all standard bid items.
  - Develop M&P for all non-standard bid items.
  - Use the current M&P.
  - Modify standard descriptions to match project requirements, if applicable.
  - Include accurate description for all effort and materials required for construction.

Develop Acceptance and Documentation (A&D)

- Use PDBS to generate A&D for all standard pay items.
  - Coordinate with the Resident Engineer (RE) to develop A&D for non-standard items.
  - Use the current A&D.
  - Modify standard descriptions to match project requirements, if applicable.

Complete Deviation From UDOT Standards Form

Input structure items into the project Deviation From UDOT Standards Form.

Submit Documents for Railroad Company Review

Coordinate with the Region Utiltiy and Railroad Leader. Prepare and submit to the Region Utility and Railroad Leader the Railroad Company Submittal Package. Refer to the respective railroad company's guidelines for submittal content. Content may include the following items:

- 100% design plans.
- 100% design calculations for underpass structures.
- Special Provisions.
- Geotechnical report.
- Additional information required by the railroad companies.

Perform Required Quality Procedures

Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and the UDOT Structures Design and Detailing Manual **before** distribution.

- Provide the Checker with the applicable cover sheets, a check print of each deliverable and supporting documentation.
- Follow the UDOT Structures QC/QA Procedures for checking and auditing.
- Upload all required documentation of quality procedures into ProjectWise before distribution of the milestone review package. Refer to SDDM, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

4S4 - Complete Structure Project Documents - (H)

Tasks Not Used

III - No railroad coordination.

Tasks Modified - None

Tasks Added - None

Assumptions:

1. UDOT Structures Divisions published special provisions will be used, if needed. No project specific modification will be required.
2. No project specific special provisions are anticipated.

Activity: 4SA - DESIGN & DETAIL BRIDGE

4SA Design and Detail Bridge

Overview

Design and detail new and widened bridges according to the approved S&L and structural design criteria. Check deliverables according to the approved S&Ls and structural design criteria following the UDOT Structures QC/QA Procedures. Incorporate design requirements and the preliminary information from the draft geotechnical report and/or the hydraulic report.

Receive S&L approval (3S6) before beginning design.

References

- AASHTO Guide Specifications for LRFD Seismic Bridge Design
- AASHTO LRFD Bridge Design Specifications
- AASHTOManual for Bridge Evaluation
- Railroad Company Guidelines
  - BNSF-UPRR Guidelines for Railroad Grade Separation Projects
  - UTS Light Rail Design Criteria
  - UTA Commuter Rail Design Criteria
- UDOT Bridge Management Manual
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications
- UDOT Structures Design and Detailing Manual (SDDM)
- UDOT Structures QC/QA Procedures

Deliverables

1. Superstructure Design Calculations

Tasks

- Design Deck, Overhang, Approach Slabs, and Parapets
- Design Beam(s)
- Design Bearing Pad(s)

- Determine Screed Elevations

2. Superstructure Plans

Task

- Develop Superstructure Plans

3. Substructure Design Calculations

Tasks

- Determine Bridge Seat Elevations
- Design Abutment(s) and Wingwall(s)
- Design Bent(s)
- Design Foundation(s)
- Perform Seismic Analysis

4. Substructure Plans

Task

- Develop Substructure Plans

5. S&L Sheet Checklist

Task

- Complete S&L Sheet Checklist

6. Seismic Design Strategy Report (Final)

Task

- Prepare Seismic Design Strategy Report (Final)

7. Load Rating Package

Task

- Perform Load Ratings

8. Railroad Company Submittal Package (if applicable)

Task

- Submit Documents for Railroad Company Review

9. Documentation of Quality Procedures

Tasks

- Perform Required Quality Procedures
- Prepare Structural Design Criteria Deviation Report (if applicable)

Design Deck, Overhang, Approach Slabs, and Parapets

See the UDOT Structures Design and Detailing Manual for design requirements.

Design Beam(s)

See the UDOT Structures Design and Detailing Manual for design requirements.

Design Bearing Pad(s)

See the UDOT Structures Design and Detailing Manual for design requirements.

Determine Screed Elevations

See the UDOT Structures Design and Detailing Manual for design requirements.

Develop Superstructure Plans

See the UDOT Structures Design and Detailing Manual for design requirements.

Determine Bridge Seat Elevations

See the UDOT Structures Design and Detailing Manual for design requirements.

Design Abutment(s) and Wingwall(s)

See the UDOT Structures Design and Detailing Manual for design requirements.

Design Bent(s)

See the UDOT Structures Design and Detailing Manual for design requirements.

Design Foundation(s)

- Obtain final geotechnical report from Geotechnical Engineer.
- Design the foundations based on static loading, the seismic analysis, and the geotechnical report.

Develop Substructure Plans

See the UDOT Structures Design and Detailing Manual for design requirements.

Complete S&L Sheet Checklist

See the S&L Sheet Guidelines and Checklist for a New Bridge or S&L Sheet Guidelines and Checklist for a Bridge Widening for instructions.

Prepare Seismic Design Strategy Report (Final)

- Finalize the design strategy for resisting the design seismic event.
- Include descriptions of expected damage, locations of plastic hinging, the redistribution of forces, the mobilization of backfills, and the functions of bearings, as appropriate.

Perform Load Ratings

- Provide design load ratings using methods described in the AASHTO Manual for Bridge Evaluation and in conformance with Chapter 4 of the UDOT Bridge Management Manual.

- Provide both inventory and operating ratings.
- Prepare and Submit the Load Rating Package according to Chapter 4 of the UDOT Bridge Management Manual.

Submit Documents for Railroad Company Review

Coordinate with the Region Utility and Railroad Leader. Prepare and submit to the Region Utility and Railroad Leader the 60% Railroad Company Submittal Package for underpass structures. Refer to the respective railroad company's guidelines for submittal content. Content may include the following items:

- 60% design plans.
- 60% design calculations.
- Special provisions.
- Geotechnical report.
- Additional information required by the railroad companies.

Perform Required Quality Procedures

Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and the UDOT Structures Design and Detailing Manual **before** distribution.

- Provide the Checker with the applicable cover sheets, a check print of each deliverable and supporting documentation.
- Follow the UDOT Structures QC/QA Procedures for checking and auditing.
- Upload all required documentation of quality procedures into ProjectWise before distribution of the milestone review package. Refer to SDDM, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

Prepare Structural Design Criteria Deviation Report (if applicable)

- Refer to the Structures Division Structural Design Criteria Deviation Request Template for required content.
- Submit for review and approval before beginning design of affected element(s).

4SA - Design & Detail Bridge - (H)

Tasks Not Used

VIII - No railroad coordination.

Tasks Modified - None

Tasks Added - None

Assumptions:

1. None

Activity: 4U1 - FINAL DESIGN UTILITY COORDINATION

4U1 Final Design Utility Coordination

Overview

Final coordination with utility owners and provide guidance and information to complete utility relocation plans. Hold a meeting to resolve any remaining conflicts and prepare for the construction stage.

References

Administrative Rule R930-7 Utility Accommodation

Administrative Rule R930-8 Utility Relocations Required by Highway Projects

UDOT Utility Coordination Manual of Instruction

UDOT Standard Design Drawing 09

UDOT QC/QA Documentation

Deliverables & Tasks

I. UTILITY COMPANY PLANS, SCHEDULES, & COST ESTIMATES

A. Hold Final Utility Design Meeting

1. This meeting is to discuss and resolve remaining conflicts or issues.

2. Prior to the meeting, send a meeting agenda, updated project plans/files and updated utility conflict matrix to all attendees.

3. Use the following discussion topics as needed:

Project scope and schedule

Constructability issues

Remaining conflicts

Specifications to be included

Utility partnering

Construction schedules

Utility outage windows and limitations

Use of UDOT's contractor

Utility betterments

4. Complete and distribute meeting notes documenting all decisions, important discussions, action items, and schedule.

B. Review Utility Company Plans, Schedules, and Cost Estimates

1. Review the final utility plans, schedules, and cost estimates for compliance with project design and goals.

2. Coordinate and resolve any deficiencies with the utility owner.

4U1 - Complete Utility Plans and Documents - (H)

Tasks Not Used:

1. Review Utility company Plans, Schedules, and Cost Estimates

Tasks Modified:

1. Hold individual Final Utility Design Meetings as follows:
    a. Dixie Power
    b. St. George Water Services
    c. Combined meeting with additional utility owners discovered during Blue Stakes mapping request

Assumptions:

1. Final Utility Design Meetings will each be 1.5 hours in duration with 4 staff in attendance
2. Final Utility Design Meetings will be held via MS Teams or Google Meet

Activity: 4U3 - COMPLETE UTILITY & RAILROAD PLANS & DOCUMENTS

4U3 COMPLETE UTILITY & RAILROAD PLANS & DOCUMENTS

Overview

Complete utility plans and documents. Obtain the UDOT Chief Railroad Engineer's and Railroad Company approval for the crossing modification or construction plans. Finalize railroad crossing plan sheets and develop all railroad project documents including Railroad Company required special provisions. Obtain executed construction and maintenance agreements from the Railroad Company.

References

Administrative Rule R930-7 Utility Accommodation

Administrative Rule R930-8 Utility Relocations Required by Highway Projects

UDOT Bus Rapid Transit Design Manual (BRTDM)

UDOT CADD Standards

UDOT Plan Sheet Development Standards

UDOT Digital Delivery Website

UDOT Roadway Design Manual (RDM)

UDOT Roadway Design Manual Drawings

UDOT Utility Coordination Manual of Instruction

UDOT Specification Writer's Guide

UDOT Standard Drawings and Standard Specifications

UDOT Standard Design Drawing 09

Masterworks

UDOT QC/QA Documentation

Deliverables & Tasks

I. UTILITY RELOCATION PLAN SHEETS

A. Address Plan-in-Hand Review Comments

1. Complete the utility relocation/railroad portions of the Plan-in-Hand Review Comment Resolution Form.
2. Respond to each utility relocation/railroad related comment.
3. Make revisions to the design and deliverables according to the responses.
4. Conduct QC review and verification of all comments.
5. See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

B. Finalize Utility Relocation Design

1. Finalize the utility relocation design based on review comments and coordination with team members.
2. Refer to 3U4 as needed.

C. Complete Utility Relocation Plan and Profile Sheets

1. Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website to finalize the utility relocation plan sheets.

Follow the UDOT Plan Sheet Development Standards¿Topo and Utility Sheet Requirements.

Follow the UDOT Plan Sheet Development Standards¿Utility Relocation Sheet Requirements.

Follow additional applicable PSDS requirements for more extensive designs and details.

UDOT Plan Sheet Development Standards¿Roadway Plan and Profile Requirements

UDOT Plan Sheet Development Standards¿Detail Sheet Requirements

2. Revise and update information labeled in previous review submittals as necessary.

3. Include all quantities and start/end stations.

4. Verify that the callouts are correctly placed and labeled.

D. Complete Utility Relocation Summary Sheets

1. Prepare summary sheets according to UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website and Summary Sheet CADD Standards.

General Plan Sheet Requirements (Department or Region)

Summary Sheet Requirements.

2. Use UDOT Excel spreadsheets and customize for the project

Include all utility relocation related pay items and necessary non-pay items.

Include names, alignment designations, stations, offsets, units, and quantities.

Show enough detail to support calculations.

3. Use UDOT standard summary plan sheets

4. Export all summaries from Excel to MicroStation.

II. GRADE SEPARATION STRUCTURE 100% SUBMITTAL PACKAGE

A. Submit Structure 100 % Submittal Package to Railroad Companies

(if applicable)

1. Review for content and submit the 100% Railroad Company Submittal Package prepared by the Structural Design Engineer to the railroad companies' local representative.

2. Refer to the respective railroad company's guidelines for submittal content.

3. Content may include the following:

Design Plans

Project Specifications and Special Provisions

Drainage Report

Shoofly Design (if applicable)

Construction Phasing Plans

III. AT-GRADE RAILROAD CROSSING PLAN SHEETS

A. Finalize At-Grade Railroad Crossing Improvements Design

1. Finalize the railroad crossing design based on review comments and coordination with team members.

2. Refer to 3U4 as needed.

B. Complete At-Grade Railroad Crossing Improvements Plan Sheets

1. Follow current UDOT CADD Standards, UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website and Railroad Company standards to finalize the utility relocation plan sheets.

2. Update and include all necessary information such as callouts and notes.

Include all necessary details.

3. Follow UDOT Plan Sheet Development Standards Detail Sheet Requirements.

IV. UTILITY RELOCATION/AT-GRADE RAILROAD CROSSING COST ESTIMATE

A. Finalize Utility Relocation/At-Grade Railroad Crossing Cost Estimate

1. Update bid items and quantities

2. Update unit costs (see 3U4)

B. Enter Utility Relocation/At-Grade Railroad Crossing Cost Estimate into Masterworks

UTILITY RELOCATION/AT-GRADE RAILROAD CROSSING PROJECT DOCUMENTS

A. Develop Utility Relocation/At-Grade Railroad Crossing Project Documents

1. Incorporate utility information into utility special provisions and limitations of operations.

Provide all special provisions required for project construction.

General Special Provisions

Project Specific Special Provisions

2. Use Masterworks to generate M&P for all bid items.

Develop M&P for all non-standard bid items.

Include accurate description for all effort and materials required for construction.

M&P pay items must match plan sheet pay items exactly.

3. Use Masterworks to generate A&D for all standard pay items.

Coordinate with the RE to develop A&D for non-standard items.

VI. QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the Utility Design QC Checklist before distribution.

Provide the Checker with a check print of each deliverable and supporting documentation.

Complete all necessary corrections from the QC checklist.

Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

4U3 - Complete Utility & Railroad Plans & Documents - (H)

Tasks Not Used:

1. Grade Separation Structure 100% Submittal Package
2. At-Grade Railroad Crossing Plan Sheets
3. Utility Relocation/At-Grade Railroad Crossing Cost Estimate
4. Utility Relocation/At-Grade Railroad Crossing Project Documents

Tasks Modified:

1. Utility Relocation Plan Sheets
    a. Includes addressing Plan-In-Hand Review Comments
    b. Includes Final Utility Plans (UT Sheets)
    c. Does not include Final Relocation Design

d. Does not include Complete Utility Relocation Plan and Profile Sheets

e. Does not include Utility Relocation Summary Sheets

Deliverables:

1. Final Utility Plans Sheets (UT Sheets)
2. Final Utility Conflict Matrix
3. Utility QC documentation
4. Utility QA documentation

Activity: 4Y1 - PREPARE/COMPILE PS&E REVIEW PACKAGE

4Y1 Prepare/Compile PS&E Review Package

Overview

Compile Plan-in-Hand comment resolution form, project cost estimate, and all discipline deliverables into one PS&E review package.

References

- Milestone Review Comment Resolution Form
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Specification Writer's Guide

Deliverables

1. Plan-in-Hand Review Comment Resolution Form

   Task

   - Finalize Plan-in-Hand Review Comment Resolution Form

2. PS&E Review Package

   Tasks

   - Update Project Cost Estimate
   - Prepare PS&E Review Package

3. QC Documentation

   Task

   - Perform QC Review

Finalize Plan-in-Hand Review Comment Resolution Form

Coordinate with team members to address and verify all Plan-in-Hand review comments. Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Update Project Cost Estimate

Obtain each discipline's cost estimate and compile them into one document. Verify all disciplines have entered their final estimates into PDBS correctly. Assist the discipline leads as needed.

Prepare PS&E Review Package

Compile all discipline documents for review including plan sheets, special provisions, and M&P.
Prepare the PS&E review package including:

- Plan-in-Hand Review Comment Resolution Form
- Complete plan set
- All special provisions, specifications, supplemental specifications
  - Use UDOT Specification Writer's Guide
- Project Cost Estimate
- M&P, A&D, and other project documents
- Project estimate ePM Screen 505
- Draft SWPPP Package for Construction
- Draft Final Structure Acceptance
- Draft Right-of-Way Certification
- Draft Traffic and Safety Certification
- Draft Utility Certification
- Environmental Permits (if available)

Distribute the package to all meeting attendees and reviewers a minimum of **two weeks** before the PS&E Review Meeting (4V1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

If Local Government Project

The Local Government Representative is responsible for monitoring the progress of the design activities to ensure that the design process remains on schedule and within budget. Any reduction of project scope or additional funding must be approved by UDOT Project Manager. The Local Government Representative should request frequent status updates from the Design Project Manager.

4Y1 Prepare/Compile PS&E Review Package - (H, MBI, & GC)

Assumptions: None

Activity: 4V1 - PLANS, SPECIFICATIONS & ESTIMATE (PS&E) REVIEW MEETING

4V1 Plans, Specifications, &Estimate (PS&E) Review Meeting

Overview

The purpose of this meeting is to ensure that the elements provided in the plan sheets and advertising documents are consistent with the project scope and available funding requirements. The meeting should include reviews to determine consistency, accuracy, and constructability.

References

- Form F1 - Milestone Review Comment Resolution Form
- UDOT QC/QA Documentation

Deliverables

1. PS&E Meeting Agenda

   Task

   - Prepare Meeting Agenda

2. PS&E Review Package

   Task

   - Distribute Review Package

3. PS&E Meeting Notes

   Tasks

   - Hold Meeting
   - Compile Meeting Notes

4. PS&E Review Comment Resolution Form

   Task

   - Compile PS&E Review Comments and Submit Initial Dispositions and Responses

Prepare Meeting Agenda

Arrange for the location and time of the meeting. Prepare the meeting agenda. Below are suggested agenda items:

- Project Definition Document (PDD)
- Meeting minutes and action items from previous milestone review meetings
- Project Design Criteria (PDC)
- Design exceptions, design waivers, and deviations from standards
- Engineer’s Estimate (Use an independent cost estimator if necessary)
- Risk Register and Mitigation Strategies
- Innovative contracting opportunities such as lane rental, P+T, and incentive/disincentive

- ROW progress
- Project commitments
- Project schedule and Submit for Advertising Date in MS Project
- UDOT QC/QA Documentation

Distribute Review Material

Invite all project team members and others as needed. Distribute PS&E Review Package (including the completedPlan-in-Hand Review Comment Resolution Form) and meeting agenda.

Compile Meeting Notes

Capture all decisions made and create an action item list. Distribute the meeting notes to all meeting invitees.

Compile PS&E Review Comments and Submit Initial Dispositions and Responses

Follow UDOT QC/QA Documentation to compile and provide initial dispositions and responses to all PS&E comments on one comment resolution form. The Design Leader submits the PS&E Review Comment Resolution Form to all reviewers and team members once all comments have an initial disposition and response.

4V1 Plans, Specifications, & Estimate (PS&E) Review Meeting - (H, MBI, & GC)

Assumptions:

1. Meeting will be held at the UDOT Purgatory office with MS Teams/Google Meet options
    a. One 4-hour meeting with (combined in-person and virtual with 4 H, 2 MBI, & 1 GC staff attending in person), plus travel.
    b. Includes 8 hours for a constructability review from Alan Preston

Activity: 5A1 - PREPARE STORMWATER POLLUTION PREV PLAN SWPPP FOR CONSTRUCTIO

5A1 Prepare SWPPP Package for Construction

Overview

Prepare the SWPPP package and submit to the Resident Engineer.

References

- Utah Department of Environmental Quality, Division of Water Quality
- UDOT QC/QA Documentation

Deliverables

1. SWPPP Package

    Tasks

    - Assemble SWPPP Package

- Send SWPPP Package to Resident Engineer

2. QC Documentation

Task

- Perform QC Review

Assemble SWPPP Package

Follow UDOT's SWPPP Outline found on UDOT's environmental webpage. Assemble the package and fill in the necessary information. Provide two copies of the SWPPP Package to the Region Landscape Architect.

Send SWPPP Package to Resident Engineer

Review SWPPP Package and provide copies to the Resident Engineer.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Aesthetics/Landscaping Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

5A1 - Prepare SWPPP Package for Construction - (MBI)

Tasks Not Used - None

Tasks Modified - None

Tasks Added - None

Assumptions:

1. Drainage and Erosion Control plans and detail sheets will be used for the Site Map within the SWPPP.

Activity: 5L1 - DELIVER RIGHT-OF-WAY CERTIFICATION

5L1 Deliver Right-Of-Way Certification

Overview

Prepare and approve ROW certification.

References

UDOT Right-of-Way Division Website

Deliverables & Tasks

I. SIGNED ROW CERTIFICATION

A. Submit Certification Request

1. The Region ROW Engineer will inform the Project Manager that there is a need to acquire additional right-of-way if the design and construction improvements are not within the existing right-of-way.

If all construction activities are within the existing right-of-way, then the Region ROW Engineer will prepare the ROW Certification and have the Region Director sign for approval.

Upon approval from the Region Director, the Region ROW Engineer will submit the ROW Certification to Central Construction.

2. If project design requires additional right-of-way, the ROW Lead Agent will collaborate with the Project Manager to complete the ROW Certification Request (with or without limitations).

B. Verify Parcel Status

1. Verify that all parcels have been acquired or that a Right-of-Occupancy has been issued.

Parcels that have NOT been acquired will be classified as a construction limitation.

2. Verify that any occupants have been relocated or will relocate before construction begins.

If occupants have NOT been relocated, this is a construction limitation.

C. Approve ROW Certification

1. Certify that the project has all parcels cleared for construction activities.

2. If all parcels are not cleared for the project to commence construction activities:

ROW Lead Agent shall provide a "Committed" timeline identifying the date each parcel will be cleared and provide the Project Manager the Limitation (555 Spec language) for inclusion in the project specifications.

Project Manager and Resident Engineer review and agree to pending limitations and sign the ROW Certification Request Memo, and submit the request for Certification with Limitations to the ROW Director.

Approval of a Certification with Limitations must be obtained from the ROW Director.

3. Sign the ROW Certification Memorandum pending the limitations of operations.

4. Submit the completed ROW certification to the Phase Leader and Central Construction.

D. Provide Documents for Construction

1. Prepare a package for the Project Manager and Resident Engineer including the following:

Copy of the Contract and Construction Notes report

2. The Resident Engineer will provide 30 days notice to the local government surveyor advising them of any monuments within or adjacent to the UDOT ROW that may be destroyed during construction.

5L1 Deliver Right-Of-Way Certification - (H)

Assumptions:

1. Along with the ROW Cert this includes Tasks 5E1 5T1, & 5U1
2. Consultant Team will assist UDOT and SG in preparing the necessary documentation to request the Environmental, Traffic, and Utility Certifications
3. UDOT will provide ROW, Environmental, Traffic and Safety, and Utility Certifications

Tasks Added:

1. Prepare for and submit request Environmental Certification
2. Prepare for and submit request for Traffic and Safety Certification
3. Prepare for and submit request for Utility Certification

Deliverables:

1. Environmental Cert (by UDOT)

2. Traffic and Safety Certification (by UDOT)
3. Utility Certification (by UDOT)

Activity: 5S1 - DELIVER FINAL STRUCTURE ACCEPTANCE

5S1 Deliver Final Structure Acceptance

Overview

Assemble and submit final structural documentation for each structure in order to obtain the final acceptance to release the structural plans and documentation for advertising. Finalized structural documentation includes incorporation of all structures related comments made throughout the project.

References

Form: PSE-ACC: Final Structure Acceptance (5S1)

Form: PSE-REV: Structural Review Completion - PS&E (Stage 4) Review

UDOT Structural Documentation Email Template

UDOT Seismic Design Strategy Report Template

UDOT Structures Design and Detailing Manual (SDDM)

UDOT Structures QC/QA Procedures

Deliverables & Tasks

I. STRUCTURAL DOCUMENTATION PACKAGE

A. Submit Final Structural Documentation Package

1. Prepare a package and submit the ProjectWise links to the Structure Project Engineer (and copy the Structures Design Manager) for final review.

Refer to the UDOT Structural Documentation Email Template for required format of the submittal.

Include the following for each structure, as appropriate:

Structure Plans (signed and sealed) - include .pdf and .dgn files necessary to create the entire plan set.

Special Provisions

Engineer's Estimate

Measurement & Payment

Design Calculations

Load Rating Package

Seismic Design Strategy Report (Final)

Final Geotechnical Report

Final Hydraulic Report

S&L Sheet Guidelines and Checklist (for each structure) - updated from 3S6

II. DOCUMENTATION OF QUALITY PROCEDURES

A. Include the following, defined in Chapter 5 of the UDOT SDDM:

1. QC cover sheets for all deliverables

2. Form: AUD-QA: Project QA Audit

3. Approved Form: DEV-APP: Structural Design Criteria Deviation Approval (may be more than one)

4. Form: STR-CRF: Structural Review Comment Resolution Form-with responses and dispositions

5. Form F1: Milestone Review Comment Resolution Form (with responses and dispositions.)

6. Form: PSE-REV: Structural Review Completion Form

PS&E (Stage 4) Review (completed and signed)

III. FORM: PSE-ACC: FINAL STRUCTURE ACCEPTANCE (5S1) - SIGNED BY UDOT STRUCTURES DESIGN MANAGER

A. Review Structural Documentation Package - UDOT Structures Division Responsibility

1. Verify that structural comment responses and verification are complete.

2. Verify that all documentation is complete and that the structure design documents are ready to advertise.

B. Accept Structure - UDOT Structures Division Responsibility

1. Sign Seismic Design Strategy Report (Final).

2. Sign Form: PSE-ACC: Final Structure Acceptance (5S1).

3. Sign plan sheets, if applicable.

UDOT Structures Division does not sign plan sheets for Local Government or Design Build projects.

IV. INVENTORY DOCUMENTATION PACKAGE

A. Submit Final Structure Inventory Documentation Package to Bridge Management

1. Resubmit the final Structural Documentation Email Template to bridgemanagement-5s1@utah.gov after Final Structure Acceptance (5S1) and Plans have been signed by the Structures Design Manager.

5S1 - Deliver Final Structure Acceptance - (H)

Tasks Not Used - None

Tasks Modified - None

Tasks Added - None

Assumptions: - None

Activity: 5V1 - COMMENT RESOLUTION REVIEW MEETING

5V1 Comment Resolution Review Meeting

Overview

This meeting is to review the final comment resolution form. All comment resolutions are addressed by the respective reviewer at the completion of this activity. There are no plan reviews other than spot checks of proper comment incorporation.

References

- Form F1 - Milestone Review Comment Resolution Form

- UDOT QC/QA Documentation

Deliverables

1. Final Comment Resolution Form

   Tasks

   - Invite Meeting Attendees
   - Hold Meeting
   - Revise Final Comment Resolution Form (if needed)

2. Revised Plan Sheets and Documents (as needed)

   Tasks

   - Provide Revised Plan Sheets
   - Provide Revised Specifications

3. QC Documentation

   Task

   - Assure all QC Documentation is loaded into ProjectWise

Invite Meeting Attendees

Determine time and location of the meeting and invite all team members and reviewers. Distribute the Final Comment Resolution Form with an invitation to the meeting.

Hold Meeting

Conduct the meeting as a review of the Final Review Comment Resolution Form. Any comment response the reviewer does not agree with must be discussed and a final action agreed upon at the meeting. Reviewers may "spot check" the plans and documents to verify proper implementation.

Revise Comment Resolution Form (if needed)

Revise the Comment Resolution Form based on the decisions made at the Comment Resolution Meeting. To resolve any remaining comments, see 5Y1 Incorporate PS&E Review Comments.

Provide Revised Plan Sheets

Provide Revised Specifications

Assure All QC Documentation is Loaded into ProjectWise
If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes and distributes them after the meeting.

5V1 Comment Resolution Review Meeting - (H, MBI, & GC)

Assumptions:

1. No new review comments, only closeout previous comments
2. Meeting will be held with MS Teams/Google Meet
    a. One 2-hour meeting with 6 staff (Consultant Team PM and key discipline leads)

Activity: 5Y1 - INCORPORATE PS&E REVIEW COMMENTS

5Y1 Incorporate PS&E Review Comments

Overview

Make revisions based on comments made during PS&E Review (4V1).

References

- Milestone Review Comment Resolution Form
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Specification Writer's Guide

Deliverables

1. Final Comment Resolution Form

   Task

   - Address and Incorporate PS&E Review Comments

2. Final Project Cost Estimate

   Task

   - Revise Project Cost Estimate

3. QC Documentation

   Task

   - Perform QC Review

4. Final Plan Set and Project Documents

   Tasks

   - Revise Plans and Project Documents (as needed)
   - Compile Advertising Plans and Documents

Finalize Comment Resolution Form

Each discipline responds to their PS&E comments, revises their designs and deliverables as needed based on the comment responses, and finalizes their plans and project documents. Verify each comment after implementation and QC review. Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

The Design Leader confirms all comment responses are verified and prepares for the Comment Resolution Review Meeting. Refer to 5V1 Comment Resolution Review Meeting for more information.

Revise Project Cost Estimate

The Design Leader coordinates with each discipline to finalize the project cost estimate.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Revise Plans and Project Documents (if needed)

Each comment's resolution is verified by the reviewers during the Comment Resolution Meeting. Any comments that are deemed inadequately resolved must be addressed before advertising. The Design Leader coordinates with project team members and reviewers to address any remaining comments and revise the final deliverables based on the decisions made during the Comment Resolution Meeting.

Perform QC procedures for all revisions and final verification of comment resolution.

Compile Advertising Plans and Project Documents

Coordinate with project team members to finalize and compile the advertising plans and project documents. Include the following:

- PS&E Review Comment Resolution Form
- Complete plan set
- All special provisions, specifications, and supplemental specifications
- Final Project Cost Estimate
- M&P, A&D, and other project documents
- Accepted Structural Documentation Package (if applicable)
- Project estimate ePM Screen 505
- All other relevant discipline specific and required documents

If Local Government Project

The Local Government Representative is responsible for monitoring the progress of the design activities to ensure that the design process remains on schedule and within budget. Any reduction of project scope or additional funding must be approved by UDOT Project Manager. The Local Government Representative should request frequent status updates from the Design Project Manager.

5Y1 - Incorporate PS&E Review Comments - (H, MBI, & GC)

Assumptions:

1. None

Activity: 5Z1 - ASSEMBLE ADVERTISING PACKAGE

5Z1 Project Management

Overview

This activity is for the Project Manager oversight of the project through the entire design phase.

References

- Project Financial Management Guide
- Team UDOT Guide
- UDOT Project Manager Guide

Deliverables

1. Team Meetings and Meeting Notes

   Tasks

   - Facilitate Coordination Between Disciplines
   - Schedule and Attend Team Meetings and Facilitate Meeting Notes

2. Updated Project Schedule

   Task

   - Update/Review Schedule in MS Project

3. Processed Invoices

   Task

   - Review/Process Consultant Invoices

Facilitate Coordination Between Disciplines

The success of any project relies on the constant coordination between all team members. The Project Manager is responsible to facilitate and encourage constant coordination between disciplines. This includes regular design meetings, informal forms of coordination, and ensuring all disciplines have the latest updates and revisions.

Schedule and Attend Team Meetings and Facilitate Meeting Notes

This covers preparation and attendance of regular project team meetings for all team members such as bi-weekly team meetings. This does not include the time to prepare and attend the milestone meetings or other meetings associated with a specific activity. For example, 1P1 Develop Initial PI Plan will likely involve a coordination meeting with several project team members. The time spent on this meeting should be charged to 1P1, not 5Z1.

The following tasks are the responsibility of the Project Manager but should be appropriately delegated to project team members as needed.

- Schedule regular project team meetings
    - Revise the schedule as needed and inform all team members
- Coordinate the compilation of meeting notes
- Distribute meeting notes to all team members and meeting attendees

Update/Review Schedule in MS Project

Project Discipline Leads are responsible to update the schedule in Project Management Office (PMO) for their activities. This task is to review updates and project status in PMO and/or MS Project. The PM is responsible for making sure the project is on schedule, within allocated resources (budget and staff), and within scope. Coordinate with Discipline Leads to address projected needs that will exceed the schedule, resources, and scope. Ultimately it is the PM's responsibility to have an accurate, up-to-date schedule.

Review/Process Consultant Invoices

The PM should timely review all consultant invoices to see that they are consistent with the contract documents and then submit for payment

5Z1 - Assemble Advertising Package - (H, MBI, & GC)

Assumptions:

1. None

UDOT CMS Staffing Plan

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	Contract Job Title	Education/Certification	License Number	Hours	Current Rate	Proposal Rate	Approval Date	Key
CABELL, LEE	SR. ENGINEER V, P.E.	M.S./P.E.	UT-188020-2202	16	$112.50	$112.50	NTP	
BEDDOES, JUSTIN	SR. ENGINEER IV, P.E.	BS	UT-362173-2202	244	$104.42	$104.42	NTP	
TOLLEY, M. NICOLE	SR. ENGINEER IV, P.E.	BS	UT-5569768-2202	16	$101.92	$101.92	NTP	
PITTS, RYAN	SR ENVIRONMENTAL SPEC IV	MLA		113	$101.92	$101.92	NTP	
SIMMONS, DAVID	SR. ENGINEER III, P.E.	MASTERS	UT-8226945-2202	32	$98.65	$98.65	NTP	
BISHOP, SCOTT	SR. LICENSED SURVEYOR II	B.S./L.S.	UT-6077910-2201	24	$93.70	$93.70	NTP	
FRANCIS, KEVIN	SR. ENGINEER II, P.E.		UT-7628637-2202	238	$83.65	$83.65	NTP	
PRESTON, ALAN	SR. FIELD TECHNICIAN IV			16	$82.50	$82.50	NTP	
DOWELL, ASHLEY	SR. ENGINEER, P.E.	MS- CIVIL ENGINEERING	UT-9867472-2202	115	$78.75	$78.75	NTP	
JENSEN, TREVOR	SR. LICENSED SURVEYOR			26	$78.51	$78.51	NTP	
OLSON, DALAN	SR. ENGINEER, P.E.	BS CIVIL	UT-8536367-2202	16	$78.46	$78.46	NTP	
DAUMUELLER, ANDREW	ENGINEER V, P.E.	DOCTOR OF PHILOSOPHY	UT-10629931-2202	388	$76.15	$76.15	NTP	
THURGOOD, DANIEL	ENGINEER V, P.E.	MS	UT-9625190-2202	4	$73.89	$73.89	NTP	
NELSON, BENJAMIN	ENGINEER IV, P.E.	BS CIVIL ENGINEERING	UT-11682569-2202	444	$70.58	$70.58	NTP	
FENN, JOSH	SR. FIELD TECHNICIAN II	NA		8	$68.03	$68.03	NTP	
KINSEY, HEATHER	SR. DESIGN TECHNICIAN II	AS		32	$63.41	$63.41	NTP	
WORTHEN, BRYAN	SR. SURVEYOR/ROW TECHNICIAN II	B.S. GEOMATICS		77	$62.50	$62.50	NTP	
PACK, AUSTIN	LICENSED SURVEYOR II		UT-12407617-2201	5	$62.12	$62.12	NTP	
FERGUSON, HAYLIE	ENVIRONMENTAL SPECIALIST VI	BS		120	$61.68	$61.68	NTP	
SCOTT, ZACHARY	ENVIRONMENTAL SPECIALIST VI	BLA		7	$61.30	$61.30	NTP	
MOEHLE, PHILIP	LICENSED SURVEYOR	PLS		2	$60.10	$60.10	NTP	
MISDOM, LEE	SR. CAD TECHNICIAN II	AS		712	$57.93	$57.93	NTP	
SIZEMORE, WESLEY	NETWORK ADMIN			4	$57.55	$57.55	NTP	

UDOT CMS Staffing Plan

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

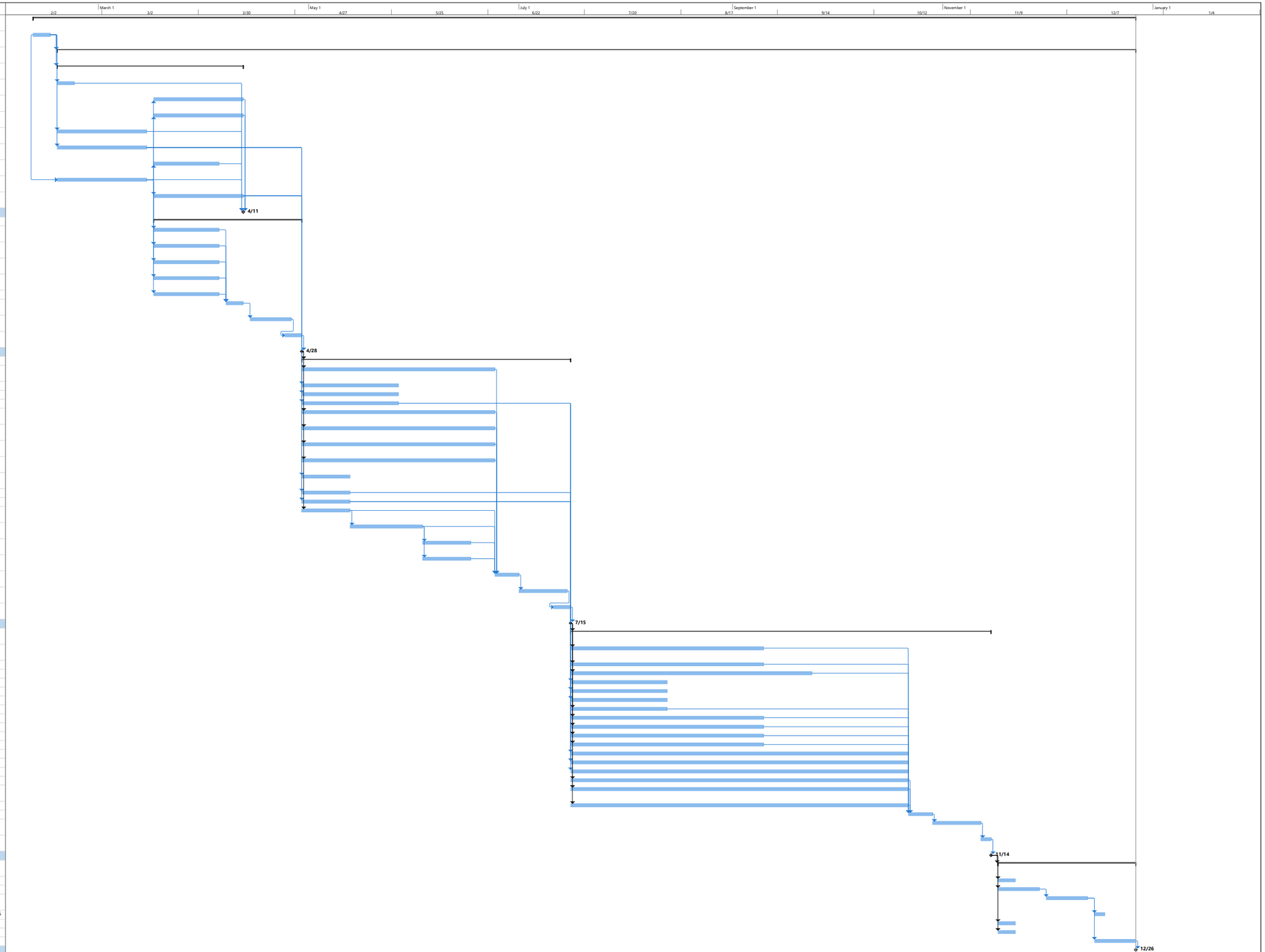
WOODS, AARON	ENVIRONMENTAL SPECIALIST V	MASTER OF ART		22	$57.36	$57.36	NTP	
HILL, KIM	SR CAD TECHNICIAN II	BS		55	$54.62	$54.62	NTP	
MADSEN, MARLEY	ENVIRONMENTAL SPECIALIST IV			60	$50.72	$50.72	NTP	
PUTER, TYLER	SR. SURVEYOR/ROW TECHNICIAN			5	$50.29	$50.29	NTP	
ANDRUS, EMILY	ENGINEER, P.E.	BS	UT-13457650-2202	205	$49.86	$49.86	NTP	
TAYLOR, MICAH	ENGINEER, P.E.		UT-13971870-2202	328	$49.76	$49.76	NTP	
CLARKE, NATHAN	ENVIRONMENTAL SPECIALIST III	BS LANDSCAPE ARCH ENV PLANNING		6	$49.57	$49.57	NTP	
CARRICK, BRANDON	GIS ANALYST II			4	$49.28	$49.28	NTP	
LEWIS, NICHOLE	SR. THIRD-PARTY COORDINATOR	NA		56	$46.97	$46.97	NTP	
SECKLETSTEWA, LYNDA	FIELD TECHNICIAN III			35	$46.35	$46.35	NTP	
THORUP, AARON	GRAPHICS SPECIALIST IV	BS		24	$45.48	$45.48	NTP	
OLSON, KYLEE	SURVEYOR/ROW TECHNICIAN III			38	$44.42	$44.42	NTP	
OLSON, GREGORY KADE	SURVEYOR/ROW TECHNICIAN III			15	$44.33	$44.33	NTP	
TAYLOR, TRAVIS	SURVEYOR/ROW TECHNICIAN III			16	$44.09	$44.09	NTP	
MORTIMER, MACEY	PUBLIC INVOLVEMENT SPEC IV			24	$43.85	$43.85	NTP	
BEDDOES, BLAKE	ENGINEERING INTERN II			25	$43.41	$43.41	NTP	
LAYCOCK, CATHY	SR. ADMINISTRATIVE ASST II			12	$42.88	$42.88	NTP	
FRANCOIS, PAUL	FIELD TECHNICIAN III			24	$42.45	$42.45	NTP	
THORNTON, ANDREW	ENGINEERING INTERN II (OR EIT)			1,112	$41.92	$41.92	NTP	
KINSEY, PHIL	CAD TECHNICIAN II			100	$40.63	$40.63	NTP	
PRESTON (JONES), HEIDI	ACCOUNTING			10	$40.00	$40.00	NTP	

UDOT CMS Staffing Plan

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

MONKURAI, MELANIE	NETWORK ADMIN			4	$39.23	$39.23	NTP	
KIDNEY, KENDRICK	FIELD TECHNICIAN II			16	$39.09	$39.09	NTP	
HENDRIX, AUDREY MACKELLE	DESIGN TECHNICIAN II			12	$37.93	$37.93	NTP	
HORLACHER, CONNER	FIELD TECHNICIAN II			56	$36.44	$36.44	NTP	
BUGDEN, KAYDEE	SURVEYOR/ROW TECHNICIAN II	AS		8	$33.51	$33.51	NTP	
ROSE, BRIAN	SURVEYOR/ROW TECHNICIAN II			10	$33.41	$33.41	NTP	
MERRILL, ALYSSA	ENVIRONMENTAL SPECIALIST II			56	$33.13	$33.13	NTP	
MERRILL, RYAN	SURVEYOR/ROW TECHNICIAN II			16	$32.36	$32.36	NTP	
CANTO, CASH	SURVEYOR/ROW TECHNICIAN II			15	$31.63	$31.63	NTP	
JAMILE (FERGUSON), MEG	ENVIRONMENTAL SPECIALIST			150	$31.30	$31.30	NTP	
MUIR, CLAYTON	FIELD TECHNICIAN			15	$30.72	$30.72	NTP	
BRAGA, RACHEL	SURVEYOR/ROW TECHNICIAN II			5	$29.52	$29.52	NTP	
RICHINS, CHELCIE	PUBLIC INVOLV SPEC II			20	$28.65	$28.65	NTP	
RHOADES, CURTIS	SURVEYOR/ROW TECHNICIAN			8	$25.63	$25.63	NTP	
KOSKI, JACKSON	JR. CAD TECHNICIAN			8	$24.62	$24.62	NTP	
			Total Hours for HORROCKS ENGINEERS LLC:	5,234				

ID	Task Mode	Activity No.	Task Name	Duration	Start	Finish
1			**SR-7, Exit 5**	**230 days**	**Mon 2/10/25**	**Fri 12/26/25**
2			Notice to Proceed	5 days	Mon 2/10/25	Fri 2/14/25
3		**1Z1**	**Project Management**	**225 days**	**Mon 2/17/25**	**Fri 12/26/25**
4			**Scoping**	**40 days**	**Mon 2/17/25**	**Fri 4/11/25**
5		1V1	Kickoff Meeting	5 days	Mon 2/17/25	Fri 2/21/25
6		1Y1	Develop PDC	20 days	Mon 3/17/25	Fri 4/11/25
7		1R1	Develop Roadway Scope	20 days	Mon 3/17/25	Fri 4/11/25
8		1Q1	Assess Drainage Needs & Scope	20 days	Mon 2/17/25	Fri 3/14/25
9		1G1	Conduct Preliminary Geotech Investigation	20 days	Mon 2/17/25	Fri 3/14/25
10		1J1	Identify Existing Right-of-Way	15 days	Mon 3/17/25	Fri 4/4/25
11		1B1	Develop Base Mapping/ Existing DTM	20 days	Mon 2/17/25	Fri 3/14/25
12		1S1	Identify Preliminary Structure Type	20 days	Mon 3/17/25	Fri 4/11/25
13			Scoping Complete	0 days	Fri 4/11/25	Fri 4/11/25
14			**Geometry Phase**	**31 days**	**Mon 3/17/25**	**Mon 4/28/25**
15		2A1	Develop Project Aesthetics Budget & Plan	15 days	Mon 3/17/25	Fri 4/4/25
16		2Q1	Develop Initial Drainage Design	15 days	Mon 3/17/25	Fri 4/4/25
17		2R1	Model Initial Roadway	15 days	Mon 3/17/25	Fri 4/4/25
18		2T1	Develop Initial Traffic Operations & Safety Analysis	15 days	Mon 3/17/25	Fri 4/4/25
19		2U1	Utility & Railroad Identification	15 days	Mon 3/17/25	Fri 4/4/25
20		2Y1	Prepare / Compile Geometry Review Package	5 days	Mon 4/7/25	Fri 4/11/25
21			2 Week Review Period	10 days	Mon 4/14/25	Fri 4/25/25
22		2V1	Geometry Review Meeting	3 days	Thu 4/24/25	Mon 4/28/25
23			Geometry Phase Complete	0 days	Mon 4/28/25	Mon 4/28/25
24			**Plan In Hand Phase**	**56 days**	**Tue 4/29/25**	**Tue 7/15/25**
25		3C1	Design ITS Components Design	40 days	Tue 4/29/25	Mon 6/23/25
26		3G1	Conduct Geotechnical Investigation	20 days	Tue 4/29/25	Mon 5/26/25
27		3G2	Conduct Geotechnical Testing	20 days	Tue 4/29/25	Mon 5/26/25
28		3G3	Complete Foundations Type Memo	20 days	Tue 4/29/25	Mon 5/26/25
29		3Q1	Complete Drainage Design	40 days	Tue 4/29/25	Mon 6/23/25
30		3R1	Complete Roadway Design	40 days	Tue 4/29/25	Mon 6/23/25
31		3R2	Complete Signing & Striping Design	40 days	Tue 4/29/25	Mon 6/23/25
32		3R3	Complete Signal & Lighting Design	40 days	Tue 4/29/25	Mon 6/23/25
33		3S1	Develop Structure TSR & Seismic Design Strategy Report	10 days	Tue 4/29/25	Mon 5/12/25
34		3S4	Develop Situation & Layout (S&L) for Retaining Walls	10 days	Tue 4/29/25	Mon 5/12/25
35		3S5	Develop Situation and Layout (S&L) For Bridge	10 days	Tue 4/29/25	Mon 5/12/25
36		3U1	Identify Potential Utility Conflicts	10 days	Tue 4/29/25	Mon 5/12/25
37		3U2	Initial Design Utility Coordination	15 days	Tue 5/13/25	Mon 6/2/25
38		3U3	Identify Utility Depth SUE	10 days	Tue 6/3/25	Mon 6/16/25
39		3U4	Complete Utility Design	10 days	Tue 6/3/25	Mon 6/16/25
40		3Y1	Prepare/ Compile Plan in Hand	5 days	Tue 6/24/25	Mon 6/30/25
41			2 Week Review Period	10 days	Tue 7/1/25	Mon 7/14/25
42		3V1	Plan in Hand Review Meeting	3 days	Fri 7/11/25	Tue 7/15/25
43			Plan in Hand Phase Completed	0 days	Tue 7/15/25	Tue 7/15/25
44			**PS&E Phase**	**88 days**	**Wed 7/16/25**	**Fri 11/14/25**
45		4A2	Complete Aesthetics, Landscape & Irrigation Plans & Documents	40 days	Wed 7/16/25	Tue 9/9/25
46		4C1	Complete ITS Plans & Documents	40 days	Wed 7/16/25	Tue 9/9/25
47		4E1	Obtain Environmental Document Approval	50 days	Wed 7/16/25	Tue 9/23/25
48		4G1	Geotechnical Design and Draft Report	20 days	Wed 7/16/25	Tue 8/12/25
49		4G2	Develop Geotechnical Project Documents	20 days	Wed 7/16/25	Tue 8/12/25
50		4G3	Finalize Geotechnical Report	20 days	Wed 7/16/25	Tue 8/12/25
51		4P1	Implement Public Involvement Plan	20 days	Wed 7/16/25	Tue 8/12/25
52		4Q1	Complete Drainage Plan Sheets & Documents	40 days	Wed 7/16/25	Tue 9/9/25
53		4R1	Complete Roadway Plans and Documents	40 days	Wed 7/16/25	Tue 9/9/25
54		4R2	Complete Signing & Striping Plans & Documents	40 days	Wed 7/16/25	Tue 9/9/25
55		4R3	Complete Signal & Lighting Plans & Documents	40 days	Wed 7/16/25	Tue 9/9/25
56		4S3	Design & Detail Retaining Walls	70 days	Wed 7/16/25	Tue 10/21/25
57		4SA	Design & Detail Bridge	70 days	Wed 7/16/25	Tue 10/21/25
58		4S4	Complete Structure Project Documents	70 days	Wed 7/16/25	Tue 10/21/25
59		4U1	Complete Utility Plans and Documents	70 days	Wed 7/16/25	Tue 10/21/25
60		4U2	Prepare & Obtain Utility & Railroad Agreements & Permits	70 days	Wed 7/16/25	Tue 10/21/25
61		4U3	Complete Utility & Railroad Plans & Documents	70 days	Wed 7/16/25	Tue 10/21/25
62		4Y1	Prepare/Compile PS&E Review Package	5 days	Wed 10/22/25	Tue 10/28/25
63			2 Week Review Period	10 days	Wed 10/29/25	Tue 11/11/25
64		4V1	Plans, Specifications, & Estimate (PS&E) Review Meeting	3 days	Wed 11/12/25	Fri 11/14/25
65			PS&E Phase Complete	0 days	Fri 11/14/25	Fri 11/14/25
66			**Advertisement Phase**	**30 days**	**Mon 11/17/25**	**Fri 12/26/25**
67		5A1	Prepare SWPPP Package for Construction	5 days	Mon 11/17/25	Fri 11/21/25
68		5Y1	Incorporate PS&E Review Comments	10 days	Mon 11/17/25	Fri 11/28/25
69			2 Week Review Period	10 days	Mon 12/1/25	Fri 12/12/25
70		5V1	Comment Resolution Review Meeting	3 days	Mon 12/15/25	Wed 12/17/25
71		5L1	Deliver Right-Of-Way Certification	5 days	Mon 11/17/25	Fri 11/21/25
72		5S1	Deliver Final Structure Acceptance	5 days	Mon 11/17/25	Fri 11/21/25
73		5Z1	Assemble Advertising Package	10 days	Mon 12/15/25	Fri 12/26/25
74			Submit Advertisement Package	0 days	Fri 12/26/25	Fri 12/26/25



Project: 21559_Contract Schedu
Date: Wed 1/15/25

Task | Milestone | Project Summary | Inactive Milestone | Manual Task | Manual Summary Rollup | Start-only | External Tasks | Deadline | Manual Progress
Split | Summary | Inactive Task | Inactive Summary | Duration-only | Manual Summary | Finish-only | External Milestone | Progress

FEES

COST PLUS A FIXED FEE
WITH FIXED TOTAL ADDITIVE RATE

1. **COST PLUS A FIXED FEE:** For all services and materials pertinent hereto and/or specifically described herein, except as otherwise explicitly cited, the LOCAL AUTHORITY agrees to authorize CONSULTANT invoices to be paid by the DEPARTMENT for the actual allowable cost and the FIXED additives plus a fixed fee in accordance with Attachment D – Provision 4 Invoices of this contract. Overhead rates have been reviewed, approved, and are limited to the costs which are allowable under 2 C.F.R. Part 200 Subpart E Cost Principles and 48 C.F.R. Part 31 Federal Acquisition Regulations (FAR) in compliance with 23 USC § 112(b)(2)(B), as modified by Utah State law, administrative rules, regulations, or contract provisions.

   The contract cost includes direct labor expense, payroll additives; indirect costs and other direct non-salary costs as outlined below.

   (a) The direct labor expense is the actual salary expense for professional and technical personnel and principals for the time they are productively engaged in work necessary to fulfill the terms of this contract. The payroll additives and indirect costs are FIXED as 177.71% of the direct salary expense.

   (b) If necessary and DEPARTMENT approved, any additional direct expenses incurred in fulfilling the terms of this contract, including but not limited to reproduction, telephone, equipment, supplies and fees of outside CONSULTANTS or sub-consultants will be reimbursed at actual costs.

   (c) If necessary and DEPARTMENT approved, any additional direct travel or lodging expenses incurred in fulfilling the terms of this contract will be reimbursed at actual costs up to the Government Services Administration (GSA) maximum allowed travel rates.

   (d) If the CONSULTANT'S normal accounting practice is to include costs in (b) and (c) above as indirect expenses, then this contract will be consistent with that practice. These types of costs must be disclosed as part of the CONSULTANT's accounting practices and in conformance to Federal Cost Principles.

   (e) The fixed fee has been determined and agreed upon as 11.00% of the combined estimated direct labor and the Overhead amount, which represents the CONSULTANT'S profit of $94,232.28. The fixed fee percentage is not a floating percent and should not be billed as a percent of labor. The CONSULTANT will prorate the fixed fee payment and invoice in proportion to the percentage of work completed. If the CONSULTANT has satisfactorily completed the services in ATTACHMENT C, any portion of the fixed fee payment not previously paid in the periodic payment may be invoiced in the final payment request.

   (f) Guest meals (meals paid by a CONSULTANT or a CONSULTANT's employee for someone other than his/her self) will not be eligible for reimbursement unless previously approved in writing by the DEPARTMENT Project Manager.

2. **MODIFICATIONS:** In the event the LOCAL AUTHORITY requires changes of services which materially affect the scope or work plan a contract modification for a change in compensation and/or time for completion must be entered into by the parties hereto prior to making such change. Any such work done without prior LOCAL AUTHORITY and the DEPARTMENT agreement must be deemed ineligible for reimbursement by the DEPARTMENT. The LOCAL AUTHORITY will not entertain requests or claims for reimbursement and remuneration unless written approval is given prior to performance of the work.

3. **PROGRESS PAYMENTS:** Progress payments are based upon the approved percentage of work completed and are made pursuant to certified invoices received.

4. **INVOICES:** The CONSULTANT will invoice the LOCAL AUTHORITY and DEPARTMENT using the actual Wage Rates, FIXED Overhead Rate, prorated Fixed Fee amount, and any additional Direct Costs. The CONSULTANT will submit monthly payment requests promptly and no later than 45 calendar days

after each monthly billing cycle. Invoices are to reflect charges as they apply to the appropriate contract, project, and account number, and must be certified and executed by an official legally authorized to bind the firm. The invoice must be substantiated with appropriate supporting documentation such as time sheets, labor reports, or cost accounting system print-out of employee time, receipts for direct expenses, and subconsultant invoices and supporting documentation that is reviewed and approved by the DEPARTMENT'S Project Manager and subject to final approval by the DEPARTMENT'S Comptroller's Office. The DEPARTMENT will make undisputed payments no later than 30-days after receiving CONSULTANT's invoices and progress reports for services performed. If an invoice is incorrect, defective, or otherwise improper, the DEPARTMENT will notify CONSULTANT within 15 days of discovering the error(s). After the DEPARTMENT receives the corrected invoice, the DEPARTMENT will pay CONSULTANT within 30-days of receiving such invoice.

Payment requests for services performed on or before the last day of the Utah fiscal year (June 30), must be submitted no later than 30 calendar days after the billing cycle, see Utah Code Ann. § 63J-1-601.

The CONSULTANT acknowledges untimely billing may adversely affect the LOCAL AUTHORITY and the DEPARTMENT due to federal funding requirements in 41 C.F.R. § 105 – 71.123, and/or the state fiscal constraints imposed upon it as a department of state government by the Budgetary Procedures Act, Utah Code Ann. § 63J-1-101 et seq. The CONSULTANT waives payment, and waives the right to bring action in law or in equity to recover payment for services, for any and all payment requests the DEPARTMENT does not receive from the CONSULTANT within the timeframe provided under this contract.

5. **FINAL PAYMENT:** Final invoice payment will be released only after all materials and services associated with this contract have been reviewed and approved by the DEPARTMENT'S Project Manager and finalized by the DEPARTMENT'S Comptroller's Office. The final invoice payment will not be released until a Consultant Project Evaluation form has been completed by the LOCAL AUTHORITY and the DEPARTMENT'S Project Manager.

   The DEPARTMENT'S Comptroller's Office has the right to hold the final payment on certain projects when design and construction are performed by two separate Consultants or if there is a potential possibility of a design or construction error. The DEPARTMENT also has the right to hold the final invoice payment until the final audit is complete upon the request of the DEPARTMENT Project Manager.

6. **FINANCIAL SUMMARY:** The total maximum amount of disbursement pertinent to this contract must not exceed $1,728,104.90 Contract overruns will not be paid.

7. **COST PROPOSAL:** The Cost Proposal for the CONSULTANT and/or sub-consultant, if applicable, may be found in the following pages of Attachment D of this contract.

UDOT CMS Cost Proposal

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Labor Costs

Employee Name	Contract Job Title	Hours	Proposal Rate	Labor Cost
ANDRUS, EMILY	ENGINEER, P.E.	205	$49.86	$10,221.30
BEDDOES, BLAKE	ENGINEERING INTERN II	25	$43.41	$1,085.25
BEDDOES, JUSTIN	SR. ENGINEER IV, P.E.	244	$104.42	$25,478.48
BISHOP, SCOTT	SR. LICENSED SURVEYOR II	24	$93.70	$2,248.80
BRAGA, RACHEL	SURVEYOR/ROW TECHNICIAN II	5	$29.52	$147.60
BUGDEN, KAYDEE	SURVEYOR/ROW TECHNICIAN II	8	$33.51	$268.08
CABELL, LEE	SR. ENGINEER V, P.E.	16	$112.50	$1,800.00
CANTO, CASH	SURVEYOR/ROW TECHNICIAN II	15	$31.63	$474.45
CARRICK, BRANDON	GIS ANALYST II	4	$49.28	$197.12
CLARKE, NATHAN	ENVIRONMENTAL SPECIALIST III	6	$49.57	$297.42
DAUMUELLER, ANDREW	ENGINEER V, P.E.	388	$76.15	$29,546.20
DOWELL, ASHLEY	SR. ENGINEER, P.E.	115	$78.75	$9,056.25
FENN, JOSH	SR. FIELD TECHNICIAN II	8	$68.03	$544.24
FERGUSON, HAYLIE	ENVIRONMENTAL SPECIALIST VI	120	$61.68	$7,401.60
FRANCIS, KEVIN	SR. ENGINEER II, P.E.	238	$83.65	$19,908.70
FRANCOIS, PAUL	FIELD TECHNICIAN III	24	$42.45	$1,018.80
HENDRIX, AUDREY MACKELLE	DESIGN TECHNICIAN II	12	$37.93	$455.16
HILL, KIM	SR CAD TECHNICIAN II	55	$54.62	$3,004.10
HORLACHER, CONNER	FIELD TECHNICIAN II	56	$36.44	$2,040.64
JAMILE (FERGUSON), MEG	ENVIRONMENTAL SPECIALIST	150	$31.30	$4,695.00
JENSEN, TREVOR	SR. LICENSED SURVEYOR	26	$78.51	$2,041.26
KIDNEY, KENDRICK	FIELD TECHNICIAN II	16	$39.09	$625.44
KINSEY, HEATHER	SR. DESIGN TECHNICIAN II	32	$63.41	$2,029.12
KINSEY, PHIL	CAD TECHNICIAN II	100	$40.63	$4,063.00
KOSKI, JACKSON	JR. CAD TECHNICIAN	8	$24.62	$196.96
LAYCOCK, CATHY	SR. ADMINISTRATIVE ASST II	12	$42.88	$514.56
LEWIS, NICHOLE	SR. THIRD-PARTY COORDINATOR	56	$46.97	$2,630.32
MADSEN, MARLEY	ENVIRONMENTAL SPECIALIST IV	60	$50.72	$3,043.20
MERRILL, ALYSSA	ENVIRONMENTAL SPECIALIST II	56	$33.13	$1,855.28
MERRILL, RYAN	SURVEYOR/ROW TECHNICIAN II	16	$32.36	$517.76
MISDOM, LEE	SR. CAD TECHNICIAN II	712	$57.93	$41,246.16
MOEHLE, PHILIP	LICENSED SURVEYOR	2	$60.10	$120.20
MONKURAI, MELANIE	NETWORK ADMIN	4	$39.23	$156.92
MORTIMER, MACEY	PUBLIC INVOLVEMENT SPEC IV	24	$43.85	$1,052.40
MUIR, CLAYTON	FIELD TECHNICIAN	15	$30.72	$460.80
NELSON, BENJAMIN	ENGINEER IV, P.E.	444	$70.58	$31,337.52
OLSON, DALAN	SR. ENGINEER, P.E.	16	$78.46	$1,255.36
OLSON, GREGORY KADE	SURVEYOR/ROW TECHNICIAN III	15	$44.33	$664.95
OLSON, KYLEE	SURVEYOR/ROW TECHNICIAN III	38	$44.42	$1,687.96
PACK, AUSTIN	LICENSED SURVEYOR II	5	$62.12	$310.60
PITTS, RYAN	SR ENVIRONMENTAL SPEC IV	113	$101.92	$11,516.96

UDOT CMS Cost Proposal

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

PRESTON (JONES), HEIDI	ACCOUNTING	10	$40.00	$400.00
PRESTON, ALAN	SR. FIELD TECHNICIAN IV	16	$82.50	$1,320.00
PUTER, TYLER	SR. SURVEYOR/ROW TECHNICIAN	5	$50.29	$251.45
RHOADES, CURTIS	SURVEYOR/ROW TECHNICIAN	8	$25.63	$205.04
RICHINS, CHELCIE	PUBLIC INVOLV SPEC II	20	$28.65	$573.00
ROSE, BRIAN	SURVEYOR/ROW TECHNICIAN II	10	$33.41	$334.10
SCOTT, ZACHARY	ENVIRONMENTAL SPECIALIST VI	7	$61.30	$429.10
SECKLETSTEWA, LYNDA	FIELD TECHNICIAN III	35	$46.35	$1,622.25
SIMMONS, DAVID	SR. ENGINEER III, P.E.	32	$98.65	$3,156.80
SIZEMORE, WESLEY	NETWORK ADMIN	4	$57.55	$230.20
TAYLOR, MICAH	ENGINEER, P.E.	328	$49.76	$16,321.28
TAYLOR, TRAVIS	SURVEYOR/ROW TECHNICIAN III	16	$44.09	$705.44
THORNTON, ANDREW	ENGINEERING INTERN II (OR EIT)	1,112	$41.92	$46,615.04
THORUP, AARON	GRAPHICS SPECIALIST IV	24	$45.48	$1,091.52
THURGOOD, DANIEL	ENGINEER V, P.E.	4	$73.89	$295.56
TOLLEY, M. NICOLE	SR. ENGINEER IV, P.E.	16	$101.92	$1,630.72
WOODS, AARON	ENVIRONMENTAL SPECIALIST V	22	$57.36	$1,261.92
WORTHEN, BRYAN	SR. SURVEYOR/ROW TECHNICIAN II	77	$62.50	$4,812.50
	Total Hours:	5,234		
	Total Direct Labor:			$308,471.84
	Overhead:		177.71%	$548,185.22
	Total Direct Labor plus Overhead:			$856,657.06
	Fixed Fee:		11.00%	$94,232.28
	Burdened Labor Cost:			$950,889.34

Other Direct Charges

ODC Item	Unit of Measure	Qty	Item Cost	Extended Cost
(AERIAL LIDAR)	EACH	2.0	$1,200.000	$2,400.00
MEETING REFRESHMENTS	EACH	5.0	$50.000	$250.00
PROPELLER (SURVEY PROCESSING)	EACH	3.0	$300.000	$900.00
MILEAGE RATE 2025	MILE	14,000.0	$.700	$9,800.00
STANDARD MEALS FULL DAY - 2025	EACH	24.0	$68.000	$1,632.00
STANDARD MEALS PARTIAL DAY2025	EACH	60.0	$51.000	$3,060.00
STANDARD LODGING W/TAX 2025	EACH	30.0	$125.400	$3,762.00
			Total Other Direct Charges:	$21,804.00

Sub Consultant Costs

Firm Name	Sub Total Cost
GERHART COLE INCORPORATED	$207,566.37
MICHAEL BAKER INTERNATIONAL, INC.	$547,845.19
Total Sub Consultant Costs:	$755,411.56
Total Contract Cost:	$1,728,104.90

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	1Z1	1V1	1B1	1C1	1G1	1J1	1Q1	1R1	1S1	1Y1	1Y2	1V2	1Z6	2A1	2Q1	
CABELL, LEE	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
BEDDOES, JUSTIN	129	16	0	0	1	0	1	1	0	1	1	1	0	0	1	
TOLLEY, M. NICOLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PITTS, RYAN	23	10	0	0	0	0	0	0	0	0	0	0	0	1	0	
SIMMONS, DAVID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BISHOP, SCOTT	0	0	2	0	0	20	0	0	0	0	0	0	0	0	0	
FRANCIS, KEVIN	32	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
PRESTON, ALAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DOWELL, ASHLEY	10	2	0	3	0	0	0	0	0	0	0	0	0	0	0	
JENSEN, TREVOR	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	
OLSON, DALAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DAUMUELLER, ANDREW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
THURGOOD, DANIEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NELSON, BENJAMIN	47	11	0	0	0	0	0	0	56	0	0	0	0	0	0	
FENN, JOSH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KINSEY, HEATHER	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	
WORTHEN, BRYAN	0	0	77	0	0	0	0	0	0	0	0	0	0	0	0	
PACK, AUSTIN	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
FERGUSON, HAYLIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SCOTT, ZACHARY	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
MOEHLE, PHILIP	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
MISDOM, LEE	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	
SIZEMORE, WESLEY	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WOODS, AARON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HILL, KIM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	2R1	2U1	2Y1	2V1	3C1	4E2	3G1	3G2	3Q1	3R1	3R2	3R3	3S1	3S4	3S5	
CABELL, LEE	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
BEDDOES, JUSTIN	1	0	2	13	0	0	1	1	1	1	1	0	0	0	0	
TOLLEY, M. NICOLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PITTS, RYAN	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	
SIMMONS, DAVID	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	
BISHOP, SCOTT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FRANCIS, KEVIN	0	41	0	2	0	0	0	0	0	0	0	0	0	0	0	
PRESTON, ALAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DOWELL, ASHLEY	0	0	4	0	7	0	0	0	0	0	0	32	0	0	0	
JENSEN, TREVOR	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
OLSON, DALAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DAUMUELLER, ANDREW	0	0	0	0	0	0	0	0	0	0	0	0	0	56	0	
THURGOOD, DANIEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NELSON, BENJAMIN	0	0	0	2	0	0	0	0	0	0	0	0	48	0	64	
FENN, JOSH	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	
KINSEY, HEATHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WORTHEN, BRYAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PACK, AUSTIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FERGUSON, HAYLIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SCOTT, ZACHARY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MOEHLE, PHILIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MISDOM, LEE	0	0	0	0	0	0	0	0	0	0	0	0	64	72	64	
SIZEMORE, WESLEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WOODS, AARON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HILL, KIM	0	0	0	0	10	0	0	0	0	0	0	15	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	3U1	3U4	3Y1	3V1	4A1	4A2	4C1	4E1	4G1	4G2	4G3	4P1	4Q1	4R1	4R2	
CABELL, LEE	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	
BEDDOES, JUSTIN	0	0	7	11	1	0	0	0	1	1	1	9	1	1	1	
TOLLEY, M. NICOLE	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	
PITTS, RYAN	0	0	0	3	0	1	0	52	0	0	0	0	0	0	0	
SIMMONS, DAVID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BISHOP, SCOTT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FRANCIS, KEVIN	50	48	0	4	0	0	0	0	0	0	0	0	0	0	0	
PRESTON, ALAN	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	
DOWELL, ASHLEY	0	0	0	2	0	0	7	0	0	0	0	0	0	0	0	
JENSEN, TREVOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OLSON, DALAN	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	
DAUMUELLER, ANDREW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
THURGOOD, DANIEL	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	
NELSON, BENJAMIN	0	0	4	15	0	0	0	0	0	0	0	0	0	0	0	
FENN, JOSH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KINSEY, HEATHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WORTHEN, BRYAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PACK, AUSTIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FERGUSON, HAYLIE	0	0	0	0	0	0	0	120	0	0	0	0	0	0	0	
SCOTT, ZACHARY	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
MOEHLE, PHILIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MISDOM, LEE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SIZEMORE, WESLEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WOODS, AARON	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	
HILL, KIM	0	0	0	0	0	7	8	0	0	0	0	0	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	4R3	4S3	4S4	4SA	4U1	4U3	4Y1	4V1	5A1	5L1	5S1	5V1	5Y1	5Z1		Total
CABELL, LEE	0	0	0	0	0	0	0	4	0	0	0	2	0	0		16
BEDDOES, JUSTIN	0	0	0	0	0	0	4	13	1	4	0	9	4	2		244
TOLLEY, M. NICOLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		16
PITTS, RYAN	0	0	0	0	0	0	0	13	0	0	0	0	0	0		113
SIMMONS, DAVID	0	0	0	0	0	0	0	0	0	0	0	0	0	0		32
BISHOP, SCOTT	0	0	0	0	0	0	0	0	0	2	0	0	0	0		24
FRANCIS, KEVIN	0	0	0	0	10	40	0	6	0	0	0	2	0	0		238
PRESTON, ALAN	0	0	0	0	0	0	0	8	0	0	0	0	0	0		16
DOWELL, ASHLEY	34	0	0	0	0	0	0	6	0	0	0	0	8	0		115
JENSEN, TREVOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0		26
OLSON, DALAN	0	0	0	0	0	8	0	0	0	0	0	0	0	0		16
DAUMUELLER, ANDREW	0	0	24	300	0	0	0	0	0	0	8	0	0	0		388
THURGOOD, DANIEL	0	0	0	0	0	0	2	0	0	0	0	0	0	0		4
NELSON, BENJAMIN	0	40	24	60	0	0	0	18	0	0	44	11	0	0		444
FENN, JOSH	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8
KINSEY, HEATHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0		32
WORTHEN, BRYAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		77
PACK, AUSTIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5
FERGUSON, HAYLIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		120
SCOTT, ZACHARY	0	0	0	0	0	0	0	0	0	0	0	0	0	0		7
MOEHLE, PHILIP	0	0	0	0	0	0	0	0	0	0	0	0	0	0		2
MISDOM, LEE	0	60	0	392	0	0	0	0	0	0	44	0	0	0		712
SIZEMORE, WESLEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0		4
WOODS, AARON	0	0	0	0	0	0	0	0	0	0	0	0	0	0		22
HILL, KIM	15	0	0	0	0	0	0	0	0	0	0	0	0	0		55

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	1Z1	1V1	1B1	1C1	1G1	1J1	1Q1	1R1	1S1	1Y1	1Y2	1V2	1Z6	2A1	2Q1	
MADSEN, MARLEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PUTER, TYLER	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	
ANDRUS, EMILY	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	
TAYLOR, MICAH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLARKE, NATHAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CARRICK, BRANDON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LEWIS, NICHOLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SECKLETSTEWA, LYNDA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
THORUP, AARON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OLSON, KYLEE	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	
OLSON, GREGORY KADE	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	
TAYLOR, TRAVIS	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	
MORTIMER, MACEY	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BEDDOES, BLAKE	20	5	0	0	0	0	0	0	0	0	0	0	0	0	0	
LAYCOCK, CATHY	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
FRANCOIS, PAUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
THORNTON, ANDREW	20	0	0	0	0	0	0	0	104	0	0	0	0	0	0	
KINSEY, PHIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PRESTON (JONES), HEIDI	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MONKURAI, MELANIE	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KIDNEY, KENDRICK	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	
HENDRIX, AUDREY MACKELLE	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
HORLACHER, CONNER	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	
BUGDEN, KAYDEE	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	
ROSE, BRIAN	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	2R1	2U1	2Y1	2V1	3C1	4E2	3G1	3G2	3Q1	3R1	3R2	3R3	3S1	3S4	3S5	
MADSEN, MARLEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PUTER, TYLER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANDRUS, EMILY	0	0	4	0	26	0	0	0	0	0	0	56	0	0	0	
TAYLOR, MICAH	0	0	0	0	0	0	0	0	0	0	0	0	0	204	0	
CLARKE, NATHAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CARRICK, BRANDON	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
LEWIS, NICHOLE	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	
SECKLETSTEWA, LYNDA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
THORUP, AARON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OLSON, KYLEE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OLSON, GREGORY KADE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TAYLOR, TRAVIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MORTIMER, MACEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BEDDOES, BLAKE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LAYCOCK, CATHY	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
FRANCOIS, PAUL	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	
THORNTON, ANDREW	0	0	0	0	0	0	0	0	0	0	0	0	124	0	84	
KINSEY, PHIL	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	
PRESTON (JONES), HEIDI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MONKURAI, MELANIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KIDNEY, KENDRICK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HENDRIX, AUDREY MACKELLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HORLACHER, CONNER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BUGDEN, KAYDEE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ROSE, BRIAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	3U1	3U4	3Y1	3V1	4A1	4A2	4C1	4E1	4G1	4G2	4G3	4P1	4Q1	4R1	4R2	
MADSEN, MARLEY	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	
PUTER, TYLER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANDRUS, EMILY	0	0	0	2	0	0	35	0	0	0	0	0	0	0	0	
TAYLOR, MICAH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CLARKE, NATHAN	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	
CARRICK, BRANDON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LEWIS, NICHOLE	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SECKLETSTEWA, LYNDA	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	
THORUP, AARON	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	
OLSON, KYLEE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OLSON, GREGORY KADE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TAYLOR, TRAVIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MORTIMER, MACEY	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	
BEDDOES, BLAKE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LAYCOCK, CATHY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FRANCOIS, PAUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
THORNTON, ANDREW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KINSEY, PHIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PRESTON (JONES), HEIDI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MONKURAI, MELANIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KIDNEY, KENDRICK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HENDRIX, AUDREY MACKELLE	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	
HORLACHER, CONNER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BUGDEN, KAYDEE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ROSE, BRIAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	4R3	4S3	4S4	4SA	4U1	4U3	4Y1	4V1	5A1	5L1	5S1	5V1	5Y1	5Z1		Total
MADSEN, MARLEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0		60
PUTER, TYLER	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5
ANDRUS, EMILY	67	0	0	0	0	0	0	0	0	0	0	0	8	0		205
TAYLOR, MICAH	0	92	24	0	0	0	0	0	0	0	8	0	0	0		328
CLARKE, NATHAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6
CARRICK, BRANDON	0	0	0	0	0	0	0	0	0	0	0	0	0	0		4
LEWIS, NICHOLE	0	0	0	0	13	0	0	0	0	0	0	0	0	0		56
SECKLETSTEWA, LYNDA	0	0	0	0	0	0	8	0	0	0	0	8	8	3		35
THORUP, AARON	0	0	0	0	0	0	0	0	0	0	0	0	0	0		24
OLSON, KYLEE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		38
OLSON, GREGORY KADE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		15
TAYLOR, TRAVIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0		16
MORTIMER, MACEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0		24
BEDDOES, BLAKE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		25
LAYCOCK, CATHY	0	0	0	0	0	0	0	0	0	0	0	0	0	0		12
FRANCOIS, PAUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0		24
THORNTON, ANDREW	0	0	40	680	0	0	0	0	0	0	60	0	0	0		1,112
KINSEY, PHIL	0	60	0	0	0	0	0	0	0	0	0	0	0	0		100
PRESTON (JONES), HEIDI	0	0	0	0	0	0	0	0	0	0	0	0	0	0		10
MONKURAI, MELANIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		4
KIDNEY, KENDRICK	0	0	0	0	0	0	0	0	0	0	0	0	0	0		16
HENDRIX, AUDREY MACKELLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		12
HORLACHER, CONNER	0	0	0	0	0	0	0	0	0	0	0	0	0	0		56
BUGDEN, KAYDEE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8
ROSE, BRIAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		10

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	1Z1	1V1	1B1	1C1	1G1	1J1	1Q1	1R1	1S1	1Y1	1Y2	1V2	1Z6	2A1	2Q1	
MERRILL, ALYSSA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MERRILL, RYAN	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	
CANTO, CASH	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	
JAMILE (FERGUSON), MEG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MUIR, CLAYTON	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	
BRAGA, RACHEL	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	
RICHINS, CHELCIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RHOADES, CURTIS	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	
KOSKI, JACKSON	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	2R1	2U1	2Y1	2V1	3C1	4E2	3G1	3G2	3Q1	3R1	3R2	3R3	3S1	3S4	3S5	
MERRILL, ALYSSA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MERRILL, RYAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CANTO, CASH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JAMILE (FERGUSON), MEG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MUIR, CLAYTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BRAGA, RACHEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RICHINS, CHELCIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RHOADES, CURTIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KOSKI, JACKSON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	3U1	3U4	3Y1	3V1	4A1	4A2	4C1	4E1	4G1	4G2	4G3	4P1	4Q1	4R1	4R2	
MERRILL, ALYSSA	0	0	0	0	0	0	0	56	0	0	0	0	0	0	0	
MERRILL, RYAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CANTO, CASH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
JAMILE (FERGUSON), MEG	0	0	0	0	0	0	0	150	0	0	0	0	0	0	0	
MUIR, CLAYTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BRAGA, RACHEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
RICHINS, CHELCIE	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	
RHOADES, CURTIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KOSKI, JACKSON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	4R3	4S3	4S4	4SA	4U1	4U3	4Y1	4V1	5A1	5L1	5S1	5V1	5Y1	5Z1		Total
MERRILL, ALYSSA	0	0	0	0	0	0	0	0	0	0	0	0	0	0		56
MERRILL, RYAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0		16
CANTO, CASH	0	0	0	0	0	0	0	0	0	0	0	0	0	0		15
JAMILE (FERGUSON), MEG	0	0	0	0	0	0	0	0	0	0	0	0	0	0		150
MUIR, CLAYTON	0	0	0	0	0	0	0	0	0	0	0	0	0	0		15
BRAGA, RACHEL	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5
RICHINS, CHELCIE	0	0	0	0	0	0	0	0	0	0	0	0	0	0		20
RHOADES, CURTIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8
KOSKI, JACKSON	0	0	0	0	0	0	0	0	0	0	0	0	0	0		8

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

	1Z1	1V1	1B1	1C1	1G1	1J1	1Q1	1R1	1S1	1Y1	1Y2	1V2	1Z6	2A1	2Q1	
Firm Activity Totals:	319	53	363	7	1	30	1	1	176	1	1	1	1	4	1	
	2R1	**2U1**	**2Y1**	**2V1**	**3C1**	**4E2**	**3G1**	**3G2**	**3Q1**	**3R1**	**3R2**	**3R3**	**3S1**	**3S4**	**3S5**	
Firm Activity Totals:	1	109	10	29	43	1	1	1	1	1	1	103	236	388	228	
	3U1	**3U4**	**3Y1**	**3V1**	**4A1**	**4A2**	**4C1**	**4E1**	**4G1**	**4G2**	**4G3**	**4P1**	**4Q1**	**4R1**	**4R2**	
Firm Activity Totals:	63	56	21	45	1	20	50	482	1	1	1	76	1	1	1	
	4R3	**4S3**	**4S4**	**4SA**	**4U1**	**4U3**	**4Y1**	**4V1**	**5A1**	**5L1**	**5S1**	**5V1**	**5Y1**	**5Z1**		**Total**
Firm Activity Totals:	116	252	112	1,432	23	48	14	68	1	6	164	32	28	5		5,234
	1Z1	**1V1**	**1B1**	**1C1**	**1G1**	**1J1**	**1Q1**	**1R1**	**1S1**	**1Y1**	**1Y2**	**1V2**	**1Z6**	**2A1**	**2Q1**	
Transaction Activity Totals:	672	71	363	7	19	30	53	195	176	6	22	5	1	4	109	
	2R1	**2U1**	**2Y1**	**2V1**	**3C1**	**4E2**	**3G1**	**3G2**	**3Q1**	**3R1**	**3R2**	**3R3**	**3S1**	**3S4**	**3S5**	
Transaction Activity Totals:	191	109	40	58	43	1	253	213	426	506	377	103	236	388	228	
	3U1	**3U4**	**3Y1**	**3V1**	**4A1**	**4A2**	**4C1**	**4E1**	**4G1**	**4G2**	**4G3**	**4P1**	**4Q1**	**4R1**	**4R2**	
Transaction Activity Totals:	63	56	66	82	55	20	50	482	141	21	61	76	287	685	197	
	4R3	**4S3**	**4S4**	**4SA**	**4U1**	**4U3**	**4Y1**	**4V1**	**5A1**	**5L1**	**5S1**	**5V1**	**5Y1**	**5Z1**		**Total**
Transaction Activity Totals:	116	252	112	1,432	23	48	54	108	29	6	164	42	38	5		9,676

UDOT CMS Contract Executive Summary

Contract Number:	NEW	Mod:		Project Number:	F-0007(30)4	PIN:	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Brief Description

PROJECT BACKGROUND AND DESCRIPTION

1. A new grade separated interchange near Exit 5 on Southern Parkway (SR-7) is planned with design including:
    a. Exit and entrance ramps for the interchange
    b. Southern Hill Drive; about 500 feet beyond ramp terminals
    c. A new bridge structure on Southern Hills Drive going over SR-7 with either spill through abutments or MSE retaining walls (less than 200 feet at each abutment)
    d. The 500-foot extension will overlap with an existing wash, but work associated with a potential box culvert is excluded from this project.
2. A project "Geotechnical Investigation" document was previously prepared in the vicinity of the new intersection by AGEC under contract to 'Development Solutions Group'.
    a. This document was not developed following UDOT standards and was provided 'For Information Only' as part of the Streamlined Solicitation. Given these limitations and the Department's designation as 'For Information Only', additional subsurface data will be collected.
    b. The AGEC study noted variable conditions / materials across the site with near surface bedrock found in some locations. Additionally, AGEC noted potential risks associated with moisture sensitive soils (swelling and collapsible) and gypsum materials that may be water soluble. These types of soils create risks for various structure and wall types.
3. Based on our discussions with the Project Team we have developed costs for the following project features and elements:
    a. A two span bridge supporting the existing Southern Hills Drive roadway over SR-7.
        i. The bridge is planned to be founded on deep foundations pending findings from field and laboratory studies given risks associated with gypsum materials that may be water soluble below foundation bearing layers.
        ii. Retaining walls may be required to reduce span lengths and corresponding structure depth to provide for vertical clearance below existing power transmission lines north of the structure.
    b. The team will evaluate spill through abutments and MSE retaining walls at the bridges (potentially two). Retaining wall lengths up to 200 feet at each abutment are assumed for both bridges.
    c. Three additional fill retaining walls are planned:
        i. Two walls near the existing box culvert supporting SR-7 to the east of the interchange (lengths less than 50 feet and fill heights of 5 feet or less)
        ii. An additional wall along Southern Hills Drive supporting the roadway to avoid impacts to the power pole (length of 130 feet or less and fill heights on the order of 15 feet).
    d. Pavement design for the interchange on and off ramps as well as along Southern Hills Drive (no pavement design needed for SR-7).
    e. No box culvert, culvert extensions, or overhead sign structures are planned for the project.
4. UDOT has requested that work related to Development of Pavement Design and Report (2M1), Foundations Type Memo (3G3), and Geotechnical Construction Services (6G1) be removed from the project due to budgetary constraints. If support related to these items is later needed GC would proceed with a contract modification.

Objective(s): Develop geotechnical design parameters and project documents for the new SR-7 Interchange.

Project Team

Prime: Horrocks

Subconsultant: Rosenberg Associates

Assumptions

See Work Plan -

Phasing

Project to be delivered in a Single Phase

Fee Type

CPFF

UDOT CMS Contract Work Plan

Contract Number:	NEW	Mod:		Project Number:	F-0007(30)4	PIN:	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Activity: 1Z1 - PROJECT OVERSIGHT

1Z1 Project Oversight

Overview

This activity is for the Project Manager oversight of the project through the entire design phase and into post advertising. This activity is used to manage all of the aspects of the project, including scope, schedule and budget.

References

Project Financial Management Guide

Team UDOT Guide

UDOT Project Manager Guide

Consultant Services Manual of Instruction

Deliverables & Tasks

I. PROJECT OVERSIGHT

A. Read, Understand, and Become Familiar with the UDOT Project Manager Guide

1. This will help experienced and new PMs understand PM processes and expectations.

2. It will acquaint PMs with their roles and responsibilities along with the skills and knowledge required to deliver a successful project.

B. Read, Understand, and Become familiar with the Team UDOT Guide

1. This brings together team building tools, tips, strategies and steps to help improve project success by:

Improving Project Delivery

Enhancing communication and collaboration

Reaching milestones on time and under budget

Generating innovative ideas and solutions

II. PROJECT SCOPE

A. Project Setup and then Continue following this Guideline to Aid in the Delivery of a Successful Project

1. See activity 1Z2

III. PROJECT SCHEDULE

A. Update/Review Schedule in UDOT Scheduling Software

1. Discipline Leads are responsible to update the schedule in UDOT scheduling software for their activities.

2. This task is to review updates and project status in the scheduling software.

3. The PM is responsible for making sure the project is on schedule, within allocated resources (budget and staff), and within scope.

4. Coordinate with Discipline Leads to address projected needs that will exceed the schedule, resources, and scope.

IV. PROJECT BUDGET

A. Read, Understand, and Become Familiar with Project Financial Management Guide

1. The goal for this guide is to provide an overview of the Project Finance Life Cycle and to give tools to minimize the project's financial risk and make best use of the budget.

2. The Project Financial Life Cycle serves as budget milestones and checkpoint opportunities to validate projected cost estimates, account for actual expenditures, confirm project phase budgets, and ensure budget risk cost controls are in place.

3. The Project Financial Management Guide includes the following chapters which describe how a project is initiated (well before the PDN process is started on a project), to how a project is closed out, including:

Introduction

Basic Project Accounting

Project PIN Creation Process

Concept Development (CD) Process

Preconstruction Process

Advertise Construction Process

B. Develop and Monitor the Budget with Coordination and Input from the Discipline Leads

C. Actively Track, Monitor, Refine, Update the Project Budget

D. Manage Contracts and Contract Modifications

1. Set up contracts with consultants when needed to deliver the scope of the project. (See Activity 1Z3 for further guidance)

2. Request contract modifications when they are justified.

3. Review all consultant invoices to see that they are consistent with the contract documents and then submit for payment. Invoices should be reviewed and approved or rejected within 30 days of submittal.

Tasks Not Used

1. Project Schedule (Horrocks to complete)

Tasks Modified

1. N/A

Tasks Added

1. Team meeting attendance.

Assumptions:

1. Attend concept verification and risk workshop 4 hours by teleconference / MS Teams.
2. Attend up to 8 monthly UDOT meetings at 1.5 hours each via MS Teams.
3. Attend up to 20 internal consultant team meetings at 1 hour per meeting via MS Teams.
4. Attend up to three (kickoff, PIH, or PS&E) milestone meetings at up to 4 hours in person at Region 4 office in St. George.
5. Attend 1 wall risk meeting at 2 hours each vis MS Teams.

Activity: 1G1 - CONDUCT PRELIMINARY GEOTECHNICAL INVESTIGATION

1G1 - Conduct Preliminary Geotechnical Investigation

Overview

Obtain information on general site and soil conditions that might affect the project scope, schedule, budget, risks, and opportunities; and prepare the Geotechnical Subsurface Exploration Plan (GSEP). Refer to UDOT Geotechnical Manual of Instruction (GMOI)for guidance.

References

UDOT Geotechnical Manual of Instruction (GMOI)

UDOT Geotechnical QC/QA Procedures

UDOT Exploratory Drilling Permit to Enter

UDOT Structures QC/QA Procedures

Deliverables & Tasks

I. GEOTECHNICAL SUBSURFACE EXPLORATION PLAN

A. Review Existing Available Information (Geotechnical Literature Review)

1. See the UDOT GMOI.

B. Conduct Field Reconnaissance

1. See the UDOT GMOI.

C. Develop Geotechnical Subsurface Exploration Plan

1. Use the UDOT GMOI to aid in developing a geotechnical subsurface exploration plan for obtaining the necessary information to complete the geotechnical design.

2. Include a summary of the existing geotechnical information and other related literature, and field reconnaissance findings in the project description and background information of the Geotechnical Subsurface Exploration Plan.

3. Submit the Plan to the design team and to the UDOT Geotechnical Project Engineer.

II. DOCUMENTATION OF QUALITY PROCEDURES (Defined in Chapter 5 of GMOI)

A. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and UDOT GMOI before distribution.

Provide the Checker with a project document cover sheet, check print, and supporting documentation for the Geotechnical Subsurface Exploration Plan.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload required documentation of quality procedures into ProjectWise before the Plan-in-Hand Meeting.

Refer to UDOT GMOI Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. Assess geologic risks identified in mapping.
2. Complete a site visit to observe and document interchange conditions, potential bedrock outcrops, drill rig access, traffic control, and identify preferred locations for test holes, test pits, and geophysics.

Assumptions

1. Gerhart Cole (GC) will retain a subconsultant (Rosenberg and Associates) to coordinate field study logistics and logging of test holes and test pits.
2. GC will coordinate drilled test hole and test pit subcontractors, Blue Stakes, and traffic control.
3. GC will provide and coordinate encroachment permits and traffic control plans.
4. Any bonding, permits, and access, beyond our annual UDOT bond are not needed to drill /excavate the planned test hole and test pit locations.
5. Test holes will be drilled and test pits excavated from the roadway shoulder and we have assumed that these areas are accessible and workable for drilling and excavator equipment.
6. Bridge will be constructed on deep foundations (drilled shafts with limited embedment in bedrock) and 200-ft or less of MSE retaining walls at the abutments.
7. GSEP for fills along the ramps (no cuts) and approaching up to 25 feet near the bridge structure.
8. Deliverables:
    a. GSEP
    b. QC documentation

Activity: 3G1 - CONDUCT GEOTECHNICAL INVESTIGATION

3G1 - Conduct Geotechnical Investigation

Overview

Conduct subsurface exploration for all cuts, fills, retaining walls, and foundation designs.

References

UDOT Geotechnical Manual of Instruction (GMOI)

UDOT Structures QC/QA Procedures

Deliverables & Tasks

I. SOIL SAMPLES

A. Perform Subsurface Exploration and Sampling

1. Obtain all permits and clearances in advance of any actual subsurface exploratory work. (See UDOT GMOI)

2. Conduct the subsurface explorations according to the GSEP.

3. Information obtained in this task is finalized in the PS&E stage for the signed and sealed soil data sheets and geotechnical report.

B. Sort and Submit Samples for Laboratory Testing

1. Properly retrieve, seal, label, store, and transport samples for laboratory testing.

II. FIELD SOIL LOGS

A. Prepare Field Subsurface Exploration Logs

1. Prepare soil logs in accordance with the UDOT GMOI.

2. Information obtained in this task is finalized in the PS&E stage for the signed and sealed soil data sheets and geotechnical report.

B. Request Survey for Subsurface Exploration Locations (Horizontal Coordinates and Elevations)

1. Coordinate with the roadway designer to request survey for subsurface exploration locations.

III. DOCUMENTATION OF QUALITY PROCEDURES (Defined in Chapter 5 of GMOI)

A. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and UDOT Geotechnical Manual of Instruction before distribution.

Provide the Checker with a project document cover sheet, check print, and supporting documentation for the Field Logs.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload required documentation of quality procedures into ProjectWise once complete (prior to the PS&E stage).

Refer to UDOT GMOI Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. Coordinate and procure a traffic control plan for field studies.
2. Complete geophysical field studies to evaluate soil and bedrock conditions:
    a. Complete up to 2 seismic refraction lines along the proposed ramps to profile bedrock (up to 2 days of geophysical testing).
    b. Geophysical study to also include shear wave profiling with depth to establish a design Vs30 profile for use in developing seismic site class / design parameters.
3. Complete field studies to measure infiltration rates at two detention basin locations on the project with measured values and field observations documented in a brief technical memo by Rosenberg.

Assumptions

1. Our 3G1 scope includes test hole locations and depths to address a two span bridge alternative with roadway cuts of less than 5 feet near the bridge. If the interchange concept of going over SR-7 is revised, then we will need to revise our SOW as part of a contract modification.
2. Environmental / archaeological clearances of our work areas / access roads are already completed with any additional re-evaluation work completed by Horrock prior to mobilizing test pit or drilling equipment.
3. Work is completed within the UDOT ROW; if test holes have to be located outside of UDOT's ROW then all permitting / access agreements will be completed by Horrocks and we will proceed with a contract mod to address additional costs.
4. Survey of test hole locations provided by Horrocks.
5. All private utilities and permits are the responsibility of UDOT and property owners; GC is not responsible for damages or delays of any unmarked utilities.
6. Figure 1 plots preliminary locations of the planned geophysics, test pits, and test holes.
7. All work completed in a single mobilization per activity.
8. Any potential subsurface contamination will be negligible, thus not requiring any special equipment, handling procedures, or disposal methods.
9. Drill, core, and sample a total of 6 test holes (TH) to support design efforts for the bridge.
    a. Drill up to 3 test holes for the bridge foundations up to 75 feet deep using a combination of:

i. Mud rotary or percussive drilling (ODEX) methods in soil deposits.
ii. Wireline rock coring in bedrock.

b. Drill up to 3 test holes for the retaining walls up to 40 feet deep using a combination of:
    i. Hollow-stem auger, mud rotary, or percussive drilling (ODEX) methods in soil deposits.
    ii. Wireline rock coring in bedrock.
c. Up to 6 shifts of drilling; if additional shifts are needed we would proceed with a contract modification.
d. Sample site soils with split spoon and possibly oversized (e.g., California) samplers.
e. Near continuous sampling in the upper 10 feet, 5 ft intervals / core runs from 10 to 75 feet, or where judged during drilling.
f. Collect rock core samples; place and identify by depth in core boxes.
g. Record groundwater levels at time of drilling (if found) prior to TH completion; install a single temporary piezometer to measure groundwater at the site.
h. Complete / backfill TH with bentonite chips.
i. Transport bedrock and soil samples to GC laboratory.

10. Excavate and sample up to 14 test pits (TP) along the roadway ramps using a track mounted excavator to observe excavatability of bedrock for roadway cuts, collect subsurface data/samples for pavement design, and identify a bedrock contact for potential shaft caps.
    a. For budgetary purposes we have assumed up to 2 days of test pit field work.
    b. Complete dynamic cone penetration (DCP) testing near each test pit and observe indications of gypsiferous layers in test pits.
    c. Excavate TP up to 10 feet deep (or practical refusal in the bedrock).
    d. Collect grab samples of site soils from excavations.
    e. Record groundwater levels at time of excavation (if found) prior to TP completion.
    f. TPs will be backfilled with excavated materials tamped into place with the excavator bucket (no specified compaction requirements).
        i. Please note that this method of closure does not constitute a structural backfill, as such we recommend these locations be surveyed, tracked, and incorporated into future construction plans so the areas can be replaced with engineered fill.
    g. Transport collected bedrock and soil samples to GC laboratory.
11. Complete Dynamic Cone Penetration (DCP) testing for locations depicted in Figure 1 along interchange on/off-ramps and Southern Hills drive for reference in pavement design. For budgetary purposes, we have assumed the following:
    a. DCP of up to 13 locations near those shown in Figure 1.
    b. DCP to be completed to a depth of up to 2.5-ft or where practical refusal is found with equipment.
12. Costs include traffic control for shoulder closures for TH and TP (no traffic control planned for geophysics); for budgetary purposes we have assumed up to 6 days of drilling / shoulder closures and favorable working hours from UDOT (7am to 7pm).
    a. If additional closures or lane closures are required given limited site access / extended travel, we will need to proceed with a contract modification.
13. Drill spoils will be disposed of onsite.
14. Soils will be classified following NRCS soil classification and in-place infiltration rates will be measured at a single depth in two test pits for locations identified by Drainage design (MBI).
    a. Filed studies assume up to 2 days of field work and limited laboratory testing (e.g., grain-size and Atterberg limits) with no traffic control required.
15. Excludes:
    a. Drilling associated with any detention/drainage basins, pavements, or custom sign foundations.
    b. Site specific utility locations, vac truck, services if needed.
    c. Containment and off-site disposal of drilling fluid / water. We have assumed drilling fluids can be discharged on-site.
    d. Retaining walls longer than 200 feet at each abutment; if walls are extended beyond these lengths/locations then additional test holes will be required.

16.Deliverables:

a. TH and TP logs will be completed, compiled and summarized with draft and final geotechnical deliverable.

b. Geophysical survey data / memo will be provided with final geotechnical deliverable.

c. Infiltration data / memo will be provided as an advanced deliverable to Drainage to support design.

d. QC documentation.

Activity: 3G2 - CONDUCT GEOTECHNICAL TESTING

3G2 - Conduct Geotechnical Testing

Overview

Conduct laboratory soil testing and prepare the soil test summary.

References

UDOT Geotechnical Manual of Instruction (GMOI)

UDOT Structures QC/QA Procedures

AASHTO Materials Reference Laboratory (AMRL Standards)

Deliverables & Tasks

I. INDIVIDUAL SOIL TEST RESULTS

A. Develop Testing Program

1. Identify tests necessary to support geotechnical analysis according to the UDOT GMOI and AASHTO/AMRL standards.

Refer to UDOT GMOI for testing requirements, preparations, and overall guidance.

B. Prepare Soil Test Samples

1. Prepare the necessary samples for laboratory testing.

C. Conduct Laboratory Tests

1. Conduct laboratory soil testing to aid in assessing geotechnical design parameters and risks related to settlement, slope stability, liquefaction/lateral spread, as well as foundation and retaining wall design.

D. Prepare Individual Soil Test Results

1. Prepare charts and graphs (as necessary) showing results of individual tests.

Note any irregularities or compromised samples.

2. Information obtained in this task is finalized in the PS&E stage and incorporated into the signed and sealed soil data sheets and geotechnical report.

II. SOIL TEST SUMMARY

A. Prepare Soil Test Summary

1. Prepare a summary of test data.

Include the following information:

Summary table containing results.

Note any irregularities or compromised samples.

2. Information obtained in this task is finalized in the PS&E stage and incorporated into the signed and sealed soil data sheets and geotechnical report.

III. DOCUMENTATION OF QUALITY PROCEDURES (Defined in Chapter 5 of GMOI)

A. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and UDOT GMOI before distribution.

Provide the Checker with a project document cover sheet, check print, and supporting documentation for the individual soil test results and soil test summary.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload required quality documentation into ProjectWise once complete and prior to PS&E stage.

Refer to the UDOT GMOI, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. Photograph recoverable rock core and include with test hole logs.

Assumptions

1. Soil samples will be disposed of following submittal of our final geotechnical report unless other arrangements are made to store soil samples by UDOT.
2. Complete laboratory testing. Planned testing will depend on material collected. Envisioned testing includes:
    a. Index testing (moisture content, Atterberg limits, particle size distributions)
    b. Strength testing: unconsolidated undrained, point-load testing, and unconfined compression testing of rock core.
    c. Consolidation / collapse / swell testing for settlement assessments.
    d. Resistivity and soil chemical testing for corrosion and concrete degradation assessments.
3. Deliverables:
    a. Laboratory data will be reduced, compiled, and summarized with our final deliverables.

Activity: 4G1 - COMPLETE GEOTECHNICAL DESIGN AND DRAFT REPORT

4G1 - Geotechnical Design and Draft Report

Overview

Perform geotechnical design of project elements including an assessment of settlement, slope stability, liquefaction/lateral spread as well as foundation and retaining wall design and develop a draft geotechnical report for review.

References

UDOT Geotechnical Manual of Instruction (GMOI)

UDOT Structures QC/QA Procedures

Deliverables & Tasks

I. SUBSURFACE EXPLORATION LOGS

A. Prepare Subsurface Exploration Logs for Soil Data Sheets (if applicable)

1. Prepare geotechnical subsurface exploration logs according to the UDOT GMOI.

Generate the logs in a graphical format (e.g., PDF) that is compatible with MicroStation.

2. Information obtained in this task is finalized in the PS&E stage for the signed and sealed soil data sheets.

II. DRAFT GEOTECHNICAL REPORT

A. Conduct Geotechnical Analysis

1. Conduct geotechnical analysis according to the UDOT GMOI.

2. Perform the geotechnical design of project elements including an assessment for settlement, slope stability, liquefaction/lateral spread, foundation, and retaining wall design.

3. As applicable, develop an instrumentation plan for construction and long-term monitoring.

B. Complete geotechnical analyses for Bridge Foundations, and Retaining Walls that includes assessments of, Slope Stability, Settlement, and Liquefaction/Lateral Spread

1. Develop calculations for bridge foundations, retaining walls, slope stability, settlement, liquefaction/lateral spread, etc., as required.

C. Develop Recommendations for the Geotechnical Report

1. Develop foundation and earthwork recommendations as applicable.

2. Provide preliminary recommendations to the roadway and structural design engineers as required.

D. Prepare Draft Geotechnical Report

1. Prepare the draft geotechnical report and include recommendations, design parameters, calculations and applicable data according to the UDOT GMOI.

2. Include preliminary project documents in the draft geotechnical report:

Draft subsurface exploration logs provided to structural engineer for soil data sheets (if applicable)

Draft special provisions

Draft geotechnical detail plan sheets (if applicable)

Draft geotechnical design calculations

III. DOCUMENTATION OF QUALITY PROCEDURES (Defined in Chapter 5 of GMOI)

A. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and UDOT GMOI before distribution.

Provide the Checker with a project document cover sheet, check print, and supporting documentation for the individual sections within the draft geotechnical report.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload required documentation of quality procedures into ProjectWise prior to PS&E.

Refer to UDOT GMOI, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. Reduce and compile field and laboratory data.

Assumptions

1. Characterize existing embankment and foundation materials and develop geotechnical model(s) for planned geotechnical analysis including:
    a. Seismic characterization and design parameters,
    b. Liquefaction and lateral spread risk assessments,
    c. Foundation resistances of deep foundations, and
    d. Assess construction related geotechnical risks in foundation construction.
2. Develop retaining wall design parameters for up to five fill retaining walls (anticipated to be MSE)
    a. Two walls located near the bridge structure
    b. Two walls near the existing box culvert supporting SR-7 to the east of the interchange (lengths less than 50 feet and fill heights of 5 feet or less)
    c. An additional wall along Southern Hills Drive supporting the roadway to avoid impacts to the power pole (length of 130 feet or less and fill heights on the order of 15 feet).
3. GC to provide P-Y geotechnical design parameters (soil and rock) for reference in lateral foundation design that will be completed by the structural engineer (Horrocks).
4. Horrocks to provide a figure showing limits / depths of structure excavation prior to GC beginning draft geotechnical design report.
5. Seismic design to be completed consistent with the 2nd edition of the LRFD Seismic Bridge Design specifications consistent with the current SDDM.
6. Excludes:
    a. Assessment of rock cuts; no rock excavation planned. If later needed, we would proceed with a contract modification.
    b. 3H:1V side slopes of drainage basins are planned; excludes rapid drawdown or slope stability assessment of detention basins.
    c. Fill retaining walls are currently planned for the project. If these walls are revised to soil nail walls then development of soil nail wall drawings for construction are excluded; if complete structural soil nail wall drawings are needed GC would proceed with a contract modification for the additional design work.
7. Deliverables:
    a. Draft geotechnical report will be submitted to the project team for comment and review in PDF format; no hardcopies will be provided.
    b. QC documentation

Activity: 4G2 - DEVELOP GEOTECHNICAL PROJECT DOCUMENTS

4G2 - Develop Geotechnical Project Documents

Overview

Finalize geotechnical plan sheets, special provisions, and other documents required for the advertisement of the project.

References

UDOT CADD Standards

UDOT Geotechnical Manual of Instruction (GMOI)

UDOT Structures QC/QA Procedures

UDOT Plan Sheet Development Standards

UDOT Digital Delivery Website

UDOT Specification Writer's Guide

UDOT Standard Drawings and Standard Specifications

Deliverables & Tasks

I. GEOTECHNICAL SOIL DATA SHEETS (IF APPLICABLE)

A. Finalize Geotechnical Soil Data Sheets (if applicable)

1. Coordinate with the structural design engineer (or drafter) to complete the soil data sheets.

2. Sign and seal the soil data sheets after the quality procedures are complete.

II. GEOTECHNICAL SPECIAL PROVISIONS (IF APPLICABLE)

A. Finalize Geotechnical Special Provisions (if applicable)

1. Provide all necessary special provisions and revisions to specifications required for project construction.

2. Follow the UDOT Specification Writer's Guide to complete all necessary specifications.

III. GEOTECHNICAL DETAIL PLAN SHEETS (IF APPLICABLE)

A. Finalize Geotechnical Details for Plan Sheets (if applicable)

1. Finalize geotechnical details to be included in plan sheets if necessary. Coordinate with the structural design engineer (drafter) or the roadway designer.

2. Plan sheets follow the UDOT CADD Standards and UDOT Plan Sheet Development Standards or the UDOT Digital Delivery Website.

General Plan Sheet Requirements

Detail Sheet Requirements

Include all necessary notes, callouts, dimensions, symbols, etc.

Make sure all symbols and line styles are identifiable

Sign and seal plan sheets

IV. DOCUMENTATION OF QUALITY PROCEDURES (Defined in Chapter 5 of GMOI)

A. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and UDOT GMOI before distribution.

Provide the Checker with a project document cover sheet, check print, and supporting documentation for the individual deliverables.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload required documentation of quality procedures into ProjectWise.

Refer to UDOT GMOI, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. N/A

Assumptions

1. Soil data test hole logs will be provided in PDF format for Horrocks to incorporate into project drawings.
2. Check Print soil data sheets will be developed by Horrocks.
3. GC will electronically sign soil data sheets provided by Horrocks.
4. Horrocks will develop the soil data sheets with needed borders and information.
5. Excludes:
    a. Special provision development ¿ if needed we will proceed with a contract modification.
6. Deliverables:
    a. Geotechnical Soil Data Plan Sheets in PDF format; no hardcopies will be provided.
    b. QC documentation

Activity: 4G3 - FINALIZE GEOTECHNICAL REPORT

4G3 - Final Geotechnical Report

Overview

Finalize the geotechnical report.

References

UDOT Geotechnical Manual of Instruction (GMOI)

UDOT Structures QC/QA Procedures

Deliverables & Tasks

I. GEOTECHNICAL REPORT

A. Finalize Geotechnical Report

1. Review and coordinate responses to finalize all review comments on the draft geotechnical report.

2. Revise the draft geotechnical report to incorporate and address all review comments and finalize the geotechnical report.

3. Verify all geotechnical project documents are complete.

II. DOCUMENTATION OF QUALITY PROCEDURES (Defined in Chapter 5 of GMOI)

A. Perform Required Quality Procedures

1. Initiate and complete the required quality procedures following the UDOT Structures QC/QA Procedures and UDOT GMOI before distribution.

Provide the Checker with a project document cover sheet, check print, and supporting documentation for the individual deliverables.

Follow the UDOT Structures QC/QA Procedures for checking and auditing.

Upload required documentation of quality procedures into ProjectWise.

Refer to UDOT GMOI, Chapter 5 for quality procedures and documentation that is required to be uploaded to ProjectWise.

Tasks Not Used

1. N/A

Tasks Modified

1. N/A

Tasks Added

1. N/A

Assumptions

1. Address one complete set of review comments from the UDOT project team.
2. Comment resolution meeting to be held virtually or by teleconference.
3. Deliverables:
    a. Final Geotechnical report and associated QC documentation prepared by licensed professionals in PDF format; no hardcopies will be provided.
    b. QC documentation

UDOT CMS Staffing Plan

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	Contract Job Title	Education/Certification	License Number	Hours	Current Rate	Proposal Rate	Approval Date	Key
MAW, RYAN	PRINCIPAL	MS CIVIL ENGINEERING	UT-8229560	40	$64.00	$64.00	NTP	
GARRETT, BRIAN	PRINCIPAL GEOTECH ENGINEER	MS CIVIL ENGINEERING	UT-4939562	42	$60.00	$60.00	NTP	
LANGFORD, NICK	STAFF ENGINEER	MS		180	$45.00	$45.00	NTP	
MCNEIL, MATHEW	STAFF GEOLOGIST	BS		68	$41.00	$41.00	NTP	
COLE, AMBER	OFFICE MANAGER	BS		11	$40.00	$40.00	NTP	
KIPPEN, MARIE	STAFF ENGINEER	MS		132	$39.00	$39.00	NTP	
COLE, JAKE	TECHNICIAN 2	GED		128	$32.00	$32.00	NTP	
			Total Hours for GERHART COLE INCORPORATED:	601				

UDOT CMS Cost Proposal

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Labor Costs

Employee Name	Contract Job Title	Hours	Proposal Rate	Labor Cost
COLE, AMBER	OFFICE MANAGER	11	$40.00	$440.00
COLE, JAKE	TECHNICIAN 2	128	$32.00	$4,096.00
GARRETT, BRIAN	PRINCIPAL GEOTECH ENGINEER	42	$60.00	$2,520.00
KIPPEN, MARIE	STAFF ENGINEER	132	$39.00	$5,148.00
LANGFORD, NICK	STAFF ENGINEER	180	$45.00	$8,100.00
MAW, RYAN	PRINCIPAL	40	$64.00	$2,560.00
MCNEIL, MATHEW	STAFF GEOLOGIST	68	$41.00	$2,788.00
	Total Hours:	601		
			Total Direct Labor:	$25,652.00
			Overhead: 176.92%	$45,383.54
			Total Direct Labor plus Overhead:	$71,035.54
			Fixed Fee: 11.00%	$7,813.91
			Burdened Labor Cost:	$78,849.45

Other Direct Charges

ODC Item	Unit of Measure	Qty	Item Cost	Extended Cost
BACKFILL TEST HOLE	FOOT	325.0	$8.000	$2,600.00
COMPRESSOR	HOUR	64.0	$100.000	$6,400.00
DRILL HRS OVER 9.5 HR/DAY	HOUR	12.0	$545.000	$6,540.00
DRILLING RATE UP TO 9.5 HR/DAY	DAY	6.0	$4,850.000	$29,100.00
EXCAVATOR MOBILIZATION	EACH	1.0	$3,000.000	$3,000.00
GEOPHYSICS	DAY	3.0	$3,000.000	$9,000.00
LARGE WATER TRUCK SUPPORT	DAY	12.0	$2,000.000	$24,000.00
PIZOMETER INSTALL	EACH	1.0	$1,500.000	$1,500.00
SUPPORT TRUCK	DAY	10.0	$150.000	$1,500.00
TRACKHOE & OPERATOR	HOUR	35.0	$140.000	$4,900.00
PERMITS, BONDS, & OTHER FEES	LUMP	1.0	$500.000	$500.00
TRAFFIC CONTROL	DAY	8.0	$1,500.000	$12,000.00
COMPANY MILEAGE (2024)	MILE	12,000.0	$.670	$8,040.00
			Total Other Direct Charges:	$109,080.00

Sub Consultant Costs

Firm Name	Sub Total Cost
ROSENBERG ASSOCIATES	$19,636.92
Total Sub Consultant Costs:	$19,636.92
Total Cost for GERHART COLE INCORPORATED:	$207,566.37

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	1Z1	1G1	3G1	3G2	4G1	4G2	4G3									Total
MAW, RYAN	20	4	4	2	4	2	4									40
GARRETT, BRIAN	0	2	0	2	24	6	8									42
LANGFORD, NICK	68	12	40	8	32	4	16									180
MCNEIL, MATHEW	0	0	60	0	0	8	0									68
COLE, AMBER	11	0	0	0	0	0	0									11
KIPPEN, MARIE	0	0	20	0	80	0	32									132
COLE, JAKE	0	0	0	128	0	0	0									128

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

	1Z1	1G1	3G1	3G2	4G1	4G2	4G3									Total
Firm Activity Totals:	99	18	124	140	140	20	60									601

UDOT CMS Contract Work Plan

Contract Number:	NEW	Mod:		Project Number:	F-0007(30)4	PIN:	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Activity: 3G1 - CONDUCT GEOTECHNICAL INVESTIGATION

3G1 Conduct Geotechnical Investigation

Activities:

- Review limited available geotechnical information near the site and available literature such as published geologic maps and assess geologic risks identified in mapping.
- Complete a site visit to observe and document interchange conditions / potential bedrock outcrops, coordinate drilling access / traffic control / earthwork; and identify preferred locations for test holes, test pits, and geophysics.
- GC will coordinate and procure a traffic control plan for field studies.
- GC will coordinate and procure geophysical field studies.
- GC will procure a drilling company to drill, core, and sample a total of 3 test holes (TH) to depths of 75 feet each to support design efforts for the bridge.
- GC will procure a drilling company to drill, core, and sample a total of 3 test holes (TH) to depths ranging from 30 to 40 feet each for retaining walls.
- GC will procure a track-mounted backhoe to excavate up to 15 test pits (TP) along the roadway ramps to observe excavatability of bedrock for roadway cuts. TPs will be excavated up to 15 feet deep (or practical refusal in the bedrock). TPs will be backfilled with excavated materials tamped into place with the excavator bucket (no specified compaction requirements).
- RA will coordinate the drilling and test pit excavations operations including logging the explorations, obtaining representative soil and bedrock samples. Soil samples will be obtained with split spoon and/or oversized (California) samplers. Near continuous sampling in the upper 15 feet, 5 ft intervals / core runs from 15 to 75 feet or where judged during drilling. Rock core samples will be collected, placed, and identified by depth in core boxes.
- RA will record groundwater levels at time of drilling (if found) prior to TH completion. At least one (1) piezometer will be installed by the drillers to measure groundwater below planned excavation depth. RA will monitor the piezometer on up to 4 occasions to record the depth of groundwater if present.
- RA will transport soil and bedrock samples to theRA laboratory; select samples will be shipped to the GC laboratory.
- RA will perform DCP testing adjacent to the test pit locations.
- RA will coordinate the excavation of test pits and conduct infiltration testing for up to two locations to support drainage basin design.

Assumptions

- **G**erhart Cole (GC) will develop geotechnical subsurface exploration plan (GSEP) to submit to UDOT and coordinate Blue Stakes efforts.
- GC will provide, and coordinate encroachment permits and traffic control plans.
- Rosenberg Associates (RA) will coordinate field study logistics.
- Planned exploration locations are accessible and workable for drilling and excavator equipment.
- The bridge will be constructed with either a shallow or deep foundation option and there will be no retaining walls.
- Roadway cuts and/or fills up to 20 feet near the bridge structure.

D**eliverables:**

- **T**H and TP logs will be completed by RA, compiled, and summarized with draft and final geotechnical deliverable.
- RA will provide DCP data.
- RA will provide a technical memorandum reporting the results of the infiltration testing.

Activity: 3G2 - CONDUCT GEOTECHNICAL TESTING

3G2 - Conduct Geotechnical Testing

Objectives:

- Complete geotechnical testing on samples collected as part of 3G1.

Activities:

- **R**A will complete laboratory testing on select soil samples. Planned tests will depend on material types sampled.
- RA will ship rock core samples and select soil samples to GC for testing.
- RA will photograph recoverable rock core and include with test hole logs.

A**ssumptions:**

- **S**oil samples will be disposed of following submittal of our final geotechnical report unless other arrangements are made to store soil samples by UDOT.

Deliverables:

- **L**aboratory data from RA will be reduced, compiled, and provided to GC.

UDOT CMS Staffing Plan

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	Contract Job Title	Education/Certification	License Number	Hours	Current Rate	Proposal Rate	Approval Date	Key
BLACK, DAVID	PRINCIPAL ENGINEER 1	MS	UT-186897-2202	50	$60.00	$60.00	NTP	Y
ALLTON, RAYMOND	PRINCIPAL ENGINEER 1	BS	UT-179031-2202	2	$60.00	$60.00	NTP	
MAXWELL, LYNN	TECHNICIAN 2			56	$36.00	$36.00	NTP	
HAWS, ALEX	STAFF ENGINEER 2	BACHELORS		88	$33.00	$33.00	NTP	
CODER, SHANNA	ADMINISTRATION 2	AS		4	$24.00	$24.00	NTP	
			Total Hours for ROSENBERG ASSOCIATES:	200				

UDOT CMS Cost Proposal

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Labor Costs

Employee Name	Contract Job Title	Hours	Proposal Rate	Labor Cost
ALLTON, RAYMOND	PRINCIPAL ENGINEER 1	2	$60.00	$120.00
BLACK, DAVID	PRINCIPAL ENGINEER 1	50	$60.00	$3,000.00
CODER, SHANNA	ADMINISTRATION 2	4	$24.00	$96.00
HAWS, ALEX	STAFF ENGINEER 2	88	$33.00	$2,904.00
MAXWELL, LYNN	TECHNICIAN 2	56	$36.00	$2,016.00
	Total Hours:	200		
			Total Direct Labor:	$8,136.00
			Overhead: 117.44%	$9,554.92
			Total Direct Labor plus Overhead:	$17,690.92
			Fixed Fee: 11.00%	$1,946.00
			Burdened Labor Cost:	$19,636.92
			Total Cost for ROSENBERG ASSOCIATES:	$19,636.92

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	3G1	3G2														Total
BLACK, DAVID	40	10														50
ALLTON, RAYMOND	0	2														2
MAXWELL, LYNN	0	56														56
HAWS, ALEX	88	0														88
CODER, SHANNA	0	4														4

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

	3G1	3G2														Total
Firm Activity Totals:	128	72														200

UDOT CMS Contract Work Plan

Contract Number:	NEW	Mod:		Project Number:	F-0007(30)4	PIN:	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Activity: 1Z1 - PROJECT OVERSIGHT

1Z1 Project Oversight

Overview

This activity is for the Project Manager oversight of the project through the entire design phase and into post advertising. This activity is used to manage all of the aspects of the project, including scope, schedule and budget.

References

Project Financial Management Guide

Team UDOT Guide

UDOT Project Manager Guide

Consultant Services Manual of Instruction

Deliverables & Tasks

I. PROJECT OVERSIGHT

A. Read, Understand, and Become Familiar with the UDOT Project Manager Guide

1. This will help experienced and new PMs understand PM processes and expectations.

2. It will acquaint PMs with their roles and responsibilities along with the skills and knowledge required to deliver a successful project.

B. Read, Understand, and Become familiar with the Team UDOT Guide

1. This brings together team building tools, tips, strategies and steps to help improve project success by:

Improving Project Delivery

Enhancing communication and collaboration

Reaching milestones on time and under budget

Generating innovative ideas and solutions

II. PROJECT SCOPE

A. Project Setup and then Continue following this Guideline to Aid in the Delivery of a Successful Project

1. See activity 1Z2

III. PROJECT SCHEDULE

A. Update/Review Schedule in UDOT Scheduling Software

1. Discipline Leads are responsible to update the schedule in UDOT scheduling software for their activities.

2. This task is to review updates and project status in the scheduling software.

3. The PM is responsible for making sure the project is on schedule, within allocated resources (budget and staff), and within scope.

4. Coordinate with Discipline Leads to address projected needs that will exceed the schedule, resources, and scope.

IV. PROJECT BUDGET

A. Read, Understand, and Become Familiar with Project Financial Management Guide

1. The goal for this guide is to provide an overview of the Project Finance Life Cycle and to give tools to minimize the project's financial risk and make best use of the budget.

2. The Project Financial Life Cycle serves as budget milestones and checkpoint opportunities to validate projected cost estimates, account for actual expenditures, confirm project phase budgets, and ensure budget risk cost controls are in place.

3. The Project Financial Management Guide includes the following chapters which describe how a project is initiated (well before the PDN process is started on a project), to how a project is closed out, including:

Introduction

Basic Project Accounting

Project PIN Creation Process

Concept Development (CD) Process

Preconstruction Process

Advertise Construction Process

B. Develop and Monitor the Budget with Coordination and Input from the Discipline Leads

C. Actively Track, Monitor, Refine, Update the Project Budget

D. Manage Contracts and Contract Modifications

1. Set up contracts with consultants when needed to deliver the scope of the project. (See Activity 1Z3 for further guidance)

2. Request contract modifications when they are justified.

3. Review all consultant invoices to see that they are consistent with the contract documents and then submit for payment. Invoices should be reviewed and approved or rejected within 30 days of submittal.

Activity: 1V1 - KICKOFF MEETING

1V1 Kickoff Meeting

Overview

Prepare for and hold the initial project team meeting. The purpose of the meeting is to introduce team members, familiarize the team with the project, review the proposed project scope, schedule, and budget, and to commit to the project's success.

References

- Team UDOT Guide

Deliverables

1. Kickoff Meeting Agenda

Tasks

- Develop Meeting Agenda
- Invite Meeting Attendees
- Hold Meeting

2. Kickoff Meeting Notes

Task

- Compile Meeting Notes

3. Project Communications Plan

Task

- Develop/Revise Project Communications Plan

4. Draft Project Definition Document (PDD)

Task

- Develop/Revise Project Definition Document (PDD)

Develop Meeting Agenda

Plan the time and location. Identify and schedule resources such as vehicles and drivers. Prepare and distribute the agenda for review **before** the meeting. The following are potential agenda items and materials:

- Field Visit
- Team Member Introductions Including Role on the Project
- Project Location
- Concept Report
- Scope, Schedule, and Budget
- Risk Register
- Aesthetics and Landscape Assessment
- Maintenance of Traffic
- Problem area identified by Maintenance
- Project Communication Plan
- UDOT QC/QA Documentation
- Draft Project Definition Document (PDD)
- Lessons Learned from Previous Projects

Invite Meeting Attendees

Invite all potential project team members. Include the following with the invitation:

- Meeting Agenda
- Proposed Scope, Schedule, and Budget
- Draft PDD
- Concept Report (if available)

Hold Meeting

Conduct the meeting according to the agenda.

- Provide the following at the meeting:
  - Concept Report
  - Project Location Mapping such as USGS Quads, GoogleEarth, and As-Builts
  - Draft Project Definition Document (PDD)

Compile Meeting Notes

Develop meeting notes and distribute them to all invitees. Include the following:

- Decisions
- Action Items
- Revisions to Draft PDD
  - Scope, Objective Statement, Schedule, Budget, and Risk Register
- Communication expectations

Develop/Revise Project Communications Plan

Based on discussions at the Kickoff Meeting, establish the communications plan. This should include a commitment to how the team members will communicate with each other throughout the project. (See Team UDOT Team Building Guide, Plan Your Communication section for suggestions.)

Develop/Revise Project Definition Document (PDD)

Based on discussions at the Kickoff Meeting, update the draft PDD to reflect the appropriate scope, schedule, budget, and risks associated with the project. Update the MS Project Schedule and Risk Register to reflect these discussions.

If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes and distributes them after the meeting.

Activity: 1Q1 - ASSESS DRAINAGE NEEDS & SCOPE

1Q1 Assess Existing Drainage Conditions

Overview

Review existing conditions and develop recommendations for improvements.

References

- UDOT Drainage Manual of Instruction

- UDOT QC/QA Documentation

Deliverables

1. Preliminary Drainage Summary

   Tasks

   - Request ProjectWise Folder
   - Obtain As-Built Info
   - Conduct Drainage Conditions Field Review
   - Coordinate with Maintenance Team
   - Develop Drainage Design Criteria
   - Recommend Drainage Improvements
   - Estimate Drainage Improvements Cost
   - Provide Preliminary Drainage Summary for Scoping Meeting

2. QC Documentation

   Task

   - Perform QC Review

Request ProjectWise Folder

Obtain As-Built Info

Obtain as-built and master plan information from the following possible sources:

- Local government infrastructure
- County
- Irrigation companies
- UDOT
- Other available sources

Conduct Drainage Conditions Field Review

Assess the location, material type, geometry, and condition of existing drainage structures. Evaluate the following:

- Existing drainage patterns
  - Outfall locations
  - Offsite flows to the project area
- Existing drainage problems
  - Ponding
  - Excessive spread
  - Erosion
- Bridges
  - Approach slab drains

- Channel stability and scour
- Culverts and Storm Drain systems
  - Determine the following
    - Capacity
    - Connectivity
    - Condition
      - Suitability for extension
      - Suitability for rehabilitation
      - Need for replacement
- Water quality and Flood Control features
  - Detention/retention ponds
  - Swales
  - Structural controls
- Ditches
  - Determine the following
    - Capacity
    - Stability
    - Locations with scour or erosion problems
    - Energy dissipaters
- Irrigation facilities and connectivity
  - Obtain information regarding the irrigation system operation and connectivity by meeting with irrigation company officials or ditch masters.
  - Identify locations of diversion structures and flow measurement elements.
  - Obtain operational flows if available and design criteria.
  - Determine requirements for agreements.
- Permitting concerns

Coordinate with Maintenance Team

Meet with maintenance personnel to identify drainage problems. This meeting may occur at Kickoff but if not, coordinate with maintenance and other disciplines to schedule an on-site meeting.

Develop Drainage Design Criteria

Determine the governing criteria for the project's hydraulic design by referring to UDOT's Drainage Manual of Instruction. Consider the following:

- Hydrology
- Roadway Drainage
- Storm Drains
- Culverts
- Under Drains
- Irrigation Systems

- Ditches
- Major Structures - bridge and box culverts
- Clear Zone Design Constraints
- Water Quality/Flood Control Features
- FEMA Flood Mapping

Recommend Drainage Improvements

- Evaluate existing drainage facilities for suitability to convey calculated flows.
- Identify possible deficiencies due to the proposed project.
- Recommend improvements based on the capacity and physical condition of existing facilities.
- Estimate the approximate size and location of new facilities needed to address deficiencies.

Estimate Drainage Improvements Costs

Estimate the costs of proposed drainage improvements. Carefully evaluate reasonable costs, risks, and contingency. Use best engineering practices to find a balance between probable costs and risk.

Provide Preliminary Drainage Summary for Scoping Meeting

The Preliminary Drainage Summary will include the following:

- Existing drainage conditions summary
- Preliminary location and size of recommended improvements
- Priority of recommended improvements
- Consider construction phasing and limitations
- Preliminary drainage cost estimate
- Updated design schedule
- Drainage Design Criteria

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Drainage Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 1R1 - DEVELOP ROADWAY SCOPE

1R1 Develop Roadway Scope

Overview

Determine the preliminary project footprint.

References

AASHTO Roadway Lighting Design Guide

AASHTO, A Policy on Geometric Design of Highways and Streets

AASHTO Roadside Design Guide

Active Transportation Facility Implementation Tool (ATFIT)

UDOT Active Transportation Plan Map

UDOT Sign Manual

UDOT Project Design Certification (PDC)

UDOT Bus Rapid Transit Manual of Instruction (BRTMOI)

UDOT Light Rail Transit Manual of Instruction (LRTMOI)

UDOT Plan Sheet Development Standards Manual (PSDS)

UDOT CADD Standards Manual

UDOT Roadway Design Manual (RDM)

UDOT Roadway Design Manual Drawings (DM Drawings)

UDOT Standard Specifications and Standard Drawings

UDOT Digital Delivery Website

UDOT Structures Design and Detailing Manual (SDDM)

UDOT Signalized Intersection Design Manual

UDOT Roadway Lighting Design Guidelines

UDOT Drainage Manual of Instruction

Manual on Uniform Traffic Control Devices (MUTCD)

Masterworks

UDOT QC/QA Documentation

Deliverables & Tasks

I. PRELIMINARY FOOTPRINT REVIEW DRAWING OR MAP

A. Assess Existing Conditions

1. Conduct a field review to assess existing roadway conditions.
2. Attend the Maintenance/Pre Construction site-visit (see 1Y2).
3. Obtain as-built information, if available.
4. Request and obtain a Project Safety Analysis (PSA) and identify safety needs.
5. Meet with maintenance onsite and identify existing deficiencies

Geometry

Signing and Striping

Safety

Lighting

Drainage

Active Transportation

Transit

B. Develop Strategy to Address Deficiencies

1. Identify roadway related deficiencies.

2. Identify improvements to correct deficiencies.

C. Review Multimodal Needs

1. Review the Active Transportation Facility Implementation Tool (ATFIT) completed during concept. Design and implement all UDOT projects so that all users have access to safe, comfortable, and convenient healthy transportation choices on Utah's transportation network.

2. Coordinate with Active Transportation Manager, and Transit Engineer to do the following:

Assess multimodal needs

Review UDOT Active Transportation Plan Map

Coordinate with local municipalities and transit agencies

Assess access and connectivity to transit stations and stops..

Assess pedestrian connectivity and safety needs.

D. Develop Preliminary Typical Section

1. Develop preliminary existing and proposed typical sections to identify the project footprint.

Conform to the Project Design Certification (PDC).

Show the existing/proposed roadway width.

Coordinate pavement section with Pavement Engineer

E. Prepare Preliminary Project Footprint Drawing or Map

1. Following the PDC and project concept, do the following:

Determine Preliminary Project Footprint.

Use the concept report, existing conditions, and preliminary project scope

Use the preliminary typical sections to determine preliminary estimated cut/fill lines

Coordinate with the following disciplines to identify potential impacts.

Environmental

Right-of-Way

Drainage

Structures

Utilities

Traffic and Safety

Planning

Maintenance

If survey is available, develop preliminary horizontal and vertical alignments of main and secondary roads if possible.

Follow design standards

See 2R1 for more information

2. Prepare a drawing or map in the format determined by the Project Manager showing the preliminary project footprint.

Include the proposed preliminary project footprint.

Include known existing topography.

Include known ROW and easements (existing and proposed).

Include available preliminary horizontal and vertical alignments.

Include additional relevant information to facilitate reviews.

Label items necessary for clarity or to highlight for discussion.

II. PRELIMINARY ROADWAY COST ESTIMATE

A. Develop Preliminary Roadway Cost Estimate

1. Compile initial roadway bid items and quantities.
    Use UDOT standard bid items
    Develop Special Provisions for non-standard bid items.
2. Develop unit costs for each item.
    Use appropriate resources for developing unit costs such as:
        Masterworks
        UDOT Constructibility and Estimating Support
        Local contractors
    Document unit cost development, cost discussions, and assumptions.
    Account for project specific factors:
        Location
        Time of year
        Limitations of operation
        Quantity of item
        Current bidding environment
        Availability of materials
        Familiarity of process
        Specialty equipment
        Risk to contractor
        Inflation
        Construction Schedule
        Constructability
    Engineering Estimates in Masterworks can only be entered with a project in Active Status within ePM.
3. Use lump sum pricing only when appropriate.
    Consider contractor risk due to unknown quantity
    Consider difficulty in pricing per unit
    Consider all materials and labor involved

QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist before distribution.

Activity: 1Y1 - DEVELOP PROJECT DESIGN CERTIFICATION (PDC)

1Y1 Develop Project Design Certification (PDC)

Overview

Develop the Project Design Certification (PDC).

References

AASHTO Critical Elements

AASHTO, A Policy on Geometric Design of Highways and Streets

UDOT Project Design Certification

UDOT Bus Rapid Transit Design Manual (BRTDM)

UDOT Roadway Design Manual(RDM)

UDOT QC/QA Documentation

Deliverables & Tasks

I. PROJECT DESIGN CERTIFICATION (PDC) FORM

A. Develop Project Design Certification (PDC)

1. Develop the PDC following the instructions provided on the PDC form.

2. Obtain information including design speed, design vehicle, design year, terrain, and Project Traffic Report or review from the Concept Report.

Use this data to complete the PDC for the project.

3. Develop criteria for critical design elements and document design deviations and exceptions from UDOT standards using the PDC form.

4. Initiate the PDC during or before project Scoping phase and complete it preferably before Final Comment Resolution or absolutely before Region Advertisement Review.

II. QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist before distribution.

Provide the Checker with a check print of each deliverable and supporting documentation.

Complete all necessary corrections from the QC checklist.

Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

III. SIGNED PROJECT DESIGN CERTIFICATION (PDC) FORM

A. Coordinate with Region Preconstruction Engineer for PDC Approval

1. Work with the Pre Construction Engineer to ensure the PDC meets the proper standards and requirements and submit the form to the Region Preconstruction Engineer for approval.

2. Additional approvals are required for specific design allowances, deviations from UDOT standards, and design exceptions.

Additional time will be required for the review and approval of these items

Activity: 1Y2 - PREPARE/COMPILE SCOPING REVIEW PACKAGE

1Y2 Prepare/Compile Scoping Review Package

Overview

Prepare and compile all discipline review materials to produce the Scoping Review Package.

References

- UDOT QC/QA Documentation

Deliverables

1. Scoping Review Package

Tasks

- Compile Initial Total Project Cost Estimate
- Prepare Scoping Review Package

2. Maintenance/Preconstruction Site Visit Certification Form

Tasks

- Schedule Maintenance/Preconstruction Site Visit
- Conduct Maintenance/Preconstruction Site Visit

3. Maintenance/Preconstruction Site Visit Comment Resolution Form (if used)

Task

- Address Maintenance/Preconstruction Site Visit Comments

4. Project Definition Document (PDD)

Task

- Compile Projects Definition Document (PDD)

5. QC Documentation

Task

- Perform QC Review

Compile Initial Total Project Cost Estimate

Obtain each discipline's cost estimate and compile them into one document.

Prepare Scoping Review Package

Compile all review materials from each discipline, including the following:

- Discipline summary reports
- Initial Project Cost Estimate
- Project estimate ePM Screen 505
- Initial Preliminary Typical Section
- Design Review Drawing

Distribute the package to all meeting attendees and reviewers a minimum of one week before the Scoping Meeting (1V2).

Schedule Maintenance/Preconstruction Site Visit

Contact the District Engineer to determine which Maintenance Station(s) are located in the project area. Contact the Maintenance Station Foreman and schedule the maintenance/preconstruction site visit. If you cannot reach the Maintenance Station Foreman, contact the Project Manager for assistance.

It is ideal to schedule the site visit between the Kickoff Meeting and the Scoping Meeting. If the site visit cannot occur before the Scoping Meeting, schedule the site visit as early as possible, but no later than the Plan-in-Hand Review Meeting.

Conduct Maintenance/Preconstruction Site Visit

The purpose of the site visit is for the Design Leader along with the Maintenance Station Supervisor to assess relevant maintenance issues to the project area, and identify potential items to be included in the project scope.

Information to discuss during the meeting includes:

- Soft spot locations
- Drainage Issues
- Culvert Inspections
- Safety
- Structures
- Maintenance Management Quality Assurance (MMQA) grades and concerns
- Top three issues provided by the maintenance station
- Any other relevant concerns of the maintenance station

Complete the Maintenance/Preconstruction Site Visit Certification Form and obtain necessary signatures. Follow the instructions on the certification form to scan and upload onto ProjectWise the signed certification form and comment resolution form (if used).

Address Maintenance/Preconstruction Site Visit Comments

It is recommended to compile and address all comments and concerns from the site visit into a Milestone Comment Resolution Form (Form F1).

Discuss the site visit comments with the Project Manager. Identify the following:

- Items that already fit within the proposed project scope.
- Items that cannot be addressed by the project.
- Items that warrant further discussion and potential scope alterations.

Assist the Project Manager addressing potential scope alterations. Complete the comment resolution form if being used.

Discuss with the maintenance station foreman the maintenance items that will be included in the project, as needed.

Compile Project Definition Document (PDD)

Complete the Project Definition Document (PDD) using the following information:

- Brief Objective Statement
- High level project goals and metrics to determine success
- Project scope to support the goals
- Project delivery method
- Major risks

- Budget estimates from ePM Screen 505
- Proposed Advertisement Date and Anticipated Construction Completion

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

If Local Government Project

The Local Government Representative is responsible for monitoring the progress of the design activities to ensure that the design process remains on schedule and within budget. Any reduction of project scope or additional funding must be approved by UDOT Project Manager. The Local Government Representative should request frequent status updates from the Design Leader.

Activity: 1V2 - SCOPING MEETING

1V2 Scoping Meeting

Overview

This meeting is to develop a clear project scope, schedule, and budget to which all team members agree. Renew commitments so they all concur with the new scope, schedule, and budget. Identify any changes to the initial first cut geometry and all ensuing alterations to other disciplines based on those modifications. Review, negotiate, and set MS Project durations.

References

- Qualitative Risk Worksheet (Developed in separate Risk Assessment Meeting 1Z6)

Deliverables

1. Scoping Meeting Agenda

   Task
   - Prepare Meeting Agenda
2. Scoping Review Material

   Task
   - Distribute Review Material
3. Scoping Meeting Notes

   Tasks
   - Hold Meeting
   - Compile Meeting Notes

4. Risk Register

Task

- Develop Risk Register

5. Mitigation Strategies

Task

- Develop Mitigation Strategies

6. Revised Project Scope, Schedule, and Budget

Tasks

- Revise PDD
- Review/Update MS Project Schedule

7. Internal Preconstruction Engineering (PE) Budget

Task

- Set Internal PE Budget

8. Project Definition Document

Task

- Finalize the PDD for Signature

Prepare Meeting Agenda

Arrange for the location and time of the meeting. Prepare the meeting agenda. Below are suggested agenda items:

- Project Definition Document (PDD)
- Duration, hours, and logic in MS Project Schedule
- Constructability issues that may impact project costs, project schedule, and construction phasing
- Preliminary Cost Estimate
- Transportation Management Plan (1Z3)
- Project Design Criteria (PDC)
- Problem areas identified by Maintenance
- Multi-modal needs
- Design exceptions
- Innovative contracting opportunities such as lane rental, P+T, and incentive/disincentive
- Project schedule, including milestones and Submit for Advertising Date in MS Project
- Possible schedule impacts, budget changes, or additional design effort
- Schedule for team meetings
- UDOT QC/QA Documentation

Distribute Review Material

Invite all project team members and others as needed. Distribute all review materials and meeting agenda at least **one week** before Scoping Meeting

Hold Meeting

Hold the meeting according to the Agenda.

Compile Meeting Notes

Assign a team member to compile the meeting notes. Send the meeting notes to all team members and meeting attendees for approval.

Develop Risk Register

Using the tool identified in the Project Management Decision Tree (refer to the Instructions for Using the Qualitative Risk Worksheet), develop a comprehensive risk register. Update the register as appropriate for the project. Depending on the size and scope of the project, this can be developed in the Scoping Meeting or in a stand-alone meeting (1Z6).

Develop Mitigation Strategies

Identify mitigation strategies to minimize and/or eliminate risks from the risk register. Incorporate into the project documents as appropriate. Retire risks that have been eliminated.

Revise PDD

Revise project scope, schedule, and budget based on discussions at the Scoping Meeting.

Review/Update MS Project Schedule

Confirm that all disciplines have updated the MS Project Schedule durations according to discussions at the Scoping Meeting. Evaluate project completion and milestone meeting dates. Evaluate resource allocation.

Set Internal PE Budget

Review scope and individual discipline projected hours to set the PE budget for the project.

Finalize the PDD for Signature

Submit PDD for appropriate signatures.

If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes, and distributes them after the meeting.

Activity: 2Q1 - DEVELOP INITIAL DRAINAGE DESIGN

2Q1 Develop Initial Drainage Design

Overview

Develop preliminary drainage design.

References

- Preliminary Drainage Summary (1Q1)
- UDOT CADD Standards
- UDOT Drainage Manual of Instruction
- UDOT QC/QA Documentation

Deliverables

1. Initial Drainage Design Layout (for Initial Roadway Model 2R1)

   Tasks

   - Perform Hydrologic Analysis
   - Perform Hydraulic Analysis
   - Develop Preliminary Drainage Layout
   - Develop Preliminary Water Quality and Flood Control Features
   - Develop Preliminary Irrigation Layout
   - Conduct Conflict Analysis
   - Coordinate with Roadway Design Team
   - Coordinate with Environmental Team
   - Coordinate with Survey Team
   - Coordinate with Utilities Team

2. Preliminary Drainage Cost Estimate

   Task

   - Update Preliminary Drainage Cost Estimate

3. QC Documentation

   Task

   - Perform QC Review

Perform Hydrologic Analysis

Identify methodologies to estimate design flows for each feature. Determine the following:

- Design storm frequency and intensity.
- Time of concentration

Perform Hydraulic Analysis

Identify methodologies for hydraulic analysis. Based upon drainage design criteria for the project, do the following:

- Identify all necessary drainage features based on proposed and existing conditions of the roadway elements such as recommended horizontal/vertical alignments and existing drainage systems.
- Identify conveyance methods (e.g., sheet flow, ditch, storm drain facility).

Develop Preliminary Drainage Layout

Determine and evaluate any constraints that could affect the layout of drainage features.

Develop Preliminary Water Quality and Flood Control Features

Evaluate needs and determine layout of features.

Develop Preliminary Irrigation Layout

Determine and evaluate any constraints that could affect the layout of irrigation features.

Conduct Conflict Analysis

- Identify potential conflicts with other design elements.
- Identify potential conflicts with existing and proposed utilities.
- Identify design elements inside roadway clear zone.
- Identify design elements outside the project ROW.

Coordinate with Roadway Design Team

Coordinate with the roadway designer to determine recommended roadway horizontal and vertical alignments that accommodate the necessary drainage features.

Coordinate with Environmental Team

Coordinate with the Environmental Team to address environmental impacts, commitments, and requirements.

Coordinate with Survey Team

Coordinate with the Survey Team if additional data is needed.

Coordinate with Utilities Team

Coordinate with the utility designer to request additional utility data if needed.

Develop Preliminary Drainage Cost Estimate

- Compile initial drainage bid items and quantities
  - Use UDOT standard bid items
- Develop unit costs for each item
  - Use appropriate resources for developing unit costs such as PDBS or local contractors

- Document unit cost development and assumptions
- Account for project specific factors

· Use lump sum pricing only when appropriate
- Consider contractor risk due to unknown quantity
- Consider all materials and labor involved

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Drainage Design QC Checklist **before** distribution.

· Provide the Checker with a check print of each deliverable and supporting documentation.

· Complete all necessary corrections from the QC check.

· Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 2R1 - MODEL INITIAL ROADWAY DESIGN

2R1 Model Initial Roadway Design

Overview

Determine the recommended horizontal and vertical alignments by developing the initial roadway model.

References

AASHTO Roadway Lighting Design Guide

AASHTO, A Policy on Geometric Design of Highways and Streets

AASHTO Roadside Design Guide

UDOT Sign Manual

UDOT Project Design Certification (PDC)

UDOT Bus Rapid Transit Manual of Instruction (BRTMOI)

UDOT Light Rail Transit Manual of Instruction (LRTMOI)

UDOT Plan Sheet Development Standards Manual (PSDS)

UDOT CADD Standards Manual

UDOT Roadway Design Manual (RDM)

UDOT Roadway Design Manual Drawings (DM Drawings)

UDOT Standard Specifications and Standard Drawings

UDOT Digital Delivery Website

UDOT Structures Design and Detailing Manual (SDDM)

UDOT Signalized Intersection Design Manual

UDOT Roadway Lighting Design Guidelines

UDOT Drainage Manual of Instruction

Manual on Uniform Traffic Control Devices (MUTCD)

UDOT QC/QA Documentation

Masterworks

Deliverables & Tasks

I. RECOMMENDED ALIGNMENTS REVIEW DRAWING OR MAP

A. Determine Recommended Horizontal and Vertical Alignments

1. Determine the recommended horizontal and vertical alignments based on discussions with reviewers, input from other disciplines, and the initial roadway model.

The final horizontal and vertical alignment design is iterative and may require multiple revisions during the development of the roadway model.

2. Do the following to determine the horizontal and vertical alignments:

Coordinate with the following disciplines to determine potential conflicts, deficiencies, and impacts.

Environmental

Right-of-Way

Maintenance

Drainage

Structures

Utilities

Traffic and Safety

Planning

Conform to horizontal and vertical alignment design standards.

B. Develop Initial Roadway Model

1. Develop templates to represent specific project conditions.

2. Develop the roadway model based on templates.

C. Analyze Roadway Design

1. Compliance with the PDC

Identify additional design exceptions and deviations from standards

2. Coordinate with Drainage Design

Surface ditches

Superelevation transitions

Flat spots

Low points

3. Feasibility of driveway connections

4. Traffic signal sight distance

5. Coordinate with Region Materials Engineer for Material availability and identification:

Identify commercial material sources

Identify state-owned pits

Investigate quality of material from the possible materials sources (if applicable)

Identify clearances necessary to use the possible materials sources (if applicable)

D. Prepare Recommended Alignments Review Drawing or Map

1. The review drawing or map provides reviewers with the initial roadway design, specifically the recommended horizontal and vertical alignments.

Prepare the drawing or map following guidance from

UDOT RDM , QC/QA Checklist, UDOT PSDS and UDOT Digital Delivery Website in the format appropriate for the Geometry Review Meeting

Provide the review drawing or map to the Design Leader for distribution to all reviewers.

INITIAL PDC FORM

A. Submit Project Design Certification

1. Complete and submit the initial PDC form.

2. Coordinate with the Region Preconstruction Engineer and necessary disciplines to review known exceptions and deviations.

ROADWAY COST ESTIMATE

A. Update Roadway Cost Estimate

1. Update roadway bid items and quantities.

2. Update roadway unit costs (see 1R1)

QC DOCUMENTATION

A. Perform QC Review

1. Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist before distribution.

Assumptions:

1. Initial Tight Diamond Interchange design by others meets UDOT and WC requirements and will be the only interchange type considered.
2. Southern Hills Drive will go over SR-7 and the existing SR-7 profile will not be modified.
3. Design of Southern Hills Drive will be limited to 500 feet beyond ramp terminal intersections; the Southern Hills Drive cross-section will be determined by SG.
4. Design will utilize the 2021 UDOT RDM, 2023 DM Drawings and 2025 UDOT Standard Drawings in conjunction with the SR-7 Development Standards and SG standards.
5. Digital Delivery will not be utilized.
6. A shared use path will run along Southern Hills Drive; It is understood that a shared used path is being designed as a separate project and this project will coordinate with that design.
7. Intersections are not signalized.

Tasks Modified

1. Analyze Roadway Design
    a. The following are not applicable to this project:
        i. Feasibility of driveway connections.
        ii. Traffic signal sight distance.
        iii. Coordination with region materials engineer

Tasks Added

1. Develop initial horizontal alignments and vertical profiles for the interchange configuration designed by others
2. Conduct a cross-street evaluation with planning-level cost estimates to determine the most cost-efficient design that minimizes drainage, utility, and ROW impacts.
3. Coordinate design of Southern Hills Drive with firm designing the remaining sections of Southern Hills Drive
4. Include Active Transportation elements in roadway modeling

Activity: 2Y1 - PREPARE/COMPILE GEOMETRY REVIEW PACKAGE

2Y1 Prepare/Compile Geometry Review Package

Overview

Compile project cost estimate and all discipline deliverables into one Geometry Review Package.

References

- UDOT QC/QA Documentation

Deliverables

1. Geometry Review Package

   Tasks

   - Compile Project Cost Estimate
   - Review PDC
   - Prepare Geometry Review Package

2. QC Documentation

   Task

   - Perform QC Review

Compile Project Cost Estimate

Obtain each discipline's cost estimate and compile them into one document.

Review PDC

Review the PDC based on comments from the scoping review.

Prepare Geometry Review Package

Compile all review materials from each discipline into one review package.

- Project Cost Estimate
- Review Drawings (in approved formats)
- Other discipline review materials
- Submit Maintenance/Preconstruction Site Visit Certification Form (if complete and not submitted with the Scoping Review Package) (see 1Y2)

Distribute the review package to all meeting attendees and reviewers a minimum of one week before the Geometry Review Meeting (2V1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 2V1 - GEOMETRY REVIEW MEETING

2V1 Geometry Review Meeting

Overview

This meeting is to review the recommended roadway alignments consistency, accuracy, and constructability within the project scope and discuss available funding.

References

- Form F1 - Milestone Review Comment Resolution Form
- UDOT QC/QA Documentation

Deliverables

1. Geometry Review Meeting Agenda

   Task
   - Prepare Meeting Agenda

2. Geometry Review Package

   Task
   - Distribute Review Package

3. Geometry Review Meeting Notes

   Tasks
   - Hold Meeting
   - Compile Meeting Notes
   - Update the PDD

4. Geometry Review Comment Resolution Form

   Task
   - Compile Geometry Review Comments and Submit Initial Dispositions and Responses

Prepare Meeting Agenda

Arrange for the location and time of the meeting. Prepare the meeting agenda. Below are suggested agenda items:

- Project Definition Document (PDD)
- Action items from previous milestone review meetings

- Project Design Criteria (PDC)
- Design exceptions, design waivers, or deviations from standards
- Design conflicts between disciplines
- Constructability issues
- Project phasing and Maintenance-of-Traffic (MOT)
- Project Cost Estimate
- Risk Register and Mitigation Strategies
- Innovative contracting opportunities such as lane rental, P+T, and incentive/disincentive
- Project schedule, milestones and Submit for Advertising Date
- ROW strategy
- UDOT QC/QA Documentation
- Project commitments

Distribute Review Material

Invite all project team members and others as needed. Distribute all review materials and meeting agenda at least **one week** before Geometry Review Meeting.

Hold Meeting

Conduct the meeting according to the agenda.

Compile Meeting Notes

Capture all decisions made and create an action item list. Distribute the meeting notes to all meeting invitees.

Update the PDD

The Project Manager should revise the project information in the PDD based on any changes identified during the Geometry Review Meeting.

Compile Geometry Review Comments and Submit Initial Dispositions and Responses

The Design Leader compiles all reviewer comments into one Geometry Review Comment Resolution Form. Each Discipline Lead provides an initial disposition and response to comments related to their design and deliverables. Refer to UDOT QC/QA Documentation for more information about completing the Milestone Review Comment Resolution Form.

The Design Leader submits the Geometry Review Comment Resolution Form to all reviewers and team members once all comments have an initial disposition and response.

If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes and distributes them after the meeting.

Activity: 3Q1 - COMPLETE DRAINAGE DESIGN

3Q1 Complete Drainage Design

Overview

Complete design of the roadway drainage and open channel drainage features.

References

- UDOT CADD Standards
- UDOT Drainage Manual of Instruction
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Standard and Supplemental Drawings

Deliverables

1. Drainage Design

   Tasks

   - Address Geometry Review Comments
   - Finalize Hydraulic Analysis
   - Complete Storage Facility Design
   - Complete Storm Inlet Design
   - Complete Storm Drain Design
   - Complete Culvert Design
   - Complete Irrigation Design
   - Identify Potential Design Conflicts

2. Preliminary Drainage Plan and Profile Sheets

   Task

   - Prepare Preliminary Drainage Plan and Profile Sheets

3. Drainage Cost Estimate

   Task

   - Update Drainage Cost Estimate

4. QC Documentation

   Task

   - Perform QC Review

Address Geometry Review Comments

Complete the roadway drainage portions of the Geometry Review Comment Resolution Form.

- Respond to each drainage related comment.
- Make revisions to the design and deliverables in accordance with the responses.
- Conduct QC Review and Verification of all comments.

See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Finalize Hydraulic Analysis

Complete Storage Facility Design

Complete storage facility design in accordance with UDOT's Drainage Manual of Instruction.

- Perform routing of check flood
- Complete the storage facility design
  - Develop inflow hydrograph
  - Calculate storage volume breakout
  - Develop grading and depth requirements
  - Identify outlet locations
  - Analyze release rate
  - Design control structures
  - Identify provisions for maintenance (such as berms and access ramps)
- Evaluate the earthwork

Complete Storm Inlet Design

The following should be considered in completing the storm inlet design in accordance with UDOT's Drainage Manual of Instruction.

- Time of concentration
- Spread width
- Bypass flow
- Access spacing
- Major sag locations
- Debris and clogging of storm drain inlet
- Grate inlet type

Complete Storm Drain Design

The following should be considered in completing the storm drain design in accordance with UDOT's Drainage Manual of Instruction.

- Drainage pipe velocity
- Drainage pipe sized
- Hydraulic grade lines (HGLs)
- Drainage pipe material
- Energy dissipation
- Flood inundation of storm drain system (Design Check)
- Environmental restrictions of water quality for outfall

- Vertical profile of storm drain and ditches
- Earthwork

Complete Culvert Design

The following should be considered in completing the culvert design according to UDOT's Drainage Manual of Instruction.

- Culvert capacity and freeboard
- Placement of headwall and end-sections
- Culvert material
- Energy dissipation
- Earthwork

Complete Irrigation Design

- Establish rim elevations for diversion structures based on operating head of the system
- Establish vertical profile of irrigation pipes and ditches
- Re-establish diversion points. Obtain written notification from ditch master if diversions are being abandoned
- Determine appropriate storm drain material type based on corrosiveness of native material
- Ensure all irrigation culverts extend from one ROW boundary to the other

Identify Potential Design Conflicts

Identify design conflicts such as utilities, roadway, and ROW with proposed drainage features. Coordinate with other disciplines to evaluate design alterations to mitigate conflicts. Coordinate with the Region Utility and Railroad Coordinator and Utility Designer to identify all potential utility conflicts and potential SUE Level A.

Prepare Preliminary Drainage Plan and Profile Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to develop preliminary plan sheets for review. These sheets are to provide a review of the final designs. It is recommend that only the information required for review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. All information on the sheets must go through the QC review procedure **before** distribution. Combine plan sheets with other designs when appropriate.

- Conform to General Plan Sheet Requirements of the UDOT Plan Sheet Development Standards.
- Follow and maintain CADD standards on each sheet.
- Include all information necessary for review including callouts and notes.

Update Drainage Cost Estimate

- Update drainage bid items and quantities.
- Update drainage unit costs (see 2Q1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Drainage Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 3R1 - COMPLETE ROADWAY DESIGN

3R1 Complete Roadway Design

Overview

Finalize the roadway model and design. Modify the design based on reviewer comments and continued coordination with project team members. Modify the design as necessary to include other discipline needs like drainage facilities, utilities, signal, signs, and ATMS. Create preliminary roadway plan sheets.

References

- 13 Critical Elements
- AASHTO, A Policy on Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- Design Exception, Design Waivers, and Deviation from Standards Forms
- NATCO, Urban Street Design Guide
- Project Design Criteria (PDC)
- Project Development Business System (PDBS)
- Test Level 5 Barrier Warrants/Approval Request Form
- UDOT Additional Design Criteria
- UDOT CADD Standards
- UDOT Median Barrier Selection Process
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Standard and Supplemental Drawings

Deliverables

1. Preliminary Roadway Plan and Profile Sheets

   Tasks

   - Address Geometry Review Comments
   - Coordinate with Project Team Members
   - Complete Roadway Design

- Develop Preliminary Roadway Plan and Profile Sheet

2. Preliminary Typical Section Plan Sheets

Task

- Develop Preliminary Typical Section Plan Sheets

3. Design Exceptions, Design Waivers, and Deviation from Standards Forms (if necessary)

Task

- Submit Design Exceptions, Design Waivers, and Deviation from Standard Forms for Approval

4. Test Level 5 Barrier Warrants/Approval Request Form (if necessary)

Task

- Submit Test Level 5 Barrier Warrants/Approval Request Form

5. Roadway Cost Estimate

Task

- Update Roadway Cost Estimate

6. QC Documentation

Task

- Perform QC Review

Address Geometry Review Comments

Complete the roadway portions of the Geometry Review Comment Resolution Form.

- Respond to each roadway related comment.
- Make revisions to the design and deliverables in accordance with the responses.
- Conduct QC Review and Verification of all comments.

Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Coordinate with Project Team Members

Continually coordinate with project team members. Discuss aspects of the model and design with appropriate disciplines to ensure compliance with standards, with other designs, and address fatal flaws. Coordinate and mitigate project design conflicts, impacts, and deficiencies.

Complete Roadway Design

Refer to AASHTO and UDOT design standards to finalize the roadway design.

- Finalize templates including, but not limited to, the following:
  - Pavement section
  - Superelevation
  - Transitions
    - Gore areas
    - Lane widening

- Finalize the roadway model based on templates.
  - Grading
    - Accommodate guardrail/barrier
    - Driveways/approaches
    - Curb returns
    - Cross streets
    - Accommodate drainage
    - Overhead sign locations
    - Retaining walls
    - Major and minor structures
  - Create design surfaces
  - Evaluate the cut/fill lines
    - Identify any additional ROW, utility, and other impacts
- Design miscellaneous features including, but not limited to, the following:
  - Maintenance access
  - Geotechnical instrumentation accommodations
  - Driveways
  - Fences
  - Fire hydrants
  - Flatwork
  - Mailboxes
  - Pedestrian access ramps
  - Raised islands
  - Removals
  - Trails
- Evaluate clear zone hazards and appropriate protection devices.
  - Design guardrail/barrier
  - Select median barrier (see UDOT Median Barrier Selection Process)
  - Complete UDOT Test Level 5 Barrier Warrants/Approval Request Form (if necessary)
- Consider construction phasing and limitations.
- Produce a clean version of the roadway design in MicroStation.
  - Roadway file
  - Typical sections
  - Profiles
  - Superelevation diagrams
- Calculate quantities.

Develop Preliminary Roadway Plan and Profile Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to develop roadway plan and profile sheets for review. These sheets are to provide a review of the final roadway design. It is recommend that only the information required for final roadway design review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review is required before distribution for all labels, callouts, notes, and information found on the plan sheets.

- Do the following for all plan sheets:
  - Follow the UDOT Plan Sheet Development Standards for General Plan Sheet Requirements when generating plan sheets, drafting, referencing, and callouts
  - Provide all information needed for review such as type of curb and gutter, cut/fill lines, and alignment annotation
  - Label all streets and important existing features
  - Ensure all existing features are displayed in proper grayscale
- Do the following for roadway plan sheets:
  - Include all roadway design and roadway related features such as cut/fill and ROW
  - Annotate all alignments
  - Label all new roadway work items, including miscellaneous design features listed above, overhead sign locations, guard rails/barrier, retaining walls, and other important design features such as type of curb and gutter and curb radius
- Do the following for roadway profile sheets:
  - Follow the UDOT Plan Sheet Development Standards for Roadway Profile Sheet Requirements
    - § Superelevation
    - § Label transition point station and rate
    - § Show and label the existing ground

Develop Preliminary Typical Section Plan Sheets

Create typical section plan sheets and include all typical sections. Use the following to develop the preliminary typical section plan sheets:

- General Plan Sheet Requirements
- Typical Sections Sheet Requirements
- Label all typical section features
- Label each typical section start and end station
- Include all necessary notes, callouts, dimensions, and symbols
- Make sure all symbols and line styles are identifiable

Submit Design Exceptions, Design Waivers, and Deviation from Standards Forms for Approval (if necessary)

Complete and submit design exception, design waivers, and deviation from standards forms. Work with the Region Preconstruction Engineer to obtain approvals.

Submit Test Level 5 Barrier Warrants/Approval Request Form (if necessary)

Complete and submit Test Level 5 Barrier Warrants/Approval Request Form.

Update Roadway Estimate

- Update roadway bid items and quantities.
- Update roadway unit costs (see 1R1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Assumptions:

1. No overhead sign/structure will be required.

Activity: 3R2 - COMPLETE SIGNING & STRIPING DESIGN

3R2 Complete Signing and Striping Design

Overview

Using the roadway model as a guide, develop the signing and striping design for the project. Locate appropriate sites for placement of overhead sign structures (if applicable). Develop Maintenance-of-Traffic (MOT) design. Develop preliminary signing, striping, and MOT plan sheets.

References

- AASHTO Roadside Design Guide
- Manual on Uniform Traffic Control Devices (MUTCD)
- NATCO, Urban Street Design Guide UDOT Sign Manual
- Project Development Business System (PDBS)
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Sign Manual
- UDOT Standard and Supplemental Drawings
- UDOT Structures Design and Detailing Manual (SDDM)

Deliverables

1. Preliminary Signing and Striping Plan Sheets

   Tasks

   - Develop Signing and Striping Design
   - Create Preliminary Signing and Striping Plan Sheets

2. Overhead Sign Locations (as necessary)

   Tasks

- Identify Overhead Sign Locations
- Determine Cantilever or Full Span
- Produce Cross-Section to Determine Vertical Clearance
- Determine Barrier Needs/Foundation Protection
- Determine Power Requirements for Lighting the Overhead Sign

3. Preliminary MOT Plan Sheets

Tasks

- Complete MOT Design
- Obtain Closure Approvals (if necessary)
- Create Preliminary MOT Plan Sheets

4. Signing, Striping, and MOT Cost Estimates

Task

- Develop Signing, Striping, and MOT Cost Estimate

5. QC Documentation

Task

- Perform QC Review

6. Region and State Approvals (as necessary)

Task

- Obtain Region and State Approvals

Develop Signing and Striping Design

Using UDOT Standard Drawings as well as the Federal Highway Administration (FHWA) and UDOT approved Manual of Uniform Traffic Control Devices (MUTCD) as references, develop signing and striping design.

- Do the following for signing design:
  - Coordinate with the Region Traffic Engineer for approval of interstate guide signs by the Central Traffic and Safety Division
  - Review for compliance with MUTCD
  - Consider signs that may be required outside of the project limits
  - Replace, modify, or upgrade existing signs where necessary
- Do the following for striping design:
  - Base the striping plan on capacity analysis
  - Design lane widths and intersection layouts from previous phases
  - Note pavement marking type

Create Preliminary Signing and Striping Plan Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to create signing and striping plan sheets for review. These sheets are to provide a review of the final signing and striping design. It is recommend that only the information required for final signing and striping design review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review is required before distribution for all labels, callouts, notes, and information found on the plan sheets.

- Do the following for all plan sheets:

- Follow the UDOT Plan Sheet Development Standards for General Plan Sheet Requirements for sheet generation, drafting, referencing, and callouts
- Provide all information needed for review
- Include the street names
- Show the proposed design without cut/fill lines
- Show the new alignment, stationing, and curve data
- Ensure all existing features are displayed in proper grayscale

· Do the following for striping plan sheets:
- Label pavement marking type

· Do the following for signing plan sheets:
- Correctly call out the proposed sign locations.

· Overhead Sign Locations
- Show on roadway plan sheets and signing and striping plan sheets
- Correctly call out the proposed foundation locations on Roadway Plan Sheets

Identify Overhead Sign Locations

Refer to the MUTCD and UDOT Sign Manual to determine the locations of overhead sign needs.

Determine Cantilever or Full Span

Determine the placement and type of structure based on recommendations from the structural design engineer and the Structures Division requirements found in the Structures Design and Detailing Manual.

Produce Cross-Section to Determine Vertical Clearance

Provide vertical clearances according to the Structures Division requirements. These requirements can be found in the Structures Design and Detailing Manual.

Determine Barrier Needs/Foundation Protection

Evaluate the clear zone requirements and need for barrier/foundation protection.

Determine Power Requirements for Lighting the Overhead Sign

Determine the lighting and power needs for overhead signs and coordinate with the Lighting Designer (3R3).

Complete MOT Design

Using resources that include the UDOT Standard and Supplemental Drawings TC series, FHWA, MUTCD, and the Work Zone Safety and Mobility Policy UDOT 08-05, develop the MOT design. Consider the following:

- Coordinate the detour routes with stakeholders to minimize impacts. These stakeholders could include state agencies, local agencies, property owners, and the traveling public.
- Coordinate with the Design Leader to determine user costs.
- Evaluate the detour alternatives.
- Review the preferred alternatives with the Region Traffic Engineer.
- Design project specific custom signs, including dimensions, color, message, and letter size.
- Determine the VMS sign placement and proposed message.
- Design the static information sign.
- Consider the overhead VMS and HAR radio sites.
- Consider the need to model traffic impacts due to traffic pattern modifications.
- Coordinate signal timing adjustments with the TOC.
- If closures are required, do the following:
    - Develop the detour plan for each closure
    - Place VMS in each direction seven days prior to the closure
    - Get approval from the Region Operations Engineer and Region Director

Obtain Closure Approvals (if necessary)

Initiate and obtain approval from local agencies or FHWA when applicable.

Create Preliminary MOT Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to create preliminary MOT plan sheets for review. These sheets are to provide a review of the preliminary MOT layout. It is recommend that only the information required for the review be placed on the sheets at this time. Verify with the project manager the expected level of effort for the review submittal. QC review of all labels, callouts, notes, and information found on the plan sheets is required before distribution.

- Follow the UDOT Plan Sheet Development Standards for general plan sheet requirements for sheet generation, drafting, referencing, and callouts
- Include the street names
- Show the MOT design
- Label/call out all necessary items

Develop Signing, Striping, and MOT Cost Estimate

Refer to the R-MOI Estimating section.

- Develop signing and striping bid items and quantities.
- Coordinate with the Structural Engineer to develop overhead sign structure bid items and quantities.
    - Use UDOT standard bid items
- Develop unit costs for each item.
    - Use appropriate resources for developing unit costs such as PDBS and local contractors
    - Document unit cost development, assumptions, etc.

- Account for project specific factors

- Use lump sum pricing only when appropriate.
  - Consider contractor risk due to unknown quantity
  - Consider difficulty in pricing per unit
  - Consider all materials and labor involved

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Obtain State and Region Approval

Submit review materials to the Region Traffic Engineer and Central Traffic Engineer. Address comments as necessary to obtain design approval.

Activity: 3Y1 - PREPARE/COMPILE PLAN-IN-HAND REVIEW PACKAGE

3Y1 Prepare/Compile Plan-in-Hand Review Package

Overview

Compile Geometry Review comment resolution form, project cost estimate, and all discipline deliverables into one Plan-in-Hand review package.

Resources

- Milestone Review Comment Resolution Form
- Price + Time Bidding (P+T)
- UDOT QC/QA Documentation

Deliverables

1. Geometry Review Comment Resolution Form

   Task

   - Finalize Geometry Review Comment Resolution Form

2. User Costs (for Price + Time Bidding)

   Tasks

   - Determine Traffic Control Restrictions
   - Coordinate with the TMD

- Finalize User Costs

3. Plan-in-Hand Review Package

Tasks

- Review PDC
- Compile Project Cost Estimate
- Prepare Plan-in-Hand Review Package

4. QC Documentation

Task

- Perform QC Review

Finalize Geometry Review Comment Resolution Form

Coordinate with team members to address and verify all Geometry Review comments. Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Determine Traffic Control Restrictions

Coordinate with the project team to determine the following:

- Construction phasing
  - Schedule
  - Phasing limits
- Unique traffic control or maintenance of traffic issues
- Preliminary MOT design
- Construction limitations

Coordinate User Cost Analysis with the TMD

Coordinate with the Traffic Management Division (TMD) to determine the user costs.

Finalize User Costs

Coordinate, as necessary, with the project team to adjust traffic control, maintenance of traffic, and construction restrictions and methods to reduce user costs and construction related delays. Determine the final estimated user costs.

Review PDC

Review and update the PDC based on comments from the geometry review.

Update Project Cost Estimate

Obtain each discipline's cost estimate and compile them into one document.

Prepare Plan-in-Hand Review Package

Prepare Plan-in-Hand Review Package:

- Geometry Review Comment Resolution Form
- All Preliminary Plan Sheets
- Typical Sections
- Project Cost Estimate
- Project estimate ePM Screen 505

Distribute the package to all meeting attendees and reviewers a minimum of two weeks before the Plan-in-Hand Meeting (3V1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

If Local Government Project

The Local Government Representative is responsible for monitoring the progress of the design activities to ensure that the design process remains on schedule and within budget. Any reduction of project scope or additional funding must be approved by UDOT Project Manager. The Local Government Representative should request frequent status updates from the Design Leader.

Activity: 3V1 - PLAN-IN-HAND REVIEW MEETING

3V1 Plan-in-Hand Review Meeting

Overview

The Plan-in-Hand review is the review of all major roadway, hydraulic, drainage, ITS, utility, geotechnical, and ROW designs. The meeting should include reviews of available funding, along with design consistency, accuracy, and constructability within the project scope.

References

- Form F1 - Milestone Review Comment Resolution Form
- UDOT QC/QA Documentation

Deliverables

1. Plan-in-Hand Meeting Agenda

Task

- Prepare Meeting Agenda

2. Plan-in-Hand Review Package

Task

- Distribute Review Package

3. Plan-in-Hand Meeting Notes

Tasks

- Hold Meeting
- Compile Meeting Notes

4. Plan-in-Hand Review Comment Resolution Form

Task

- Compile Plan-in-Hand Review Comments and Submit Initial Dispositions and Responses

Prepare Meeting Agenda

Arrange for the location and time of the meeting. Prepare the meeting agenda. Below are suggested agenda items:

- Field visit
- Project Definition Document (PDD)
- Action items from previous milestone review meetings
- Comment resolution form
- Project Design Criteria (PDC)
- Design exceptions, design waivers, and deviations from standards
- Plan sheet responsibilities
- Design conflicts between disciplines
- Constructability issues
- Project phasing and Maintenance-of-Traffic
- Limitations of operations
- Environmental, ROW, Utility,and PI commitments
- Engineer's Estimate
- Risk Register and Mitigation Strategies
- Innovative contracting opportunities such as lane rental, P+T, and incentive/disincentive
- Project schedule, including milestones and Submit for Advertising Date in MS Project
- ROW strategy
- UDOT QC/QA Documentation

Distribute Review Package

Invite all project team members and others as needed. Distribute Plan-in-Hand Review Package (including the completed Geometry Review Comment Resolution Form) and meeting agenda at least **two weeks** before the Plan-in-Hand Review Meeting.

Hold Meeting

Conduct the meeting according to the agenda.

Compile Meeting Notes

Capture all decisions made and create an action item list. Distribute the meeting notes to all meeting invitees

Compile Plan-in-Hand Review Comments and Submit Initial Dispositions and Responses

The Design Leader compiles all reviewer comments into one Plan-in-Hand Review Comment Resolution Form. Each discipline provides an initial disposition and response to comments related to their design and deliverables. Refer to UDOT QC/QA Documentation for more information about completing the Milestone Review Comment Resolution Form.

The Design Leader submits the Plan-in-Hand Review Comment Resolution Form to all reviewers and team members once all comments have an initial disposition and response.

If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes, and distributes them after the meeting.

Activity: 4A1 - COMPLETE EROSION & SEDIMENT CONTROL PLANS & DOCUMENTS

4A1 Complete Erosion & Sediment Control Plans and Documents

Overview

Develop the project erosion and sediment control design, plans, and summaries. Prepare and assemble erosion and sediment control project documents including plans, special provisions, and Engineer's Estimate in PDBS.

References

- Acceptance and Documentation Guide (A&D)
- Measurement and Payment (M&P)
- Project Development Business System (PDBS)
- UDOT CADD Standards
- UDOT Erosion and Sediment Control Field Guide
- UDOT Erosion and Sediment Control Manual
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Specification Writer's Guide
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications
- UDOT Storm Water Information and Permitting Website

Deliverables

1. Erosion and Sediment Control Plans

   Tasks

   - Design Erosion and Sediment Control Elements

- Complete Erosion and Sediment Control Plan Sheets
- Complete Erosion and Sediment Control Detail Sheets
- Complete Erosion and Sediment Control Summary Sheets

2. Erosion and Sediment Control Cost Estimate

Tasks

- Finalize Erosion and Sediment Control Cost Estimate
- Enter Erosion and Sediment Control Cost Estimate into PDBS

3. Erosion and Sediment Control Project Documents

Task

- Prepare Erosion and Sediment Project Documents

4. QC Documentation

Task

- Perform QC Review

Design Erosion and Sediment Control Elements

- Design the location of erosion and sediment control elements using UDOT's Erosion and Sediment Control Field Guide to stabilize disturbed soil during construction and to capture and remove sediment from storm water runoff.
- Comply with UPDES requirements.
- Evaluate the erosion and sediment control needs for all construction phases.
- Select temporary erosion and sediment control measures.
- Develop locations for erosion and sediment control best management practices (BMPs).
- Use UDOT standard BMPs as much as possible.
- Coordinate with Region Landscape Architect to determine the need for an Environmental Control Supervisor.
- Determine areas requiring seeding and develop appropriate seeding schedule based on soils, precipitation, and elevation.

Complete Erosion and Sediment Control Plan Sheets

- Complete all erosion and sediment control plans according to UDOT standards.
  - Conform to UDOT CADD Standards
  - Conform to UDOT Plan Sheet Development Standards
    - § General plan sheet requirements
- Maintain CADD standards on each sheet such as line styles shown and cell scaling.
- Include all necessary notes, callouts, and legends.
- Identify and reference standard drawings and details.
- Clearly organize all information.
- Place a legend on each sheet.
- Identify all temporary erosion and sediment control measures.
- Include all necessary permanent stabilization requirements as indicated below and identify locations on erosion and sediment control plans or on other appropriate plans.
  - Topsoil - include depth, limits, and total area
  - Seed - include limits (shown graphically and total area)
  - Mulch - include limits

- Erosion control blanket - include limits (shown graphically and total area)
- Rock of fabric-lined ditches/swales - include limits (shown graphically and total area)

· Match all pay item callouts exactly with the cost estimate.

Complete Erosion and Sediment Control Detail Sheets

Develop all non-standard details necessary for construction and detail plan sheets.

· Conform to UDOT Standards
  - UDOT Erosion and Sediment Control Manual
  - UDOT CADD Standards
  - UDOT Erosion and Sediment Control Field Guide
  - UDOT Standard and Supplemental Drawings
· Prepare detail plan sheets in accordance with UDOT Plan Sheet Development Standards.
  - General Plan Sheet Requirements
  - Detail Sheet Requirements
  - Include all necessary notes, callouts, dimensions, and symbols
  - Use identifiable symbols and line styles

Complete Erosion and Sediment Control Summary Sheets

· Prepare summary sheets according to UDOT Plan Sheet Development Standards and Summary Sheet CADD Standards.
  - General Plan Sheet Requirements (Department or Region)
  - Summary Sheet Requirements
· Use UDOT Excel spreadsheets and customize for the project.
  - Include all erosion and sediment control related pay items and necessary non-pay items
  - Include names, alignment designations, stations, offsets, units, and quantities
  - Show enough detail to support calculations
· Use UDOT standard summary plan sheets.
  - Export all summaries from Excel to MicroStation

Finalize Erosion and Sediment Control Cost Estimate

· Update bid items and quantities
· Update unit costs

Enter Erosion and Sediment ControlCost Estimate into PDBS

Prepare Erosion and Sediment Control Documents

· Provide all special provisions required for project construction.
  - General Special Provisions
  - Project Specific Special Provisions

- Use UDOT Specification Writer's Guide
- Include local municipality specifications

· Generate Measurement and Payment (M&P) for all bid items.
- Develop M&P for all non-standard bid items
- Use the current M&P
- Include accurate description for all effort and materials required for construction
- M&P pay items must match plan sheet pay items exactly

· Generate Acceptance and Documentation Guide (A&D) for all standard pay items.
- Use the current A&D
- Coordinate with the RE to develop the A&D for non-standard items

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Aesthetics/Landscaping Design QC Checklist **before** distribution.

· Provide the Checker with a check print of each deliverable and supporting documentation.
· Complete all necessary corrections from the QC check.
· Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 4Q1 - COMPLETE DRAINAGE PLAN SHEETS & DOCUMENTS

4Q1 Complete Drainage Plan Sheets and Documents

Overview

Revise the drainage design based on the plan-in-hand review. Complete drainage plan set and documents. Finalize the drainage report.

References

· Acceptance and Documentation Guide (A&D)
· Measurement and Payment (M&P)
· UDOT CADD Standards
· UDOT Drainage Manual of Instruction
· UDOT Plan Sheet Development Standards
· UDOT QC/QA Documentation
· UDOT Specification Writer's Guide
· UDOT Standard and Supplemental Drawings
· UDOT Standard and Supplemental Specifications

Deliverables

1. Drainage Plan Sheets

Tasks

- Address Plan-in-Hand Review Comments
- Revise Drainage Design
- Complete Drainage Plan and Profile Sheets
- Complete Drainage Detail Sheets
- Complete Drainage Summary Sheets

2. Drainage Cost Estimate

Tasks

- Finalize Drainage Cost Estimate
- Enter Drainage Cost Estimate into PDBS

3. Drainage Project Documents

Task

- Complete Drainage Project Documents

4. Drainage Report

Task

- Complete Drainage Report

5. QC Documentation

Task

- Perform QC Review

Address Plan-in-Hand Review Comments

Complete the drainage portions of the Plan-in-Hand Review Comment Resolution Form.

- Respond to each drainage related comment.
- Make revisions to the design and deliverables in accordance with the responses.
- Conduct QC Review and Verification of all comments.

See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Revise Drainage Design

Based on review comments and coordination with other disciplines, revise the drainage design as needed.

Complete Drainage Plan and Profile Sheets

Complete all drainage plan and profile sheets according to UDOT and Federal standards.

- Conform to UDOT Plan Sheet Development Standards.
  - General plan sheet requirements.
- Maintain CADD standards on each sheet such as line styles shown correctly and cell scaling.
- Include all necessary notes, callouts, and legends.
  - Identify all existing drainage facilities
    - Existing water features ¿ river, stream, creek, lake, canals, ditches, and pipes
    - Call out all protect-in-place existing facilities

- Identify all proposed drainage facilities
    - Provide drainage structure grate/rim elevations
    - Provide station and offset information necessary for construction
    - Identify and number all pipes, culverts, and inlets
    - Identify all proposed conveyance methods
    - Identify all slopes
    - Call out all sizes or cross sections
    - Design flows and velocities
    - Hydraulic grade line
    - Inflow and outflow elevations
    - Energy dissipation locations and methods
    - Vertical profiles for each conveyance method
        - Profiles follow the individual alignment (not the roadway)
- Identify and reference standard drawings and details correctly
- Clearly organize all information
- Make sure all symbols and line styles used are identifiable
- Make sure pay item callouts match the cost estimate exactly
- Indicate all utility conflicts on both the plan and profile

Complete Drainage Detail Sheets

- Complete all details necessary for construction of the project.
    - Conform to UDOT Standards
- Prepare detail plan sheets.
    - General Plan Sheet Requirements.
    - Detail Sheet Requirements
    - Include all necessary notes, callouts, dimensions, and symbols
    - Use identifiable symbols and line styles

Complete Drainage Summary Sheets

- Prepare summary sheets according to UDOT Plan Sheet Development Standards and Summary Sheet CADD Standards.
    - General Plan Sheet Requirements (Department or Region)
    - Summary Sheet Requirements
- Use UDOT Excel spreadsheets and customize for the project
    - Include all roadway related pay items and necessary non-pay items
    - Include names, alignment designations, stations, offsets, units, and quantities
    - Show enough detail to support calculations
- Use UDOT standard summary plan sheets.
    - Export all summaries from Excel to Microstation

Finalize Drainage Cost Estimate

- Update drainage bid items and quantities.
- Update drainage unit costs (see 2Q1).

Enter Drainage Cost Estimate into PDBS

Complete Drainage Project Documents

- Provide all special provisions required for project construction.
  - General Special Provisions
  - Project Specific Special Provisions
  - Use UDOT Specification Writer's Guide.
- Use PDBS to generate M&P for all bid items.
  - Develop M&P for all non-standard bid items
  - Use the current M&P
  - Include accurate description for all effort and materials required for construction
  - M&P pay items must match plan sheet pay items exactly
- Use PDBS to generate A&D for all standard pay items.
  - Use the current A&D
  - Coordinate with the RE to develop A&D for non-standard items

Complete Drainage Report

Complete Drainage report and include necessary drainage elements and data for the project.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Drainage Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 4R1 - COMPLETE ROADWAY PLANS & DOCUMENTS

4R1 Complete Roadway Plans and Documents

Overview

Following UDOT Plan Sheet Development Standards, complete the roadway plan and profile sheets and create roadway plan summaries, details, and additional plan sheets. Prepare and assemble roadway project documents. Finalize roadway cost estimate.

References

- AASHTO, A Policy on Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- Acceptance and Documentation Guide (A&D)
- Measurement and Payment (M&P)
- NATCO, Urban Street Design Guide
- Project Development Business System (PDBS)
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Specification Writer's Guide
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications

Deliverables

1. Roadway Plan and Profile Sheets

   Tasks

   - Address Plan-in-Hand Review Comments
   - Finalize Roadway Design
   - Complete Roadway Plan and Profile Sheets
   - Complete Typical Section Sheets
   - Complete Roadway Detail Sheets
   - Complete Grading Plan Sheets
   - Complete Roadway Summary Sheets

2. Roadway Cost Estimate

   Tasks

   - Finalize Roadway Cost Estimate
   - Enter Roadway Cost Estimate into PDBS

3. Roadway Project Documents

   Task

   - Develop Roadway Project Documents

4. QC Documentation

   Task

   - Perform QC Review

Address Plan-in-Hand Review Comments

Complete the roadway portions of the Plan-in-Hand Review Comment Resolution Form.

- Respond to each roadway related comment.
- Make revisions to the design and deliverables in accordance with the responses.

- Conduct QC Review and Verification of all comments.

See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Finalize Roadway Design

Finalize the roadway design based on review comments and coordination with team members. Refer to 3R1 as needed.

Complete Roadway Plan and Profile Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to complete the roadway plan and profile sheets.

- Do the following for all plans sheets:
  - Follow the UDOT Plan Sheet Development Standards for General Plan Sheet. Requirements for generating plan sheets, drafting, referencing, and callouts.
  - Provide all necessary information.
- Do the following for roadway plan sheets:
  - Revise/update information labeled in previous review submittals as necessary.
  - Follow the UDOT Plan Sheet Development Standards for Roadway Plan Sheet Requirements.
  - Include all quantities and start/end stations.
  - Verify that the callouts are correctly placed and labeled.
- For roadway profile sheets, do the following:
  - Revise/update information as needed.
  - Follow the UDOT Plan Sheet Development Standards for Roadway Profile Sheet Requirements.
    - § Superelevation
    - § Label transition point station and rate.
    - § Show and label the existing ground.

Complete Typical Section Sheets

Finalize all typical sections and complete the plan sheets. Revise typical sections as needed based on review comments and roadway design revisions.

Complete Roadway Detail Sheets

- Complete all details necessary for construction of the project.
  - Conform to UDOT Standards.
- Prepare detail sheets.
  - General Plan Sheet Requirements
  - Detail Sheet Requirements
  - Include all necessary notes, callouts, dimensions, and symbols
  - Use identifiable symbols and line styles.

Complete Grading Plan Sheets

- Complete grading design necessary for construction of the project.
  - Conform to UDOT Standards.
- Prepare grading plan sheets.
  - General Plan Sheet Requirements
  - Grading Sheet Requirements
  - Include all necessary notes, callouts, dimensions, and symbols
  - Use identifiable symbols and line styles.

Complete Roadway Summary Sheets

- Prepare summary sheets according to UDOT Plan Sheet Development Standards and Summary Sheet CADD Standards.
  - General Plan Sheet Requirements (Department or Region).
  - Summary Sheet Requirements
- Use UDOT Excel spreadsheets and customize for the project.
  - Include all roadway related pay items and necessary non-pay items.
  - Include names, alignment designations, stations, offsets, units, and quantities.
  - Show enough detail to support calculations.
- Use UDOT standard summary plan sheets.
  - Export all summaries from Excel to MicroStation.

Finalize Roadway Cost Estimate

- Update roadway bid items and quantities.
- Update roadway unit prices (see 1R1).

Enter Roadway Cost Estimate into PDBS

Develop Roadway Project Documents

- Provide all special provisions required for project construction.
  - General Special Provisions.
  - Project Specific Special Provisions.
  - Use UDOT Specification Writer’s Guide.
- Generate M&P for all bid items.
  - Develop M&P for all non-standard bid items.
  - Use the current M&P.
  - Include accurate description for all effort and materials required for construction.
  - M&P pay items must match plan sheet pay items exactly.
- Generate A&D for all standard pay items.
  - Use the current A&D.
  - Coordinate with the RE to develop A&D for non-standard items.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 4R2 - COMPLETE SIGNING & STRIPING PLANS & DOCUMENTS

4R2 Complete Signing and Striping Plans and Documents

Overview

Following UDOT CADD and Plan Sheet Standards, finalize the signing and striping plan set and create summary sheets. Finalize the Maintenance-of-Traffic (MOT) design and plans. Prepare and assemble the signing, striping, and MOT project documents, including measurement and payment, special provisions, A&D, and final cost estimate.

References

- AASHTO, A Policy on Geometric Design of Highways and Streets
- AASHTO Roadside Design Guide
- Acceptance and Documentation Guide (A&D)
- Manual on Uniform Traffic Control Devices (MUTCD)
- Measurement and Payment (M&P)
- NATCO, Urban Street Design Guide
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Roadway Design Manual of Instruction (R-MOI)
- UDOT Specification Writer's Guide
- UDOT Standard and Supplemental Drawings
- UDOT Standard and Supplemental Specifications

Deliverables

1. Signing and Striping Plan Sheets

   Tasks

   - Address Plan-in-Hand Review Comments
   - Design Overhead Sign Layout (if necessary)
   - Finalize Signing and Striping Design
   - Complete Signing and Striping Plan Sheets

- Complete Signing and Striping Detail Sheets
- Complete Signing and Striping Summary Sheets

2. MOT Plan Sheets

Tasks

- Finalize MOT Design
- Complete MOT Plan Sheets

3. Signing, Striping, and MOT Cost Estimate

Tasks

- Finalize Signing, Striping, and MOT Cost Estimate
- Enter Signing, Striping, and MOT Cost Estimate into PDBS

4. Signing, Striping, and MOT Project Documents

Task

- Develop Signing, Striping, and MOT Project Documents

5. QC Documentation

Task

- Perform QC Review

6. Overhead Sign Approval

Task

- Obtain Overhead Sign Approval

Address Plan-in-Hand Review Comments

Complete the signing and striping portions of the Plan-in-Hand Review Comment Resolution Form.

- Respond to each signing and striping related comment.
- Make revisions to the design and deliverables according to the responses.
- Conduct QC Review and Verification of all comments.

See UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Design Overhead Sign Layout (if necessary)

- Layout the sign message.
- Determine the lighting requirements.
- Submit the sign layout to Central Traffic and Safety Division for approval.
- Coordinate with the Central Structures for sign structure design.
- Finalize electrical power needs for lighting and overhead signs.

Finalize Signing and Striping Design

Finalize the signing and striping design based on review comments and coordination with team members. Refer to 3R3 as needed.

Complete Signing and Striping Plan Sheets

Follow the current UDOT CADD Standards and UDOT Plan Sheet Development Standards to finalize the plan sheets.

- Combine signing and striping plan sheets when possible.
- Update/revise all labels for items labeled in 3R2.
- Do the following for **str**iping plan sheets:
  - Follow the Striping Sheet Requirements
  - Callout all items necessary to construct
    - Lane widths
    - Taper locations
    - Taper widths
    - Striping types and sizes
    - Beginning and ending of all striping
- Do the following for **signin**g plan sheets:
  - Follow the Signing Sheet Requirements
  - Callout all items necessary to construct
    - Callout existing sign removals and relocations
  - For each proposed sign
    - Pay item description
    - MUTCD code
    - Station and offset
    - Reference number
- Include all notes, legends, and title block information.
- Verify that the callouts are correctly placed and labeled.

Complete Signing and Striping Detail Sheets

- Complete all details necessary to construct signing and striping design.
  - Conform to UDOT Standards
  - Include all overhead sign details
- Prepare detail sheets.
  - General Plan Sheet Requirements
  - Detail Sheet Requirements
  - Include all necessary notes, callouts, dimensions, symbols, etc.
  - Use identifiable symbols and line styles

Complete Signing and Striping Summary Sheets

- Prepare summary sheets in accordance with UDOT Plan Sheet Development Standards
  - General Plan Sheet Requirements
  - Summary Sheet Requirements
- Use UDOT Excel spreadsheets and customize for the project.
  - Include all roadway related pay items and necessary non-pay items.

- Include names, alignment designations, stations, offsets, units, and quantities.
- Show enough detail to support calculations.

· Use UDOT standard summary plan sheets.
- Export all summaries from Excel to MicroStation.

Finalize MOT Design

Finalize the MOT design based on review comments and coordination with team members.

· Refer to 3R2 tasks as needed.
· Determine the detour signs, warning signs, and VMS required for MOT.
· Conform to all design standards including the MUTCD, R-MOI, and UDOT Plan Sheet Development Standards ¿ MOT Sheet Requirements.

Complete MOT Plan Sheets

· Follow the UDOT Plan Sheet Development Standards.
- General Plan Sheet Requirements
- MOT Sheet Requirements

· Callout all bid items.
· Include all proposed MOT sign layouts.
· Include all necessary notes.

Finalize Signing, Striping, and MOT Cost Estimate

· Update signing, striping, and MOT bid items and quantities.
· Update the signing, striping, and MOT unit prices.

Enter Signing, Striping, and MOT Cost Estimate into PDBS

Develop Signing, Striping, and MOT Project Documents

· Provide all special provisions required for project construction.
- General Special Provisions
- Project Specific Special Provisions
- Use UDOT Specification Writer’s Guide.

· Generate M&P for all bid items.
- Develop M&P for all non-standard bid items.
- Use the current M&P.
- Include accurate description for all effort and materials required for construction.
- M&P pay items must match plan sheet pay items exactly.

· Generate A&D for all standard pay items.
- Use the current A&D.

- Coordinate with the RE to develop A&D for non-standard items.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Roadway Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Obtain Overhead Sign Approval

Submit overhead sign layout to Central Traffic and Safety for approval. Make any revisions required and obtain final approval.

Activity: 4Y1 - PREPARE/COMPILE PS&E REVIEW PACKAGE

4Y1 Prepare/Compile PS&E Review Package

Overview

Compile Plan-in-Hand comment resolution form, project cost estimate, and all discipline deliverables into one PS&E review package.

References

- Milestone Review Comment Resolution Form
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Specification Writer's Guide

Deliverables

1. Plan-in-Hand Review Comment Resolution Form

   Task
   - Finalize Plan-in-Hand Review Comment Resolution Form
2. PS&E Review Package

   Tasks
   - Update Project Cost Estimate
   - Prepare PS&E Review Package
3. QC Documentation

   Task
   - Perform QC Review

Finalize Plan-in-Hand Review Comment Resolution Form

Coordinate with team members to address and verify all Plan-in-Hand review comments. Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

Update Project Cost Estimate

Obtain each discipline's cost estimate and compile them into one document. Verify all disciplines have entered their final estimates into PDBS correctly. Assist the discipline leads as needed.

Prepare PS&E Review Package

Compile all discipline documents for review including plan sheets, special provisions, and M&P.
Prepare the PS&E review package including:

- Plan-in-Hand Review Comment Resolution Form
- Complete plan set
- All special provisions, specifications, supplemental specifications
  - Use UDOT Specification Writer's Guide
- Project Cost Estimate
- M&P, A&D, and other project documents
- Project estimate ePM Screen 505
- Draft SWPPP Package for Construction
- Draft Final Structure Acceptance
- Draft Right-of-Way Certification
- Draft Traffic and Safety Certification
- Draft Utility Certification
- Environmental Permits (if available)

Distribute the package to all meeting attendees and reviewers a minimum of **two weeks** before the PS&E Review Meeting (4V1).

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

If Local Government Project

The Local Government Representative is responsible for monitoring the progress of the design activities to ensure that the design process remains on schedule and within budget. Any reduction of project scope or additional funding must be approved by UDOT Project Manager. The Local Government Representative should request frequent status updates from the Design Project Manager.

Activity: 4V1 - PLANS, SPECIFICATIONS & ESTIMATE (PS&E) REVIEW MEETING

4V1 Plans, Specifications, &Estimate (PS&E) Review Meeting

Overview

The purpose of this meeting is to ensure that the elements provided in the plan sheets and advertising documents are consistent with the project scope and available funding requirements. The meeting should include reviews to determine consistency, accuracy, and constructability.

References

- Form F1 - Milestone Review Comment Resolution Form
- UDOT QC/QA Documentation

Deliverables

1. PS&E Meeting Agenda

   Task

   - Prepare Meeting Agenda

2. PS&E Review Package

   Task

   - Distribute Review Package

3. PS&E Meeting Notes

   Tasks

   - Hold Meeting
   - Compile Meeting Notes

4. PS&E Review Comment Resolution Form

   Task

   - Compile PS&E Review Comments and Submit Initial Dispositions and Responses

Prepare Meeting Agenda

Arrange for the location and time of the meeting. Prepare the meeting agenda. Below are suggested agenda items:

- Project Definition Document (PDD)
- Meeting minutes and action items from previous milestone review meetings
- Project Design Criteria (PDC)
- Design exceptions, design waivers, and deviations from standards
- Engineer’s Estimate (Use an independent cost estimator if necessary)
- Risk Register and Mitigation Strategies

- Innovative contracting opportunities such as lane rental, P+T, and incentive/disincentive
- ROW progress
- Project commitments
- Project schedule and Submit for Advertising Date in MS Project
- UDOT QC/QA Documentation

Distribute Review Material

Invite all project team members and others as needed. Distribute PS&E Review Package (including the completedPlan-in-Hand Review Comment Resolution Form) and meeting agenda.

Compile Meeting Notes

Capture all decisions made and create an action item list. Distribute the meeting notes to all meeting invitees.

Compile PS&E Review Comments and Submit Initial Dispositions and Responses

Follow UDOT QC/QA Documentation to compile and provide initial dispositions and responses to all PS&E comments on one comment resolution form. The Design Leader submits the PS&E Review Comment Resolution Form to all reviewers and team members once all comments have an initial disposition and response.

Activity: 5A1 - PREPARE STORMWATER POLLUTION PREV PLAN SWPPP FOR CONSTRUCTIO

5A1 Prepare SWPPP Package for Construction

Overview

Prepare the SWPPP package and submit to the Resident Engineer.

References

- Utah Department of Environmental Quality, Division of Water Quality
- UDOT QC/QA Documentation

Deliverables

1. SWPPP Package

   Tasks

   - Assemble SWPPP Package
   - Send SWPPP Package to Resident Engineer

2. QC Documentation

   Task

   - Perform QC Review

Assemble SWPPP Package

Follow UDOT's SWPPP Outline found on UDOT's environmental webpage. Assemble the package and fill in the necessary information. Provide two copies of the SWPPP Package to the Region Landscape Architect.

Send SWPPP Package to Resident Engineer

Review SWPPP Package and provide copies to the Resident Engineer.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Aesthetics/Landscaping Design QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Activity: 5V1 - COMMENT RESOLUTION REVIEW MEETING

5V1 Comment Resolution Review Meeting

Overview

This meeting is to review the final comment resolution form. All comment resolutions are addressed by the respective reviewer at the completion of this activity. There are no plan reviews other than spot checks of proper comment incorporation.

References

- Form F1 - Milestone Review Comment Resolution Form
- UDOT QC/QA Documentation

Deliverables

1. Final Comment Resolution Form

   Tasks

   - Invite Meeting Attendees
   - Hold Meeting
   - Revise Final Comment Resolution Form (if needed)

2. Revised Plan Sheets and Documents (as needed)

   Tasks

   - Provide Revised Plan Sheets
   - Provide Revised Specifications

3. QC Documentation

Task

- Assure all QC Documentation is loaded into ProjectWise

Invite Meeting Attendees

Determine time and location of the meeting and invite all team members and reviewers. Distribute the Final Comment Resolution Form with an invitation to the meeting.

Hold Meeting

Conduct the meeting as a review of the Final Review Comment Resolution Form. Any comment response the reviewer does not agree with must be discussed and a final action agreed upon at the meeting. Reviewers may "spot check" the plans and documents to verify proper implementation.

Revise Comment Resolution Form (if needed)

Revise the Comment Resolution Form based on the decisions made at the Comment Resolution Meeting. To resolve any remaining comments, see 5Y1 Incorporate PS&E Review Comments.

Provide Revised Plan Sheets

Provide Revised Specifications

Assure All QC Documentation is Loaded into ProjectWise
If Local Government Project

The Local Government Representative schedules and conducts the meeting, provides agendas, keeps meeting minutes and distributes them after the meeting.

Activity: 5Y1 - INCORPORATE PS&E REVIEW COMMENTS

5Y1 Incorporate PS&E Review Comments

Overview

Make revisions based on comments made during PS&E Review (4V1).

References

- Milestone Review Comment Resolution Form
- UDOT CADD Standards
- UDOT Plan Sheet Development Standards
- UDOT QC/QA Documentation
- UDOT Specification Writer's Guide

Deliverables

1. Final Comment Resolution Form

   Task

   - Address and Incorporate PS&E Review Comments

2. Final Project Cost Estimate

   Task

   - Revise Project Cost Estimate

3. QC Documentation

   Task

   - Perform QC Review

4. Final Plan Set and Project Documents

   Tasks

   - Revise Plans and Project Documents (as needed)
   - Compile Advertising Plans and Documents

Finalize Comment Resolution Form

Each discipline responds to their PS&E comments, revises their designs and deliverables as needed based on the comment responses, and finalizes their plans and project documents. Verify each comment after implementation and QC review. Refer to UDOT QC/QA Documentation for more information about completing a Milestone Review Comment Resolution Form.

The Design Leader confirms all comment responses are verified and prepares for the Comment Resolution Review Meeting. Refer to 5V1 Comment Resolution Review Meeting for more information.

Revise Project Cost Estimate

The Design Leader coordinates with each discipline to finalize the project cost estimate.

Perform QC Review

Perform the QC Review following the UDOT QC/QA Procedures and the Design Leader QC Checklist **before** distribution.

- Provide the Checker with a check print of each deliverable and supporting documentation.
- Complete all necessary corrections from the QC check.
- Upload all QC documentation into ProjectWise and attribute it correctly before or at the distribution of the milestone review package.

Revise Plans and Project Documents (if needed)

Each comment's resolution is verified by the reviewers during the Comment Resolution Meeting. Any comments that are deemed inadequately resolved must be addressed before advertising. The Design Leader coordinates with project team members and reviewers to address any remaining comments and revise the final deliverables based on the decisions made during the Comment Resolution Meeting.

Perform QC procedures for all revisions and final verification of comment resolution.

Compile Advertising Plans and Project Documents

Coordinate with project team members to finalize and compile the advertising plans and project documents. Include the following:

- PS&E Review Comment Resolution Form
- Complete plan set
- All special provisions, specifications, and supplemental specifications
- Final Project Cost Estimate
- M&P, A&D, and other project documents
- Accepted Structural Documentation Package (if applicable)
- Project estimate ePM Screen 505
- All other relevant discipline specific and required documents

If Local Government Project

The Local Government Representative is responsible for monitoring the progress of the design activities to ensure that the design process remains on schedule and within budget. Any reduction of project scope or additional funding must be approved by UDOT Project Manager. The Local Government Representative should request frequent status updates from the Design Project Manager.

UDOT CMS Staffing Plan

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	Contract Job Title	Education/Certification	License Number	Hours	Current Rate	Proposal Rate	Approval Date	Key
LEWIS, STEVE	TRAFFIC LEAD	BS	ID-181480-2202	230	$85.70	$86.27	NTP	Y
SPEULDA, JOSHUA	DRAINAGE LEAD	BS	UT-7512253-2202	263	$74.56	$75.06	NTP	Y
JENSEN, DANIEL	PROJECT MANAGER	BS	UT-10467374-2202	107	$72.59	$73.07	NTP	Y
WIGHTMAN, BREE	ROADWAY LEAD	BS	UT-11928434-2202	368	$69.57	$70.03	NTP	Y
HARBAUGH, JARED	ROADWAY DESIGNER	BS	UT-13570231-2202	1,062	$52.87	$53.22	NTP	Y
TERRY, BENJAMIN	DRAINAGE DESIGNER		UT-12288227-2202	549	$50.12	$50.45	NTP	Y
AKIN, CORY	CADD			684	$44.44	$44.74	NTP	Y
KOCH, ZALIA	ADMIN & INVOICING	BS		92	$40.46	$40.73	NTP	Y
UFELLE, CINDY	DRAINAGE DESIGNER	MS		286	$39.51	$39.77	NTP	Y
			Total Hours for MICHAEL BAKER INTERNATIONAL, INC.:	3,641				

Pay Rate Variance Explanation
Prorated wages reflect an annual 6% adjustment anticipated in January 1, 2026. Contract completion anticipated at 13 months, so rate adjustment used will be 12/13 x CR (Current Rate) + 1-12/13 x AR (Adjusted Rate).

UDOT CMS Cost Proposal

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Labor Costs

Employee Name	Contract Job Title	Hours	Proposal Rate	Labor Cost
AKIN, CORY	CADD	684	$44.74	$30,602.16
HARBAUGH, JARED	ROADWAY DESIGNER	1,062	$53.22	$56,519.64
JENSEN, DANIEL	PROJECT MANAGER	107	$73.07	$7,818.49
KOCH, ZALIA	ADMIN & INVOICING	92	$40.73	$3,747.16
LEWIS, STEVE	TRAFFIC LEAD	230	$86.27	$19,842.10
SPEULDA, JOSHUA	DRAINAGE LEAD	263	$75.06	$19,740.78
TERRY, BENJAMIN	DRAINAGE DESIGNER	549	$50.45	$27,697.05
UFELLE, CINDY	DRAINAGE DESIGNER	286	$39.77	$11,374.22
WIGHTMAN, BREE	ROADWAY LEAD	368	$70.03	$25,771.04
	Total Hours:	3,641		
	Total Direct Labor:			$203,112.64
	Overhead:		140.86%	$286,104.47
	Total Direct Labor plus Overhead:			$489,217.11
	Fixed Fee:		11.00%	$53,813.88
	Burdened Labor Cost:			$543,030.99

Other Direct Charges

ODC Item	Unit of Measure	Qty	Item Cost	Extended Cost
2025 COMPANY FLEET MILEAGE	MILE	1,506.0	$.700	$1,054.20
2025 PERSONAL MILEAGE	MILE	750.0	$.700	$525.00
CONUS 2024 - PER DIEM	DAY	20.0	$68.000	$1,360.00
CONUS 2024 F/L - PER DIEM	DAY	5.0	$51.000	$255.00
11X17 B/W	EACH	500.0	$.120	$60.00
11X17 COLOR	EACH	400.0	$.480	$192.00
8.5X11 B&W	EACH	700.0	$.060	$42.00
8.5X11 COLOR	EACH	300.0	$.240	$72.00
LODGING - CONUS 2024 W/TAX	DAY	10.0	$125.400	$1,254.00
			Total Other Direct Charges:	$4,814.20
			Total Cost for MICHAEL BAKER INTERNATIONAL, INC.:	$547,845.19

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	1Z1	1V1	1Q1	1R1	1Y1	1Y2	1V2	2Q1	2R1	2Y1	2V1	3Q1	3R1	3R2	3Y1	
LEWIS, STEVE	24	0	0	16	0	0	0	0	2	0	0	0	20	108	0	
SPEULDA, JOSHUA	24	8	14	0	0	2	2	18	0	3	12	64	8	0	2	
JENSEN, DANIEL	28	2	0	0	1	5	0	0	0	3	2	0	13	4	10	
WIGHTMAN, BREE	24	8	0	54	1	4	2	0	48	7	12	0	44	28	10	
HARBAUGH, JARED	24	0	0	84	3	6	0	0	120	13	0	0	216	120	19	
TERRY, BENJAMIN	24	0	38	0	0	0	0	66	0	0	0	235	0	0	0	
AKIN, CORY	24	0	0	40	0	0	0	0	20	0	3	0	204	116	0	
KOCH, ZALIA	58	0	0	0	0	4	0	0	0	4	0	0	0	0	4	
UFELLE, CINDY	24	0	0	0	0	0	0	24	0	0	0	126	0	0	0	

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

Employee Name	3V1	4A1	4Q1	4R1	4R2	4Y1	4V1	5A1	5V1	5Y1						Total
LEWIS, STEVE	0	0	0	0	60	0	0	0	0	0						230
SPEULDA, JOSHUA	14	14	48	0	0	4	14	8	2	2						263
JENSEN, DANIEL	3	0	0	20	0	8	4	0	2	2						107
WIGHTMAN, BREE	14	0	0	72	8	14	14	0	2	2						368
HARBAUGH, JARED	3	0	0	344	92	10	4	0	2	2						1,062
TERRY, BENJAMIN	0	22	150	0	0	0	0	14	0	0						549
AKIN, CORY	3	0	0	232	36	0	4	0	2	0						684
KOCH, ZALIA	0	0	0	16	0	4	0	0	0	2						92
UFELLE, CINDY	0	18	88	0	0	0	0	6	0	0						286

UDOT CMS Hours Derivation

Contract Number:	NEW	**Mod:**		**Project Number:**	F-0007(30)4	**PIN:**	21559
UDOT Primary Contact:	Taylor Ricks (Acting as UDOT)						
PIN Description:	SR-7; Exit 5						

	1Z1	1V1	1Q1	1R1	1Y1	1Y2	1V2	2Q1	2R1	2Y1	2V1	3Q1	3R1	3R2	3Y1	
Firm Activity Totals:	254	18	52	194	5	21	4	108	190	30	29	425	505	376	45	
	3V1	**4A1**	**4Q1**	**4R1**	**4R2**	**4Y1**	**4V1**	**5A1**	**5V1**	**5Y1**						**Total**
Firm Activity Totals:	37	54	286	684	196	40	40	28	10	10						3,641

Insurance

As stated in Attachment B - Standard Terms and Conditions, services to be provided by the CONSULTANT under this contract are required to be covered by insurance. Insurance must be maintained in force until all activities which are required by this contract or as changed by contract modification are completed and accepted by the DEPARTMENT.

Insurance	Full Coverage Exception	Aggregate Coverage Exception	Expiration Date	Insurance Carrier	Policy Number	Each Occurrence Limit	General Aggregate Limit	Additional Endorsement
AUTOMOBILE LIABILITY	N	N	12/31/2025	LIBERTY INSURANCE CORPORATION	AS7-641-446161-044	$2,000,000	$0	N
EXCESS/UMBRELLA LIABILITY	N	N	12/31/2025	AMERICAN GUARANTEE & LIABILITY	AUC 8344746-01	$10,000,000	$10,000,000	N
GENERAL LIABILITY	N	N	12/31/2025	LIBERTY MUTUAL FIRE INSUR CO	TB2 641-446161-054	$2,000,000	$4,000,000	Y
QUALIFIED HEALTH COVERAGE	N	N	4/30/2025	XXXXXX	XXXXXX	$0	$0	N
PROFESSIONAL LIABILITY	N	N	12/31/2025	ALLIED WORLD SURPLUS LINES INS	0313-8987	$5,000,000	$5,000,000	N
WORKERS COMPENSATION	N	N	12/31/2025	LIBERTY INSURANCE CORP	WC7-641-446161-064	$1,000,000	$0	N

Agenda Date: 02/20/2025 **Agenda Item Number:** 03

Subject:

Public hearing and consideration of Ordinance No. 2025-012 approving the vacation of a public utility and drainage easement as described in Doc. No. 20170025075.

Item at-a-glance:

Staff Contact: Todd Jacobsen

Applicant Name: Scott McCall, Sun River

Reference Number: PLANLRE25-004

Address/Location:

3061 S Bloomington Drive, Building A

Item History (background/project status/public process):

This easement was granted to the City of St. George as public use across parcel SG-6-3-12344 by Doc. No. 20170025075, recorded on the 19th day of June, 2017.

Staff Narrative (need/purpose):

During an ALTA survey of the property, it was discovered that a building had been constructed over the referenced existing easement. No infrastructure was placed within this easement, and new easements were granted at the time of construction away from the building, and the infrastructure was relocated accordingly. However, this easement was never officially vacated until this request.

Name of Legal Dept approver: Jami Brackin

Budget Impact: No Impact

Recommendation (Include any conditions):

JUC reviewed the proposed vacation and has recommended its approval.

When Recorded Return To:
City of St. George
City Recorder's Office
175 East 200 North
St. George, UT 84770

ORDINANCE NO. _____

Tax ID: SG-6-3-12-346

AN ORDINANCE VACATING A PUBLIC UTILITY AND DRAINAGE EASEMENT LOCATED IN THE CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH
(as described in Doc. No. 20170025075)

WHEREAS, a petition was received by this Council requesting the vacation of a public utility and drainage easement, as described in Doc. No. 20170025075, according to the official record thereof, on file in the Office of the Washington County Recorder's Office, being more particularly described and shown in Exhibit A and Exhibit B; and

WHEREAS, the Joint Utility Commission (JUC) has reviewed the proposed vacation and has recommended its approval; and

WHEREAS, all other easements currently of record on parcel SG-6-3-12-346 are to remain; and

WHEREAS, the City Council finds that vacating the easement, as described in Exhibit A and Exhibit B, will not be detrimental to the public interest and that good cause exists for such action;

NOW, THEREFORE, BE IT ORDAINED, by the City Council of the City of St. George, Washington County, Utah, as follows:

1. **Vacation of Easement**: The public utility and drainage easement as described in Doc. No. 20170025075, and as described and depicted in Exhibit A and Exhibit B, is hereby vacated.
2. **Effective Date**: This ordinance shall take effect upon the recording of all necessary documents and the posting of this ordinance in the manner prescribed by law.

APPROVED AND ADOPTED by the St. George City Council on this ____ day of _____, 2025.

CITY OF ST. GEORGE:

_____
Michele Randall, Mayor

APPROVED AS TO FORM:
City Attorney's Office

_____
Jami Brackin, Deputy City Attorney

ATTEST:

_____
Christina Fernandez, City Recorder

VOTING OF CITY COUNCIL:
Councilmember Hughes _____
Councilmember Larkin _____
Councilmember Larsen _____
Councilmember Tanner _____
Councilmember Kemp _____

Exhibit “A”

Beginning at a point on the easterly line of Bloomington Drive, said point being North 89°59'00" East 5,638.84 feet and North 1,674.64 feet from the Northwest Corner of Section 14, Township 43 South, Range 16 West, Salt Lake Base & Meridian, and running;

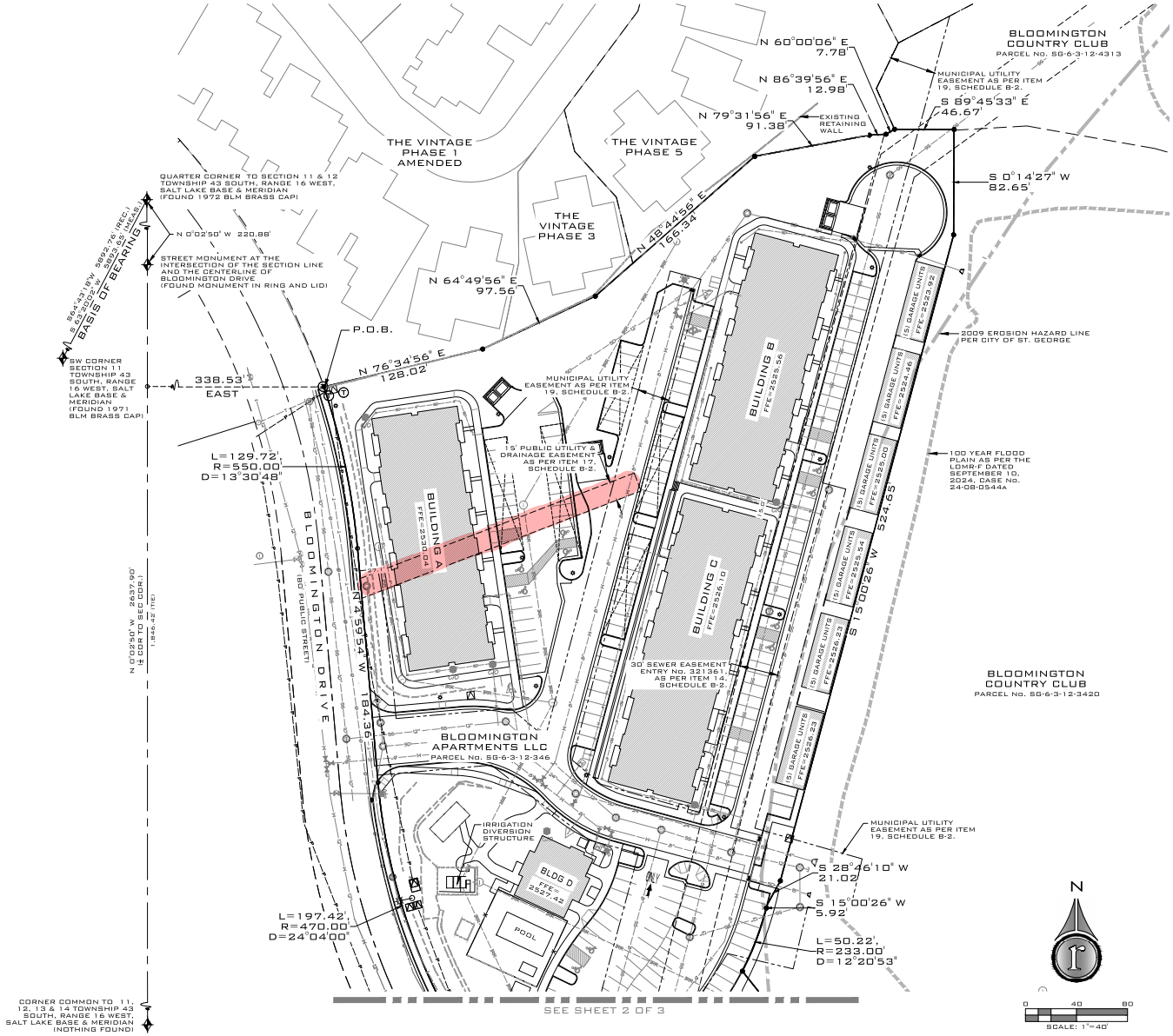
thence North 05°00'00" West 15.61 feet;

thence North 68°56'10" East 230.22 feet;

thence South 21°03'50" East 15.00 feet;

thence South 68°56'10" West 234.54 feet to the Point of Beginning.

Exhibit B



NARRATIVE:

This survey was conducted at the request of the client to provide an ALTA/NSPS Land Title Survey. The Basis of Bearing is the line between the Southwest Corner and the East Quarter Corner of Section 11, Township 43 South, Range 16 West, Salt Lake Base & Meridian. The section line between the East Quarter Corner and the Southeast Corner of Section 11 used the street monument for bearing as noted.

SURVEYOR'S CERTIFICATE:

I hereby certify to Hudson Realty Finance LLC, Department of Housing and Urban Development ("HUD"), Bloomington Apartments LLC, Old Republic National Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, including items 1, 2, 3, 4, 6a, 6b, 7a, 8, 9, 10, 11a, 12, 13, 16, 17, and 18 of Table A. The field work was completed on October 22, 2024.

Date: 10-28-2024

Brandon E. Anderson — Certificate No. 4938716

LEGAL DESCRIPTION:

Beginning at a point on the southwesterly corner of the Vintage Phase 1 Amended, recorded as Entry No. 313234, said point being North 00°02'50" West 1,845.42 feet along the Section Line and East 338.53 feet from the Southwest Corner of Section 12, Township 43 South, Range 16 West, Salt Lake Base & Meridian, and running:

Thence northeasterly the following (21) courses along the southerly line of said The Vintage Phase 1 Amended:
Thence North 76°34'50" East 128.02 feet;
Thence North 64°49'50" East 97.56 feet;
Thence North 48°44'50" East 166.34 feet;
Thence North 79°31'50" East 91.38 feet;
Thence North 86°39'50" East 12.98 feet;
Thence North 60°00'47" East 7.78 feet;
Thence South 89°45'38" East 46.67 feet;
Thence South 00°14'22" West 82.65 feet;
Thence South 15°00'21" West 524.65 feet;
Thence South 28°46'05" West 21.02 feet;
Thence South 15°00'21" West 5.92 feet;
Thence South 50.22 feet along an arc of a 233.00 foot radius curve to the right (center bears North 74°59'39" West; long chord bears South 21°10'48" West 50.12 feet with a central angle of 12°20'53");
Thence South 38°34'16" East 361.48 feet;
Thence South 12.32 feet along an arc of a 709.00 foot radius curve to the left (center bears South 74°00'57" East; long chord bears South 15°29'11" West 12.32 feet with a central angle of 00°59'44");
Thence South 15°39'01" West 58.50 feet;
Thence Southwest 84.37 feet along an arc of a 326.43 foot radius curve to the right (center bears North 74°20'59" West; long chord bears South 23°18'23" West 84.14 feet with a central angle of 14°48'32");
Thence South 111.70 feet along an arc of a 172.32 foot radius curve to the left (center bears South 59°15'31" East; long chord bears South 12°10'19" West 109.75 feet with a central angle of 37°08'21");
Thence South 69°07'05" West 25.60 feet to the easterly line of Bloomington Drive;
Thence northerly the following (7) courses along said easterly line of Bloomington Drive;
Thence Northwest 96.84 feet along an arc of a 230.00 foot radius curve to the left (center bears South 69°07'25" West; long chord bears North 32°56'18" West 96.12 feet with a central angle of 24°07'25");
Thence North 45°00'00" West 144.84 feet;
Thence Northwest 130.70 feet along an arc of a 470.00 foot radius curve to the right (center bears North 45°00'00" East; long chord bears North 37°52'00" West 130.28 feet with a central angle of 15°56'00");
Thence North 29°04'00" West 249.45 feet;
Thence North 197.42 feet along an arc of a 470.00 foot radius curve to the right (center bears North 60°56'00" East; long chord bears North 17°02'00" West 195.97 feet with a central angle of 24°04'00");
Thence North 05°00'00" West 184.36 feet;
Thence North 129.72 feet along an arc of a 550.00 foot radius curve to the left (center bears South 85°00'00" West; long chord bears North 11°45'24" West 129.42 feet with a central angle of 13°30'48") to the Point of Beginning.

TABLE A STATEMENT OF INFORMATION:

Item 2: Project Address - 3061 South Bloomington Drive, St. George, Utah 84790 Tax ID: SG-6-3-12-346

Item 3: Flood Zone Classification - The surveyed parcel is located within Zone "X" "X" which is defined as "Areas determined to be outside the 0.2% annual chance floodplain", and such flood condition is shown on the Letter of Map Revision (LOMR-F) Case No. 24-08-0544A, Dated September 10, 2024.

Note: Said zone determined by depicted scale map location and graphic plotting only

Item 4: The total gross area of the site is 7.78 acres.

Item 6a: Zoning Classification and requirements - No letter provided

Item 6(b): If the zoning setback requirements are set forth in a zoning report or letter provided to the surveyor by the client, and if those requirements do not require an interpretation of the zoning, graphically depict the building setback requirements. Identify the date and source of the report or letter. - No letter provided

Item 7(a): Exterior dimensions of all buildings at ground level. - See sheet 2

Item 8: Substantial features observed - All depicted on plat.

Item 9: Number and type (e.g., disabled, motorcycle, regular and other marked specialized types) of clearly identifiable parking spaces on surface parking areas, lots and in parking structures. Striping of clearly identifiable parking spaces on surface parking areas and lots. - See Sheet 2 for parking table

Item 10(a): As designated by the client, a determination of the relationship and location of certain division or party walls with respect to adjoining properties (client to obtain necessary permissions). - Nothing identified

Item 10(b): As designated by the client, a determination of whether certain walls are plumb (client to obtain necessary permissions). - Nothing identified

Item 11: (a) Location of utilities existing on or serving the surveyed property as determined by: Observation & City of St. George's GIS department.

Item 12: As specified by the client, Governmental Agency survey-related requirements. The relevant survey requirements are to be provided by the client or client's designated representative. - HUD Requirements

Item 13: Names of adjoining owners according to current tax records. - Shown

Item 16: Evidence of recent earth moving work, building construction, or building additions observed in the process of conducting the fieldwork. - None

Item 17: Proposed changes in street right of way lines, if such information is made available to the surveyor by the controlling jurisdiction. Evidence of recent street or sidewalk construction or repairs observed in the process of conducting the fieldwork. - Nothing Observed

Item 18: Include any plottable offsite (i.e., appurtenant) easements or servitudes disclosed in documents provided to or obtained by the surveyor as a part of the survey pursuant to Sections 5 and 6. - Nothing Provided

COMMITMENT FOR TITLE INSURANCE:

Prepared pursuant to Old Republic National Title Insurance Company, Commitment Date August 30, 2024, File No.: 248746780.

LOCATED IN THE S.W. 1/4 OF SECTION 12 T.43S., R.16W., S.L.B.&M.

DATE:	10/28/24
JOB NO.:	9026-21-039
DRAWN BY:	B.E.A.
CHECKED BY:	B.E.A.
SCALE:	1"=40'
DWG:	Survey-ALTA

REVISIONS	DATE
ADD: FFE TO BLDGS.	10.28.24

ROSENBERG ASSOCIATES
CIVIL ENGINEERS - LAND SURVEYORS
352 East Riverside Drive, Suite A-2
St. George, UT 84790
Ph: (435) 673-8586
www.radivil.com

ALTA/NSPS LAND TITLE SURVEY
FOR
BLOOMINGTON APARTMENTS LLC

SHEET 1 OF 3 SHEETS

Agenda Date: 02/20/2025 **Agenda Item Number:** 04

Subject:

Public hearing and consideration of Ordinance No. 2025-013 approving the vacation of a portion of an existing public cross access and municipal utility easement, and also a drainage easement located on Lots 5, 6, and 7 of The Fields at Mall Drive Phase 2 Partial Amendment A.

Item at-a-glance:

Staff Contact: Todd Jacobsen

Applicant Name: Rick Magness, AWA

Reference Number: PLANLRE25-003

Address/Location:

Approximately 2515 E Mall Drive (west of Revere Health)

Item History (background/project status/public process):

The subdivision plat for The Fields at Mall Drive Phase 2 Partial Amendment A was approved by the City of St. George Land Use Authority on the 12th day of July, 2024 and recorded in the Office of the Washington County Recorder on the 1st day of August, 2024.

Staff Narrative (need/purpose):

The purpose for vacating these easements is to record another subdivision amendment to be known as The Fields at Mall Drive Phase 2 Partial Amendment B, where a fourth lot will be added to the subdivision. By doing so the easements will be relocated to follow the new lot configuration. Currently there are not any utility lines in place, those will be installed with the new layout and approval of the new subdivision amendment.

Name of Legal Dept approver: Jami Brackin

Budget Impact: No Impact

Recommendation (Include any conditions):

JUC reviewed the proposed vacation and has recommended its approval.

When Recorded Return To:
City of St. George
City Recorder's Office
175 East 200 North
St. George, UT 84770

ORDINANCE NO. _____

Tax ID: SG-FMD-2-5-PT-A, SG-FMD-2-6-PT-A, and SG-FMD-2-7-PT-A

AN ORDINANCE VACATING A PORTION OF A PUBLIC CROSS ACCESS AND MUNICIPAL UTILITY EASEMENT, AND ALSO A DRAINAGE EASEMENT LOCATED IN THE CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH
(Located on Lots 5, 6, and 7, The Fields at Mall Drive Phase 2 Partial Amendment A)

WHEREAS, a petition was received by this Council requesting the vacation of a portion of an existing public cross access and municipal utility easement, and also a drainage easement, located on Lots 5, 6, and 7, The Fields at Mall Drive Phase 2 Partial Amendment A, according to the official plat thereof, on file in the Office of the Washington County Recorder's Office as Doc. No. 20240024103, being more particularly describe and shown in Exhibit A, Exhibit B, Exhibit C, Exhibit D, Exhibit E, and Exhibit F; and

WHEREAS, the Joint Utility Commission (JUC) has reviewed the proposed vacation and has recommended its approval; and

WHEREAS, the City Council finds that vacating the easement, as described in Exhibit A, Exhibit B, Exhibit C, Exhibit D, Exhibit E, and Exhibit F, will not be detrimental to the public interest and that good cause exists for such action;

NOW, THEREFORE, BE IT ORDAINED, by the City Council of the City of St. George, Washington County, Utah, as follows:

1. **Vacation of Easement**: The public cross access and municipal utility easement, and also a drainage easement located on Lots 5, 6, and 7, The Fields at Mall Drive Phase 2 Partial Amendment A, as described and depicted in Exhibit A, Exhibit B, Exhibit C, Exhibit D, Exhibit E, and Exhibit F, is hereby vacated.
2. **Effective Date**: This ordinance shall take effect upon the recording of all necessary documents and the posting of this ordinance in the manner prescribed by law.

APPROVED AND ADOPTED by the St. George City Council on this ____ day of _____, 2025.

CITY OF ST. GEORGE:

_____
Michele Randall, Mayor

APPROVED AS TO FORM:
City Attorney's Office

_____
Jami Brackin, Deputy City Attorney

ATTEST:

_____
Christina Fernandez, City Recorder

VOTING OF CITY COUNCIL:
Councilmember Hughes _____
Councilmember Larkin _____
Councilmember Larsen _____
Councilmember Tanner _____
Councilmember Kemp _____

Exhibit A

AFCU Mall Drive St. George **Thursday, 19 September, 2024**
10 ft wide PUE being vacated

A 10.0 foot wide easement for Public Utility Purposes being 5.0 feet each side of the Lot Line common to Lots 5 and 6 of The Fields at Mall Drive Phase 2 Partial Amendment A (Lot 5) as shown on the official plat recorded August 1, 2024 as Document Number 20240024103 of the official records of Washington County, Utah and lying within the Southwest Quarter of Section 27, Township 42 South, Range 15 West of the Salt Lake Base and Meridian, U.S. Survey; said common Lot Line being further described metes and bounds as follows:

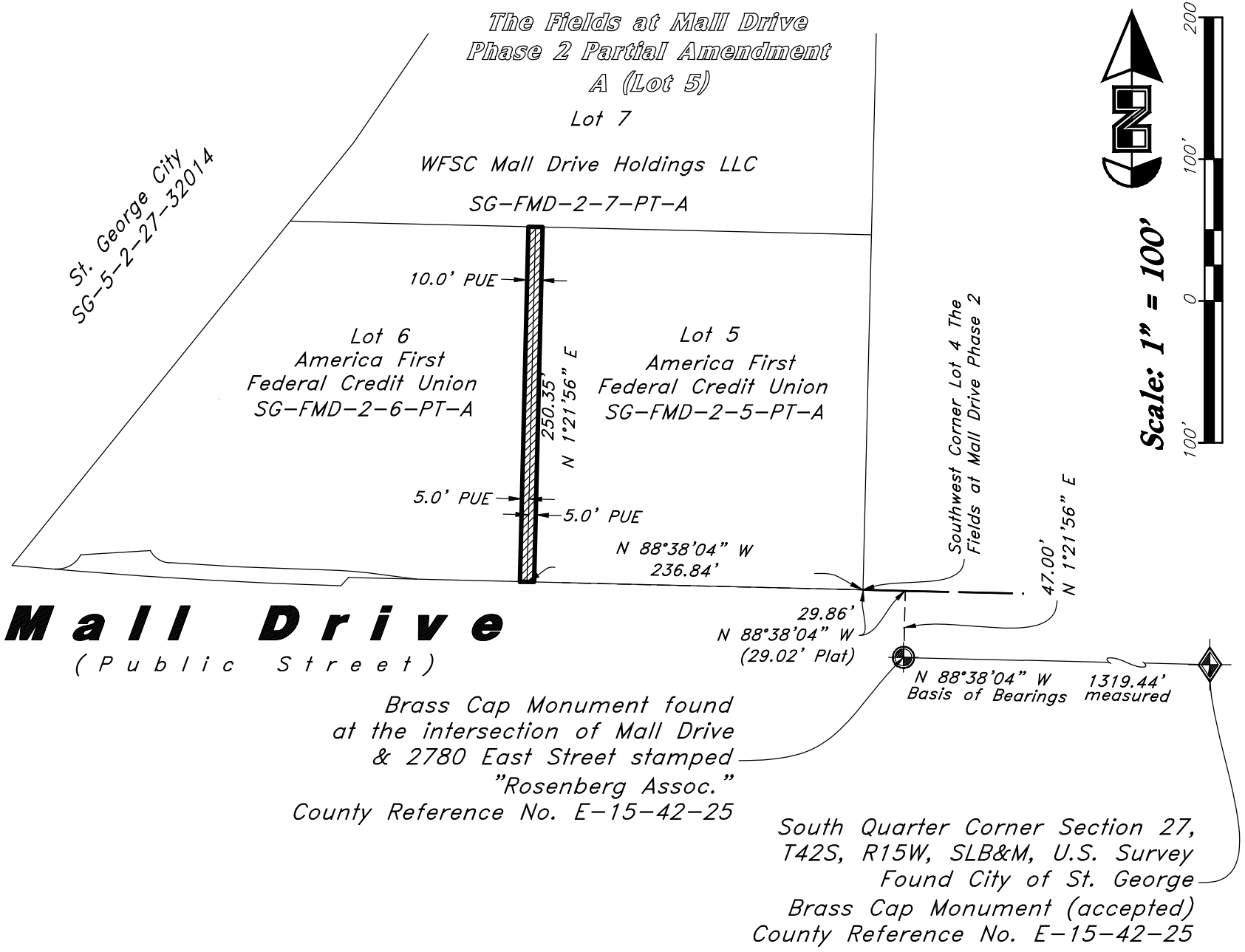
Beginning at a point 236.84 feet North 88°38'04" West along the North line of Mall Drive as it exists at 47.00 foot half-width from the Southwest Corner of Lot 4 of The Fields at Mall Drive Phase 2 as it exists on the ground located 1319.44 feet North 88°38'04" West along the monument line of Mall Drive to an existing Brass Cap Centerline Monument found at the Intersection of Mall Drive and 2780 East Street; 47.00 feet North 1°21'56" East to said North Line of Mall Drive; and 29.86 feet (29.02 feet plat) North 88°38'04" West along said North Line from an existing Monument found marking the South Quarter Corner of said Section 27; and running thence North 1°21'56" East 250.35 feet along said common Lot Line.

Contains 2,503 sq ft

Note :

The above legal description reflects a rotation of 22 seconds Counterclockwise from the Underlying Amended Subdivision Plat to place the basis of bearings on the NAD83 State Plane Utah South Zone as measured by GPS methods and as verified by field measurements to match the recovered original subdivision markers as it is monumented and as it exists on the ground.

Exhibit B



Designed By: BDP	
Drafted By: TC	
Client Name: AFCU	
23-150 VWCA&MUE Vac	3 Feb, 2025

Sheet No. 1 of 1

10.0' PUE

AFCU Mall Drive

2765 East Mall Drive
St George, Utah

2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWAengineering.net

Exhibit C

AFCU Mall Drive St. George **Thursday, 19 September, 2024**
Drainage Easement per record plat

A part of Lots 5 and 6 of The Fields at Mall Drive Phase 2 Partial Amendment A (Lot 5) as shown on the official plat recorded August 1, 2024 as Document Number 20240024103 of the official records of Washington County, Utah and lying within the Southwest Quarter of Section 27, Township 42 South, Range 15 West of the Salt Lake Base and Meridian, U.S. Survey:

Beginning at an angle point on the Southerly Line of an existing Cross Access and Municipal Utility Easement as defined by the official plat of said Partial Amendment A (Lot 5) located 211.83 feet North 88°38'04" West along the North Line of Mall Drive as it exists at 47.00 foot half-width; and 78.68 feet North 1°21'50" East from the Southwest Corner of Lot 4 of The Fields at Mall Drive Phase 2 as it exists on the ground located 1319.44 feet North 88°38'04" West along the monument Line of Mall Drive to an existing Brass Cap Centerline Monument found at the Intersection of Mall Drive and 2780 East Street; 47.00 feet North 1°21'56" East to the North Line of said Mall Drive; and 29.86 feet (29.02 feet plat) North 88°38'04" West along said North Line of Mall Drive from an existing monument found marking the South Quarter Corner of said Section 27; and running thence South 1°21'50" West 3.91 feet along said easement line; thence South 69°18'14" West 84.44 feet; thence South 1°16'49" West 24.76 feet to a point of curvature; thence Southwesterly along the arc of a 3.00 foot radius curve to the right a distance of 4.71 feet (Central Angle equals 90°00'00" and Long Chord bears South 46°16'49" West 4.24 feet) to a point of tangency; thence North 88°43'11" West 80.77 feet to a point of curvature; thence Southwesterly along the arc of a 5.00 foot radius curve to the left a distance of 2.84 feet (Central Angle equals 32°33'00" and Long Chord bears South 75°00'19" West 2.80 feet) to a point of tangency; thence South 58°43'49" West 1.73 feet to a point of curvature; thence Southwesterly along the arc of a 5.00 foot radius curve to the right a distance of 2.90 feet (Central Angle equals 33°12'13" and Long Chord bears South 75°19'56" West 2.86 feet) to a point of tangency; thence North 88°03'58" West 110.38 feet to a point of curvature; thence Northwesterly and Northerly along the arc of a 3.00 foot radius curve to the right a distance of 5.43 feet (Central Angle equals 103°44'17" and Long Chord bears North 36°11'49" West 4.72 feet) to a point of tangency; thence North 15°40'19" East 37.98 feet to a point of curvature; thence Northeasterly along the arc of a 3.00 foot radius curve to the right a distance of 3.96 feet (Central Angle equals 75°36'30" and Long Chord bears North 53°28'34" East 3.68 feet) to a point of tangency; thence South 88°43'11" East 188.57 feet to a point of curvature; thence Southeasterly along the arc of a 3.00 foot radius curve to the right a distance of 4.71 feet (Central Angle equals 90°00'00" and Long Chord bears South 43°43'11" East 4.24 feet); thence North 69°18'14" East 66.15 feet to the Southerly Line of said existing Easement Line; thence South 88°37'09" East 16.97 feet along said easement Line to the point of beginning.

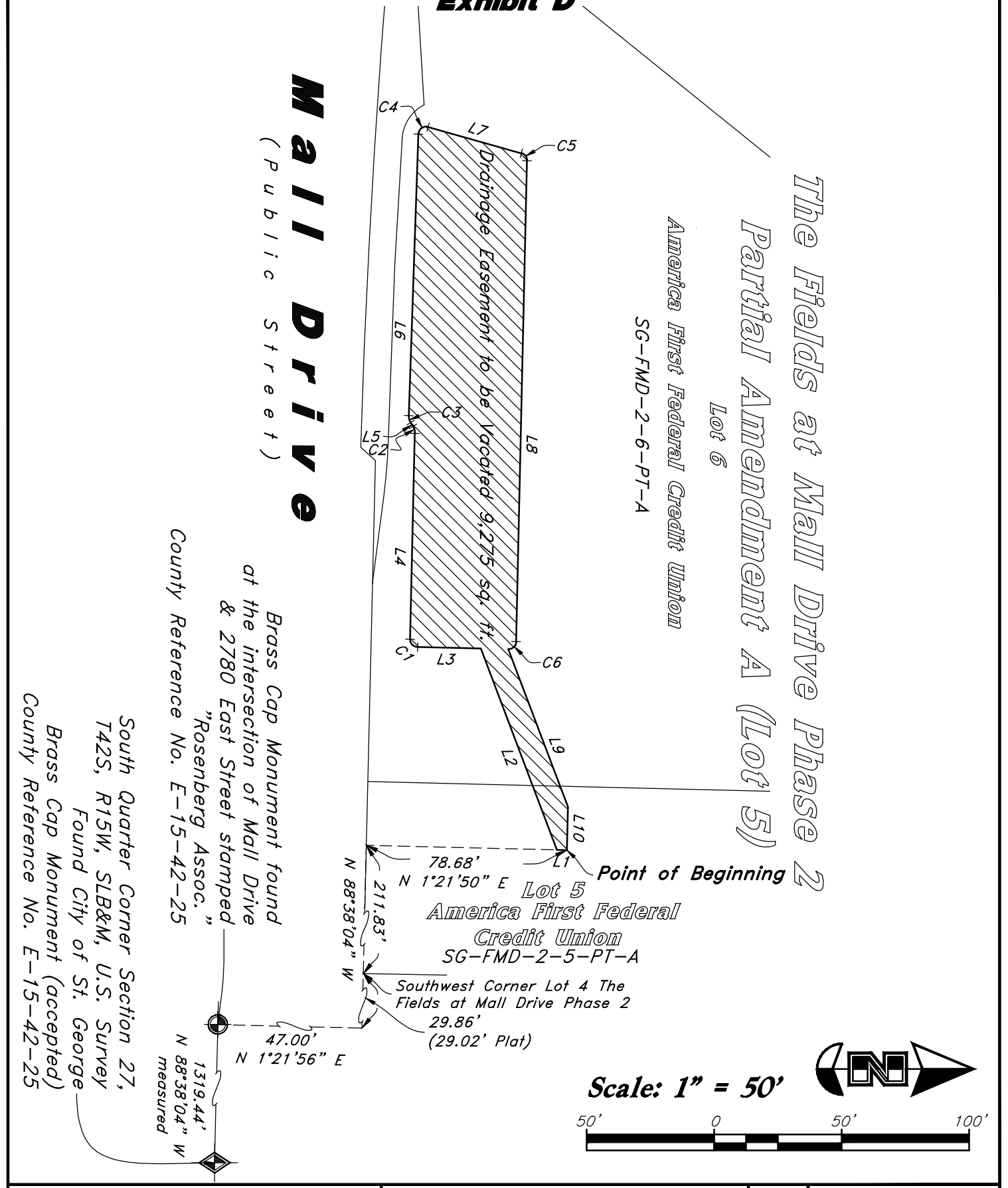
Contains 9,275 sq ft

Note :

The above legal description reflects a rotation of 22 seconds Counterclockwise from the Underlying Amended Subdivision Plat to place the basis of bearings on the NAD83 State Plane Utah South Zone as measured by GPS methods and as verified by field measurements to match

the recovered original subdivision markers as it is monumented and as it exists on the ground.

Exhibit D



2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWAengineering.net

Drainage Easement Vacation

AFCU Mall Drive

2765 East Mall Drive
St George, Utah

Sheet No. **1 of 2**

Designed By:	BDP
Drafted By:	TC
Client Name:	AFCU
	23-150 Drainage Esmt Vac
	3 Feb, 2025

Line Table		
Line #	**Bearing**	**Length**
L1	S 1°21'50" W	3.91'
L2	S 69°18'14" W	84.44'
L3	S 1°16'49" W	24.76'
L4	N 88°43'11" W	80.77'
L5	S 58°43'49" W	1.73'
L6	N 88°03'58" W	110.38'
L7	N 15°40'19" E	37.98'
L8	N 88°43'11" W	188.57'
L9	N 69°18'14" E	66.15'
L10	S 88°37'09" E	16.97'

Curve Table					
Curve	**Delta**	**Radius**	**Length**	**Chord Data**	
C1	90°00'00"	3.00'	4.71'	S 46°16'49" W	4.24'
C2	32°33'00"	5.00'	2.84'	S 75°00'19" W	2.80'
C3	33°12'13"	5.00'	2.90'	S 75°19'56" W	2.86'
C4	103°44'17"	3.00'	5.43'	N 36°11'49" W	4.72'
C5	75°36'30"	3.00'	3.96'	N 53°28'34" E	3.68'
C6	90°00'00"	3.00'	4.71'	S 43°43'11" E	4.24'

2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWAengineering.net

Drainage Easement Vacation

AFCU Mall Drive

2765 East Mall Drive
St George, Utah

Sheet No. **2 of 2**

Designed By: BDP
Drafted By: TC
Client Name: AFCU
23-150 Drainage Esmt Vac
3 Feb, 2025

Exhibit E

AFCU Mall Drive St. George **Monday, 3 February, 2025**
Partial release of Variable Width Cross Access and
Municipal Utility Easements depicted on record plat

A part of Lots 5 and 6 of The Fields at Mall Drive Phase 2 Partial Amendment A (Lot 5) as shown on the official plat recorded August 1, 2024 as Document Number 20240024103 of the official records of Washington County, Utah and lying within the Southwest Quarter of Section 27, Township 42 South, Range 15 West of the Salt Lake Base and Meridian, U.S. Survey:

Beginning at a point on the West Line of Lot 4 of The Fields at Mall Drive Phase 2 located 42.00 feet North 1°21'56" East along said West Line from the Southwest Corner of said Lot 4 as it exists on the ground located 1319.44 feet North 88°38'04" West along the monument Line of Mall Drive to an existing Brass Cap Centerline Monument found at the Intersection of Mall Drive and 2780 East Street; 47.00 feet North 1°21'56" East to the North Line of said Mall Drive; and 29.86 feet (29.02 feet plat) North 88°38'04" West along said North Line of Mall Drive from an existing monument found marking the South Quarter Corner of said Section 27; and running thence North 88°38'04" West 195.22 feet; thence South 1°20'01" West 27.00 feet; thence North 88°38'04" West 10.00 feet; thence North 1°20'01" East 27.00 feet (26.99 feet plat); thence North 88°38'04" West 6.61 feet; thence North 1°21'50" East 36.68 feet; thence North 88°37'09" West 248.52 feet (214.44 feet plat) North 49°03'05" West 21.65 feet (21.89 feet plat); thence Southwesterly along the arc of a 132.00 foot radius curve (117.41 feet plat) to the left a distance of 86.39 feet (82.38 feet plat) (Center bears South 45°53'18" East, Central Angle equals 37°29'55" (40°12'08" plat) and Long Chord bears South 25°21'45" West 84.86 feet (80.70 feet plat)) to the North Line of Mall Drive as dedicated; thence South 86°29'42" West 32.41 feet along said North Line of Mall Drive; thence Northeasterly along the arc of a 164.00 foot radius curve to the right a distance of 98.15 feet (95.45 feet plat) (Center bears South 85°22'34" East, Central Angle equals 34°17'19" (33°20'48" plat) and Long Chord bears North 21°46'06" East 96.69 feet 94.11 feet plat)) to a point of tangency; thence North 38°54'45" East 184.51 feet to a point of curvature; thence Northeasterly along the arc of a 35.00 foot radius curve to the right a distance of 32.04 feet (Central Angle equals 52°27'11" and Long Chord bears North 65°08'21" East 30.94 feet) to a point of tangency; thence South 88°38'04" East 15.00 feet along a line being parallel with and 12.50 feet perpendicularly distant Northerly from said North Line of Lot 6; thence South 1°21'56" West 25.00 feet to a point 12.50 feet perpendicularly distant Southerly from the North Line of said Lot 6; thence North 88°38'04" West 16.15 feet along a line being parallel with and 12.50 ft perpendicularly distant Southerly from said North Line of said Lot 6; thence South 38°54'45" West 154.96 feet; thence South 51°05'15" East 18.46 feet (17.76 feet plat); thence South 88°37'09" East 239.06 feet (212.56 feet plat); thence North 1°09'15" East 134.17 feet (133.74 feet plat) to a point 12.50 feet perpendicularly distant Southerly from the North Line of said Lot 5; thence South 88°38'04" East 25.00 feet along a line being parallel with and 12.50 ft perpendicularly distant Southerly from said North Line of said Lot 5; thence South 1°09'15" West 134.23 feet (133.74 feet plat); thence South 89°07'27" East 186.84 feet to the West Line of said Lot 4; thence South 1°21'56" West 25.00 feet along said West Line of said Lot 4; thence North 89°07'14" West 186.84 feet; thence South 1°21'50" West 21.64 feet ; thence South 88°38'10" East 186.83 feet to the West Line of said Lot 4; thence South 1°21'56" West 15.00 feet along said West Line of said Lot 4 to the point of beginning.

Contains 28,173 sq ft

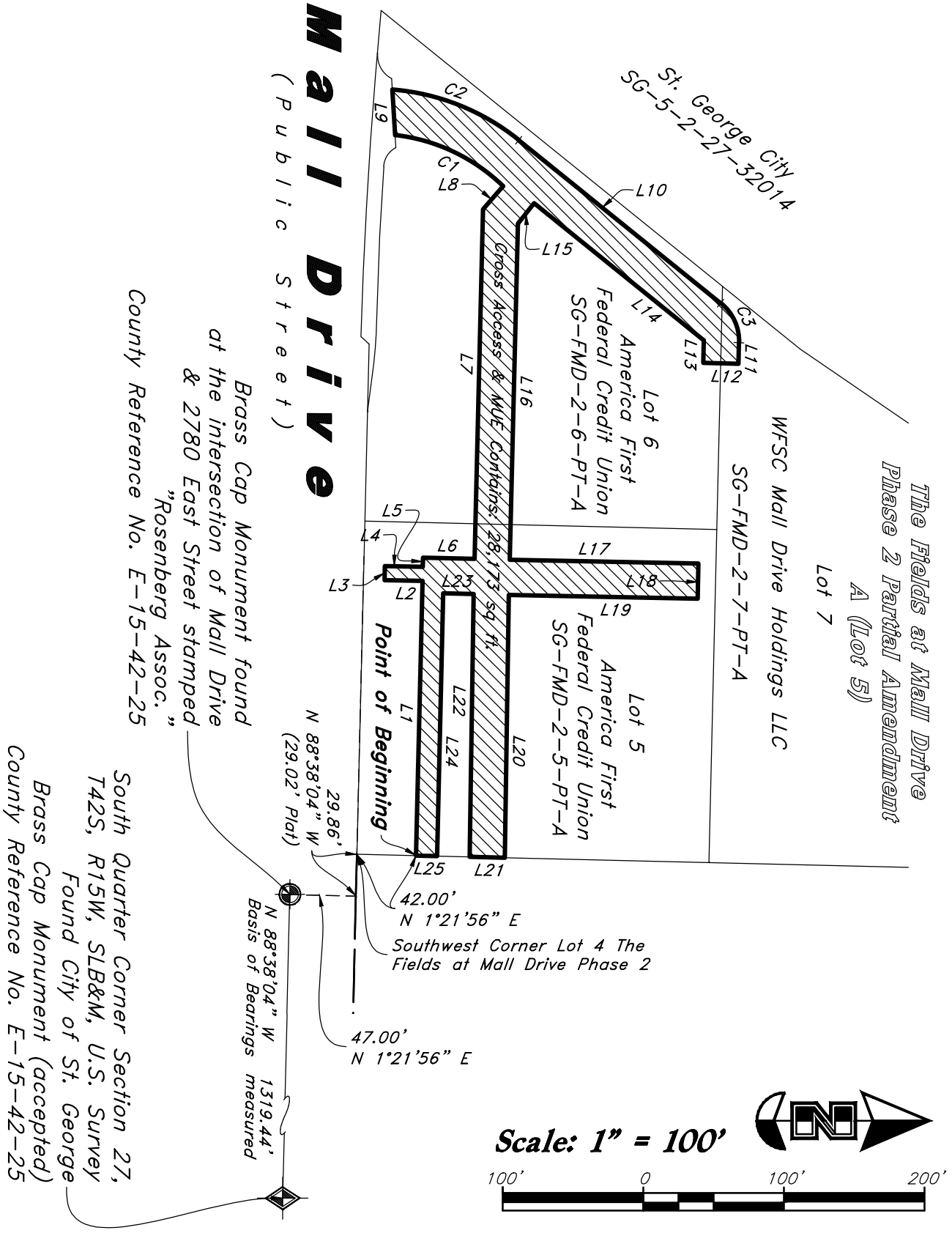
Note :

The above legal description reflects a rotation of 22 seconds Counterclockwise from the Underlying Amended Subdivision Plat to place the basis of bearings on the NAD83 State Plane Utah South Zone as measured by GPS methods and as verified by field measurements to match the recovered original subdivision markers as it is monumented and as it exists on the ground.

Note :

All distances indicated as (XX.XX feet plat) in the legal description above are incorrect as shown on The Fields at Mall Drive Phase 2 Partial Amendment A (Lot 5). By replacing these with the correct distances of XX.XX feet, rather than relying on the erroneous figures from the referenced plat, the easement layout is accurately depicted ensuring the legal description fully closes. Without these corrections, the easement would not align properly.

Exhibit F



2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWAengineering.net

Drainage Easement Vacation

AFCU Mall Drive

2765 East Mall Drive
St George, Utah

Sheet No. 1 of 2

Designed By:	BDP
Drafted By:	TC
Client Name:	AFCU
	23-150 VWCA&MUE Vac
	3 Feb, 2025

Line Table

Line #	Bearing	Length
L1	N 88°38'04" W	195.22'
L2	S 1°20'01" W	27.00'
L3	N 88°38'04" W	10.00'
L4	N 1°20'01" E	27.00'
L5	N 88°38'04" W	6.61'
L6	N 1°21'50" E	36.68'
L7	N 88°37'09" W	248.52'
L8	N 49°03'05" W	21.65'
L9	S 86°29'42" W	32.41'
L10	N 38°54'45" E	184.51'
L11	S 88°38'04" E	15.00'
L12	S 1°21'56" W	25.00'
L13	N 88°38'04" W	16.15'
L14	S 38°54'45" W	154.96'
L15	S 51°05'15" E	18.46'
L16	S 88°37'09" E	239.06'
L17	N 1°09'15" E	134.17'
L18	S 88°38'04" E	25.00'
L19	S 1°09'15" W	134.23'
L20	S 89°07'27" E	186.84'
L21	S 1°21'56" W	25.00'
L22	N 89°07'14" W	186.84'
L23	S 1°21'50" W	21.64'
L24	S 88°38'10" E	186.83'
L25	S 1°21'56" W	15.00'

Curve Table

Curve	Delta	Radius	Length	Chord Data	
C1	37°29'55"	132.00'	86.39'	S 25°21'45" W	84.86'
C2	34°17'19"	164.00'	98.15'	N 21°46'06" E	96.69'
C3	52°27'11"	35.00'	32.04'	N 65°08'21" E	30.93'

2010 North Redwood Road, Salt Lake City, Utah 84116
(801) 521-8529 - AWAengineering.net

Cross Access & MUE

AFCU Mall Drive

2765 East Mall Drive
St George, Utah

Designed By: BDP
Drafted By: TC
Client Name: AFCU
23-150 VWCA&MUE Vac
3 Feb, 2025

THE FIELDS AT MALL DRIVE PHASE 2 PARTIAL AMENDMENT A (LOT 5)

SUBDIVISION AMENDMENT

LOCATED IN THE SOUTHWEST QUARTER OF SECTION 27, T42S, R15W, SALT LAKE BASE & MERIDIAN
CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH

LEGEND

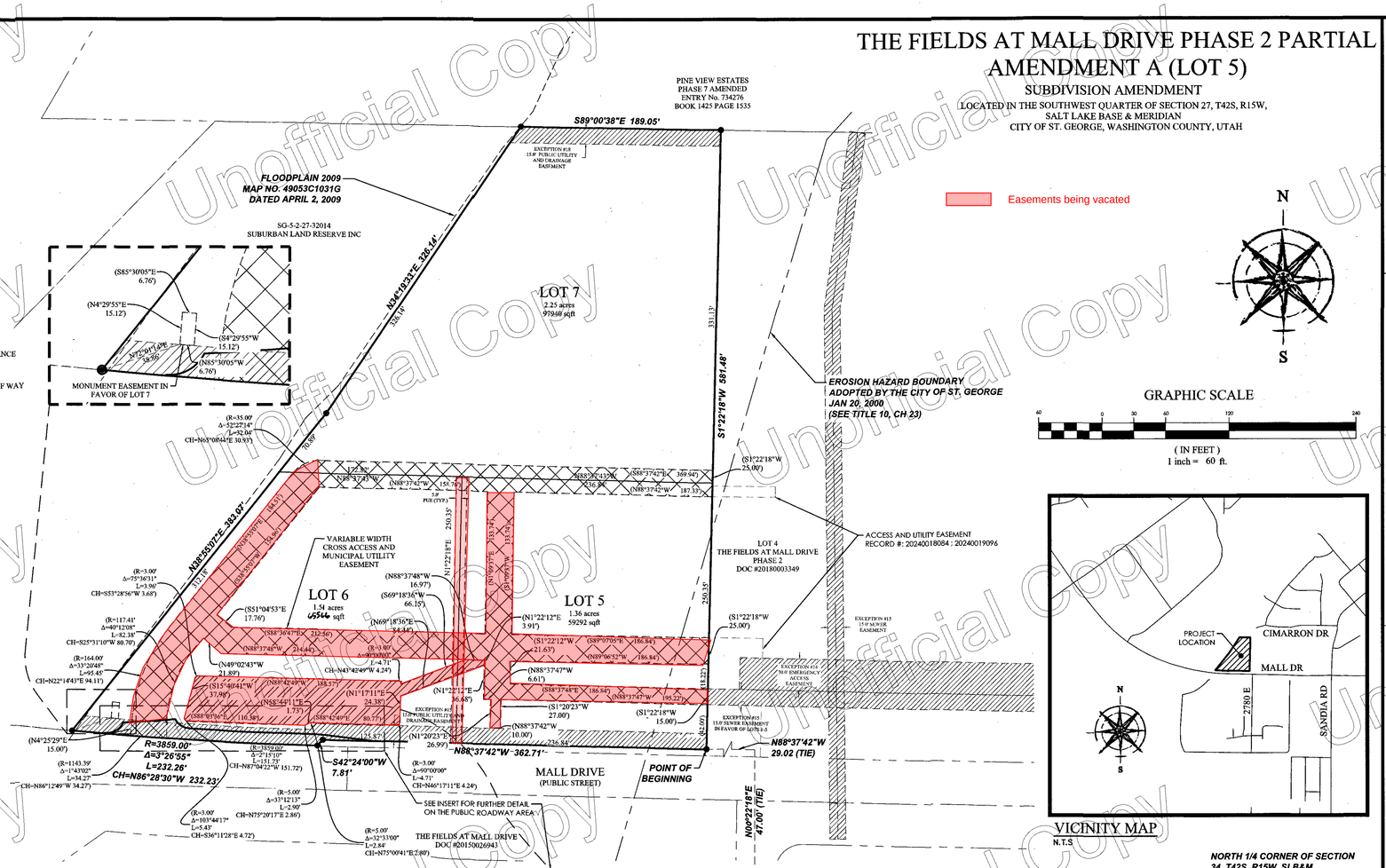
- BOUNDARY
- SECTION LINE
- EASEMENT
- RIGHT-OF-WAY LINE
- CENTERLINE
- EROSION HAZARD BOUNDARY
- 100-YEAR FLOODPLAIN
- BUILDING SETBACK
- EXISTING PROPERTY LINE
- SECTION MONUMENT (FOUND) AS SHOWN AND DESCRIBED
- SECTION MONUMENT (NOT FOUND) AS SHOWN AND DESCRIBED
- CLASS 1 (RING AND LID) MONUMENT FOUND
- BOUNDARY MARKERS #5 REBAR AND CAP
- PUBLIC CROSS ACCESS AND MUNICIPAL UTILITY EASEMENT
- EXISTING PUBLIC UTILITY AND DRAINAGE EASEMENT
- DRAINAGE EASEMENT IN FAVOR OF LOTS 5, 6, & 7 WITH SHARED MAINTENANCE
- AREA HEREBY DEDICATED TO THE CITY OF ST. GEORGE AS PUBLIC RIGHT OF WAY

VIRGIN RIVER FLOOD PLAIN RESTRICTIONS:

- BASED ON THE PROXIMITY OF THIS PROPERTY TO THE VIRGIN RIVER, BUILDINGS CONSTRUCTED WITHIN THE BOUNDARIES OF THIS SUBDIVISION MAY BE SUBJECT TO A FLOODING AND EROSION HAZARD. BY PURCHASING PROPERTY WITHIN THIS SUBDIVISION, THE PURCHASER ASSUMES ANY AND ALL RISK OF DAMAGE AND PERSONAL INJURY AS A RESULT OF ITS PROXIMITY TO THE VIRGIN RIVER, AND DOES INDEMNIFY AND HOLD THE CITY OF ST. GEORGE, ITS OFFICERS, BOARDS, EMPLOYEES, AGENTS AND ASSIGNS, HARMLESS FROM ANY AND ALL CLAIMS OF INJURY, DAMAGE, EXPENSE OR LOSS OF WHATEVER NATURE, AND BY ANY PERSON, RELATED TO THE USE OF THEIR PROPERTY NOW AND IN THE FUTURE, BY REASON OF FLOODING, FLOWAGE, OR ANY DAMAGE, DIRECTLY OR INDIRECTLY, CAUSED BY WATER, EROSION, OR DEPOSITION, SUDDEN OR GRADUAL, WHETHER SURFACE, FLOOD, OR RAINFALL. THE 100-YEAR FLOOD PLAIN IS AN AREA DEFINED BY FEMA AND THE EROSION HAZARD BOUNDARY SHOWN WAS ADOPTED BY THE CITY OF ST. GEORGE IN JANUARY OF 2000 BASED ON THE RIVER STABILITY STUDY COMPLETED BY CH2M HILL AND JE FULLER/HYDROLOGY AND GEOMORPHOLOGY INC. HOMEOWNERS ARE ENCOURAGED TO INVESTIGATE AND EVALUATE THE RISK PRIOR TO PURCHASING WITHIN THE ZONE.
- NO ENCROACHMENT, FILL, CLEARING, REMOVAL OF VEGETATION OR ACTIVITY OR WORK OF ANY KIND IS ALLOWED IN THE VIRGIN RIVER FLOOD PLAIN WITHOUT NECESSARY APPROVALS FROM THE CITY, STATE AND FEDERAL AGENCIES.
- ALL BUILDINGS WITHIN THE 100-YEAR FLOOD PLAIN MUST HAVE A FEMA ELEVATION CERTIFICATE, PREPARED BY A LICENSED PROFESSIONAL, VERIFYING THE MINIMUM FINISHED FLOOR ELEVATION PRIOR TO ISSUANCE OF A BUILDING PERMIT. SAID BUILDING MINIMUM FINISHED FLOOR ELEVATION SHALL BE VERIFIED BY THE LICENSED PROFESSIONAL BEFORE THE CERTIFICATE OF OCCUPANCY IS ISSUED.
- IT IS RECOMMENDED THAT OWNERS WITHIN THE FLOOD PLAIN SHOWN ON THIS PLAT MAINTAIN A FLOOD INSURANCE POLICY.

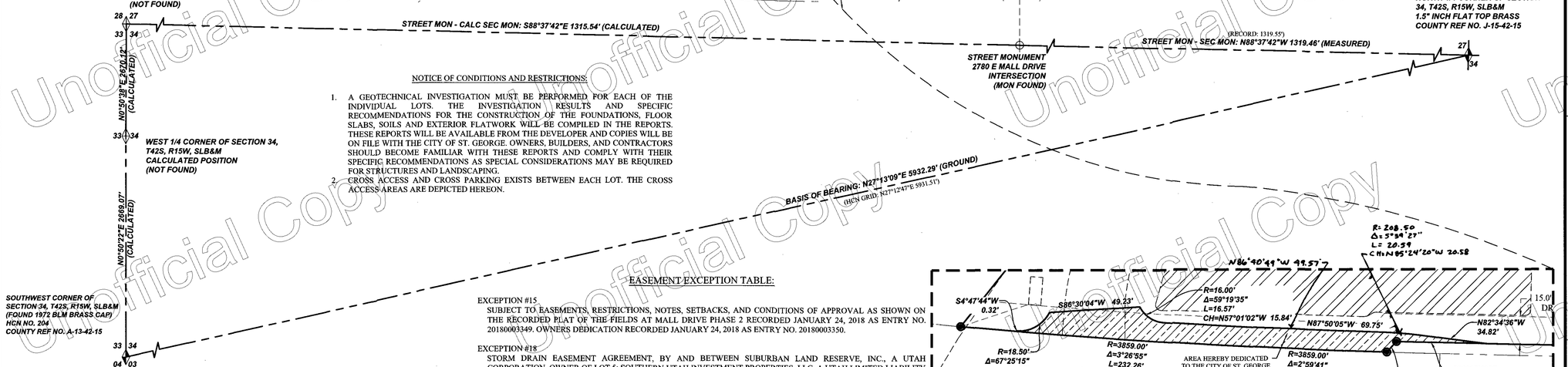
AMENDMENT NARRATIVE:

THE PURPOSE FOR AMENDING LOT 5, THE FIELDS AT MALL DRIVE PHASE 2, ACCORDING TO THE OFFICIAL PLAT THEREOF, ON FILE IN THE OFFICE OF THE WASHINGTON COUNTY RECORDER'S OFFICE AS DOC. NO 20180003349 IS TO SUBDIVIDE SAID LOT 5 FURTHER INTO THREE LOTS, AND TO IDENTIFY CROSS ACCESS AND MUNICIPAL UTILITY EASEMENTS. THESE LOTS WILL BE KNOWN AS LOT 5, LOT 6, AND LOT 7.



NOTICE OF CONDITIONS AND RESTRICTIONS:

1. A GEOTECHNICAL INVESTIGATION MUST BE PERFORMED FOR EACH OF THE INDIVIDUAL LOTS. THE INVESTIGATION RESULTS AND SPECIFIC RECOMMENDATIONS FOR THE CONSTRUCTION OF THE FOUNDATIONS, FLOOR SLABS, SOILS AND EXTERIOR FLATWORK WILL BE COMPILED IN THE REPORTS. THESE REPORTS WILL BE AVAILABLE FROM THE DEVELOPER AND COPIES WILL BE ON FILE WITH THE CITY OF ST. GEORGE. OWNERS, BUILDERS, AND CONTRACTORS SHOULD BECOME FAMILIAR WITH THESE REPORTS AND COMPLY WITH THEIR SPECIFIC RECOMMENDATIONS AS SPECIAL CONSIDERATIONS MAY BE REQUIRED FOR STRUCTURES AND LANDSCAPING.
2. CROSS ACCESS AND CROSS PARKING EXISTS BETWEEN EACH LOT. THE CROSS ACCESS AREAS ARE DEPICTED HEREON.



EASEMENT EXCEPTION TABLE:

EXCEPTION #15
SUBJECT TO EASEMENTS, RESTRICTIONS, NOTES, SETBACKS, AND CONDITIONS OF APPROVAL AS SHOWN ON THE RECORDED PLAT OF THE FIELDS AT MALL DRIVE PHASE 2 RECORDED JANUARY 24, 2018 AS ENTRY NO. 20180003349. OWNERS DEDICATION RECORDED JANUARY 24, 2018 AS ENTRY NO. 20180003350.

EXCEPTION #18
STORM DRAIN EASEMENT AGREEMENT, BY AND BETWEEN SUBURBAN LAND RESERVE, INC., A UTAH CORPORATION, OWNER OF LOT 5; SOUTHERN UTAH INVESTMENT PROPERTIES, LLC, A UTAH LIMITED LIABILITY COMPANY, OWNER OF LOT 4; AND PARTNERS PROPERTY MANAGEMENT, LLC, A UTAH LIMITED LIABILITY COMPANY, OWNER OF LOT 3, RECORDED OCTOBER 7, 2019 AS ENTRY NO. 20190041125 OF THE OFFICIAL RECORDS

SURVEYOR'S CERTIFICATE

I, Justin Lundberg, Professional Land Surveyor number 12554439, hold a license in accordance with Title 58, Chapter 22, Professional Engineers and Land Surveyors Licensing Act and have completed a survey of the property described hereon in accordance with Section 17-23-17 and hereby certify all measurements and descriptions are correct. Monuments will be set as represented on this plat I further certify that by authority of the hereon owners, I have made a survey of the tract of land shown on this plat and have subdivided the same tract into lots, public streets, and easements to be hereinafter known as:

THE FIELDS AT MALL DRIVE PHASE 2 PARTIAL AMENDMENT A

That the same has been correctly surveyed and points established on the ground in accordance with the hereon legal description

PROFESSIONAL LAND SURVEYOR 06/24/24 No. 12554439 JUSTIN LUNDBERG STATE OF UTAH

Justin Lundberg
Professional Land Surveyor
License No. 12554439

06/24/24
Date

BOUNDARY DESCRIPTION

Lot 5, THE FIELDS AT MALL DRIVE PHASE 2, according to the official plat thereof, on file and of record in the office of the Washington County Recorder, State of Utah. per Doc. No. 20180003349 being more particularly described as follows.

A part of the Southwest 1/4 Section 27, Township 42 South, Range 15 West, Salt Lake Base and Meridian, located in the City of St. George, Washington County, Utah, being more particularly described as follows:

Beginning at a point located at the Southwest corner of Lot 4 of previously said Subdivision, said point being N88°37'42"W 1319.46 feet along the Section line to a street monument located at the intersection of 2780 East & Mall Drive; thence N0°22'18"E 47.00 feet; thence N88°37'42"W 29.02 feet from the North 1/4 Corner of Section 34, Township 42 South, Range 15 West, Salt Lake Base and Meridian; thence continue along said plat the following seven (7) courses: (1) thence N88°37'42"W 362.71 feet; (2) thence S42°24'00"W 7.81 feet; (3) thence Westerly along the arc of a non-tangent curve to the right having a radius of 3,859.00 feet (radius bears: N01°48'03"E) a distance of 232.26 feet through a central angle of 03°26'55" Chord: N86°28'30"W 232.23 feet; (4) thence N38°55'07"E 383.07 feet; (5) thence N34°19'33"E 326.14 feet; (6) thence S89°00'38"E 189.05 feet; To the northwest corner of said Lot 4 (7) thence S01°22'18"W along the west line of said Lot 4, a distance of 581.48 feet to the point of beginning.

Containing 6.17 acres +/-

OWNER'S DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED OWNER OF ALL THE ABOVE DESCRIBED TRACT OF LAND, HAVING CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, PUBLIC STREETS, AND EASEMENTS TO HEREAFTER BE KNOWN AS

THE FIELDS AT MALL DRIVE PHASE 2 PARTIAL AMENDMENT A

FOR GOOD AND VALUABLE CONSIDERATION RECEIVED, DOES HEREBY DEDICATE AND CONVEY TO THE CITY OF ST. GEORGE FOR PERPETUAL USE OF THE PUBLIC ALL PARCELS OF LAND SHOWN ON THIS PLAT AS PUBLIC STREETS, AND EASEMENTS AS SHOWN. ALL LOTS, AND EASEMENTS ARE NOTED AS SHOWN. THE OWNERS DO HEREBY WARRANT TO THE CITY OF ST. GEORGE AND IT'S SUCCESSORS AND ASSIGNS,TITLE TO ALL PROPERTY DEDICATED AND CONVEYED TO PUBLIC USE HEREIN AGAINST THE CLAIMS OF ALL PERSONS. LOTS SHOWN ON THIS ARE, SUBJECT TO THE DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS (CC&R'S), RECORDED CONCURRENTLY WITH THIS PLAT. SAID DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTION IS HEREBY INCORPORATED AND MADE PART OF THIS PLAT.

IN WITNESS WHEREOF, WE HAVE HEREUNTO SET OUR HANDS THIS 24 DAY OF June A.D. 2024

WFSC MALL DRIVE HOLDINGS, LLC, A UTAH LIMITED LIABILITY COMPANY

BY: ROB OLSEN

ITS: MANAGER

OWNER'S ACKNOWLEDGMENT

STATE OF UTAH
S.S.
COUNTY OF Salt Lake

ON THIS 24 DAY OF June IN THE YEAR 2024 BEFORE ME, Carie Young A NOTARY PUBLIC, PERSONALLY APPEARED Rob Olsen, PROVED ON THE BASIS OF SATISFACTORY EVIDENCE TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO IN THIS DOCUMENT AND ACKNOWLEDGED (HE/SHE) EXECUTED THE SAME.

NOTARY SIGNATURE

NOTARY PUBLIC FULL NAME: Carie Young

COMMISSION NUMBER: 715347

MY COMMISSION EXPIRES: December 3, 2024

A NOTARY PUBLIC COMMISSIONED IN THE STATE OF UTAH

(STAMP NOT REQUIRED PER UTAH CODE 46-1-16(7))

DO NOT STAMP

THE FIELDS AT MALL DRIVE PHASE 2 PARTIAL AMENDMENT A (LOT 5)

SUBDIVISION AMENDMENT

LOCATED IN THE SOUTHWEST QUARTER OF SECTION 27, T42S, R15W, SALT LAKE BASE & MERIDIAN
CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH

RECORDED NUMBER

DOC # 20240024103
Map (Conveying Property) Page 1 of 2
Carri Jo Nielsen Washington County Recorder
08/01/2024 08:37:32 PM Fee: $ 58.00
By: BRYCE DIAMOND

WASHINGTON COUNTY RECORDER

CITY SURVEYOR APPROVAL

I HEREBY VERIFY THAT THIS OFFICE EXAMINED THIS FINAL SUBDIVISION PLAT AND HEREBY RECOMMENDS APPROVAL ON THIS 27 DAY OF JUNE, 2024

CITY SURVEYOR
CITY OF ST. GEORGE

COMMUNITY DEVELOPMENT DIRECTOR APPROVAL

I HEREBY VERIFY THAT THIS OFFICE EXAMINED THIS FINAL SUBDIVISION PLAT AND HEREBY RECOMMENDS APPROVAL ON THIS 26th DAY OF June, 2024

COMMUNITY DEVELOPMENT DIRECTOR
CITY OF ST. GEORGE

CITY ENGINEER APPROVAL

I HEREBY VERIFY THAT THIS OFFICE EXAMINED THIS FINAL SUBDIVISION PLAT AND HEREBY RECOMMENDS APPROVAL ON THIS 9th DAY OF July, 2024

CITY ENGINEER
CITY OF ST. GEORGE

CITY ATTORNEY APPROVAL

APPROVED AS TO FORM, THIS THE 3 DAY OF July, 2024.

CITY ATTORNEY
CITY OF ST. GEORGE

LAND USE AUTHORITY APPROVAL

I HEREBY VERIFY THAT THE LAND USE AUTHORITY REVIEWED THIS FINAL SUBDIVISION PLAT AND APPROVED IT ON THIS 12 DAY OF July, 2024 WITH ALL COMMITMENTS AND OBLIGATIONS PERTAINING THERETO.

LAND USE AUTHORITY
CITY OF ST. GEORGE

TREASURER APPROVAL

I, WASHINGTON COUNTY TREASURER, CERTIFY ON THIS 26 DAY OF July A.D. 2024 THAT ALL TAXES, SPECIAL ASSESSMENTS AND FEES DUE AND OWING ON THIS SUBDIVISION FINAL PLAT HAVE BEEN PAID IN FULL.

STATE OF UTAH COUNTY OF WASHINGTON TREASURER

WASHINGTON COUNTY TREASURER

PAGE 1 OF 1

FOCUS ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

Unofficial Copy

Z:\2022\22-0462\31 George Hotgreens\design 22-0462\dwg\sheets\C2.2 FINAL PLAT.dwg

Agenda Date: 02/20/2025 **Agenda Item Number:** 05

Subject:

Public hearing and consideration of Ordinance No. 2025-014 approving the vacation of a portion of an existing municipal utility easement located between Lots 58 and 59 of Cottam Cove Phase 5.

Item at-a-glance:

Staff Contact: Todd Jacobsen

Applicant Name: Brandee Walker, Civil Science

Reference Number: PLANLRE25-002

Address/Location:

Approximately 1815 S Talus CT

Item History (background/project status/public process):

The subdivision plat for Cottam Cove Phase 5 was approved by the City of St. George Land Use Authority on the 20th day of September, 2022 and recorded in the Office of the Washington County Recorder on the 23rd day of September, 2022.

Staff Narrative (need/purpose):

The owner would like to merge Lots 58 and 59 together into one lot. A subdivision amendment has been submitted and it is currently under review. The easement will need to be approved and recorded before the plat can be.

Name of Legal Dept approver: Jami Brackin

Budget Impact: No Impact

Recommendation (Include any conditions):

JUC reviewed the proposed vacation and has recommended its approval.

When Recorded Return To:
City of St. George
City Recorder's Office
175 East 200 North
St. George, UT 84770

ORDINANCE NO. _____

Tax ID: SG-CTC-5-58, SG-CTC-5-59

AN ORDINANCE VACATING A PORTION OF A MUNICIPAL UTILITY EASEMENT LOCATED IN THE CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH
(Located between Lots 58 and 59, Cottam Cove Phase 5)

WHEREAS, a petition was received by this Council requesting the vacation of a portion of an existing municipal utility easement, located between Lots 58 and 59, Cottam Cove Phase 5, according to the official plat thereof, on file in the Office of the Washington County Recorder's Office as Doc. No. 20220044147, being more particularly describe and shown in Exhibit A and Exhibit B; and

WHEREAS, the Joint Utility Commission (JUC) has reviewed the proposed vacation and has recommended its approval; and

WHEREAS, the City Council finds that vacating the easement, as described in Exhibit A and Exhibit B, will not be detrimental to the public interest and that good cause exists for such action;

NOW, THEREFORE, BE IT ORDAINED, by the City Council of the City of St. George, Washington County, Utah, as follows:

1. **Vacation of Easement**: The municipal utility easement located between Lots 58 and 59, Cottam Cove Phase 5, as described and depicted in Exhibit A and Exhibit B, is hereby vacated.
2. **Effective Date**: This ordinance shall take effect upon the recording of all necessary documents and the posting of this ordinance in the manner prescribed by law.

APPROVED AND ADOPTED by the St. George City Council on this ____ day of _____, 2025.

CITY OF ST. GEORGE:

_____
Michele Randall, Mayor

APPROVED AS TO FORM:
City Attorney's Office

_____
Jami Brackin, Deputy City Attorney

ATTEST:

_____
Christina Fernandez, City Recorder

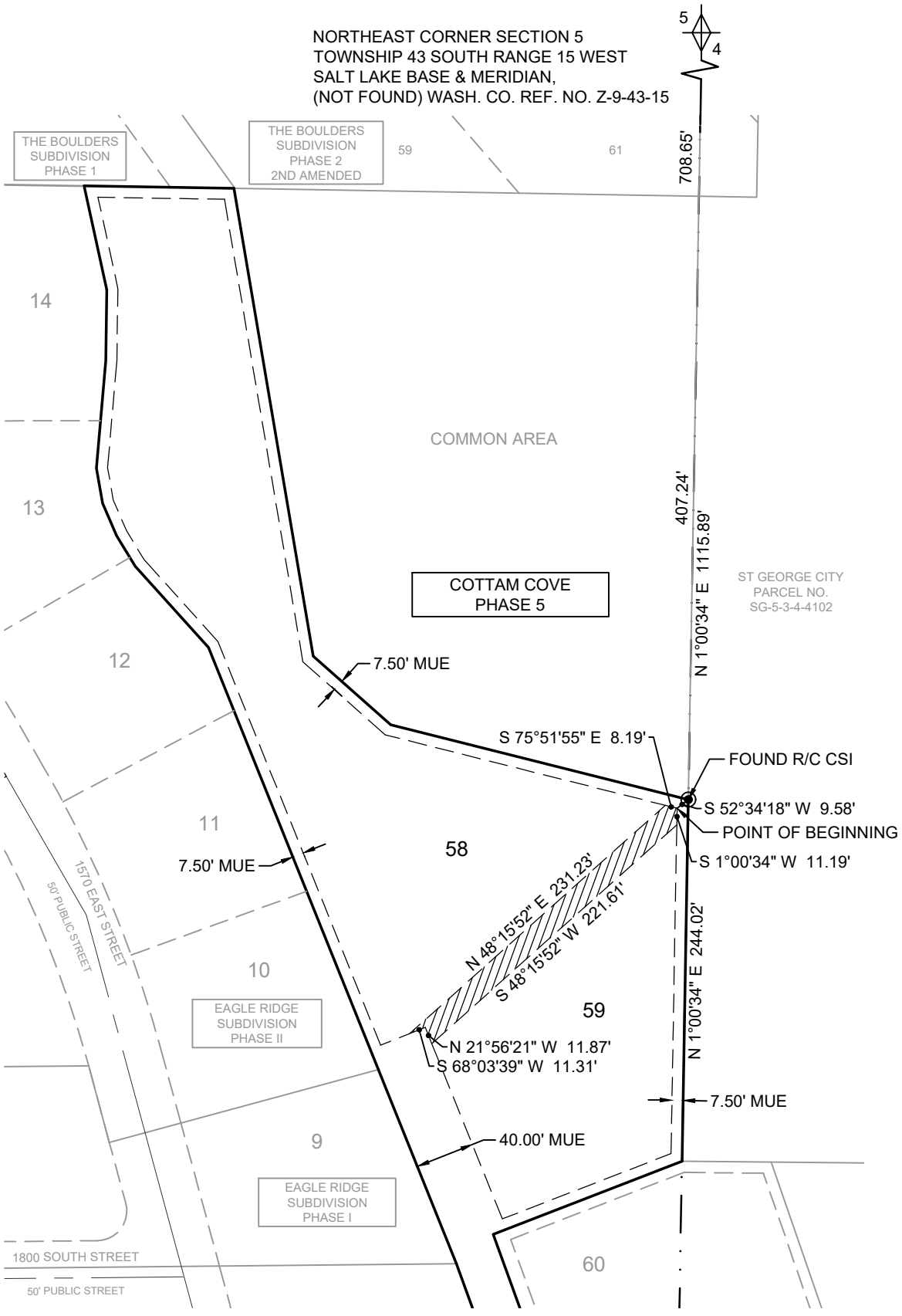
VOTING OF CITY COUNCIL:
Councilmember Hughes _____
Councilmember Larkin _____
Councilmember Larsen _____
Councilmember Tanner _____
Councilmember Kemp _____

EXHIBT “A”

COTTAM COVE PHASE 5

VACATED MUNICIPAL UTILITY EASEMENT LEGAL DESCRIPTION

BEGINNING AT A POINT WHICH IS S 52°34'18" W 9.58 FEET FROM THE NORTHEAST CORNER OF LOT 59 OF COTTAM COVE PHASE 5 SUBDIVISION, RECORDED AND ON FILE IN THE OFFICE OF THE RECORDER, WASHINGTON COUNTY, STATE OF UTAH, SAID POINT ALSO BEING S 1°00’34” W 1115.89 FEET FROM THE NORTHEAST CORNER OF SECTION 5, TOWNSHIP 43 SOUTH, RANGE 15 WEST, SALT LAKE BASE AND MERIDIAN, AND RUNNING THENCE S 1°00'34" W 11.19 FEET; THENCE S 48°15'52" W 221.61 FEET; THENCE N 21°56'21" W 11.87 FEET; THENCE S 68°03'39" W 11.31 FEET; THENCE N 48°15'52" E 231.23 FEET; THENCE S 75°51'55" E 8.19 FEET, TO THE POINT OF BEGINNING.



FF24551.00

EXHIBIT B

VACATED MUNICIPAL UTILITY EASEMENT

CivilScience
1453 S. DIXIE DRIVE, SUITE 150
ST. GEORGE, UT 84770
435.986.0100

Agenda Date: 02/20/2025 **Agenda Item Number:** 06

Subject:

Consider approval of Ordinance No. 2025-015 amending an approved PD-C (Planned Development Commercial) zone on approximately 0.43 acres located east of River Road and south of 900 south, with conditions from the Planning Commission. (2025-PDA-001 - 951 S River Road Commercial)

Item at-a-glance:

Staff Contact: Brett Hamilton

Applicant Name: Brandee Walker, Civil Science

Reference Number: 2025-PDA-001

Address/Location:

951 S River Road

Item History (background/project status/public process):

The subject property is in a PD-C (Planned Development Commercial) Zone. When the PD-C zone was approved by the City Council in 2006, the approval was to allow all uses listed in the AP (Administrative Professional) zone. The project includes a 5,000 square foot building on a 0.43 acre site. The Planning Commission held a public hearing on the request on January 28, 2025 and recommend approval of the amendment with conditions.

Staff Narrative (need/purpose):

The applicant is requesting the site layout and design for a 5,000 square foot office building. The building architecture proposes a brick and stucco exterior with wood cladding accents, as well as iron trellises and fabric awnings. The building is intended to be used for medical and professional offices, complimentary to the adjacent commercial uses to the north. The proposed professional and medical office uses for the building are allowed in this PD-C (allows uses from AP zoning in the city code).

Name of Legal Dept approver: Jami Brackin

Budget Impact: No Impact

Recommendation (Include any conditions):

The Planning Commission held a public hearing on January 28, 2025 and voted 5-0 to forward a positive recommendation to the City Council with the following two conditions:1. 1.When the property to the south (987 S River Road) develops, and if shared access between the two properties becomes practical and feasible, the owner of 951 S River Road shall: 1) Remove or block off its direct access to River Road; and 2) Reconfigure site access to align with the development to the south; and 3) Adjust parking as necessary to comply with applicable City ordinances. These modifications shall be completed within a reasonable timeframe after shared access becomes available. The City reserves the right to convert site access to a right-in/right-out configuration at any time, with or without a median.2.Depending on how the parking configuration changes in the future, power and drainage may need to be revised on the site to avoid conflicts.

St.George
Community Development

Planned Development Amendment

PLANNING COMMISSION AGENDA REPORT: 1/28/2025
CITY COUNCIL AGENDA REPORT: 2/20/2025

951 S River Road Commercial Planned Development Amendment (Case No. 2025-PDA-001)		
Request:	Consider approval of an ordinance amending an approve Planned Development Commercial (PD-C) zone located at 951 S River Road. The applicant is seeking approval of their site plan and building design for a new 5,000 square foot building, on approximately 0.43 acres.	
Applicant:	Brandee Walker, Civil Science	
Location:	951 S River Road	
General Plan:	LDR (Low Density Residential)	
Existing Zoning:	PD-C (Planned Development Commercial)	
Surrounding Zoning:	North	PD-C (Planned Development Commercial)
	South	PD-C (Planned Development Commercial)
	East	PD-C (Planned Development Commercial)
	West	PD-R (Planned Development Residential)
Land Area:	Approximately 0.43 acres	



BACKGROUND:
The subject property is in a PD-C (Planned Development Commercial) Zone. When the PD-C zone was approved by the City Council in 2006, the approval was to allow all uses in the AP (Administrative Professional) zone. The proposed project includes a 5,000 square foot building on a 0.43 acre site. The building architecture proposes a brick and stucco exterior with wood cladding accents, as well as iron trellises and fabric awnings. The building is intended to be used for medical and professional offices, complimentary to the adjacent commercial uses to the north. The proposed uses for the building are allowed in this PD-C (allows uses from AP zoning in the city code). The proposed project meets the above standards as well as the zoning requirements shown below.

Please see the zoning requirement details below:

Zoning Requirements			
Regulation	**Section Number**	**Proposal**	**Staff Comments**
Setbacks	10-8D-6	Front: 133’ Internal Side: 10’ Rear: 10’	Front: 20’ Internal Side: 10’ Rear: 10’
Uses	10-8A-1	Medical & Professional Office	This PD-C allows for all uses listed in the AP zone.
Height and Elevation	10-8D-6	Approximate Height: 22’	The maximum height allowed in the zone is 50’ and a minimum height of 10’
Landscape Plan	10-8D-2	The conceptual landscape plan proposes approximately 3,413 square feet of landscaping which is approximately 18% of the site.	The conceptual plan meets the landscaping requirements.
Utilities	10-8D-2	None shown	All utilities will be designed during the JUC process. Utilities have previously been discussed with the applicant in pre-application meetings. Staff will ensure this is completed during the site plan approval process.
Signs	10-8D-2	Signage has not been determined.	Signs need to meet the regulations found in Title 9-13 and will be reviewed at the time of permitting.

Lighting	10-8D-2	A photometric plan has not been submitted.	The lighting needs to be at or below 1.0 foot candles at the property line with dark sky lighting and meet all other site lighting standards.
Solid Waste	10-8D-6	Dumpster location is shown on the site.	Dumpster to be screened with block walls, gates, and landscaping.
Parking	10-19-5	21 parking spaces proposed	20 parking spaces are required based on 5,000 square feet of office
EVCS And Bike Parking	10-19-6	Bike parking area shown at the north side of the building.	The project would be required to have conduit to one parking space for a future EVCS and a bike rack that holds at least two bikes.

RECOMMENDATION:
The Planning Commission held a public hearing on January 28, 2025 and recommended approval of the application with a 5-0 vote for an amendment to the planned development for the 951 S River Road Commercial to allow construction of the site for medical and professional office uses, with the following conditions:

1. When the property to the south (987 S River Road) develops, and if shared access between the two properties becomes practical and feasible, the owner of 951 S River Road shall: (1) remove or block off its direct access to River Road, (2) reconfigure site access to align with the development to the south, and (3) adjust parking as necessary to comply with applicable City ordinances.

   These modifications shall be completed within a reasonable timeframe after shared access becomes available. The City reserves the right to convert site access to a right-in/right-out configuration at any time, with or without a median.

2. Depending on how the parking configuration changes in the future, power and drainage may need to be revised on the site to avoid conflicts.

ALTERNATIVES:
1. Approve as presented.
2. Approve with conditions.
3. Deny the application as presented.
4. Continue the proposed PD amendment to a future date.

POSSIBLE MOTION:
"I move that we approve the PD amendment for 951 South River Road Commercial as presented, case no. 2025-PDA-001, based on the findings and subject to the conditions listed in the staff report."

FINDINGS FOR APPROVAL:

1. The proposed uses are permitted uses found in the AP zone.
2. The proposed project meets the Planned Development Commercial general requirements found in Section 10-8D-2.
3. Approval of the PD amendment is in the best interest of the health, safety, and welfare of the city of St. George.

Exhibit A
Applicant's Narrative

951 River Road Commercial
Planned Development Amendment

The proposed commercial development is seeking a zone change from PD-C to PD-C for a new approximately 5,000 square foot building located at 951 South River Road being parcel SG-5-2-32-1312. The building proposes a height of 22'-0" with a modern brick finish. The parking required is 20 stalls with 20 stalls being provided.

No changes to the approved use list are proposed with this zone change application as the permitted uses within the PD-AP are desired.

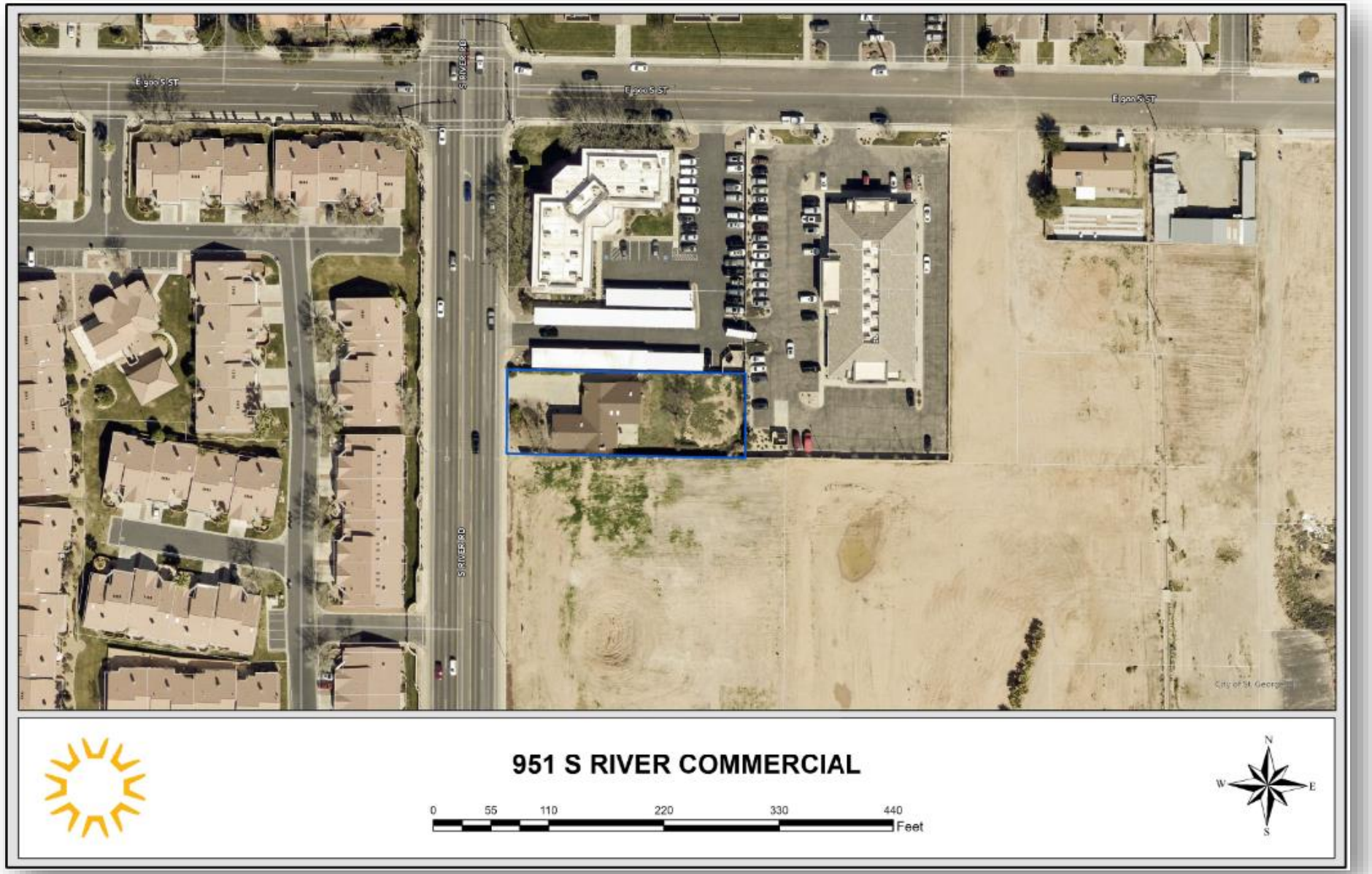
The project will be constructed in a single phase. The site totals 0.43 acres.

Exhibit B
PowerPoint Presentation

951 S River Road Commercial Planned Development Amendment

2025-PDA-001

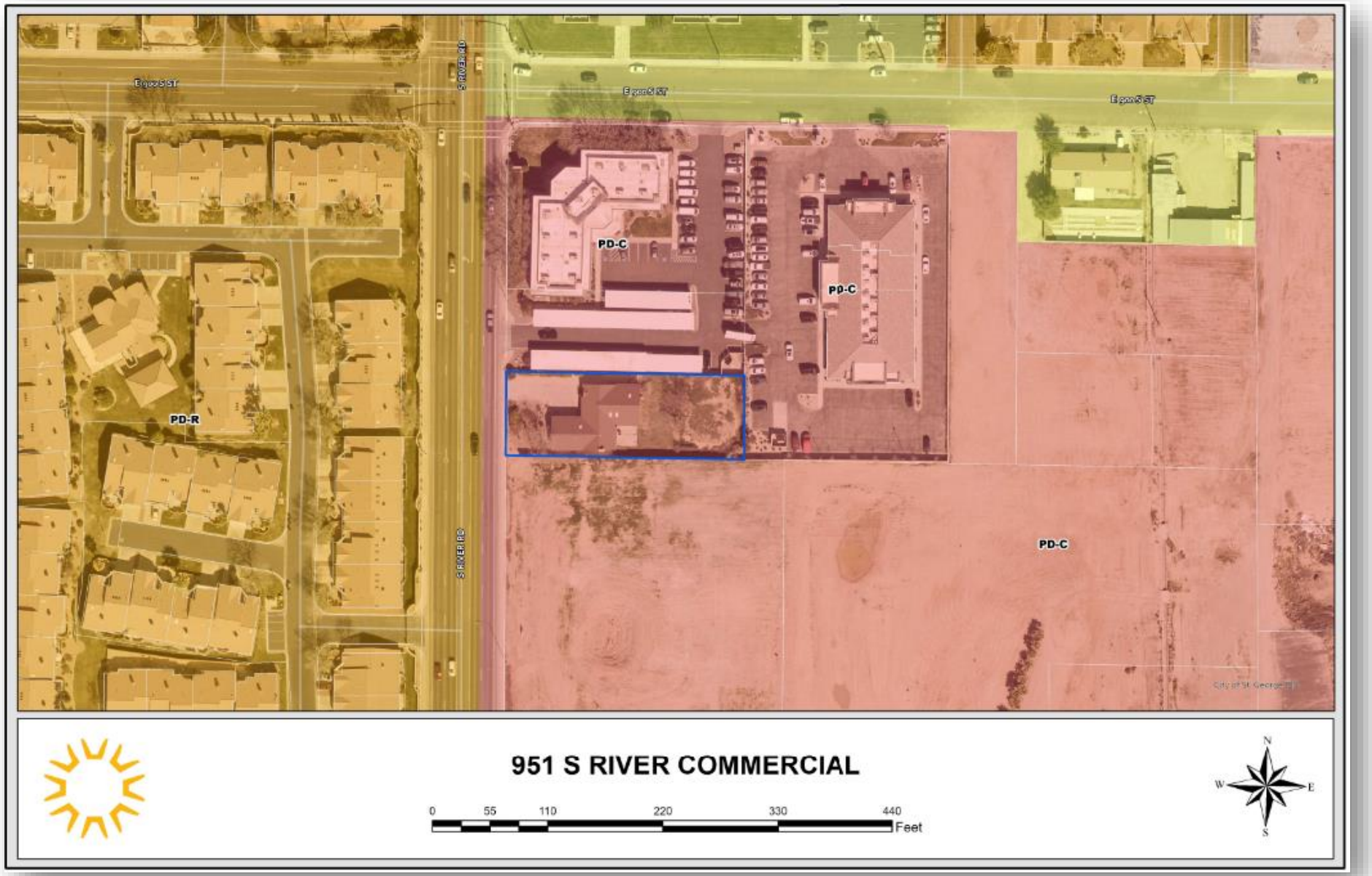
Aerial Map


E 900 S ST
S RIVER RD
E 900 S ST
E 900 S ST
S RIVER RD
951 S RIVER COMMERCIAL
0 55 110 220 330 440
Feet
N
W
E
S

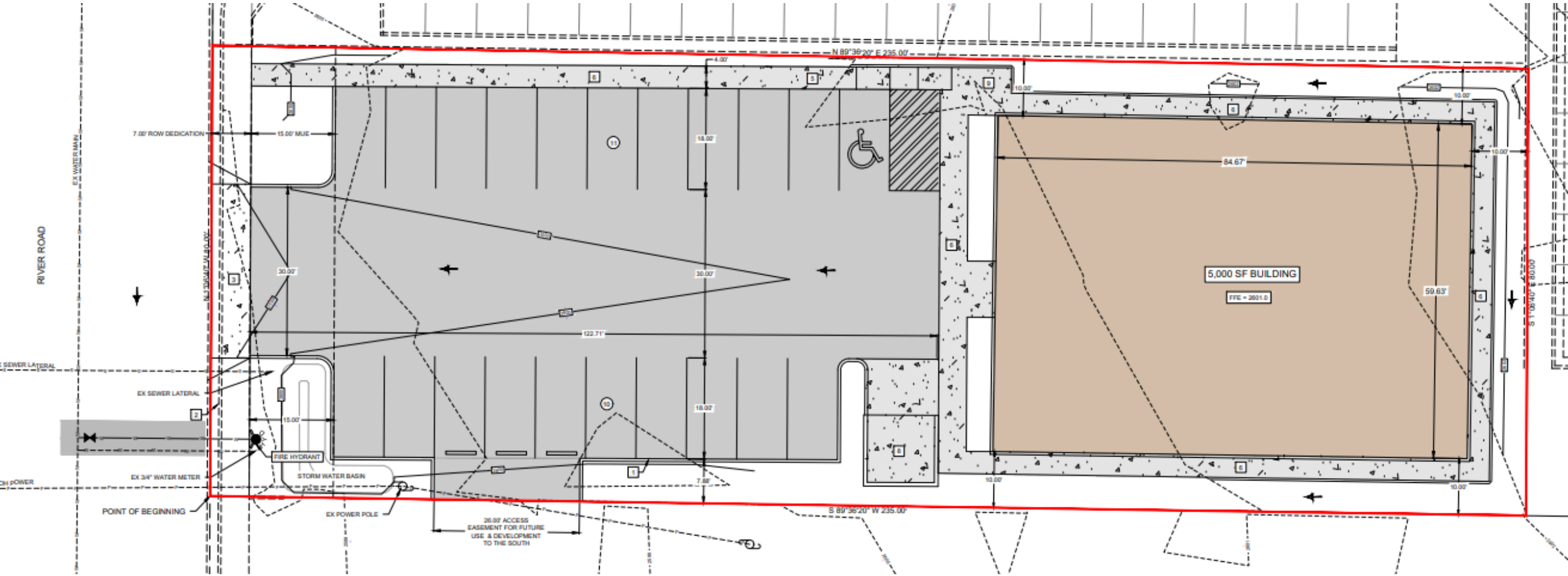
Land Use Map



Zoning Map


E 500 S ST
S RIVER RD
E 400 S ST
E 300 S ST
PD-C
PD-C
PD-R
PD-C
S RIVER RD
951 S RIVER COMMERCIAL
0
55
110
220
330
440
Feet
N
W
E
S

Site Plan


N 89°36'20" E 235.00'
7.00' ROW DEDICATION
15.00' MUE
EX WATER MAIN
RIVER ROAD
5,000 SF BUILDING
FFE = 2931.0
84.67'
59.63'
30.00'
122.71'
18.00'
EX SEWER LATERAL
FIRE HYDRANT
STORM WATER BASIN
EX 3/4" WATER METER
POINT OF BEGINNING
EX POWER POLE
26.00' ACCESS EASEMENT FOR FUTURE USE & DEVELOPMENT TO THE SOUTH
S 89°36'20" W 235.00'
10.00'

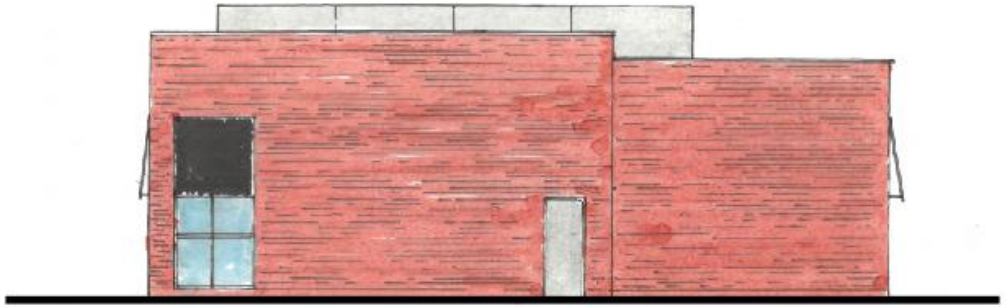
Elevations



FRONT ELEVATION



RIGHT ELEVATION



REAR ELEVATION



LEFT ELEVATION



Landscaping

PLANT AND LANDSCAPE MATERIALS LEGEND

THE FOLLOWING IS A LIST OF PLANTS AND LANDSCAPE MATERIALS TO USE FOR THE SKY RIDGE APARTMENTS. PLANT AND LANDSCAPE MATERIAL NOT SHOWN ON THIS LIST MUST BE APPROVED BY THE PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
TREES			
	CHILOPSIS LINEARIS 'BURGUNDY LACE'	BURGUNDY LACE DESERT WILLOW	15 GAL / 24" BOX
	OLEA EUROPAEA 'WILSONII'	WILSON OLIVE	15 GAL / 24" BOX
	PISTACIA CHINENSIS 'RED PUSH'	RED PUSH CHINESE PISTACHE	15 GAL / 24" BOX
	PROSOPIS GLANDULOSA 'MAVERICK'	MAVERICK MESQUITE	15 GAL / 24" BOX
	PYRUS CALLERYANA 'BRADFORD'	BRADFORD FLOWERING PEAR	15 GAL / 24" BOX
	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	15 GAL / 24" BOX
	WASHINGTONIA FILIFERA	CALIFORNIA FAN PALM	6-8' TALL

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
SMALL ACCENT/SUCCULENTS			
	AGAVE PARRYI VARIETY PARRYI	PARRY'S AGAVE	5 GAL
	ECHINOCEREUS GRUSONII	GOLDEN BARREL CACTUS	5 GAL
	EUPHORBIA RIGIDA	GOPHER PLANT	5 GAL
	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL
GRASSES			
	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLONDE AMBITION BLUE GRAMMA	5 GAL
	MUHLENBERGIA CAPILLARIS 'REGAL MIST'	REGAL MIST GRASS	5 GAL
	STIPA TENUISSIMA	MEXICAN FEATHER GRASS	5 GAL

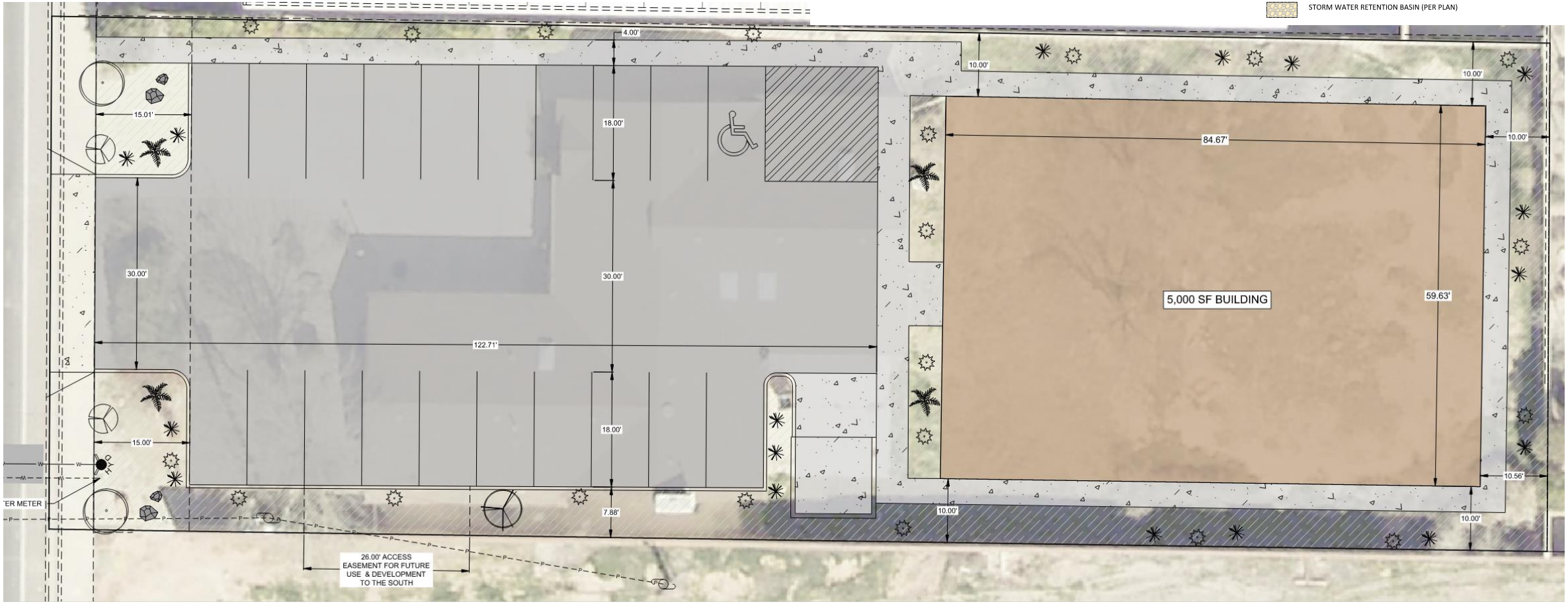
BOULDERS

- SMALL: 2-3' DIAMETER, BLACK BASALT
- SMALL: 2-3' DIAMETER, TAN LIMESTONE
- LARGE: 4-5' DIAMETER, BLACK BASALT
- LARGE: 4-5' DIAMETER, TAN LIMESTONE

ROCK MULCH

- 1/2" BLACK BASALT, 2" DEPTH
- 1/2" TAN LIMESTONE, 2" DEPTH
- 1" BLACK LAVA CINDERS
- 1" KANOSH VALLEY RIVER ROCK
- 2-4" BLACK LAVA CINDERS, 6" DEPTH
- 2-4" KANOSH VALLEY RIVER ROCK
- 2-4" TAN LIMESTONE, 6" DEPTH

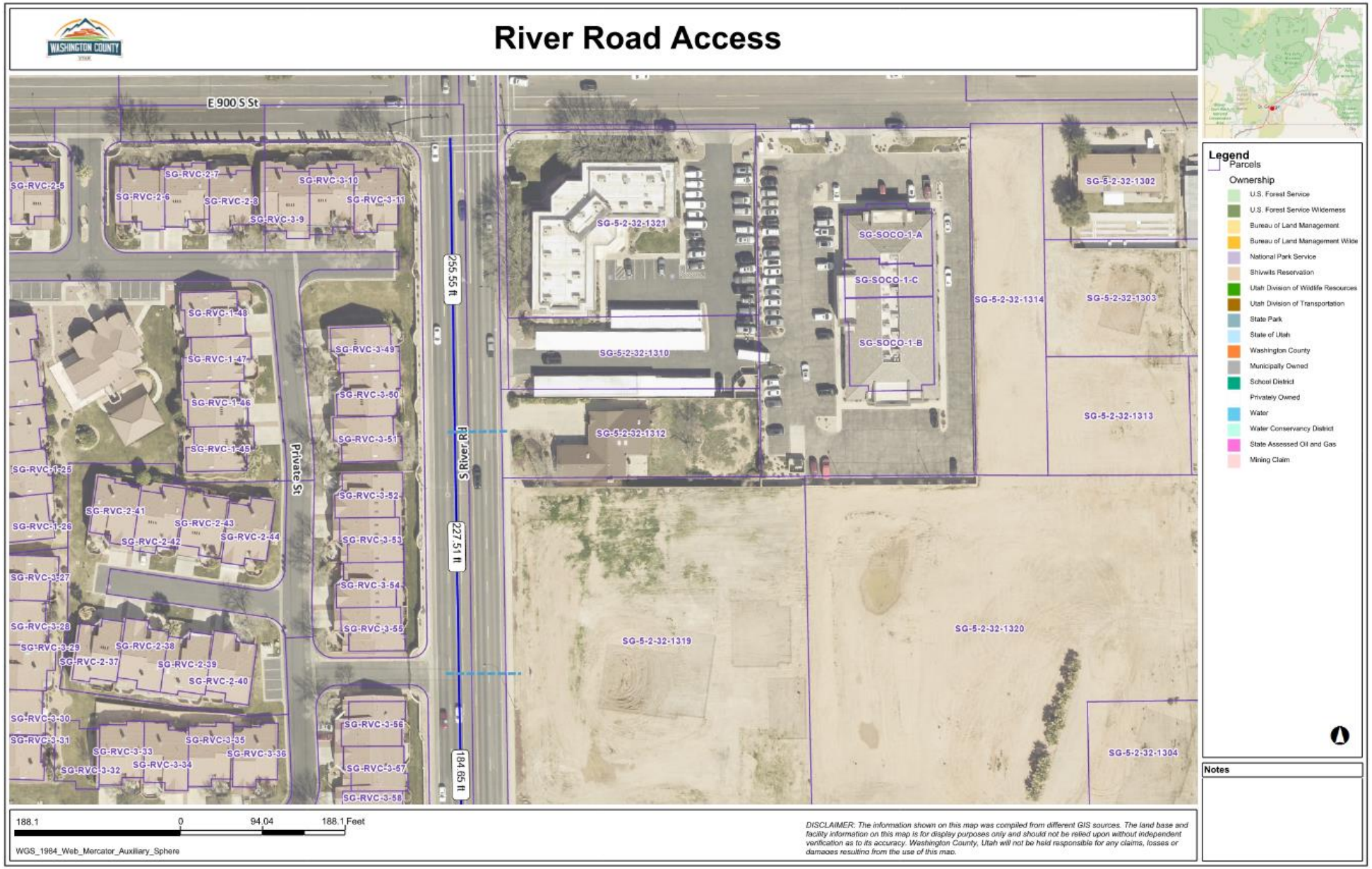
STORM WATER RETENTION BASIN (PER PLAN)



River Road Spacing

255 feet from project driveway to 900 S

227 feet from project driveway to next south intersection



ORDINANCE NO._____

AN ORDINANCE AMENDING AN APPROVED PD-C (PLANNED DEVELOPMENT COMMERCIAL) ZONE ON APPROXIMATELY 0.43 ACRES, LOCATED AT 951 SOUTH RIVER ROAD FOR THE PURPOSE OF CONSTRUCTING A 5,000 SQUARE FOOT OFFICE BUILDING.

(951 S RIVER ROAD COMMERCIAL)

WHEREAS, the property owner has requested to amend the PD-C (Planned Development Commercial) on approximately 0.43 acres, located east of River Road and south of 900 south for the purpose of constructing a 5,000 square foot office building; and

WHEREAS, the City Council held a public meeting on this request on February 20, 2025; and

WHEREAS, the Planning Commission held a public hearing on this request on January 28, 2025, and recommended approval with a 5-0 vote with the following conditions:

1. When the property to the south (987 S River Road) develops, and if shared access between the two properties becomes practical and feasible, the owner of 951 S River Road shall:
   - Remove or block off its direct access to River Road; and,
   - Reconfigure site access to align with the development to the south; and,
   - Adjust parking as necessary to comply with applicable City ordinances.

   These modifications shall be completed within a reasonable timeframe after shared access becomes available. The City reserves the right to convert site access to a right-in/right-out configuration at any time, with or without a median.

2. Depending on how the parking configuration changes in the future, power and drainage may need to be revised on the site to avoid conflicts.

WHEREAS, the City Council has determined that the requested change to the Planned Development is justified at this time, and is in the best interest of the health, safety, and welfare of the citizens of the City of St. George.

NOW, THEREFORE, BE IT ORDAINED, by the St. George City Council, as follows:

Section 1. Repealer. Any provision of the St. George City Code found to be in conflict with this Ordinance is hereby repealed.

Section 2. Enactment. The approved planned development within the PD-C Zone for the property described in Exhibit “A”, shall be amended upon the Effective Date of this Ordinance to reflect the approval of an additional building as shown in Exhibit “B”. The planned development amendment and location is more specifically described on the attached property legal description, incorporated herein as Exhibit “A”, and site plan, incorporated herein as Exhibit “B”.

Section 3. Severability. If any provision of this Ordinance is declared to be invalid by a court of competent jurisdiction, the remainder shall not be affected thereby.

Section 4. Effective Date. This Ordinance shall take effect immediately on the date executed below, and upon posting in the manner required by law.

APPROVED AND ADOPTED by the St. George City Council, this 20th day of February 2025.

CITY OF ST. GEORGE:

_____
Michele Randall, Mayor

ATTEST:

_____
Christina Fernandez, City Recorder

APPROVED AS TO FORM:
City Attorney's Office

_____
Jami Brackin, Deputy City Attorney

VOTING OF CITY COUNCIL:

Councilmember Hughes	_____
Councilmember Larkin	_____
Councilmember Larsen	_____
Councilmember Tanner	_____
Councilmember Kemp	_____

Exhibit “A” – Legal Description

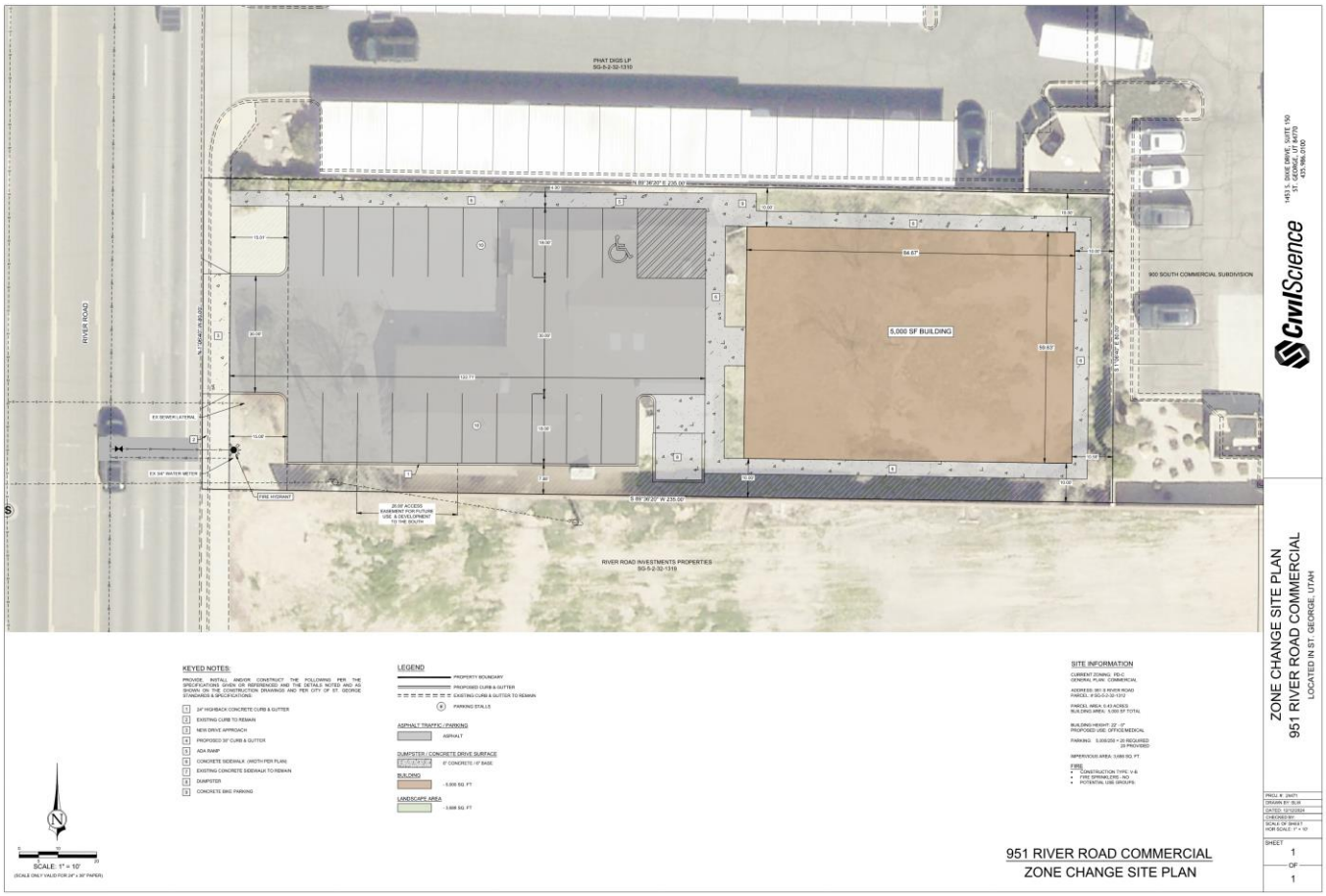
LEGAL DESCRIPTION

BEGINNING AT A POINT ON THE EAST LINE OF A 4.0 ROD COUNTY ROAD, SAID POINT BEING NORTH 88°49'16" EAST 587.20 FEET ALONG THE SECTION LINE AND SOUTH 1°06'40" EAST 1711.53 FEET ALONG SAID EAST LINE OF ROAD FROM THE NORTH QUARTER CORNER OF SECTION 32 , TOWNSHIP 42 SOUTH, RANGE 15 WEST, SALT LAKE BASE AND MERIDIAN; RUNNING THENCE NORTH 1°06'40" WEST 80.0 FEET ALONG SAID EAST LINE OF ROAD; THENCE NORTH 89°36'20"EAST 235.0 FEET; THENCE SOUTH 1°06'40" EAST 80.0 FEET; THENCE SOUTH 89°36'20" WEST 235.0 FEET TO THE POINT OF BEGINNING.
LESS AND EXCEPTING THEREFROM THE FOLLOWING DESCRIBED PARCEL:
BEGINNING AT A POINT ON THE EAST LINE OF A 4.0 ROD COUNTY ROAD, SAID POINT BEING NORTH 88°49'16" EAST 587.20 FEET ALONG THE SECTION LINE AND SOUTH 1°06'40" EAST 1711.53 FEET ALONG SAID EAST LINE OF ROAD FROM THE NORTH QUARTER CORNER OF SECTION 32, TOWNSHIP 42 SOUTH, RANGE 15 WEST, SALT LAKE BASE AND MERIDIAN; RUNNING THENCE NORTH 1°06'40" WEST 80.0 FEET ALONG SAID EAST LINE OF ROAD; THENCE NORTH 89°36'20" EAST 7.0 FEET; THENCE SOUTH 1°06'40" EAST 80.0 FEET; THENCE SOUTH 89°36'20" WEST 7.0 FEET TO THE POINT OF BEGINNING.

PROJECT INFORMATION

PARCEL NO: SG-5-2-32-1312
TOTAL AREA = 0.43 ACRES

Exhibit “B” – Site Plan



Agenda Date: 02/20/2025 **Agenda Item Number:** 07

Subject:

Consider approval of Ordinance No. 2025-016 re-approving the Flats at Grand View PD-R (Planned Development Residential) zone on approximately 8.93 acres to amend the approved Flats at Grand View development with conceptual site plan and elevations, located generally at 1600 West and Skyrocket Road., with a condition from the Planning Commission. (Case No. 2025-PDA-007 - Flats at Grand View at Green Valley)

Item at-a-glance:

Staff Contact: Dan Boles

Applicant Name: American Land Consulting, LLC, Adam Allen

Reference Number: 2025-PDA-007

Address/Location:

Generally located at 1600 West and Skyrocket Road

Item History (background/project status/public process):

In February of 2021, Grand Views was granted PD zoning allowing a total of 431 units. Additionally, the initial 240 apartment units were also approved at that time. In September of 2021, City Council approved a zone change on the subject property which allowed 50 units which was later updated to 60 units. The applicant allowed the approvals to lapse and is now ready to move forward. As such, the applicant is requesting reapproval of the PD approvals. The Planning Commission held a public hearing on January 28, 2025 and voted 6-0 to forward a positive recommendation with a condition.

Staff Narrative (need/purpose):

Under the St. George codes, a PD zone expires if benchmarks are not hit within certain timeframes. Because this application was approved over three years ago with no final approvals, such as a plat or site plan, the zoning is considered null and void. The applicant has resurfaced interest in building this project now and is asking that the original approvals (with minor modifications), be approved.

Name of Legal Dept approver: Jami Brackin

Budget Impact: No Impact

Recommendation (Include any conditions):

On January 28, 2025, the Planning Commission held a public hearing as part of their consideration of the application. No comment was received and they voted 6-0 to forward a positive recommendation to the City Council with the following condition:1.That all driveways are a minimum of 18 feet in width in order to accommodate two vehicles.

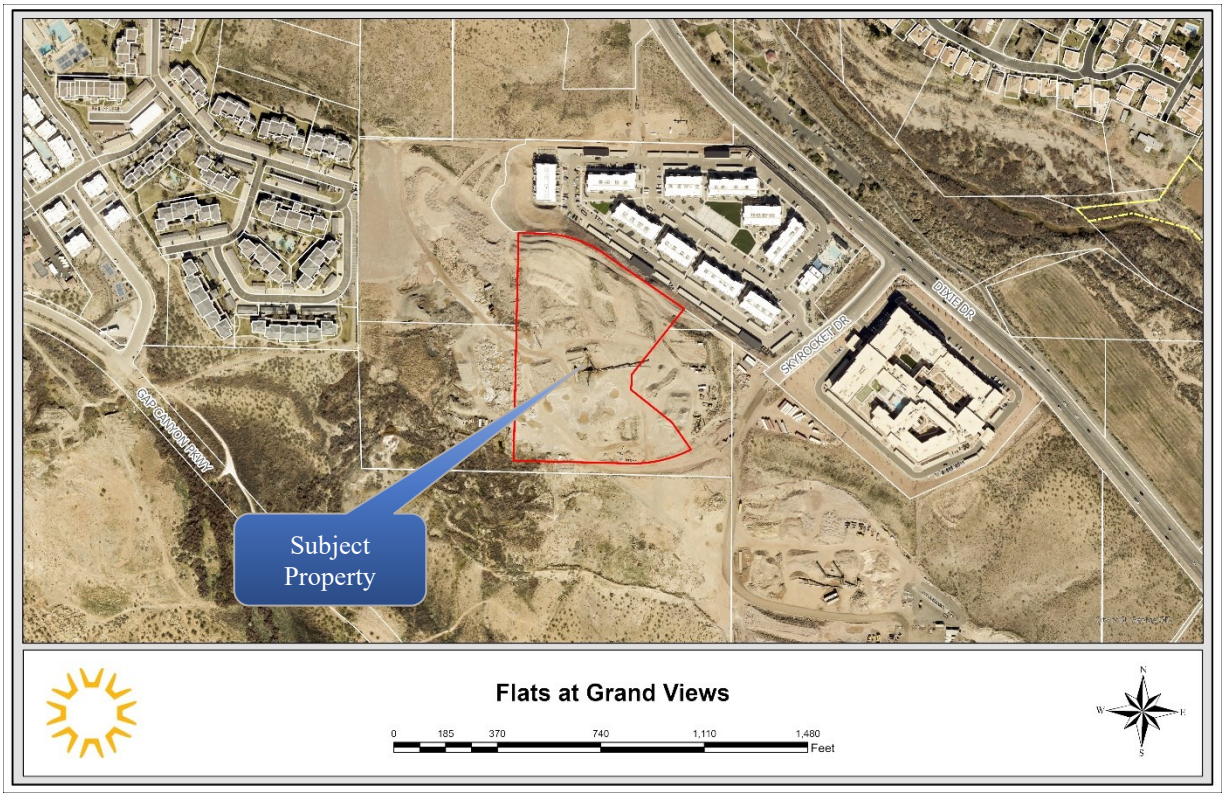
St.George
Community Development

PD AMENDMENT

PLANNING COMMISSION AGENDA REPORT: 01/28/2025
CITY COUNCIL AGENDA REPORT: 02/20/2025

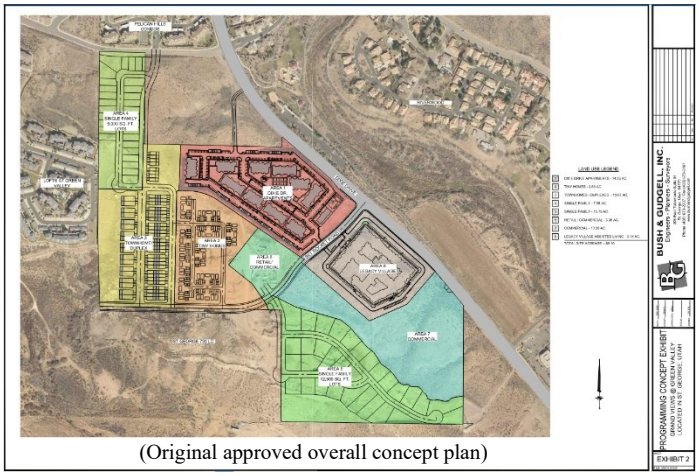
PD Amendment
Flats at Grand Views at Green Valley
Case No. 2025-PDA-007

Request:	Consider a PD Amendment for the Grand Views at Green Valley PD (Planned Development) in order to re-approve the Flats at Grand View Planned Development on approximately 9.62 acres after zoning expired due to inactivity.
Applicant:	American Land Consulting, LLC
Representative:	Adam Allen
Area:	8.93 Acres (388,990 ft²)
Location:	The property is generally located at 1600 West and Skyrocket Road.
Current Zone:	PD-R (Planned Development Residential)
General Plan:	MDR (Medium Density Residential), COM (Commercial)



BACKGROUND

For many years, much (though not all) of the subject property has been a gravel pit. In 2018, the applicant applied for a General Plan amendment on the subject 8.93-acre property along with the rest of the Grand Views property. That request was granted and changed the land use from low density to a mix of commercial, medium density and low density. Specifically, the 8.93 acres was changed to Medium Density Residential. In February of 2020, The City Council heard a request to change the general plan again on the property to medium density and commercial and remove the low density residential. That request was also granted. In February of 2021, the property was granted PD zoning allowing a total of 431 units. Additionally, the initial 240 apartment units were also approved at that time. Finally, in September of 2021, City Council approved a zone change on the subject property which allowed 50 units which was later updated to 60 units.



(Original approved overall concept plan)

REQUEST

Under the St. George codes, a PD zone expires if benchmarks are not hit within certain timeframes. Because this application was approved over three years ago with no final approvals, such as a plat or site plan, the zoning is considered null and void. The applicant has resurfaced interest in building this project now and is asking that the original approvals (with minor modifications, be approved. The following is the information that was previously submitted and approved for the Planning Commission's consideration.

PD Amendment:

By way of information, the following is a breakdown of the densities on the site. Because the Grandview area was designated MDR (Medium Density Residential), the overall density must not exceed nine units per acre. The following chart shows the density as approved.

Area 1 – Dixie Drive Apartments	240 Units	14.25 Acres	16.84 du/ac
Area 2 – Tiny Homes	60 Units	8.93 Acres	6.71 du/ac
Area 3 – Townhomes/Duplexes	80 Units	13.07 Acres	6.12 du/ac
Area 4 – Single Family	30 Units	7.55 Acres	3.97 du/ac
Area 5 – Single Family	31 Units	15.79 Acres	1.96 du/ac
Totals	**441 Units**	**59.59 Acres**	**7.40 du/ac**

It should be noted that area one provides a great deal of the density over the entire site. Removing area one from the calculation leaves the rest of the site at a 4.34 du/ac density. The applicant is proposing to allow 60 units as previously approved. This would result in a density of 6.71 units on area two and 7.40 du/ac overall (4.34 du/ac without area one).

Area Two Site Details:
The property is currently vacant. The proposed site, which totals 8.93 acres, depicts 60 single-family residential buildings. This portion of the property was originally marketed as a tiny home development. That said, a typical tiny home is between 150-500 square feet in size and the smallest of the previously approved structures was 904 ft² which is significantly larger than a typical tiny home. Further, one of the changes proposed with this application is to enlarge the pads to 46' x 25' or 1,150 ft², not the tiny home once envisioned but still a smaller option that we would typically see.

Parking: Under section 10-19-4(A)(4) of the St. George zoning code, each unit is required to provide two parking stalls, one of which must be covered (garage), plus one stall for every three units for guest parking. With 60 units, this would yield a total requirement of 140 stalls (60 covered). The site plan depicts a total of 145 stalls. Because the driveways are 16 feet wide, they don't quite meet the requirements for two parking stalls though in reality two cars may be able to park there. Therefore, staff has only considered the driveway as one stall and not two. That said, it would appear that three more parking stalls are needed to meet the guest requirement. There is plenty of space to fit three more parking stalls on the stalls.

The parking stalls are well dispersed throughout the site, and all meet the minimum size requirements.

Elevations: The site depicts 60 units. Two building layouts are proposed, a two-story layout and a single-story layout. Each of the units are designed with a single-car garage and a 20-foot driveway. Materials include wood siding, stucco and stacked stone. A two-story building would stand at approximately 22 feet tall while a single story would reach approximately 13 feet. These elevations are very similar to the previous elevations but have been updated (see elevations attached).

Landscaping/Amenities: The site is required to maintain a minimum of 30% landscaping requiring 2.67 acres. The site will have just under five acres of open/amenity space. A Planned Development must provide usable recreation areas, in this case at least 12,000 ft² with which the site complies. The site is designed with two pickleball courts, a pool, BBQs, and fire pits which will exceed that requirement.

Recommendation:
Planning Commission held a public hearing on January 28, 2025, and received no comment from the public. They recommend approval of this PD Amendment to the Grand Views at Green Valley PD for the Flats at Grand Views as requested, with the following condition:

1. That all driveways are a minimum of 18 feet in width to accommodate two vehicles.

Alternatives:
1. Approve as presented.
2. Approve with conditions.
3. Deny the application as presented.
4. Continue the proposed PD amendment to a future date.

Possible Motion:
"I move that we approve the PD amendment for the Flats Grand Views at Green Valley as presented, case no. 2025-PDA-007, based on the findings listed in the staff report."

Findings for Approval:

1. The proposed amendment meets the requirements of section 10-7F of the zoning code.
2. There will be adequate parking to facilitate the development.
3. The application meets the requirements of section 10-7F-4(C) regarding height.

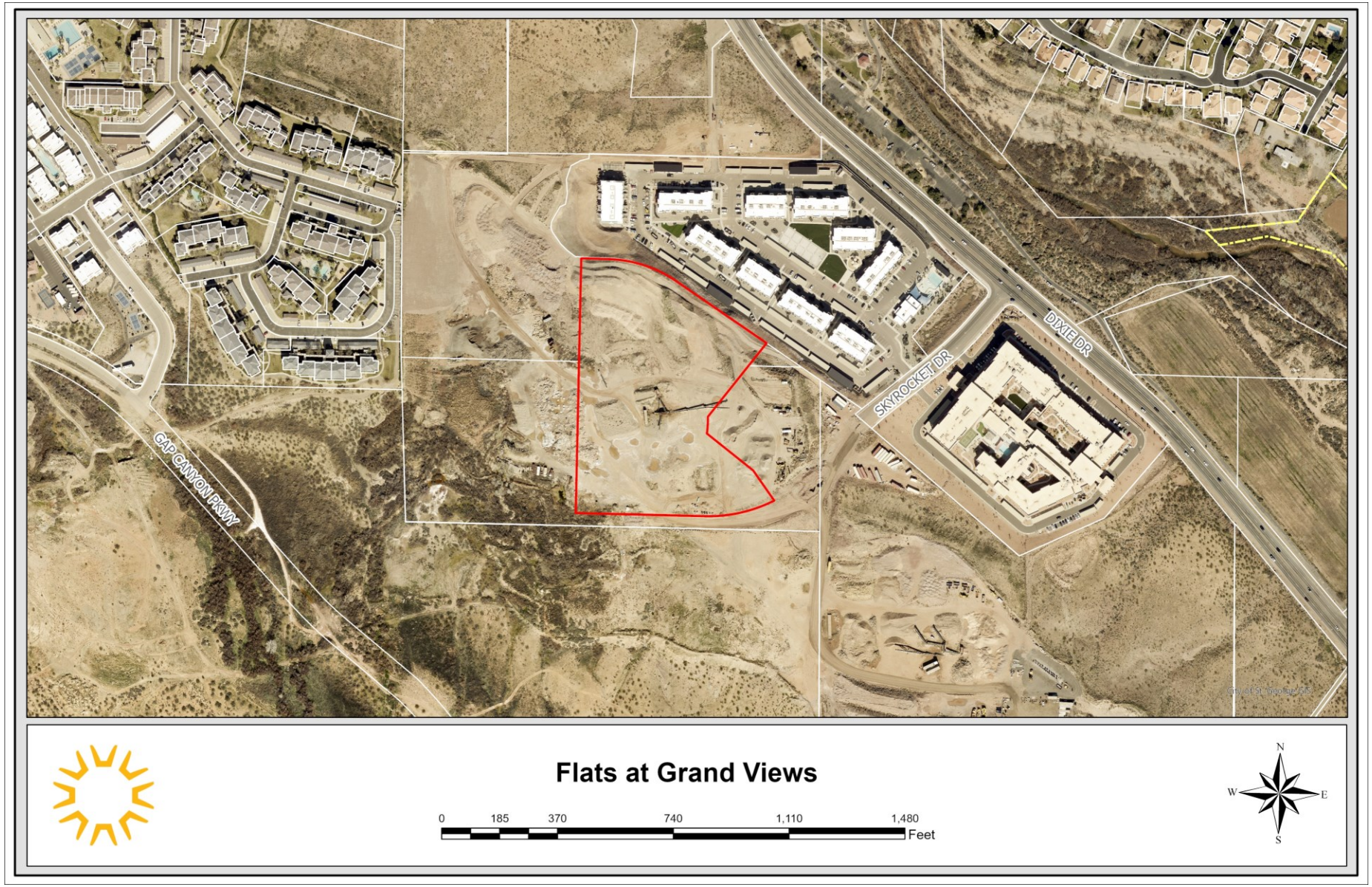
EXHIBIT A
PRESENTATION



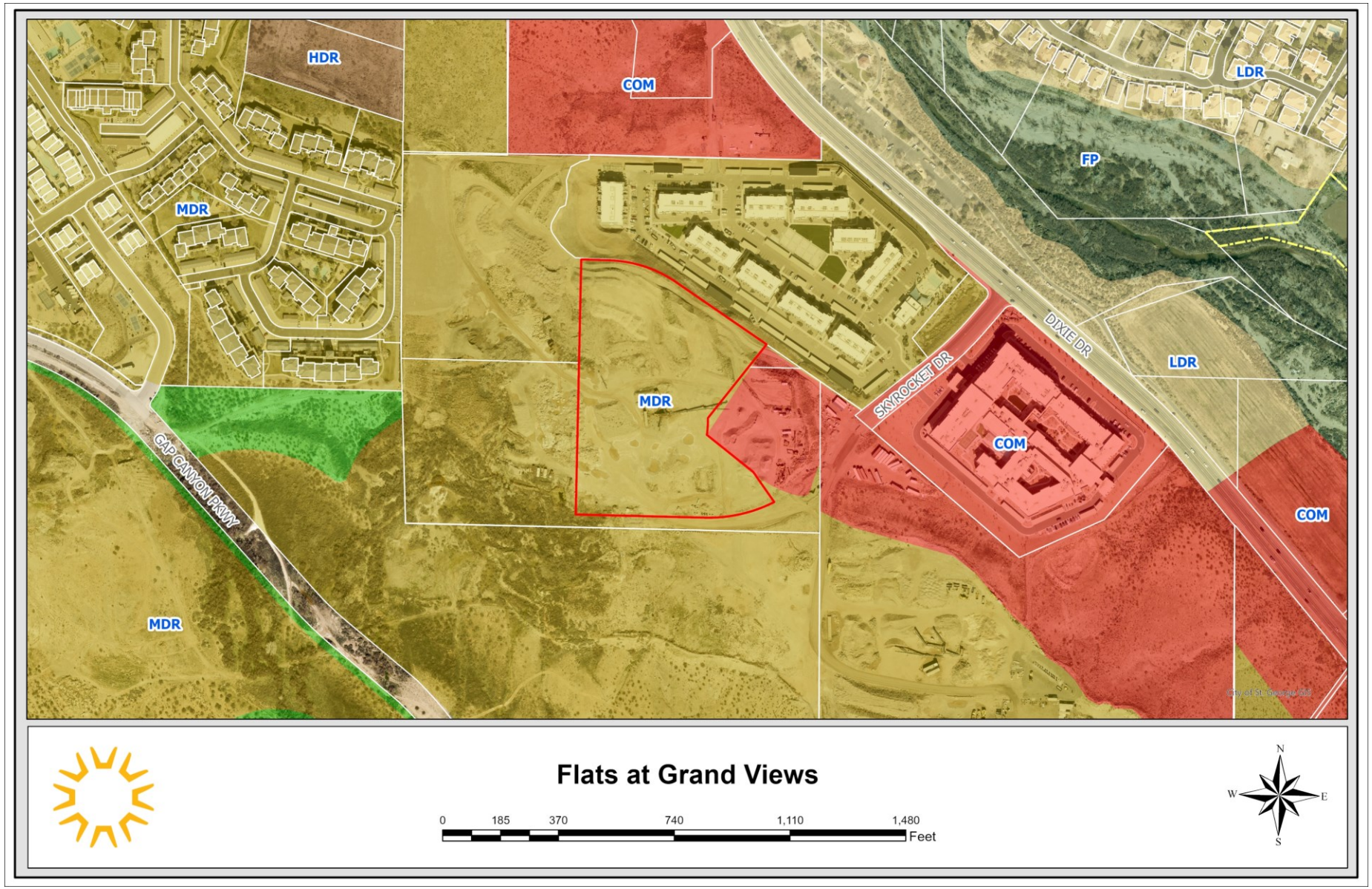
FLATS AT GRAND VIEWS

2024-PDA-007

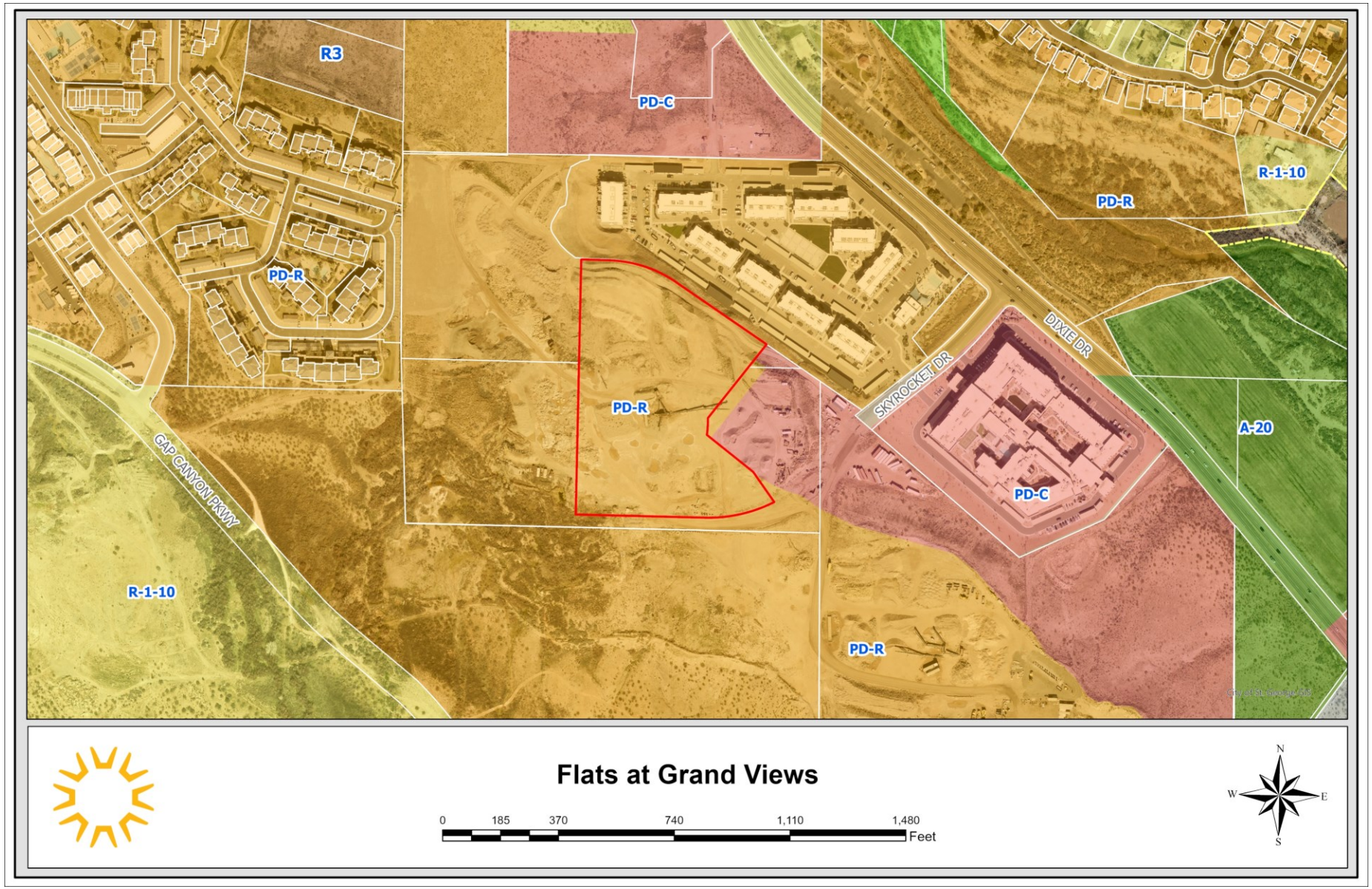
AERIAL MAP


GAP CANYON PKWY
SKYROCKET DR
DIXIE DR
Flats at Grand Views
0
185
370
740
1,110
1,480
Feet
N
W
E
S

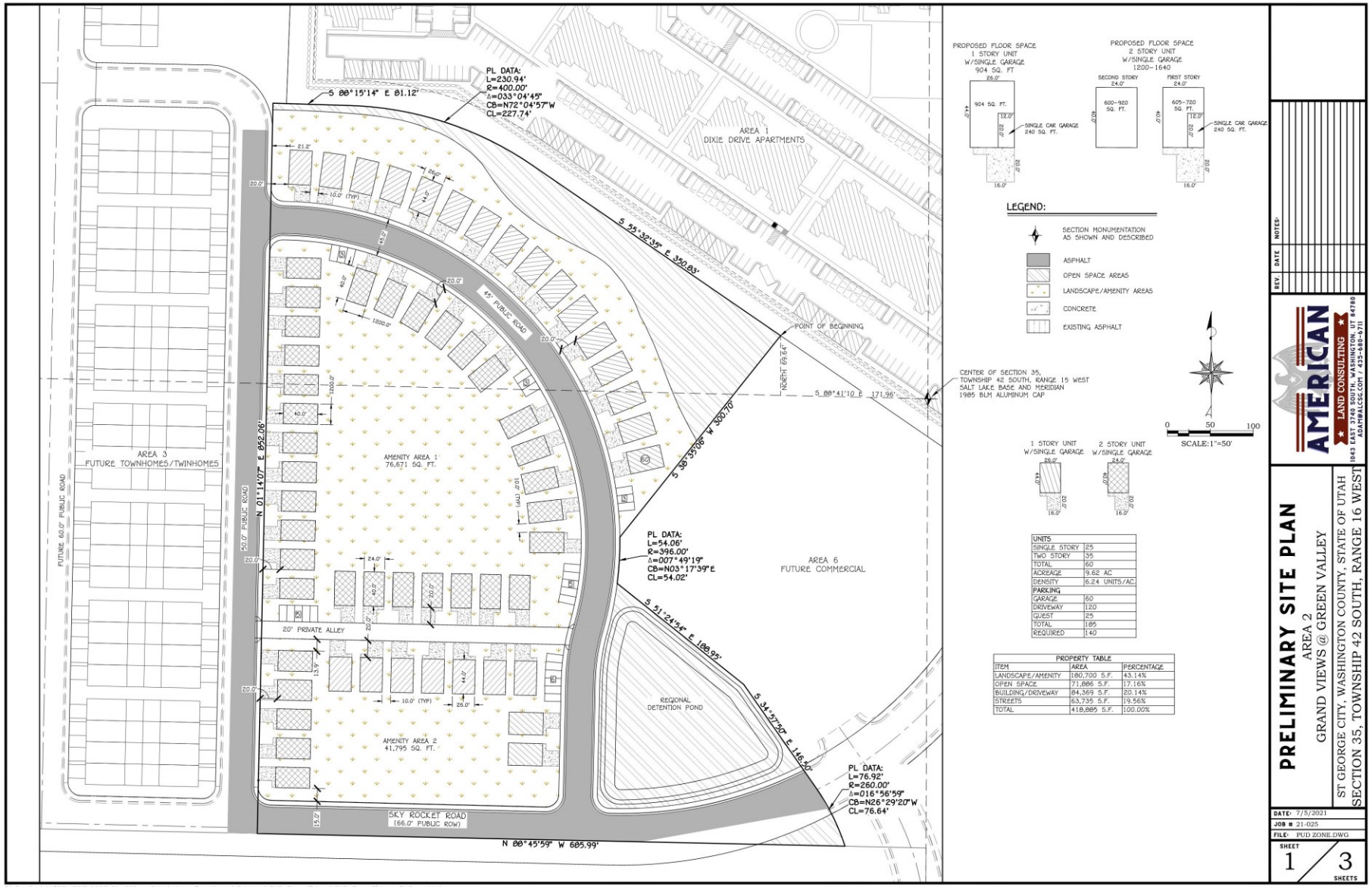
LAND USE MAP


HDR
COM
LDR
FP
MDR
DIXIE DR
SKYROCKET DR
LDR
MDR
COM
COM
GAP CANYON PKWY
MDR
Flats at Grand Views
0
185
370
740
1,110
1,480
Feet
N
W
E
S

ZONING MAP


R3
PD-C
R-1-10
PD-R
PD-R
PD-R
DIXIE DR
SKYROCKET DR
A-20
PD-C
GAP CANYON PKWY
R-1-10
PD-R
Flats at Grand Views
0
185
370
740
1,110
1,480
Feet
N
W
E
S

APPROVED SITE PLAN



APPROVED BUILDINGS

GRAND VIEW AT GREEN VALLEY





G.H.TURNER DESIGN
GREG TURNER
435.229.9706
ghturnerdesign@gmail.com

GRAND VIEW AT GREEN VALLEY

Project Number: 21038

Drawings and Specifications as instruments of service are and shall remain the property of the Architect. They are not to be used on extensions of the project, or other projects, except by agreement in writing and appropriate compensation to the Architect.

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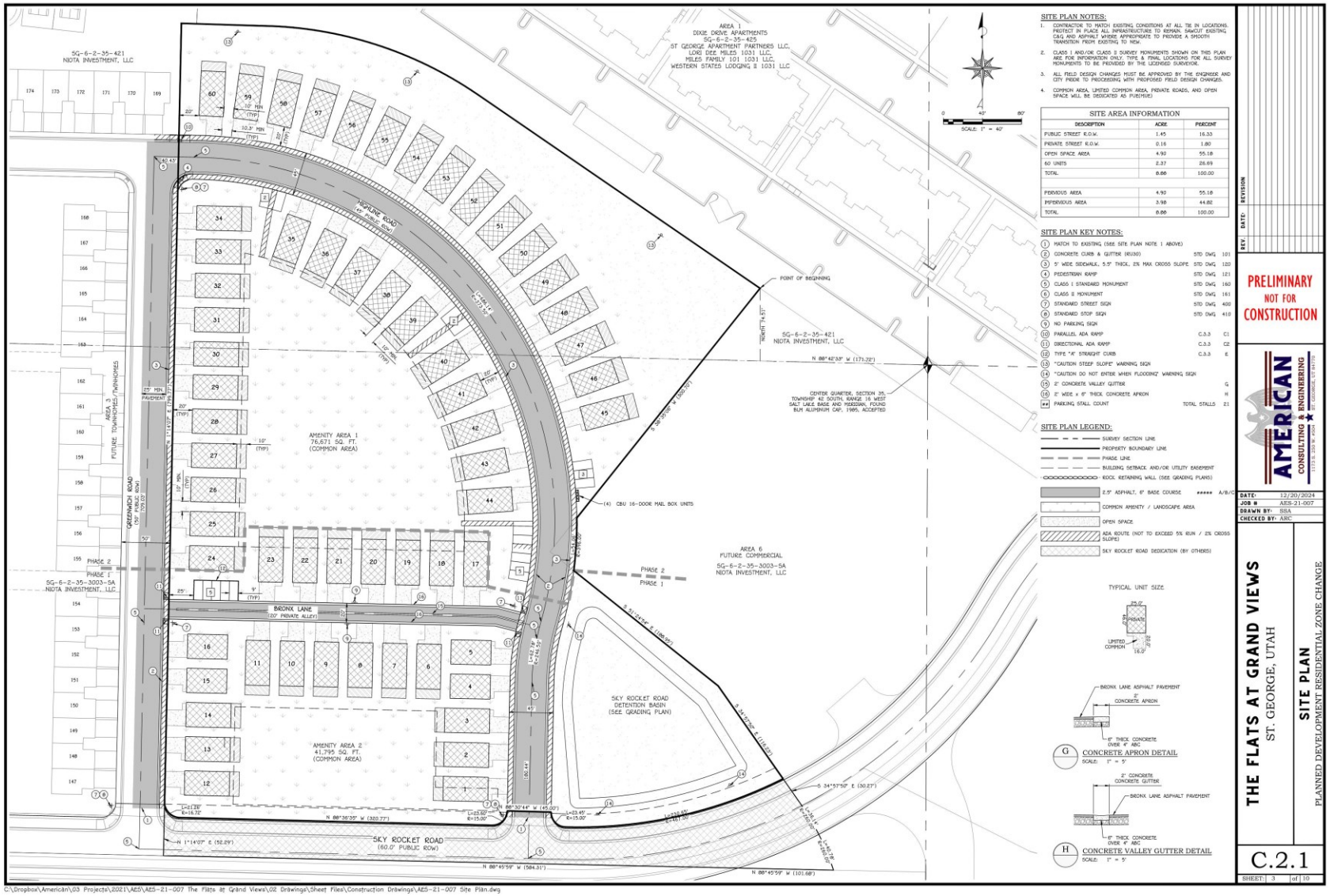
ISSUED:

Cover Sheet

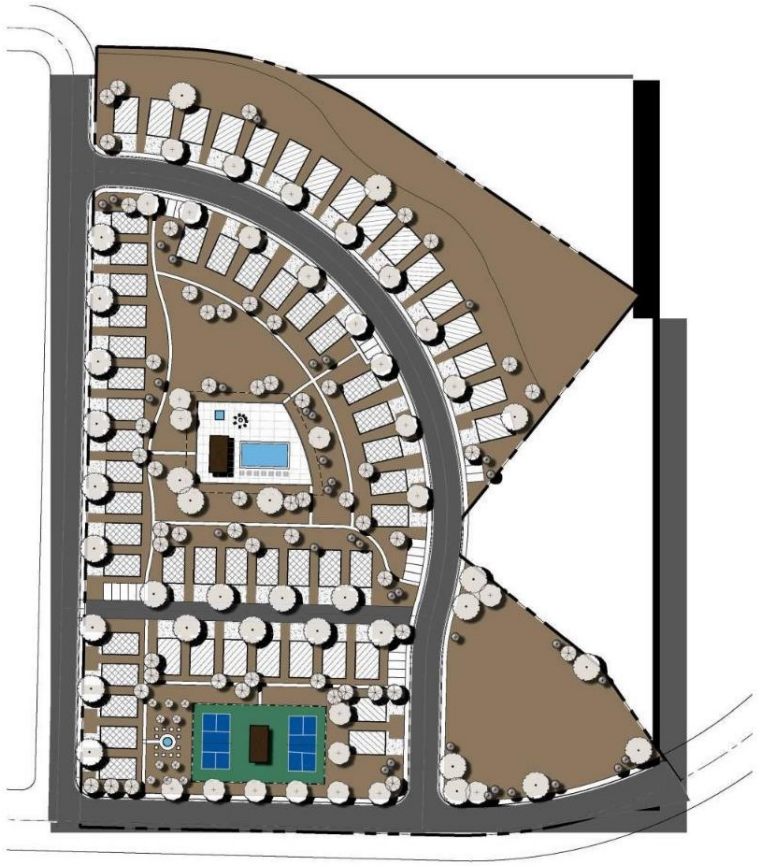
A001

Printed: 7/4/21

PROPOSED SITE PLAN



PROPOSED LANDSCAPE PLAN

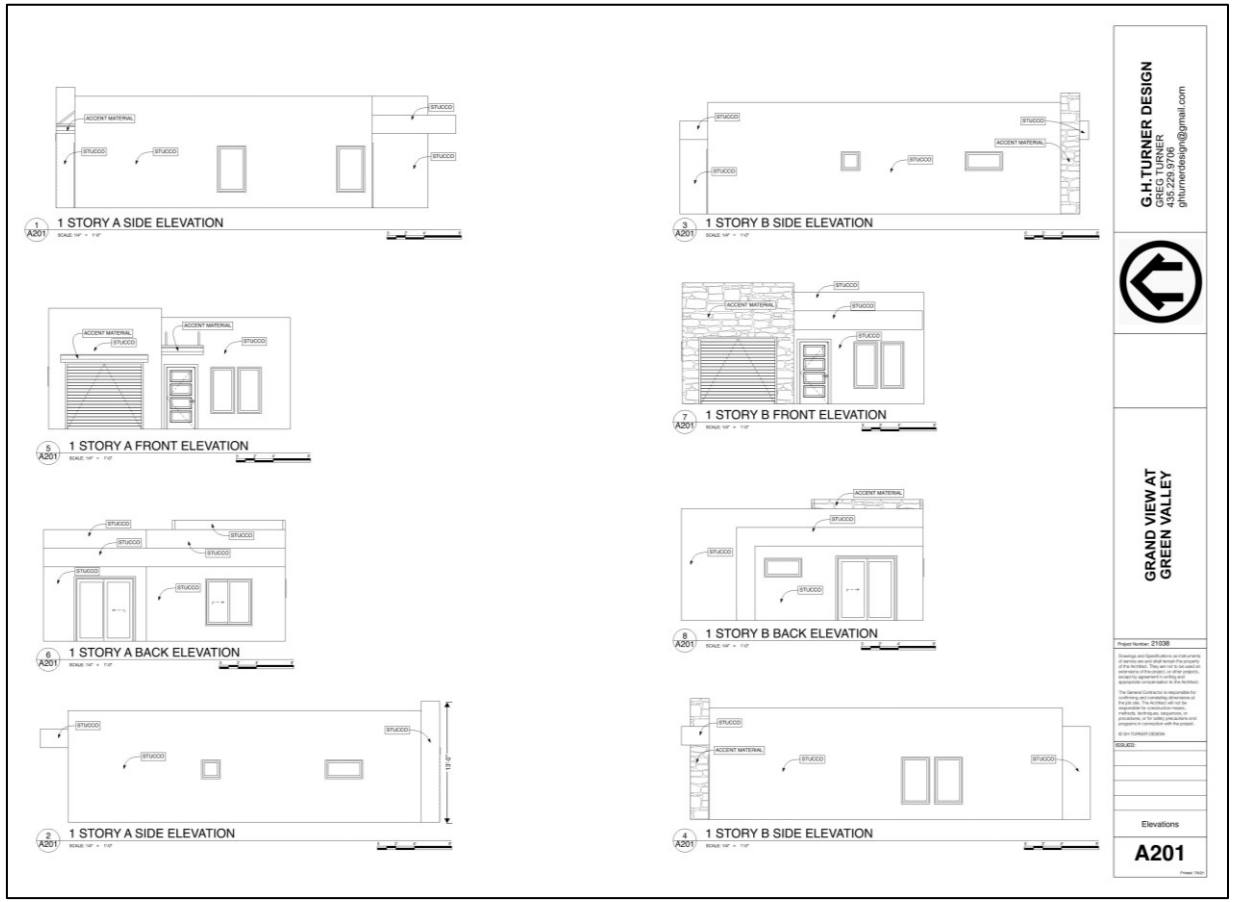


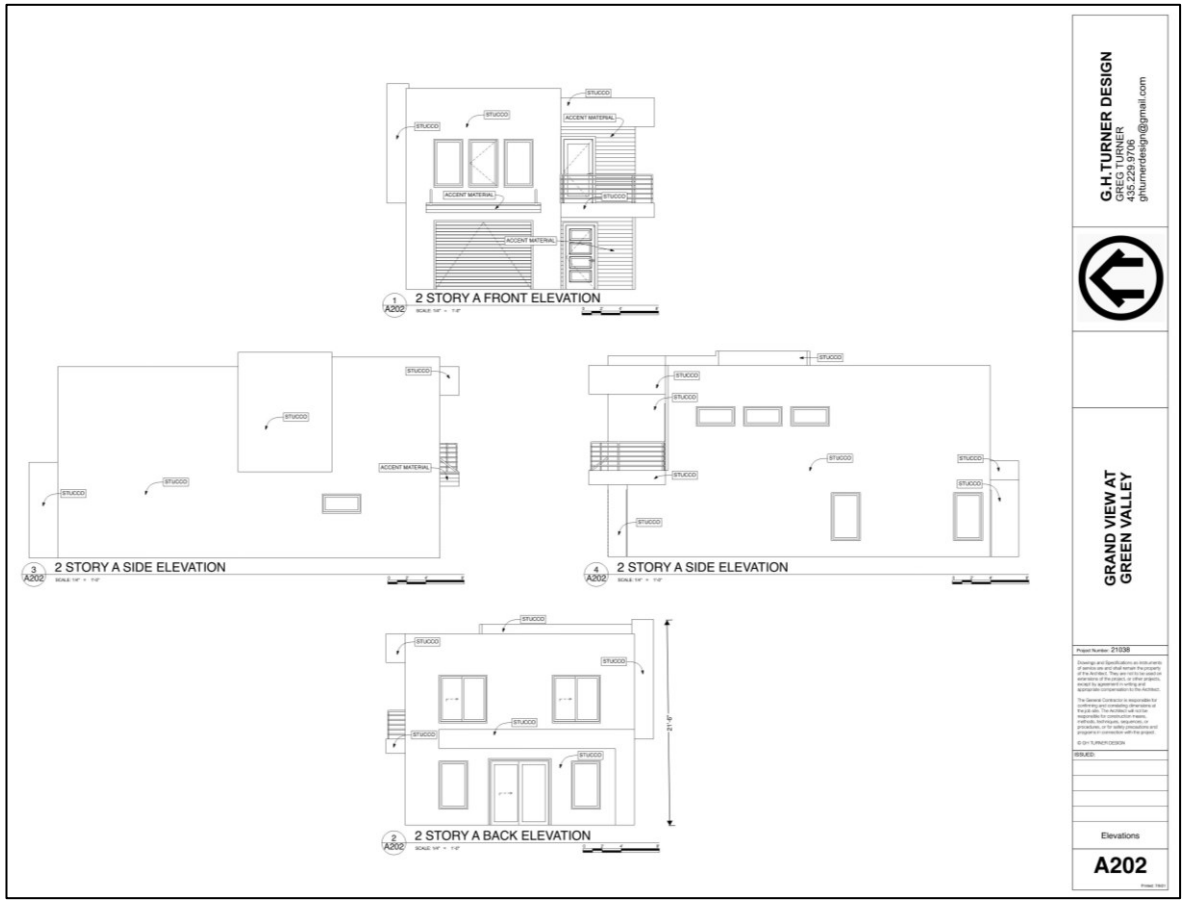
landeight.
PROFESSIONAL
LANDSCAPE
ARCHITECT &
PLANNER
bronson.tatton@gmail.com
c. 435.218.5656
234 North 160 East
Vineyard | Utah | 84059

THE FLATS
LANDSCAPE CONSTRUCTION DRAWINGS
St. George, Utah | July 20, 2022

call 811 or visit www.bluestakes.org
before you dig to have all utilities
located and marked

PROPOSED ELEVATIONS





PROPOSED RENDERINGS

GRAND VIEW AT GREEN VALLEY





G.H.TURNER DESIGN
GREG TURNER
435 229 9706
ghturnerdesign@gmail.com

GRAND VIEW AT GREEN VALLEY

Project Number: 21038

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ISSUED:

Cover Sheet

A001

Printed: 7/6/21

MATERIALS



WOOD SIDING COLORS: SAGIER KNOTTY MAPLE,
SAGIER ESPRESSO BLACKWOOD,
SAGIER CHOCOLATE SAGIER
STUCCO COLORS: THUNDER GREY
STONE COLORS: FIELDSTONE HERMITAGE



WOOD SIDING COLORS: SAGIER KNOTTY MAPLE,
SAGIER ESPRESSO BLACKWOOD,
SAGIER CHOCOLATE SAGIER
STUCCO COLORS: SHOJI WHITE
STONE COLORS: MTN. LEDGE DUSK



WOOD SIDING COLORS: SAGIER KNOTTY MAPLE,
SAGIER ESPRESSO BLACKWOOD,
SAGIER CHOCOLATE SAGIER
STUCCO COLORS: GALVESTON GREY
STONE COLORS: DESIGN SERIES OXFORD



WOOD SIDING COLORS: SAGIER KNOTTY MAPLE,
SAGIER ESPRESSO BLACKWOOD,
SAGIER CHOCOLATE SAGIER
STUCCO COLORS: BRIARWOOD
STONE COLORS: MTN. LEDGE FOSSIL GRAY

G.H.TURNER DESIGN
GREG TURNER
435.229.9706
ghturnerdesign@gmail.com

GRAND VIEW AT GREEN VALLEY

Project Number: 21038

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ISSUED:

Material Board

A002

Printed: 7/6/21

ORDINANCE NO._____

AN ORDINANCE AMENDING THE EXISTING FLATS AT GRAND VIEW PLANNED DEVELOPMENT RESIDENTIAL (PD-R) ZONE ON APPROXIMATELY 8.93 ACRES TO AMEND THE APPROVED FLATS AT GRAND VIEW DEVELOPMENT WITH CONCEPTUAL SITE PLAN AND ELEVATIONS, LOCATED GENERALLY AT 1600 WEST AND SKYROCKET ROAD TO BE KNOWN AS FLATS AT GRAND VIEW WITH A CONDITION FROM THE PLANNING COMMISSION.

(Flats at Grand View)

WHEREAS, the property owner has requested an amendment to the approved Flats at Grand View, within the Grand View development, on approximately 8.93 acres, to re-approve an amendment to the elevations and site layout. The site is generally located at 1600 West and Skyrocket Road; and

WHEREAS, the PD was originally approved in 2021, and the property owner allowed the approvals to lapse and requires a new approval of the project in order for it to move forward; and

WHEREAS, the City Council held a public meeting on this request on February 20, 2025, to consider approval of the Flats at Grand View project; and

WHEREAS, the Planning Commission held a public hearing on January 28, 2025, and thereafter forwarded a recommendation for approval of the requested amendment to the City Council with a 5-0 vote with the following conditions:

1. That all driveways are a minimum of 18 feet in width to accommodate two vehicles.

WHEREAS, the City Council has determined that the requested PD amendment is consistent with the goals and objectives of the General Plan, consistent with the approved master plan, does not create an undue burden or hardship on the city, and is in the best interest of the health, safety, and welfare of the citizens of the City of St. George.

NOW, THEREFORE, BE IT ORDAINED, by the St. George City Council, as follows:

Section 1. Repealer. Any provision of the St. George City Code found to be in conflict with this Ordinance is hereby repealed.

Section 2. Enactment. The approved planned development within the PD-R Zone for the property described in Exhibit ‘A’ shall be amended upon the effective date of this ordinance to reflect the approval of an amended site as shown in Exhibit ‘B’. The planned development amendment and location is more specifically described on the attached property legal description, incorporated herein as Exhibit ‘A’, and parcel exhibit, incorporated herein as Exhibit ‘B’.

Section 3. Severability. If any provision of this Ordinance is declared to be invalid by a court of competent jurisdiction, the remainder shall not be affected thereby.

Section 4. Effective Date. This Ordinance shall take effect upon publication and the final approval by the land use authority of a final plat or site plan. In the event a final plat is not approved within one year of the adoption of this Ordinance, this Ordinance shall be considered null and void and of no effect.

APPROVED AND ADOPTED by the St. George City Council, this 20th day of February 2025.

CITY OF ST. GEORGE:

_____
Michele Randall, Mayor

ATTEST:

_____
Christina Fernandez, City Recorder

APPROVED AS TO FORM:
City Attorney's Office

_____
Jami Brackin, Deputy City Attorney

VOTING OF CITY COUNCIL:

Councilmember Hughes _____
Councilmember Larkin _____
Councilmember Larsen _____
Councilmember Tanner _____
Councilmember Kemp _____

EXHIBIT "A"

BEGINNING AT A POINT THAT LIES THENCE NORTH 00°49'06" EAST 288.66 FEET ALONG THE SECTION LINE AND EAST 1,911.53 FEET FROM THE WEST QUARTER CORNER OF SECTION 35, TOWNSHIP 42 SOUTH, RANGE 15 WEST, SALT LAKE BASE AND MERIDIAN; RUNNING THENCE NORTH 89°50'53" EAST 15.74 FEET; THENCE SOUTH 88°15'14" EAST 65.39 FEET; THENCE SOUTH 88°37'20" EAST 5.22 FEET; THENCE EASTERLY ALONG A 400.00 FOOT RADIUS CURVE TO THE RIGHT, (LONG CHORD BEARS SOUTH 72°04'57" EAST 227.74 FEET, CENTER POINT LIES SOUTH 01°22'40" WEST) THROUGH A CENTRAL ANGLE OF 33°04'45", A DISTANCE OF 230.94 FEET; THENCE SOUTH 55°32'35" EAST 350.83 FEET; THENCE SOUTH 38°35'06" WEST 300.70 FEET; THENCE SOUTHERLY ALONG A 396.00 FOOT RADIUS NON-TANGENT CURVE TO THE RIGHT, (LONG CHORD BEARS SOUTH 03°17'39" WEST 54.02 FEET, CENTER POINT LIES SOUTH 89°22'59" WEST) THROUGH A CENTRAL ANGLE OF 07°49'19", A DISTANCE OF 54.06 FEET; THENCE SOUTH 51°24'54" EAST 188.95 FEET; THENCE SOUTH 34°57'50" EAST 117.45 FEET; THENCE WESTERLY ALONG A 467.00 FOOT RADIUS NON-TANGENT CURVE TO THE RIGHT, (LONG CHORD BEARS SOUTH 77°19'30" WEST 227.01 FEET, CENTER POINT LIES NORTH 26°44'30" WEST) THROUGH A CENTRAL ANGLE OF 28°08'00", A DISTANCE OF 229.31 FEET; THENCE NORTH 88°36'30" WEST 412.84 FEET; THENCE NORTH 01°14'07" EAST 813.68 FEET; TO THE POINT OF BEGINNING.

CONTAINING 388,795 SQUARE FEET OR 8.93 ACRES.

BASIS OF BEARINGS FOR THIS NORTH 00°49'06" EAST 2665.03 FEET BETWEEN THE WEST QUARTER CORNER AND THE NORTHWEST CORNER OF SECTION 35, TOWNSHIP 42 SOUTH, RANGE 15 WEST, SALT LAKE BASE AND MERIDIAN

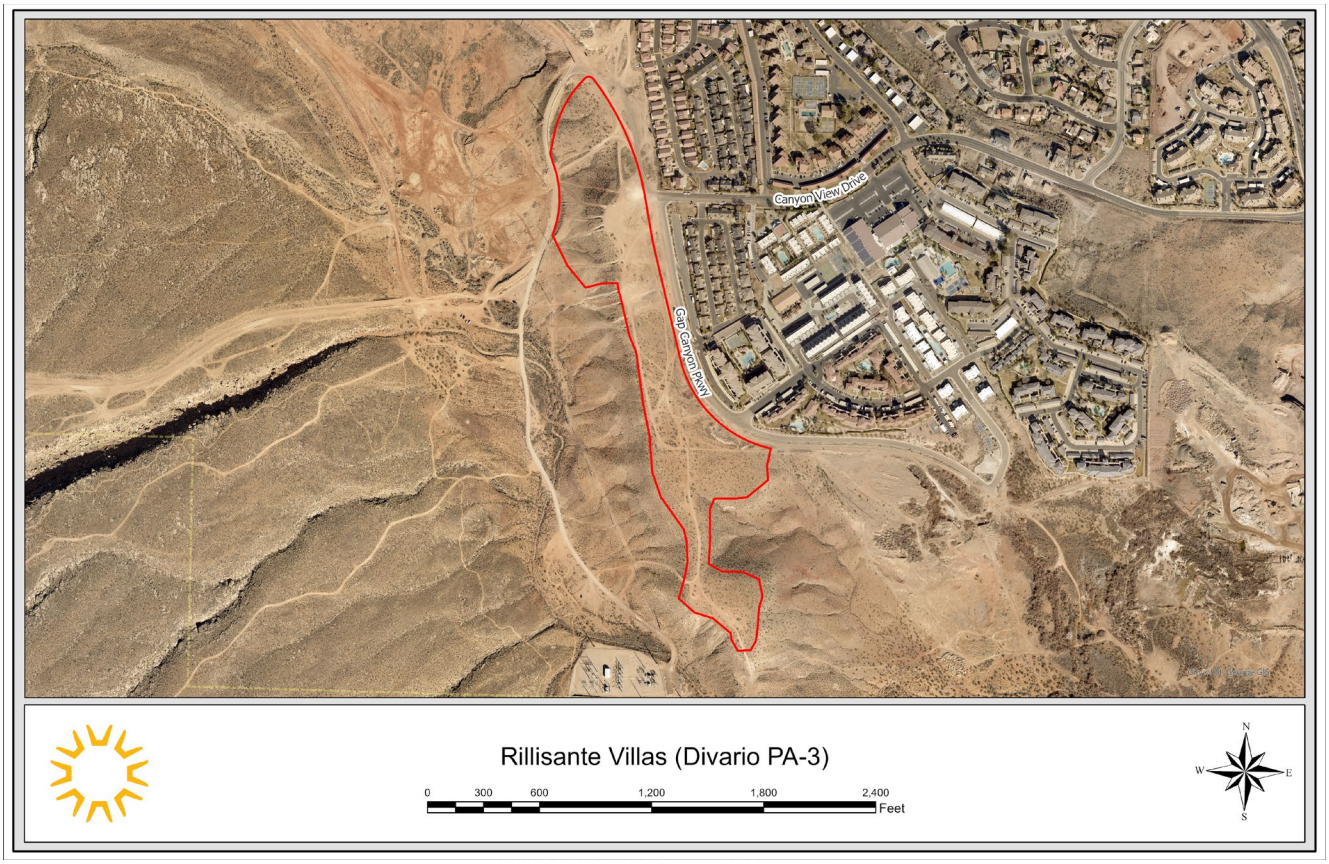
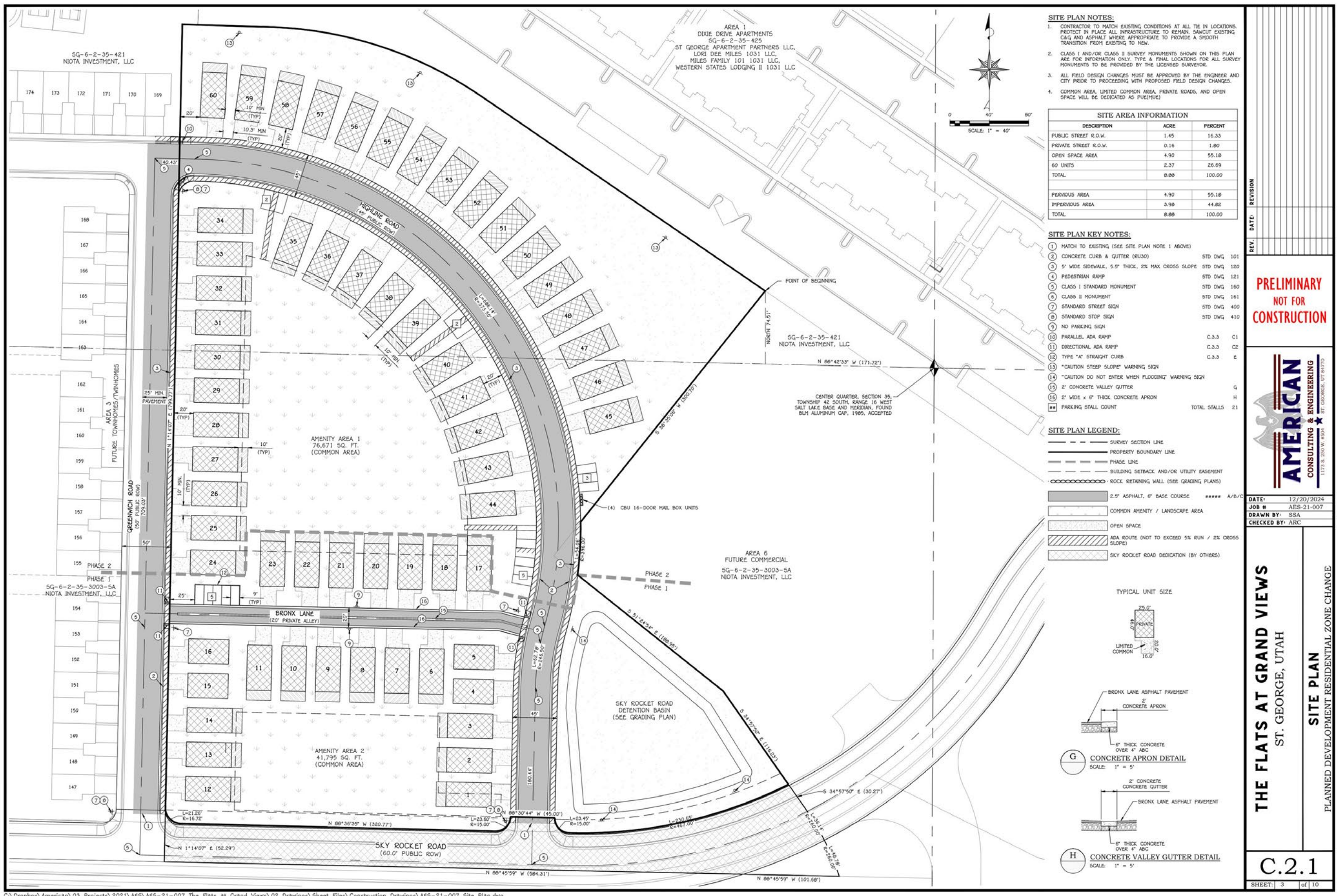


EXHIBIT "B"



C:\Dropbox\American\03 Projects\2021\AES\AES-21-007 The Flats at Grand Views\02 Drawings\Sheet Files\Construction Drawings\AES-21-007 Site Plan.dwg

Agenda Date: 02/20/2025 **Agenda Item Number:** 08

Subject:

Consider approval of Ordinance No. 2025-017 amending the existing Rillisante Villas at Divario Planned Development Residential (PD-R) zone on approximately 24.10 acres to amend the approved Rillisante Villas development with conceptual site plan and elevations located generally on the west side of the intersection of Canyon View Drive and Gap Canyon Parkway, with conditions from the Planning Commission. (Case No. 2025-PDA-006 - Rillisante Villas)

Item at-a-glance:

Staff Contact: Dan Boles

Applicant Name: Unified Business Alliance, Jared Huish

Reference Number: 2025-PDA-006

Address/Location:

Generally located on the west side of the intersection of Canyon View Drive and Gap Canyon Parkway

Item History (background/project status/public process):

In April of 2021, the City Council voted to approve a zone change on the property from R-1-10 to PD-R. In November of 2023, some minor amendments to the site and architecture were made and approved by the City Council. The current applications makes further changes to the site layout and building elevations. The Planning Commission held a public hearing on the request on January 28, 2025 and recommend approval of the amendment with conditions.

Staff Narrative (need/purpose):

The applicant is proposing to reduce the total number of units from 206, which was previously approved, to 196 units. The applicant is requesting two things: 1) Update the elevations of approved townhomes, and 2) convert all units to townhomes and eliminate the stacked units previously approved. By making the change from stacked units to townhomes, the applicant made some changes to the site including an ingress/egress point from Divario Trail Drive. They are also proposing some minor changes to the site road layout. These changes necessitate an amendment to the approved PD.

Name of Legal Dept approver: Jami Brackin

Budget Impact: No Impact

Recommendation (Include any conditions):

The Planning Commission held a public hearing on January 28, 2025 and voted 5-0 to forward a positive recommendation to the City Council with the following recommendations:1.That the number of units is limited to 196 as proposed and shown in this staff report.2.That parking will meet the minimum requirement required for a multi-family development. 3.That a site plan is applied for and approved prior to any construction.

St.George
Community Development

PD AMENDMENT

PLANNING COMMISSION AGENDA REPORT: 01/28/2025
CITY COUNCIL AGENDA REPORT: 02/28/2025

PD Amendment
Rillisante Villas – Zen Townhomes (Divario PA-3)
Case No. 2025-PDA-006

Request: Consider a PD amendment for Rillisante Villas (Divario PA-3) (to be called Zen Townhomes) PD (Planned Development) zone, specifically to remove the previously approved stacked units and converts all units to townhomes resulting in some modifications to the layout. This will also reduce the number of units from 206 to 196.

Applicant: Unified Business Alliance

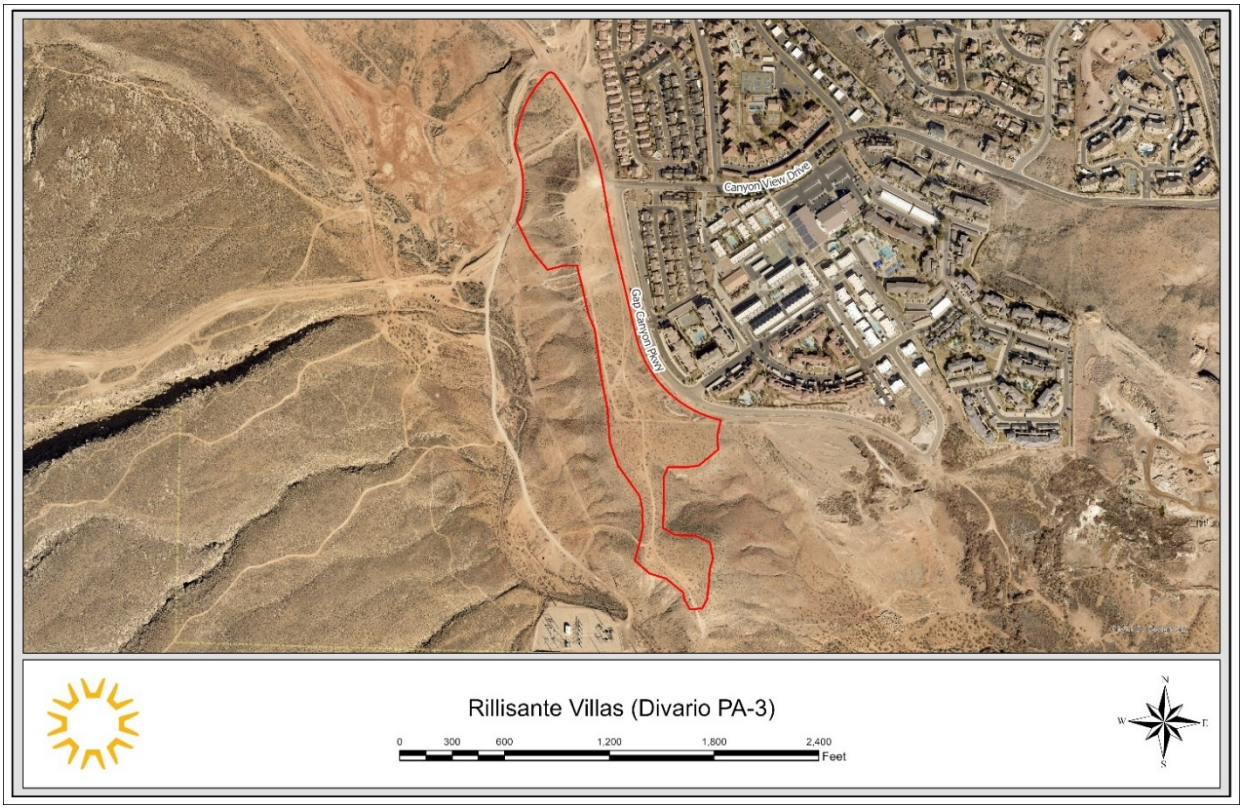
Representative: Jared Huish

Area: 24.11 acres

Location: The property is generally located on the west side of the intersection of Canyon View Drive and Gap Canyon Parkway

Current Zone: PD-R (Planned Development Residential)

General Plan: MDR (Medium Density Residential)



CC 2025-PDA-006
Rillisante Villas – Zen Townhomes
(Divario PA-3)

Background:
The property was annexed as part of the Plantations Land in 1994. A PD (Planned Development) was approved on at least two separate occasions, but upon failure to construct, expired and reverted back the R-1-10 zoning (current zoning). In 2007, a development agreement was approved between the developer and the city. The development at the time was called "The Lakes". The name has since changed to "Divario". An updated development agreement was approved in 2014 which sets forth the parameters of the development, planning areas, etc.

Under the Development Agreement, PA-3 was approved as a development area consisting of 24.10 acres with density of up to nine units per acre (maximum 216 residential units). Planning Commission held a hearing in 2020 on a proposal for 216 units in four stacked units and no townhomes which was denied by the City Council. The applicant made changes to the proposed site which included townhomes and in April of 2021, City Council voted to approve a zone change on the property from R-1-10 to PD-R. In November of 2023, some minor amendments to the site and architecture were made and approved by the City Council.

REQUEST
The applicant is proposing to reduce the total number of units from 206, which was previously approved, to 196 units. The applicant is requesting two things: 1) Update the elevations of approved townhomes, and 2) convert all units to townhomes and eliminate the stacked units previously approved. By making the change from stacked units to townhomes, the applicant made some changes to the site including an ingress/egress point from Divario Trail Drive. They are also proposing some minor changes to the site road layout. Due to the confining nature of the property (topography, length vs width, etc.), there is relatively little the applicant can do to change the basic layout but some of the roads have been straightened to the greatest extent possible.

Townhome Site Details:
The applicant is proposing two building pad sizes – one that is 48'x 24' and the other 48'x 22', almost identical but will give them slight flexibility in laying out the site. 37 separate buildings are being proposed which range from duplexes to seven-plex buildings. The site is still showing the required and necessary amenity areas two pickleball courts, a barbeque area, and playground. 39,200 ft² of amenity area is required and the applicant is showing approximately 40,500 ft². No required open space required by the Divario development agreement is being encroached into.

Elevations: The current elevations show an overall height of 31'3" where the updated elevations show a maximum height of 33'9" for a greater height of 2.5'. They are proposing three different styles that complement each other. Some elevations will be two stories and others three stories. The applicant is working with Visionary Homes who have provided the elevations of the townhomes. Visionary Homes has built similar townhomes in Desert Color. The proposed townhomes are shown in the attached presentation.

CC 2025-PDA-006
Rillisante Villas – Zen Townhomes
(Divario PA-3)

Recommendation:

Planning Commission has held a public hearing on January 28, 2025, and has reviewed the application and the changes being requested and recommends approval of the application. A full site plan will be required, and the site (if approved) will be reviewed against all required and applicable ordinances.

Alternatives:

1. Approve as presented.
2. Approve with conditions.
3. Deny the application.
4. Continue the proposed PD amendment to a later date.

Possible Motion:

"I move that we approve the PD amendment for Rillisante Villas – Zen Townhomes (Divario PA-3) as presented, case no. 2025-PDA-006, based on the findings and subject to the conditions listed in the staff report (and as modified by the following…)."

Conditions:

1. That the number of units is limited to 196 as proposed and shown in this staff report.
2. That parking will meet the minimum requirement required for a multi-family development.
3. That a site plan is applied for and approved prior to any construction.

Findings for Approval:

1. The proposed amendment meets the requirements of section 10-7F of the zoning code.
2. There will be adequate parking to facilitate the development.
3. This amendment follows an initial approval in 2021 and a subsequent amendment in 2023.

EXHIBIT A
NARRATIVE

Zen Townhomes at Divario: Planned Development Narrative

The proposed development at Zen Townhomes at Divario represents an exciting opportunity to create a vibrant, owner-occupied community in St. George. Spanning 24 acres, the project is thoughtfully designed to balance the area's natural beauty with the community's evolving housing needs. With 196 townhomes planned, this development embodies Visionary Homes' mission of fostering connected, thriving neighborhoods while addressing the local demand for obtainable housing.

The name **"Zen Townhomes"** was chosen to reflect the community's emphasis on harmony, balance, and tranquility—qualities that resonate deeply with the serene desert surroundings and the thoughtfully designed living spaces. This name underscores our vision of creating a neighborhood where residents can feel at peace while enjoying the vibrant amenities and the natural beauty of Divario.

Project Vision and Transition

This project marks a significant evolution from earlier site plans, which envisioned multiple 4-story apartment buildings. After careful evaluation of market conditions, zoning considerations, and community needs, we transitioned to a townhome-only design. This shift reflects our commitment to creating a neighborhood that offers stability, affordability, and a strong sense of community.

St. George has long been celebrated for its open spaces, mountain biking trails, and stunning desert landscapes. While this area has historically included nightly rentals nearby, we are introducing a development designed to attract families and individuals seeking owner-occupied homes, encouraging long-term residency and community growth.

We partnered with Visionary Homes due to their stellar reputation as a Utah-based builder known for creating enduring, high-quality developments throughout the state. Their dedication to designing a product tailored to this unique site underscores their commitment to the homeowners and the broader St. George community.

Land Use and Density

The proposed development will consist entirely of townhomes, offering a cohesive yet varied residential experience. Key highlights include:

- **Density**: Approximately 8 units per acre, totaling 196 townhomes across the 24-acre site.
- **Land Allocation**:

Building Coverage: Approximately 40% of the site will feature thoughtfully designed townhome structures.

Landscaped Areas: Nearly 30% of the site will be dedicated to landscaped open spaces, fostering outdoor enjoyment and community interaction.

Parking Areas: Approximately 30% will be allocated for parking and supporting infrastructure to meet City requirements.

Amenities and Community Features

To enhance the quality of life for residents, Zen Townhomes will include a range of well-designed amenities that align with the community's vision of balance, connection, and recreation. These include:

Pool and Pool House: A central feature offering relaxation and recreation for residents.

Two Pickleball Courts: Providing active, engaging spaces for residents of all ages.

Play Area: A safe, inviting space for children and families to enjoy.

These amenities, paired with the neighborhood's walkable design and access to nearby trails, align perfectly with the "Zen" concept, creating a harmonious environment where residents can relax yet be active and healthy.

Phasing Plan

The development will be carried out in 4 to 5 successive phases, proceeding from the north to the south of the property. The phased approach ensures that as one phase is completed, the next begins immediately, maintaining momentum and allowing new residents to settle into completed sections without delay.

This methodical phasing strategy ensures that the infrastructure, amenities, and housing units are developed in an efficient and organized manner, allowing for a seamless progression from start to completion.

Unique Challenges and Thoughtful Solutions

Developing this site has presented unique challenges, from the steep terrain and soil conditions to zoning requirements and infrastructure needs. By collaborating closely with Visionary Homes, we've created a plan that works harmoniously with the natural landscape while addressing these complexities.

The design prioritizes preserving views, integrating open spaces, and optimizing functionality for homeowners. These considerations, paired with Visionary Homes' commitment to quality, ensure that Zen Townhomes will stand out as a beacon of thoughtful development in the St. George area.

Conclusion

Zen Townhomes at Divario represents more than just a collection of homes—it's a community designed to enhance the lives of its residents and contribute to the broader vitality of St. George. By transitioning to a townhome-focused plan, we are addressing the growing need for attainable housing while fostering a neighborhood that invites connection and outdoor enjoyment.

We are thrilled to bring Zen Townhomes to life, a community that embodies balance, harmony, and vitality. We look forward to partnering with the City of St. George to shape a bright future for this area of the City and to create a lasting legacy of quality, community, and sustainability.

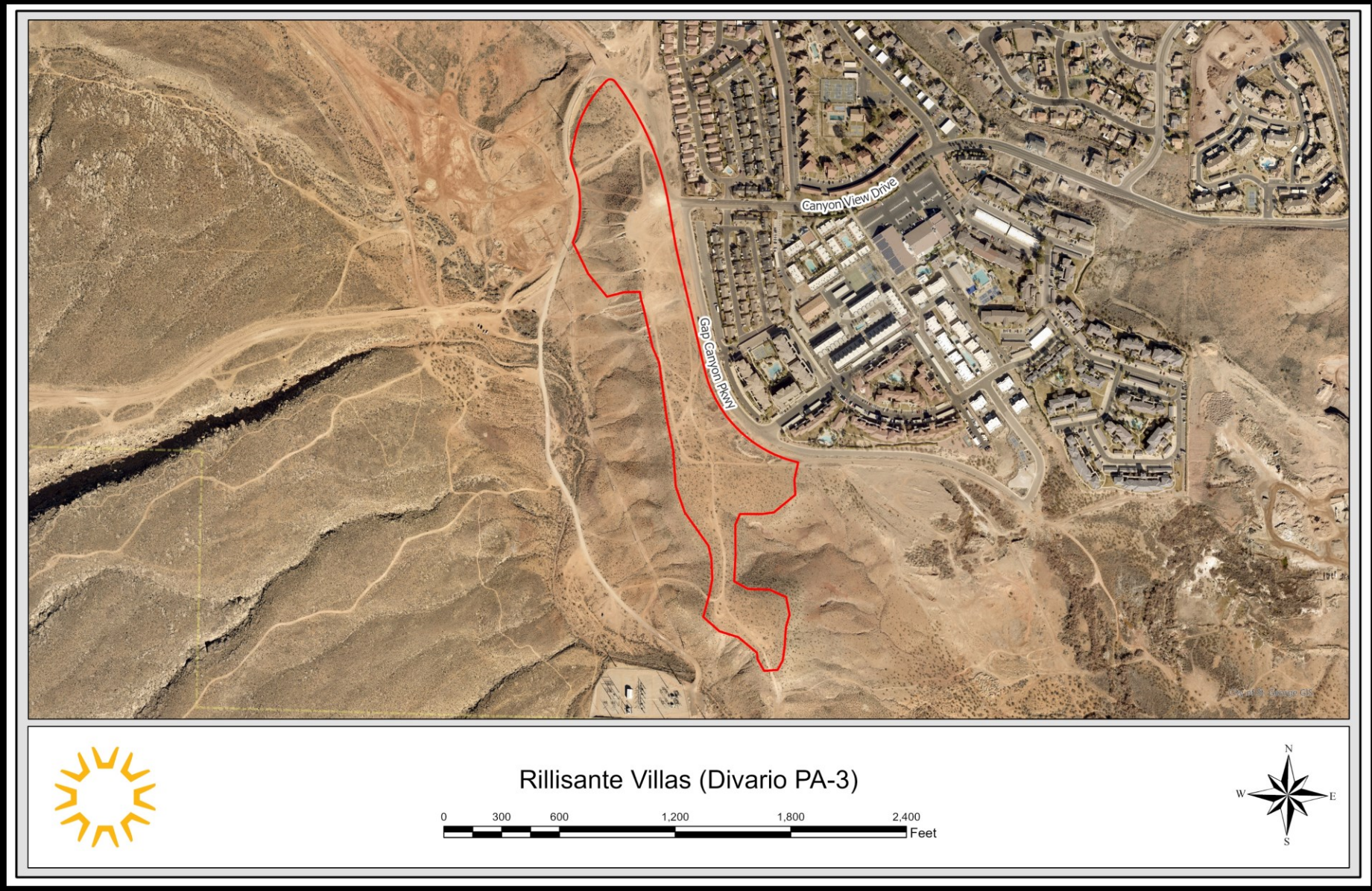
EXHIBIT B
PRESENTATION



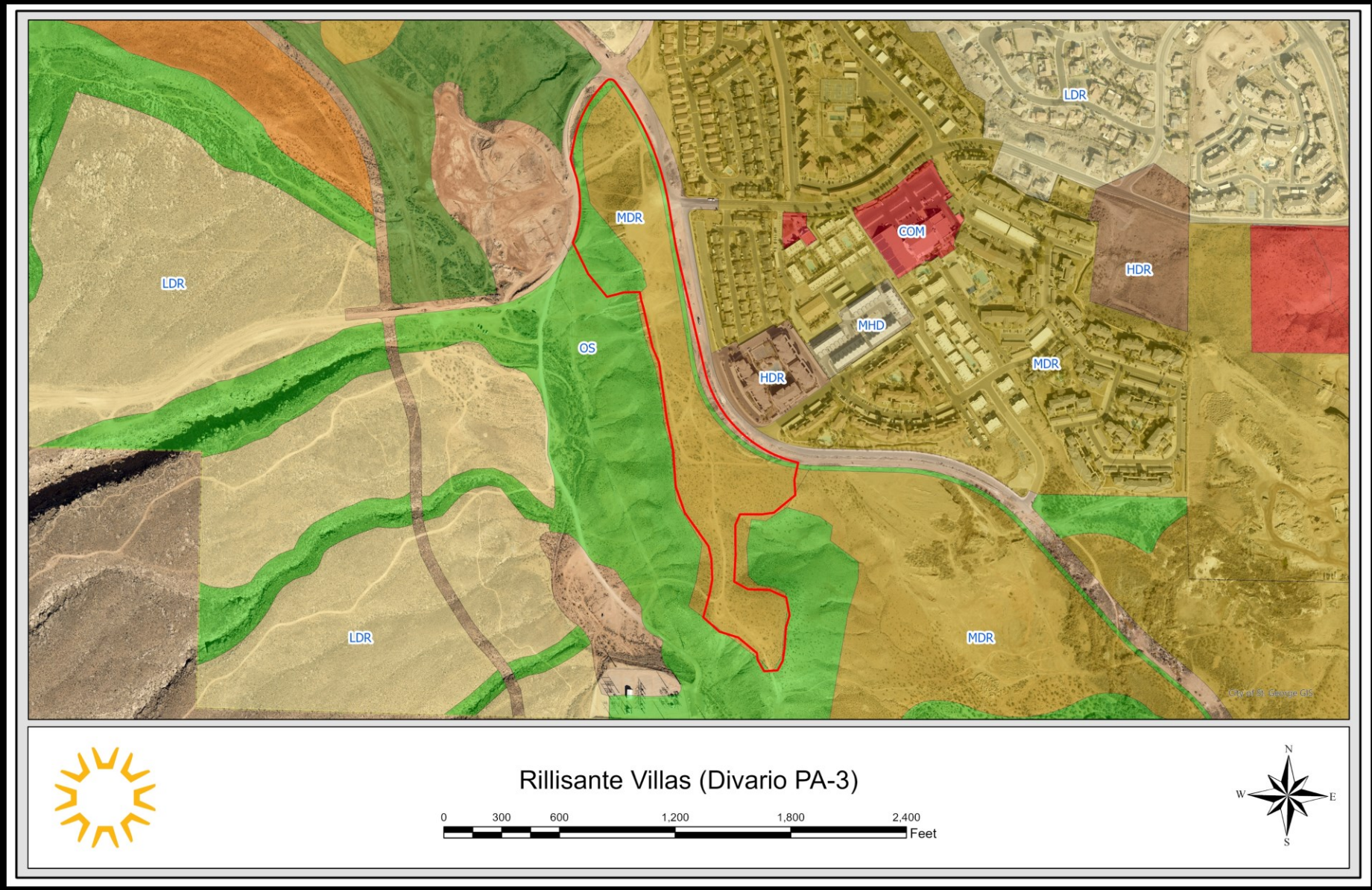
Rillisante Villas – Zen Townhomes (Divario PA-3)

2025-PDA-006

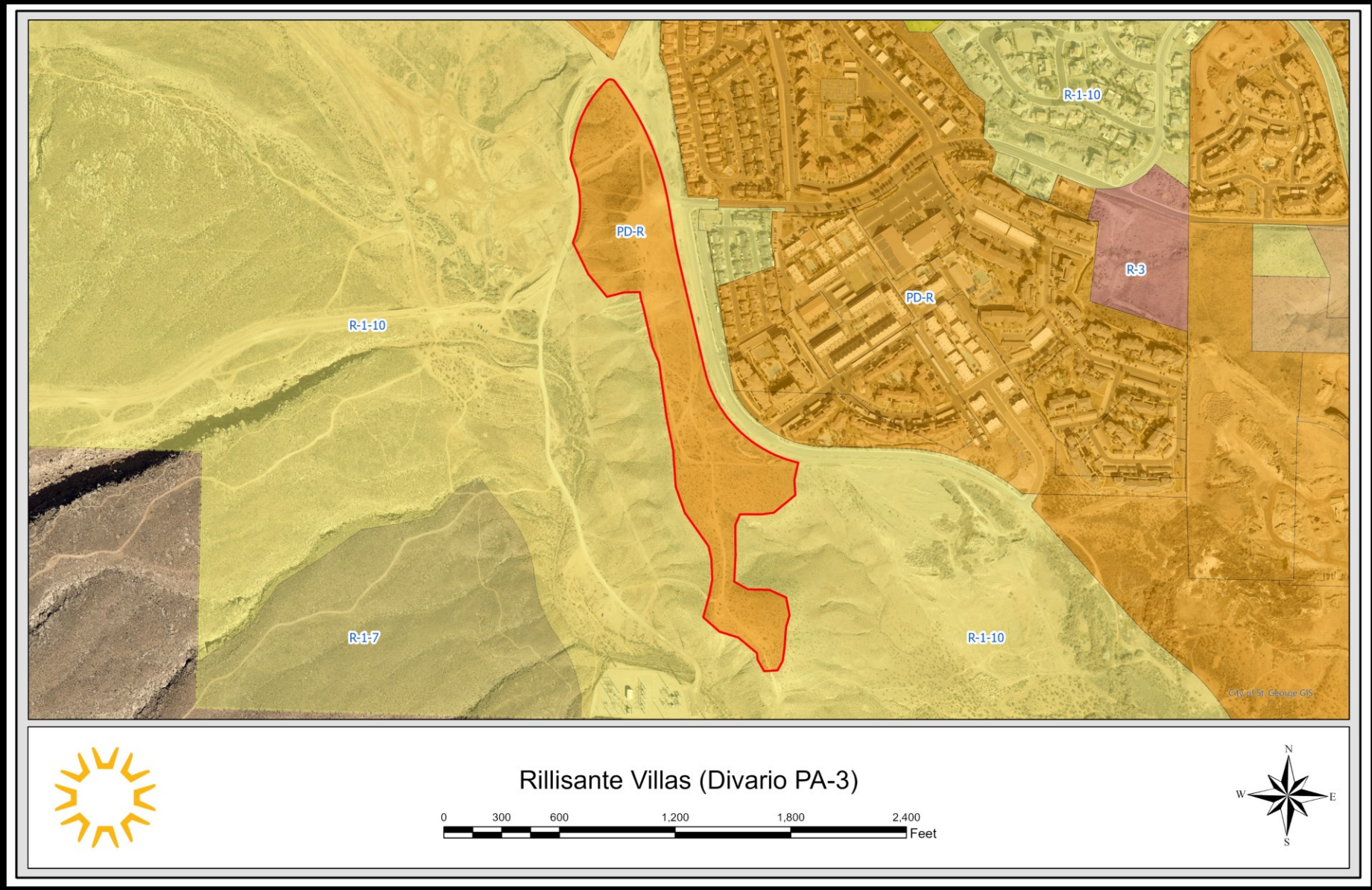
Aerial Map


Canyon View Drive
Gap Canyon Pkwy
Rillisante Villas (Divario PA-3)
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1,200
1,800
2,400
Feet
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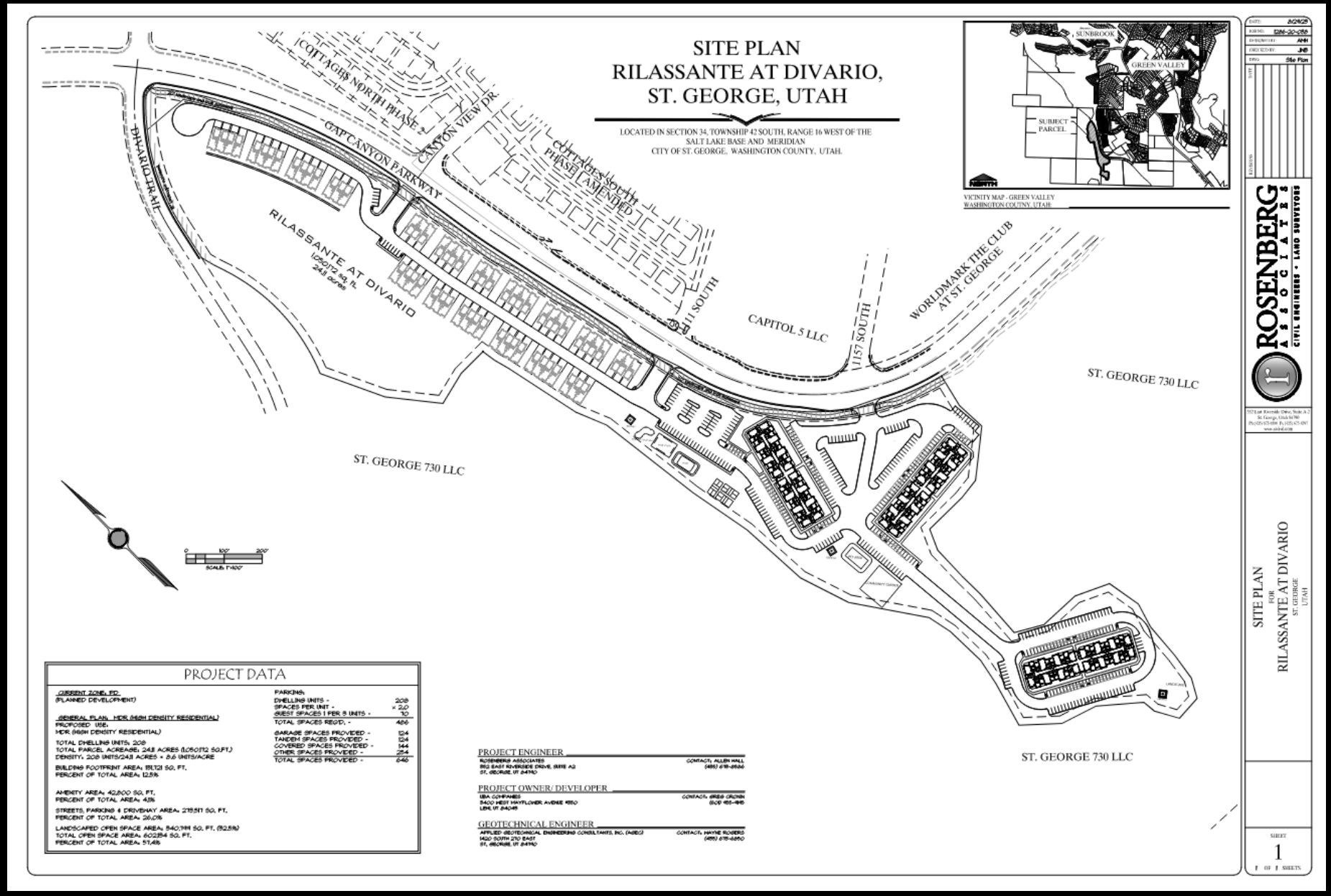
Land Use Map


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HDR
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Rillisante Villas (Divario PA-3)
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Zoning Map


R-1-10
PD-R
R-3
PD-R
R-1-10
R-1-7
R-1-10
City of St. George GIS
Rillisante Villas (Divario PA-3)
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Approved Site Plan

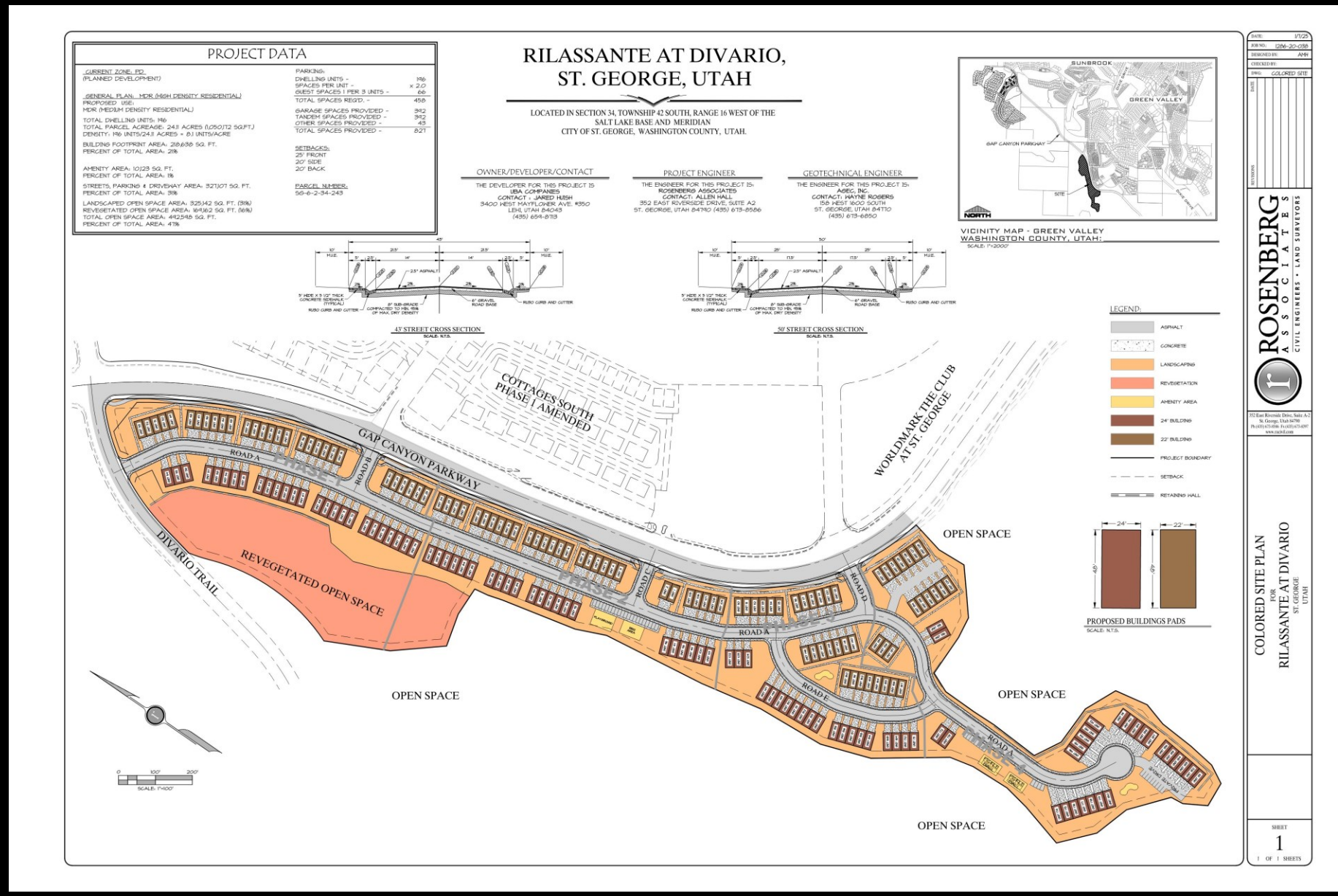


Approved Elevations

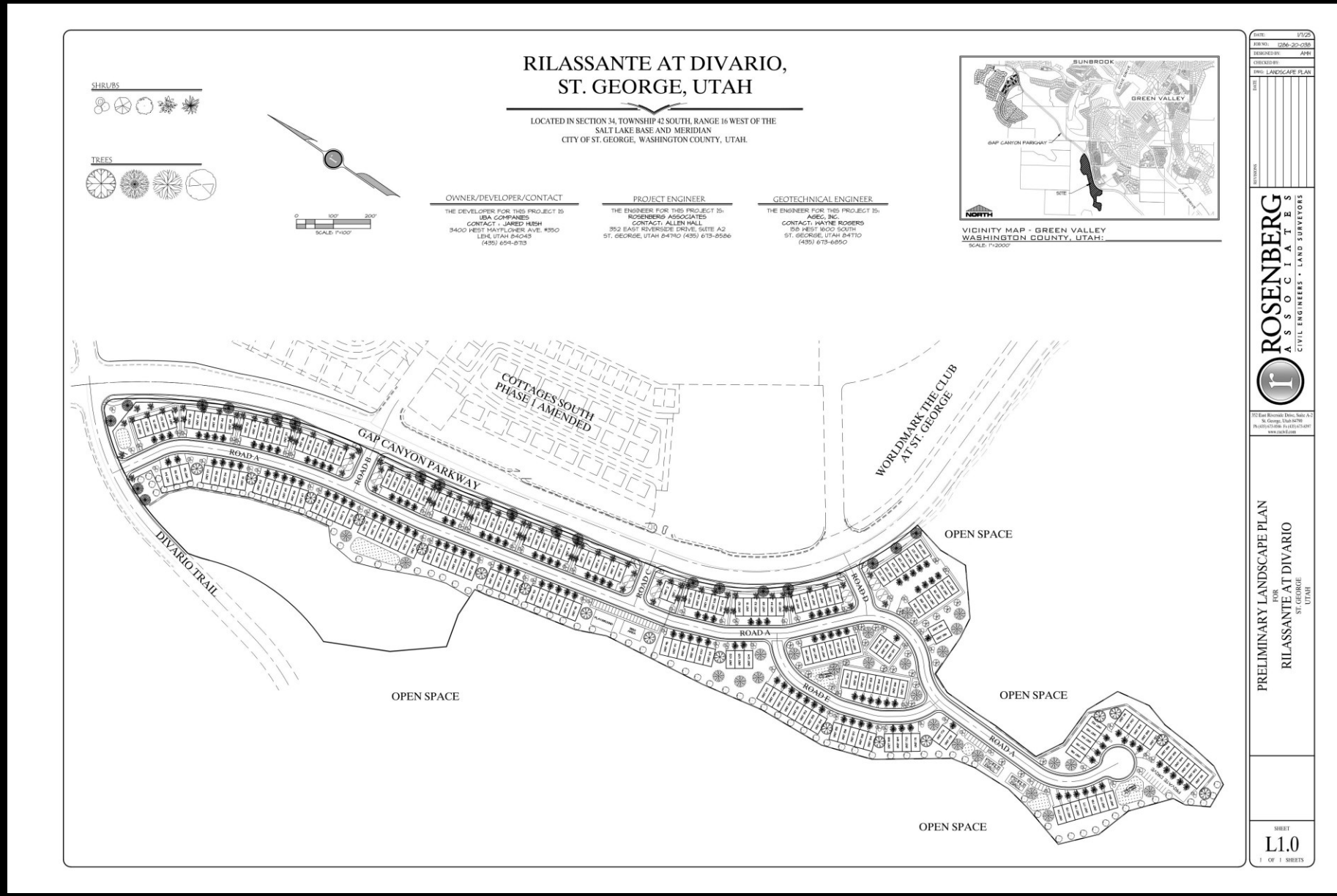




Proposed Site Plan



Proposed Landscape Plan



Poppy Renderings

Poppy Plan Renderings

Front Loaded Townhome Product





visionary HOMES

Poppy Plan Renderings

Front Loaded Townhome Product

















Poppy Elevations

Poppy Plan

Front Loaded Townhome Product



Lilac & Iris Renderings

Lilac & Iris Plan Renderings

3-Story - **Rear Loaded** Townhome Product





Lilac & Iris Plan Renderings

3-Story - **Rear Loaded** Townhome Product

















Lilac & Iris Elevations

Lilac & Iris Plan

3-Story - **Rear Loaded** Townhome Product



Daisy Renderings

Daisy Plan Renderings

2-Story - **Rear Loaded** Townhome Product





Daisy Plan Renderings

2-Story - **Rear Loaded** Townhome Product

















Daisy Elevations

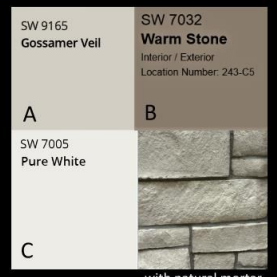
Daisy Plan

2-Story - **Rear Loaded** Townhome Product



Color Schemes

Color Scheme A
3-Story - **Rear Loaded** Townhome Product



with natural mortar

A. Main Stucco: SW9165 Gossamer Veil
B. Hardboard Lap 1: SW7032 Warm Stone
Windows: White
C. Stucco Accent Pop-Out & Hardboard Lap 2: SW7005 Pure White
D. Stone: Flint Lueders with Natural Mortar
Front Door Color: SW7005 Pure White
Garage: Modern Flat White
Coach Lights: 5" Downlight Cylinder Black





Color Scheme A
Front Loaded Townhome Product

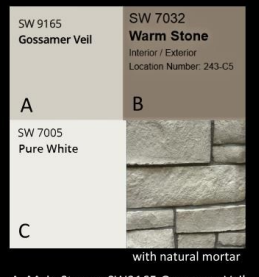


with natural mortar

A. Main Stucco: SW9165 Gossamer Veil
B. Hardboard Lap 1: SW7032 Warm Stone
Windows: White
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D. Stone: Flint Lueders with Natural Mortar
Front Door Color: SW7005 Pure White
Garage: Modern Flat White
Coach Lights: 5" Downlight Cylinder Black



Color Scheme A
2-Story - **Rear Loaded** Townhome Product



with natural mortar

A. Main Stucco: SW9165 Gossamer Veil
B. Hardboard Lap 1: SW7032 Warm Stone
Windows: White
C. Stucco Accent Pop-Out & Hardboard Lap 2: SW7005 Pure White
D. Stone: Flint Lueders with Natural Mortar
Front Door Color: SW7005 Pure White
Garage: Modern Flat White
Coach Lights: 5" Downlight Cylinder Black



Color Schemes

Color Scheme B
Front Loaded Townhome Product



with natural mortar

A. Main Stucco: SW7064 Passive
B. Hardboard Lap 1: Aged Pewter (Hardie color)
Windows: White
C. Stucco Accent Pop-Out & Hardboard Lap 2: SW7005 Pure White
D. Stone: Slate Dry Stone with natural mortar
Front Door Color: SW7069 Iron Ore
Garage: Modern Flat White
Coach Lights: 5" Downlight
Cylinder Black



Color Scheme B
3-Story - **Rear Loaded** Townhome Product



with natural mortar

A. Main Stucco: SW7064 Passive
B. Hardboard Lap 1: Aged Pewter (Hardie color)
Windows: White
C. Stucco Accent Pop-Out & Hardboard Lap 2: SW7005 Pure White
D. Stone: Slate Dry Stone with natural mortar
Front Door Color: SW7069 Iron Ore
Garage: Modern Flat White
Coach Lights: 5" Downlight
Cylinder Black



Color Scheme B
2-Story - **Rear Loaded** Townhome Product



with natural mortar

A. Main Stucco: SW7064 Passive
B. Hardboard Lap 1: Aged Pewter (Hardie color)
Windows: White
C. Stucco Accent Pop-Out & Hardboard Lap 2: SW7005 Pure White
D. Stone: Slate Dry Stone with natural mortar
Front Door Color: SW7069 Iron Ore
Garage: Modern Flat White
Coach Lights: 5" Downlight
Cylinder Black



ORDINANCE NO._____

AN ORDINANCE AMENDING THE EXISTING RILLISANTE VILLAS PLANNED DEVELOPMENT RESIDENTIAL (PD-R) ZONE ON APPROXIMATELY 24.10 ACRES TO AMEND THE APPROVED RILLISANTE VILLAS DEVELOPMENT WITH CONCEPTUAL SITE PLAN AND ELEVATIONS, LOCATED GENERALLY ON THE WEST SIDE OF THE INTERSECTION OF CANYON VIEW DRIVE AND GAP CANYON PARKWAY TO BE KNOWN AS RILLISANTE VILLAS WITH CONDITIONS FROM THE PLANNING COMMISSION.

(Rillisante Villas - Divario PA-3)

WHEREAS, the property owner has requested an amendment to the approved Rillisante Villas PD, within the Divario Development known as PA-3, on approximately 24.10 acres, to approve an amendment to the elevations and site layout. The site is generally located on the west side of the intersection of Canyon View Drive and Gap Canyon Parkway; and

WHEREAS, property owner and developer have proposed a reduction in the approved number of units from 206 to 196, and thus reducing the overall density on the site and infrastructure demands; and

WHEREAS, the City Council held a public meeting on this request on February 20, 2025, to consider the amendment of the Rillisante Villas Planned Development; and

WHEREAS, the Planning Commission held a public hearing on January 28, 2025, and thereafter forwarded a recommendation for approval of the requested amendment to the City Council with a 5-0 vote with the following conditions:

1. That the number of units is limited to 196 as proposed and shown in this staff report.
2. That parking will meet the minimum requirement required for a multi-family development.
3. That a site plan is applied for and approved prior to any construction.

WHEREAS, the City Council has determined that the requested PD amendment is consistent with the goals and objectives of the General Plan, consistent with the approved master plan, does not create an undue burden or hardship on the city, and is in the best interest of the health, safety, and welfare of the citizens of the City of St. George.

NOW, THEREFORE, BE IT ORDAINED, by the St. George City Council, as follows:

Section 1. Repealer. Any provision of the St. George City Code found to be in conflict with this Ordinance is hereby repealed.

Section 2. Enactment. The approved planned development within the PD-R Zone for the property described in Exhibit ‘A’ shall be amended upon the effective date of this ordinance to reflect the approval of an amended site as shown in Exhibit ‘B’. The planned development amendment and location is more specifically described on the attached property legal description, incorporated herein as Exhibit ‘A’, and parcel exhibit, incorporated herein as Exhibit ‘B’.

Section 3. Severability. If any provision of this Ordinance is declared to be invalid by a court of competent jurisdiction, the remainder shall not be affected thereby.

Section 4. Effective Date. This Ordinance shall take effect upon publication and the final approval by the land use authority of a final plat or site plan. In the event a final plat is not approved within one year of the adoption of this Ordinance, this Ordinance shall be considered null and void and of no effect.

APPROVED AND ADOPTED by the St. George City Council, this 20th day of February 2025.

CITY OF ST. GEORGE:

_____
Michele Randall, Mayor

ATTEST:

_____
Christina Fernandez, City Recorder

APPROVED AS TO FORM:
City Attorney's Office

_____
Jami Brackin, Deputy City Attorney

VOTING OF CITY COUNCIL:

Councilmember Hughes _____
Councilmember Larkin _____
Councilmember Larsen _____
Councilmember Tanner _____
Councilmember Kemp _____

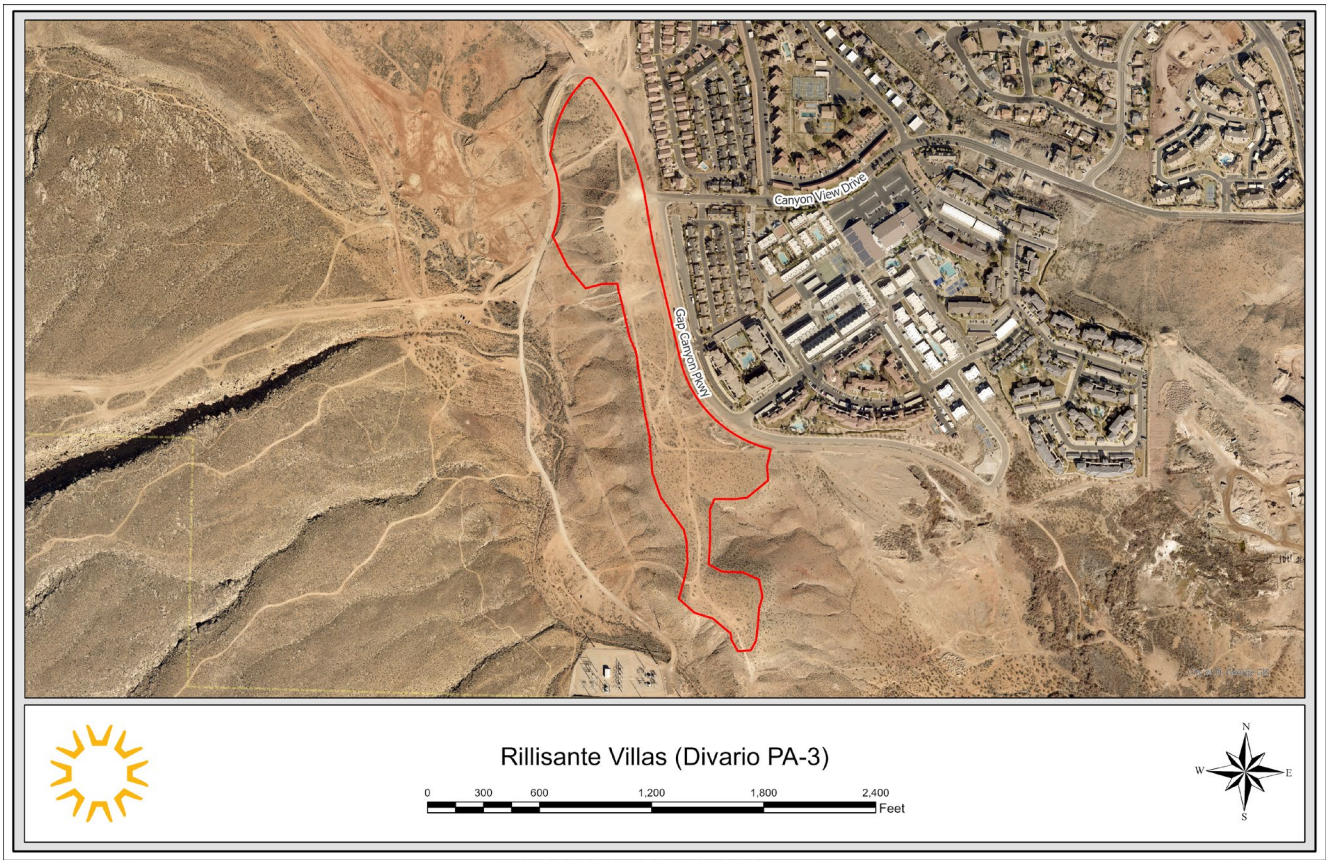
EXHIBIT "A"

Beginning at a point being North 88°23'46" West 673.21 feet along the Center Section line and

North 30.71 feet from the East Quarter Corner of Section 34, Township 42 South, Range 16 West, Salt Lake Base & Meridian, and running;

thence South 12°42'52" West 91.39 feet;
thence South 03°19'56" East 79.49 feet;
thence South 50°26'54" West 87.89 feet;
thence South 50°48'45" West 55.82 feet;
thence South 82°16'27" West 59.34 feet;
thence South 89°47'41" West 117.19 feet;
thence South 23°16'05" West 59.56 feet;
thence South 00°47'06" West 91.96 feet;
thence South 01°25'55" East 68.65 feet;
thence South 02°50'57" West 134.66 feet;
thence South 61°01'55" East 81.71 feet;
thence South 88°29'15" East 111.35 feet;
thence South 65°31'37" East 95.57 feet;
thence South 10°39'19" East 93.14 feet;
thence South 16°17'41" West 67.37 feet;
thence South 03°40'52" West 98.68 feet;
thence South 07°48'43" West 74.16 feet;
thence South 28°18'36" West 55.80 feet;
thence South 277.75 feet;
thence North 88°27'41" West 439.86 feet; thence North 250.73 feet along an arc of a 667.00 foot radius curve to the left (center bears South 86°46'26" West, long chord bears North 13°59'43" West 249.26 feet with a central angle of 21°32'18"); thence North 78°16'07" West 371.72 feet; thence North 29°24'52" West 1,133.30 feet; thence South 73°34'54" West 98.18 feet; thence North 800.56 feet along an arc of a 1,717.00 foot radius curve to the right (center bears North 55°08'41" East, long chord bears North 21°29'53" West 793.33 feet with a central angle of 26°42'52") to the Southerly line of Alienta Drive; thence Northerly along said Alienta Drive the following (5) courses; thence Northeast 123.66 feet along an arc of a 77.00 foot radius curve to the right (center bears North 81°51'34" East, long chord bears North 37°52'08" East 110.80 feet with a central angle of 92°01'08"); thence North 83°52'42" East 13.36 feet; thence Northeast 859.37 feet along an arc of a 680.00 foot radius curve to the left (center bears North 06°07'18" West, long chord bears North 47°40'25" East 803.31 feet with a central angle of 72°24'33"); thence North 11°28'09" East 378.59 feet; thence Northeast 354.76 feet along an arc of a 598.00 foot radius curve to the right (center bears South 78°31'51" East, long chord bears North 28°27'51" East 349.58 feet with a central angle of 33°59'25"); thence East 50.86 feet along an arc of a 30.00 foot radius curve to the right (center bears South 44°32'26" East, long chord bears South 85°58'06" East 44.99 feet with a central angle of 97°08'41") to the Westerly line of said Gap Canyon Parkway; then Southerly along said Gap Canyon Parkway the following (5) courses; thence Southeast 707.94 feet along an arc of a 1,455.00 foot radius curve to the right (center bears South 52°36'15" West, long chord bears South 23°27'25" East 700.98 feet with a central angle of 27°52'40"); thence South 09°31'05" East 159.71 feet; thence South 133.35 feet along an arc of a 2,045.00 foot radius curve to the left (center bears North 80°28'55" East, long chord bears South 11°23'10" East 133.32 feet with a central angle of 03°44'10"); thence South 13°15'15" East 579.68 feet; thence Southeast 720.82 feet along an arc of a 645.00 foot radius curve to the left (center bears North 76°44'45" East, long chord bears South 45°16'11" East 683.90 feet with a central angle of 64°01'53") to the Point of Beginning.

Containing 3,069,144 square feet or 70.46 acres.

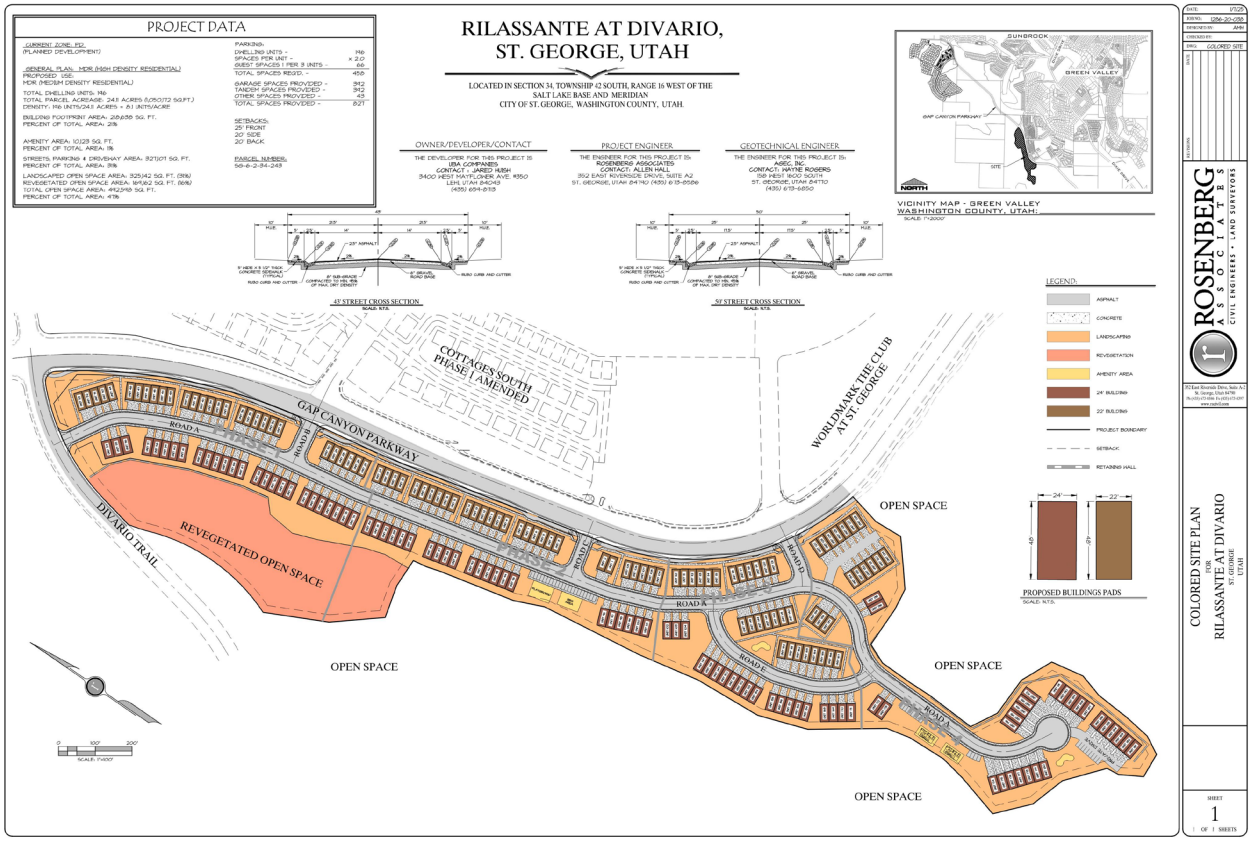


Rillisante Villas (Divario PA-3)

0 300 600 1,200 1,800 2,400 Feet

N W E S

EXHIBIT "B"


PROJECT DATA
RILASSANTE AT DIVARIO,
ST. GEORGE, UTAH
LOCATED IN SECTION 34, TOWNSHIP 42 SOUTH, RANGE 16 WEST OF THE SALT LAKE BASE AND MERIDIAN CITY OF ST. GEORGE, WASHINGTON COUNTY, UTAH.
OWNER/DEVELOPER/CONTACT
PROJECT ENGINEER
GEOTECHNICAL ENGINEER
VICINITY MAP - GREEN VALLEY
WASHINGTON COUNTY, UTAH;
45' STREET CROSS SECTION
57' STREET CROSS SECTION
LEGEND:
ASPHALT
CONCRETE
LANDSCAPING
REVEGETATION
AMENITY AREA
24' BUILDING
22' BUILDING
PROJECT BOUNDARY
SETBACK
RETAINING WALL
PROPOSED BUILDINGS PADS
COTTAGES SOUTH PHASE I AMENDED
WORLDMARK THE CLUB AT ST. GEORGE
GAP CANYON PARKWAY
DIVARIO TRAIL
REVEGETATED OPEN SPACE
OPEN SPACE
ROAD A
ROAD B
ROAD C
ROAD D
ROAD E
ROAD F
ROAD G
ROSENBERG ASSOCIATES
CIVIL ENGINEERS • LAND SURVEYORS
COLORED SITE PLAN
RILASSANTE AT DIVARIO
ST. GEORGE
UTAH
SHEET
1
OF 1 SHEETS