January 16, 2025

CO 60 & COLORADO BOULEVARD INTERSECTION IMPROVEMENTS
TOWN OF JOHNSTOWN
CONTRACT AMENDMENT #2 – ULTIMATE DESIGN
Benesch Project # 00152161.05

This Contract amendment is to amend the PSA Agreement signed between the Town of Johnstown and Alfred Benesch & Company on August 18, 2023, for the design of interim improvements at CO 60 and Colorado Blvd.

This contract amendment will provide additional funding for the ultimate design of Colorado Blvd from Carlson Blvd to the Purvis development, including the CO 60 intersection. The additional funding will cover additional work that was outside of the scope of the original contract. This additional work is primarily focused on the roadway and drainage design for Colorado Blvd to build it to its Council-approved 4-lane ultimate layout.

This amendment is based on the following:

- Design completed to date includes laneage for interim left turn lane improvements on Colorado Blvd at CO 60.
- Colorado Blvd will be designed to its ultimate 4-lane width from Carlson Blvd to the Purvis development (near cemetery driveway).
- Ultimate alignment, laneage and lane width will be based on the previously recommended and approved ultimate concept layout.
- WB deceleration, WB acceleration, and EB acceleration lanes along CO 60 will be designed.
- Signal poles have been previously designed for their ultimate location.
- Subsurface Utility Engineering plans/report pursuant to SB 18-167 is required to the new north and south limits of the design.
- Irrigation lateral relocations north of the intersection have been previously designed and will be finalized as part of this scope.
- New curb inlets and storm sewer is anticipated for new curbed sections of Colorado Blvd.
- The Colorado Blvd ultimate plans will be integrated with plans for a new roundabout at Colorado & Roosevelt Pkwy for a single project plan set (Colorado & Roosevelt design fee is separate).

Additional information is attached to this letter, including detailed scope, fee and subconsultant information for this amendment. Benesch is requesting an additional **$298,620** for this amendment.

This amount reflects the estimate needed to complete the project design and deducting the remaining budget on the contract.

Thank you for the opportunity to continue working with the Town of Johnstown on this project.

Sincerely,

Johnny Olson, P.E.
Project Manager

APPROVALS

CLIENT	ALFRED BENESCH & COMPANY
BY: _____	BY: _____
AUTHORIZED REPRESENTATIVE	AUTHORIZED REPRESENTATIVE
PRINT NAME: **Matt LeCerf**	PRINT NAME: **John Sabo**
TITLE: **Town Manager**	TITLE: **Transportation Group Lead -VP**
DATE: _____, 20__	DATE: _____, 20____
	BENESCH OFFICE: **Denver**
	ADDRESS: **7979 Tufts E Ave, #800**
	Denver CO, 80237

ALFRED BENESCH & CO.
SCOPE OF WORK AMENDMENT
SH 60 & COLORADO BLVD ULTIMATE DESIGN

INTRODUCTION

Alfred Benesch & Company (CONSULTANT) is currently providing engineering services to the Town of Johnstown (CLIENT) for interim intersection improvements at CO 60 and Colorado Blvd (CR 13). The interim improvements include signal pole replacement, adding northbound and southbound turn lanes, and irrigation pipe replacement.

The CLIENT has requested the design for Colorado Blvd be expanded to include its ultimate configuration from Carlson/Meadowlark to the Purvis development. This is an expansion in scope and necessitates an amendment to the design contract. This scope amendment is as follows:

PROJECT TEAM

The CONSULTANT team will split tasks for the project generally as follows:

Scope of Work Item	Benesch	UMS	Rocksol	Horrocks
Project Management	X			
Geotech & Pavement Design			X	
Roadway Design	X			
Property Owner Coordination				X
Subsurface Utility Engineering Plans		X		
QL-A Test-Holing		X		
Hydrology & Hydraulics	X			
Signing	X			
Striping	X			
Traffic Signal Design	X			
Cost Estimates	X			

PERFORMANCE PERIOD

It is assumed this amended scope of work will be completed by December 31, 2026.

ASSUMPTIONS

- Colorado Blvd will be designed to its ultimate width from Carlson Blvd to the Purvis development (near cemetery driveway).
- Ultimate alignment, laneage and lane width will be based on the previously recommended and approved ultimate concept layout.
- WB deceleration, WB acceleration, and EB acceleration lanes along CO 60 will be designed.
- Signal poles have been previously designed for their ultimate location.
- Subsurface Utility Engineering plans/report pursuant to SB 18-167 is required to the new north and south limits of the design.
- Irrigation lateral relocations north of the intersection have been previously designed and will be finalized as part of this scope. Additional irrigation crossing structures will be designed for the Home Supply Ditch crossing to Trembath/Purvis.
- New curb inlets and storm sewer is anticipated for new curbed sections of Colorado Blvd.
- OpenRoads Designer 10.10 or 10.12 software will be used in the development of the design plans.

- Project will be approved by CDOT through an Access Permit process.
- CLIENT will assist with ongoing developer coordination.

Tasks by the CONSULTANT include the following:

1. PROJECT INITIATION AND CONTINUING REQUIREMENTS

As part of the project continuing requirements, CONSULTANT will perform the following:

a. Progress Meetings. CLIENT and the CONSULTANT will meet biweekly. A total of 14 progress meetings **by video** are included in this scope of work. These progress meetings will be used to coordinate and track the work effort and resolve problems.

b. CDOT Meetings. CONSULTANT will meet with CLIENT and CDOT for coordination. Three meetings at CDOT R4 Greeley are assumed.

c. Update Design Criteria.

d. Project Management. The CONSULTANT PM will coordinate the work tasks being accomplished by the CONSULTANT to ensure project work completion stages are on schedule. Project staffing and assigning of tasks, scheduling and invoicing are included within this task.

e. Property Owner / Utility Coordination. See attached scope of work from Horrocks dated December 30, 2024.

2. PRELIMINARY DESIGN

As part of this preliminary design, CONSULTANT will perform the following activities:

a. Survey. See attached scope of work from Eugene Lynne dated January 7, 2025.

b. Subsurface Utility Engineering. Includes QL-B utility investigation in additional areas near the Carlson Blvd intersection and north to the cemetery driveway. Also includes an additional 20 QL-A test holes. See attached scope of work from UMS, P.C., dated January 3, 2025.

c. Roadway Engineering. CONSULTANT will perform various roadway engineering tasks associated with the design of the ultimate roadway (includes Colorado Blvd from Carlson Blvd to Purvis, and WB deceleration, WB acceleration, and EB acceleration lanes along CO 60):

   i. Review of design criteria, previous designs and existing topographical survey.

   ii. Preliminary horizontal and vertical alignment design of centerlines, islands, lanes and medians.

   iii. Preliminary design of typical templates, and preliminary modeling to determine roadside grading and toes-of-slopes.

   iv. Creation of preliminary cross sections at 50’ interval.

d. Right-of-Way. Included in previous work.

e. Traffic Engineering. Develop preliminary striping plans for the proposed roadway and intersection improvements.

f. Signal Design. Update previous signal design for ultimate lanes.

g. Geotech. See attached scope of work from Rocksol, Inc., dated January 6, 2025.

h. Hydrology/Hydraulic Engineering.

   i. Data Review. Obtain and review existing drainage data from available sources.

   ii. Minor Structures. Determine locations, sizes, and alignment based on preliminary hydraulic design. Prepare preliminary structure cross-sections and determine elevations, flow lines, slopes and lengths of the structures.

   iii. Irrigation Structures. Confirm previous irrigation lateral design and update. Establish preliminary design for Home Supply Ditch crossing structures to Trembath/Purvis.

   iv. Prepare preliminary Hydraulic Design Report in accordance with Town of Johnstown requirements.

i. Utility Conflicts. CONSULTANT will identify potential conflicts based on topographic base files and site visits. Any potential conflicts identified will be coordinated with the Town and Horrocks and shown on the plans and a Utility Conflict Matrix. Utility relocation design is not included.

j. Preparation for the 30%:

   i. Coordinate, complete, and compile the plan set. The 30% plans shall include a title sheet, M&S index, typical sections, general notes, SUE plans, plan/profile sheets, preliminary intersection layouts, preliminary minor drainage structures and preliminary signal design. The plan/profile sheets will include all existing topography, survey alignments, projected alignments, profile grades, ground line, existing ROW, rough structure notes (preliminary drainage design notes, including pipes, inlets, ditches and channels), and existing utility locations. Typical plan sheets scales will be 1”=40’. Cross sections will be 1”=20’.

   ii. Prepare the preliminary cost estimate for the work described in the 30% plans based on estimated quantities.

   iii. QA/QC. Perform QA and QC for the plans. This task includes interdisciplinary review and crosschecks.

   iv. Submit the 30% plans in electronic PDF format to the CLIENT for review 2 weeks prior to the review meeting.

k. 30% Review Meeting:

   i. Attend the review meeting.

   ii. The 30% review comments shall be compiled in a comment review log and meeting minutes submitted.

3. FINAL DESIGN

As part of this final design, CONSULTANT will perform the following activities, except as noted:

a. Project Review. CONSULTANT will update the project schedule based upon the results of the 30% review, coordinate activities required for final design, initiate design decisions and discuss variances as they affect 90% design activities.

b. Roadway Engineering. CONSULTANT will perform the following final design roadway engineering tasks associated with the design of the improvements (includes Colorado Blvd from Carlson Blvd to Purvis, and WB deceleration, WB acceleration, and EB acceleration lanes along CO 60):

   i. Final design of horizontal and vertical alignments.

   ii. Final detailed design of islands, curb ramps, medians and lanes.

   iii. Final detailed modeling of proposed roadway and roadside slopes and ditches.

   iv. Updated cross sections with final earthwork quantities.

c. Hydrology/Hydraulic Engineering.

   i. Data Review. Review data and information developed under the Preliminary Hydraulic Investigation and update in accordance with decisions made at the 30% review.

   ii. Minor Structures.

      - Complete final design for minor drainage structures. Finalize horizontal and vertical locations and sizes for all drainage structures based on hydraulic design.

      - Finalize structure cross-sections and profiles to determine the elevations, flow lines, slopes and lengths of structures.

   iii. Complete final design for all drainage details required for minor drainage structures.

   iv. Irrigation Structures. Finalized locations, sizes, and alignment. Finalize structure cross-sections and determine elevations, flow lines, slopes and lengths of the structures.

   v. Prepare final construction plans in accordance with Town of Johnstown requirements.

   vi. Storm Water Management Plan. Initiate a Storm Water Management Plan in accordance with Municipal Separate Storm Sewer Systems (MS4), CDPHE's Construction Discharge Permit System requirements, CDOT's Erosion Control and Storm Water Quality Guide, local agency SWMP/GESC/EC requirements, CDOT's Standard Specifications, CDOT Standard Plans and other appropriate documents.

   vii. Prepare a Final Hydraulic Design Report in accordance with the requirements of the Town of Johnstown.

d. Utility Conflicts. Following the finalization of the roadway horizontal alignment and profile grade and the horizontal and vertical location of drainage structures, sewers, and other underground structures, update the Utility Conflict Matrix, and coordinate with the Town and Horrocks to identify and resolve any conflicts to finalize utility clearances. Utility relocation design is not included in this scope of work.

e. Utility Test-Holing. Coordinate with the SUE investigator to identify QL-A test hole locations.

f. A final construction phasing plan will be developed which integrates the construction of all project work elements into a practical and feasible sequence. This plan shall accommodate the existing traffic movements during construction, and a final traffic control plan will be developed which shall be compatible with the phasing plan.

g. Traffic Engineering.

i. Prepare and provide permanent signing/pavement marking plans according to MUTCD and CDOT criteria.

ii. Signal Design. CONSULTANT will finalize proposed signal design based on current MUTCD and CDOT requirements. CONSULTANT will develop:

- A removals sheet will identify the existing traffic signal equipment to be removed. Existing features to remain will also be identified on this sheet. The sheet will establish quantities of removals for the signal location.

- A signal design sheet will identify the proposed traffic signal installation. The signal design will include all proposed traffic signal equipment, poles, heads, vehicle detection zones, existing interconnect connections and the resulting item quantities necessary to complete traffic signal installation. Other signal plan features shown will include detection, pedestrian buttons and signals, new controller locations and emergency vehicle preemption.

- Obtain new signal structure identification numbers from CDOT Staff Bridge.

h. Plan Preparation for the 90% Submittal

i. Coordinate the Packaging of the Plans. Collect plans from all design elements and collate the plan package. Calculate plan quantities and prepare the tabulations.

The 90% plans prepared by CONSULTANT shall include the following sheets (as appropriate):

- Title Sheet
- Standard Plans List
- Typical Sections
- General Notes
- Summary of Approximate Quantities
- Appropriate Individual Quantity Tabulations
- Survey Control (by subconsultant)
- SUE Plans (by subconsultant)
- Roadway Plan & Profile
- Intersection Details
- Drainage/Irrigation Plan
- Drainage/Irrigation Profiles
- Stormwater Management Plan
- Signal Plans
- Signing & Striping Plans
- Construction Phasing/Traffic Control Plan

- Cross Sections With Earthwork Quantities

ii. Specifications. In addition to the plan sheets, the Special Provisions shall be provided. This will consist of any unique Project Special Provisions which have to be written specifically for items, details and procedures not adequately covered by CDOT's Standard Specifications and Standard Special Provisions. The Project Special Provisions shall be provided in the CDOT format and submitted with the project plans.

iii. Prepare the 90% estimate. Item numbers, descriptions, units and quantities shall be listed and submitted.

iv. QA/QC. Perform QA and QC for plans and specifications. This task includes interdisciplinary review and crosschecks.

v. Submit the 90% plans and specifications in electronic PDF format to the CLIENT for a review 2 weeks prior to the FOR.

i. 90% Review Meeting.

i. CONSULTANT will attend the 90% meeting.

ii. Prepare meeting minutes and comment resolution log and distribute within one week of the meeting.

iii. 90% Plan Revisions. The plan sheets and the specifications shall be revised in accordance with the 90% review comments and submitted to the CLIENT within 4 weeks after the meeting.

j. Construction Plan Package. Submit the final revision of the plans and specifications incorporating all comments received at the 90% FOR meeting. The bid plans shall consist of the 100% plans and will completely describe the work required to build the project including project special provisions and detailed quantities.

k. Record Plan Sets. CONSULTANT will electronically seal record documents.

l. Advertisement Support. Provide the following when requested by the CLIENT:

i. Pre-Bid Meeting. Attend the pre-bid meeting in Johnstown.

ii. Contractor Questions. Assist CLIENT with answering questions on the plans and specifications during the advertisement period.

iii. Revisions Under Ad. Provide revisions to plans and specifications when clarifications or changes are required on the advertisement package.

4. EXCLUSIONS

The following are not included in this amendment scope and their inclusion is subject to a change in scope, schedule and/or fee: Environmental studies and reports, Value Engineering workshops, additional topographic survey, additional right-of-way research and plans, utility design, railroad coordination and submittals, structural design, signal timing plans, lighting design and permit applications.

Design Fee: CO60-Colorado Blvd Ultimate Design Amendment

Town of Johnstown
1/9/2025

Staff:	Sabo	Olson	Salek	Hebert	Lynch	Abernathy	Fling	Kenny					
Classification:	Principal	Senior Project Manager	Senior Project Manager	Designer II	Designer I	Proj Engr I	Designer I	Proj Asst II	Total Hours	Benesch Labor Fee	Mileage	Sub Consultants	Sub-Task Fees
Hourly Rates:	$ 250	$ 232	$ 232	$ 125	$ 112	$ 138	$ 112	$ 100					
Subs													
UMS - SUE													$ 50,744
Estimate to Finish with Additional QL-B Area and 20 Additional Potholes												$ 84,657	
UMS Budget Remaining from Orignal Contract												$ (33,913)	
Rocksol - Geotech													$ 2,437
Estimate to Finish With Additional Pavement Recommendation												$ 6,504	
Rocksol Budget Remaining from Orignal Contract												$ (4,067)	
Horrocks - Owner/Utility Coordination													$ 9,289
Estimate to Finish With Additional Owner Coordination												$ 51,250	
Horrocks Budget Remaining from Orignal Contract												$ (41,961)	
Eugene Lynne - Survey/ROW													$ 15,060
Estimate to Finish With Additional Survey/ROW Work												$ 15,060	
1) Project Management													
a) Progress Meetings		14	7	7	7	7	7		49	$8,281			$ 8,281
b) CDOT Meetings		6	9						15	$3,480	$ 228		$ 3,708
c) Update Design Criteria			1			1			2	$370			$ 370
d) Project Management	2	24	12					2	40	$9,052			$ 9,052
2) Preliminary Design													
a) Survey									0	$0			$ -
b) SUE			2						2	$464			$ 464
c) Roadway Engineering													
i) Data Review			1		1				2	$344	$ 76		$ 420
ii) Preliminary Horiz/Vert			20	16	120				156	$20,080			$ 20,080
iii) Templates/Modeling			10		60				70	$9,040			$ 9,040
iv) Cross Sections					32				32	$3,584			$ 3,584
d) Right-of-Way									0	$0			$ -
e) Traffic Engineering				30					30	$3,750			$ 3,750
f) Signal Design				16					16	$2,000			$ 2,000
g) Geotech			2		2				4	$688			$ 688
h) Hydrology/Hydraulics									0	$0			$ -
i) Data Review						2	4		6	$724			$ 724
ii) Minor Structures						20	40		60	$7,240			$ 7,240
iii) Irrigation Structures						16	40		56	$6,688			$ 6,688
iv) Preliminary Drainage Report						4	30		34	$3,912			$ 3,912
i) Utility Conflicts			4						4	$928			$ 928
j) Preparation of 30%									0	$0			$ -
i) Plan Set			16	8	60	8	40		132	$17,016			$ 17,016
ii) Cost Estimate			2		4				6	$912			$ 912
iii) QA/QC	1		8	4	4	4	4		25	$4,054			$ 4,054

Staff:	Sabo	Olson	Salek	Hebert	Lynch	Abernathy	Fling	Kenny					
Classification:	Principal	Senior Project Manager	Senior Project Manager	Designer II	Designer I	Proj Engr I	Designer I	Proj Asst II	Total Hours	Benesch Labor Fee	Mileage	Sub Consultants	Sub-Task Fees
Hourly Rates:	$ 250	$ 232	$ 232	$ 125	$ 112	$ 138	$ 112	$ 100					
iv) Submit 30% Plans		2	4		2				8	$1,616			$ 1,616
i) FIR Review									0	$0			$ -
i) Attend the Meeting		3	4		4	4	4		19	$3,072	$ 76		$ 3,148
ii) Meeting Minutes			4						4	$928			$ 928
													$ -
2) Final Design													
a) Project Review		1	1						2	$464			$ 464
b) Roadway Engineering													
i) Final Horiz/Vert			4		60				64	$7,648			$ 7,648
ii) Final Detailed Design			8	16	120				144	$17,296			$ 17,296
iii) Modeling			4		80				84	$9,888			$ 9,888
iv) Cross Sections					40				40	$4,480			$ 4,480
c) Hydrology/Hydraulics									0	$0			$ -
i) Data Review						2	4		6	$724			$ 724
ii) Minor Structures						20	40		60	$7,240			$ 7,240
iii) Details						2	16		18	$2,068			$ 2,068
iv) Irrigation Structures						16	40		56	$6,688			$ 6,688
v) Construction Plans						10	40		50	$5,860			$ 5,860
vi) SWMP							40		40	$4,480			$ 4,480
vii) Final Drainage Report						4	20		24	$2,792			$ 2,792
d) Utility Conflicts			4						4	$928			$ 928
e) Utility Test Holing			4						4	$928			$ 928
f) Phasing/TCP			2	24					26	$3,464			$ 3,464
g) Traffic Engineering									0	$0			$ -
i) Signing/Pavement Marking Plans				40					40	$5,000			$ 5,000
ii) Signal Design				16					16	$2,000			$ 2,000
j) Preparation of 90%									0	$0			$ -
i) Plan Set		4	20	20	80	8	60		192	$24,852			$ 24,852
ii) Specifications			4						4	$928			$ 928
iii) 90% Estimate			4						4	$928			$ 928
iv) QA/QC	1		16	8	8	8	8		49	$7,858			$ 7,858
iv) Submit 90% Plans		2	4		2				8	$1,616			$ 1,616
i) 90% Review Meeting									0	$0			$ -
i) Attend the Meeting		3	4	4	4	4	4		23	$3,572	$ 76		$ 3,648
ii) Meeting Minutes			6						6	$1,392			$ 1,392
iii) 90% Plan Revisions		2	16	30	40	10	30		128	$17,146			$ 17,146
j) Construction Plan Package		2	16	10	30		20		78	$11,026			$ 11,026
k) Record Plan Set			1			1			2	$370			$ 370
l) Advertisement Support									0	$0			$ -
i) Pre-Bid Meeting		2	3						5	$1,160	$ 76		$ 1,236
ii) Contractor Questions		1	4						5	$1,160			$ 1,160
iii) Revisions Under Ad		1	4		8		8		21	$2,952			$ 2,952
Subtotals	**4**	**67**	**235**	**249**	**768**	**151**	**499**	**2**	**1975**	**$ 265,131**	**$ 532**	**$ 77,530**	

Benesch Estimate Needed to Finish	**$ 265,663**
Benesch Budget Remaining from Orignal Contract	**$ (44,573)**
Benesch Additional Needed to Finish	**$ 221,090**

Staff:	Sabo	Olson	Salek	Hebert	Lynch	Abernathy	Fling	Kenny					
Classification:	Principal	Senior Project Manager	Senior Project Manager	Designer II	Designer I	Proj Engr I	Designer I	Proj Asst II	Total Hours	Benesch Labor Fee	Mileage	Sub Consultants	Sub-Task Fees
Hourly Rates:	$ 250	$ 232	$ 232	$ 125	$ 112	$ 138	$ 112	$ 100					
												Subs Additional Needed to Finish	**$ 77,530**
												Total Additional Amendment Request	**$ 298,620**

benesch

2025 Employment Classification and Rate Schedule

Classification	Billable Rate
Project Manager I	$172.00
Project Manager II	$206.00
Senior Project Manager	$232.00
Project Principal	$250.00
Project Engineer I	$138.00
Project Engineer II	$149.00
Senior Project Engineer	$178.00
Designer I	$112.00
Designer II	$125.00
Technologist I	$80.00
Technologist II	$113.00
Senior Technologist	$142.00
Technical Specialist I	$95.00
Technical Specialist II	$125.00
Senior Technical Specialist	$152.00
Intern	$75.00
Project Scientist I (Environmental)	$81.00
Project Scientist II (Environmental)	$92.00
Project Scientist III (Environmental)	$105.00
Senior Project Scientist	$156.00
Office Assistant	$67.00
Project Assistant I	$81.00
Project Assistant II	$100.00
Division Administrative Assistant I	$74.00
Division Administrative Assistant II	$98.00

Classification	Billable Rate
Construction Project Manager I	$155.00
Construction Project Manager II	$170.00
Sr. Construction Project Manager	$198.00
Construction Manager I	$145.00
Construction Manager II	$175.00
Sr. Construction Manager	$216.00
Construction Engineer I	$128.00
Construction Engineer II	$150.00
Sr. Construction Engineer	$162.00
Construction Representative I	$102.00
Construction Representative II	$115.00
Construction Representative III	$125.00
Construction Representative IV	$145.00
Construction Technical Representative I	$95.00
Construction Technical Representative II	$110.00
Construction Technical Representative III	$126.00
Construction Technical Representative IV	$152.00
Construction Technical Manager	$195.00
Inspector I	$82.00
Inspector II	$88.00
Inspector III	$108.00
Inspector IV	$128.00
Sr. Inspector	$148.00
Field/Lab Technician I	$72.00
Field/Lab Technician II	$85.00
Field/Lab Technician III	$102.00
Senior Field/Lab Technician	$120.00

Eugene Lynne

Mr. Johnny Olson
Benesch
7979 E. Tufts Ave, Suite 800
Denver, CO 80237

Amara L. Hildebrand
Eugene Lynne, LLC
PO Box 27691
Lakewood, CO 80227

January 27th, 2025

RE: SH60 and CR13 Intersection Design– Ultimate Design

Scope of Services:

No additional survey work is anticipated, and our remaining budget allows for updates on ROW plans and easements already assembled. However, in the case that additional easements are identified, additional field work is required, or files need to be translated, etc. there is no contingency within the allotted budget to address unforeseen survey needs. As such, a nominal amount of field and office time is proposed as a T&M NTE contingency, to address any unforeseen additions to the survey scope. The fee below accounts for one week of two–person field time and two weeks of professional land surveyor office time. No additional reimbursables are anticipated.

Fee:

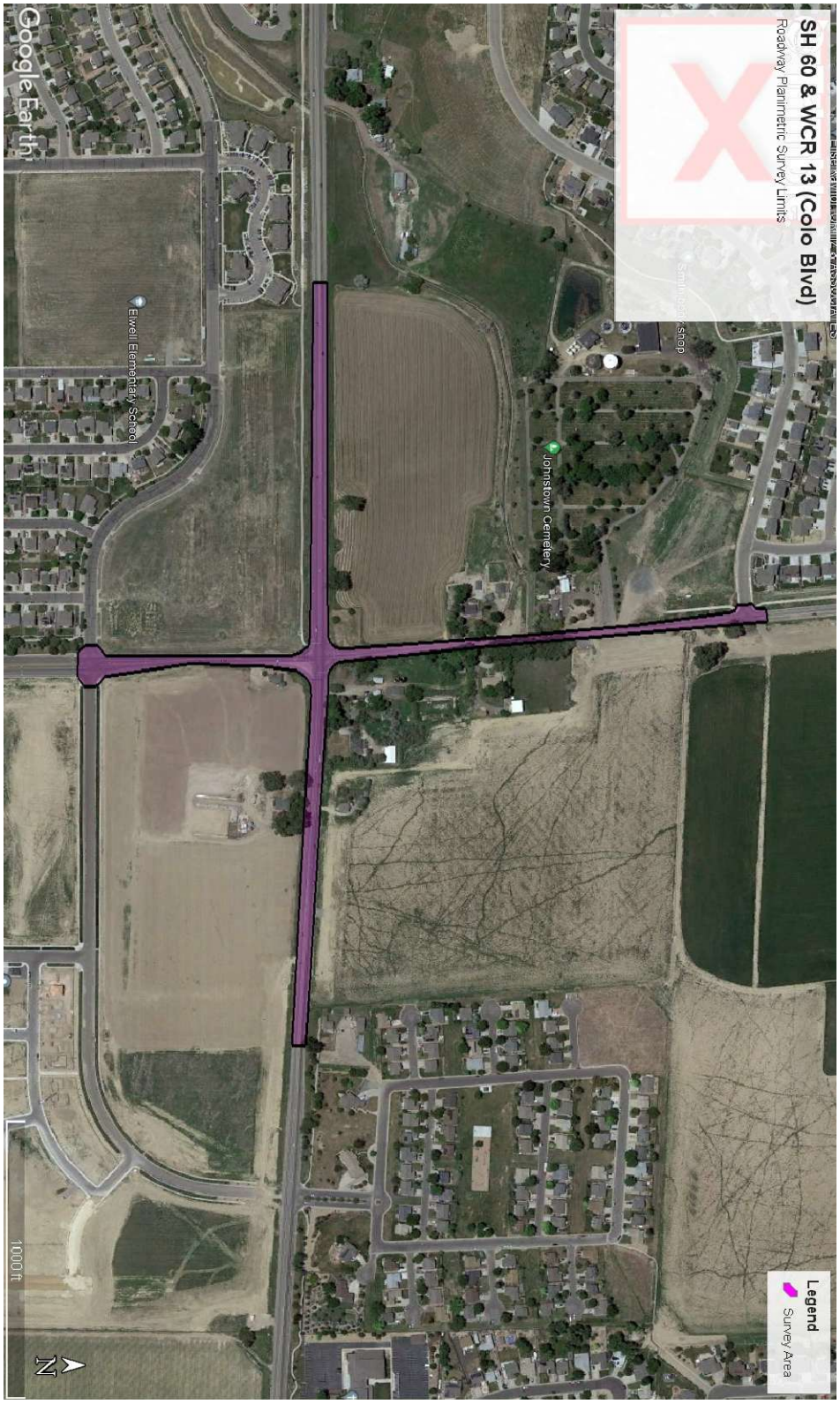
Survey Contingency for Ultimate Design	***Fee Subtotal***
Management	$1,440
Office Survey	$6,200
Field Survey	$7,000
Sub-Total Fee	$14,640
Mileage	$420
Fee Total	**$15,060**

Please reach out to me at 720–771–8149 or ahildebrand@eugenelynne.com should you have any questions or concerns about the additional services. As noted, these are not likely costs that will be incurred, and they will not be billed if additional survey work is not identified. Easements and ROW plans already assembled will be completed within the original design budget.

Sincerely,

Amara L. Hildebrand
Partner

Figure 1


SH 60 & WCR 13 (Colo Blvd)
Roadway Planimetric Survey Limits
Google Earth
Eixell Elementary School
Johnstown Cemetery
Legend
Survey Area
1000 ft
N

RockSol
Consulting Group, Inc.

GEOTECHNICAL SCOPE OF WORK

Final Design for SH 60 and CR 13 Intersection Improvements Project
Benesch / Town of Johnstown, Colorado
January 27, 2025

The Town of Johnstown (Town) is planning improvements to the State Highway 60 (SH 60) and County Road 13 (CR 13) intersection. Improvements include design of a signalized intersection at SH 60 and CR 13, widening CR 13 to two through lanes in each direction through the intersection, and adding turns lanes where necessary. Ancillary items such as striping modifications, signage installation, curb ramp installations and upgrades, landscape modifications, and grading/earthwork are also planned for the improvements project.

RockSol has completed a preliminary geotechnical investigation and submitted a draft Geotechnical Report for preliminary design of the proposed improvements. Final design for the CR 13 ultimate layout and aux lanes on SH 60 includes:

- Pavement recommendation for ultimate Colorado Blvd (2 lanes in each direction Carlson Blvd to cemetery driveway), and
- Pavement recommendation for SH 60 widening (WB right turn lane, WB accel lane, EB accel lane).

No additional geotechnical boreholes are needed to support final design. For final design recommendations, the preliminary Geotechnical Report will be updated with final pavement design, traffic signal pole foundation, and roadway subgrade preparation requirements. The report will be reviewed, stamped, and signed by a Colorado Licensed P.E.

RockSol Consulting Group, Inc.

Fee Estimate for Geotechnical Investigation Services (Final Design)
SH 60 and CR 13 Intersection Improvements, Johnstown, Colorado
Prepared January 27, 2025

Classification	*Hours*	*Rate/Hour*	*Total Estimated Fee*
Administrative Assistant	4	$110.89	$443.56
Senior Geotechnical Engineer (Don Hunt)	4	$269.92	$1,079.68
Senior Pavement Design Engineer (Jay Goldbaum)	8	$269.92	$2,159.36
Geotechnical Engineering Staff (Madison Philips)	16	$154.85	$2,477.60
Senior Geologist (Ryan Lepro)	2	$171.83	$343.66
Total Labor			**$6,503.86**

Other Direct Costs	
Total Other Direct Cost	**$0.00**
Total	**$6,503.86**

December 30, 2024

Johnny Olson, PE
Senior Project Manager, Benesch

Sent via email: jwolson@benesch.com

SUBJECT: Contract Modification 1- SH 60/CR 13 Intersection Improvements
Benesch Contract #152161.05, attached as Exhibit A. Horrocks project #CO-7153-23

Dear Mr. Olson:

Thank you for the opportunity to submit this contract modification and continue working with Benesch and the Town of Johnstown on the SH60/WCR 13 Intersection Improvement project.

Described below is a summary of work remaining necessary to complete acquisitions, a ditch crossing and utility/irrigation coordination, as well as an hourly rate increase for 2025.

SUMMARY OF SERVICES PROVIDED BY HORROCKS LAND ACQUISITION AND UTILITY COORDINATION

1. Continued support to project team, including Town representatives in Public Engagement; letters, open houses, social media, etc. Serve as POC for affected and adjacent landowners, developers, stakeholders.
2. Coordination and communication of utility and irrigation providers and project team. Includes work with Consolidated Home Supply Ditch Company to obtain a crossing agreement
3. Shared spreadsheets with project status
4. Update Informational title reports
5. Document preparation, mailing and recording, as well as QA/QC of all documents
6. Conduct good faith negotiations with affected property owners
7. Waiver valuations, offer preparation and delivery. Appraisals have been contracted through Horrocks for an additional fee and are incorporated below.
8. Closing and recording of conveyance documents. Fee parcel takes will require title insurance unless the Town will be seeking parcel via a deed of dedication rather than conveyance via warranty deed.

SERVICES NOT PROVIDED BY HORROCKS LAND ACQUISITION

1. Engineering and ROW design plans
2. Project staking

3. Legal review of documents

ASSOCIATED FEES

• Good faith negotiations	100 hours x $175/hr	$17,500.00
• Appraisals (up to 3)	3 x $5000	$15,000.00
• Utility coordination/Ditch Crossing	100 hours x $175/hr	$17,500.00
• Title Updates	5 x $250	$ 1,250.00
Total		**$51,250.00**

If additional effort is needed beyond what is assumed above, a change order may be required for additional hours/scope. If work assignments are completed prior to reaching the total estimated cost, then the Benesch would not be liable for paying the entire quoted price. Should project efforts need to be continued into 2026 the above hourly fee will need to be updated.

Sincerely,

Courtney Wallace

Courtney Wallace, SR/WA
ROW Acquisition and Utility Coordination

Horrocks.

5250 Hanh's Peak Dr. Suite 220,
Loveland, CO 80537
Direct 720-577-1741
Mobile 970-999-4165
Email Courtney.wallace@horrocks.com
Web www.horrocks.com

January 3, 2025

DETAILED WORK PLAN FOR UTILITY ENGINEERING

Phase 1 – SUE Utility Designating
Phase 2 – SUE Utility Locating (Vacuum Excavations)

SH-60 and CR-13 – Johnstown, CO

Submitted to:

benesch

Alfred Benesch & Company
7979 East Tufts Avenue, Suite 800
Denver, Colorado 80237
p. 303.771.6868

Submitted by:

Utility Mapping Services
www.umsi.us

UMS

7100 N. Broadway, Unit 1D
Denver, CO 80221
p. 720.230.0780

Contents

DETAILED WORK PLAN FOR UTILITY ENGINEERING
Phase 1 – Project Corridor Utility Investigation, 2-D QL B Utility Designating
Phase 2 – Utility Locating (Vacuum Excavations)

SH-60 and CR-13
Johnstown, Colorado

Executive Summary

Utility Mapping Services (UMS) scope of work is to perform utility engineering (UE, a.k.a. subsurface utility engineering or SUE) services as a sub-consultant for Alfred Benesch & Company (a.k.a. "Client") which is the prime consultant under contract with the Town of Johnstown (a.k.a. "Owner"). A utility investigation will be executed in accordance with ASCE standards to designate and depict existing infrastructure for integration within the conflict analytic process and design.

Section 1 - Statement of Scope of Work

This work will be performed in accordance with ASCE 38[1], as well as Colorado Revised Statute CRS 9-1.5-103 and includes the following activities:

- Compilation of utility data (i.e. records and as-built information) acquired by UMS and others.
- Preparation of field books, log sheets, and crew scheduling and logistics for the initial utility designating field campaign.
- Phase 1: 2D QL B data acquisition (using electromagnetic (EM) induction, acoustic, and/or other geophysical technologies), characterization, and 2D depiction (CAD file) of existing utility infrastructure data to develop a reliably qualified base map and data set from which to develop and support future design, coordination, and construction decisions.
- Phase 2: Vacuum Excavations at specific utility target locations to be determined by the project design team and utility coordination staff.
- Populating utility data management system GEOfeature™ with hydraulic structure and test hole information from the field investigation.

**Note: QL refers to the quality level as described in ASCE 38.*
***Note: GEOfeature™ is a 3-D digital utility data repository designed to manage existing and new infrastructure as-built data in accordance with the new ASCE 75 standard. The repository includes a tablet and Web-GIS application for in-the-field utility data acquisition and viewing.*

[1] American Society of Civil Engineers, Construction Institute and Utility Engineering and Surveying Institute, *Standard Guideline for Investigating and Documenting Existing Utilities*. Reston, VA 2022.

Phase 1 Designating

Although Phase 1 utility designating of buried infrastructure will have goal of QL B (i.e., position is determined via a combination of geophysical, survey and engineering methods) some facilities such as non-conductive water are pragmatically designated to a mixture of QL C (i.e., based on surveyed surface features and record data), B, and A (i.e., exposed survey grade observations such as possible at manholes) during the Phase 1 field effort. Likewise, some non-conductive piping and/or ducts lacking tracer wire may be designated to QL D (i.e., based on evidence consisting of available record information and/or verbal accounts) during the Phase 1 effort. Data quality is improved as and where required during subsequent project utility engineering phases. Any utilities designated to QL C and/or QL D quality levels will be explained and described in the Phase 1 SUE existing utility report as to why a quality level below QL B has been used.

All work is intended to incorporate and stem from previous efforts performed by the Owner, Client and their consultants, and will be performed in compliance with applicable project design standards, procedures, and accepted engineering principles. Information contained within this SOW and corresponding labor and cost estimate is based on: project standards and deliverables; Federal Highway Administration (FHWA) *Avoiding Utility Relocations* (DTFH61-01-C-00024); FHWA guidelines for SUE; ASCE 38; Colorado Revised Statute CRS 9-1.5-103; and ASCE 75.

Phase 2 Locating

The Phase 2 investigation primarily consists of utility locating (discrete QL A vacuum excavated test holes). UMS and a vac truck contractor will perform excavation operations and the engineering survey of each test hole location. The test hole locations will need to be coordinated between UMS and project team based on identified utility conflicts and areas were more detailed data, including three-dimensional coordinates, are required to complete designs and mitigate/accommodate conflicts. For the purpose of this work, “locate” means to establish by engineering, surveying, drafting, and vacuum excavation practices the accurate horizontal and vertical position of subsurface utilities with vertical tolerances of generally 0.1 feet based on referenced benchmarks. Written logs for all test holes are utilized, derived elevations are transcribed onto CAD reference files, and “locate” points area mapped to Quality Level A on the plans.

Section 2 - Recommendations

Although not specifically requested by the Client, UMS strongly recommends the following locate methods be included with the utility mapping effort for this project:

- Ground penetrating radar (GPR) sweep of the project area. UMS employs state-of-the-art multi-channel GPR with RTK GPS navigation and 3D time slice data processing software. This combined technology enables grossly enhanced investigative measures for searching for buried unknowns and provides useful depth information.
- A project area sweep using a Geonics EM61-MK2 high sensitivity metal detector. This equipment is suitable for the detection of both ferrous and non-ferrous metal.

Note: Both of these sweeps can be completed during either Phase 1 or 2 field operations.

Additional work products the Client may wish UMS adapt into the work scope include:

- Continuous 3-D profile data in lieu of vacuum excavations. UMS uses the Vivax-Metrotech Spar 300 electromagnetic induction system which derives 3D alignment data for conductive utilities. This tool can provide highly valuable, continuous 3D profile data, reducing the number of excavated test holes and Phase 2 costs.

- CAD 3D modeling of the identified existing utilities for improved design, conflict analytics, and advanced resolution engineering

Section 3 - Project Limits

The project area is located at the intersection of SH-60 and CR-13 in Johnstown, CO. The project areas can be seen in Figures 1-3 below.

The designating of some individual utilities may extend beyond the noted SUE project limits to include surface features or structures which are necessary to complete QL C alignments. Table 1 presents the utility owners listed by Colorado 811 as being present within or nearby the project area, along with the estimated lineal footages which are the basis for the Phase 1 cost estimate. Table 2 presents the proposed utility designating quality levels for the various facilities that are anticipated.

Figure 1. Initial SUE Project Area

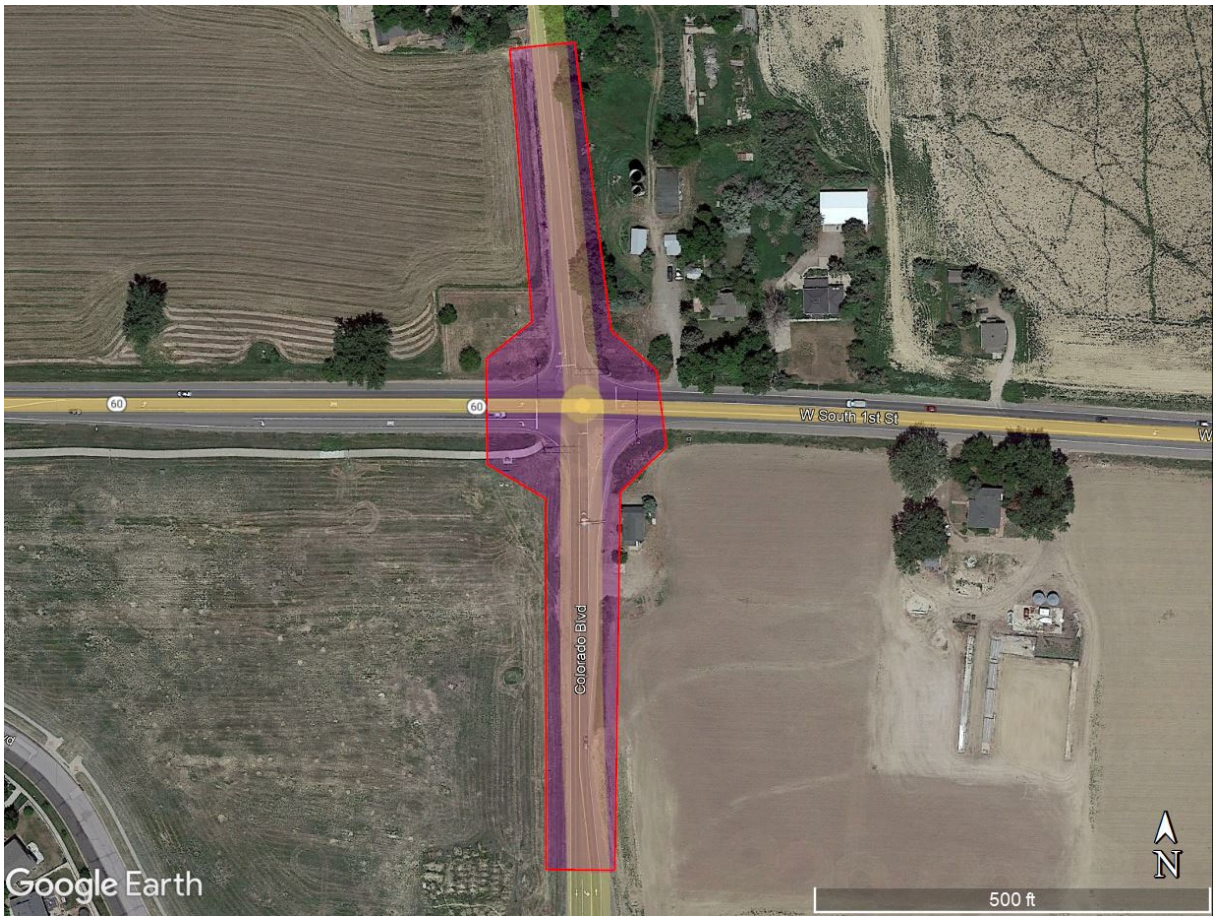


Figure 2. Northern SUE Extension Area

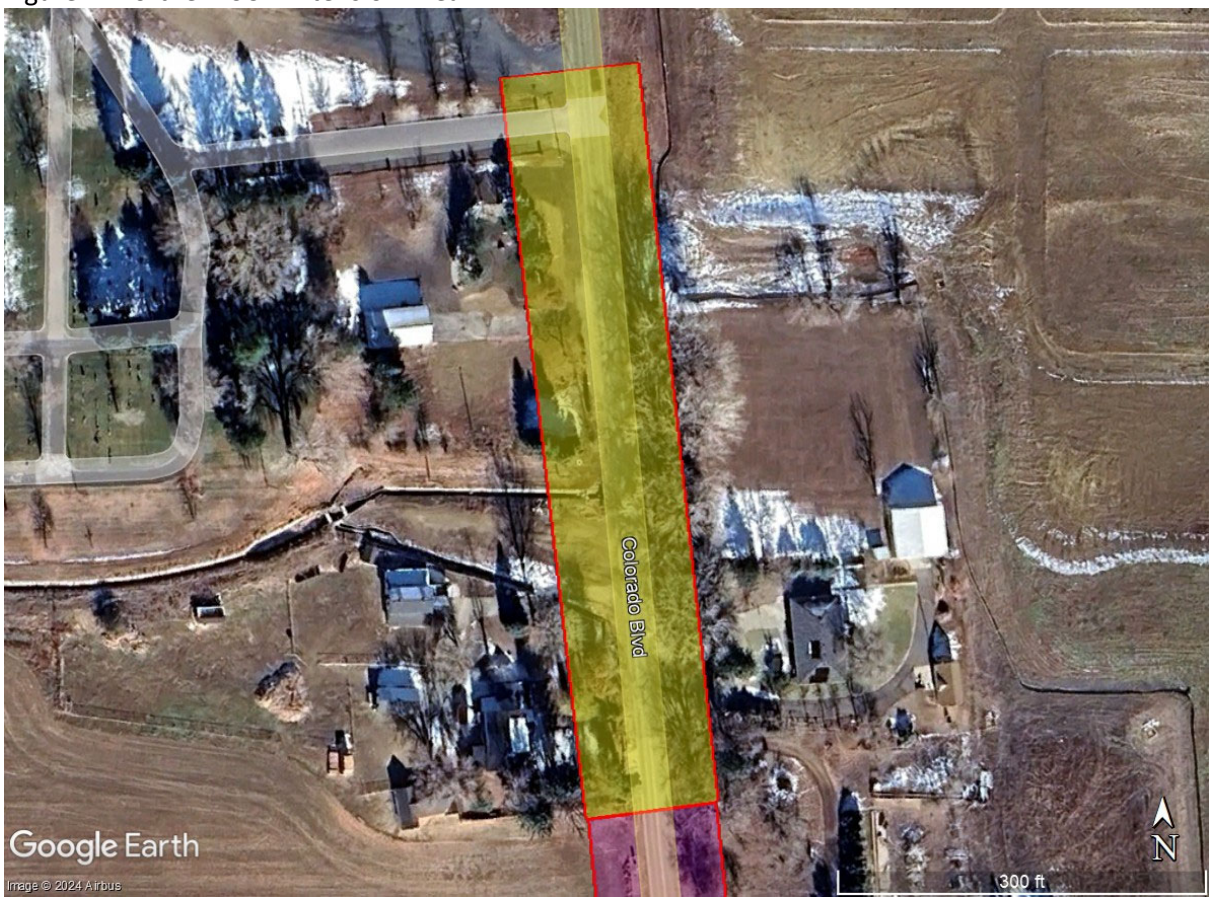


Figure 3. Southern SUE Extension Area

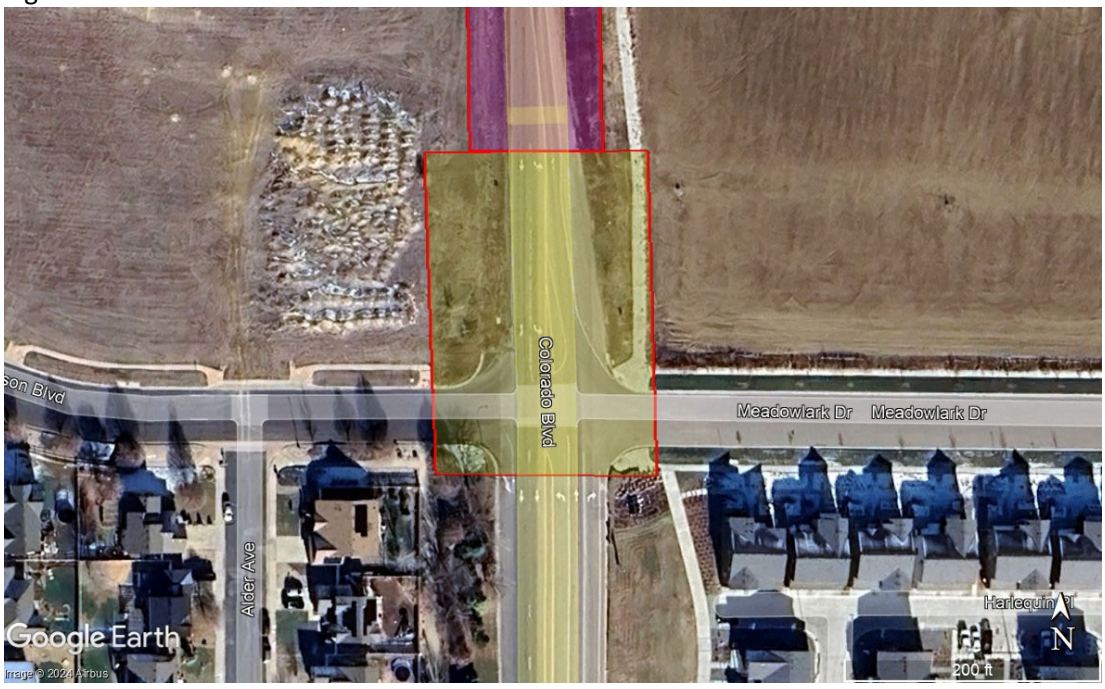


Table 1. Estimated Utility Linear Footages.

Owner	Utility	Estimated Linear Footage
CDOT	Electric, Traffic	1,200
City of Thornton	Fiber, Water	0
Civitas Resources	Gas, Electric, Water	0
Consolidated Home Supply Ditch	Irrigation	3,150
DCP Midstream	Pipeline	1,950
Lumen	Fiber, Telephone	6,700
Occidental Petroleum	Pipeline	0
TDS Telecom	Fiber, Telephone	3,200
Town of Johnstown	Water, Sewer	7,200
Western Midstream	Pipeline	250
Xcel Energy	Electric, Gas	7,350
	Total	**31,000**

*Record information not available at the time of estimate.

Table 2. Targeted designation of utilities for the subject project Phase I SUE investigation.

Utility Type (Buried)	**Mains & Primary Laterals**	**Services / Secondary Laterals**
Storm Drain	QL A at accessible inlets/outlets; QL C between accessible features	N/A
Sanitary Sewer	QL A at accessible inlets/outlets; QL C between accessible features	QL D
Culverts	QL A at accessible inlets/outlets; QL C between accessible features	N/A
Telecommunication	QL B	QL B
Cable TV	QL B	QL B
Natural Gas	QL B	QL B
Traffic Signals	QL B	N/A
ATMS	None Anticipated	N/A
Lighting	QL B	N/A
Water Mains	QL B	QL B
Buried Power	QL B	QL B
Private sprinklers	Not included in this scope of work; however, identified surface facilities encountered incidental to the field work will be noted.	N/A
Petroleum	None Anticipated	
Military Comm.	None Anticipated	N/A
Wells (Water, Crude Oil, Natural Gas)	Presently not included in this scope of work; however, wells encountered incidental to the field work will be noted.	N/A

Note: QL refers to the quality level as described in ASCE 38.

Section 4 - Project Deliverables

Utility Engineering deliverables include digital submittals of the following:

- CAD utility reference file based on Phase 1 and Phase 2 findings.
- Hydraulics summary report (pdf format).
- Vacuum excavation (test hole) summary report (pdf format).
- A P.E. sealed SUE existing utility plan set with quality level designations.
- A P.E. sealed submittal report summarizing this investigation with highlights of unusual findings.

In addition, UMS will provide ongoing interpretive support to assist design engineers and utility coordinators with subsequent findings and ensure submitted data is properly understood and utilized.

Section 5 - Project Assumptions

Phase 1 Assumptions:

- UMS utility research will stem from previous records investigation work performed by the Client. UMS requests all previously obtained records be provided upon Notice to Proceed. Reasonable efforts will be made to obtain supplemental utility records to produce the deliverables within the project schedule. The timely cooperation of utility owners may be necessary to develop the utility inventory map for facilities within the project area.
- All field work will be completed while the project corridor is clear of snow and ice.
- Labor to complete line of sight surveying is currently not included within this scope of work. UMS assumes RTK GPS/GNSS survey operations will be sufficient to map all utilities.
- Sufficient project survey control exists along the project corridor for RTK GPS survey operations; consequently, labor for establishing survey control is currently not included within this scope of work and the associated cost estimate.
- A maximum of three days of traffic control will be required for Phase I operations. Traffic control measures are not expected to require flagging operations.
- Confined space entry will not be required for this effort. All storm drainage, sanitary sewer, and any other measurements within confined spaces will be taken from the surface without entry into the confined space.
- Aerial clearance measurements will not be required for the Phase 1 effort. The locations of aerial wires, however, will be noted for clearance observations by others or during subsequent Phase 2 operations and are not included in this work scope and estimate.
- Vertical (depth and elevation) QL A observations will be tied to project control to an average accuracy of +/- 0.1 feet.
- UMS assumes all work will be completed during regular working hours (8:00 AM to 5:00 PM) and without start/stop time restrictions.
- Field crews will use paint to mark out the utility alignments and assume no paint removal will be required.

Phase 2 assumptions:

- Extreme weather conditions can significantly impact crew production rates and schedules. For this submittal, UMS assumes the project corridor will be clear of snow and ice during all field operations. UMS will keep the Client apprised of any schedule delays or budget impacts should current conditions affect the SUE field campaign.
- Client or Owner will obtain all necessary permits, right-of-entries, etc. (including private land access and railroad access) to allow UMS field personnel to work in areas outside of public right-of-way limits.
- UMS assumes that all work will take place during normal daytime working hours (7am to 5pm). Any work required outside of these hours, or any limitations applied to these work hours may result in additional costs and may affect the schedule UMS deliverables schedule.
    - UMS has not included any costs related to night work in this estimate. Should nighttime work be required, any equipment, special PPE, traffic control, lighting, coordination, and preparation, permitting etc. will need to be added to the Phase 2 cost estimate.
- Vacuum excavations which fail to expose the targeted utility after attaining a reasonable depth (10-feet) will still be considered a completed excavation. Vacuum excavations exceeding 10-feet in depth may require additional time and efforts that impact schedule and budget. UMS will coordinate with the client should this situation arise.
- A possibility exists that existing conditions (i.e. groundwater, large boulders) may prevent crews from exposing the targeted utility. In addition, utilities may be installed at a depth beyond the limits of the vacuum excavation equipment.
- The backfilling of each excavation will be accomplished with materials based on permit requirements.
- Specialty repairs are not included with this proposal. These may include replacement of concrete panels, hot patch repairs, T-patch repairs, etc.
- A maximum of 6 days of traffic control will be required for Phase 2 operations. Traffic control measures are not expected to require flagging operations.
- Each excavation is accessible to the vac truck and crew.
- Up to 4 caisson clearance holes. The caisson clearance excavations have a targeted width of 2-feet in diameter and up to 10-feet in depth. The Client will identify the caisson clearance hole locations.
- Up to 15 excavations in asphalt/concrete pavement which will require concrete/asphalt coring. Flowable fill will be used as backfill and perma-patch for surface restoration to repair the concrete/asphalt plug.
- An additional 15 excavations are assumed to be in the dirt, outside of the pavement areas.

Client and / or Owner will:

- **Obtain all necessary right-of-entries, security clearances, etc. (including private land access) to allow UMS field personnel to work outside the roadway right-of-way**.

- Provide information showing the project limits, alignment, profile, survey control points, benchmark data, coordinate data, relevant design and topographic CAD files, aerial photographs, and any other applicable information.
- Provide survey control information **prior** to UMS field crews arriving on-site.
- Provide any record or relevant survey or LIDAR information previously obtained by others.
- Assist UMS as necessary with obtaining permissions for access to private utility facilities.

UMS will perform the following coordination activities:

- Work closely with the Client and Owner to facilitate the orderly progress and timely completion of the approved tasks.
- Coordinate the work effort with the Client to discuss progress and resolve problems.
- Upon request provide the Client copies of logs and/or correspondence that document work-related communications between utility owners, outside agencies, and/or private landowners.
- Coordinate operations with private and public utility infrastructure owners.
- Obtain required One-Call (Call 811) tickets.
- Provide all necessary equipment, supplies, and support personnel to secure data outlined in this section.

Associated labor and costs may increase if actual conditions deviate significantly from those assumed for this estimate. UMS will work with the Client in good faith to complete operations in a timely manner and will negotiate new pricing if conditions encountered significantly deviate from those assumed.

The results of the Phase 1 and 2 efforts will be pertinent at the time in which field investigation operations are completed and are subject to change. Subsequent SUE investigations may be necessary to account for any new or changed utility installations.

Section 6 - Project Coordination

The UMS project management team will consist of:

- Project Manager, Alex Ramm-Hutchinson, arammhutchinson@umsi.us, 509.570.8448
- Project Engineer, Cameron Greer, P.E., cgreer@umsi.us, 406.422.9702
- Principal Engineer, Philip Meis, P.E., pjmeis@umsi.us, 406.552.0883

If required, a monthly progress report will be prepared by the project manager and submitted via email to Client project management to document the SUE investigation. During the project time frame UMS project management staff members can be available to meet in person with Client project management for any urgent reason. Cell phone numbers for all of the UMS project management team members will be available to the Client should immediate communication be desired.

Section 7 - Project Schedule

UMS can typically begin work within two weeks of receiving notice-to-proceed (NTP). Based on assumed conditions identified in this scope of work, the following is the estimated project schedule:

- The initial effort will consist of requesting record information from each utility owner in the area. Depending on utility owner response time, it may take **up to two weeks** to gather all the record prints and as-built information.

- Utility designating field operations are estimated to require approximately **8 days** for a 2-person field designating crew, with an **additional 5 days** required to complete the location survey. Field operations will generally begin shortly after the utility record information has been compiled. However, the **actual start date will be dependent on the field crew schedule and availability at the time NTP is provided**.
- Final submittals will require **three to four weeks** after the field work has been completed to include the QL B CAD drawing, utility database preparation, along with completion of QA review and discrepancy resolution efforts.
- The Phase 2 schedule will be developed after completion of the Phase 1 effort.

UMS, at its own discretion, may assign different personnel to perform tasks specified within the work scope and estimate based on staff availability and project schedule.
UMS is prepared to add crew members as necessary to ensure necessary production levels are met and submittals are timely for utility coordination and design development.

Appendix A

SUE and the ASCE 38 Standard Guidelines

Data collection activities will follow American Society of Civil Engineers, Construction Institute and Utility Engineering and Surveying Institute, *Standard Guideline for Investigating and Documenting Existing Utilities*. Reston, VA 2022. Perhaps the most significant contribution of the ASCE/CI standard is the development of a formalized procedure for qualifying and designating the general quality of the depicted individual facilities. The Table below summarizes the four quality level (QL) definitions included in the ASCE standard. Included with the definitions are comments on the relative positional accuracy for the corresponding quality levels.

Adherence to ASCE depiction standards along with the use of records research, geophysical methods, vacuum excavation, and engineering survey combined in a phased approach and guided by professional judgment, has often been referred to as Subsurface Utility Engineering (SUE). In proper context, SUE, or more recently simply referred to as "Utility Engineering", is a rather complex and important series of engineering tasks, procedures and associated responsibilities established to manage risk, promote efficiency, and reduce costs; the utility mapping and designation of quality levels, in fact, provides the data set with which the utility engineering process begins. In a broader sense, utility engineering involves utilizing the qualified utility data sets to conduct the following engineering activities:

- systematically identify, itemize, and define apparent conflicts between proposed designs and existing utilities;
- optimize design development and mitigate utility conflicts;
- identify and accommodate other infrastructure, planned betterments and new installations;
- conduct effective utility coordination in which resolutions to conflicts are derived that serve the best interests of the public and all stakeholders involved;
- develop construction plans and bid documents which concisely identify and provide details of outstanding conflicts for construction planning, bidding, and execution; and
- encourage value engineering and mitigation of cost implications to all infrastructure systems which provide service to commerce, government, and the general public.

Protocols for SUE / utility engineering as established by the Federal Highway Administration (FHWA) and the applicable state DOT will be followed for this project. The SUE process utilizing the ASCE 38 standard guideline for acquiring and depicting existing utilities provides a framework to obtain and represent the requested utility information in a pragmatic and cost effective manner.

By ASCE 38 definition, utility record data is classified as quality level (QL) D and will cause inconsistent and erroneous interpretation due to the following: 1) utilities are inaccurately positioned and in reality may or may not pose as an issue for proposed construction; 2) utility installations may vary due to recent improvements or changes and may not be properly documented; 3) some existing facilities may not be reported or identified and are missing from the data set; and 4) incomplete or inaccurate records can likewise cause misleading and erroneous field markings by third party contract locators or utility owner field personnel. In addition, buried unknowns can cause deceptive geophysical phenomena and interference which severely alter induced current flow and distort corresponding electromagnetic fields; these issues commonly occur, are difficult to detect and decipher, and greatly complicate detection and interpretive efforts.

Consequently, ASCE 38 standard guidelines were developed to overcome these problems and permit systematic upgrading of utility data designation to QL C, B, and A to facilitate subsequent design, conflict resolution engineering, and utility coordination work. The ASCE/CI 38-02 guidelines require:

- calibrated geophysical prospecting methods performed by qualified, experienced field personnel;
- methodical field investigation and verification practices;
- research and field identification of installation type, size, and material;
- land survey methods to accurately tie data to project coordinates;
- supplemental field and records investigation to prevent overlooked facilities;
- quality assurance review that includes owner written confirmation of depicted facilities; and
- a qualified registered professional engineer of record who thoroughly understands geophysical theory, has experience with all issues and pitfalls associated with mapping buried infrastructure, directly oversees the effort, and is directly accountable for all aspects of the work product.

Limitations

Professional subsurface utility engineering services are to be performed in accordance with generally accepted engineering principles and practices at this time. Adherence to ASCE 38 standards and good practices by experienced utility engineering personnel typically ensures development of a very good data set; practical restrictions in budget, schedule, access and equipment, however, can limit acquisition and interpretation efforts. The Phase 1 effort retraces detectable utility alignments within the project area to obtain QL B data wherever possible, collating information from records obtained from the utility owners, and relating records with observable surface features. A possibility will always exist that abandoned, forgotten, non-detectable or undocumented utilities are not mapped using standard SUE procedures previously described. Utilities possessing characteristics mentioned below can be overlooked while following standard SUE investigative procedures:

1. Utilities without apparent records available, without apparent surface features, and not detected through standard search procedures.
2. Utilities with records which are illegible or incomplete.
3. Utilities that are inaccurately reported or inaccurately represented by the owner as lying a significant distance from the true position.
4. Abandoned utilities lacking records and apparent surface features, and are not detected through standard search procedures.
5. Utilities buried excessively deep (as a rule of thumb, utilities located deeper than 10 feet), beyond detection limits of standard designating equipment and standard vacuum excavation equipment.
6. Non-conductive utilities buried in clay soil and lacking apparent surface features.
7. Facilities installed subsequent to the utility designating field investigation effort.
8. Individual utilities in a common trench. Designating of common trench utilities can be difficult due to EM signal bleed over and difficulties in separating EM signals. Cathodic Protection connections between individual pipelines also increases the difficulty of determining individual pipe alignments.

9. QL B depictions of pipe alignments developed by means of tracer wire direct connection methods is dependent on the assumption that the tracer wire has been placed in close proximity to the associated pipe. Events such as lightning strike surges along tracer wires have caused damages to pipes, so installation practices now require that tracer wire is offset a safe distance (e.g., 1 to 2 feet) from the pipes. Users are cautioned that it is the tracer wire alignment that is recorded and depicted on the existing utility reference file and the assumption is made that this represents the alignment of the target pipe.

A pragmatic effort will be made to systematically designate and depict buried utilities within the corridor to the extent practical for the authorized project budget and schedule. UMS must be kept advised throughout the design process to: 1) assess subsequent verbal accounts or record evidence on infrastructure which do not agree with or contradict the submitted data set; 2) evaluate designer evaluation and usage of the qualified and depicted utility data, especially QL C and D data; and 3) provide recommendations for further utility investigations as deemed prudent.

Final utility plans are for design purposes only and reflect subsurface utility conditions at the time surveyed. Existing utility locations depicted on the plans do not supersede statutory mandates including Colorado 811 notification; the contractor shall call 811 two business days prior to construction and obey mandates as required by law. The Client and UMS should be notified of any discrepancies between the utility designating results and Colorado 811 notification markings, and caution shall be used by the contractor until discrepancies are resolved.

Contractor shall call the utility notification service (Colorado 811) before excavating as required by Law.

Utility Mapping Services

Cost Proposal for Phase 1 Utility Investigation

Project Name: SH-60 and CR-13

UMS Project No: 11951.1

Date: January 3, 2025

Owner: Town of Johnstown

Contact: Johnny Olson

Address: 7979 East Tufts Avenue, Suite 800, Denver, CO 80237

Phone: 303-771-6868

Email: jwolson@benesch.com

Utility Mapping Services
7100 N. Broadway, Unit 1D
Denver, CO 80221
720.230.0780
www.umsi.us
email: arammhutchinson@umsi.us

Subsurface Utility Engineering - Phase 1 Assumptions: 9050 linear feet of utilities
A two man designating crew for 2 days
An engineering survey for 1 days

Project Task No.	Project Task Description	Project Manager	Project Engineer	Senior Engineer	Principal Engineer	Field Ops Manager	Party Chief	SUE Field Specialist II	SUE Field Specialist I	Staff Engineer	Administrator	Total Hours
1100	Project Preparation and Management, Meetings	4.00	4.00		2.00		2.00	2.00		1.00	1.00	16.00
1200	Records Research and Review	1.00					1.00	1.00				3.00
1300	Mobilization						5.00	5.00		2.00		12.00
1400	Field Designating						16.00	16.00				32.00
1500	Engineering Survey									8.00		8.00
1600	CADD Development		6.00									6.00
1700	Database Development		4.00									4.00
1800	Project Documentation & QA/QC	4.00	4.00		4.00		2.00	1.00		2.00		17.00
1900	Submittal Preparation	4.00	8.00		4.00						1.00	17.00
	Phase I Hours	13.00	26.00	0.00	10.00	0.00	26.00	25.00	0.00	13.00	2.00	115
	Billing Rates	206.82	204.15	209.82	211.84	168.60	148.83	125.58	90.00	171.66	176.97	
	Total Billing Rates	2688.67	5307.85	0.00	2118.44	0.00	3869.54	3139.50	0.00	2231.56	353.94	19709
											Phase I Labor Costs	**19709.49**

Alternate Employee Classifications	Rates
Staff Geophysicist	$ 161.78
Geophysics Technician	$ 159.28
Engineering Technician	$ 129.99

**Empoyee Classifications may vary based on scheduling and availability.

Item	Unit	No. of Units	Unit cost	
CADD Station	hour	6.00	7.75	46.50
Survey Equipment (Trimble R8 RTK GPS)	day	1.00	198.00	198.00
Geofeature Database Fee	hour	4.00	27.00	108.00
Specialty Field Vehicle	mile	500.00	0.70	350.00
			Total Direct Costs	**702.50**

UMS Services **$20,411.99**

Traffic Control (does not include flaggers)	day	1.00	1500.00	1500.00
Permits (Fee assumed to be waived)	ea	0.00	500.00	0.00

***traffic control and permit costs are approximate; actual costs will be invoiced.**

THIS ESTIMATE IS VAILD FOR 60 DAYS FROM THE DATE POSTED AT THE TOP OF THIS PROPOSAL

Additional Phase 1 Budget Needed **$21,911.99**

Utility Mapping Services

Cost Proposal for Phase 2 QL A Utility Investigation

Project Name: SH-60 and CR-13

UMS Project No: 11951.2

Date: January 3, 2025

Owner: Town of Johnstown

Contact: Johnny Olson

Address: 7979 East Tufts Avenue, Suite 800, Denver, CO 80237

Phone: 303-771-6868

Email: jwolson@benesch.com

Utility Mapping Services
7100 N. Broadway, Unit 1D
Denver, CO 80221
720.230.0780
www.umsi.us
email: arammhutchinson@umsi.us

Subsurface Utility Engineering - Phase 2 Utility Investigation: Assuming 30 vacuum excavation holes on utilities less than 7-feet in depth, 15 holes in pavement, and 15 in dirt.

Project Task No.	Project Task Description	Project Manager	Project Engineer	Senior Engineer	Principal Engineer	Party Chief	SUE Field Specialist II	SUE Field Specialist I	Staff Engineer	Administrator	Total Hours
2100	Work Plan, H&S, Traffic, Permits	8	4		2	4				2	20.0
2200	Mobilization					13					13.0
2300	Test Hole Staking/Designating					4					4.0
2400	Utility Locating					48					48.0
2500	Engineering Survey					4					4.0
2600	CADD Development		4								4.0
2700	Database Development		4								4.0
2800	Project Documentation & QA/QC	2	3		2	4					11.0
2900	Submittal Preparation	4	4		2					2	12.0
	Phase II Hours	14.0	19.0	0.0	6.0	77.0	0.0	0.0	0.0	4.0	120
	Billing Rates	206.82	204.15	209.82	211.84	148.83	125.58	90.00	171.66	176.97	
	Total Billing Rates	2895.49	3878.81	0.00	1271.06	11459.79	0.00	0.00	0.00	707.88	20213.03
										Labor Costs	**20213.03**

Item	Unit	No. of Units	Unit cost	
CADD Station	hour	4.00	7.75	31.00
Survey Equipment (Trimble R8 RTK GPS)	day	1.00	198.00	198.00
Geofeature Database Fee	hour	4.00	27.00	108.00
Specialty Field Vehicle	mile	600.00	0.70	420.00
			Total Direct Costs	**757.00**

UMS Services	**20970.03**

Vacuum Excavation Truck and Crew	ea	30.00	730.00	21900.00
Pavement Coring and Repair	ea	15.00	325.00	4875.00
Permits	ea	1.00	1800.00	1800.00
Traffic Control (does not include flaggers)	day	6.00	2200.00	13200.00

Vendor Services, Permits, Traffic Control	**41775.00**

***traffic control, vac truck and permit costs are approximate; actual costs will be invoiced.**

THIS ESTIMATE IS VAILD FOR 60 DAYS FROM THE DATE POSTED AT THE TOP OF THIS PROPOSAL

SUE Phase 2 Total	**$62,745.03**
Current Remaining Budget	$33,000.00
Additional Phase 2 Budget Needed	**$29,745.03**