Town of Rico Memorandum

Date: March 14, 2025

TO: Town of Rico Board of Trustees
FROM: Chauncey McCarthy, Rico Town Manager
SUBJECT: March Board of Trustees Regular Meeting

60% Stormwater design, Anderson Engineering (Pg. 15-103)

Anderson Engineering will present the 60% stormwater design documents, which outline the progress and proposed solutions for stormwater management. The packet includes the 60% design documents, a memo detailing the engineer's cost estimates, and a stormwater management facility operation and maintenance guidelines document. Additionally, a PowerPoint presentation has been prepared to support the discussion. These materials will provide a comprehensive overview of the design, estimated costs, and long-term maintenance considerations for the stormwater management system

Consideration of Columbia Tailings soil storage proposal (Pg. 104-106)

Included in the packet is a proposal from Atlantic Richfield to use the Columbia Tailings site to stockpile clean for the Town Wide Lead Soil Voluntary Clean Up.

Public hearing and consideration of a road building and disturbance permit application Carter Way, Breitenbach applicant (Pg. 107-165)

Eric and Jennifer Breitenbach have submitted an application for a road building permit and a disturbance permit to construct and improve a driveway within the Carter Way Alley right-of-way. The proposed improvements will provide access and utilities to Lots 13-20, Block 17 for future residential development. Due to site constraints, the applicant is proposing two variances related to driveway grade and requesting that the Town enter into a private driveway agreement along with a wetland buffer zone reduction.

The packet includes all required application materials, as well as two staff review memos—one addressing driveway and road standards and the other reviewing disturbance permit standards. Additionally, the packet contains a memo from the town's reviewing engineer, the private driveway agreement (approved as to form), and one letter of public comment.

A public hearing was held by the Planning Commission at their February 12, 2025 meeting. Motion below:

Motion
Motion to Grant a road building permit and enter into a private driveway agreement between the Town of Rico and the owners of Lots 13-20, Block 17 to provide access and utilities for future residential development. The town will grant a license to use and enjoy the portion of the Alley which will only serve one residence on the Property. A variance will be granted for the driveway to have a 16% grade rather than the 12% grade as required in RLUC 494.3

Conditions:
1. A note will be added to the plat and be recorded along with the driveway agreement with the County stating that The license will be revocable by the Town if the use of the licensed premises is expanded to more than one residence. Additionally, the agreement will require that the driveway be further improved

to widen the driveway surface from 10’ to 14’ in compliance with the RLUC § 498.4 or the code at the time of the expansion, if the driveway is later used by more than one residence on the Property.
2. Note to be added to the updated and recorded plat and driveway agreement that any improvement that is constructed to include an independent fire suppression system or a fire suppression system that is satisfactory to the fire district at that time.
3. That the excavation remains in compliance with the terms, conditions and requirements set forth in the RLUC 494 and 498 regarding excavation of driveway permits**.**

To grant a disturbance permit with a Variance or reduction of the inner buffer setback for a wetlands buffer zone from 25 ft to 10 ft.
With conditions that a bond or security of 125% of the opinion of probable cost is provided to the town per RLUC 475.7/824.14

That the driveway agreement must be approved by the Town Board of Trustees for the application to be granted**.**

Moved by Kiplynn Smith, seconded by Todd Gillman.

Vote. A roll call vote was taken and the motion was approved, 5-0.

Consideration of a letter of support for the Town of Rico’s Fiscal Year 2026 congressionally directed spending request (Pg. 166-167)

The Town of Rico is seeking Fiscal Year 2026 Congressionally Directed Spending (CDS) to support the reactivation of the Silver Creek Water System, a critical infrastructure project aimed at increasing water supply, enhancing resiliency, and supporting workforce housing and economic development. Included in the packet is a letter of support for this funding request. CDS FY 26 application is due by March 24, 2025 at 5:00 PM.

RFP 2025-01 Town of Rico Road Dust Palliative Application

The Town of Rico is seeking proposals through RFP 2025-01 for the application of dust palliative treatments on town roads to improve air quality, road safety, and overall maintenance. The selected contractor will be responsible for applying dust suppression materials to designated unpaved roads within the town limits. This effort is aimed at reducing airborne dust, minimizing road surface degradation, and enhancing driving conditions for residents and visitors.

The scope of work includes preparing road surfaces, applying approved dust palliative materials, and ensuring proper coverage and effectiveness. Contractors will need to adhere to environmental and regulatory requirements, as well as provide a detailed project timeline and cost estimate.

The request for proposals was advertised for a month, but no contractors submitted bids. At this point, alternatives will need to be discussed with ARCO to determine the Town’s next steps. Potential options include exploring whether ARCO’s subcontractors at the St. Louis site would be willing to take on the work, seeing if ARCO can bring in a different contractor with whom they have an existing working relationship, or reaching out to the Dolores County Commissioners and their Road and Bridge Department to determine if they would be willing to perform the work and bill the Town.

Rico Water System (Pg. 168-171)

Water Rules and Regulations including revised rates - Staff and legal have completed the revised Water Rules and Regulations, which will be presented to the Board of Trustees for first reading on April 16, 2025. As part of the adoption process, Resolution 2025-02 will establish revised water rates. While System Improvement Fees and Tap Fees will remain unchanged, water service rates will be increased. The proposed rates have been included in the packet. Additionally, the packet contains a memo from February 2024, when the Board discussed potential water rates and directed staff to move forward with Option 3.

Dolores River crossing waterline replacement - I have spoken with a handful of engineers to better understand different potential avenues to replace the waterline that runs from Piedmont under the Dolores River and ties into N. River Street. At this point it seems as though directional boring under the river is not a viable option due to costs and potential for the drill to deflect in the river cobble. Two other options would be to line/slip-line the pipe or install a new water line via an open trench. An open trench would require Army Corp approval along with installing coffer dams and digging in the river. Lining/Slip-lining the pipe would not require digging in the river and would be less disruptive but at this time it is unknown if this alternative would work. Due to potential wetlands on both the east and west side of the river an Army Corp permit may also be required for this alternative. Eric Anderson of Canyon Construction plans to make a site visit in the next couple of weeks to investigate the feasibility of lining/slip-lining. Canyon Construction has a long history working for the Town of Rico and has helped with projects such as the West Rico water line extensions including crossing the Dolores River. Staff would like to start engaging with an Army Corp approved wetlands delineator to start working on the materials needed for permitting this crossing.

Park and Recreation project update (Pg. 172-175)

The Town of Rico received two proposals for the earthwork and concrete work for the Town Pavilion. Lewis Excavation submitted a bid of $169,830, while Kuboske's bid was $319,653.60. Additionally, Kuboske offered building installation services for an additional $61,920. Both bids are included in the packet for review. Based on cost considerations, staff recommends moving forward with the proposal from Lewis Excavation. To address the budget overrun, I am currently working on two grant applications and have also approached Dolores State Bank regarding a potential donation. The Town should have a better understanding of the outcome on potential funding opportunities by April.

The contract for the skatepark construction with 5th Pocket has been executed, and work is expected to begin in June. As previously discussed, the contractor is seeking affordable housing options for their crew to help reduce soft costs associated with the project, allowing more funds to be allocated directly to the build.

C-Safe investment account

Due to the success of the Town’s current C-Safe investment account, Town Clerk Anna Wolf has suggested that the Board consider opening a new account to help generate additional revenue for the

Town Water Fund. While the current C-Safe interest rates have declined from last year, they remain significantly higher than those offered by Dolores State Bank.

Joint Board of Trustees and Planning Commission meeting

The Planning Commission is requesting a joint meeting with the Board of Trustees during their May 14, 2025 meeting to review the redlined revisions of Articles 5–10 of the Rico Land Use Code as part of the global revision process.

RICO TOWN BOARD MEETING MINUTES

Date: February 19, 2025
Call to Order 7:02PM

Trustees Present:

Mayor Patrick Fallon
Mayor Pro Tem Cristal Hibbard
Trustee Benn Vernadakis
Trustee Gerrish Willis (Zoom)
Trustee Scott Poston

Trustees Absent:

Trustee Joe Dillsworth
Trustee Chris Condon

Staff Present. Chauncey McCarthy, Anna Wolf (Zoom),

Approval of the Agenda

Motion
To approve the agenda.
Moved by Trustee Benn Vernadakis, seconded by Trustee Scott Poston

Vote. A roll call vote was taken and the motion was approved, 5-0.

Approval of the Minutes
Motion
To approve the minutes of January 15 and 30 with correction of clerical errors.
Moved by, Mayor Pro Tem Cristal Hibbard, seconded by Trustee Benn Vernadakis.

Vote. A roll call vote was taken and the motion was approved, 5-0.

Consent Agenda
Payment of the Bills
Additional bill added for Bohanna Huston services.
Motion
To approve payment of the bills.
Moved by Trustee Benn Vernadakis, seconded by Trustee Scott Poston

Vote. A roll call vote was taken and the motion was approved, 5-0.

Public Comment:

Presentation:
Rico Geothermal Coalition, Teal Stetson-Lee presenter
Teal Stetson-Lee presents about the community outreach event.

Wildfire Adapted Partnership, Celeste Moore presenter
Presenter Celeste Moore presenter gives a presentation.
The Board directs interested citizens to reach out to staff. If there is enough interest the volunteers can coordinate with Celeste Moore.

Action Items:
Consideration of amended and restated right-of-way encroachment easement agreement, Raegan Ellease applicant
Town Manager gives summary.
Board has discussion.
Applicant answers questions.
Public Comment: Dylan Robertson, Jim Baron

Motion
Move to approve of amended and restated right-of-way encroachment easement agreement as written.
Moved by Trustee Scott Poston, seconded by Mayor Patrick Fallon.

Vote. A roll call vote was taken and the motion was approved, 4-1.
Voting Yes Trustee Scott Poston, Trustee Benn Vernadakis, Mayor Pro Tem Cristal Hibbard, and Mayor Patrick Fallon. Voting No Trustee Gerrish Willis.

Consideration of first reading of Ordinance 2025-01 an ordinance of the Town of Rico, Colorado approving the purchase of the Community Church property located at 110 and 116 East Mantz Avenue
Mayor Patrick Fallon gives summary.
Town Manager Chauncey McCarthy gives update on Engle house sale.
Board had discussion.
Public Comment: Nicole Pieterse

Motion
Move to approve first reading of Ordinance 2025-01 an ordinance of the Town of Rico, Colorado approving the purchase of the Community Church
Moved by Trustee Benn Vernadakis, seconded by Mayor Pro Tem Cristal Hibbard.
Vote. A roll call vote was taken and the motion was approved, 5-0.
Special meeting to be added March 3rd, 2025 6:30PM for second reading.

Staff Report
Clerk's report:
Have been training on Sage Software.
Dog licenses are available.

Manager's report
Public works working hard on snow removal.
Federal freeze finally released for projects.
Meeting with EPA for sewer construction documents.
Dolores River crossing for the water system is losing water. 40% loss of water use to leaks.
Park update: Skate park and pavilion.

Discussion Items
Rico Trail Alliance pedestrian bridge

Rico Trails Alliance gives update of the project.
Alex Wing gives presentation.
Board and Public Comment was had.

Voluntary lead soils clean up ("VCUP") update
Town Manager gives update.
Dust suppression was discussed.
Soil Manager job posting to be posted shortly.

Rico water system and public works resolution
Mayor Pat Fallon and Town Manager Chauncey gives update.
Board has discussion.

CML Conference
Town Manager Chauncey McCarthy asks for commitment of who will be attending the conference.

Public Comment from Dylan Robertson concerning the VCUP.

Motion
Move to adjourn.
Moved by Trustee Benn Vernadakis, seconded by Trustee Scott Poston.

Vote. A roll call vote was taken and the motion was approved, 5-0.

_____ _____

Anna Wolf
Rico Town Clerk

Patrick Fallon
Mayor

RICO TOWN BOARD MEETING MINUTES

Date: March 3, 2025
Call to Order 6:32PM

Trustees Present:

Mayor Patrick Fallon
Mayor Pro Tem Cristal Hibbard
Trustee Benn Vernadakis
Trustee Gerrish Willis
Trustee Scott Poston

Trustees Absent:

Trustee Joe Dillsworth
Trustee Chris Condon

Staff Present. Chauncey McCarthy, Anna Wolf (Zoom),

Approval of the Agenda
Mayor Patrick Fallon has discussion potentially delaying resolution 2025-01 to the regular March meeting.
The board agrees to keep it in this meeting.
Motion
To approve the agenda.
Moved by Trustee Benn Vernadakis, seconded by Trustee Gerrish Willis

Vote. A roll call vote was taken and the motion was approved, 5-0.

Action Items:
Consideration of Resolution 2025-01 a resolution of the Town of Rico Board of Trustees prioritizing the town's water system, infrastructure repairs, funding initiative, public works department staffing, and road maintenance
Mayor Patrick Fallon gives summary.
Board has discussion.

Motion
To approve consideration of Resolution 2025-01 as written
Moved by Trustee Benn Vernadakis, seconded by Trustee Scott Poston.

Vote. A roll call vote was taken and the motion was approved, 5-0.

Consideration of second reading of Ordinance 2025-01 an ordinance of the Town of Rico, Colorado approving the purchase of the Community Church property located at 110 and 116 East Mantz Avenue
Mayor Patrick Fallon gives summary.
Board has discussion.
Public Comment: Jim Baron, Joy Littleton, Sean Stogner
Town Manager gives high level summary about potential grant funding for the upkeep of the Church building.

Motion
To approve Ordinance 2025-01 an ordinance of the Town of Rico, Colorado approving the purchase of the Community Church property.

Moved by Mayor Pro Tem Cristal Hibbard, seconded by Trustee Benn Vernadakis.

Vote. A roll call vote was taken and the motion was approved, 4-1.
Voting yes, Mayor Pro Tem Cristal Hibbard, Trustee Benn Vernadakis, Trustee Gerrish Willis, and Mayor Patrick Fallon. Voting no Trustee Scott Poston

Discussion Items
Congressionally directed spending FY 2026 request
Town Manager gives summary.
Board has discussion.
Board directs staff to go forward with the application for monies towards
Motion
Move to directs Town Manager Chauncey McCarthy to apply for monies towards Silver Creek reactivation in the Congressional Spending.

Moved by Mayor Patrick Fallon, seconded by Mayor Pro Tem Cristal Hibbard.

Vote. A roll call vote was taken and the motion was approved, 5-0.

Motion
Move to adjourn.

Moved by Trustee Benn Vernadakis, seconded by Trustee Scott Poston.

Vote. A roll call vote was taken and the motion was approved, 5-0.

_____
Anna Wolf
Rico Town Clerk

_____
Patrick Fallon
Mayor

NEW Town of Rico - General Fund

Check Register

For the Period From Mar 1, 2025 to Mar 31, 2025

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Cash Account	Amount
18379	3/10/25	Orkin	10000	152.00
18380	3/10/25	Zircon Container Compan	10000	95.00
18381	3/10/25	CNA Surety	10000	300.00
18382	3/10/25	Century Link	10000	53.16
18383	3/10/25	Karp Neu Hanlon, PC	10000	5,922.45
18384	3/10/25	Kaplan Kirsch LLC	10000	1,334.01
18385	3/10/25	Jon Kelly	10000	375.00
18386	3/10/25	San Miguel Power Associ	10000	131.00
18387	3/10/25	Rico Telephone Company	10000	150.00
18388	3/10/25	Fraley Propane, LLC	10000	485.00
18389	3/11/25	Big O Tires	10000	136.51
18390	3/13/25	All Points Land Survey	10000	750.00
18391	3/13/25	ATLAS CPAs & Advisors	10000	6,500.00
18392	3/14/25	Chauncey P. McCarthy	10000	2,727.64
18393	3/14/25	Jerry A. Sam	10000	449.64
18394	3/14/25	Dennis E. Swank	10000	1,599.92
18395	3/14/25	Anna C. Wolf	10000	1,504.63
Total				22,665.96

NEW Town of Rico - Open Park Fund

Check Register

For the Period From Mar 1, 2025 to Mar 31, 2025

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Cash Account	Amount
1792	3/10/25	San Miguel Power Associ	11000	30.00
Total				30.00

NEW Town of Rico - Sanitition Fund

Check Register

For the Period From Mar 1, 2025 to Mar 31, 2025

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Cash Account	Amount
1436	3/10/25	Bohannan Huston	13500	8,199.24
Total				8,199.24

2018 NEW Town of Rico - Street Fund

Check Register

For the Period From Mar 1, 2025 to Mar 31, 2025

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Cash Account	Amount
2981	3/10/25	San Miguel Power Associ	10000	224.00
2982	3/10/25	Rico Telephone Company	10000	50.00
2983	3/10/25	USA Bluebook	10000	662.00
2984	3/10/25	Partners in Parts, Inc	10000	319.58
2985	3/10/25	WM Corporate Services, I	10000	166.67
2986	3/10/25	Slavens, Inc	10000	62.47
2987	3/11/25	4 rivers Equipment	10000	136.50
2988	3/11/25	Senergy Petroleum, LLC	10000	2,949.16
Total				4,570.38

NEW Town of Rico - Water Fund

Check Register

For the Period From Mar 1, 2025 to Mar 31, 2025

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Cash Account	Amount
4704	3/10/25	Rico Telephone Company	10000	115.00
4705	3/10/25	San Miguel Power Associ	10000	479.00
4706	3/10/25	Fraley Propane LLC	10000	200.00
4707	3/10/25	Core & Main LP	10000	829.19
4708	3/10/25	PVS DX, INC	10000	10.00
4709	3/10/25	Dewco	10000	120.09
4710	3/13/25	Atlas CPAs & Advisors P	10000	500.00
Total				2,253.28

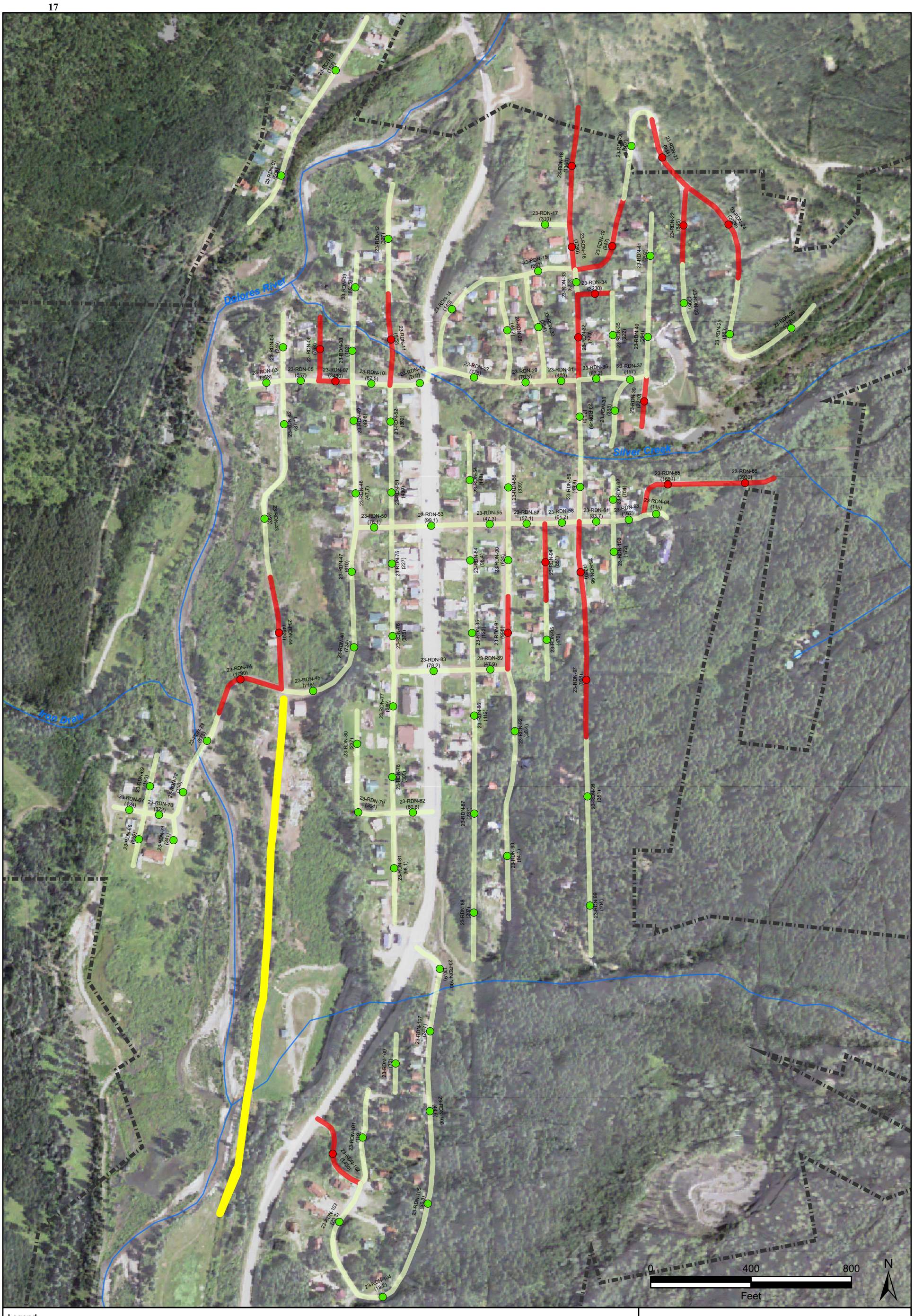
Town of Rico

Unpaved Streets and Alleys Capping and Drainage Plan
60% Design and Opinion of Cost

ANDERSON
ENGINEERING COMPANY INC.

Town of Rico Stormwater

60% Design/Cost Estimate



Legend

2023 Lead in Unpaved Road Samples (mg/kg)

- < 761 mg/kg Lead
- >= 761 mg/kg Lead
- Railroad Corridor, >761 mg/kg Lead. To be capped with clean material
- Rivers and Streams
- Town of Rico Boundary

StandardResult

- **< 761**
- **>= 761 mg/Kg**

Lead results are from Pace Analytical method 6010 ICP.

RICO, COLORADO

2023 LEAD CONCENTRATIONS IN UNPAVED ROAD AND ALLEY SAMPLES 0 - 2" DEPTH

DATE: DEC 18, 2024

By: DKG | For: BGH

FORMATION ENVIRONMENTAL

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REMEDIAL AREA SHEET INDEX

RM1-01 - REMEDIATION AREAS NORTHEAST-QUADRANT
RM1-02 - REMEDIATION AREAS NORTHEAST-QUADRANT
RM2-01 - REMEDIATION AREAS SOUTHEAST-QUADRANT
RM3-01 - REMEDIATION AREAS WEST-QUADRANT

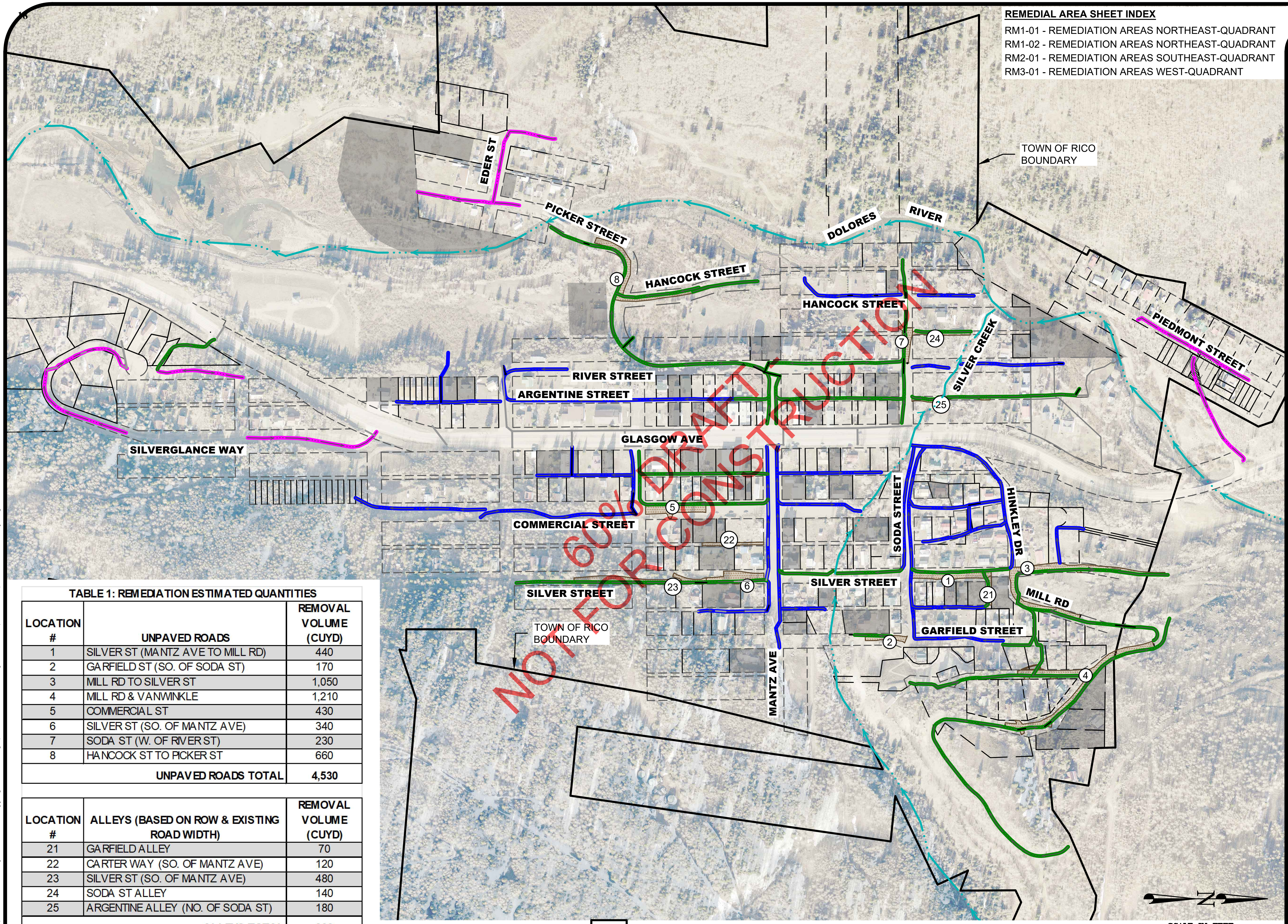


TABLE 1: REMEDIATION ESTIMATED QUANTITIES

LOCATION #	UNPAVED ROADS	REMOVAL VOLUME (CUYD)
1	SILVER ST (MANTZ AVE TO MILL RD)	440
2	GARFIELD ST (SO. OF SODA ST)	170
3	MILL RD TO SILVER ST	1,050
4	MILL RD & VANWINKLE	1,210
5	COMMERCIAL ST	430
6	SILVER ST (SO. OF MANTZ AVE)	340
7	SODA ST (W. OF RIVER ST)	230
8	HANCOCK ST TO PICKER ST	660
	UNPAVED ROADS TOTAL	**4,530**

LOCATION #	ALLEYS (BASED ON ROW & EXISTING ROAD WIDTH)	REMOVAL VOLUME (CUYD)
21	GARFIELD ALLEY	70
22	CARTER WAY (SO. OF MANTZ AVE)	120
23	SILVER ST (SO. OF MANTZ AVE)	480
24	SODA ST ALLEY	140
25	ARGENTINE ALLEY (NO. OF SODA ST)	180
	ALLEYS TOTAL	**990**
	UNPAVED AND ALLEYS TOTAL	**5,520**

01 REMEDIAL CLEANUP AREAS OVERVIEW
SCALE - 1" = 400'

General Notes

LEGEND
TOWN OF RICO BOUNDARY
TOWN OF RICO R.O.W. BLOCKS
N.T.S.
LOTS REQUIRING REMEDIATION (BY OTHERS) SEE NOTE 1.
ROAD REMEDIATION AREA
SURVEYED EDGE OF ROADS & DRIVEWAYS
VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS
NON-VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS #1
NON-VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS #2

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

REMEDIAL CLEANUP AREAS OVERVIEW

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO
Date: 28-Feb-2025
Scale: 1" = 400'
Sheet: RM-01

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\Rico Street Cleanup.dwg

Town of Rico Stormwater

60% Design/Cost Estimate

Timeline:

- February 2024: Conceptual Design and Conceptual Cost Estimate provided to Town of Rico
- August 2024: 30% Engineering Design provided to Town of Rico
- February 2025: 60% Engineering and Cost Estimate provided to Town of Rico

Key Assumptions at Conceptual/30% Level:

- Hydraulic Analysis not yet preformed
- Generalized Channel Type
- Generalized Quantities, Material Costs, and Labor Costs
- Slopes Generalized
- Culvert Type/Quantity
- Conceptual Cost Estimate intended to be +/- 25%

Town of Rico Stormwater

60% Design/Cost Estimate

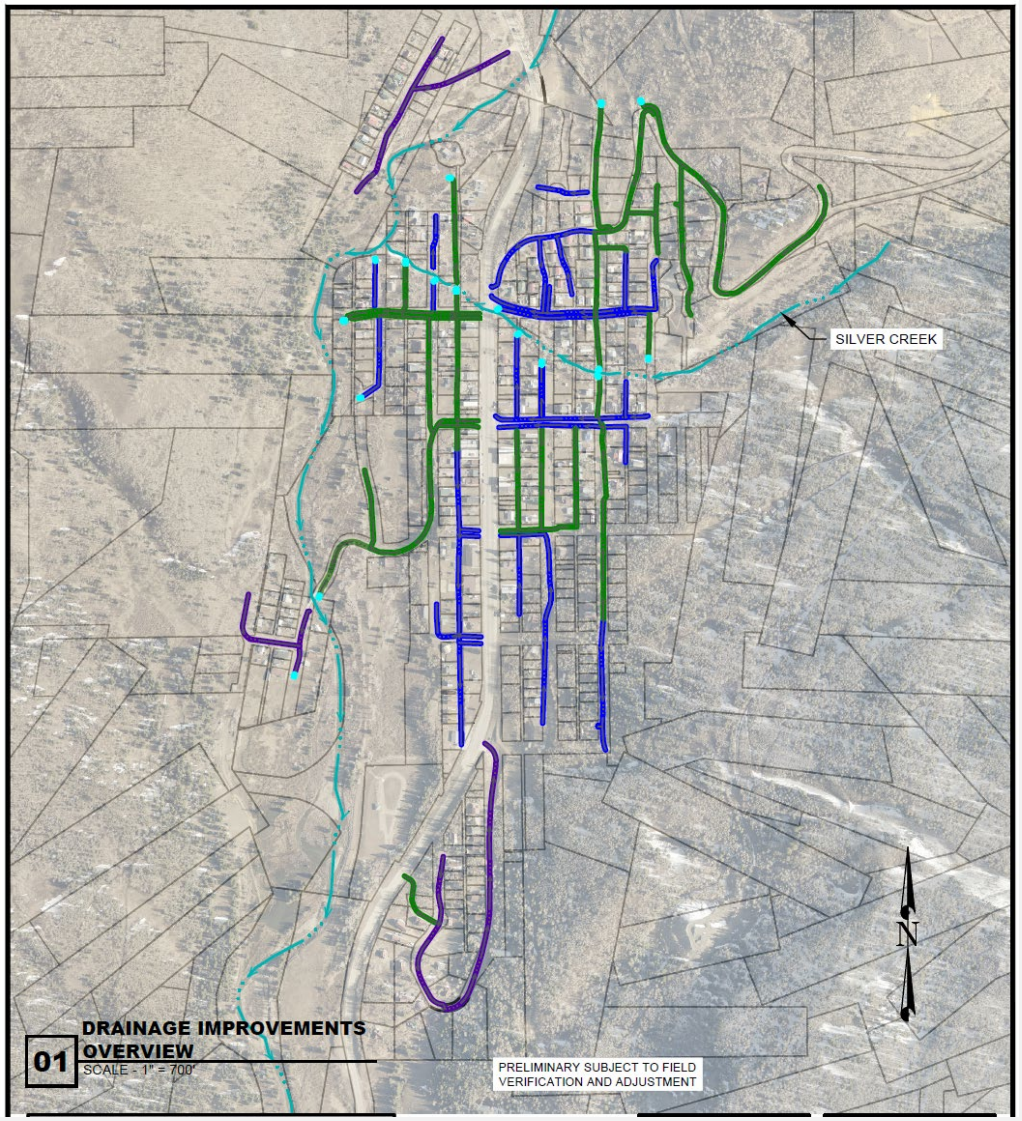
- Total Estimated Drainage Improvements:
  - 60% Engineer Cost Estimate - $4,900,069
  - (2/8/2024 Conceptual Level Cost-$3,775,089)

- Drainage Improvements by Atlantic Richfield (Remediated Roads/Upgradient/Down Gradient) (Green).
  - 60% Engineer Cost Estimate - $2,171,975 (44% of the Total)
  - (2/8/2024 Conceptual Level Cost-$1,861,688, 48% of the Total)

- Drainage Improvements by the Town of Rico (Blue).
  - 60% Engineer Cost Estimate - $1,923,939 (39% of the Total)
  - (2/8/2024 Conceptual Level Cost-$1,346,412 36 % of the Total)

- Drainage Improvements by the Town of Rico (Purple).
  - 60% Engineer Cost Estimate - $804,155 (16% of the Total)
  - (2/8/2024 Conceptual Level Cost-$600,056, 16% of the Total)

- Atlantic Richfield Road & Alley Remediation
  - 60% Engineer Cost Estimate - $2,799,226.
  - (2/8/2024 Conceptual Level Cost-$2,681,495)



Town of Rico Stormwater

60% Design/Cost Estimate

	Conceptual Estimate Quantity*	60% Estimate Quantity*	Net Cost Change**
Vegetated Channel (LF)	11,739	5,785	($87,372)
Rock-Lined Channel (LF)	18,994	11,536	($208,772)
Culverts (LF)	2478	2441	$66,210
Concrete Drainage Channels (Waterways, curbs, trench drains) (LF)	-	1,970	$383,639
Hauling Excavated Channel Material	573	4,966	$158,718
Other (Catch basins, repair existing culverts, roadside grading, etc.)	-	-	$112,155
Retention Basin***	0	1	$50,000

*Numbers represent total stormwater improvements (Green, Blue and Purple)
**Costs of material, labor, and equipment only. Mobilization, Miscellaneous, Contingency, and Indirect costs are not included.
***Retention Basin is allocated to AR funding

Town of Rico Stormwater

60% Design/Cost Estimate

Channel length reduced by 13,000+ feet

- Some roads with channels on both sides reduced to just one side
  - Soda Street
- Converted to alley grading
  - South Silver St.
  - Argentine Alley
  - Yellowman Alley
  - Short Street
- Eliminated
  - Water Tank Road
  - Parts of W King Street
  - Parts of W Cambell Street
  - Part of S Silver Street

MATERIAL CHANGES

ROCK-LINED CHANNELS

LOOSE RIPRAP

CONCEPTUAL DESIGN ELEMENT

GEOWEB WITH GRAVEL INFILL

60% DESIGN ELEMENT

Reduced the quantity of rock from 7,300+ to about 1,500 tons, the equivalent of almost 400 dump truck deliveries

MATERIAL CHANGES

CULVERT PIPE MATERIAL

HDPE

CONCEPTUAL DESIGN ELEMENT

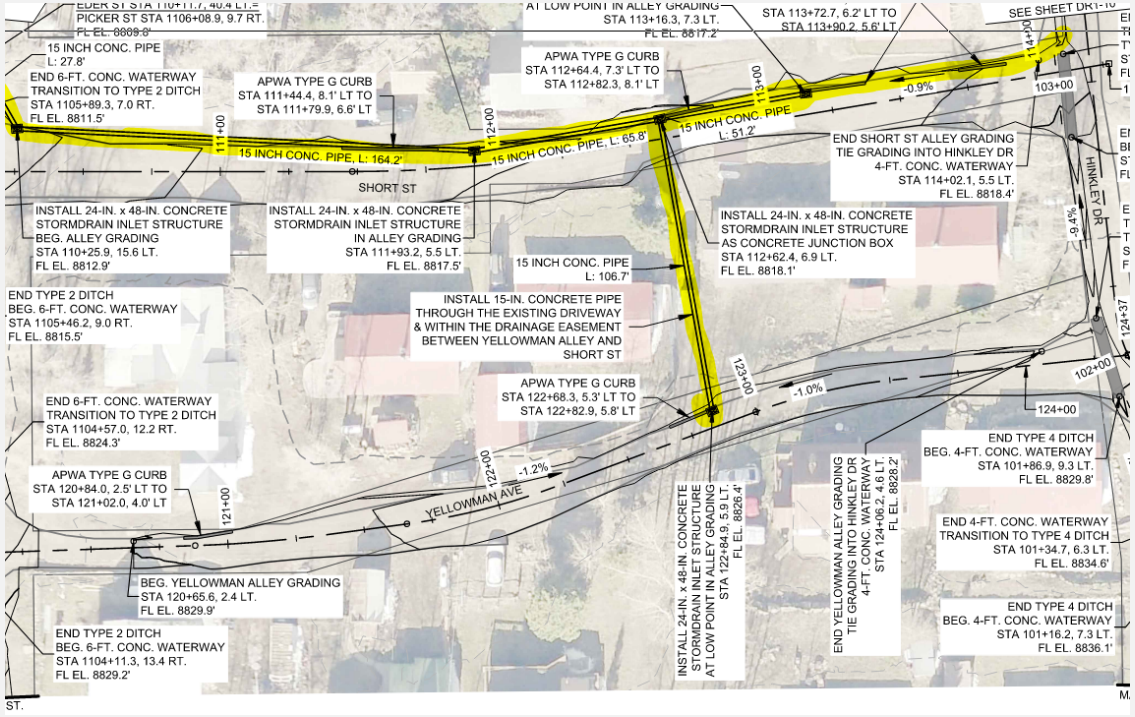
REINFORCED CONCRETE PIPE (RCP)

60% DESIGN ELEMENT

Shallow cover depth over the culvert necessitates the use of structural pipe that can handle the traffic loads

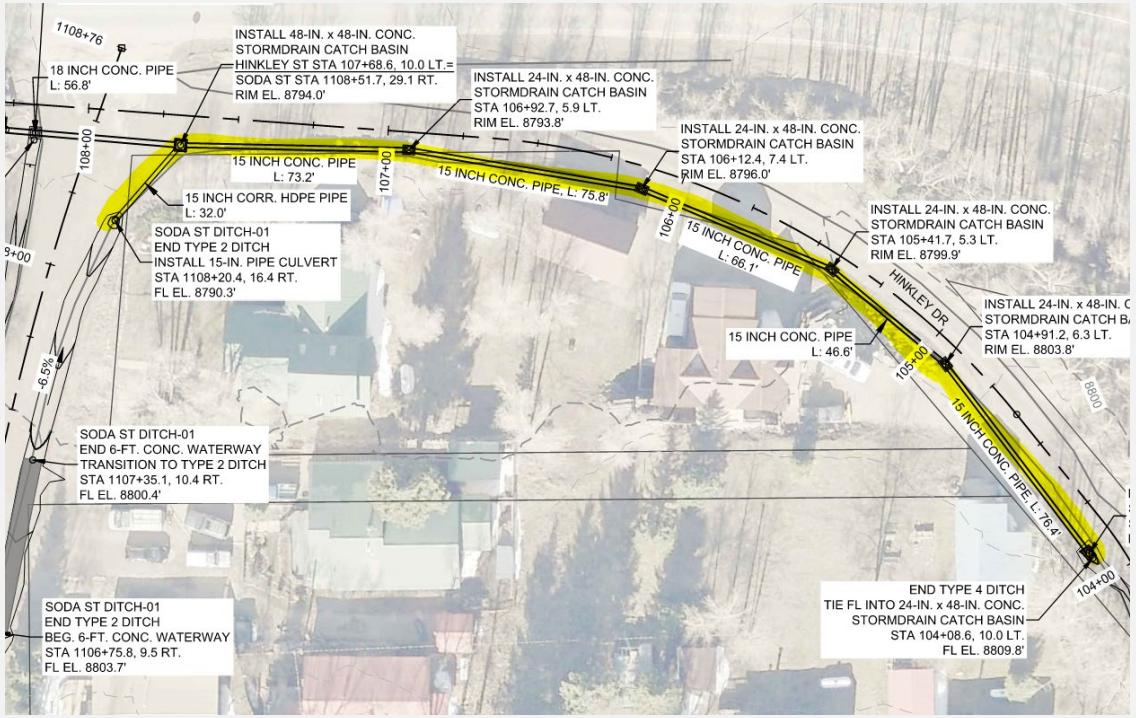
MATERIAL CHANGES

CHANNELS TO CULVERTS



YELLOWMAN AVE AND SHORT STREET (~400 LF)

Drainage is to middle of the segments with a surface outlet



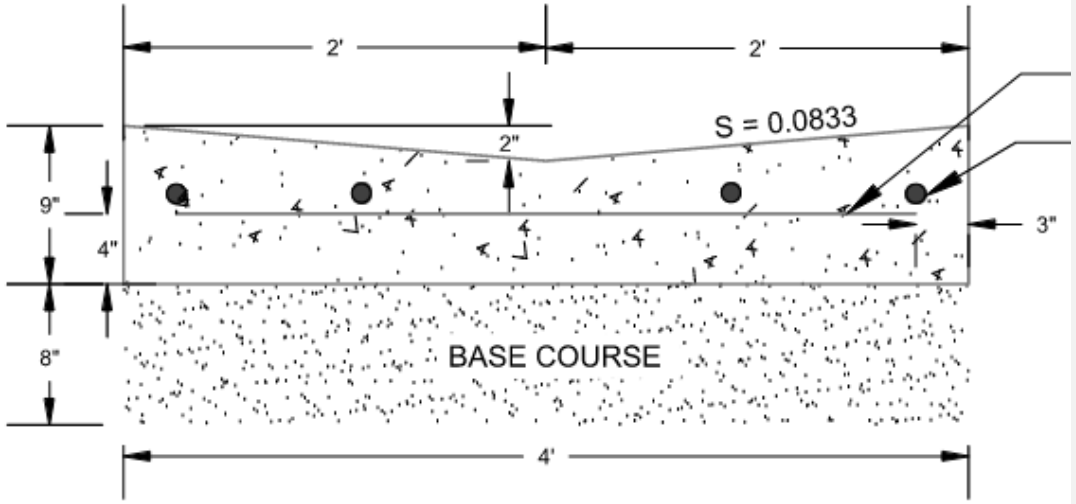
HINCKLEY DRIVE (~375 LF)

Road too narrow for channel

SILVER ST AND GARFIELD STREET (~250 LF)

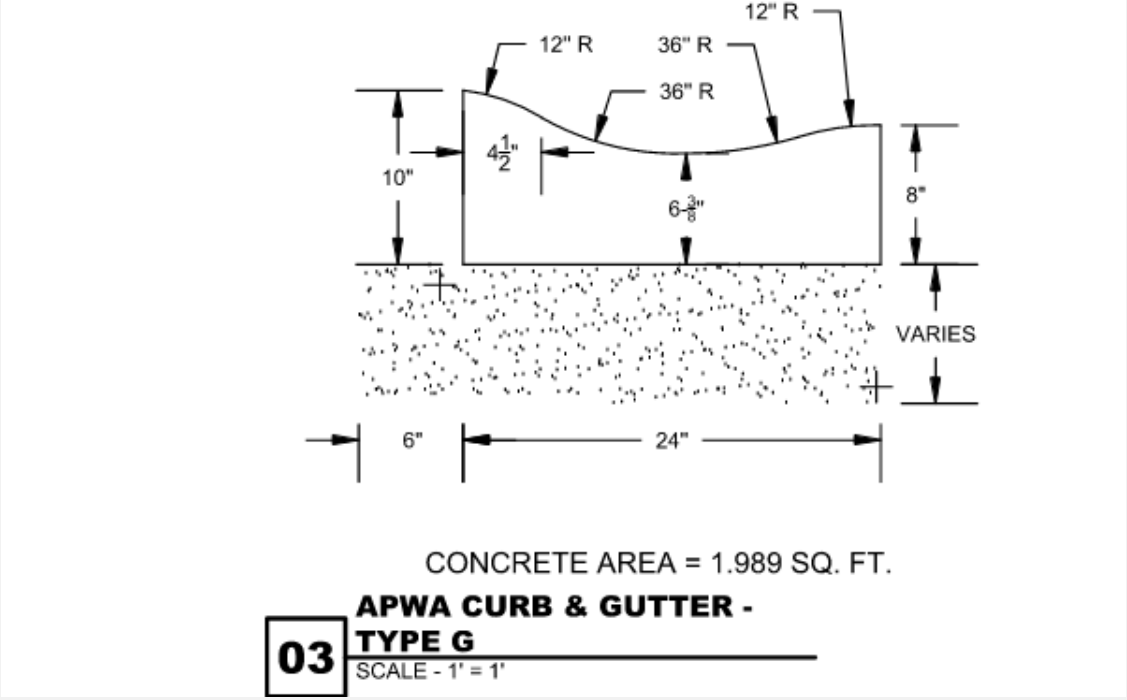
MATERIAL CHANGES

CONCRETE CHANNELS (WATERWAYS) OR TYPE G CURBS
CULVERTS TO CROSS-PANS (WATERWAYS)



WATERWAYS (4-FT OR 6-FT WIDE)

Used at intersections where culverts would have utility conflicts or insufficient grade drop

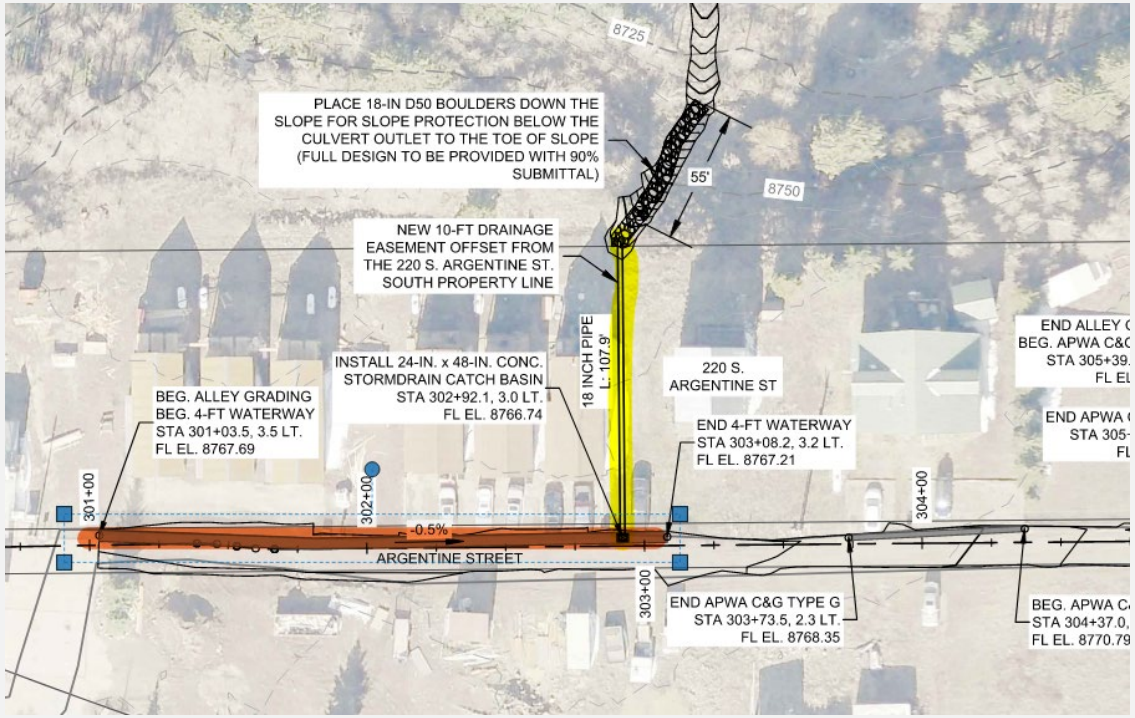


TYPE G CURB

Narrow alleys and driveway access

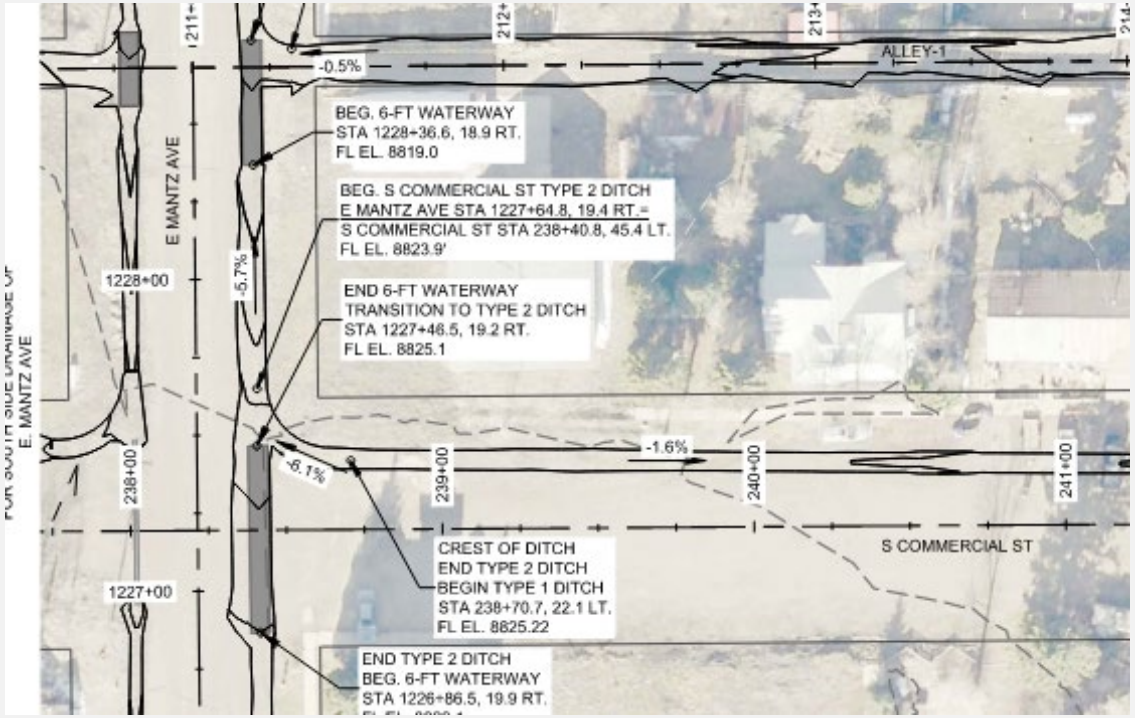
MATERIAL CHANGES

CONCRETE CHANNELS (WATERWAYS) OR TYPE G CURBS
CULVERTS TO CROSS-PANS (WATERWAYS)



ARGENTINE STREET (~200 LF OF WATERWAY, 108 LF OF CULVERT)

Drainage is to middle of the segments



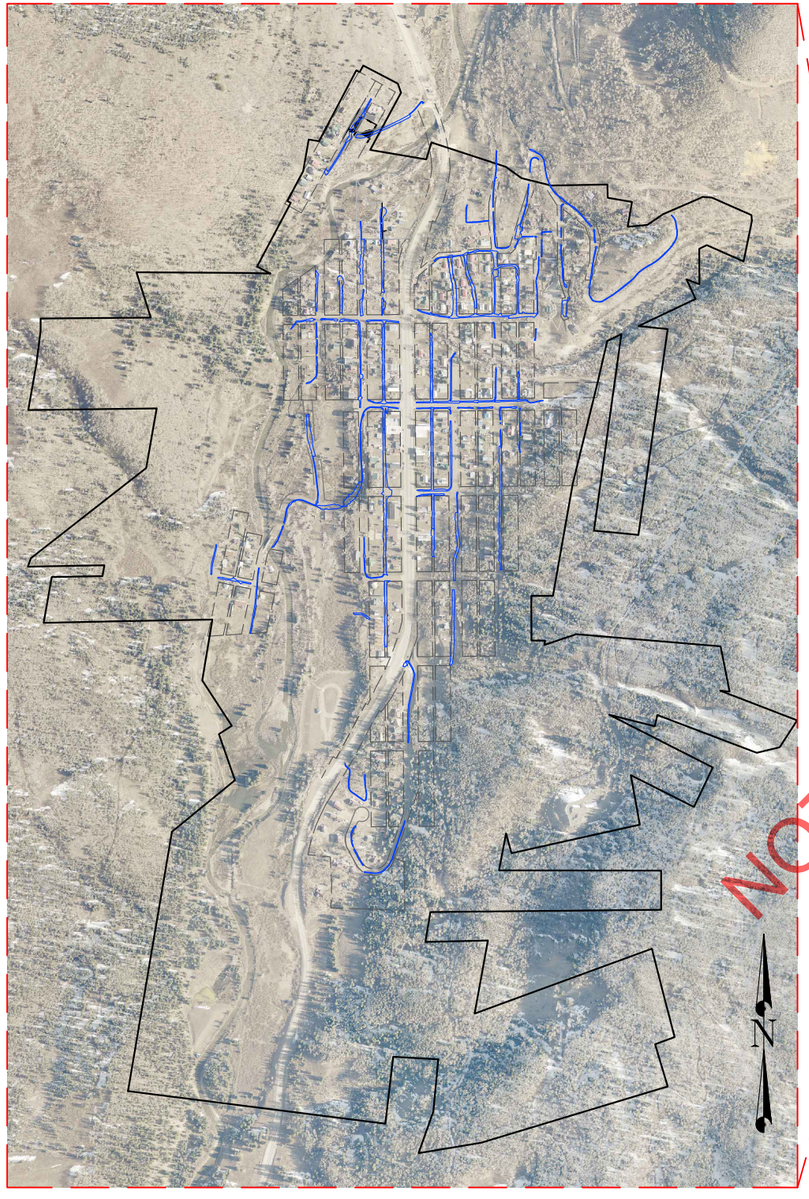
MANTZ AVE

Culverts changed to waterways due to insufficient grade drop

60% Cost Estimate

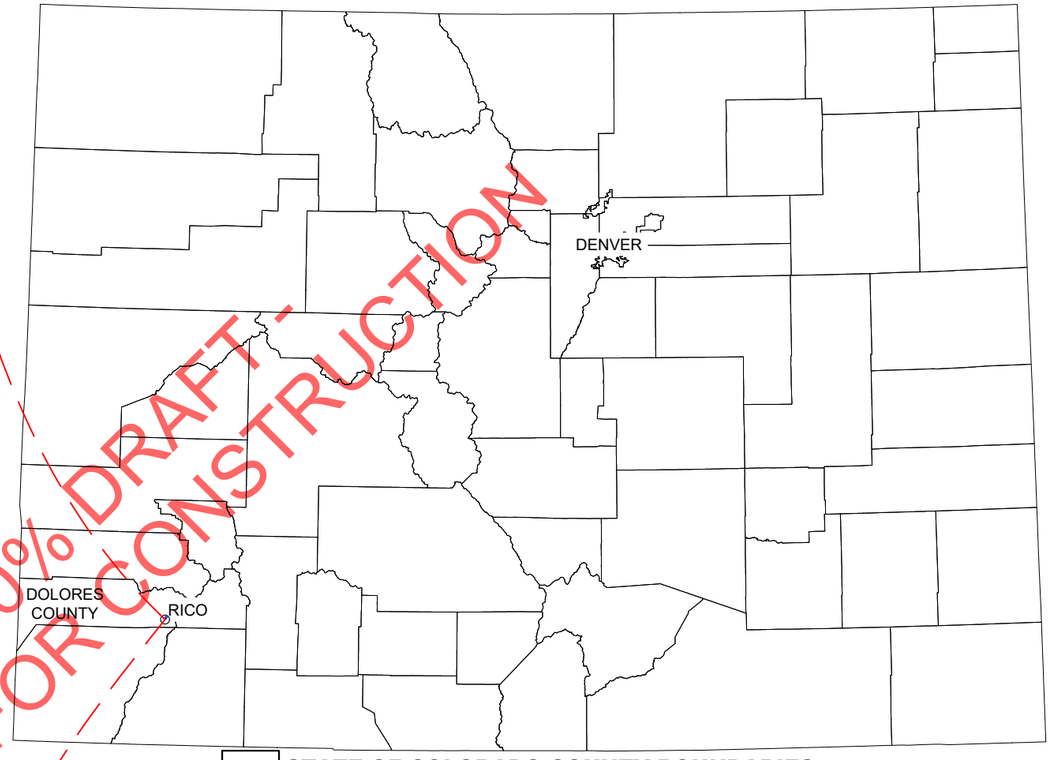
Table 6 ECE Summary Opinion of Cost (60%)					
Item			Atlantic Richfield (Green)	Town of Rico (Blue)	Town of Rico (Purple)
Project Costs					
		Mobilization/Demobilization and Supervision[1]	$320,393	$ -	$ -
		Street & Alley Removal	$444,644	$ -	$ -
		Street and Alley Purchase/Haul Materials	$360,014	$ -	$ -
		Street and Alley Replacement	$472,824	$ -	$ -
		Miscellaneous[2]	$178,848	$ -	$ -
		Contingency[3]	$266,508	$ -	$ -
		Indirect Costs[4]	$755,995	$ -	$ -
	Street and Alley Subtotal		$2,799,226	$ -	$ -
		Mobilization/Demobilization and Supervision[1]	$ 248,599	$ 220,209	$ 92,042
		Drainage Ditch Removal	$ 299,875	$ 241,643	$ 118,673
		Drain Ditches Purchase/Haul Materials	$ 201,144	$ 167,598	$ 67,336
		Drainage Feature Placement	$ 490,205	$ 468,787	$ 180,983
		Miscellaneous[2]	$ 138,771	$ 122,924	$ 51,379
		Contingency[3]	$ 206,789	$ 183,174	$ 76,562
		Indirect Costs[4]	$ 586,592	$ 519,604	$ 217,181
	Drainage Subtotal		$ 2,171,975	$ 1,923,939	$ 804,155
Total			$ 4,971,202	$ 1,923,939	$ 804,155

TOWN OF RICO STORMWATER CONTROL PLAN
(60% SUBMITTAL)



02 **TOWN OF RICO PROPOSED DRAINAGE CHANNELS**

SCALE IN FEET
0 500 1,000



01 **STATE OF COLORADO COUNTY BOUNDARIES**

Legend

- PROPOSED CHANNELS
- TOWN OF RICO BOUNDARY
- TOWN OF RICO ROW

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.
2053 N HILLCREST RD. SARATOGA SPRINGS, UT. 84045 (801) 972-6222

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

COVER SHEET

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: G-01
Date: 20-Feb-2025	
Scale: AS SHOWN	

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TOWN OF RICO STORMWATER CONTROL PLAN
(60% SUBMITTAL)

Sheet List Table	
Sheet Number	Sheet Title
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G-02	SHEET INDEX
G-03	EXISTING UTILITIES
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RM1-01	REMEDIATION AREAS NORTHEAST-QUADRANT
RM1-02	REMEDIATION AREAS NORTHEAST-QUADRANT
RM2-01	REMEDIATION AREAS SOUTHEAST-QUADRANT
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DR1-09	GARFIELD ST & SILVER ST TO SILVER CREEK & SODA ST
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DR3-01	ARGENTINE ST, RIVER ST, MANTZ AVE & SODA ST
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DR3-03	ARGENTINE ALLEY TO KING ST
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DR3-06	PICKER ST & HANCOCK ST TO PICKER ST
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DR4-03	SILVERGLANCE WY TO ABANDONED ACCESS ROAD TO EXSTING CULVERT
DR5-01	JONES MINE RD, EDER ST, & PICKER ST
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RD-01	ARGENTINE ALLEY CROSS SECTIONS
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RD-04	HANCOCK STREET RAISING ROAD GRADE PLAN
RD-05	VANWINKLE AVE, SODA ST TO GARFIELD ST ROAD GRADING PLAN
DT-01	TYPICAL CROSS SECTION DETAILS
DT-02	TYPICAL CROSS SECTION DETAILS
DT-03	WATERWAY DETAILS
DT-04	TRENCH DRAIN DETAILS
DT-05	CATCH BASIN DETAIL

TOWN OF RICO STORMWATER CONTROL PLAN
(60% SUBMITTAL) SHEET INDEX

01

Legend

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.
2053 N HILLCREST RD. SARATOGA SPRINGS, UT 84045 (801) 972-6222

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

SHEET INDEX

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: G-02
Date: 20-Feb-2025	
Scale: AS SHOWN	

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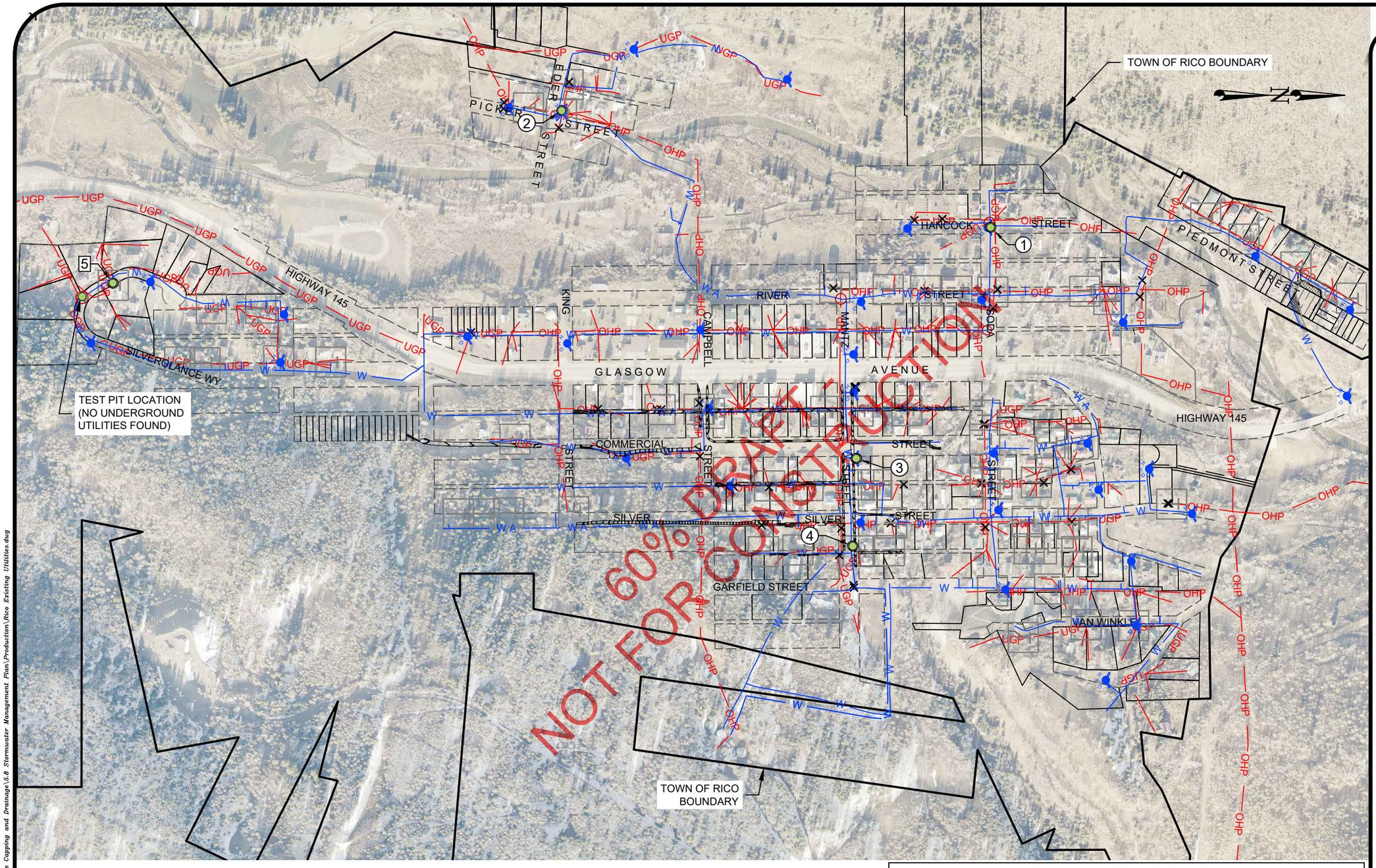

Legend

- W — EXISTING WATERLINES BASED ON SURVEY OF WATER VALVES, WATER METERS, AND AS-BUILT INFORMATION PROVIDED BY THE TOWN OF RICO
- W A — W A — EXISTING WATERLINES LOCATIONS ARE ASSUMED BASED ON SURVEYED LOCATIONS OF WATER METERS AND FOUND WATER VALVES
- EXISTING FIRE HYDRANTS
- OHP — EXISTING OVERHEAD POWER LINES BASED ON SURVEY OF UTILITY POLES AND AS-BUILT MAP FROM SAN MIGUEL POWER ASSOCIATION
- UGP — EXISTING UNDERGROUND POWER BASED ON AS-BUILT MAP FROM SAN MIGUEL POWER ASSOCIATION
- 6 EXISTING UTILITY POLES
- P EXISTING POWER BOX
- TOWN OF RICO BOUNDARY
- TOWN OF RICO ROW
- 1 REQUESTED UGP POT HOLE LOCATIONS (#2&13)
- 3 REQUESTED W POT HOLE LOCATIONS (#3,9,13)

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

EXISTING UTILITIES

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	20-Feb-2025
Scale	1" = 400'
Sheet	G-03

TABLE 01: POT HOLE POINT TABLE

POINT NUMBER	NORTHING	EASTING	DESCRIPTION
1	1384077.32	2267031.33	WATER POT HOLE @ HYDRANT (5.3-FT DEPTH)
2	1382357.35	2266563.51	WATER POT HOLE @ HYDRANT (6-FT DEPTH)
3	1383537.94	2267958.08	6" C-900 WATER POT HOLE (7-FT DEPTH)
4	1383523.43	2268309.22	UNIDENTIFIED 1.5-IN PIPE (6.3-FT DEPTH)
5	1380557.35	2267255.18	UGP POT HOLE (4.5-FT DEPTH)

NOTES

1. DIRECT COMMUNICATIONS IS IN THE PROCESS OF INSTALLING FIBER OPTIC CABLE. WHEN THEY HAVE COMPLETED THEIR CONSTRUCTION SEASON IN OCTOBER 2024 THEY WILL SEND THE AS-BUILT INFORMATION FOR WHAT WAS INSTALLED THIS YEAR. THE CURRENT EXPECTED TIMELINE TO FINISH OUT THE INSTALLATION OF THE FIBER OPTICS AND HAVE ALL PHONE LINES REPLACED IS THE MAY THROUGH OCTOBER 2025 CONSTRUCTION SEASON. ONCE INSTALLED, THE OLD LINES WILL BE ABANDONED.

01 TOWN OF RICO EXISTING UTILITY LOCATIONS MAP

SCALE - 1" = 400'

SCALE IN FEET 0 200 400

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REMEDIAL AREA SHEET INDEX

RM1-01 - REMEDIATION AREAS NORTHEAST-QUADRANT
RM1-02 - REMEDIATION AREAS NORTHEAST-QUADRANT
RM2-01 - REMEDIATION AREAS SOUTHEAST-QUADRANT
RM3-01 - REMEDIATION AREAS WEST-QUADRANT

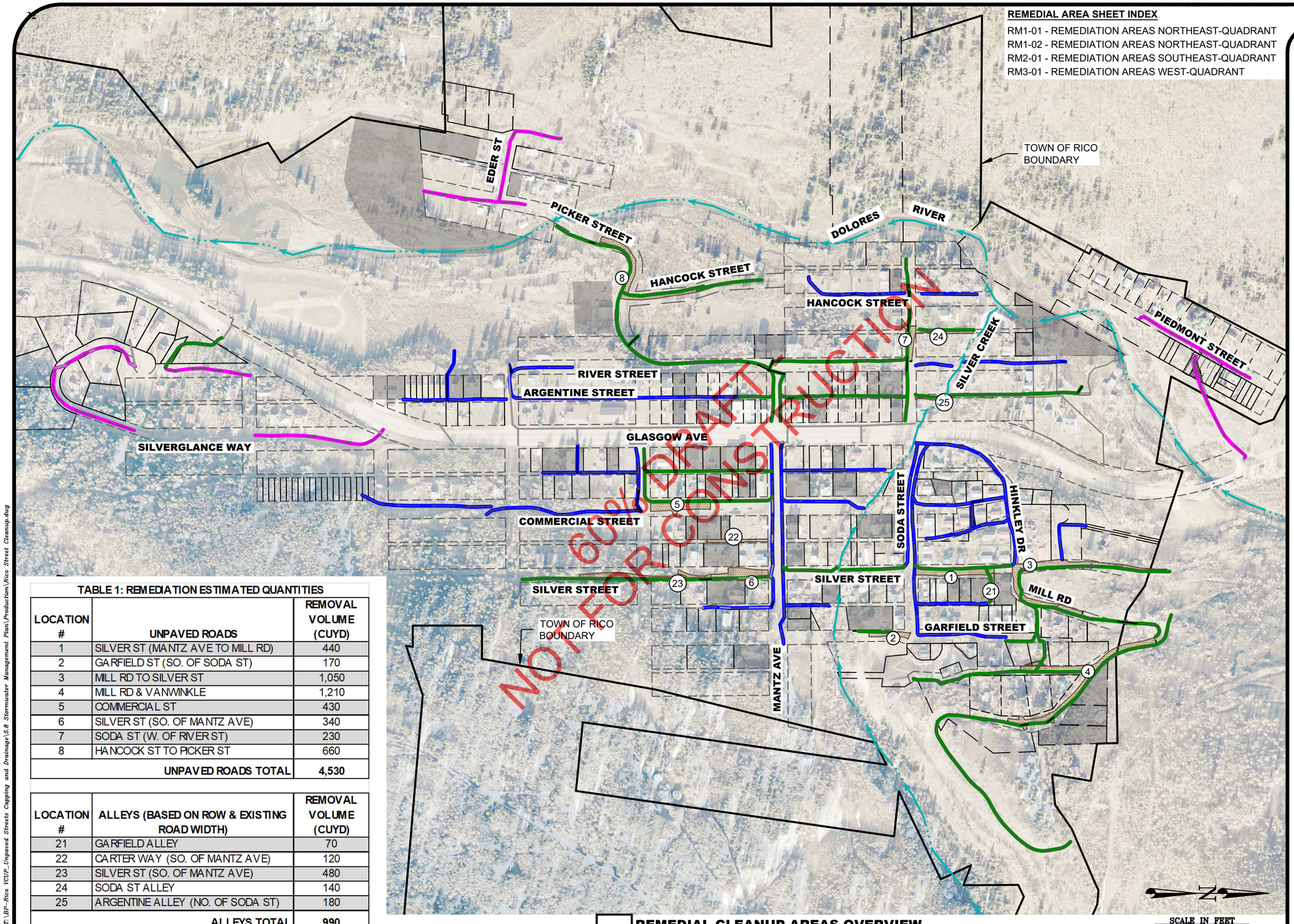

TABLE 1: REMEDIATION ESTIMATED QUANTITIES

LOCATION #	UNPAVED ROADS	REMOVAL VOLUME (CUYD)
1	SILVER ST (MANTZ AVE TO MILL RD)	440
2	GARFIELD ST (SO. OF SODA ST)	170
3	MILL RD TO SILVER ST	1,050
4	MILL RD & VANWINKLE	1,210
5	COMMERCIAL ST	430
6	SILVER ST (SO. OF MANTZ AVE)	340
7	SODA ST (W. OF RIVER ST)	230
8	HANCOCK ST TO PICKER ST	660
	UNPAVED ROADS TOTAL	**4,530**

LOCATION #	ALLEYS (BASED ON ROW & EXISTING ROAD WIDTH)	REMOVAL VOLUME (CUYD)
21	GARFIELD ALLEY	70
22	CARTER WAY (SO. OF MANTZ AVE)	120
23	SILVER ST (SO. OF MANTZ AVE)	480
24	SODA ST ALLEY	140
25	ARGENTINE ALLEY (NO. OF SODA ST)	180
	ALLEYS TOTAL	**990**
	UNPAVED AND ALLEYS TOTAL	**5,520**

01 REMEDIAL CLEANUP AREAS OVERVIEW
SCALE - 1" = 400'

SCALE IN FEET
0 200 400

General Notes

LEGEND

- TOWN OF RICO BOUNDARY
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S.
- LOTS REQUIRING REMEDIATION (BY OTHERS) SEE NOTE 1.
- ROAD REMEDIATION AREA
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS
- NON-VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS #1
- NON-VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS #2

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

REMEDIAL CLEANUP AREAS OVERVIEW

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	28-Feb-2025
Scale	1" = 400'
Sheet	RM-01

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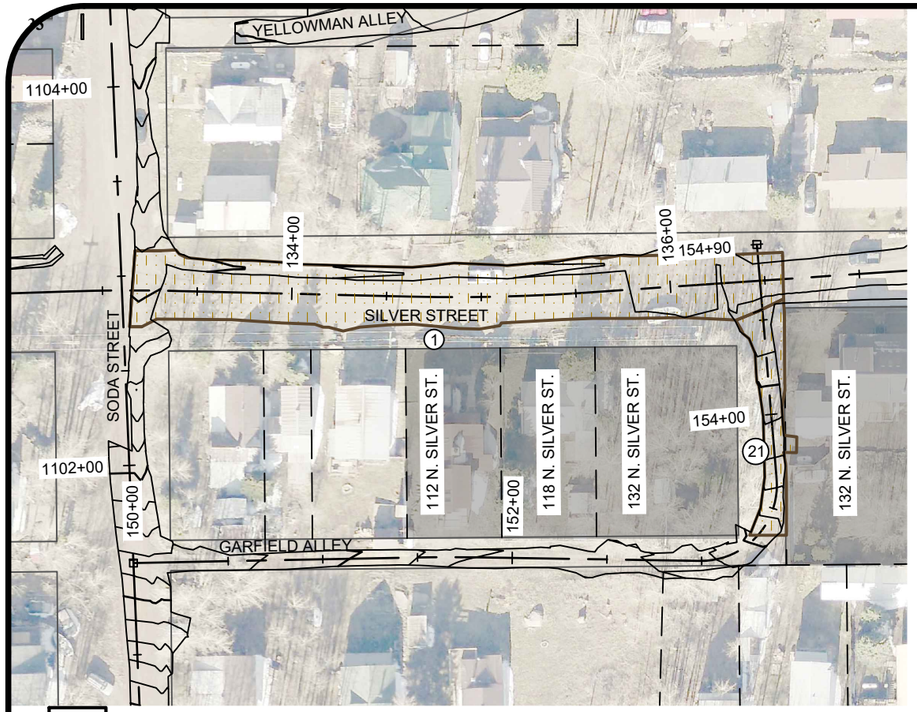
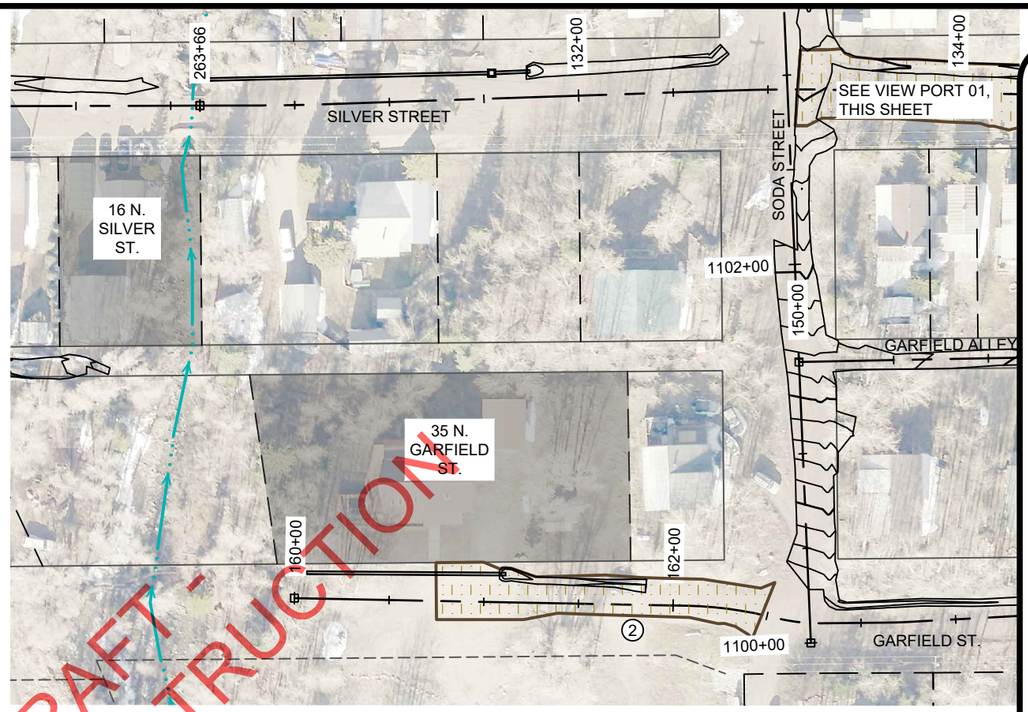


01 **REMEDIATION AREA SILVER ST. & GARFIELD ALLEY PLAN VIEW**
SCALE - 1" = 80'



02 **REMEDIATION AREA SILVER ST. & GARFIELD ST. PLAN VIEW**
SCALE - 1" = 80'

SCALE IN FEET
0 40 80

60% DRAFT - NOT FOR CONSTRUCTION

General Notes

1. LOTS IDENTIFIED AS REQUIRING REMEDIATION AS OF 01/01/2025

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S.
- LOTS REQUIRING REMEDIATION (BY OTHERS) SEE NOTE 1
- LOTS REQUIRING NO REMEDIATION
- ROAD REMEDIATION AREA
- 2-FT DITCH & GRADING CONTOURS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- (1) REMEDIATION AREA LOCATION MARKER (REFERENCE TABLE 01 ON SHEET RM-01)

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

REMEDIATION AREAS
NORTHEAST-QUADRANT

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: RM1-01
Date: 20-Feb-2025	
Scale: 1" = 80'	

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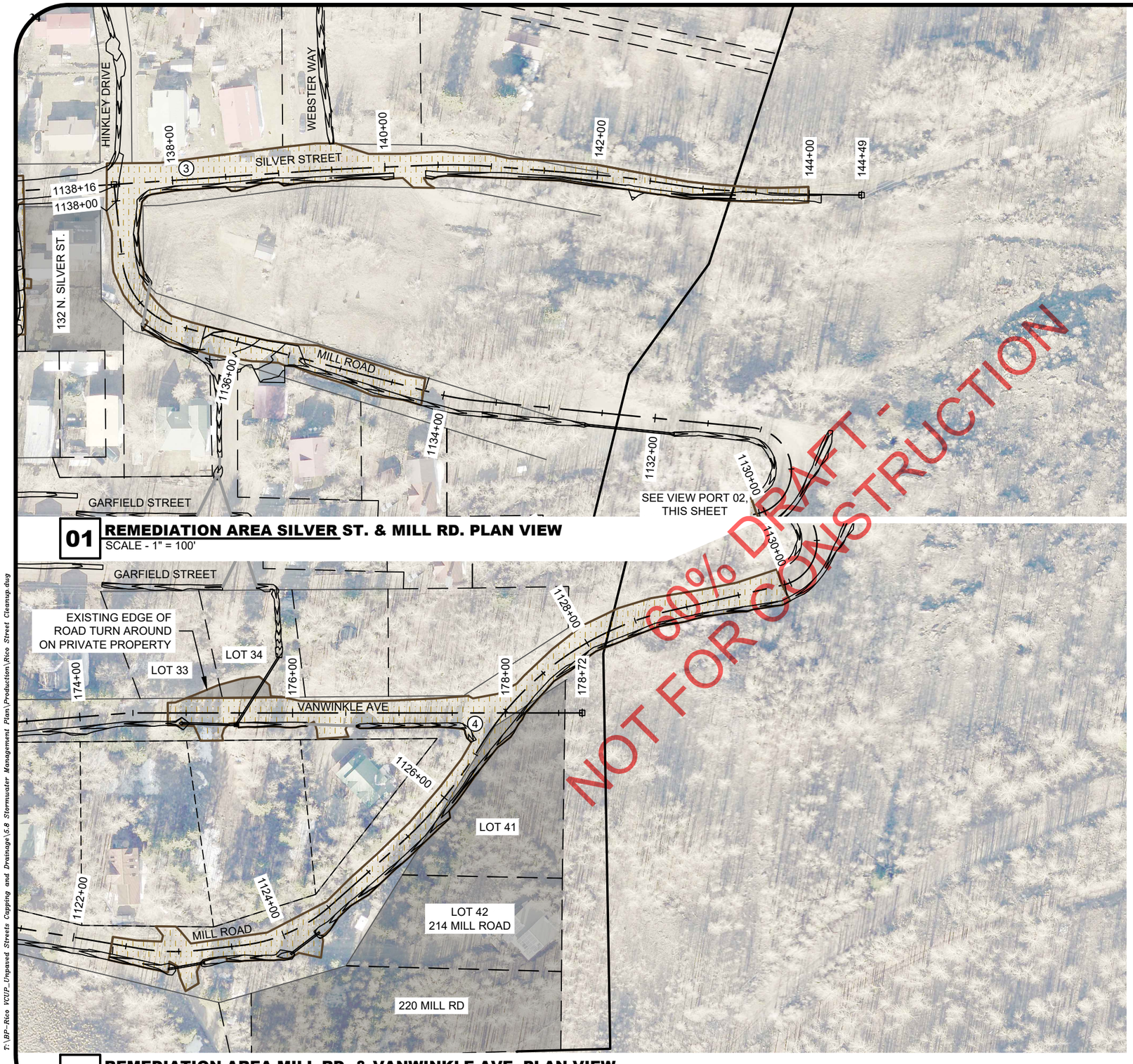

01 **REMEDIATION AREA SILVER ST. & MILL RD. PLAN VIEW**
SCALE - 1" = 100'

02 **REMEDIATION AREA MILL RD. & VANWINKLE AVE. PLAN VIEW**
SCALE - 1" = 100'

General Notes

1. LOTS IDENTIFIED AS REQUIRING REMEDIATION AS OF 01/01/2025

LEGEND

- TOWN OF RICO R.O.W. BLOCKS N.T.S.
- LOTS REQUIRING REMEDIATION (BY OTHERS) SEE NOTE 1
- LOTS REQUIRING NO REMEDIATION
- ROAD REMEDIATION AREA
- 2-FT DITCH & GRADING CONTOURS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- (1) REMEDIATION AREA LOCATION MARKER (REFERENCE TABLE 01 ON SHEET RM-01)

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

REMEDIATION AREAS NORTHEAST-QUADRANT

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: RM1-02
Date: 20-Feb-2025	
Scale: 1" = 100'	

SCALE IN FEET
0 50 100

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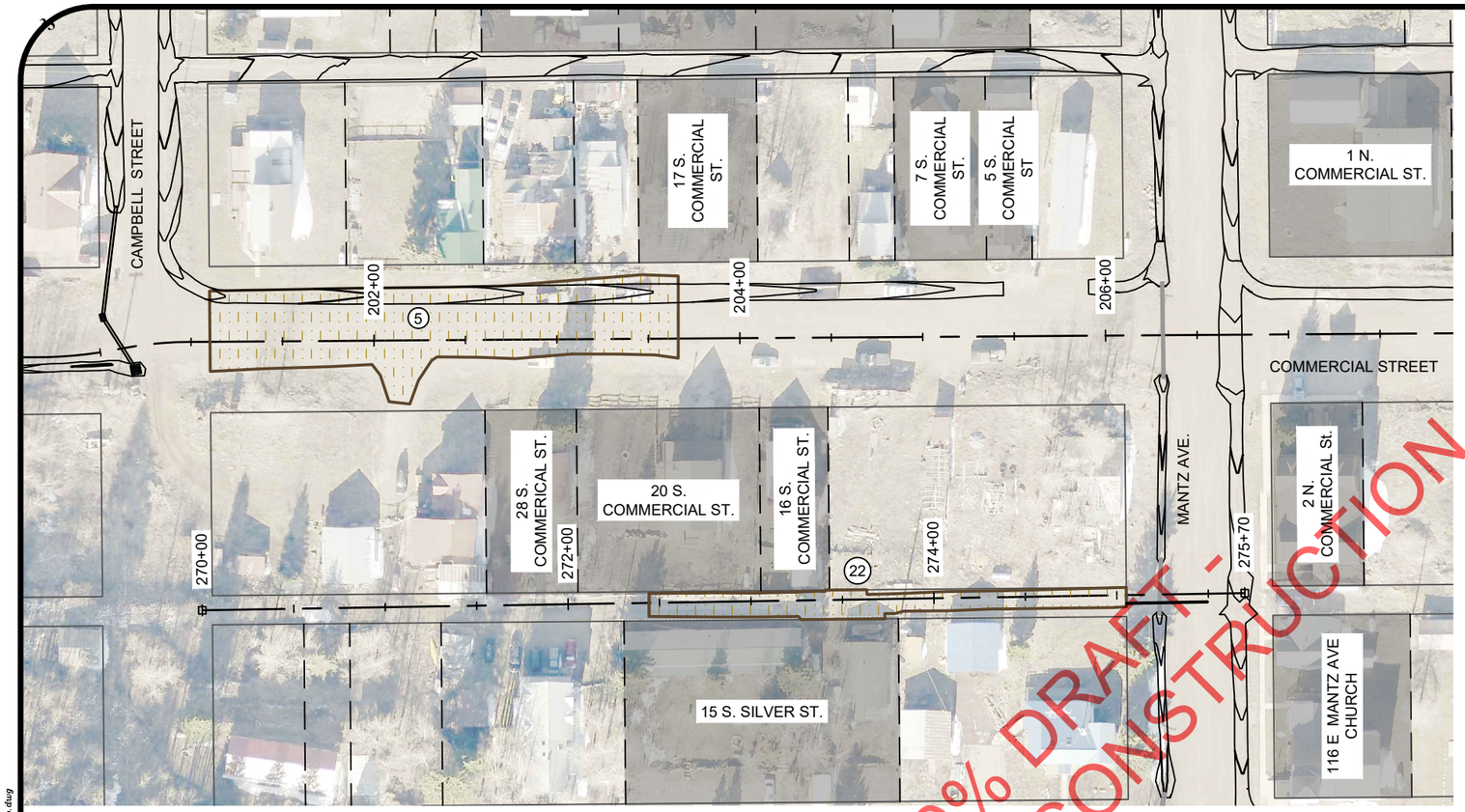
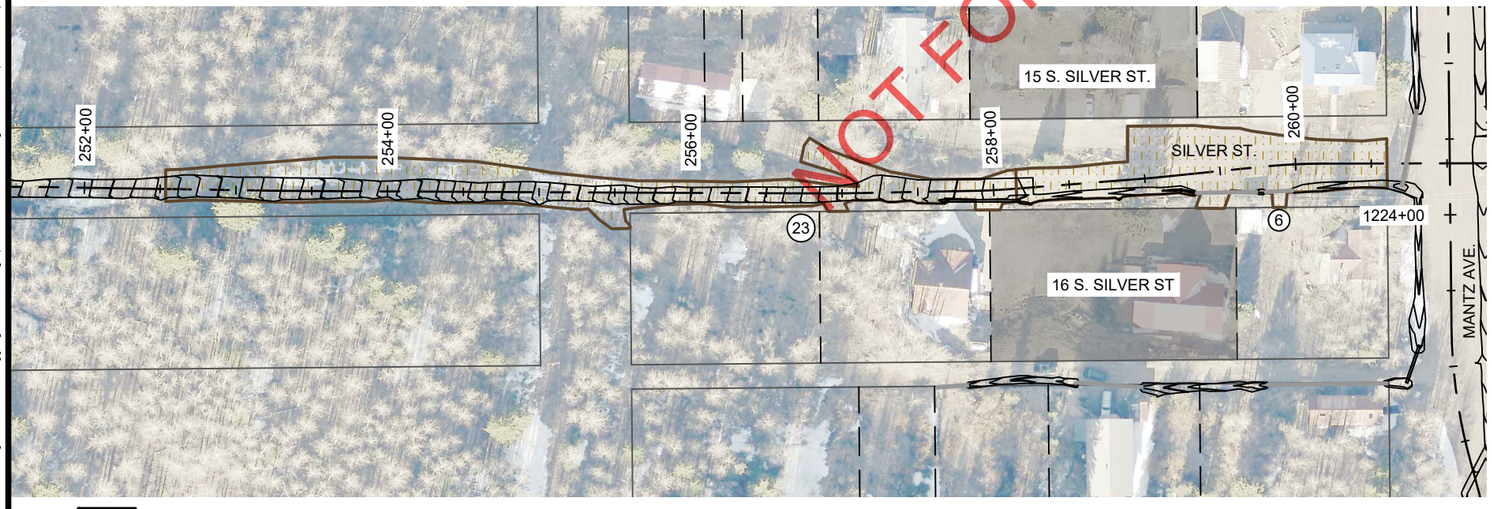


01 REMEDIATION AREA ALLEY WAY-1, COMMERCIAL ST. & ALLEY WAY-2 PLAN VIEW

SCALE - 1" = 80'

SCALE IN FEET 0 40 80



02 REMEDIATION AREA SILVER ST. PLAN VIEW

SCALE - 1" = 100'

SCALE IN FEET 0 50 100

General Notes

1. LOTS IDENTIFIED AS REQUIRING REMEDIATION AS OF 01/01/2025

LEGEND

- TOWN OF RICO R.O.W. BLOCKS N.T.S.
- LOTS REQUIRING REMEDIATION (BY OTHERS) SEE NOTE 1
- LOTS REQUIRING NO REMEDIATION
- ROAD REMEDIATION AREA
- 2-FT DITCH & GRADING CONTOURS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- (1) REMEDIATION AREA LOCATION MARKER (REFERENCE TABLE 01 ON SHEET RM-01)

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

REMEDIATION AREAS SOUTHEAST-QUADRANT

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: RM2-01
Date: 20-Feb-2025	
Scale: AS SHOWN	

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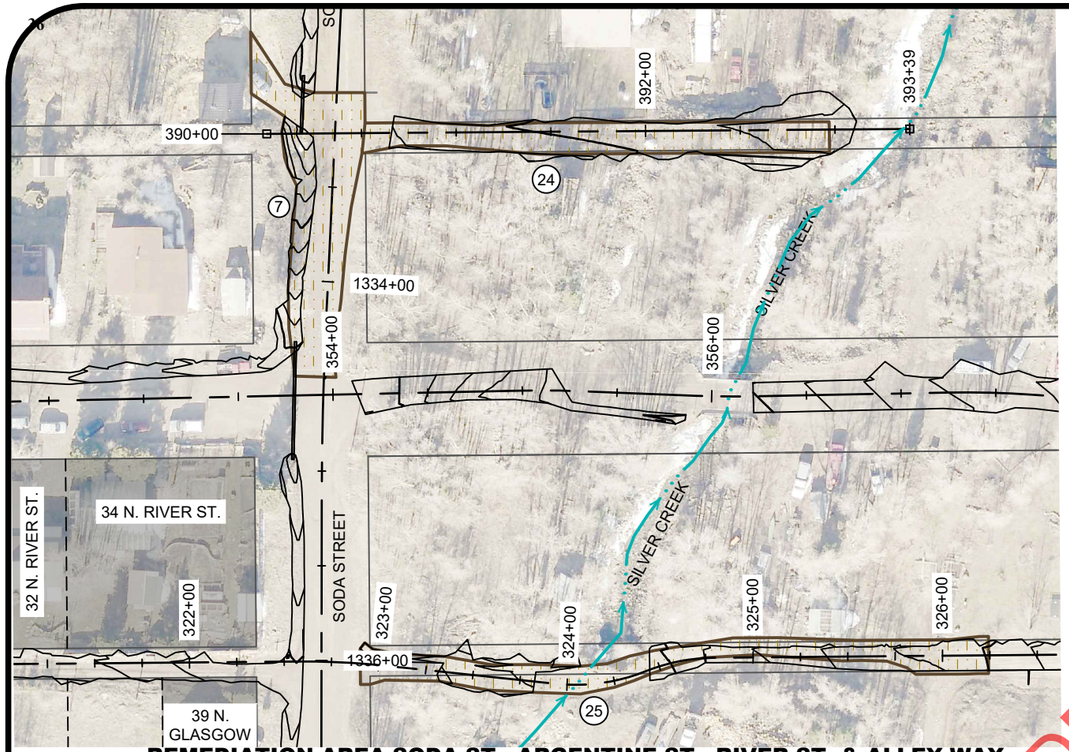
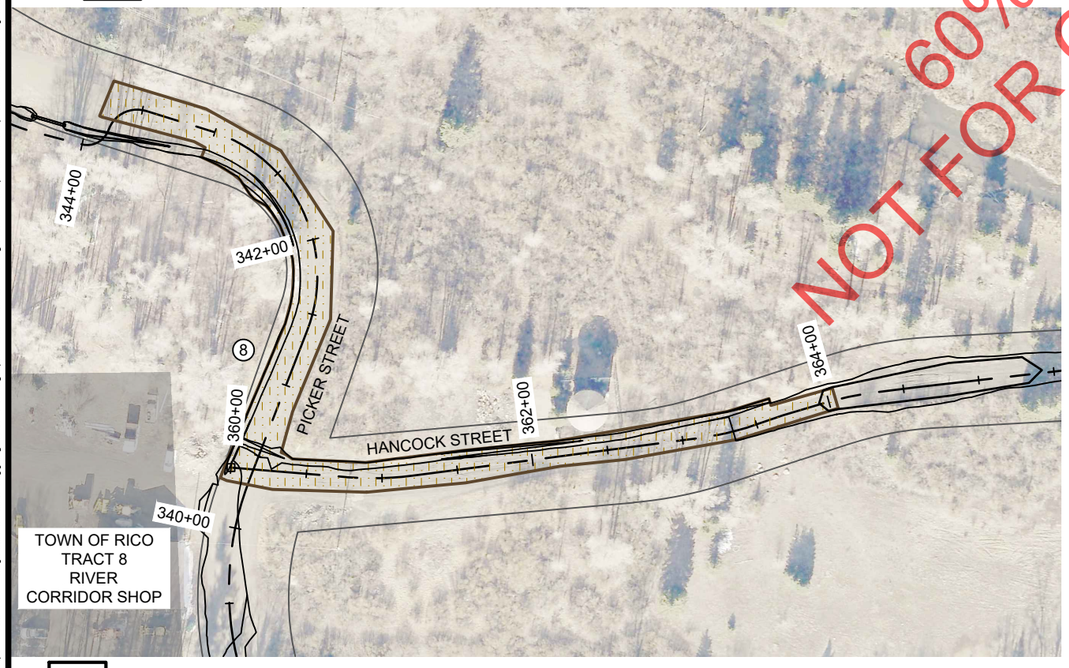


01 **REMEDIATION AREA SODA ST., ARGENTINE ST., RIVER ST. & ALLEY WAY PLAN VIEW**
SCALE - 1" = 80'

SCALE IN FEET
0 40 80



02 **REMEDIATION AREA PICKER ST. & HANCOCK ST. PLAN VIEW**
SCALE - 1" = 100'

SCALE IN FEET
0 50 100

General Notes

1. LOTS IDENTIFIED AS REQUIRING REMEDIATION AS OF 01/01/2025

LEGEND

- TOWN OF RICO R.O.W. BLOCKS (N.T.S.)
- LOTS REQUIRING REMEDIATION (BY OTHERS) SEE NOTE 1
- LOTS REQUIRING NO REMEDIATION
- ROAD REMEDIATION AREA
- 2-FT DITCH & GRADING CONTOURS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- (1) REMEDIATION AREA LOCATION MARKER (REFERENCE TABLE 01 ON SHEET RM-01)

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

REMEDIATION AREAS
WEST-QUADRANT

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: RM3-01
Date: 20-Feb-2025	
Scale: AS SHOWN	

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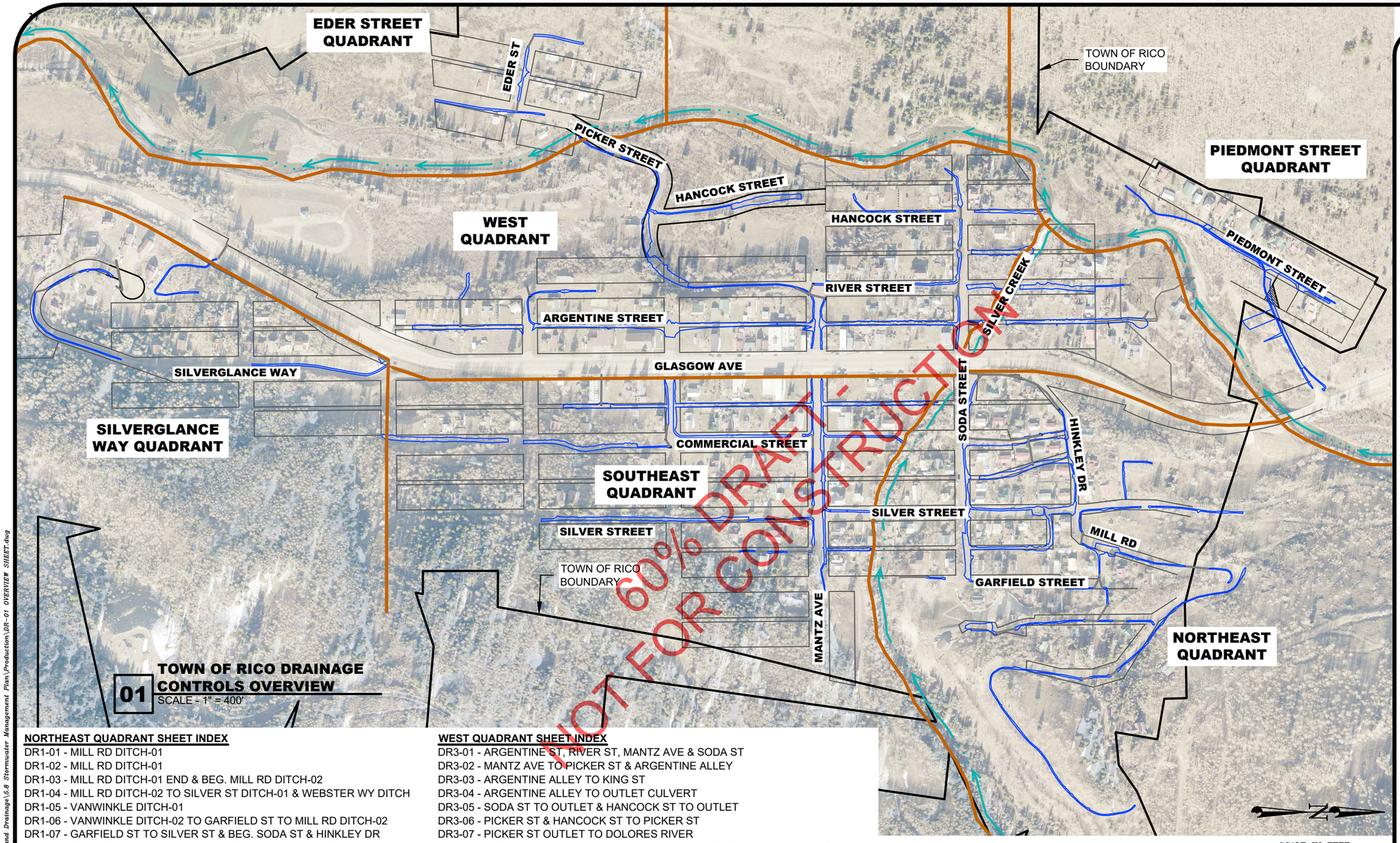

01 **TOWN OF RICO DRAINAGE CONTROLS OVERVIEW**
SCALE - 1" = 400'

NORTHEAST QUADRANT SHEET INDEX
DR1-01 - MILL RD DITCH-01
DR1-02 - MILL RD DITCH-01
DR1-03 - MILL RD DITCH-01 END & BEG. MILL RD DITCH-02
DR1-04 - MILL RD DITCH-02 TO SILVER ST DITCH-01 & WEBSTER WY DITCH
DR1-05 - VANWINKLE DITCH-01
DR1-06 - VANWINKLE DITCH-02 TO GARFIELD ST TO MILL RD DITCH-02
DR1-07 - GARFIELD ST TO SILVER ST & BEG. SODA ST & HINKLEY DR
DR1-08 - SODA ST & HINKLEY DR & YELLOWMAN AVE & SHORT ST
DR1-09 - GARFIELD ST & SILVER ST TO SILVER CREEK & SODA ST
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SOUTHEAST QUADRANT SHEET INDEX
DR2-01 - MANTZ DITCH-01, CARTER WY & SILVER ST NORTH TO CREEK
DR2-02 - MANTZ DITCH-01, COMMERCIAL ST & ALLEY-1 NORTH TO CREEK
DR2-03 - SILVER ST SO. ROAD GRADING
DR2-04 - SILVER ST SO. ROAD GRADING, CARTER WY & MANTZ DITCH-02
DR2-05 - MANTZ DITCH-02 & CAMPBELL DITCH-01, COMMERCIAL ST & ALLEY-1
DR2-06 - COMMERCIAL ST TO CAMPBELL DITCH-02, & ALLEY-1 TO OUTLET
DR2-07 - COMMERCIAL ST SO. GRADING & DITCH OUTLET

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DR3-02 - MANTZ AVE TO PICKER ST & ARGENTINE ALLEY
DR3-03 - ARGENTINE ALLEY TO KING ST
DR3-04 - ARGENTINE ALLEY TO OUTLET CULVERT
DR3-05 - SODA ST TO OUTLET & HANCOCK ST TO OUTLET
DR3-06 - PICKER ST & HANCOCK ST TO PICKER ST
DR3-07 - PICKER ST OUTLET TO DOLORES RIVER
DR3-08 - ARGENTINE ST, RIVER ST, ALLEY WY, & HANCOCK ST TO SILVER CREEK
DR3-09 - ARGENTINE ALLEY & RIVER STREET NORTH OF SILVER CREEK

SILVERGLANCE WAY QUADRANT SHEET INDEX
DR4-01 - SILVERGLANCE WY TO GLASGOW HWY
DR4-02 - SILVERGLANCE WY TO EXISTING SILVERGLANCE CULVERT
DR4-03 - SILVERGLANCE WY TO ABANDONED ACCESS ROAD TO EXSTING CULVERT

EDER STREET QUADRANT SHEET INDEX
DR5-01 - JONES MINE RD, EDER ST, & PICKER ST

PIEDMONT STREET QUADRANT SHEET INDEX
DR6-01 - PIEDMONT ST & ROAD 54.7
DR6-02 - ROAD 54.7 OUTLET

Legend
- TOWN OF RICO BOUNDARY
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S.
- DITCH & ROAD GRADING LOCATIONS
- DOLORES RIVER & SILVER CREEK QUADRANT DIVISION LINES

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

DRAINAGE CONTROLS OVERVIEW

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR-01
Date: 21-Feb-2025	
Scale: 1" = 400'	

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR-01 OVERVIEW SHEET.dwg

01 **MILL RD BEG. OF DITCH-01 PLAN VIEW**
SCALE - 1" = 50'

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO
- R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

N.T.S.

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

MILL RD DITCH-01

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	1" = 50'
Sheet	DR1-01

T:\BP--Rico VCUP_Unpaved Streets Capping and Drainage\6.0 Stormwater Management Plan\Production\DR1--SERIES SHEETS.dwg

01 MILL RD DITCH-01
PLAN VIEW
SCALE - 1" = 50'

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
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LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

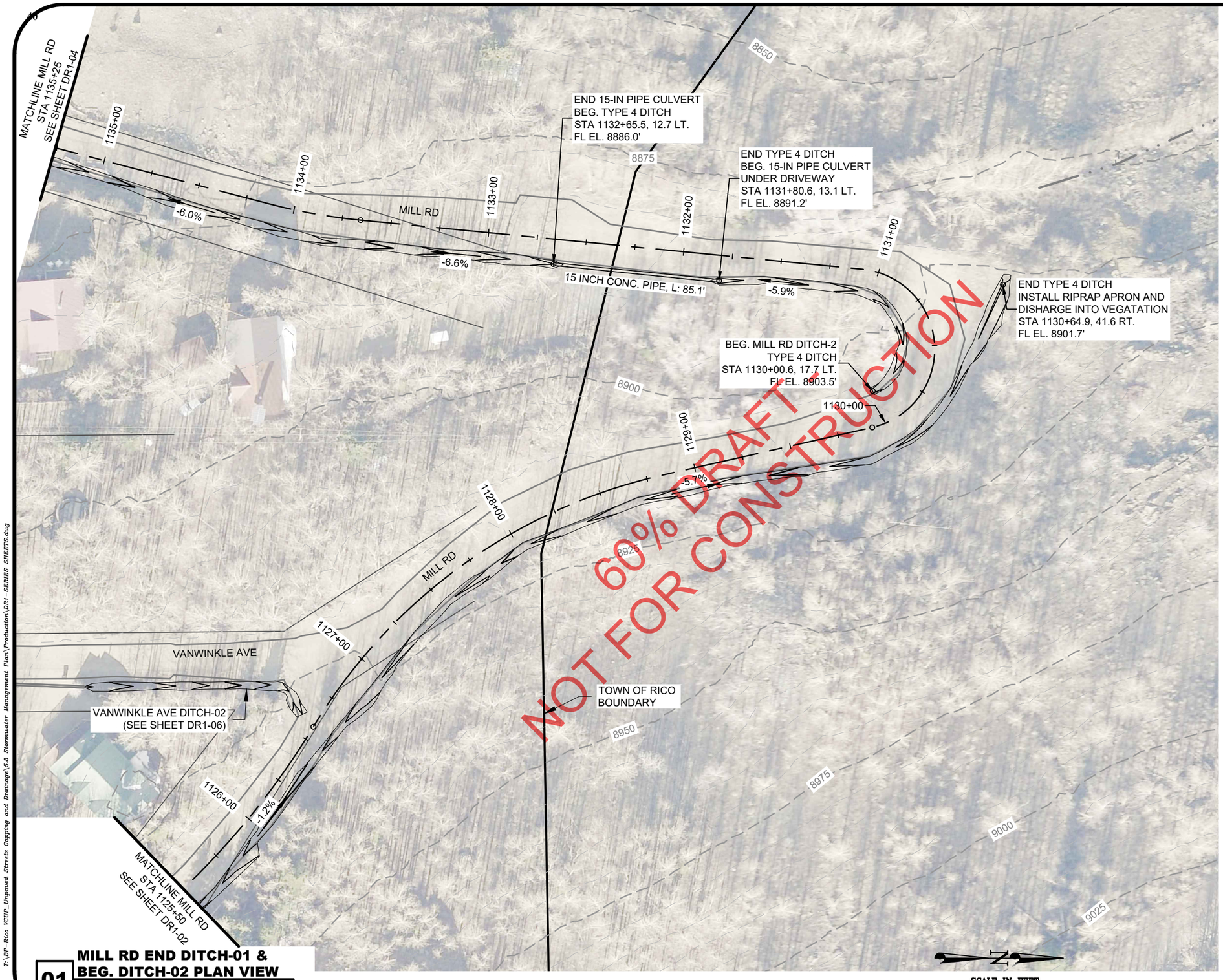
TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

MILL RD DITCH-01

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR1-02
Date: 21-Feb-2025	
Scale: 1" = 50'	



01 **MILL RD END DITCH-01 & BEG. DITCH-02 PLAN VIEW**
SCALE - 1" = 50'

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\6.8 Stormwater Management Plan\Production\DR1-SERIES SHEETS.dwg

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
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LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

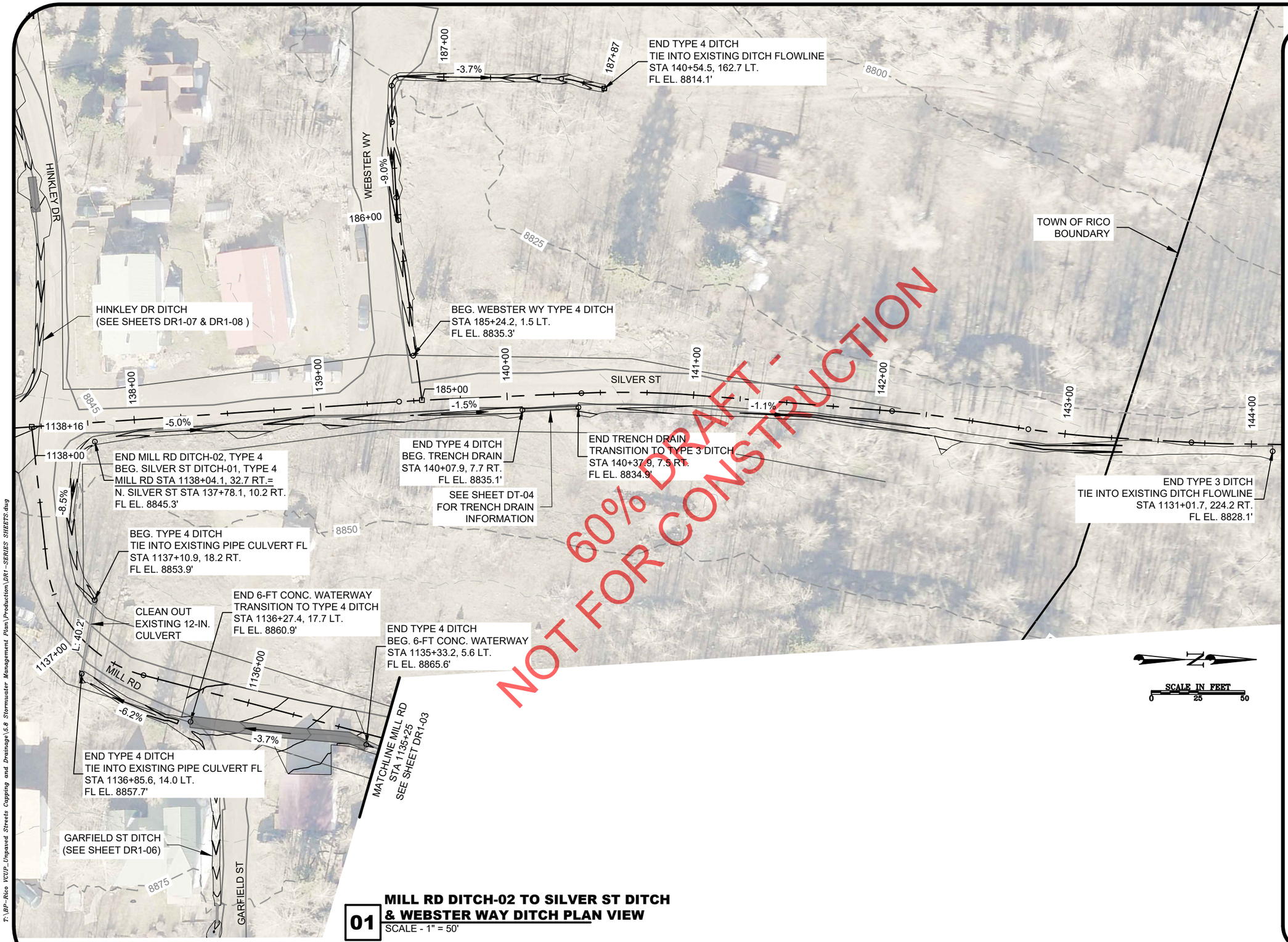
TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

MILL RD DITCH-01 END & BEG. MILL RD DITCH-02

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR1-03
Date: 21-Feb-2025	
Scale: 1" = 50'	



01 **MILL RD DITCH-02 TO SILVER ST DITCH & WEBSTER WAY DITCH PLAN VIEW**
SCALE - 1" = 50'

T:\BP--Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR1--SERIES SHEETS.dwg

General Notes

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LEGEND

- TOWN OF RICO
- R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

N.T.S.

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

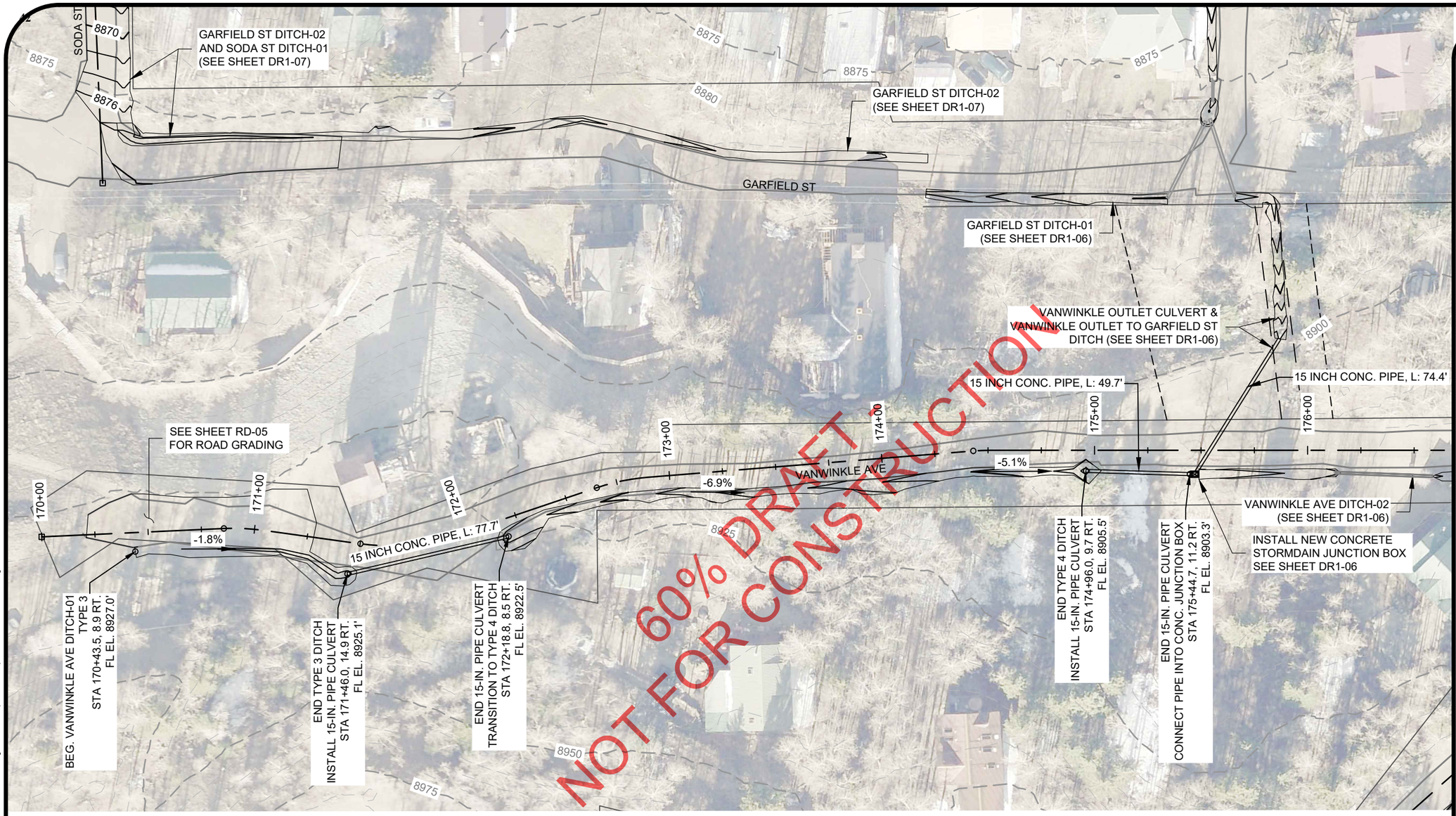
TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

MILL RD DITCH-02 TO SILVER ST
DITCH-01 & WEBSTER WY DITCH

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR1-04
Date: 21-Feb-2025	
Scale: 1" = 50'	



01 VANWINKLE DITCH-01 PLAN VIEW
SCALE - 1" = 50'

N

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
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LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S.
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

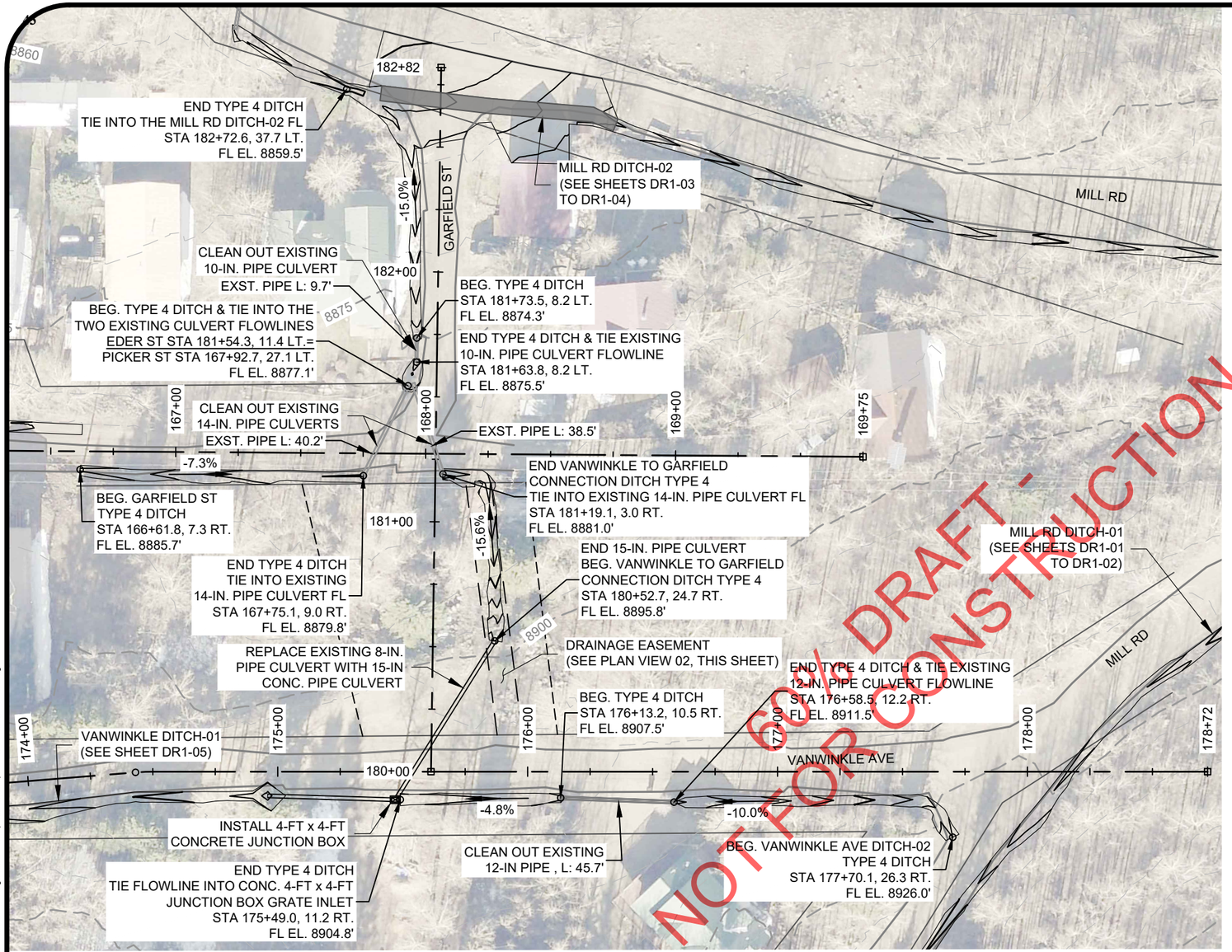
TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

VANWINKLE DITCH-01

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

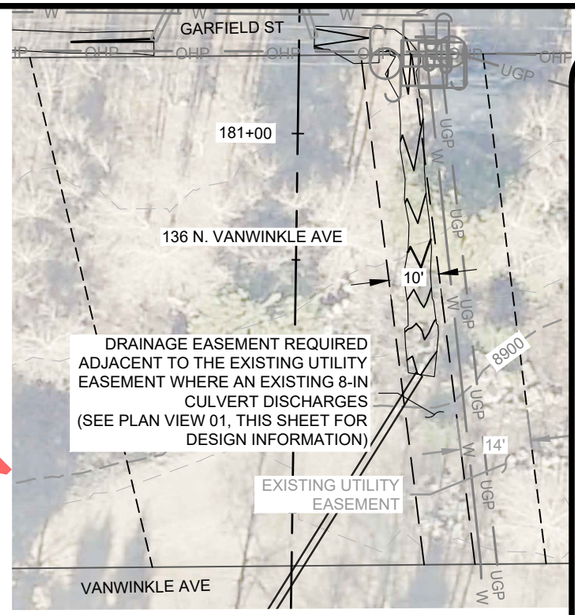
Project	RICO
Date	21-Feb-2025
Scale	1" = 50'
Sheet	DR1-05



01 VANWINKLE AVE DITCH-02 TO GARFIELD ST TO MILL RD DITCH-02 PLAN VIEW

SCALE - 1" = 50'

SCALE IN FEET
0 25 50



PLAN VIEW 02 LEGEND

- EXISTING POWER POLE
- EXISTING POWER BOX
- OHP — EXISTING OVERHEAD POWER
- UGP — EXISTING UNDERGROUND POWER
- W — EXISTING WATER LINE
- EXISTING & PROPOSED EASEMENT LINE
- EXISTING INTERNAL PROPERTY LINES

02 136 N. VANWINKLE AVE REQUIRED DRAINAGE EASEMENT PLAN VIEW

SCALE - 1" = 30'

SCALE IN FEET
0 15 30

General Notes

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LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

VANWINKLE DITCH-02 TO GARFIELD ST TO MILL RD DITCH-02

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	AS SHOWN
Sheet	DR1-06

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MATCHLINE SODA ST.
STA 1103+75
SEE SHEET DR1-08

END 6-FT CONC. WATERWAY
BEG. TYPE 2 DITCH
SODA ST STA 1103+23.1, 12.6 RT.=
SILVER ST STA 133+21.4, 31.1 LT.
FL EL. 8837.2'

END TYPE 1 DITCH
BEG. TYPE 2 DITCH AND
TRANSITION INTO WATERWAY
STA 150+29.1, 157.5 LT.
FL EL. 8839.0'

END TYPE 2 DITCH
BEG. 6-FT CONC. WATERWAY
STA 1102+67.5, 6.4 RT.
FL EL. 8841.6'

END 6-FT. CONC. WATERWAY
TRANSITION TO TYPE 2 DITCH
STA 1102+52.5, 5.6 RT.
FL EL. 8842.9'

EXISTING DRIVEWAY

END TYPE 2 DITCH
BEG. 6-FT. CONC. WATERWAY
STA 1102+40.8, 5.4 RT.
FL EL. 8844.2'

END 6-FT. CONC. WATERWAY
BEG. TYPE 2 DITCH
STA 1101+58.6, 7.9 RT.
FL EL. 8854.9'

TRANSITION ALLEYGRADING
INTO CONCRETE WATERWAY
STA 150+19.7, 4.7 LT.
FL EL. 8856.0'

END TYPE 2 DITCH
BEG. 6-FT. CONC. WATERWAY
STA 1101+38.9, 9.4 RT.
FL EL. 8857.7'

SEE SHEET RD-05
FOR ROAD GRADING

END GARFIELD ST DITCH-02 TYPE 3
TRANSITION TO SODA ST. DITCH-01 TYPE 2
GARFIELD ST STA 162+87.6, 10.2 LT.=
SODA ST STA 1100+20.0, 14.8 RT.
FL EL. 8877.7'

SEE SHEET RD-05
FOR ROAD GRADING

END 4-FT. CONC. WATERWAY
TIE INTO SILVER ST DITCH-03
STA 154+81.1, 16.4 LT.
FL EL. 8845.3'

END TYPE 1 DITCH
BEG. 6-FT. CONC. WATERWAY
STA 136+01.3, 13.5 LT.
FL EL. 8844.4'

EXISTING DRIVEWAY

END 6-FT. CONC. WATERWAY
TRANSITION TO TYPE 1 DITCH
STA 135+84.9, 13.9 LT.
FL EL. 8844.4'

GRADE LOW SPOT IN ROAD
TO DRAIN TOWARD THE DITCH

BEG. 4-FT. CONC. WATERWAY
STA 154+57.5, 15.0 LT.
FL EL. 8845.8'

TRANSITION FROM
GARFIELD ALLEY GRADING
TO 4-FT CONC. WATERWAY
STA 154+41.9, 7.7 LT.
FL EL. 8847.0'

GARFIELD ALLEY GRADING
HIGH POINT
STA 152+20.0, 4.6 LT.
FL EL. 8864.8'

END SILVER ST GRADING & TRANSITION
TO HINKLEY DR TYPE 4 DITCH
N. SILVER ST STA 137+27.9, 9.3 LT.=
HINKLEY DR STA 100+06.2, 28.4 LT.
FL EL. 8844.6'

BEG. SILVER ST DITCH-03
TYPE 1 DITCH
STA 154+84.1, 13.8 LT.
FL EL. 8845.5'

CREST OF SILVER ST GRADING
BLEND INTO BEG. OF SILVER ST DITCH-03
STA 136+44.1, 7.3 LT.
FL EL. 8845.2'

MATCHLINE HINKLEY DR.
STA 100+75
SEE SHEET DR1-08

END TRANSITION
BEG. TYPE 4 DITCH
STA 100+29.0, 8.5 LT.
FL EL. 8843.1'

SILVER ST DITCH-01
(SEE SHEET DR1-04)

GRADE SILVER ST TO DRAIN
TOWARDS THE HINKLEY DR
DITCH (SEE DT.05, SHEET DT-02)

BEG. GARFIELD ST
DITCH-02 TYPE 3
STA 166+62.5, 8.7 LT.
FL EL. 8886.8'

SILVER ST
SODA ST
GARFIELD ALLEY
GARFIELD ST
HINKLEY DR

-8.4% -3.7% -1.0% -1.4% -5.0% -4.5% -6.2% -0.7% -8.3% -9.9% -0.7% -13.3% -17.0% -4.6% -3.9% -10.7% -4.1%

1103+00 133+00 134+00 135+00 136+00 154+90 137+00 138+00 100+00 1102+00 150+00 151+00 152+00 153+00 154+00 1101+00 163+00 164+00 165+00 166+00 1100+00

8845 8846 8850 8855 8858 8860 8864 8865 8870 8875 8876 8880

NOT FOR CONSTRUCTION
60% DRAFT

GARFIELD ST TO SILVER ST & SODA ST DITCH-01 & HINKLEY DR DITCH PLAN VIEW

01 SCALE - 1" = 40'

SCALE IN FEET
0 20 40

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
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LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

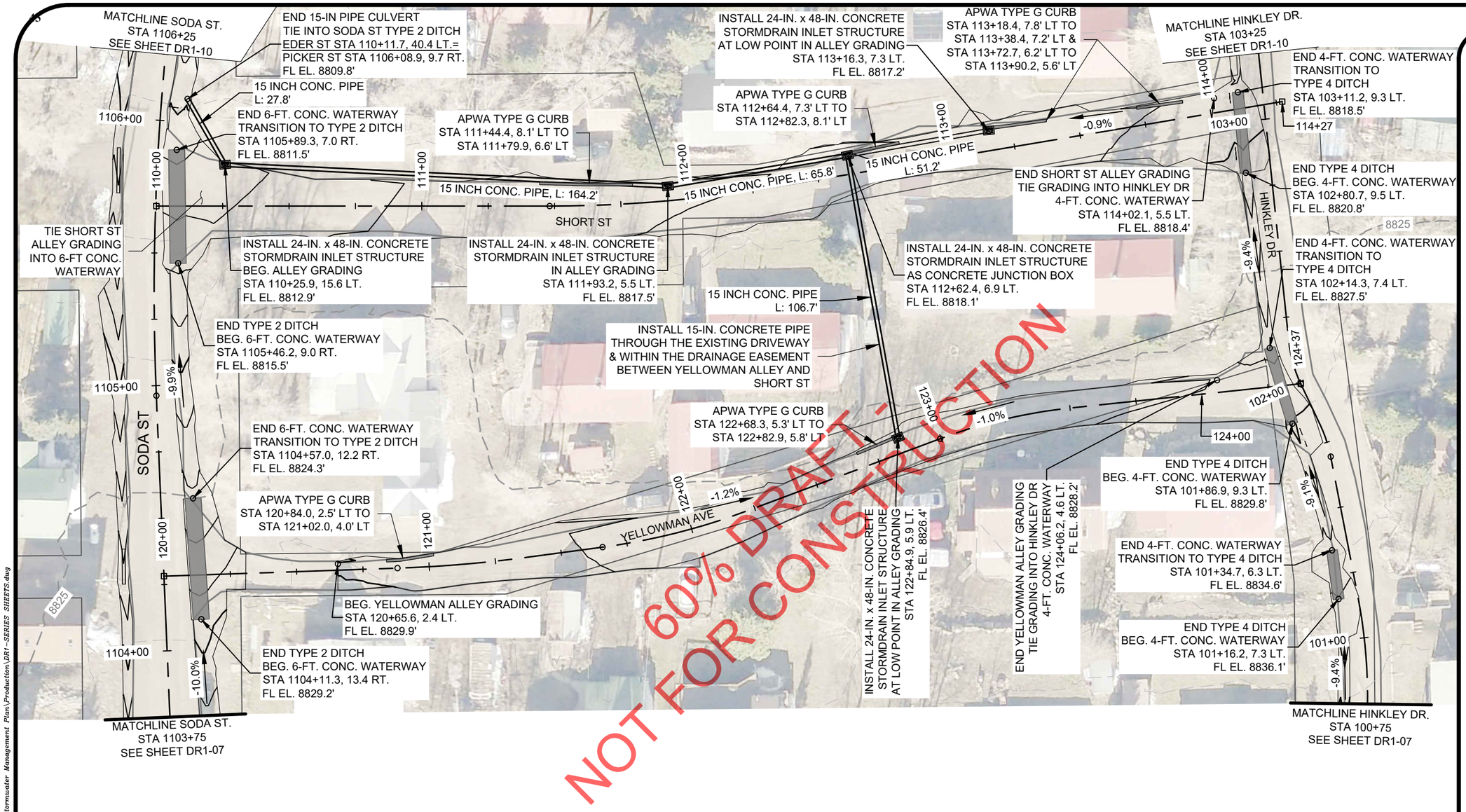
GARFIELD ST TO SILVER ST &
BEG. SODA ST & HINKLEY DR

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR1-07
Date: 21-Feb-2025	
Scale: 1" = 40'	

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR1-SERIES SHEETS.dwg



01 **SODA ST, HINKLEY ST, YELLOWMAN AVE, & SHORT ST DITCHES PLAN VIEW**
SCALE - 1" = 40'

SCALE IN FEET
0 20 40

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
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LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

SODA ST & HINKLEY DR &
YELLOWMAN AVE & SHORT ST

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	1" = 40'
Sheet	DR1-08

MATCHLINE SODA ST. STA 1106+25
SEE SHEET DR1-10

END TRENCH DRAIN
BEG. TYPE 4 DITCH
STA 1105+88.8, 14.8 LT.
FL EL. 8810.8'

END TYPE 4 DITCH
BEG. TRENCH DRAIN
STA 1105+72.1, 14.2 LT.
FL EL. 8812.3'

END TRENCH DRAIN
BEG.TYPE 4 DITCH
STA 1104+39.0, 14.7 LT.
FL EL. 8825.6'

END TYPE 4 DITCH
BEG. TRENCH DRAIN
STA 1104+25.8, 15.2 LT.
FL EL. 8826.6'

1106+00
1105+00
1104+00
SODA ST
8.9%
8825

SHORT ST
SHORT ST ALLEY GRADING
(SEE SHEET DR1-08)

YELLOWMAN AVE
YELLOWMAN AVE ALLEY GRADING
(SEE SHEET DR1-08)

SODA ST DITCH-01
(SEE SHEETS DR1-07 & DR1-08)

SILVER CREEK

END 15-IN. PIPE CULVERT
AT SILVER CREEK BANK
INSTALL OUTLET APRON
STA 130+05.6, 13.8 LT.
PIPE INV. EL. 8832.0'

INSTALL 48-IN. x 48-IN. CONC.
STORMDRAIN CATCH BASIN
AT LOW POINT OF ROAD
STA 131+54.5, 13.5 LT.
RIM EL. 8836.3'

15 INCH CONC. PIPE
L: 18.8'

BEG. SODA ST. DITCH-02 TYPE 4
STA 1103+17.9, 28.7 LT.
FL EL. 8837.1'

SILVER ST DITCH-03
(SEE SHEET DR1-07)

130+00
131+00
132+00
133+00
134+00
135+00
1103+00

15 INCH CONC. PIPE, L: 147.9'
-1.8%

SILVER ST

END SILVER ST. DITCH-04 TYPE 1
INSTALL 15-IN. CONC. PIPE CULVERT
UNDER DRIVEWAY TO 48-IN. x 48-IN.
CONC. STORMDRAIN CATCH BASIN
STA 131+74.7, 13.7 LT.
FL EL. 8834.5'

BEG. SILVER ST. DITCH-04 TYPE 1
STA 132+77.9, 21.8 LT.
FL EL. 8837.7'

SILVER ST

8845
8850

01 SILVER ST DITCH-04 TO SILVER CREEK & SODA ST DITCH-02 PLAN VIEW

SCALE - 1" = 50'

END 15-IN. PIPE CULVERT
AT SILVER CREEK BANK
(SEE DT.02, SHEET DT-05)
STA 160+06.4, 13.6 LT.
PIPE INV. EL 8873.2'

END TYPE 4 DITCH
BEG. 12-IN. PIPE CULVERT
STA 161+12.0, 14.9 LT.
FL EL. 8874.5'

END TYPE 3 DITCH
BEG. TYPE 4 DITCH
STA 161+27.1, 11.9 LT.
FL EL. 8876.2'

160+00
161+00
162+00
163+00

15 INCH CORR. HDPE PIPE, L: 104.9'
-3.2%

SILVER CREEK
GARFIELD ST

BEG. TYPE 3 DITCH
STA 161+85.5, 10.7 LT.
FL EL. 8878.0'

SODA ST
8870
8875
8876

GARFIELD ST DITCH-02
AND SODA ST DITCH-01
(SEE SHEET DR1-07)

02 GARFIELD ST & SILVER ST TO SILVER CREEK & SODA ST DITCH-02 PLAN VIEW

SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
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LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

GARFIELD ST & SILVER ST TO SILVER CREEK & SODA ST

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR1-09
Date: 21-Feb-2025	
Scale: 1" = 50'	

T:\AP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR1-SERIES SHEETS.dwg

INSTALL 48-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN HINKLEY ST STA 108+17.2, 9.4 LT.= SODA ST STA 1108+39.9, 18.0 LT. RIM EL. 8794.3'

GLASGOW AVE

END 18-IN. PIPE CULVERT AT SILVER CREEK BANK PLACE 12-IN. MINUS RIPRAP AROUND PIPE OUTLET STA 1108+37.9, 27.5 LT. PIPE INV. EL. 8785.7'

1108+76

18 INCH CONC. PIPE L: 56.8'

INSTALL 48-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN HINKLEY ST STA 107+68.6, 10.0 LT.= SODA ST STA 1108+51.7, 29.1 RT. RIM EL. 8794.0'

INSTALL 24-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN STA 106+92.7, 5.9 LT. RIM EL. 8793.8'

108+30

108+00

SODA ST DITCH-02 END TYPE 4 DITCH TIE INTO 48-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN RIM EL. STA 1108+37.5, 17.5 LT. FL EL. 8794.5'

15 INCH CONC. PIPE L: 73.2'

107+00

15 INCH CONC. PIPE, L: 75.8'

INSTALL 24-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN STA 106+12.4, 7.4 LT. RIM EL. 8796.0'

15 INCH CORR. HDPE PIPE L: 32.0'

SODA ST DITCH-01 END TYPE 2 DITCH INSTALL 15-IN. PIPE CULVERT STA 1108+20.4, 16.4 RT. FL EL. 8790.3'

1108+00

106+00

15 INCH CONC. PIPE L: 66.1'

INSTALL 24-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN STA 105+41.7, 5.3 LT. RIM EL. 8799.9'

8800

SILVER CREEK

-6.5%

HINKLEY DR

8775

INSTALL 24-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN STA 104+91.2, 6.3 LT. RIM EL. 8803.8'

15 INCH CONC. PIPE L: 46.6'

105+00

-6.0%

SODA ST

8800

15 INCH CONC. PIPE, L: 76.4'

SODA ST DITCH-01 END 6-FT. CONC. WATERWAY TRANSITION TO TYPE 2 DITCH STA 1107+35.1, 10.4 RT. FL EL. 8800.4'

INSTALL 24-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN STA 104+10.8, 10.1 LT. RIM EL. 8810.8'

1107+00

104+00

END TYPE 4 DITCH TIE FL INTO 24-IN. x 48-IN. CONC. STORMDRAIN CATCH BASIN STA 104+08.6, 10.0 LT. FL EL. 8809.8'

SODA ST DITCH-01 END TYPE 2 DITCH BEG. 6-FT. CONC. WATERWAY STA 1106+75.8, 9.5 RT. FL EL. 8803.7'

-8.5%

-7.5%

MATCHLINE SODA ST. STA 1106+25
SEE SHEET DR1-09 FOR SODA ST DITCH-02
SEE SHEET DR1-08 FOR SODA ST DITCH-01

MATCHLINE HINKLEY DR. STA 103+25
SEE SHEET DR1-08

SODA ST DITCHES 01 & 02 AND HINKLEY DR TO SILVER CREEK

01 PLAN VIEW

SCALE - 1" = 40'

N

SCALE IN FEET
0 20 40

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

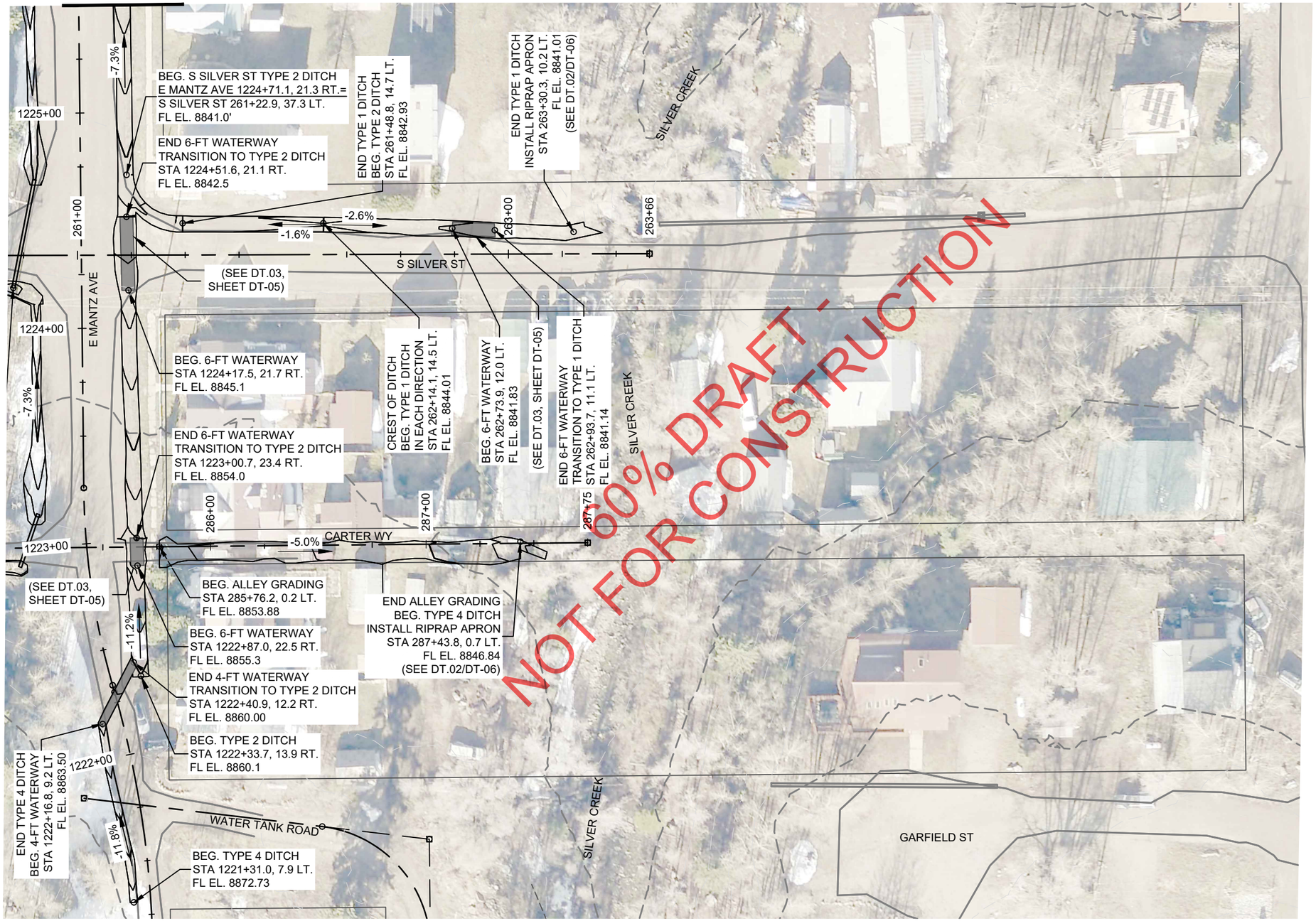
TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

SODA ST DITCHES 01 & 02 AND HINKLEY DR TO SILVER CREEK

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR1-10
Date: 21-Feb-2025	
Scale: 1" = 40'	



01 MANTZ DITCH-01, CARTER WY & SILVER ST NORTH TO CREEK
PLAN VIEW
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

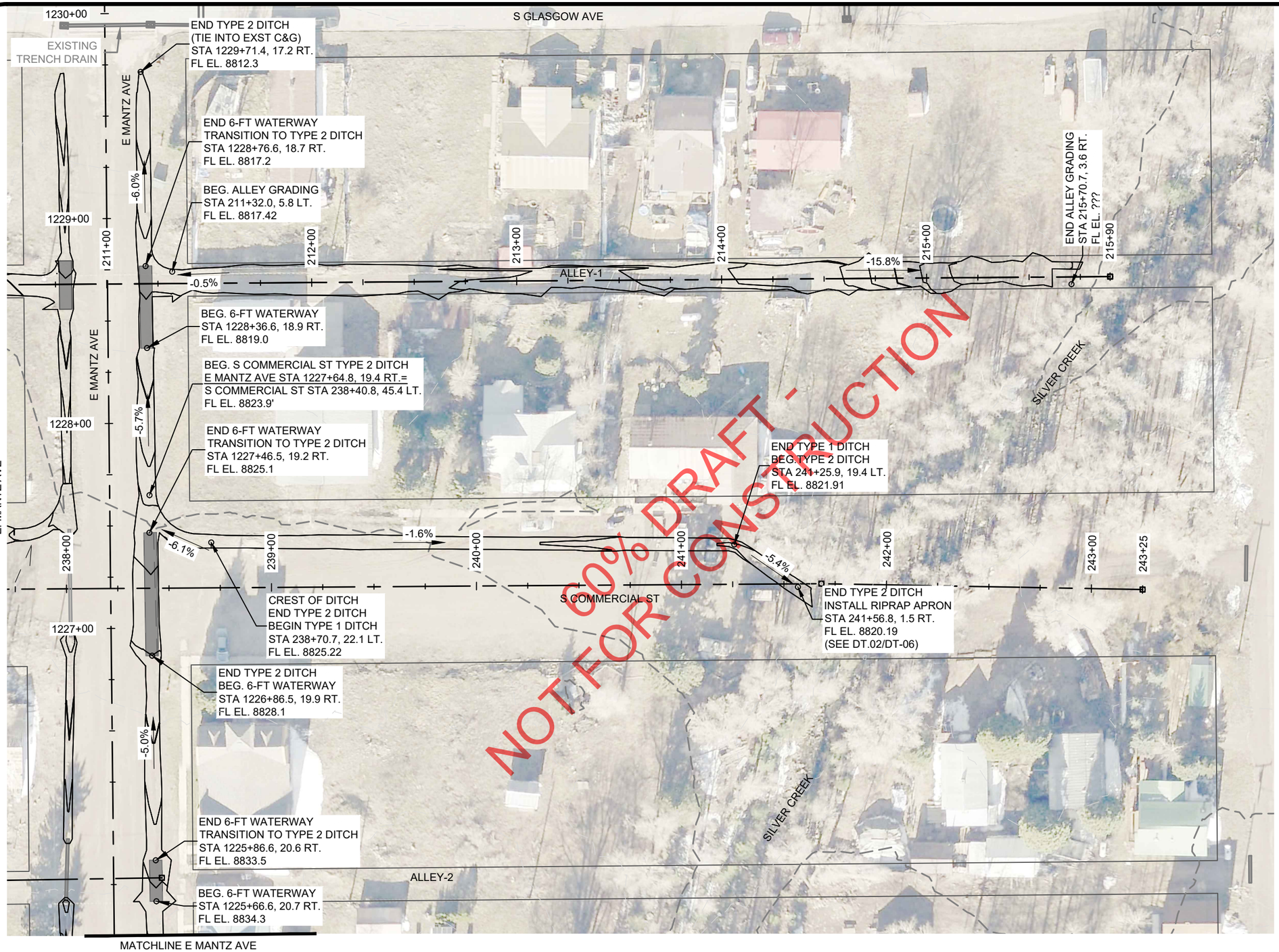
TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

MANTZ DITCH-01, CARTER WY &
SILVER ST NORTH TO CREEK

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR2-01
Date: 21-Feb-2025	
Scale: 1" = 50'	



01 **MANTZ DITCH-01, COMMERCIAL ST & ALLEY-1 NORTH TO CREEK**
PLAN VIEW
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

MANTZ DITCH-01, COMMERCIAL ST & ALLEY-1 NORTH TO CREEK

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR2-02
Date: 21-Feb-2025	
Scale: 1" = 50'	

01 SILVER ST SO. ROAD GRADING PLAN VIEW

SCALE - 1" = 50'

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS (N.T.S.)
- CONCRETE WATERWAY

No.	Revision/Issue	Date

SCALE IN FEET
0 25 50

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

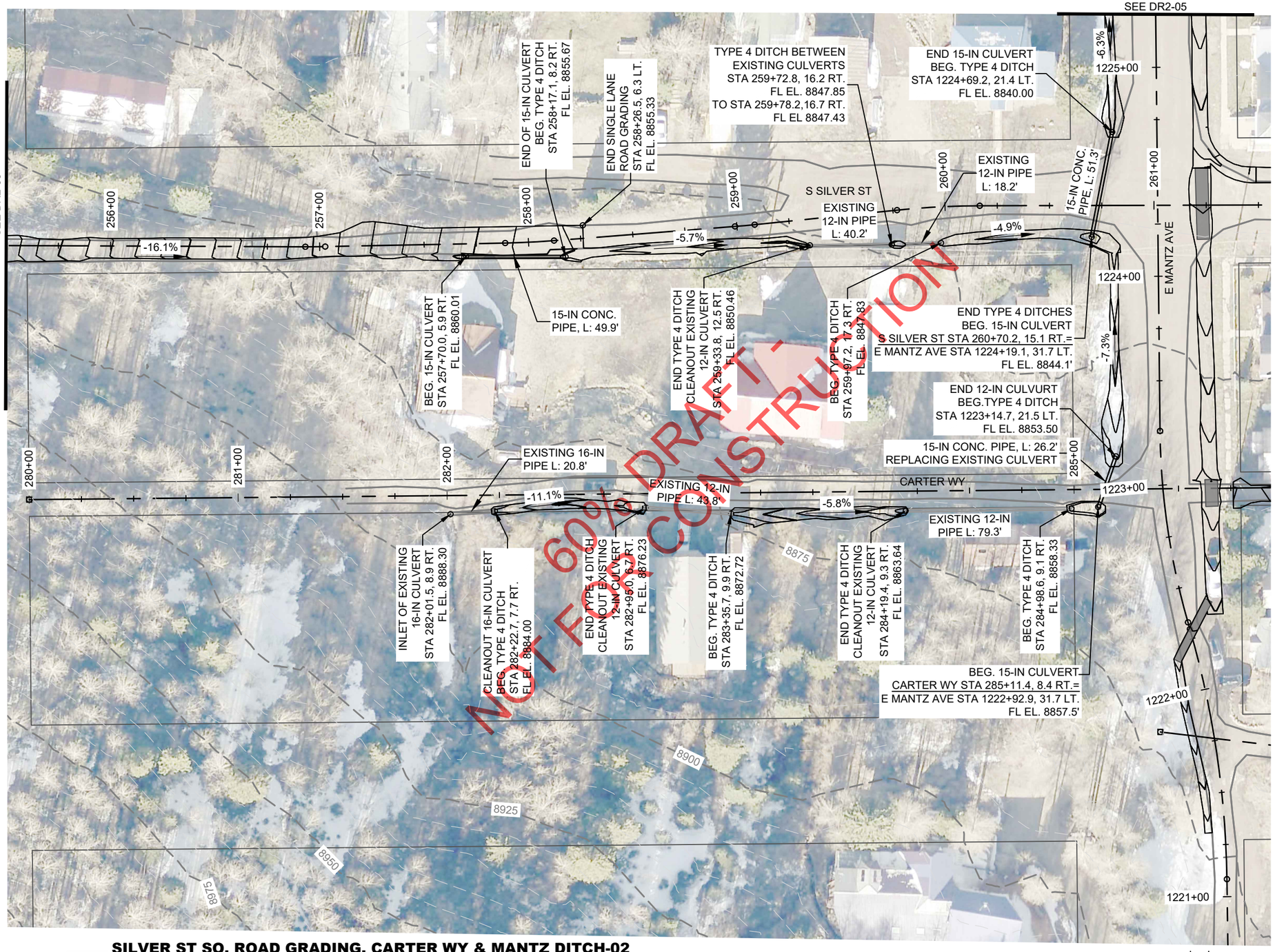
SILVER ST SO. ROAD GRADING

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR2-03
Date: 21-Feb-2025	
Scale: 1" = 50'	

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR2 SE RICO SHEETS.dwg



01 **SILVER ST SO. ROAD GRADING, CARTER WY & MANTZ DITCH-02**
PLAN VIEW
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

SILVER ST SO. ROAD GRADING, CARTER WY & MANTZ DITCH-02

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR2-04
Date: 21-Feb-2025	
Scale: 1" = 50'	

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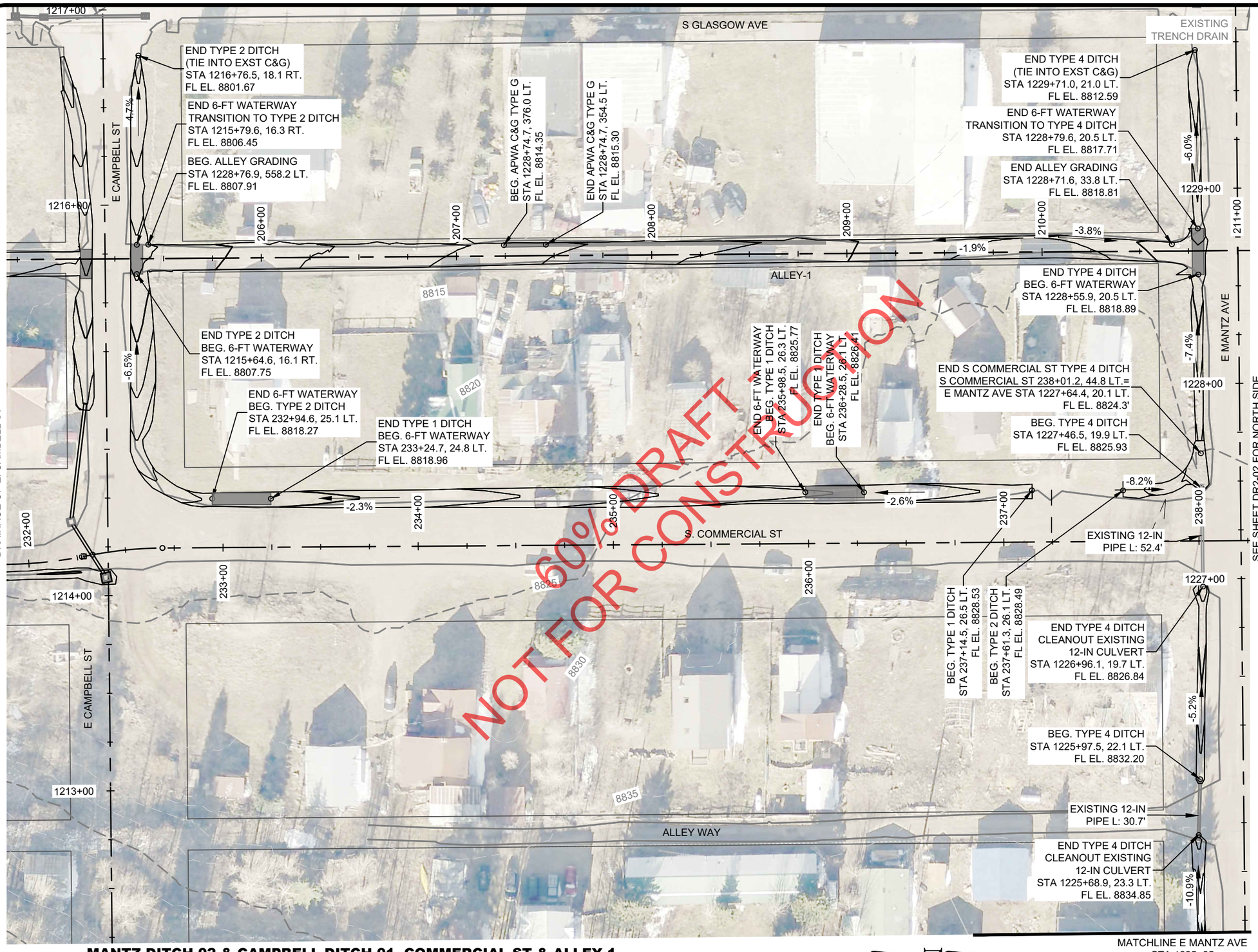

01 **MANTZ DITCH-02 & CAMPBELL DITCH-01, COMMERCIAL ST & ALLEY-1 PLAN VIEW**
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

MANTZ DITCH-02 & CAMPBELL DITCH-01, COMMERCIAL ST & ALLEY-1
RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR2-05
Date: 21-Feb-2025	
Scale: 1" = 50'	

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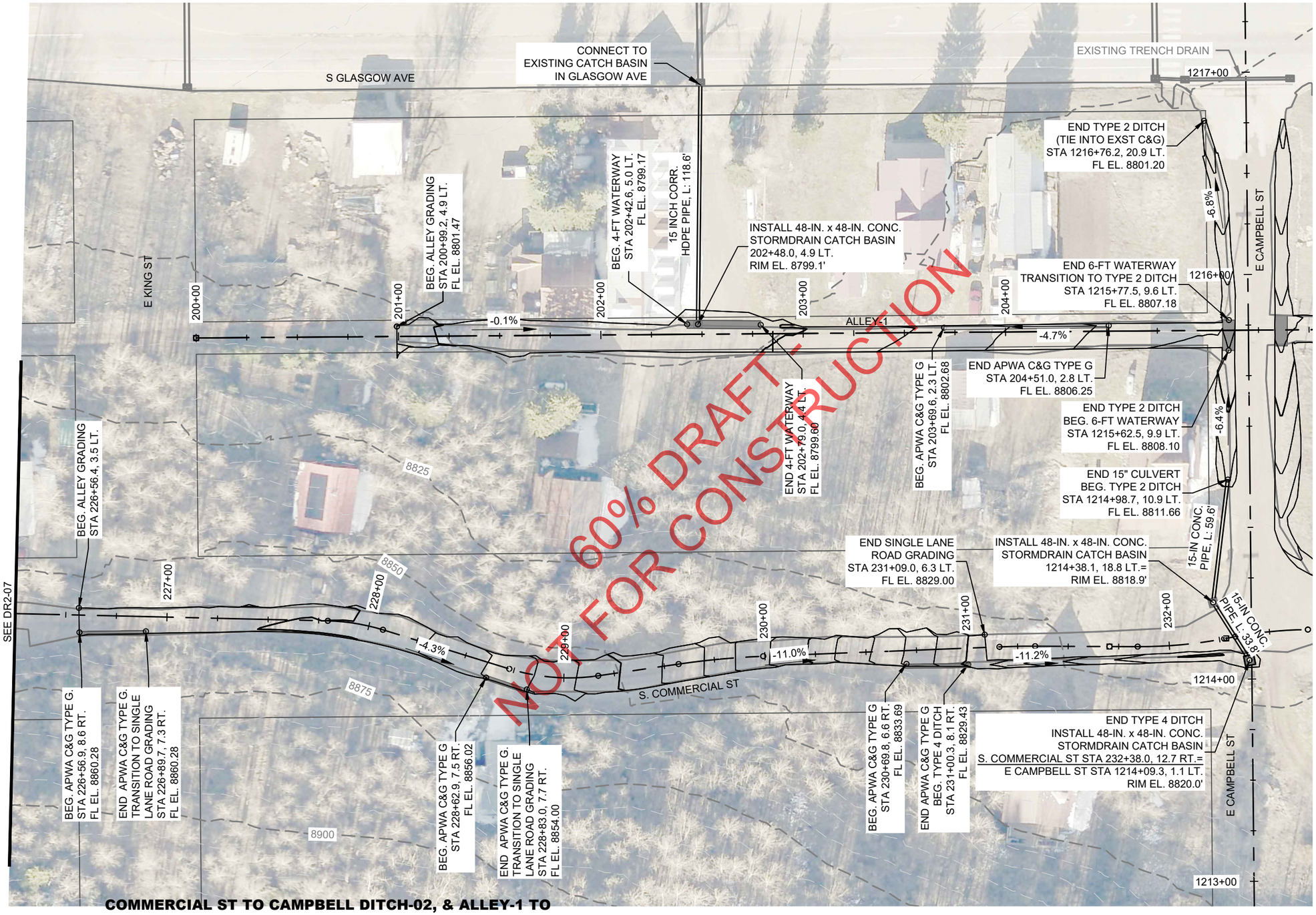


COMMERCIAL ST TO CAMPBELL DITCH-02, & ALLEY-1 TO OUTLET

01 PLAN VIEW

SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

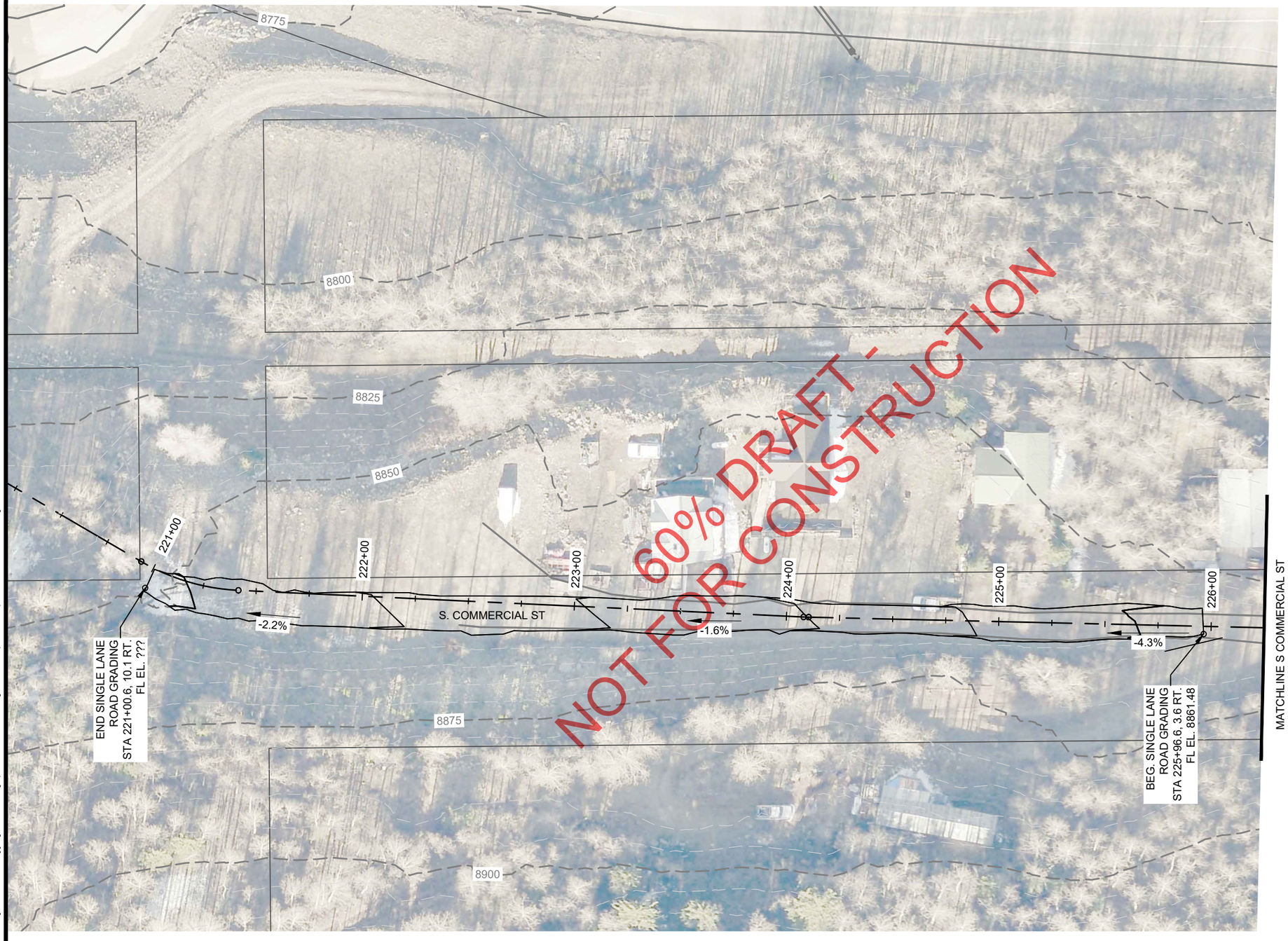
TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

COMMERCIAL ST TO CAMPBELL DITCH-02, & ALLEY-1 TO OUTLET

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR2-06
Date: 21-Feb-2025	
Scale: 1" = 50'	



01 **COMMERCIAL ST SO. GRADING & DITCH OUTLET**
PLAN VIEW
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

COMMERCIAL ST SO. GRADING & DITCH OUTLET

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR2-07
Date: 21-Feb-2025	
Scale: 1" = 50'	

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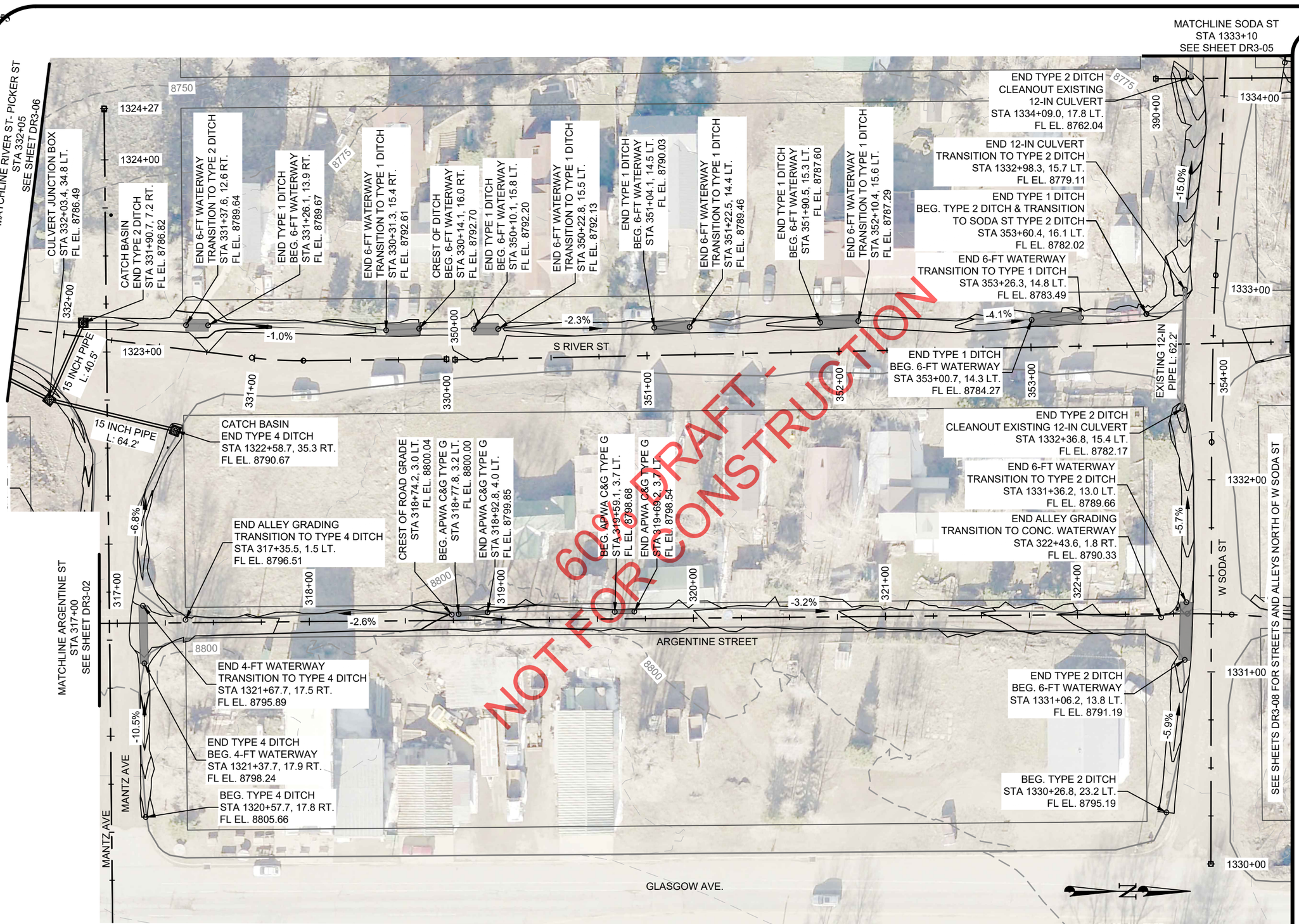


ARGENTINE ST, RIVER ST, MANTZ AVE & SODA ST

01 PLAN VIEW

SCALE - 1" = 50'

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

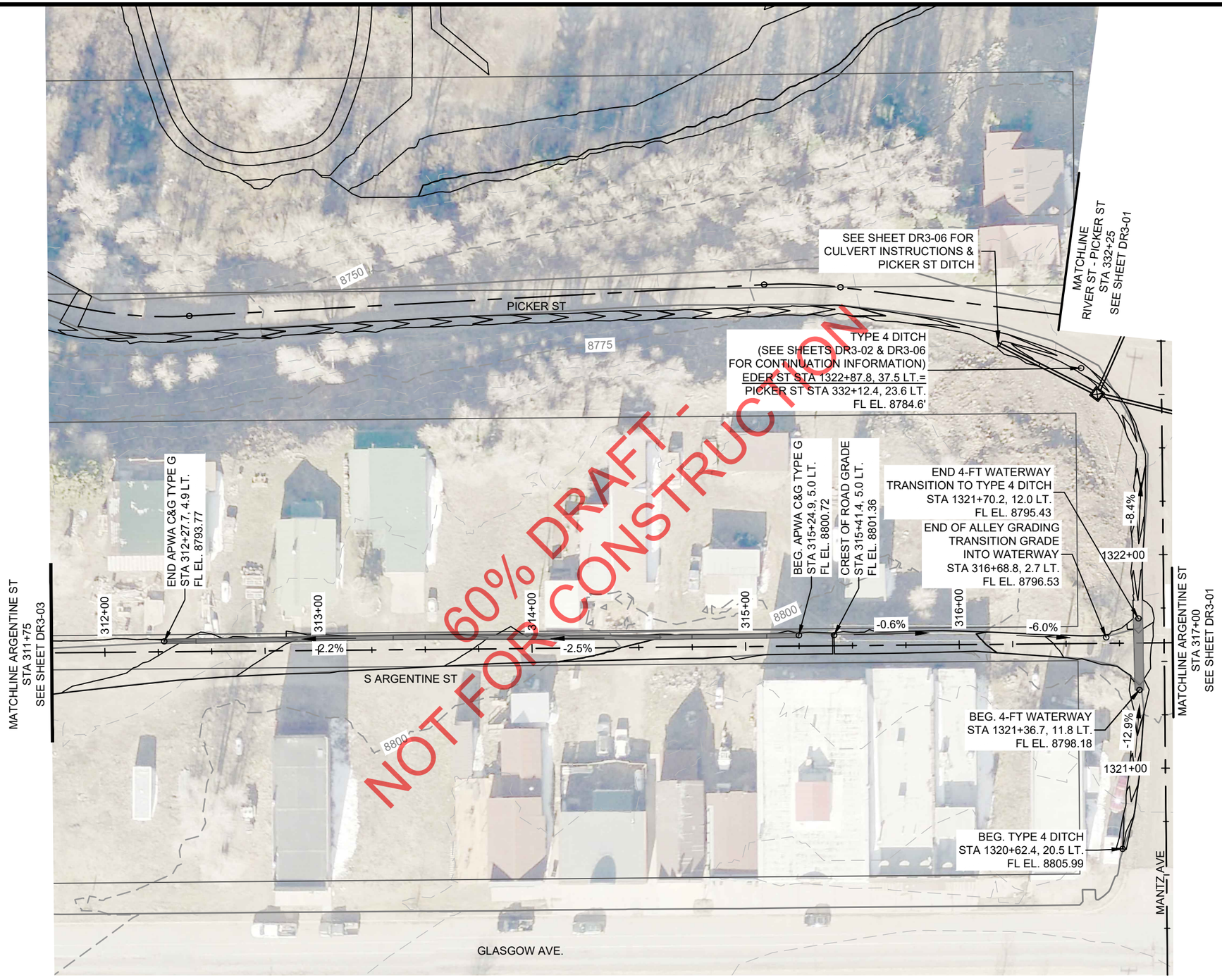
ARGENTINE ST, RIVER ST, MANTZ AVE & SODA ST

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR3-01
Date: 21-Feb-2025	
Scale: 1" = 50'	

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5-8 Stormwater Management Plan\Production\DR3 RICO SHEETS.dwg



01 MANTZ AVE TO PICKER ST & ARGENTINE ALLEY PLAN VIEW

SCALE - 1" = 50'

N

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

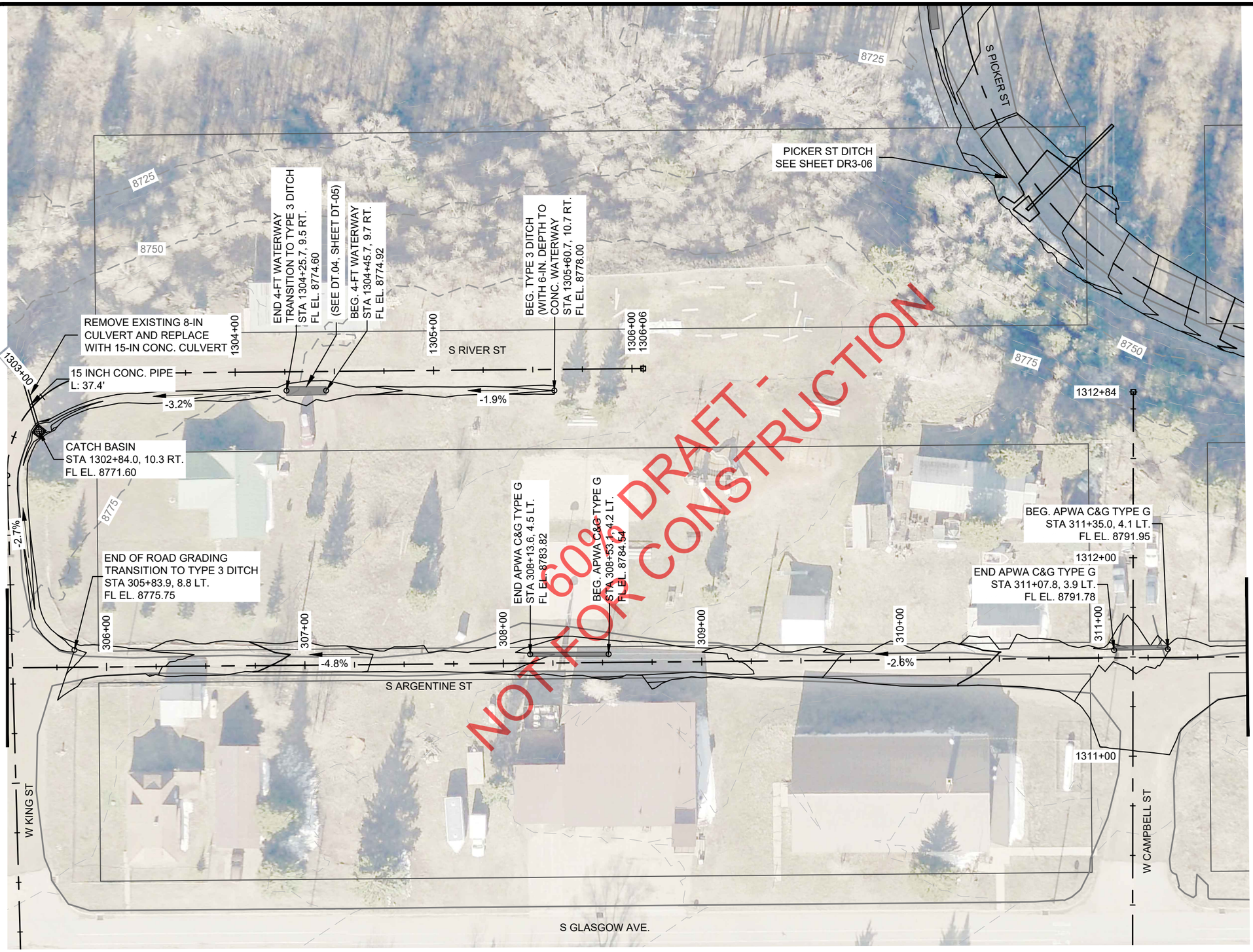
MANTZ AVE TO PICKER ST & ARGENTINE ALLEY

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR3-02
Date: 21-Feb-2025	
Scale: 1" = 50'	

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR3 RICO SHEETS.dwg



01 **ARGENTINE ALLEY TO KING ST PLAN VIEW**
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO
- R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

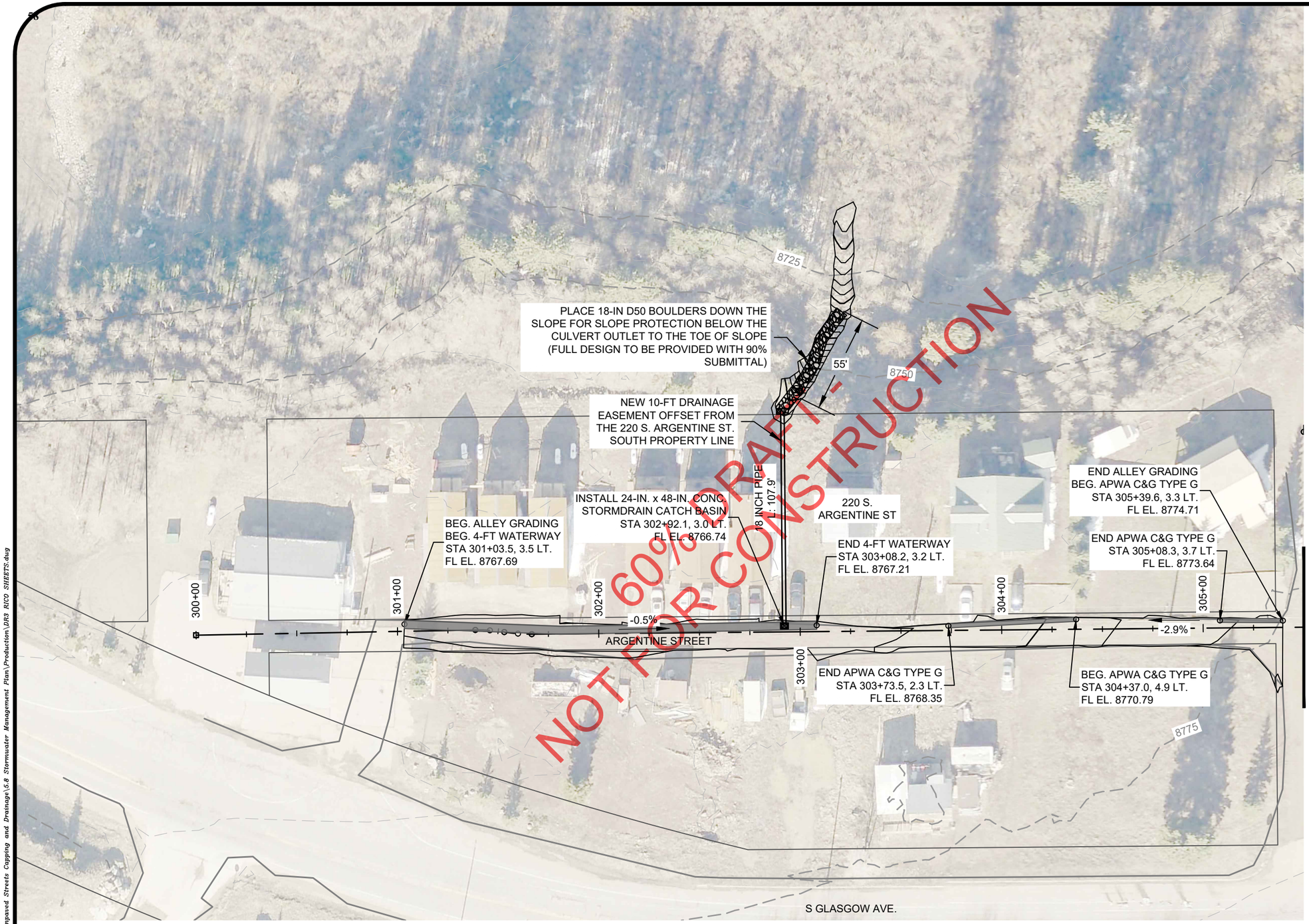
ARGENTINE ALLEY TO KING ST

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	1" = 50'
Sheet	DR3-03

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR3 RICO SHEETS.dwg



01 ARGENTINE ALLEY TO OUTLET CULVERT PLAN VIEW
SCALE - 1" = 50'

N

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

ARGENTINE ALLEY TO OUTLET CULVERT

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR3-04
Date: 21-Feb-2025	
Scale: 1" = 50'	

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.0 Stormwater Management Plan\Production\DR3 RICO SHEETS.dwg

DOLORES RIVER

PROPERTY OF
TOWN OF RICO

END TYPE 1 DITCH
INSTALL RIPRAP APRON &
DISCHARGE INTO VEGETATION
STA 1337+50.5, 46.8 LT.
FL EL. 8736.34

END TYPE 3 DITCH
INSTALL RIPRAP APRON &
DISCHARGE INTO VEGETATION
STA 368+07.5, 29.8 LT.
FL EL. 8732.21

END TYPE 4 DITCH
TRANSITION TO CULVERT
STA 370+38.1, 12.6 LT.
FL EL. 8738.80

CLEANOUT EXISTING
12-IN PIPE CULVERT, L: 20.0'

BEG. TYPE 3 DITCH
STA 370+18.1, 12.2 LT.
FL EL. 8737.49

END TYPE 3 DITCH
TRANSITION TO CULVERT
STA 371+48.9, 12.7 LT.
FL EL. 8743.25

CLEANOUT EXISTING
12-IN PIPE CULVERT, L: 18.0'

BEG. TYPE 4 DITCH
STA 371+24.0, 11.5 LT.
FL EL. 8742.21

END TYPE 3 DITCH
BEG. TYPE 4 DITCH
STA 370+75.5, 10.5 LT.
FL EL. 8741.41

END 6-FT WATERWAY
TRANSITION TO TYPE 1 DITCH
STA 1336+37.4, 12.5 LT.
FL EL. 8740.38

(SEE DT.03, SHEET DT-05)

BEG. 6-FT WATERWAY
STA 1335+93.8, 16.2 LT.
FL EL. 8742.61

CLEANOUT EXISTING 14-IN CULVERT
TRANSITION TO CONC. WATERWAY
STA 1335+80.8, 13.5 LT.
FL EL. 8743.59

BEG. TYPE 3 DITCH
STA 372+43.8, 17.1 LT.
FL EL. 8746.54

CLEAN OUT EXISTING
14-IN. PIPE CULVERT

END TYPE 2 DITCH
CLEANOUT EXISTING 14-IN CULVERT
STA 1335+40.0, 16.3 LT.
FL EL. 8748.32

CLEANOUT EXISTING 12-IN CULVERT
TRANSITION TO TYPE 2 DITCH
STA 1334+38.8, 18.0 LT.
FL EL. 8759.00

367+00
368+00
369+00
370+00
371+00
372+00
1337+80
1337+00
1336+00
380+00
1335+00

-2.8%
-5.7%
-1.0%
-2.4%
-3.5%
-10.8%

8750
8775

N HANCOCK ST
W SODA ST

SEE DR3-08 FOR STREETS AND ALLEYS NORTH OF W SODA ST

MATCHLINE SODA ST
STA 1333+10
SEE SHEET DR3-01

01 SODA ST TO OUTLET & HANCOCK ST TO OUTLET PLAN VIEW

SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO
- R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

SODA ST TO OUTLET &
HANCOCK ST TO OUTLET

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO	Sheet	DR3-05
Date	21-Feb-2025		
Scale	1" = 50'		

MATCHLINE PICKER ST STA 341+75
SEE SHEET DR3-07

END 4-FT WATERWAY TRANSITION TO TYPE 3 DITCH
STA 360+05.7, 17.9 LT.
FL EL. 8723.86

(SEE DT.04, SHEET DT-05)

BEG. 4-FT WATERWAY
STA 360+34.2, 9.0 LT.
FL EL. 8723.99

360+00

361+00

362+00

363+00

364+00

365+00

366+00

-0.7%

-0.8%

-1.0%

-0.9%

-1.6%

-0.8%

S HANCOCK ST

BEG. TYPE 3 DITCH
STA 363+63.1, 10.8 LT.
FL EL. 8727.93

END ROAD GRADING
STA 363+33.8, 1.3 LT.
CL EL. 8728.24

SEE SHEET RD-04
FOR ROAD GRADING

BEG. ROAD GRADING
STA 366+12.4, 0.4 LT.
CL EL. 8729.74

S PICKER ST STA 340+55.1, 15.8 LT.=
S HANCOCK ST STA 360+03.8, 18.4 LT.
FL EL. 8723.1'

END ROAD GRADING
STA 340+41.1

END 4-FT WATERWAY
TRANSITION TO TYPE 3 DITCH
STA 340+28.0, 16.4 LT.
FL EL. 8724.15

ROAD GRADE TRANSITION
INTO 4-FT WATERWAY
SEE SHEET RD-03

END TYPE 4 DITCH
BEG. 4-FT WATERWAY
STA 339+20.8, 14.8 LT.
FL EL. 8725.46

S PICKER ST

-4.5%

THE PRO PATRIA SITE RETENTION BASIN WILL BE EXPANDED TO ACCEPT STORMWATER RUNOFF FROM THE PICKER STREET DISCHARGE PIPE AS PART OF THE 90% DESIGN PACKAGE

ON-SITE RETENTION BASIN AND CAP DESIGN FOR THE TRACT 9 RIVER CORRIDOR (REFERRED AS THE PRO PATRIA SITE)

90% DESIGN TO INCLUDE CONNECTING THE PICKER ST DISCHARGE PIPE TO THE PRO PATRIA RETENTION BASIN

15 INCH PIPE
L: 60.5'

END TYPE 4 DITCH
CONSTRUCTION STILLING BASIN
AROUND OUTLET PIPE CULVERT
STA 338+23.9, 11.1 LT.
FL EL. 8728.40

GRADE ROAD TO DRAIN TOWARD
TYPE 4 ROADSIDE DITCH
SEE SHEET RD-03

BEG. TYPE 4 DITCH
TIE INTO TOP OF STILLING BASIN
STA 338+32.0, 10.0 LT.
FL EL. 8729.05

BEG. ROAD GRADING
CONT. TYPE 4 DITCH
STA 336+81.2, 6.3 RT.

8750

8775

PICKER ST

-11.4%

END PIPE CULVERT
TRANSITION TO TYPE 4 DITCH
STA 332+52.2, 17.2 LT.
FL EL. 8782.92

END TRANSITION
CONTINUE TYPE 4 DITCH
STA 332+65.5, 12.4 LT.
FL EL. 8782.28

MATCHLINE RIVER ST - PICKER ST
STA 332+25
SEE SHEET DR3-01

TYPE 4 DITCH
(SEE SHEETS DR3-02 & DR3-06
FOR CONTINUATION INFORMATION)
EDER ST STA 1322+87.8, 37.5 LT.=
PICKER ST STA 332+12.4, 23.6 LT.
FL EL. 8784.6'

-4.9%

15 INCH PIPE
L: 50.1'

CULVERT JUNCTION BOX
(SEE SHEET DR3-01)

PICKER ST & HANCOCK ST TO PICKER ST
01 PLAN VIEW
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

N.T.S.

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

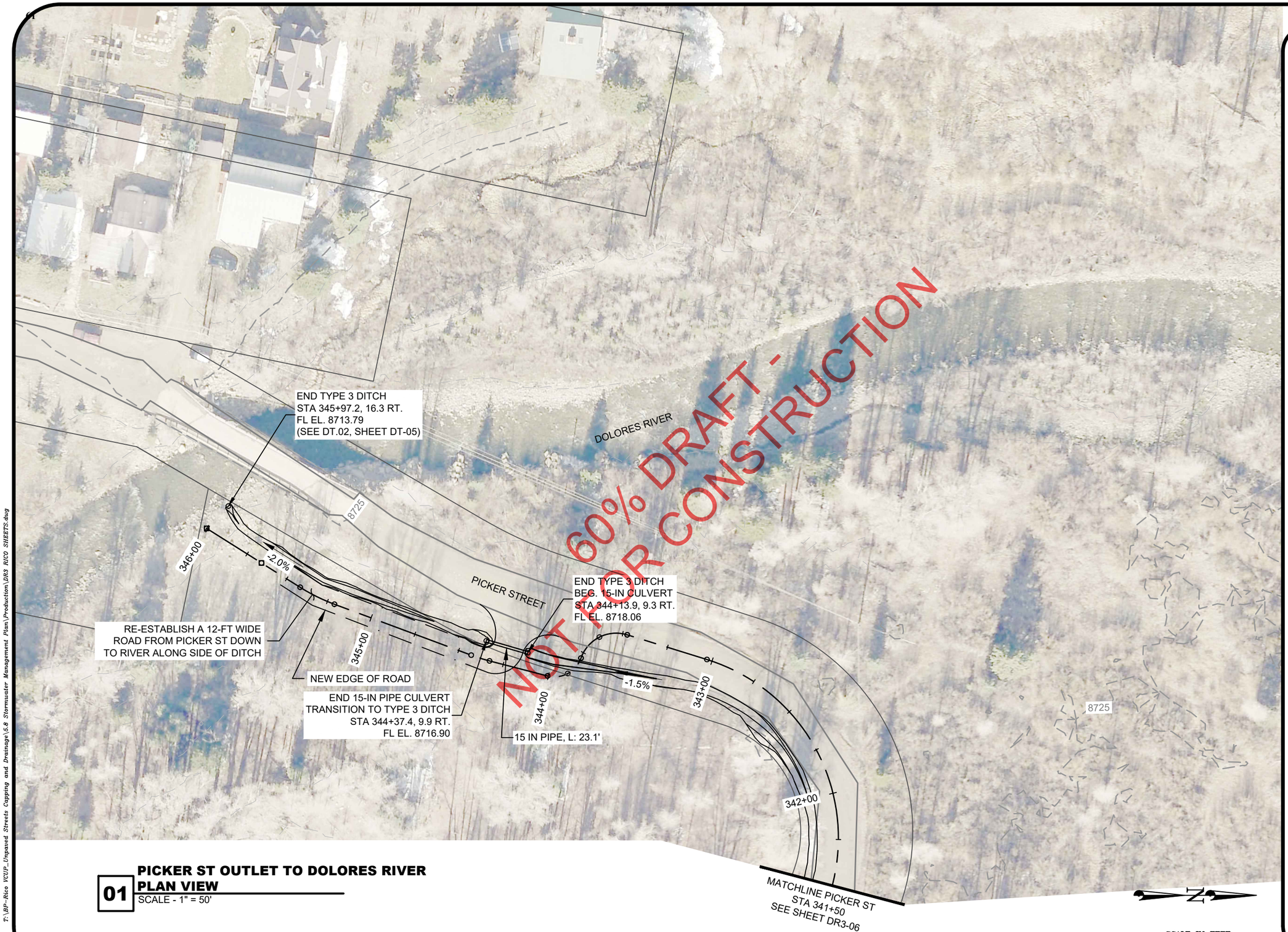
PICKER ST & HANCOCK ST TO PICKER ST

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	1" = 50'
Sheet	DR3-06

T:\BP--Rico VCUP_Unpaved Streets Capping and Drainage\6.0 Stormwater Management Plan\Production\DR3 RICO SHEETS.dwg



01 PICKER ST OUTLET TO DOLORES RIVER
PLAN VIEW
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO
- R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

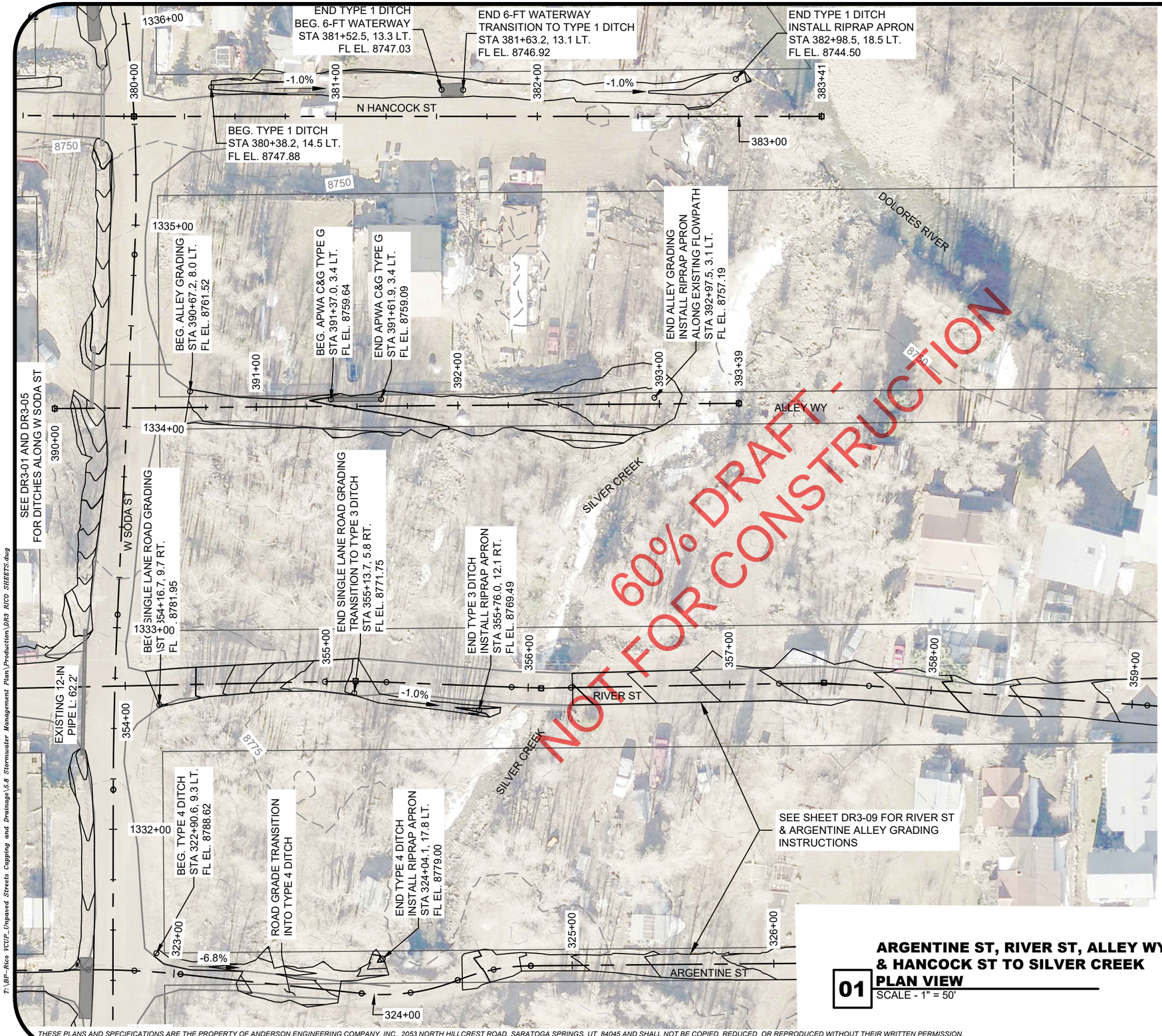
PICKER ST OUTLET TO DOLORES RIVER

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR3-07
Date: 21-Feb-2025	
Scale: 1" = 50'	

T:\BP-Rico VCIP_Unpaved Streets Capping and Drainage\5-8 Stormwater Management Plan\Production\DR3 RICO SHEETS.dwg



01 **ARGENTINE ST, RIVER ST, ALLEY WY, & HANCOCK ST TO SILVER CREEK PLAN VIEW**
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

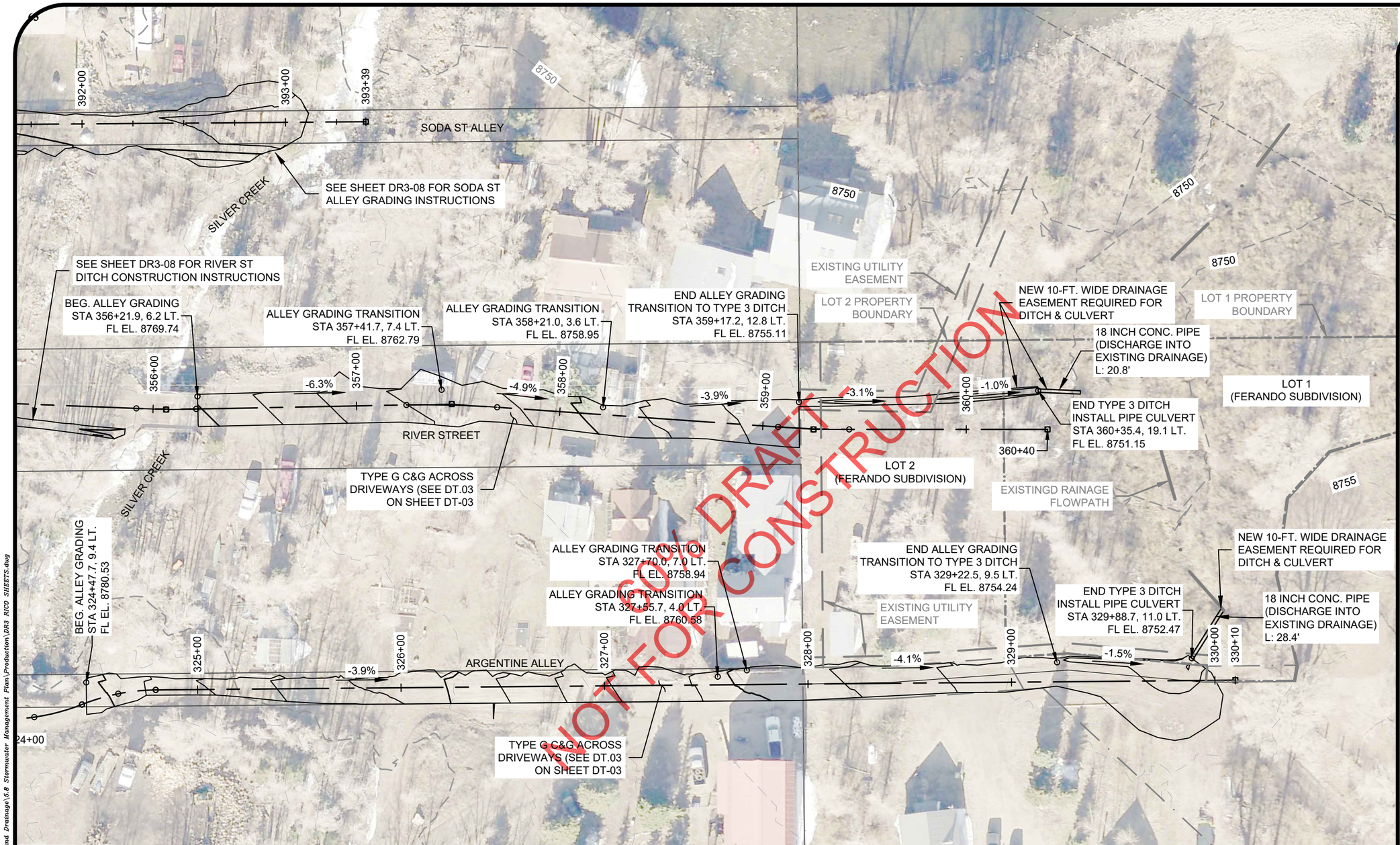
ARGENTINE ST, RIVER ST, ALLEY WY, & HANCOCK ST TO SILVER CREEK

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	1" = 50'
Sheet	DR3-08

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR3 RICO SHEETS.dwg



ARGENTINE ALLEY & RIVER STREET NORTH OF SILVER CREEK

01 **PLAN VIEW**

SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

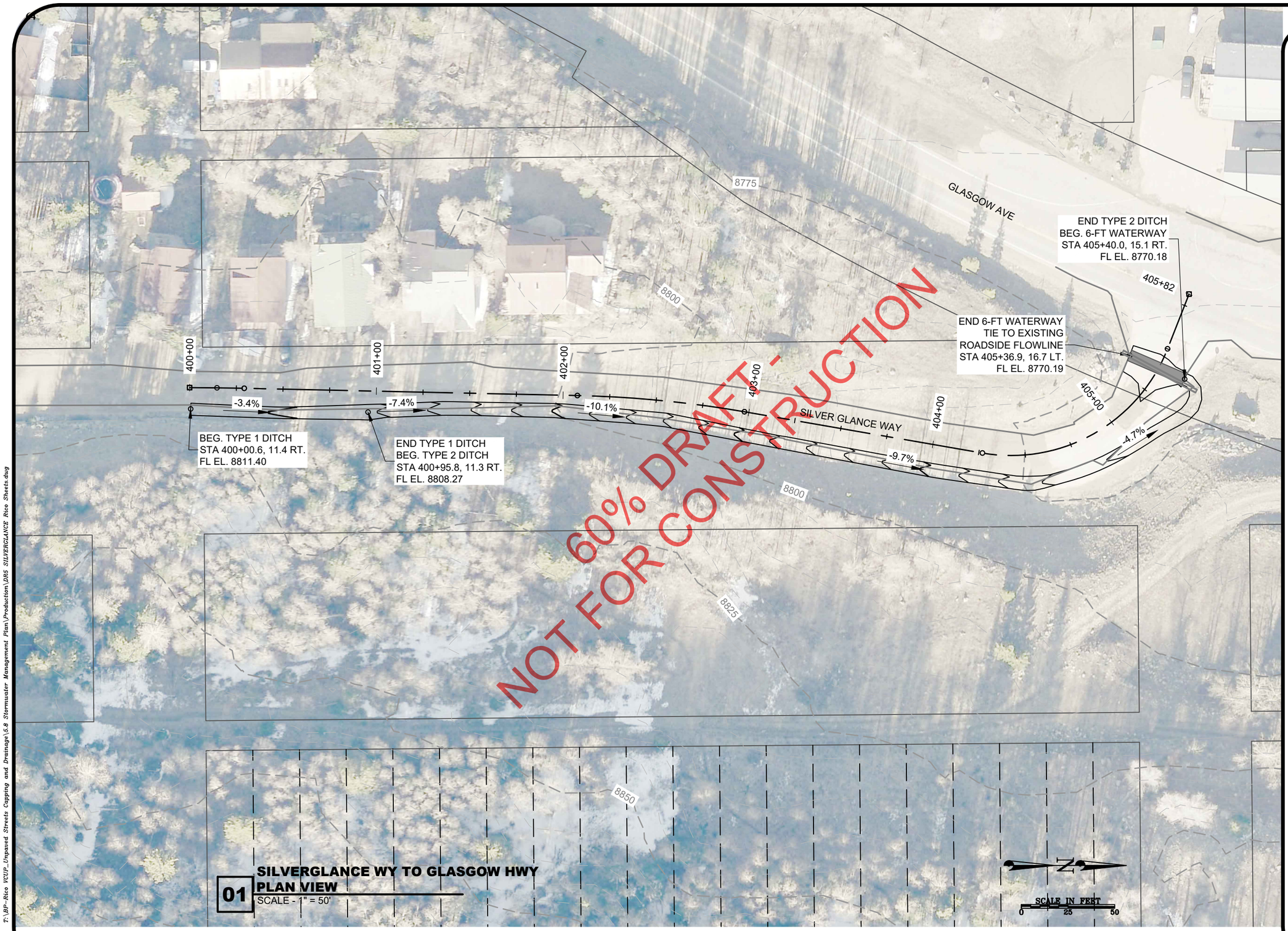
ARGENTINE ALLEY & RIVER STREET NORTH OF SILVER CREEK

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	1" = 50'
Sheet	DR3-09

T:\BP--Rico VCUP_Unpaved Streets Capping and Drainage\6.0 Stormwater Management Plan\Production\DR3 RICO SHEETS.dwg



01 **SILVERGLANCE WY TO GLASGOW HWY PLAN VIEW**
SCALE - 1" = 50'

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS (N.T.S.)
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

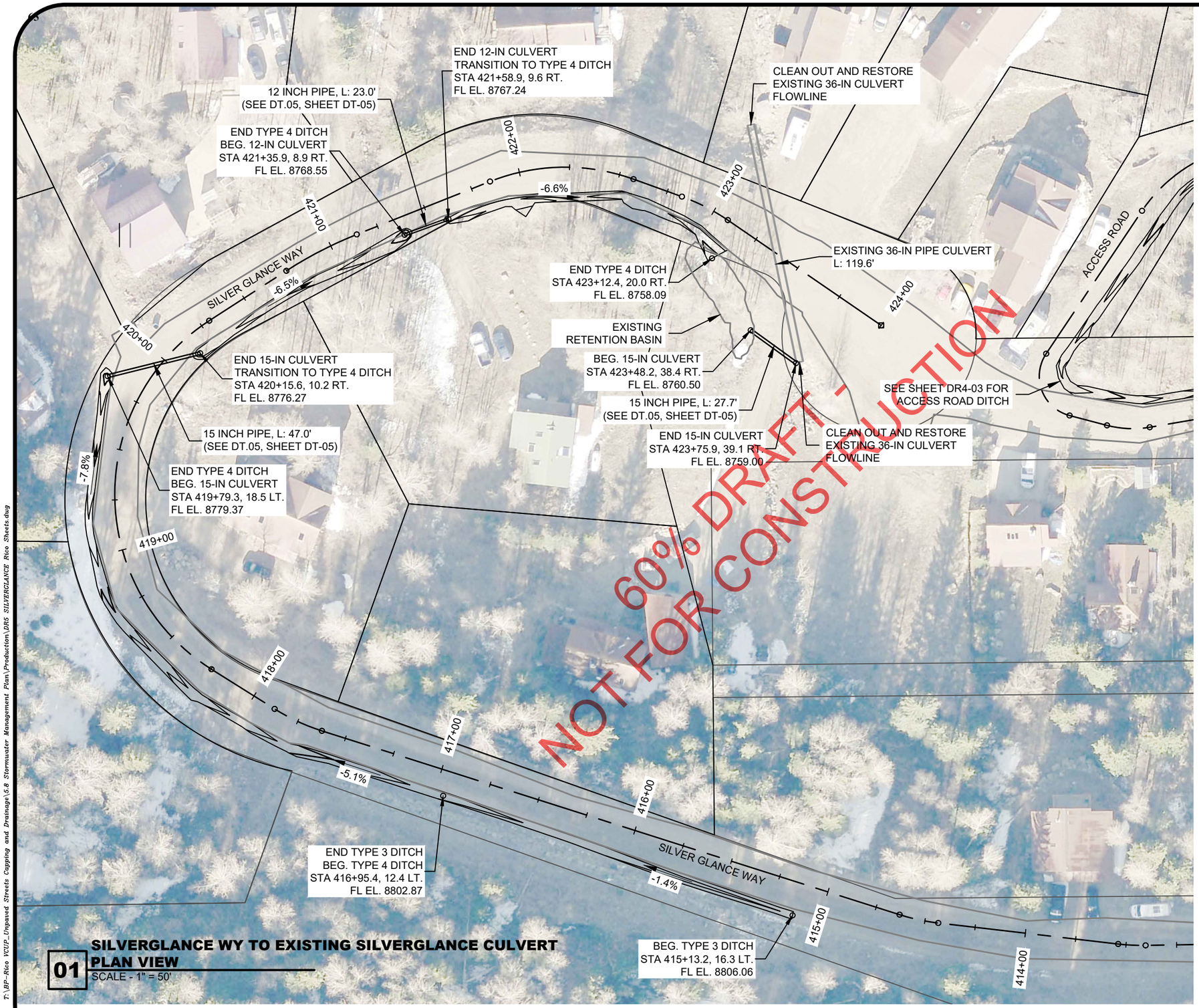
TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

SILVERGLANCE WY TO GLASGOW HWY

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	17-Feb-2025
Scale	1" = 50'
Sheet	DR4-01



01 **SILVERGLANCE WY TO EXISTING SILVERGLANCE CULVERT PLAN VIEW**
SCALE - 1" = 50'

SCALE IN FEET
0 25 50

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

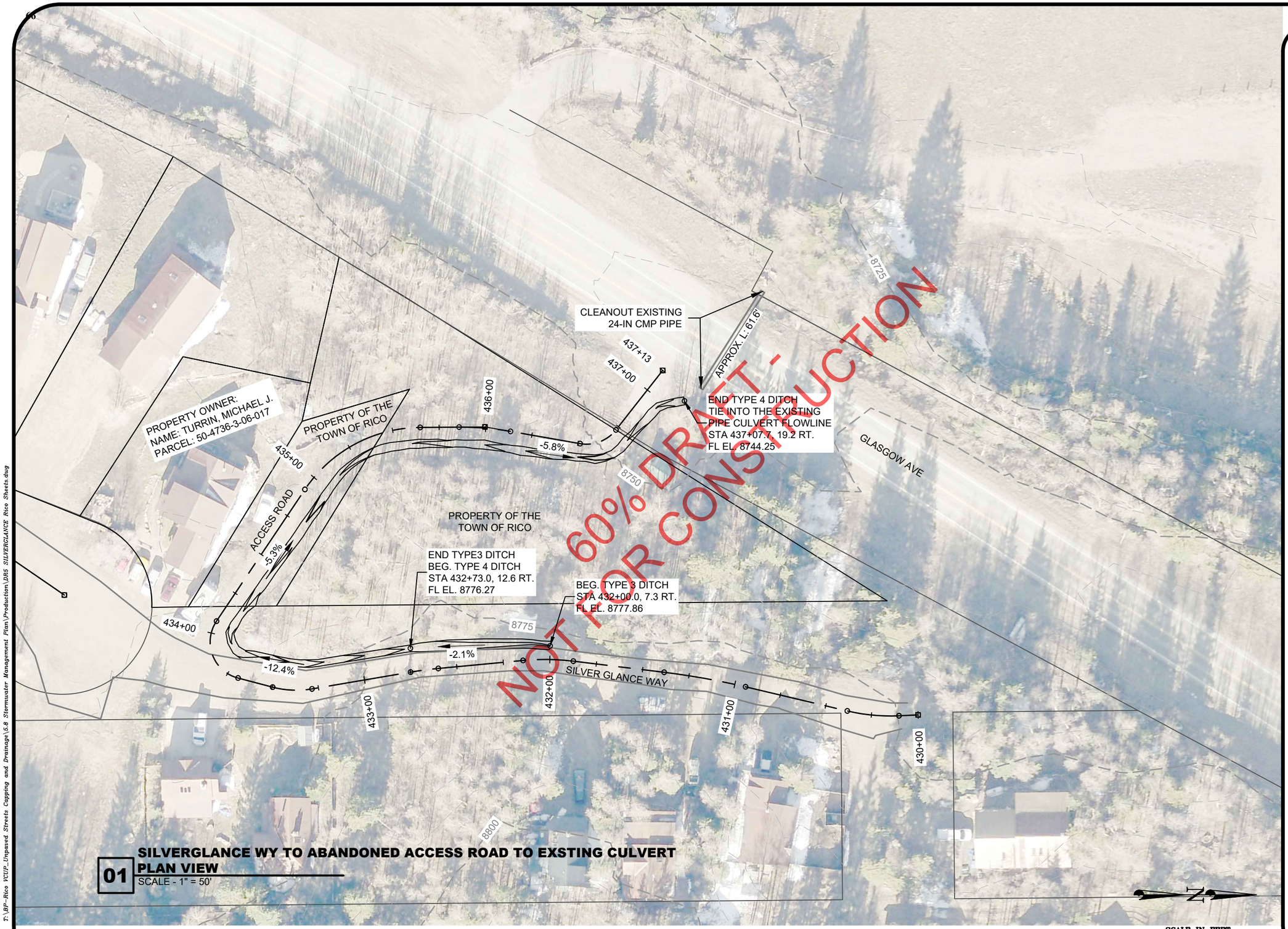
TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

SILVERGLANCE WY TO EXISTING SILVERGLANCE CULVERT

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	17-Feb-2025
Scale	1" = 50'
Sheet	DR4-02



01 **SILVERGLANCE WY TO ABANDONED ACCESS ROAD TO EXSTING CULVERT PLAN VIEW**
SCALE - 1" = 50'

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO
- R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

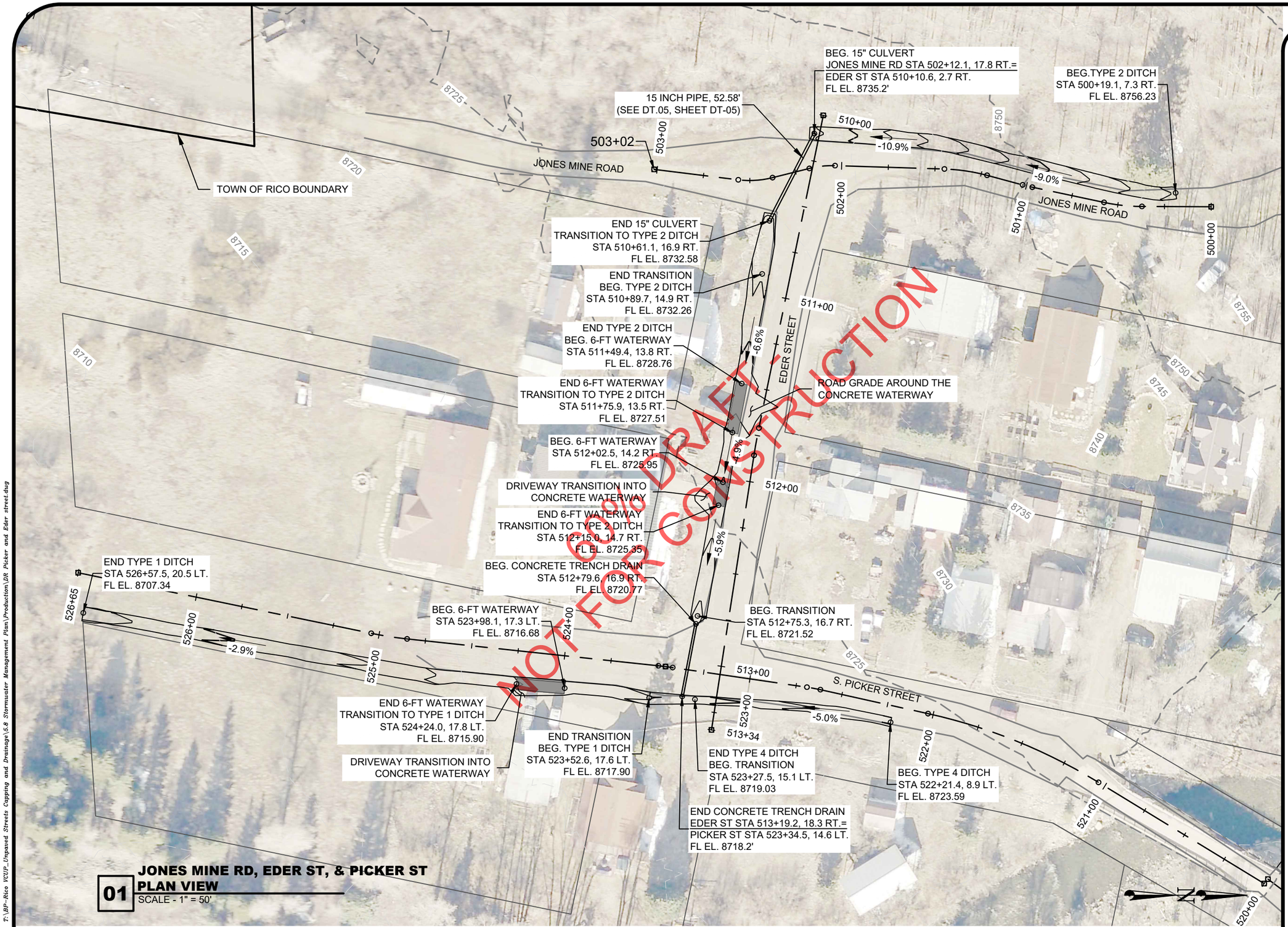
SILVERGLANCE WY TO ABANDONED ACCESS ROAD TO EXSTING CULVERT

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO	Sheet	DR4-03
Date	17-Feb-2025		
Scale	1" = 50'		

T:\BP--Rico VCUP_Unpaved Streets Capping and Drainage\6.0 Stormwater Management Plan\Production\DR5 SILVERGLANCE Rico Sheets.dwg



01 **JONES MINE RD, EDER ST, & PICKER ST PLAN VIEW**
SCALE - 1" = 50'

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND

- TOWN OF RICO R.O.W. BLOCKS
- SURVEYED EDGE OF ROADS & DRIVEWAYS (N.T.S.)
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

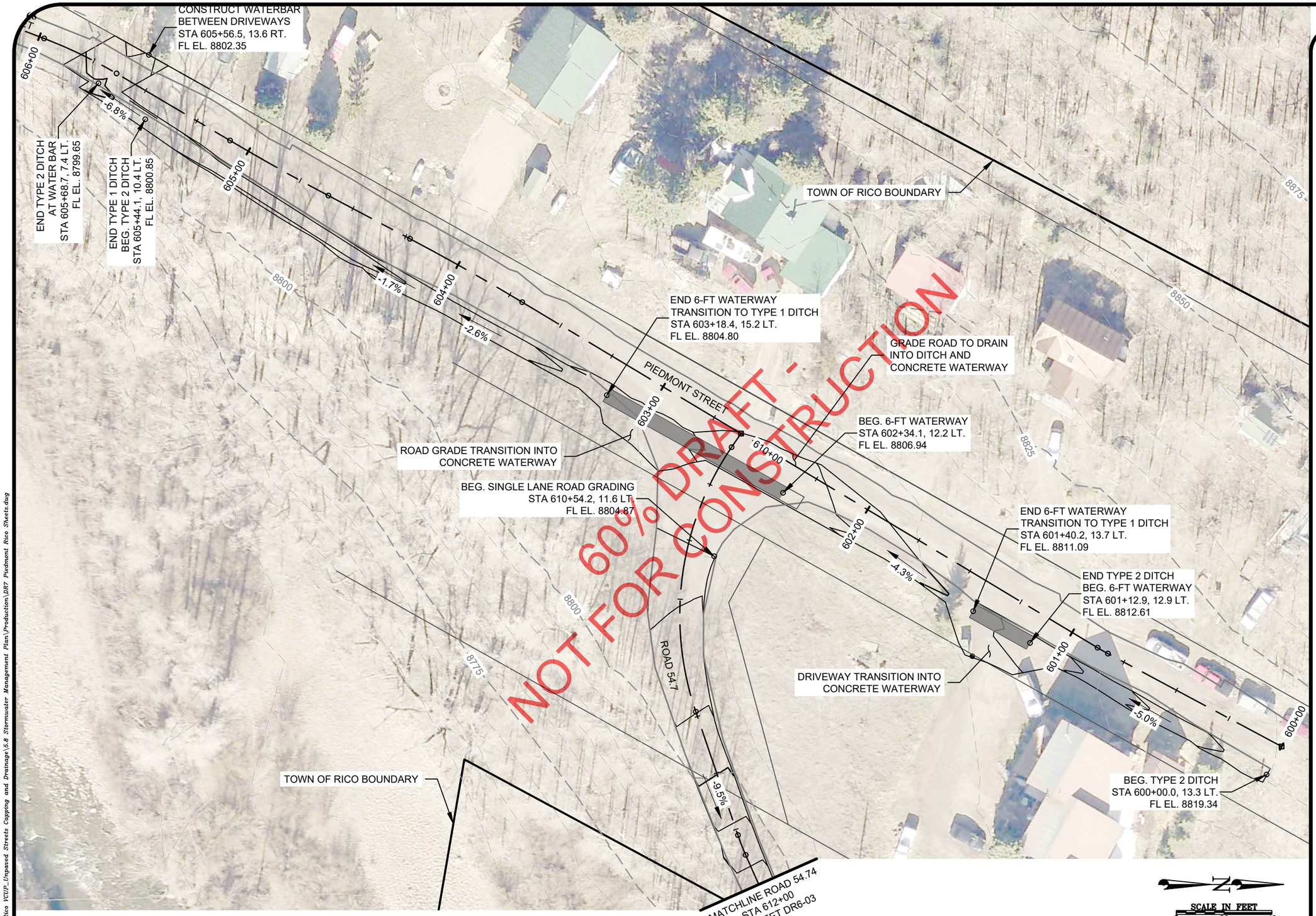
JONES MINE RD, EDER ST, & PICKER ST

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	1" = 50'
Sheet	DR5-01

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\DR Picker and Eder street.dwg



01 PIEDMONT ST & ROAD 54.7 PLAN VIEW
SCALE - 1" = 40'

SCALE IN FEET
0 20 40

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
4. EXISTING CONTOURS ARE SHOWN AT 5-FT INTERVALS. DESIGN CONTOURS ARE SHOWN AT 2-FT INTERVALS.

LEGEND
- TOWN OF RICO
- R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

PIEDMONT ST & ROAD 54.7

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR6-01
Date: 18-Feb-2025	
Scale: 1" = 40'	

MATCHLINE ROAD 54.74
STA 612+25
SEE SHEET DR6-01

8775

-12.0%

613+00

TOWN OF RICO BOUNDARY

-11.6%

614+00

END SINGLE LANE ROAD GRADING
TRANSITION TO TYPE 3 DITCH
STA 614+30.8, 6.3 LT.
FL EL. 8770.31

8800

8775

ROAD 54.7

-1.4%

615+00

END TYPE 3 DITCH
BEG. TYPE 4 DITCH
STA 615+41.7, 37.8 LT.
FL EL. 8767.52

-9.9%

L=57'

LOCATE AND CLEANOUT
EXISTING CULVERT OR INSTALL
NEW 18-INCH PIPE CULVERT AS
DIRECTED BY FIELD ENGINEER

END TYPE 4 DITCH
STA 615+49.1, 26.9 LT.
FL EL. 8765.93

GLASGOW AVE

616+00
616+07

8825

60% DRAFT - NOT FOR CONSTRUCTION

01 ROAD 54.7 OUTLET PLAN VIEW
SCALE - 1" = 40'

SCALE IN FEET
0 20 40

General Notes

1. DETAILS OF DITCH TYPES ARE FOUND ON SHEET DT-02.
2. REFER TO SHEET DT-03 FOR CONCRETE WATERWAY DETAILS.
3. THE AERIAL BACKGROUND IMAGE SHOWN IS FOR REFERENCE ONLY AND VARIES FROM THE TOPOGRAPHIC SURVEY PERFORMED BY ANDERSON. THE AERIAL IMAGE WAS TAKEN IN 2021 AND PROVIDED BY DOLORES COUNTY, COLORADO.
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LEGEND
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

ROAD 54.7 OUTLET

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DR6-02
Date: 18-Feb-2025	
Scale: 1" = 40'	

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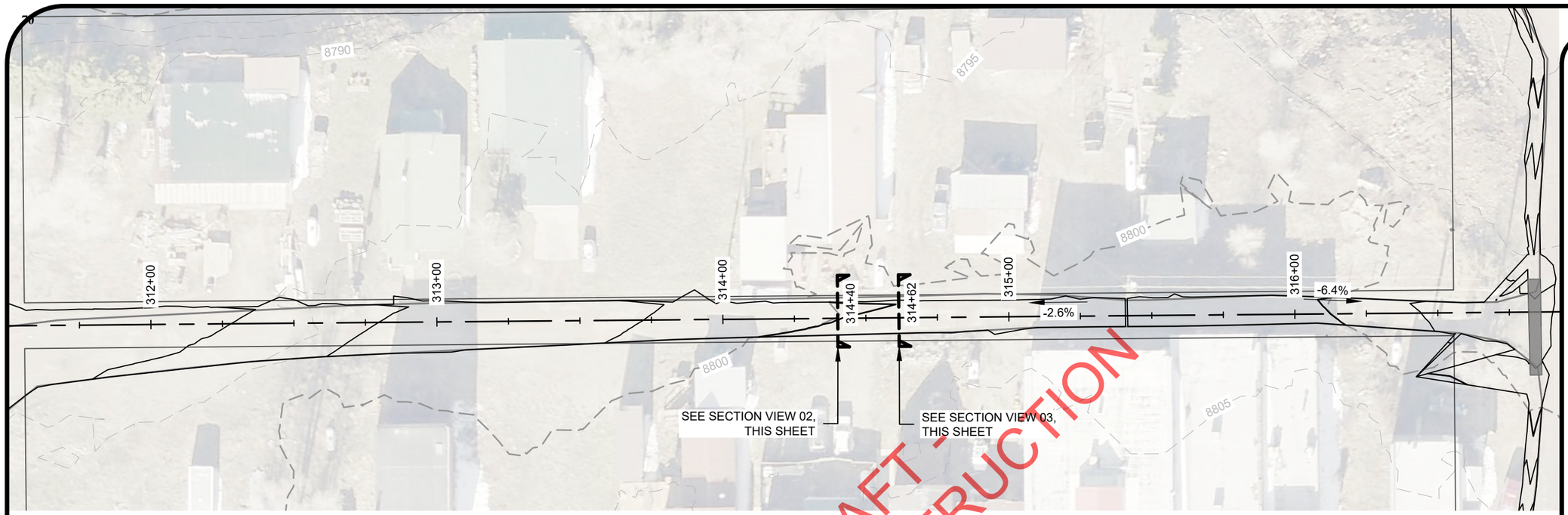
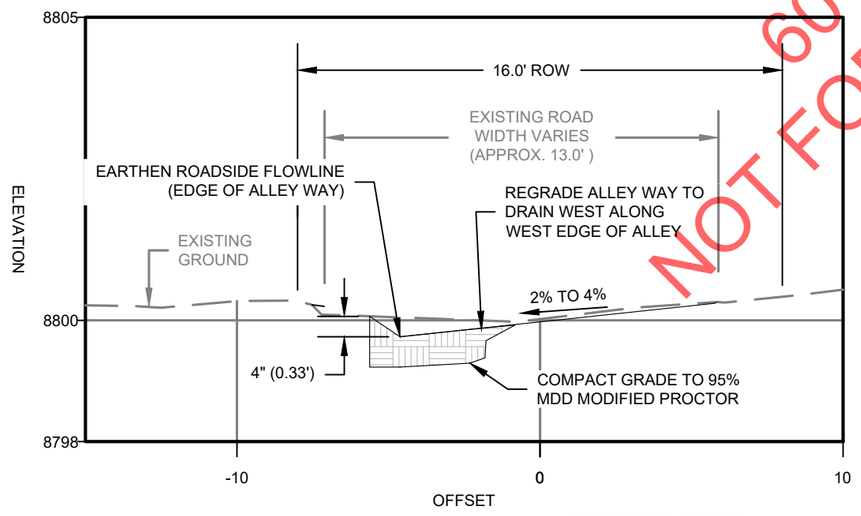


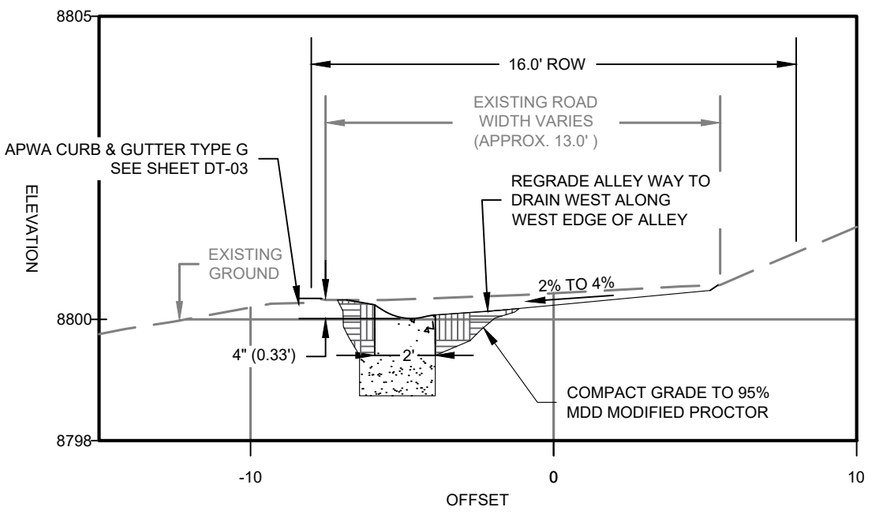
01 ARGENTINE ALLEY PLAN VIEW
SCALE - 1" = 40'

SCALE IN FEET
0 20 40



SECTION VIEW
RM-ARGENTINE ST @ 314+40
(VERTICAL EXAGGERATION 2:1)

02 ARGENTINE ALLEY SECTION VIEW
SCALE - 1" = 5'



SECTION VIEW
RM-ARGENTINE ST @ 314+62
(VERTICAL EXAGGERATION 2:1)

03 ARGENTINE ALLEY AT DRIVEWAY LOCATIONS SECTION VIEW
SCALE - 1" = 5'

SCALE IN FEET
0 2.5 5

Legend

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

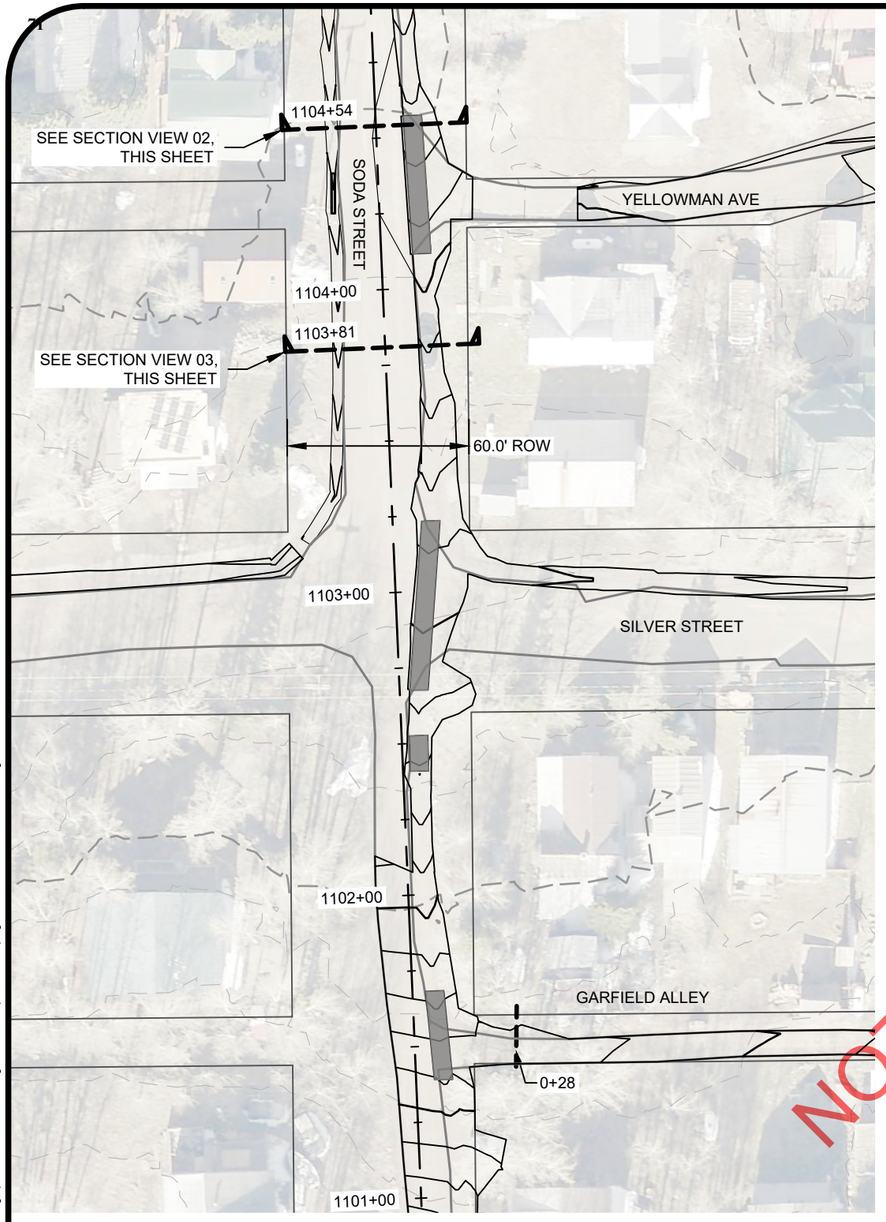
ARGENTINE ALLEY CROSS SECTIONS

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

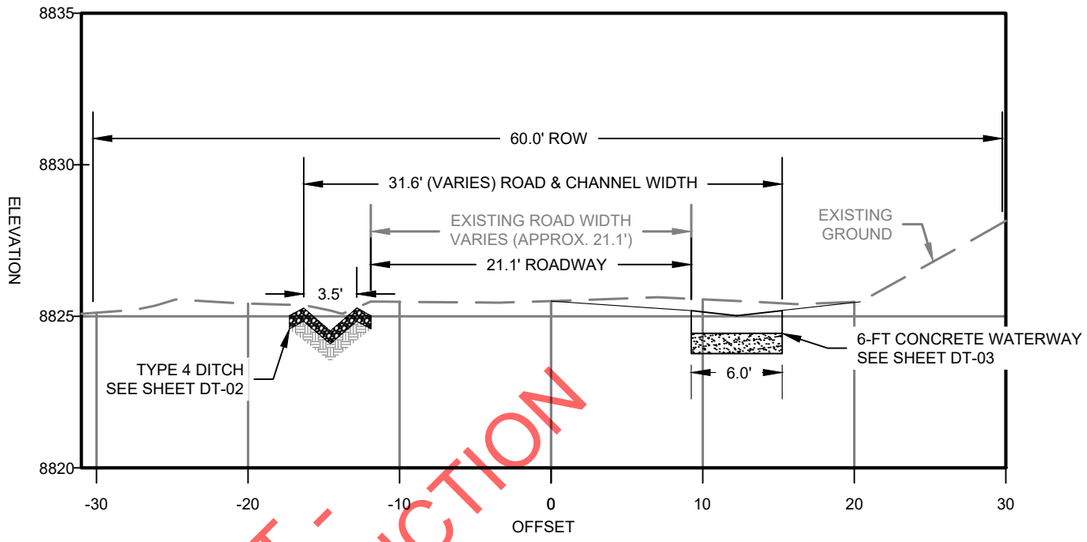
Project	RICO
Date	21-Feb-2025
Scale	AS SHOWN
Sheet	RD-01

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.0 Stormwater Management Plan\Production\Alignments and Section Views.dwg



01 SODA STREET PLAN VIEW
SCALE - 1" = 50'

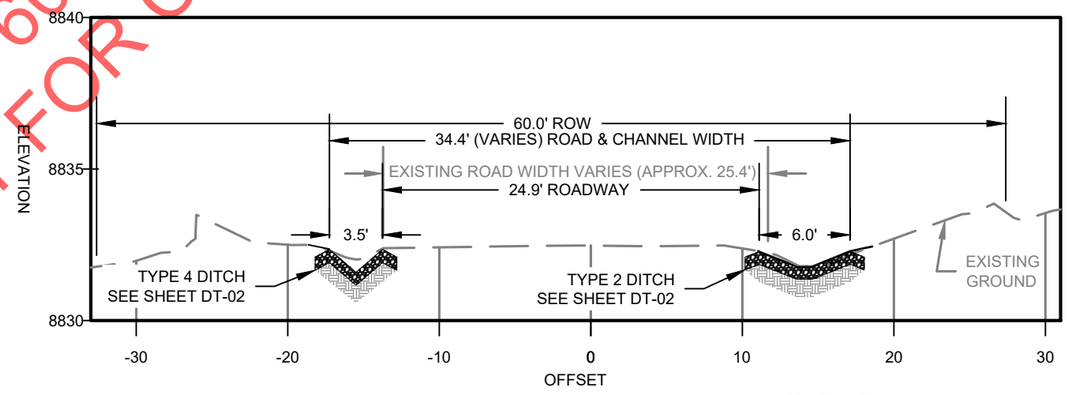
SCALE IN FEET
0 25 50



SECTION VIEW
W SODA STREET @ 1104+54
(VERTICAL EXAGGERATION 2:1)

02 SODA STREET SECTION VIEW
SCALE - 1" = 10'

SCALE IN FEET
0 5 10



SECTION VIEW
W SODA STREET @ 1103+81
(VERTICAL EXAGGERATION 2:1)

03 SODA STREET SECTION VIEW
SCALE - 1" = 10'

SCALE IN FEET
0 5 10

COMPACTION NOTES

1. PLACE AND COMPACT 8 IN. OF SUBBASE (APPROVED BANK OR PIT RUN MATERIAL WITH MAXIMUM PARTICLE SIZE OF 4 IN. AND ATTAINING A MINIMUM R-VALUE OF 50) WITHIN THE TRAVELED WAY AND IN-USE ALLEYS.
2. PLACE AND COMPACT 4 IN. OF COLORADO DEPARTMENT OF TRANSPORTATION CLASS 6 AGGREGATE BASE COURSE OVER SUB-BASE WITHIN THE TRAVELED WAY AND IN-USE ALLEYS.
3. PLACE AND COMPACT 12 IN. OF SUBBASE (APPROVED BANK OR PIT RUN MATERIAL WITH MAXIMUM PARTICLE SIZE OF 4 INCHES AND ATTAINING A MINIMUM R-VALUE OF 50) WITHIN THE NON-VEGETATED RIGHT-OF-WAY.

Legend
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

SODA STREET CROSS SECTIONS

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	AS SHOWN
Sheet	RD-02

T:\DP--Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\Alignments and Section Views.dwg

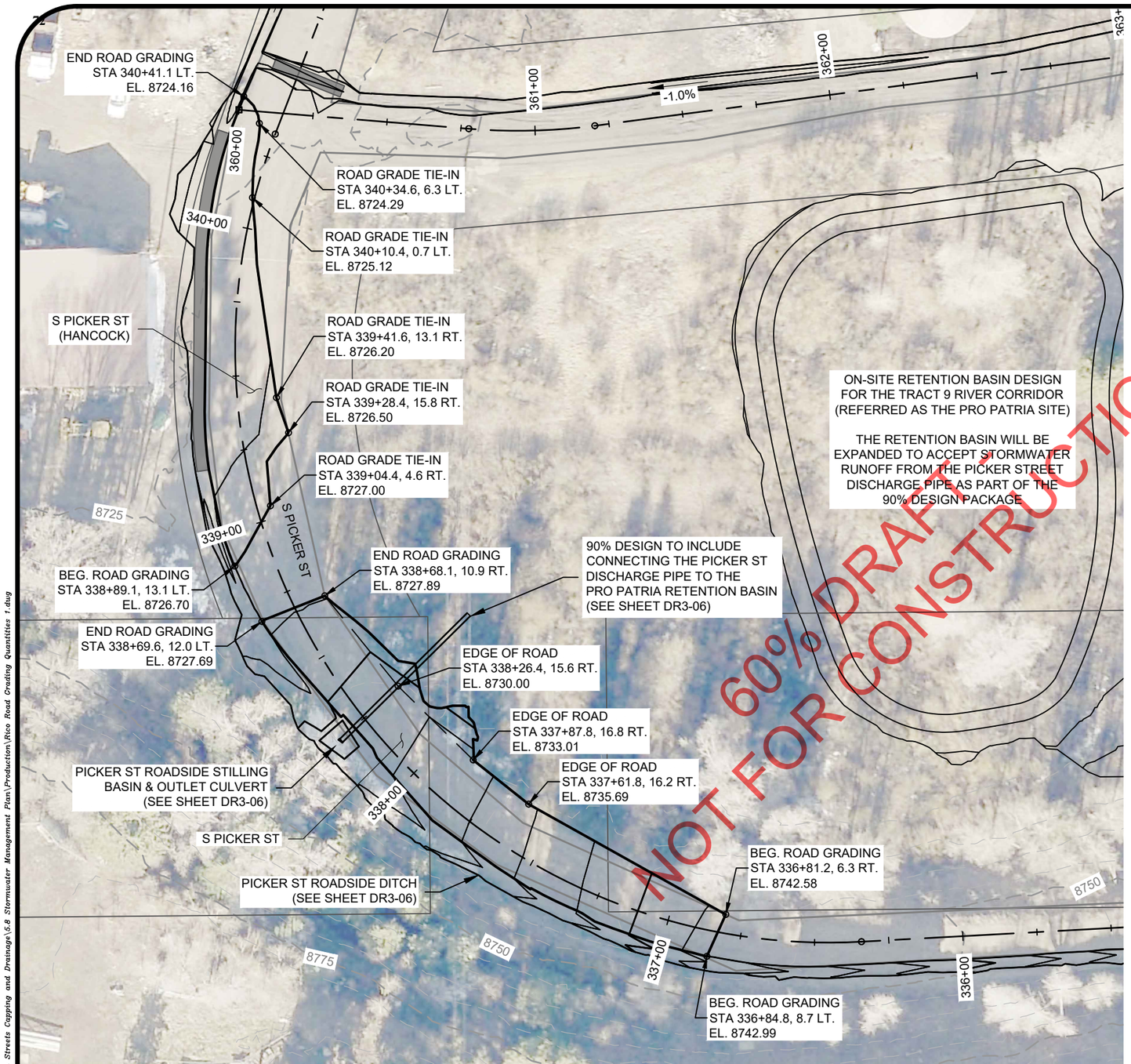


TABLE 01:
GRADING VOLUME ESTIMATES

ROAD GRADE FILL LOCATION	CUT QUANTITY (BCY)	FILL QUANTITY (ECY)*
S PICKER ST	25	25
S PICKER ST (HANCOCK)	25	0
TOTAL	**50**	**25**

NOTE: *ECY REPRESENTS COMPACTED TO LINES AND GRADES.

01 S PICKER ST - ROAD GRADING PLAN VIEW
SCALE - 1" = 40'

N

SCALE IN FEET
0 20 40

Legend
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

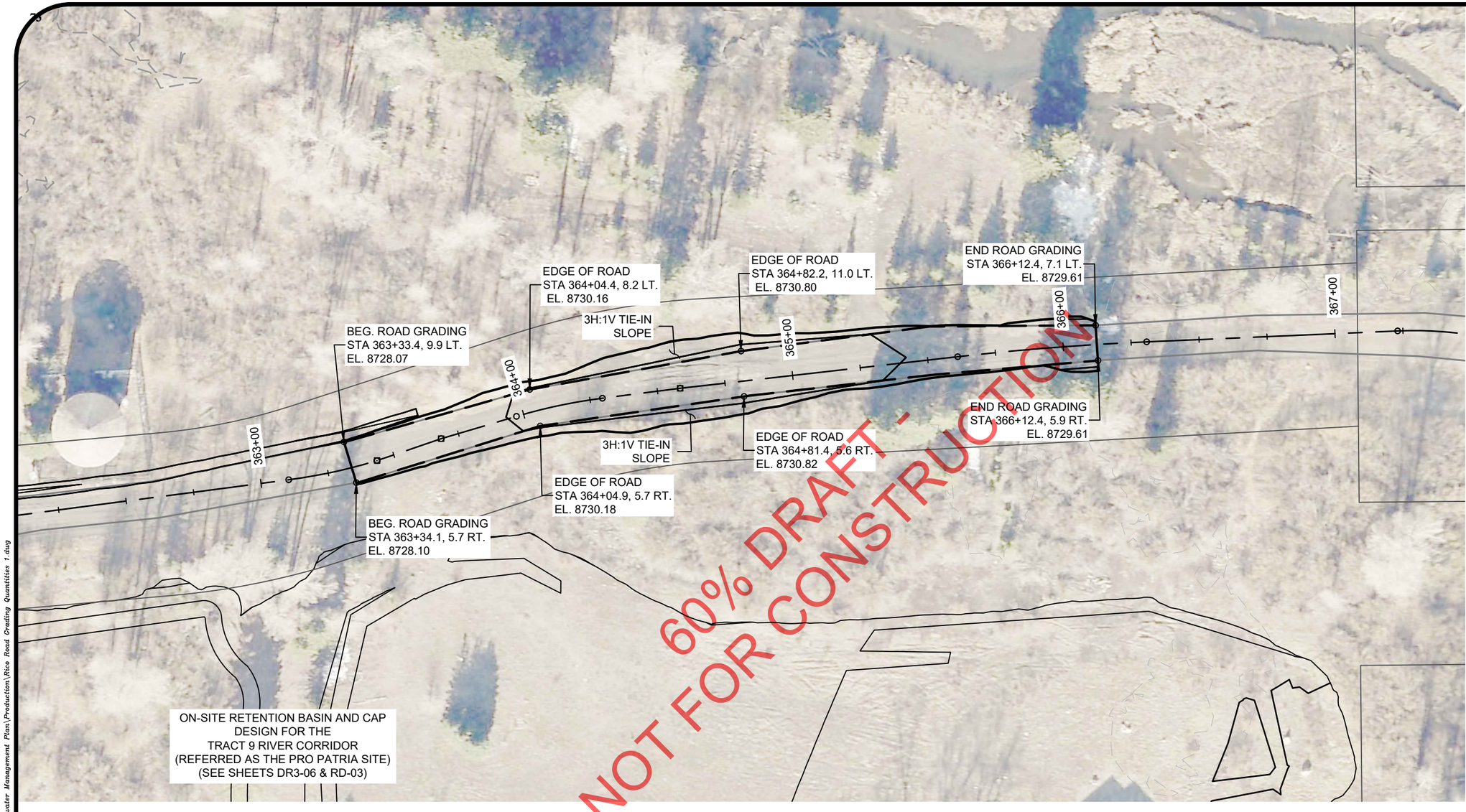
PICKER STREET ROAD WIDENING PLAN

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	21-Feb-2025
Scale	1" = 40'
Sheet	RD-03

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.0 Stormwater Management Plan\Production\Rico Road Grading Quantities 1.dwg



01 S HANCOCK ST ROAD GRADING PLAN VIEW

SCALE - 1" = 40'

TABLE 01:
GRADING VOLUME ESTIMATES

ROAD GRADE FILL LOCATION	CUT QUANTITY (BCY)	FILL QUANTITY (ECY)*
S HANCOCK ST	0	285
TOTAL	**0**	**285**

NOTE: *ECY REPRESENTS COMPACTED TO LINES AND GRADES.

SCALE IN FEET
0 20 40

Legend

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

HANCOCK STREET RAISING
ROAD GRADE PLAN

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

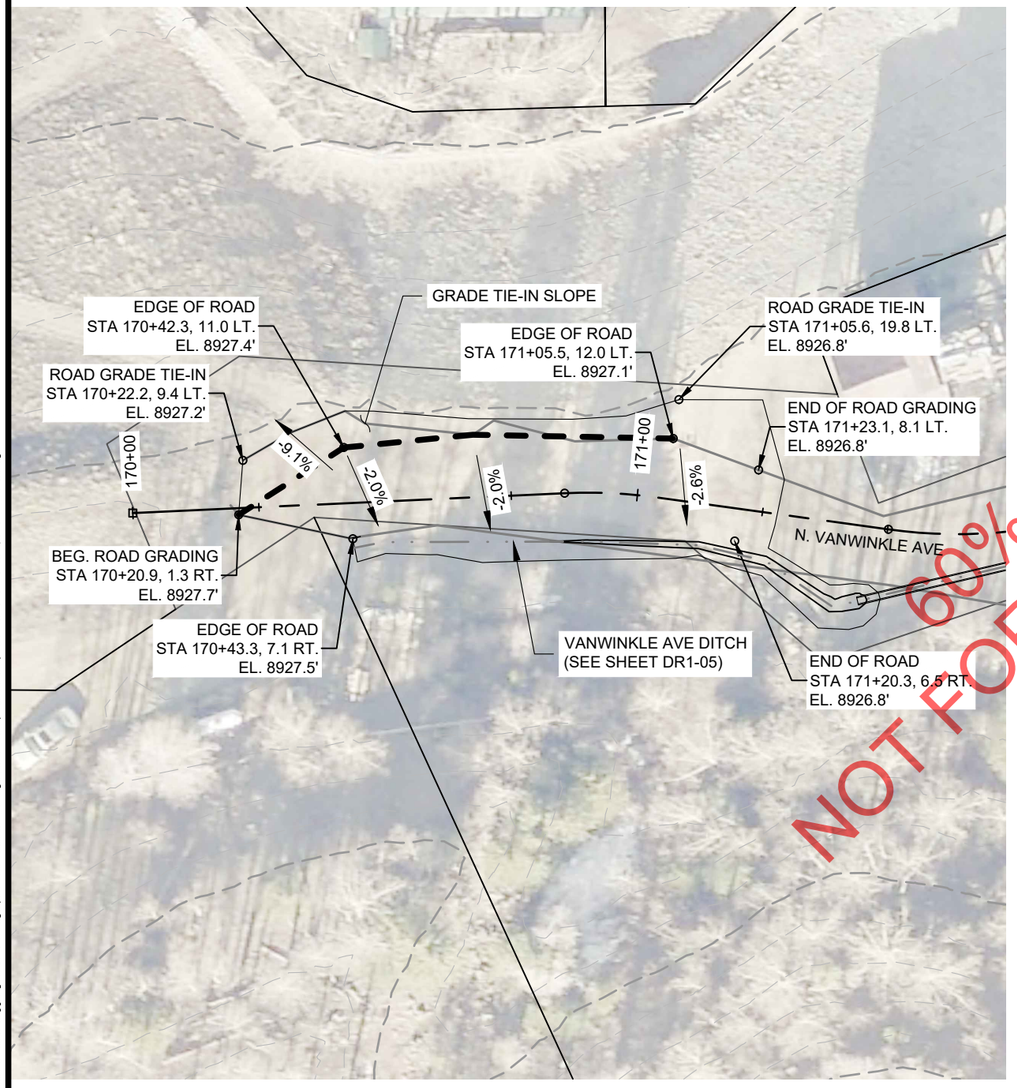
Project: RICO	Sheet: RD-04
Date: 21-Feb-2025	
Scale: 1" = 40'	

T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\Rico Road Grading Quantities 1.dwg

TABLE 01:
GRADING VOLUME ESTIMATES

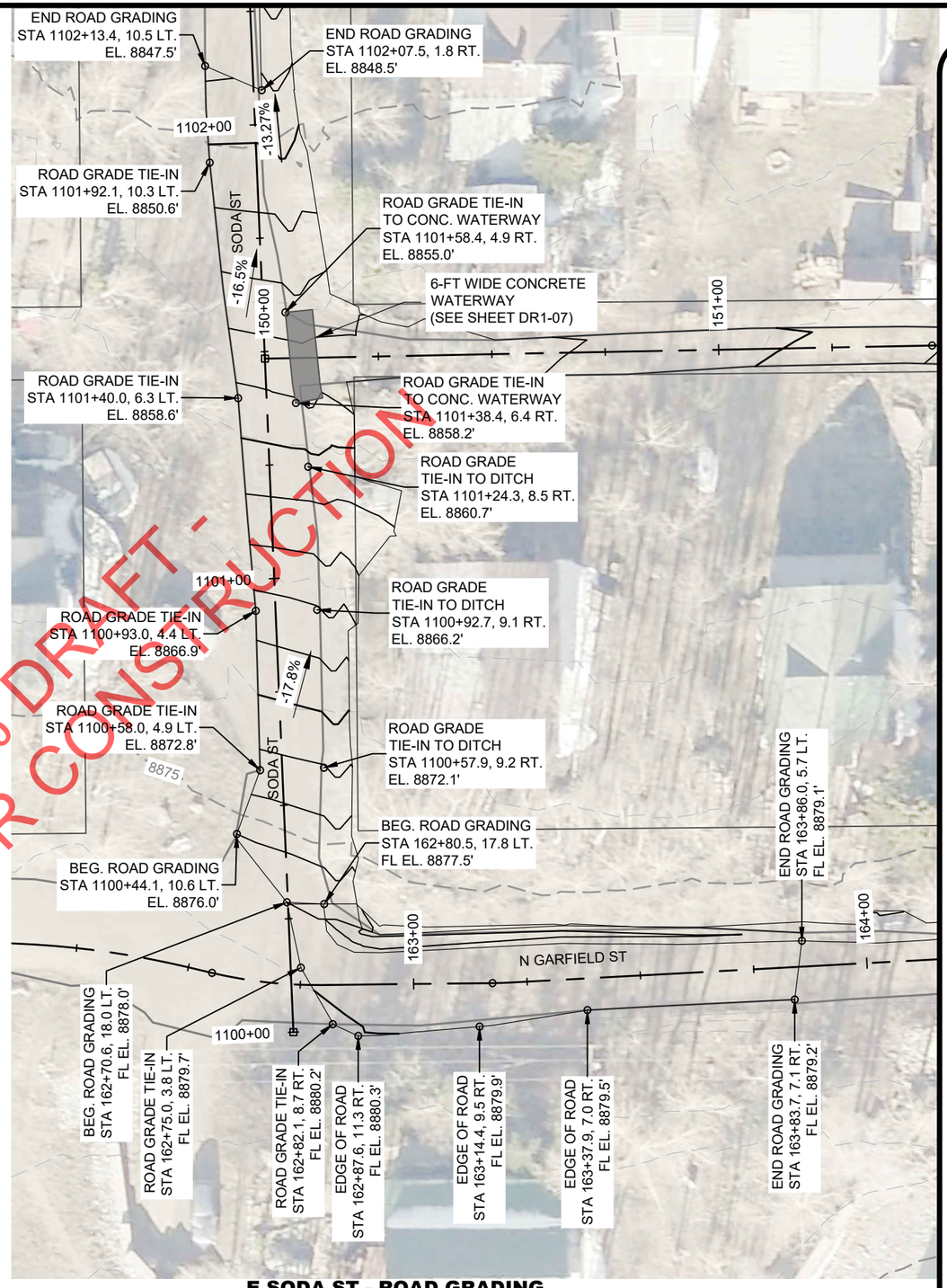
ROAD GRADE FILL LOCATION	CUT QUANTITY (BCY)	FILL QUANTITY (ECY)*
VANWINKLE AVE (SOUTH END)	5	10
SODA ST	5	5
GARFIELD ST	20	5
TOTAL	**30**	**20**

NOTE: *ECY REPRESENTS COMPACTED TO LINES AND GRADES.



01 N. VANWINKLE AVE - ROAD GRADING PLAN VIEW

SCALE - 1" = 30'



02 E SODA ST - ROAD GRADING PLAN VIEW

SCALE - 1" = 30'

SCALE IN FEET
0 15 30

Legend

- TOWN OF RICO R.O.W. BLOCKS
- N.T.S. SURVEYED EDGE OF ROADS & DRIVEWAYS
- CONCRETE WATERWAY

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

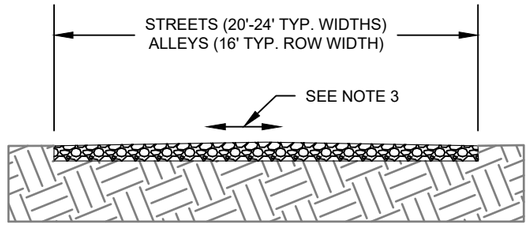
VANWINKLE AVE, SODA ST TO GARFIELD ST ROAD GRADING PLAN

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

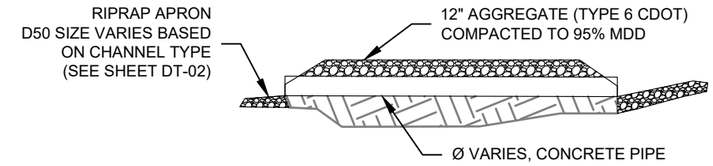
Project: RICO	Sheet: RD-05
Date: 21-Feb-2025	
Scale: 1" = 30'	

T:\BP--Rico VCUP_Unpaved Streets Capping and Drainage\5.8 Stormwater Management Plan\Production\RICO ROAD GRADING QUANTITIES 2.dwg



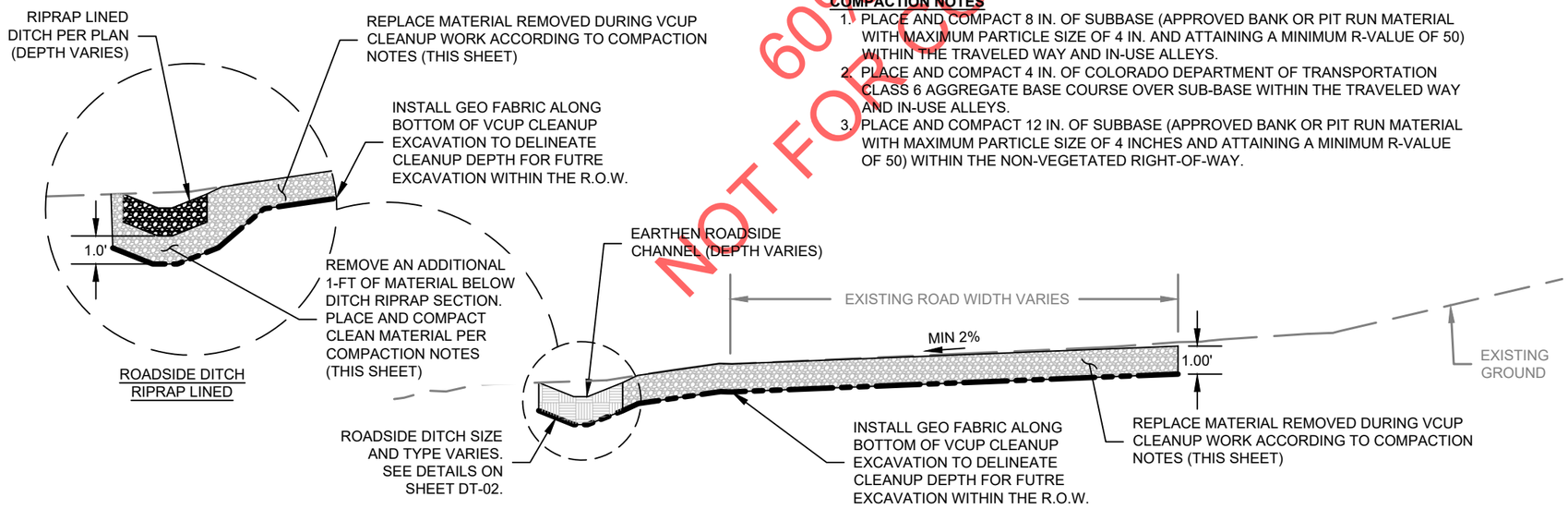
NOTES:
1. STREETS AND ALLEYS SHALL BE RECLAIMED AS PER RECLAMATION DETAIL 03, THIS SHEET.
2. PROTECT EXISTING VEGETATION ADJACENT TO WORK AREAS.
3. GRADE TOWARD DRAINAGE CONTROLS AS SPECIFIED ON DR SERIES SHEETS.

01 TYPICAL STREET OR ALLEY RECLAMATION DETAIL
SCALE - 1"-10'



02 TYPICAL STREET OR ALLEY CULVERT DETAIL
SCALE -1"-10'

COMPACTION NOTES
1. PLACE AND COMPACT 8 IN. OF SUBBASE (APPROVED BANK OR PIT RUN MATERIAL WITH MAXIMUM PARTICLE SIZE OF 4 IN. AND ATTAINING A MINIMUM R-VALUE OF 50) WITHIN THE TRAVELED WAY AND IN-USE ALLEYS.
2. PLACE AND COMPACT 4 IN. OF COLORADO DEPARTMENT OF TRANSPORTATION CLASS 6 AGGREGATE BASE COURSE OVER SUB-BASE WITHIN THE TRAVELED WAY AND IN-USE ALLEYS.
3. PLACE AND COMPACT 12 IN. OF SUBBASE (APPROVED BANK OR PIT RUN MATERIAL WITH MAXIMUM PARTICLE SIZE OF 4 INCHES AND ATTAINING A MINIMUM R-VALUE OF 50) WITHIN THE NON-VEGETATED RIGHT-OF-WAY.



03 ROAD AND DITCH REMEDIATION DETAIL
SCALE - N.T.S

General Notes

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

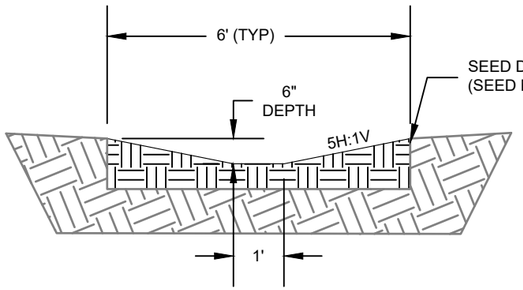
TYPICAL CROSS SECTION DETAILS

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

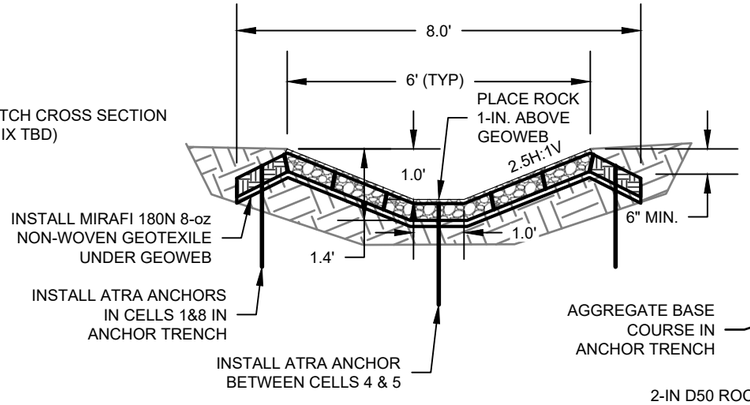
Project: RICO	Sheet: DT-01
Date: 21-Feb-2025	
Scale:	

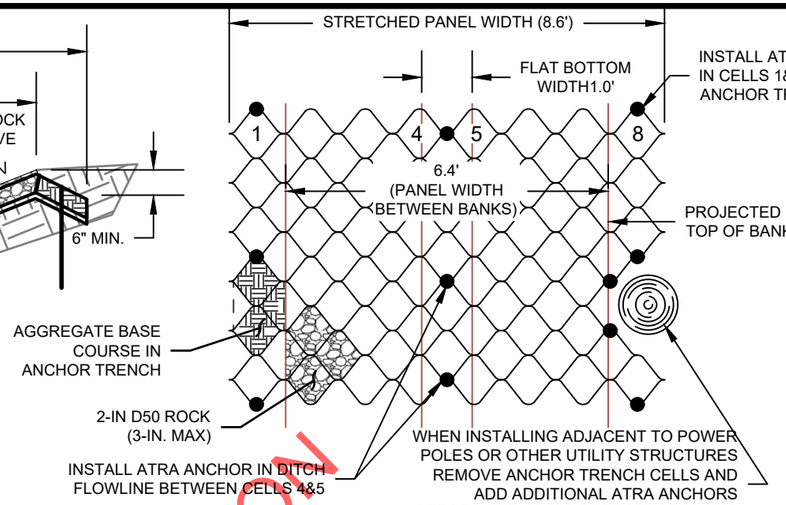
T:\BP-Rico VCUP_Unpaved Streets Capping and Drainage\5.0 Stormwater Management Plan\Production\Rico Stormwater Management System Details.dwg



TYPE 1 - TYPICAL 6-FT WIDE DITCH (6-IN. DEPTH VEGETATIVE COVER)

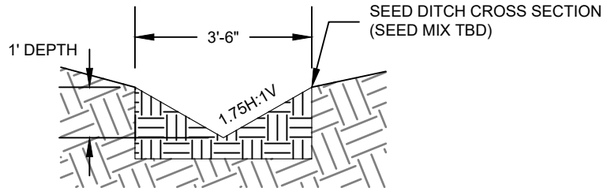
01 SCALE - 1" = 3'





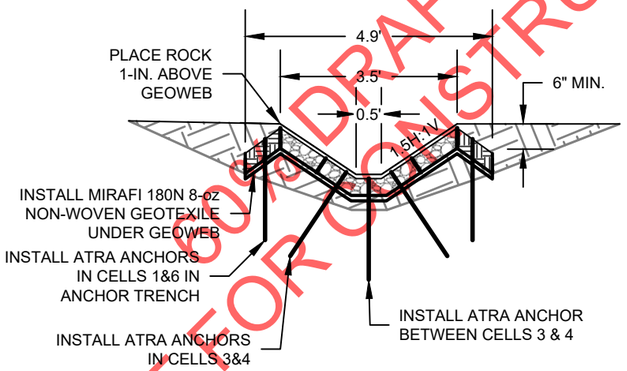
TYPE 2 - 1-FT DEPTH DITCH (GW30V GEOWEB (4-IN. DEPTH) WITH 2-IN D50 (3-IN. MAX) ROCK) SECTION & PANEL LAYOUT

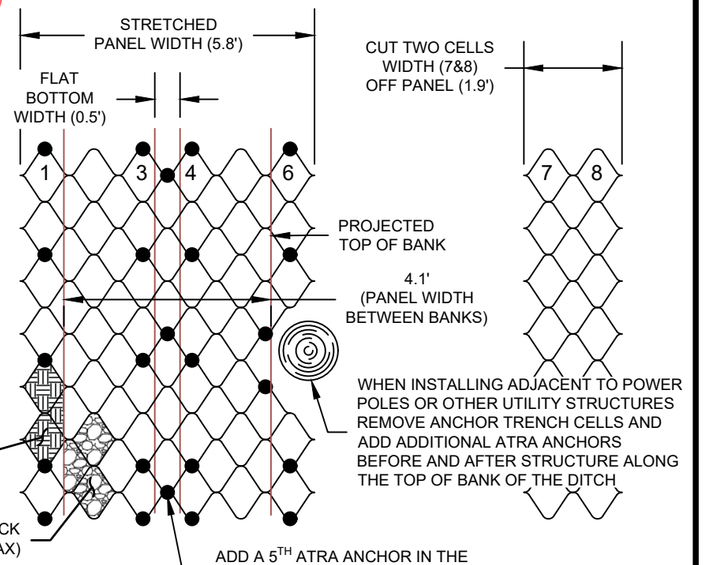
02 SCALE - 1" = 3'



TYPE 3 - TYPICAL 3.5-FT WIDE DITCH (12-IN. DEPTH VEGETATIVE COVER)

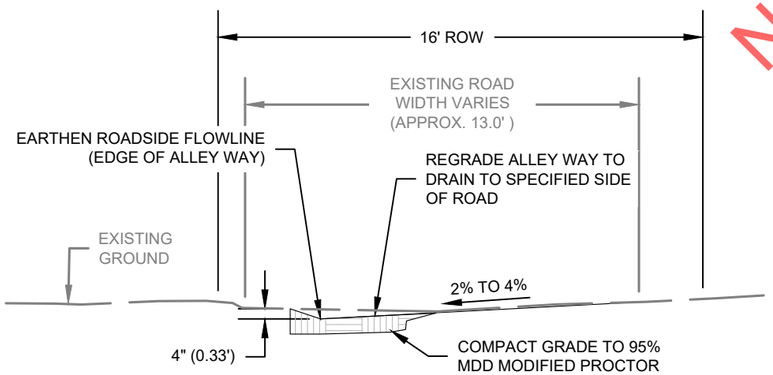
03 SCALE - 1" = 3'





TYPE 4 - 3.5-FT WIDE x 1-FT DEPTH DITCH (GW30V GEOWEB (4-IN. DEPTH) WITH 2-IN D50 (3-IN. MAX) ROCK) SECTION & PANEL LAYOUT

04 SCALE - 1" = 3'



ALLEY GRADING (16-FT ROW OR EXISTING SINGLE LANE WIDTHS)

05 SCALE - 1" = 5'

General Notes

1. DITCHES SHALL BE CONSTRUCTED ADJACENT TO ROAD SURFACES AS SPECIFIED IN PLANS, UNLESS OTHERWISE NOTED. THE FILED ENGINEER SHALL CONFIRM WITH PROPERTY OWNERES, PROJECT MANAGEMENT, AND THE CONTRACTOR ANY MODIFICATIONS TO THE PLANS BASED ON FIELD OBSERVATIONS.
2. INSTALL DITCH REVETMENT BASED ON THE FOLLOWING SLOPES:
   - 2.A. <4.5%; SEED (DT.01 OR DT.03)
   - 2.B. ≥4.5%; GEOWEB (DT.02 OR DT.04)
3. FOR GEOWEB DITCH REVETMENT, PLACE AGGREGATE ROAD BASE IN CELLS IN THE ANCHOR TRENCH AND 2-IN D50 ROCK (3-IN. MAX) IN THE REMAINING CELLS WITHIN THE DITCH.

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

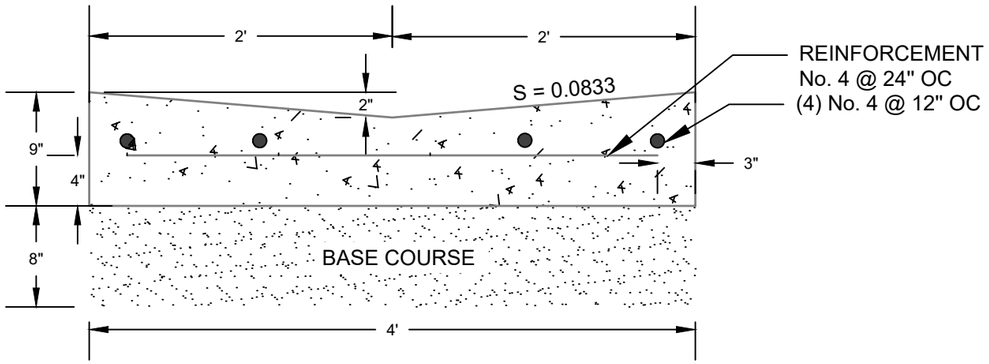
TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

TYPICAL CROSS SECTION
DETAILS

RICO, COLORADO

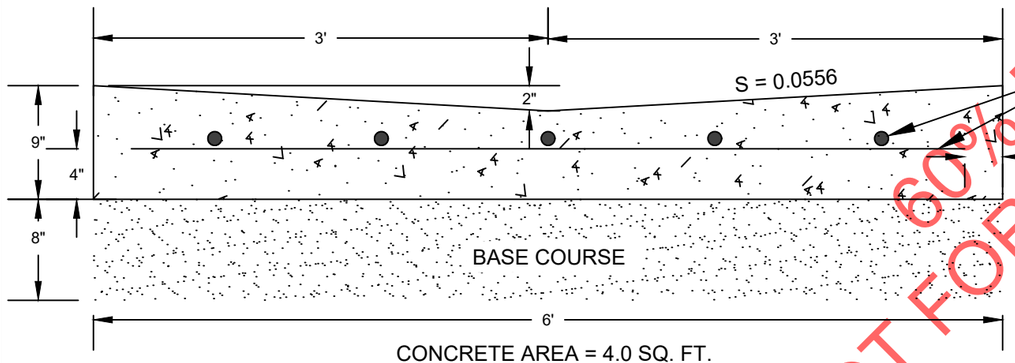
DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DT-02
Date: 21-Feb-2025	
Scale: AS SHOWN	



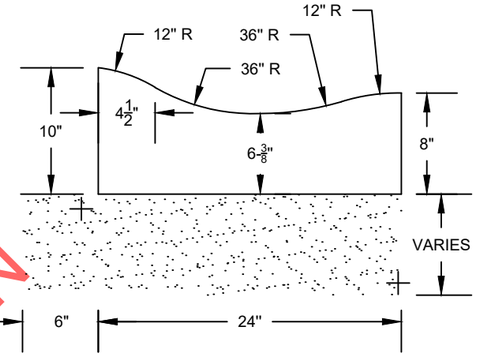
CONCRETE AREA = 2.667 SQ. FT.

01 APWA 4'-0" WATERWAY
SCALE - 1' = 1'



CONCRETE AREA = 4.0 SQ. FT.

02 APWA 6'-0" WATERWAY
SCALE - 1' = 1'



CONCRETE AREA = 1.989 SQ. FT.

03 APWA CURB & GUTTER - TYPE G
SCALE - 1' = 1'

General Notes

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

WATERWAY DETAILS

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DT-03
Date: 21-Feb-2025	
Scale: 1' = 1'	

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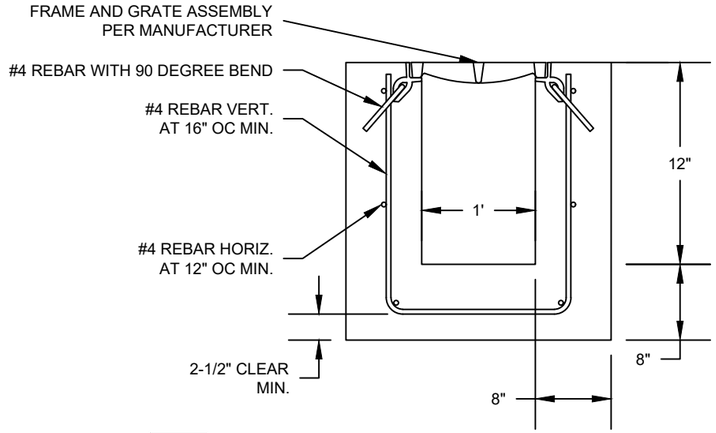
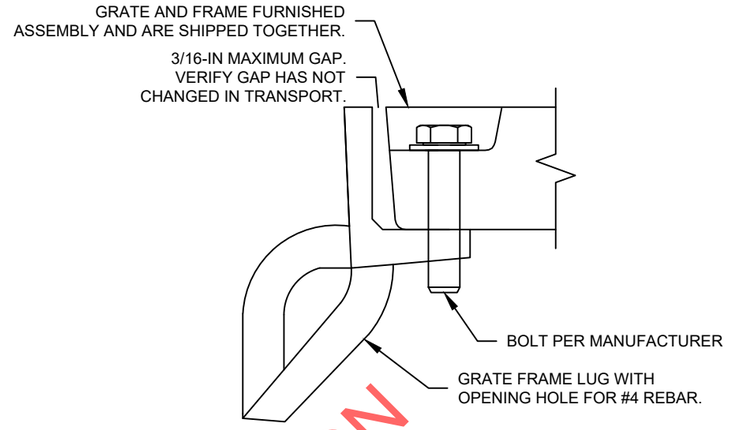
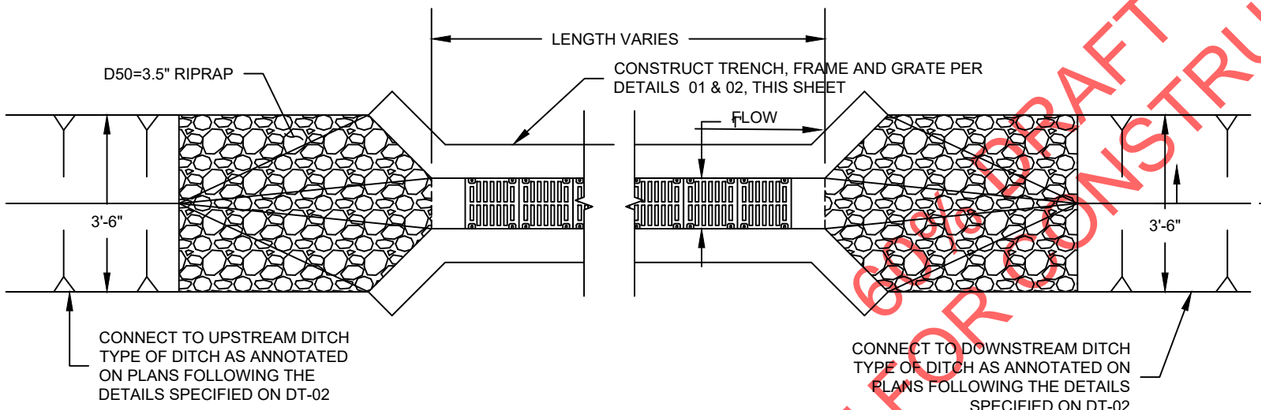


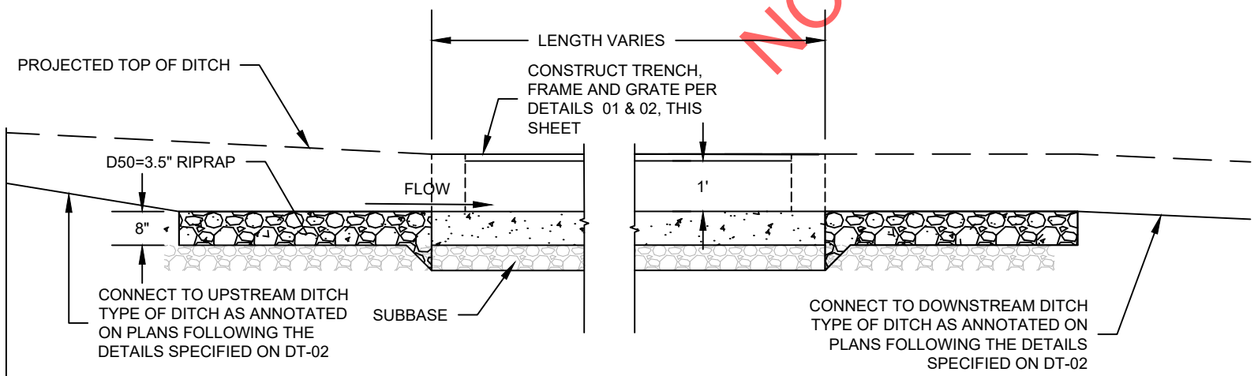
01 TYPICAL TRENCH CROSS SECTION
SCALE - N.T.S.



02 FRAME DETAIL SHOWING LUG
SCALE - N.T.S.



03 TRENCH PLAN VIEW
SCALE - N.T.S.



04 TRENCH PROFILE VIEW A-A'
SCALE - N.T.S.

TRENCH DRAIN GENERAL NOTES

1. TRENCH DRAIN MAY BE USED TO COLLECT ROADWAY RUNOFF IN AREAS WHERE LONG SECTION OF FLAT PROFILE GRADE ARE UNAVOIDABLE. THEY MAY BE USED IN MEDIANS OR IN OTHER AREAS WHERE RUNOFF MAY COLLECT.
2. TRENCH DRAIN FRAMES SHALL BE PROVIDED WITH LUGS SPACED AT 12 INCHES ON CENTER. LUG TYPE MAY VARY BY MANUFACTURER. LUG SHALL BE PROVIDED WITH A HOLE THROUGH WHICH A #4 REBAR, WITH A 90 DEGREE BEND, MAY BE PLACED PRIOR TO POURING THE TRENCH WALLS.
3. GRATES SHALL BE SOLIDLY ATTACHED TO THE TRENCH DRAIN FRAMES BY MEANS OF STAINLESS STEEL BOLTS (3/8-16 x 2-3/4 INCHES) AND FLAT WASHERS AT EACH CORNER OF THE GRATE.
4. THE GENERAL INSTALLATION PROCEDURE FOR CAST IN PLACE DRAINS SHALL BE AS FOLLOWS:
   - 4.1. SET REINFORCING STEEL.
   - 4.2. FORM AND POUR TRENCH DRAIN BASE.
   - 4.3. SET FORMS FOR TRENCH DRAIN WALLS.
   - 4.4. SET TRENCH GRATES AND FRAMES INTO PLACE ON THE FORMS. GRATES MUST BE BOLTED TO THE FRAMES. INSERT SHORT SECTIONS OF #4 REBAR,WITH 90 DEGREE BEND, INTO THE FRAME LUGS
   - 4.5. POUR TRENCH DRAIN WALLS.
5. USE PRECAST TRENCH DRAIN SECTIONS WITH APPROVAL OF THE ENGINEER.
6. THE FOLLOWING MATERIAL PROPERTIES ARE REQUIRED FOR BOTH CAST-IN-PLACE AND PRECAST STRUCTURES:
   - 6.1) CONCRETE: f'c = 4,000 POUNDS PER SQUARE INCH AT 28 DAYS
   - 6.2) REINFORCING STEEL: ASTM A615, Fy = 60,000 POUNDS PER SQUARE INCH
   - 6.3) ALL REINFORCING IS TO BE INSTALLED AS DETAILED ON THIS DRAWING

General Notes

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL
PLAN (60% SUBMITTAL)

TRENCH DRAIN DETAILS

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project: RICO	Sheet: DT-04
Date: 21-Feb-2025	
Scale: N.T.S.	

T:\BP--Rico VCUP_Unpaved Streets Capping and Drainage\6.0 Stormwater Management Plan\Production\Rico Stormwater Management System Details.dwg

Oldcastle Precast®

CATCH BASINS

File: 266-48x48-DIC

48"x48" Catch Basin
Model: CB-484848

Dual Heavy Duty Grate :

Weight : 800 Lbs.
Open Area 820 Sq. Inches

6" Trans. Top W/ Frame

Weight : 695 Lbs.

Risers

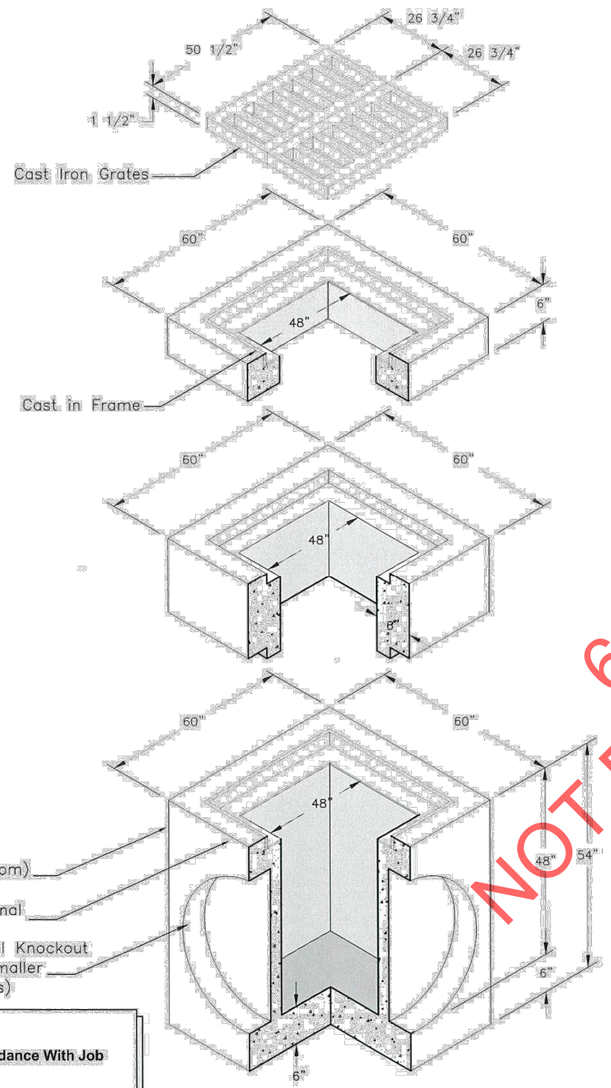
Weight : Varies

Riser	
B	Weight (Lbs.)
6"	675
12"	1,350

Bottom :

Weight : See Chart

Bottom	
Wall(s)	Weight (Lbs.)
4-Way	4,764



GENERAL NOTES:

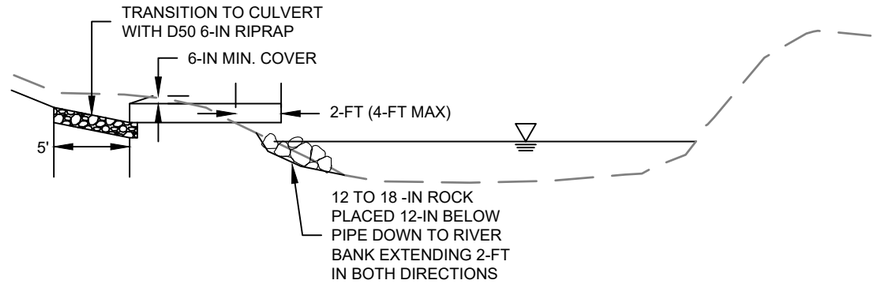
1. Bedding Shall be in Accordance With Job and Plan Specifications.

Oldcastle Precast
Houston, TX Division
Phone: (713) 991-2400

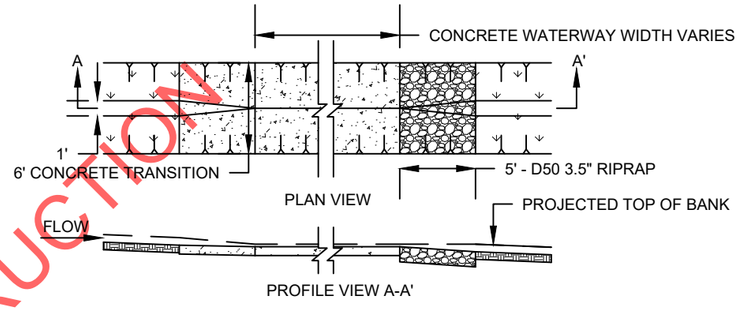
For more information about our products please visit us on the web at:
oldcastleprecast.com/houston CB-6 oldcastleprecast.com/brookshire

Oldcastle Precast
Brookshire, TX Division
Phone: (713) 934-7900

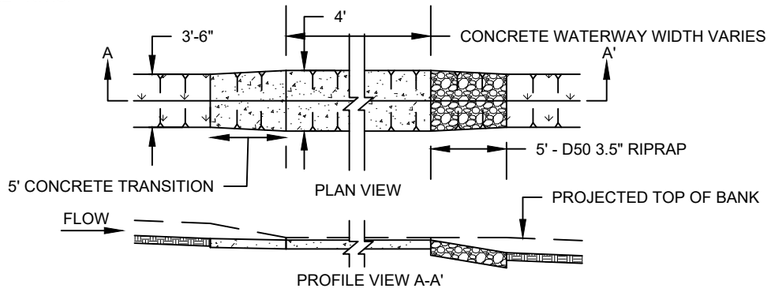
01 48"X48" CATCH BASIN
SCALE - N.T.S.



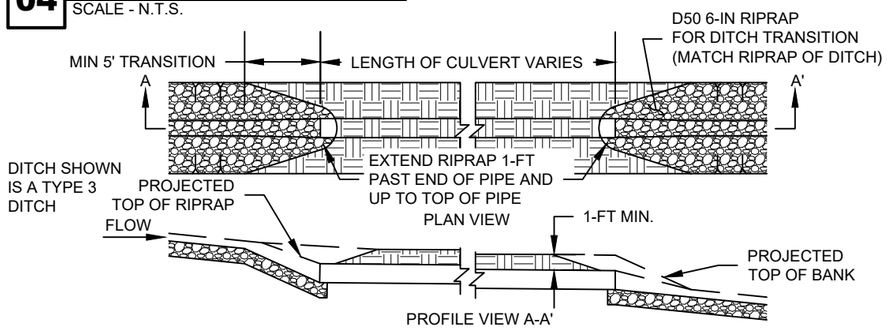
02 CULVERT TO RIVERS
SCALE - N.T.S.



03 DITCH TRANSITIONS TO 6-FT WIDE WATERWAYS
SCALE - N.T.S.



04 DITCH TRANSITIONS TO 4-FT WIDE WATERWAYS
SCALE - N.T.S.



05 DITCH TRANSITIONS TO CULVERTS
SCALE - N.T.S.

General Notes

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO
STORMWATER CONTROL PLAN (60% SUBMITTAL)

DRAINAGE DETAILS

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO	Sheet	DT-05
Date	21-Feb-2025		
Scale	N.T.S.		

T:\BP--Rico VCUP_Unpaved Streets Capping and Drainage\6.0 Stormwater Management Plan\Production\Rico Stormwater Management System Details.dwg

ANDERSON
ENGINEERING COMPANY INC.
CIVIL ENGINEERING ENVIRONMENTAL CONSULTING LAND SURVEYING

2053 N. Hillcrest Road
Saratoga Springs, UT 84045
801-972-6222
andersoneng.com

February 27, 2025

Chauncey McCarthy
Town Manager
Town of Rico
P.O. Box 9
2 Commercial Street
Rico, Colorado 81332

RE: DRAFT 60 Percent Cost Estimate for Rico Unpaved Streets and Alleys Capping and Drainage Plan

Dear Mr. McCarthy,

This letter report is to provide supplemental DRAFT 60 percent construction cost estimates for remediating lead-impacted soil and stormwater improvements proposed for the unpaved streets, in-use alleys, rail grades, and non-vegetated rights of ways in Rico, Colorado, based on meeting the Action Level of 761 ppm lead in soil. Below are the cost estimate assumptions, methods, and details. This letter and cost estimates have been updated to correspond with soil sampling completed in 2023. Costs have been prepared based on the 60% level design drawings.

Background

These cost estimates are based on the revised Rico Townsite Soils Voluntary Action Clean-up (VCUP) residential action level of 761 ppm lead in soil for work on the unpaved streets, in-use alleys, and non-vegetated rights of ways. Previous cost estimates were prepared with soil lead action levels of 1,100 ppm and 1,700 ppm. Formation Environmental (Formation) prepared the attached map (Figure 1), which shows the areas with soil lead concentrations exceeding 761 ppm.

The Town of Rico currently has minimal stormwater infrastructure outside of SR-145. The residential streets are unpaved, gravel, and dirt roads. Stormwater infrastructure is to be constructed simultaneously with road remediation. This infrastructure update will be performed

throughout the entire town. The cost estimate is segregated into portions related to road remediation and those areas independent of road remediation.

Methodology

The road remediation cost estimate has been assembled based on quantity takeoffs from the Rico Unpaved Streets and Alleys Capping and Drainage Plan cost estimate drawings prepared by Anderson Engineering Co. Inc (Anderson). The length of road removal areas was provided by Formation. Quantity takeoffs were derived from the Plan drawings, aerial imagery, and topographic survey, supplemented by available Colorado lidar elevation data.

Key elements of the work required to implement the Plan include:

- Mobilization/demobilization
- Supervision
- Road lead-impacted soil removal
- Purchase and haul of materials
- Placement of the cap
- Stormwater management system construction
- Miscellaneous work items
- Error, Omission, Contingency
- Indirect costs

Tasks for each major activity were characterized as to the type of work, appropriate unit of measure, the quantity of the item, and cost breakdown (unit price or lump sum). Unit prices and lump sum estimates were based on Heavy Construction Contractor Estimates (Flare Construction), RS Means industry standard cost guide (R.S. Means, 2023), past cost experience in Rico, vendor quotes, and engineering judgment. Cost estimates are in 2025-dollar value.

Stormwater analysis was performed using a hydrologic and hydraulic model for the 25-year, 24-hour storm event. The requirement for channel linings was assumed to depend solely on the flowline gradient. Profiles of each drainage ditch were analyzed using topographic survey data. Channel reaches with slopes less than 4.5% were determined to be stable with vegetative lining. Reaches with slopes greater than 4.5% required rock lining.

Discharge point into existing waterways, namely Silver Creek and the Dolores River were planned as frequently as reasonably possible.

Key Assumptions

The cost estimate has been prepared assuming that the work described will be conducted concurrently with utility improvements and street upgrades work shown on the 60 Percent Progress design documents. Separate mobilization and demobilization costs were included for each scope of work to account for equipment unique to each phase.

Mobilization/Demobilization and Supervision

This work element includes the transport of light and heavy equipment and support materials to and from the work site, field office facilities, and field management and administration by the contractor. The cost of contractor management is also included here. It does not include costs associated with owner representation and project oversight. Rico is a remote remediation site and the historical average (based on three former Rico remediation projects) for this element is about 22 percent of the construction cost.

Removal

Anderson understands the removal of road or alley soil materials may be limited due to the presence of underlying rock along a portion of traveled roadways and alley access areas. The estimated quantities have assumed all areas will have removal depths to one foot. Areas with underlying rock would represent a reduction to the estimated quantities included herein. Soil expansion is assumed to be 30% when converting volume from bank cubic yards (BCY) to loose cubic yards (LCY).

Roads requiring removal were provided to Anderson based on sampling efforts and lab lead values. Anderson delineated the extents of the non-vegetated right of way area using survey instruments. The total estimated neatline removal volume is approximately 5,500 BCY. The Engineer's Cost Estimate (ECE) increases that volume by 10% to account for construction methodology and buffer zones at the beginning/ending points of the remediation.

Removal is to be completed by ripping the existing roadway, excavating the material, and loading impacted soil into haul trucks. The impacted soil is to be hauled to a soil repository, spread, and compacted within the repository according to industry-applicable specifications. The assumed equipment for this work includes a bulldozer, excavator, loader, haul trucks, and compactor. Ripping may be performed by the grader, dozer, or excavator depending on accessibility and road conditions. The excavation of stormwater features will follow the same methodology. Because the suitability for re-use is currently unknown, the cost estimate plans for material hauled to a stockpile somewhere near the Town.

The Rico Soil Lead Repository (SLR) is assumed to have a remaining capacity of 20,000 cubic yards, which is to be split between residential clean up and road remediation. An estimated 10,000 cubic yards will be allocated for road removal, though the current estimates are closer to 6,100 cubic yards. No tipping fee is anticipated at the SLR.

Costs for the excavation and construction of drainage channels were derived from Flare Construction's cost estimate.

Purchase/Haul Materials

The two aggregates of subbase (4" minus) and base coarse (CDOT Class 6), are required in reconstruction of the roads. Material quotes were provided by a supplier in

the Cortez area. The purchase price is conservatively based on a recent quotation from McStone Aggregates, LLC who project 2025 material costs. Haulage pricing is based on using end-dump haul trucks. Haulage cost could potentially decrease if the contractor is able to sequence the material placement such that belly-dump trucks could be utilized. The savings would be on the order of $5/ton for the portion that could be hauled with belly-dumps.

Drainage system materials costs were obtained from a vendor quote for reinforced concrete pipe (RCP), delivered to Rico, CO. Drainage channel lining costs were provided by Flare Construction. Riprap has been difficult to research. The nearest supplier with riprap products meeting CDOT specification for specific gravity is in Durango. C&J Gravel quoted $85 per ton for the material and $60 per ton for delivery for the 2025 construction season. Given this information, the design was revised to use smaller aggregate in confining cells. The smaller (d_{50}=2 inches) rock cost was estimated to be $20 per ton with the freight estimated at $60 per ton, assuming a six-hour round trip.

A geotextile for the purpose of delineation will be placed at the bottom of the cap material. Cost estimates were derived from RS means, with verification of pricing from local retailers (Tencate and White Cap). An estimated 90 rolls of geotextile will be purchased near Durango and delivered to the site.

Capping

The road capping involves replacing the removed 12 inches of soil and aggregate on all unpaved streets, non-vegetated rights of ways (NVROW), and in-use alleys with lead concentrations exceeding the action level. Rights of way, non-vegetated right of way, and the rail corridor will be capped at varying base layer depths. The breakdown for each material type can be found in *Table 1* below. The aggregate base course placed as roadway surfacing in the traveled way and in-use alleys is to be spread, graded, and compacted. Equipment assumed for this placement work includes a grader, dozer (for alleys and hard-to-access areas), loader, and compactor. Drainage system riprap and culverts will also be installed under this element using labor crews, an excavator, and a loader. Soil has been assumed to have a shrinkage factor of 15% from BCY to embankment cubic yards (ECY).

Table 1 Road Capping Depths

Capping Depths		
Alignment	**Subbase Depth (in.)**	**Base Depth (in.)**
Right of Way	8	4
Non-Vegetated Right of Way	12	0
Rail Corridor	9	3

Miscellaneous Materials/Work

This work element is intended to cover the following items:

- Traffic Control (3%)
- Environmental Controls (3%)
- HSS&E (3%)
- Field Staking/Surveying (2%)
- QA/QC (2%)
- Utility Locates/Protection (1%)

The cumulative cost of these work items is estimated to be 14 percent of the construction cost. This cost does not include the cost of Mobilization/Demobilization and Supervision which are included separately.

Contingency

The contingency cost is applied to all other project costs, including Mobilization/Demobilization, infrastructure construction, and materials purchase. The contingency is intended to cover potential errors, omissions, uncertainties in the scope of this type of work, unanticipated site conditions, and the local construction market. It is not necessarily intended to cover the volatility in fuel cost, fuel-sensitive materials, and other prices that are highly variable and can significantly impact construction costs. A contingency value of 15% was used for this estimate.

Indirect Costs

Indirect costs were estimated at 37% of the total project cost. The costs include engineering, project management, owner representation, profit and regulatory agency coordination.

Channel Lining

Linings consist of vegetation and aggregate confined in geoweb cells. A 25-year flow was calculated for all channel analyses. The FHWA Hydraulic Toolbox was used for velocity calculations and stability analysis of vegetated channels. The USBR method was used for riprap sizing. A roughness coefficient (Manning's n value) of 0.035 was assumed for riprap velocity calculations. Due to the shallow nature of the channels, the n-value of 0.035 produced conservative estimates.

For this estimate, slopes were generalized, and changes between lining types were limited for ease of construction. The channel area was assumed to be outside of the traveled way but within the ROW. The removal of soil and aggregate within the traveled way is accounted for in road remediation estimate.

Existing culverts were identified in 2010 in a field assessment by Anderson and the Rico Town Manager. Further information has been collected in 2024 regarding existing

culverts. A third-party review recommends minimum culvert sizing to be between 15- and 18-inches. This cost estimate uses 18-inch reinforced concrete pipe (RCP) culverts in all applications. RCP is being recommended due to the shallow bury depths of the culverts which result in minimal soil cover.

Limitations

The results of the engineering cost estimate are limited based on the above assumptions. This report was created utilizing data and information available within the schedule for timely delivery. Limitations of the cost estimate are detailed below.

The development of the Columbia Tailings or expansion of the existing repository was not considered in the cost estimate.

This report and cost estimate utilizes results of the hydrologic and hydraulic analysis for the 25-year, 24-hour storm event. Culvert and channel linings performance will be dependent on actual storm events and the operation and maintenance of the entire system.

The 60 percent design documents identify various locations requiring easements or right of way acquisition. This cost estimate assumes those will be acquired but does not include the acquisition cost.

Channel linings were determined using flowline slope determined from topographic survey and lidar elevation data. For ease of construction, the contractor may wish to replace the installation of small, isolated segments of channel linings.

Costs to upgrade highway drainage or to cross channels under the highway were not considered. Instead, channels were considered to connect to existing natural waterways after passing through a catch basin. Discharge permitting is expected to be minimal and handled through the Town.

Some locations were identified where low spots in the channel profile could be made to drain by strategic grading of the roadway. Other low spots will require easements, and buried pipes to be able to drain.

Cost Estimate Results

The estimate for the work is summarized by the major cost elements described above and as shown on the included Table 6.

Table 6 ECE Summary Opinion of Cost (60%)				
Item	Atlantic Richfield (Green)	Town of Rico (Blue)	Town of Rico (Purple)
Project Costs			
Mobilization/Demobilization and Supervision[1]	$290,892	$ -	$ -
Street & Alley Removal	$444,644	$ -	$ -
Street and Alley Purchase/Haul Materials	$360,014	$ -	$ -
Street and Alley Replacement	$355,200	$ -	$ -
Miscellaneous[2]	$162,380	$ -	$ -
Contingency[3]	$241,970	$ -	$ -
Indirect Costs[4]	$686,387	$ -	$ -
Street and Alley Subtotal	$2,541,488	$ -	$ -
Mobilization/Demobilization and Supervision[1]	$ 248,599	$ 220,209	$ 92,042
Drainage Ditch Removal	$ 299,875	$ 241,643	$ 118,673
Drain Ditches Purchase/Haul Materials	$ 201,144	$ 167,598	$ 67,336
Drainage Feature Placement	$ 490,205	$ 468,787	$ 180,983
Miscellaneous[2]	$ 138,771	$ 122,924	$ 51,379
Contingency[3]	$ 206,789	$ 183,174	$ 76,562
Indirect Costs[4]	$ 586,592	$ 519,604	$ 217,181
Drainage Subtotal	$ 2,171,975	$ 1,923,939	$ 804,155
Total	$ 4,713,463	$ 1,923,939	$ 804,155

[1] Mobilization/Demobilization and Supervision at 22% of all other project costs.

[2] Miscellaneous at 14% of Removal, Purchase/Haul Materials, and Replacement costs with the following breakout:
- Traffic Control (3%)
- Environmental Controls (3%)
- HSS&E (3%)
- Field Staking/Surveying (2%)
- QA/QC (2%)
- Utility Locates/Protection (1%)

[3] Contingency at 15% of total project cost.

[4] Indirect Costs at 37% of the total cost including:
- Engineering
- Project Management
- Owner Representation
- Agency Coordination
- Profit

Should you have any questions please contact us for further details or explanation.

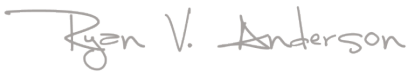
Sincerely,

ANDERSON Engineering Co., Inc.

Justin M. Dye, P.E.

Project Manager

Reviewed by,



Ryan V. Anderson, CSP, PLA

Portfolio Manager

Cc: Mike Mc Anulty - Atlantic Richfield (email)
Ron Halsey - Atlantic Richfield (email)
Adam Cohen - Davis Graham & Stubbs LLP (email)
Lucas Satterlee - Davis Graham & Stubbs LLP (email)
Nathan Block - BP (email)

Attachments:

Figure 1 Lead Soil Concentrations of 761 ppm and Greater (Formation)

Sheet RM-01 – Road Remediation and Stormwater Construction Overview

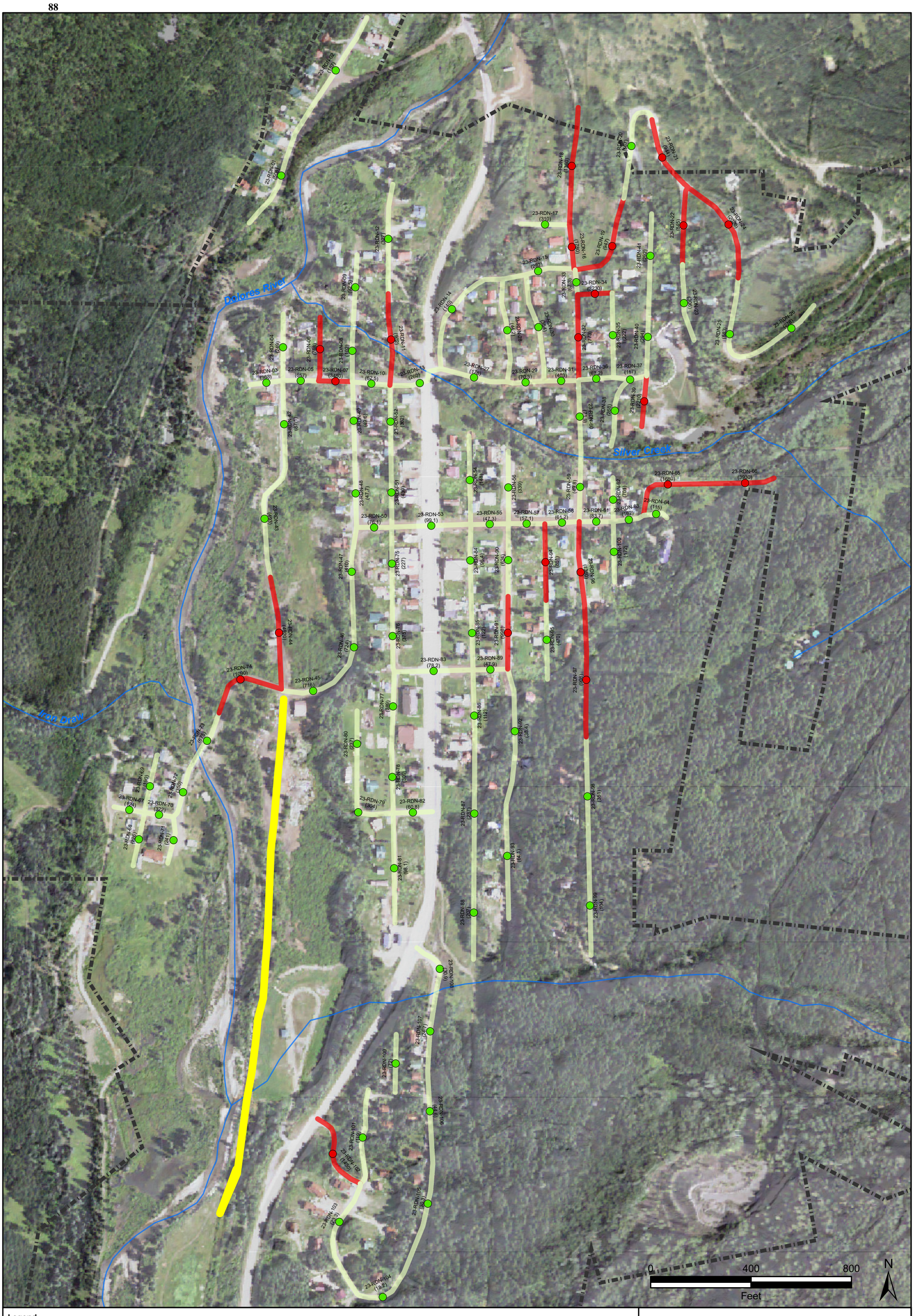
Table 6 Engineer Cost Estimate Summary

Table 7 Road Removal Detailed ECE

Table 8 Atlantic Richfield Drainage Detailed ECE

Table 9 Town of Rico Drainage (Blue) Detailed ECE

Table 10 Town of Rico Drainage (Purple) Detailed ECE



Legend

2023 Lead in Unpaved Road Samples (mg/kg)

- < 761 mg/kg Lead
- >= 761 mg/kg Lead
- Railroad Corridor, >761 mg/kg Lead. To be capped with clean material
- Rivers and Streams
- Town of Rico Boundary

StandardResult

- **< 761**
- **>= 761 mg/Kg**

Lead results are from Pace Analytical method 6010 ICP.

RICO, COLORADO

2023 LEAD CONCENTRATIONS IN UNPAVED ROAD AND ALLEY SAMPLES 0 - 2" DEPTH

DATE: DEC 18, 2024

By: DKG | For: BGH

FORMATION ENVIRONMENTAL

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REMEDIAL AREA SHEET INDEX

RM1-01 - REMEDIATION AREAS NORTHEAST-QUADRANT
RM1-02 - REMEDIATION AREAS NORTHEAST-QUADRANT
RM2-01 - REMEDIATION AREAS SOUTHEAST-QUADRANT
RM3-01 - REMEDIATION AREAS WEST-QUADRANT

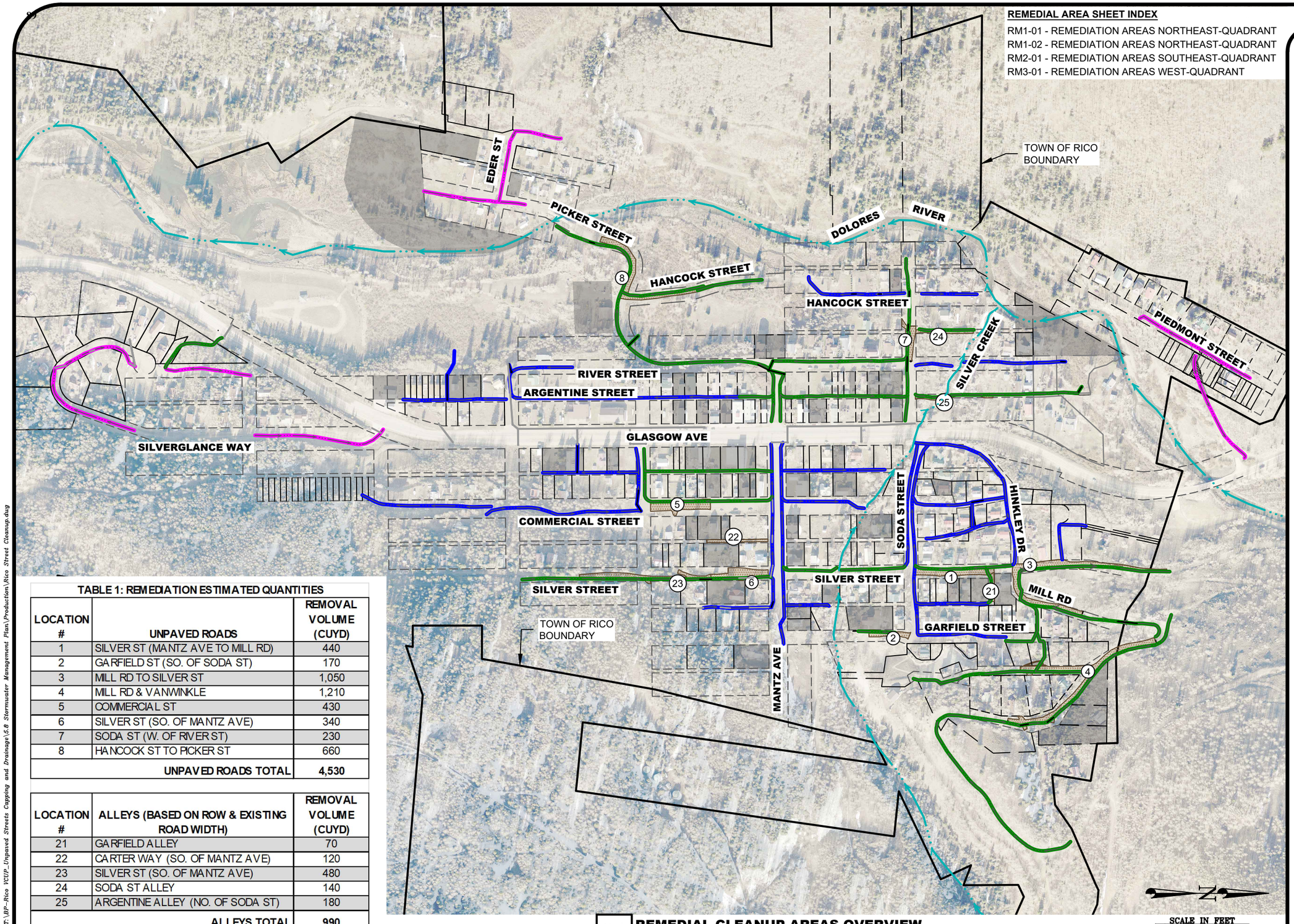

TABLE 1: REMEDIATION ESTIMATED QUANTITIES

LOCATION #	UNPAVED ROADS	REMOVAL VOLUME (CUYD)
1	SILVER ST (MANTZ AVE TO MILL RD)	440
2	GARFIELD ST (SO. OF SODA ST)	170
3	MILL RD TO SILVER ST	1,050
4	MILL RD & VANWINKLE	1,210
5	COMMERCIAL ST	430
6	SILVER ST (SO. OF MANTZ AVE)	340
7	SODA ST (W. OF RIVER ST)	230
8	HANCOCK ST TO PICKER ST	660
	UNPAVED ROADS TOTAL	**4,530**

LOCATION #	ALLEYS (BASED ON ROW & EXISTING ROAD WIDTH)	REMOVAL VOLUME (CUYD)
21	GARFIELD ALLEY	70
22	CARTER WAY (SO. OF MANTZ AVE)	120
23	SILVER ST (SO. OF MANTZ AVE)	480
24	SODA ST ALLEY	140
25	ARGENTINE ALLEY (NO. OF SODA ST)	180
	ALLEYS TOTAL	**990**
	UNPAVED AND ALLEYS TOTAL	**5,520**

01 REMEDIAL CLEANUP AREAS OVERVIEW
SCALE - 1" = 400'

SCALE IN FEET
0 200 400

General Notes

LEGEND

- TOWN OF RICO BOUNDARY
- TOWN OF RICO R.O.W. BLOCKS
- N.T.S.
- LOTS REQUIRING REMEDIATION (BY OTHERS) SEE NOTE 1.
- ROAD REMEDIATION AREA
- SURVEYED EDGE OF ROADS & DRIVEWAYS
- VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS
- NON-VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS #1
- NON-VCUP STORMWATER MANAGEMENT SYSTEM COMPONENTS #2

No.	Revision/Issue	Date

TOWN OF RICO

ANDERSON ENGINEERING COMPANY INC.

TOWN OF RICO STORMWATER CONTROL PLAN (60% SUBMITTAL)

REMEDIAL CLEANUP AREAS OVERVIEW

RICO, COLORADO

DRAWN BY:	RSH
ENGINEER:	RSH
APPROVED:	JMD

Project	RICO
Date	28-Feb-2025
Scale	1" = 400'
Sheet	RM-01

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Table 6 ECE Summary Opinion of Cost (60%)				
Item		Atlantic Richfield (Green)	Town of Rico (Blue)	Town of Rico (Purple)
Project Costs				
	Mobilization/Demobilization and Supervision[1]	$320,393	$ -	$ -
	Street & Alley Removal	$444,644	$ -	$ -
	Street and Alley Purchase/Haul Materials	$360,014	$ -	$ -
	Street and Alley Replacement	$472,824	$ -	$ -
	Miscellaneous[2]	$178,848	$ -	$ -
	Contingency[3]	$266,508	$ -	$ -
	Indirect Costs[4]	$755,995	$ -	$ -
Street and Alley Subtotal		$2,799,226	$ -	$ -
	Mobilization/Demobilization and Supervision[1]	$ 248,599	$ 220,209	$ 92,042
	Drainage Ditch Removal	$ 299,875	$ 241,643	$ 118,673
	Drain Ditches Purchase/Haul Materials	$ 201,144	$ 167,598	$ 67,336
	Drainage Feature Placement	$ 490,205	$ 468,787	$ 180,983
	Miscellaneous[2]	$ 138,771	$ 122,924	$ 51,379
	Contingency[3]	$ 206,789	$ 183,174	$ 76,562
	Indirect Costs[4]	$ 586,592	$ 519,604	$ 217,181
Drainage Subtotal		$ 2,171,975	$ 1,923,939	$ 804,155
Total		$ 4,971,202	$ 1,923,939	$ 804,155

[1] Mobilization/Demobilization and Supervision at 22% of all other project costs.

[2] Miscellaneous at 14% of Removal, Purchase/Haul Materials, and Replacement costs with the following breakout:

- Traffic Control (3%)
- Environmental Controls (3%)
- HSS&E (3%)
- Field Staking/Surveying (2%)
- QA/QC (2%)
- Utility Locates/Protection (1%)

[3] Contingency at 15% of total project cost.

[4] Indirect Costs at 37% of the total cost including:

- Engineering
- Project Management
- Owner Representation
- Agency Coordination
- Profit

Table 7 Road Removal
ECE Detailed Opinion of Cost (60%)

Action	Vehicle	Units	Unit Price	Quantity	Extended	Cost	Daily Output	# Veh.	Days	Description	2023 RS Means Construction Cost Data - Ref No.
Mobilization/Demobilization and Supervision [1]		%	22			$ 320,392.58					
Street and Alley Removal						$ 444,644.36					
Ripping Existing Roadways	Dozer	SY	$ 3.10	15,137	$ 46,924.36		-	-	85	Flare Construction unit cost estimate	Flare Construction
Excavating & Loading Haul Truck	Loader	BCY[4]	$ 46.00	6,100	$ 280,600.00		-	-	85	Flare Construction unit cost estimate	Flare Construction
Hauling to Lead Soil Repository	Haul Truck	BCY[4]	$ 19.20	6,100	$ 117,120.00		-	-	85	Flare Construction unit cost estimate; Placement at SLR will be handled by AR	Flare Construction
Streets and Alleys Purchase/Haul Materials						$ 360,014.02					
Delineating Fabric & Placement		SY	$ 1.85	15,137	$ 28,003.24		2,500	1	21		313219161500
Geotextile Delivery	Semi-trailer	Day	$ 2,241.39	2	$ 4,482.78		1	1	2	40T flatbed trailer & Truck, Labor included. Assumes 2 loads in per day, 150 rolls per load.	Crew B-34N
Aggregate Subbase Course - 4" minus		Tons[6]	$ 11.10	8,120	$ 90,132.00					Mcstone Aggregates - projecting 2025 costs	Vendor Quote 12/18/2024
Aggregate Base Course - Class 6		Tons[6]	$ 11.70	3,880	$ 45,396.00					Mcstone Aggregates - projecting 2025 costs	Vendor Quote 12/18/2024
Hauling	Haul Truck	Tons[6]	$ 16.00	12,000	$ 192,000.00					Mcstone Aggregates, 15 ton Dump truck, assumes 2 hr round trip.	Vendor Quote 12/18/2024
Street and Alley Replacement						$ 472,824.00					
Place Road Delineating Fabric		LF	$ 18.00	4,010	$ 72,180.00					24 ft width	
Place Alley Delineating Fabric		LF	$ 12.00	1,525	$ 18,300.00					16 ft width	
Place Rail Delineating Fabric		LF	$ 12.00	2,262	$ 27,144.00					15 ft width	
Road Place and Compact Subbase		ECY	$ 48.00	3,330	$ 159,840.00		-	-	80	Flare Construction unit cost estimate; Assumes 400T delivered per day	Flare Construction
Road Place and Compact Base		ECY	$ 48.00	1,670	$ 80,160.00		-	-	80	Flare Construction unit cost estimate; Assumes 400T delivered per day	Flare Construction
Alley Place and Compact Subbase		ECY	$ 48.00	730	$ 35,040.00		-	-	80	Flare Construction unit cost estimate; Assumes 400T delivered per day	Flare Construction
Alley Place and Compact Base		ECY	$ 48.00	370	$ 17,760.00		-	-	80	Flare Construction unit cost estimate; Assumes 400T delivered per day	Flare Construction
Rail Place and Compact Subbase		ECY	$ 48.00	950	$ 45,600.00		-	-	80	Flare Construction unit cost estimate; Assumes 400T delivered per day	Flare Construction
Rail Place and Compact Base		ECY	$ 48.00	350	$ 16,800.00		-	-	80	Flare Construction unit cost estimate; Assumes 400T delivered per day	Flare Construction
Miscellaneous [2]		%	14			$ 178,847.53					
Contingency [3]		%	15			$ 266,508.37					
Indirect Costs [8]		%	37			$ 755,995.42					
					Total Estimated Cost ($):	$ 2,799,226.29					

Contingency, Haul to Aztec [7]						$ -					
Haul to Aztec	Haul Truck	LCY	$ 67.68	0	$ -					12 L.C.Y Dump Truck, Assumes 5 hr round trip	312323202000
Landfill Tipping		Ton	$ 70.00	0	$ -					Pending deposit upon approval, Waste Management Vendor Quote	

[1] Mobilization/Demobilization and Supervision at 22% of all other project costs. Historical Average

[2] Miscellaneous at 14% of the Removal, Replacement, and Purchase/Haul Materials costs with the following breakout:
- Traffic Control (3%)
- Environmental Controls (3%)
- HSS&E (3%)
- Field Staking/Surveying (2%)
- QA/QC (2%)
- Utility Locates/Protection (1%)

[3] Contingency at 15% of total project cost.

[4] Bank Cubic Yards use an expansion factor of 15% from Embankment Cubic Yards

[5] Assumed maximum dry density unit weight of 120pcf

[6] Indirect Costs at 37% of the total cost including:
- Engineering
- Project Management
- Owner Representation
- Agency Coordination
- Profit

Table 8 Atlantic Richfield Drainage (Green)
ECE Detailed Opinion of Cost (60%)

Action	Vehicle	Units	Unit Price	Quantity	Extended	Cost	Daily Output	# Veh.	Days	Description	2023 RS Means Construction Cost Data - Ref No.
Mobilization/Demobilization and Supervision [1]		%	22			$ 248,598.98					
Drainage Ditch Removal						$ 299,874.91					
Culvert Excavation	Backhoe	LF	$ 63.00	1,018	$ 64,162.98					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 1 Seeded channel (6' wide)	Excavator	LF	$ 23.00	1,381	$ 31,763.00					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 2 Geoweb Channel (6' wide)	Excavator	LF	$ 23.00	1,111	$ 25,553.00						
Excavate Type 3 Seeded channel (3.5' wide)	Excavator	LF	$ 16.00	1,717	$ 27,467.68					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 4 Geoweb Channel (3.5' wide)	Excavator	LF	$ 16.00	4,735	$ 75,760.00						
Hauling to SLR	Haul Truck	BCY[4]	$ 36.00	2,088	$ 75,168.25					Flare Construction unit cost estimate; Placement at SLR will be handled by AR	Flare Construction Quote
Drain Ditches Purchase/Haul Materials						$ 201,144.38					
Drainage Geotextile		SY	$ 1.85	13,416	$ 24,818.85						313219161500.00
Geotextile Delivery	Semi-trailer	Day	$ 2,241.39	2	$ 4,482.78					40T flatbed trailer & Truck, Labor included. Assumes 2 loads in per day, 150 rolls per load.	Crew B-34N
Geoweb (includes delivery)		LF	$ 10.00	5,846	$ 58,460.00					Written Quote from Bowman Construction Supply in Denver	
Geoweb Gravel Fill - 2" D50		Tons[5]	$ 20.00	704	$ 14,085.54					Quote from C&J Gravel current advertised price	
CDOT Class 6		Tons[5]	$ 11.10	302	$ 3,357.56					Mcstone Aggregates, Culvert fill	Vendor Quote 12/17/24
Hauling	Haul Truck	Tons[5]	$ 60.00	1,007	$ 60,405.58					Verbal quote from Durango Gravel, 15 ton Dump truck, assumes 6 hr round trip.	
18" RCP Culvert		LF	$ 34.89	1,018	$ 35,534.07					Rinker Pipe in Grand Junction; w/ delivery	Vendor Quote 11/14/2024
Drainage Feature Placement						$ 490,204.72					
Misc. Construction Permitting		LS	$10,000.00	1	$ 10,000.00					ECE	
Seeding Type 1 (6' wide) channels		LF	$ 2.00	1,381	$ 2,762.00					Flare Construction unit cost estimate	Flare Construction Quote
Placing Type 2 Geoweb and Gravel fill (6' wide)		LF	$ 24.00	1,111	$ 26,664.00					Flare Construction unit cost estimate	Flare Construction Quote
Seeding Type 3 (3.5' wide) channels		LF	$ 2.00	1,717	$ 3,433.46					Flare Construction unit cost estimate	Flare Construction Quote
Placing Type 4 Geoweb and Gravel fill (3.5' wide		LF	$ 24.00	4,735	$ 113,640.00					Flare Construction unit cost estimate	Flare Construction Quote
Clean/Repair Existing Culverts		LF	$ 150.00	83	$ 12,465.00					Flare Construction unit cost estimate	Flare Construction Quote
18" RCP Culvert Installation		LF	$ 72.00	1,018	$ 73,329.12					Flare Construction unit cost estimate	Flare Construction Quote
Catch Basin Installation		Ea.	$ 4,220.00	5	$ 21,100.00					Flare Construction unit cost estimate, Includes materials and installation for 5 catch basins	
4' Concrete Waterway		LF	$ 112.00	325	$ 36,431.36					Flare Construction unit cost estimate	Flare Construction Quote
6' Concrete Waterway		LF	$ 150.00	461	$ 69,081.00					Flare Construction unit cost estimate	Flare Construction Quote
Trench Drain		LF	$ 1,330.00	30	$ 39,900.00					Flare Construction unit cost estimate	Flare Construction Quote
Type G Concrete Curb		LF	$ 112.00	50	$ 5,600.00					Flare Construction unit cost estimate	Flare Construction Quote
Roadside Grading		LF	$ 8.50	3,035	$ 25,798.78					Flare Construction unit cost estimate	Flare Construction Quote
Detention Basin		Ea.	$50,000.00	1	$ 50,000.00					ECE - Accounts for additional cost to modify a temporary basin	
Miscellaneous [2]		%	14			$ 138,771.36					
Contingency [3]		%	15			$ 206,789.15					
Indirect Costs [6]		%	37			$ 586,591.89					
					Total Estimated Cost ($):	$ 2,171,975.39					

[1] Mobilization/Demobilization and Supervision at 22% of all other project costs. Historical Average

[2] Miscellaneous at 14% of the Removal, Replacement, and Purchase/Haul Materials costs with the following breakout:
- Traffic Control (3%)
- Environmental Controls (3%)
- HSS&E (3%)
- Field Staking/Surveying (2%)
- QA/QC (2%)
- Utility Locates/Protection (1%)

[3] Contingency at 15% of total project cost.

[4] Bank Cubic Yards use an expansion factor of 15% from Embankment Cubic Yards

[5] Assumed maximum dry density unit weight of 120pcf

[6] Indirect Costs at 37% of the total cost including:
- Engineering
- Project Management
- Owner Representation
- Agency Coordination
- Profit

Table 9 Town of Rico Drainage (Blue)
ECE Detailed Opinion of Cost (60%)

Action	Vehicle	Units	Unit Price	Quantity	Extended	Cost	Daily Output	# Veh.	Days	Description	2023 RS Means Construction Cost Data - Ref No.
Mobilization/Demobilization and Supervision [1]		%	22			$ 220,209.32					
Drainage Ditch Removal						$ 241,642.86					
Culvert Excavation	Backhoe	LF	$ 63.00	1,272	$ 80,124.66					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 1 Seeded channel (6' wide)	Excavator	LF	$ 23.00	482	$ 11,075.19					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 2 Geoweb Channel (6' wide)	Excavator	LF	$ 23.00	2,009	$ 46,204.93						
Excavate Type 3 Seeded channel (3.5' wide)	Excavator	LF	$ 16.00	936	$ 14,974.56					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 4 Geoweb Channel (3.5' wide)	Excavator	LF	$ 16.00	1,611	$ 25,775.52						
Hauling to Soil Lead Repository	Haul Truck	BCY[4]	$ 36.00	1,764	$ 63,488.00					Flare Construction unit cost estimate; Placement at SLR will be handled by AR	Flare Construction Quote
Drain Ditches Purchase/Haul Materials						$ 167,597.74					
Drainage Geotextile		SY	$ 1.85	7,556	$ 13,978.56						313219161500.00
Geotextile Delivery	Semi-trailer	Day	$ 2,241.39	2	$ 4,482.78					40T flatbed trailer & Truck, Labor included. Assumes 2 loads in per day, 150 rolls per load.	Crew B-34N
Geoweb (includes delivery)		LF	$ 10.00	3,620	$ 36,198.80					Written Quote from Bowman Construction Supply in Denver	
Geoweb Gravel Fill - 2" D50		Tons[5]	$ 20.00	521	$ 10,426.79					Quote from C&J Gravel current advertised price	
CDOT Class 6		Tons[5]	$ 11.10	378	$ 4,192.81					Mcstone Aggregates, Culvert fill	Vendor Quote 12/17/24
Hauling	Haul Truck	Tons[5]	$ 60.00	899	$ 53,944.20					Verbal qutoe from Durango Gravel, 15 ton Dump truck, assumes 6 hr round trip.	
18" RCP Culvert		LF	$ 34.89	1,272	$ 44,373.80					Rinker Pipe in Grand Junction; w/ delivery	Vendor Quote 11/14/2024
Drainage Feature Placement						$ 468,787.00					
Misc. Construction Permitting		LS	$ 10,000.00	1	$ 10,000.00					ECE	
Seeding Type 1 (6' wide) channels		LF	$ 2.00	482	$ 963.06					Flare Construction unit cost estimate	Flare Construction Quote
Placing Type 2 Geoweb and Gravel fill (6' wide)		LF	$ 24.00	2,009	$ 48,213.84					Flare Construction unit cost estimate	Flare Construction Quote
Seeding Type 3 (3.5' wide) channels		LF	$ 2.00	936	$ 1,871.82					Flare Construction unit cost estimate	Flare Construction Quote
Placing Type 4 Geoweb and Gravel fill (3.5' wide)		LF	$ 24.00	1,611	$ 38,663.28					Flare Construction unit cost estimate	Flare Construction Quote
Clean/Repair Existing Culverts		LF	$ 150.00	137	$ 20,556.00					Flare Construction unit cost estimate	Flare Construction Quote
18" RCP Culvert Installation		LF	$ 72.00	1,272	$ 91,571.04					Flare Construction unit cost estimate	Flare Construction Quote
Catch Basin Installation		Ea.	$ 4,220.00	17	$ 71,740.00					Flare Construction unit cost estimate, Includes materials and installation for 17 catch basins	
4' Concrete Waterway		LF	$ 112.00	226	$ 25,332.16					Flare Construction unit cost estimate	Flare Construction Quote
6' Concrete Waterway		LF	$ 150.00	254	$ 38,029.50					Flare Construction unit cost estimate	Flare Construction Quote
Trench Drain		LF	$ 1,330.00	35	$ 46,550.00					Flare Construction unit cost estimate	Flare Construction Quote
Type G Concrete Curb		LF	$ 112.00	338	$ 37,824.64					Flare Construction unit cost estimate	Flare Construction Quote
Roadside Grading		LF	$ 8.50	4,408	$ 37,471.66					Flare Construction unit cost estimate	Flare Construction Quote
Detention Basin		Ea.	$ 50,000.00	0	$ -					ECE - Accounts for additional cost to modify a temporary basin	
Miscellaneous [2]		%	14			$ 122,923.86					
Contingency [3]		%	15			$ 183,174.12					
Indirect Costs [8]		%	37			$ 519,603.91					
					Total Estimated Cost ($):	$ 1,923,938.82					

[1] Mobilization/Demobilization and Supervision at 22% of all other project costs. Historical Average

[2] Miscellaneous at 14% of the Removal, Replacement, and Purchase/Haul Materials costs with the following breakout:
- Traffic Control (3%)
- Environmental Controls (3%)
- HSS&E (3%)
- Field Staking/Surveying (2%)
- QA/QC (2%)
- Utility Locates/Protection (1%)

[3] Contingency at 15% of total project cost.

[4] Bank Cubic Yards use an expansion factor of 15% from Embankment Cubic Yards

[5] Assumed maximum dry density unit weight of 120pcf

[6] Indirect Costs at 37% of the total cost including:
- Engineering
- Project Management
- Owner Representation
- Agency Coordination
- Profit

Table 10 Town of Rico Drainage (Purple)
ECE Detailed Opinion of Cost (60%)

Action	Vehicle	Units	Unit Price	Quantity	Extended	Cost	Daily Output	# Veh.	Days	Description	2023 RS Means Construction Cost Data - Ref No.
Mobilization/Demobilization and Supervision [1]		%	22			$ 92,041.64					
Drainage Ditch Removal						$ 118,672.65					
Culvert Excavation	Backhoe	LF	$ 63.00	150	$ 9,473.94					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 1 Seeded channel (6' wide)	Excavator	LF	$ 23.00	967	$ 22,251.12					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 2 Geoweb Channel (6' wide)	Excavator	LF	$ 23.00	1,268	$ 29,163.54						
Excavate Type 3 Seeded channel (3.5' wide)	Excavator	LF	$ 16.00	302	$ 4,836.64					Flare Construction unit cost estimate	Flare Construction Quote
Excavate Type 4 Geoweb Channel (3.5' wide)	Excavator	LF	$ 16.00	802	$ 12,831.04						
Hauling to Soil Lead Repository	Haul Truck	BCY[4]	$ 36.00	1,114	$ 40,116.37					Flare Construction unit cost estimate; Placement at SLR will be handled by AR	Flare Construction Quote
Drain Ditches Purchase/Haul Materials						$ 67,336.41					
Drainage Geotextile		SY	$ 1.85	5,009	$ 9,267.53						313219161500.00
Geotextile Delivery	Semi-trailer	Day	$ 2,241.39	2	$ 4,482.78					40T flatbed trailer & Truck, Labor included. Assumes 2 loads in per day, 150 rolls per load.	Crew B-34N
Geoweb (includes delivery)		LF	$ 10.00	2,070	$ 20,699.20					Written Quote from Bowman Construction Supply in Denver	
Geoweb Gravel Fill - 2" D50		Tons[5]	$ 20.00	306	$ 6,116.15					Quote from C&J Gravel current advertised price	
CDOT Class 6		Tons[5]	$ 11.10	45	$ 495.76					Mcstone Aggregates, Culvert fill	Vendor Quote 12/17/24
Hauling	Haul Truck	Tons[5]	$ 60.00	350	$ 21,028.23					Verbal qutoe from Durango Gravel, 15 ton Dump truck, assumes 6 hr round trip.	
18" RCP Culvert		LF	$ 34.89	150	$ 5,246.76					Rinker Pipe in Grand Junction; w/ delivery	Vendor Quote 11/14/2024
Drainage Feature Placement						$ 180,983.13					
Misc. Construction Permitting			$10,000.00	1	$ 10,000.00					ECE	
Seeding Type 1 (6' wide) channels		LF	$ 2.00	967	$ 1,934.88					Flare Construction unit cost estimate	Flare Construction Quote
Placing Type 2 Geoweb and Gravel fill (6' wide)		LF	$ 24.00	1,268	$ 30,431.52					Flare Construction unit cost estimate	Flare Construction Quote
Seeding Type 3 (3.5' wide) channels		LF	$ 2.00	302	$ 604.58					Flare Construction unit cost estimate	Flare Construction Quote
Placing Type 4 Geoweb and Gravel fill (3.5' wid		LF	$ 24.00	802	$ 19,246.56					Flare Construction unit cost estimate	Flare Construction Quote
Clean/Repair Existing Culverts		LF	$ 150.00	120	$ 18,000.00					Flare Construction unit cost estimate	Flare Construction Quote
18" RCP Culvert Installation		LF	$ 72.00	150	$ 10,827.36					Flare Construction unit cost estimate	Flare Construction Quote
Catch Basin Installation		Ea.	$ 4,220.00	0	$ -					Flare Construction unit cost estimate, Includes materials and installation for 0 catch basins	
4' Concrete Waterway		LF	$ 112.00	0	$ -					Flare Construction unit cost estimate	Flare Construction Quote
6' Concrete Waterway		LF	$ 150.00	211	$ 31,690.50					Flare Construction unit cost estimate	Flare Construction Quote
Trench Drain		Ea.	$ 1,330.00	40	$ 53,200.00					Flare Construction unit cost estimate	Flare Construction Quote
Type G Concrete Curb		LF	$ 112.00	0	$ -					Flare Construction unit cost estimate	Flare Construction Quote
Roadside Grading		LF	$ 8.50	594	$ 5,047.73					Flare Construction unit cost estimate	Flare Construction Quote
Detention Basin		Ea.	$50,000.00	0	$ -					ECE - Accounts for additional cost to modify a temporary basin	
Miscellaneous [2]		%	14			$ 51,378.91					
Contingency [3]		%	15			$ 76,561.91					
Indirect Costs [8]		%	37			$ 217,180.62					
					Total Estimated Cost ($):	$ 804,155.26					

[1] Mobilization/Demobilization and Supervision at 22% of all other project costs. Historical Average

[2] Miscellaneous at 14% of the Removal, Replacement, and Purchase/Haul Materials costs with the following breakout:
- Traffic Control (3%)
- Environmental Controls (3%)
- HSS&E (3%)
- Field Staking/Surveying (2%)
- QA/QC (2%)
- Utility Locates/Protection (1%)

[3] Contingency at 15% of total project cost.

[4] Bank Cubic Yards use an expansion factor of 15% from Embankment Cubic Yards

[5] Assumed maximum dry density unit weight of 120pcf

[6] Indirect Costs at 37% of the total cost including:
- Engineering
- Project Management
- Owner Representation
- Agency Coordination
- Profit

Stormwater Management Facility Operation and Maintenance (O&M) General Guidelines

Town of Rico

2 Commercial St
Rico, Colorado 81332
970-967-2861

2025

Stormwater Management Facility
Operation and Maintenance (O&M) General Guidelines

Table of Contents

Stormwater Management Facility
Operation and Maintenance (O&M) General Guidelines

I. Background

This document provides General Guidelines and Standard Operating Procedures (SOPs) for Operation and Maintenance (O&M) of stormwater facilities.

A. Compliance

The Contractor shall comply with the "Colorado Water Quality Control Act" (Title 25, article 8, CRS), the "Protection of Fishing Streams" (Title 33, Article 5, CRS), the "Clean Water Act" (33 USC 1344), regulations promulgated, certifications or permits issued, and to the requirements listed below. In the event of conflicts between these requirements and water quality control laws, rules, or regulations of other Federal or State agencies, the more restrictive laws, rules, or regulations shall apply.

B. Preventive and Prompt Maintenance Activities Reduce Overall Maintenance Costs

The most effective way to maintain your stormwater facility is to prevent pollutants from entering the facility. Common pollutants include sediment, trash and debris, chemicals, pet wastes, runoff from stored materials, illicit discharges into the storm drainage system and many others. A thorough maintenance program will include measures to address these potential contaminants and will save money and time in the long run. Key points to consider in your maintenance program include:

- Educate employees/residents on how their actions impact water quality and how they can help reduce maintenance costs.
- Keep properties, streets, curb & gutters and parking lots free of trash, debris and lawn clippings.
- Ensure the proper disposal of hazardous wastes and chemicals.
- Plan lawn care to minimize the use of chemicals and pesticides.
- Sweep or blow grass clippings from paved surfaces and put the clippings in a compost pile or back on the lawn.
- Be aware of automobiles leaking fluids. Use absorbents such as clay cat litter to soak up drippings and dispose of properly.
- Re-vegetate disturbed and bare areas to maintain vegetative stabilization.
- Clean out the upstream components of the storm drainage system, including inlets, storm sewers and outfalls.

- Do not store materials outdoors (including landscaping materials) unless they are properly protected from stormwater runoff.

II. General Description of Stormwater Management Facilities

A. Water Quality and Flood Control Facilities

1. Retention Basin – An artificial pond designed to manage stormwater runoff. It has vegetation around the perimeter and a permanent pool of water. The basin temporarily stores excess water, allowing it to infiltrate into the ground or evaporate over time.
2. Stilling Basin – An excavated pool lined with rip-rap deep enough to absorb or dissipate the energy from the spillway discharge to protect the spillway from erosion and undermining.
3. Catch Basins – A type of drainage structure that is typically used to collect stormwater runoff and direct it into a storm sewer system. It is made up of a runoff grate, an outlet trap (sump), and an outlet pipe.
4. Culverts – Relatively short lengths of pipe connecting two open ditch segments or bodies of water.
5. Stormdrain Pipe Culverts – Pipe, such as reinforced concrete pipe, connect between catch basins, and used as outfalls.
6. Trench Drains – Concrete drainage channel covered with a grate to remove excess surface water from an area, while still being able to cross over.

B. Open Channels

1. Concrete Waterways – Concrete cross gutters to maintain drainage through an intersection with minimal ponding and shallow enough to drive over.
2. Stabilized Channels – Grass or confined riprap in geoweb lined channels that collect and covey stormwater while encouraging infiltration into the ground.

III. Ownership and Easements

Maintenance responsibility lies with the owner of the land, except as modified by specific agreement. Maintenance responsibility shall be defined on Final Plats and Final Development Plans. The property owner or designee shall be responsible for the maintenance of all drainage facilities including inlets, pipes, culverts, ditches, and hydraulic structures, located on their land unless modified by specific agreement. Maintenance access for all facilities must be adequate for the anticipated maintenance vehicles and/or equipment and should be shown on the Final Plats and Final Development Plans.

Drainage easements are required to ensure for the proper construction, maintenance and access to drainage improvements that have the potential to affect the public drainage system and other properties. Drainage easements shall be granted to the Town for inspection and maintenance purposes and shall be shown on the Drainage Plan, Final Plat and Site Improvement Plan, as applicable. The drainage easement shall state that the Town has the right-of-access on the easements for inspection and maintenance purposes. In general, easements are required for detention or retention ponds, water quality enhancement ponds and other Best Management Practice facilities, such as storm sewers, swales, channels, that convey runoff from adjacent properties (blanket type easements), and major drainageways and floodplains. Easement requirements are specific to the type of stormwater management facility and are discussed in more detail in later chapters.

IV. Access

Refer to approved Plat, Drainage Plan and/or Site Plan for location of designated maintenance accesses. Contact the Town's manager at 970-967-2861 with any questions regarding access to a facility.

V. Safety

Always keep safety considerations at the forefront of inspection and maintenance procedures. Likely hazards should be anticipated and avoided. Never enter a confined space (outlet structure, manhole, etc) without proper training or equipment. A confined space should never be entered without at least one additional person present.

If a highly toxic or flammable substance is discovered, the inspector(s) should leave the immediate area and contact the Town's Fire Department at 911. If there is any question about a substance, leave the area immediately and contact Rico Fire Protection District at 970-967-2222. Never open a sealed container to check the contents.

Potentially dangerous (e.g., fuel, chemicals, hazardous materials) substances found in the areas must be referred to the Rico Fire Protection District immediately for response by the Hazardous Materials Unit. The emergency contact number is 970-967-2222.

Vertical drops may be encountered in areas located within and around the facility. Avoid walking on top of retaining walls or other structures that have a significant vertical drop. If a vertical drop is identified within the stormwater management facility that is greater than 48-inches height, make the appropriate note/comment on the maintenance inspection form.

If any hazard is found within the facility area that poses an immediate threat to public safety, contact the Rico Fire Protection District immediately.

VI. Field Inspection Equipment

It is imperative that the appropriate equipment is taken to the field with the inspector(s). This is to ensure the safety of the inspector and allow the inspections to be performed as efficiently as possible. Below is a list of the equipment that may be necessary to perform the inspections of Stormwater Management Facilities:

- Town Approved Drainage Report and As-Built Construction Drawings
- Typical Inspection & Maintenance Requirements (See Appendix B)
- Protective clothing and boots
- Safety equipment (vest, hard hat, confined space entry equipment)
- Communication equipment
- Clipboard
- Manhole Lid Remover
- Shovel
- First Aid Kit

VII. Inspecting and Maintaining Stormwater Management Facilities

The quality of stormwater discharging to waterways relies heavily on the proper operation and maintenance of permanent control measures. This section contains a general overview of stormwater management facility inspection, operation and maintenance guidelines. Appendix A contains Standard Operating Procedures (SOPs) for the facilities identified in Section II. Refer to the approved Drainage Report and Construction Drawings prior to performing inspections and/or maintenance.

A. Inspection Procedures

All stormwater management facilities shall be inspected by a qualified individual at a minimum of one time per year. Inspections should follow the inspection guidance found in the SOPs located in Appendix A of this manual.

B. Maintenance Procedures

Stormwater Management Facility Maintenance Programs are separated into three broad categories of work. These categories were based largely on the Urban Drainage and Flood Control District's Maintenance Program for regional

drainage facilities. The categories are separated based upon the magnitude and type of the maintenance activities performed. A description of each category follows:

1. Routine Work:

Most of this work consists of regularly scheduled mowing, trimming and trash and debris pickups for stormwater management facilities during the growing season. This work also includes items such as the removal of debris and material that may be clogging catch basin and trench drain grates, culverts, and stormdrain pipe culverts. It may also include activities such as weed control, mosquito treatment and algae treatment. These activities normally will be performed numerous times during the year. These items can be completed without any prior notification to the Town.

2. Minor Work:

This work consists of a variety of isolated or small-scale maintenance and operational problems. Most of this work can be completed by a small crew, hand tools, and small equipment. **These items require notification, at least seven days prior to the start of work to the Town manager 970-967-2861.**

3. Major Work:

This work consists of larger maintenance/operational problems and failures within the stormwater management facilities. **All this work requires notification, at least 14 days prior to the start of work to the Town manager at 970-967-2861 to ensure the proper maintenance is performed.** Install temporary erosion control measures as necessary to redirect water flow away from homes and businesses, and back down stream to the stormdrain infrastructure as approved by the Town Manager. Some of this work requires that the engineering staff review the original design and construction drawings to assess the situation and assign the necessary maintenance. This work may also require more specialized maintenance equipment, design/details, surveying, or assistance through private contractors and consultants.

C. Maintenance Personnel

Maintenance personnel must be qualified to properly maintain stormwater management facilities. Inadequately trained personnel can cause additional problems resulting in additional maintenance costs.

VIII. References

CONTECH Stormwater Solutions. 2007. *StormFilter Inspection and Maintenance Procedures.*

Koski, T. and Skinner, V. 2003. Colorado State University Extension. Fact Sheet no.7.202, Lawn Care.

Law, N.L., K. DiBlasi, and U. Ghosh. 2008. *Deriving Reliable Pollutant Removal Rates for Municipal Street Sweeping and Storm Drain Cleanout Programs in the Chesapeake Bay Basin.* Center for Watershed Protection. Prepared for U.S. EPA Chesapeake Bay Program Grant CB-973222-01: Ellicott City, MD.

Wright Water Engineers, Inc., Wenk Associates, Muller Engineering Company, Inc., Matrix Design Group, and Smith Environmental. 2004. *City and County of Denver Water Quality Management Plan.* Denver, CO

Dong, Janet, Elzarka, Hazem, Gao, Ce and Kaushik, Adithya November 2018 *Evaluation of Trench and Slotted Drain Maintenance and Cleaning-Phase 2.* Prepared for the Ohio Department of Transportation, Office of Statewide Planning & Research.

Table 01: Estimated Hours for Operation and Maintenace of the Town of Rico Stormwater Control System

	Hours	# of times per year	Spring Total Hours	Fall Total Hours
*Catch Basins (22) Inspection	5	Spring/Fall	5	5
*Catch Basins (22) Cleaning	30	Spring/Fall	15	15
*Trench Drains (3)	3	Spring/Fall	1	2
**Culverts (22 connected to catch basins) Cleaning	22	As needed	0	0
**Culverts (13) Cleaning	13	Fall	0	13
Concrete Waterways (100)	50	Spring/Fall	25	25
APWA Type G Concrete Curb & Gutter (43)	35	Spring/Fall	35	35
Misc. Labor Hours (Inspections or Extra Assistance)	80	As needed	40	40
		Estimated Total	**121**	**135**

* Cleaning will be based on location and statistical cleaning based on past events due sediment build up from unpaved roads. Catch Basins should be inspected after snow melt and prior to the first snow fall. Some may require cleaning in the spring or fall.

** Inspect inlets and outlets of pipes while inspecting catch basins. If catch basins are maintained, pipe culvert cleaning should be minimal. The majority of pipe culvert cleaning will be at driveway crossings for ditch to ditch pipe conveyances. Estimating half of driveway culverts may require more than hand labor to clean.

Table 02: Estimated 2025 Equipment & Operator Rates

Item	Rate	Unit
Hydro-Excavation (Operator and Swamper) up to 10 hours	$ 385.00	HR
Hydro-Excavation OT (Operator and Swamper) after 10 hours	$ 430.00	HR
Culvert cleaning (Warthog) 5" to 30"	$ 460.00	HR
Disposition (Dump Fee)	$ 385.00	EA
Water Truck	$ 225.00	HR
Equipment and Operator	$ 130.00	HR
Fuel Surcharge	TBD	Federal Market

Badger Daylighting O&M Costs - based on quote from the Utility Locate Costs

o One water refill/excavation

o Driving mile costs included in hourly rates (no added costs)

Table 03: Yearly Estimated Operation and Maintenance Costs of the Town of Rico Stormwater Control System

Estimate to complete Rico project (based on 10 hr days):	Rate	Estimated Duration (HR)	Total
Hydro-Excavation (Operator and Swamper) up to 10 hours	$ 385.00	30	$11,550
Culvert Cleaning (Warthog) 5" to 30"	$ 460.00	10	$4,600
Water Truck	$ 225.00	10	$2,250
Equipment and Operator	$ 130.00	80	$10,400
Misc. Labor Hours (Inspections or Extra Assistance)	$ 30.00	256	$7,680
		Estimated Yearly Total	**$36,480**

Columbia Tailings – Townsite Soils VCUP Clean Soil Stockpile Plan

DRAFT – 2/17/2025

Background

Operations and maintenance (OM&M) work on the Columbia Tailings Site that began in 2024 is anticipated to be completed by the end of June 2025.

As required by the Townsite Soils Voluntary Clean Up Program (VCUP) Agreement, Atlantic Richfield Company ("AR") needs to establish a Clean Soil Stockpile for use by Rico landowners completing developments projects in accordance with the VCUP Overlay Zone Regulations. Due to the ongoing CERCLA-related construction and remediation work at the Rico-Argentine Site this year, AR plans to establish this VCUP stockpile at a secure location on the Columbia Tailings property, which is the most suitable alternative location and will be closer and easier to access for Rico residents in need of soil cover material. This stockpile will need to be established after winter weather conditions subside and materials are available for transport to the stockpile location, which is not expected to be until approximately May 1, 2025. Per the VCUP agreement, approximately 100 CY of clean fill for the stockpile will be imported to the site, which equates to approximately ten end-dump truck loads. There will be minimal impact within the Town boundaries aside from some increased Highway 145 to/from the site to establish the initial stockpile, and subsequent replenishment on a periodic basis to ensure an adequate supply is available for use by developers.

Stockpile Description and Access

A layer of compacted, clean road base material at least six inches in thickness will be placed under the stockpiles and the access road to/from the stockpiles. This material will be placed in discrete stockpiles at the southern end of the Columbia Tailings Site as shown in Figure 1.

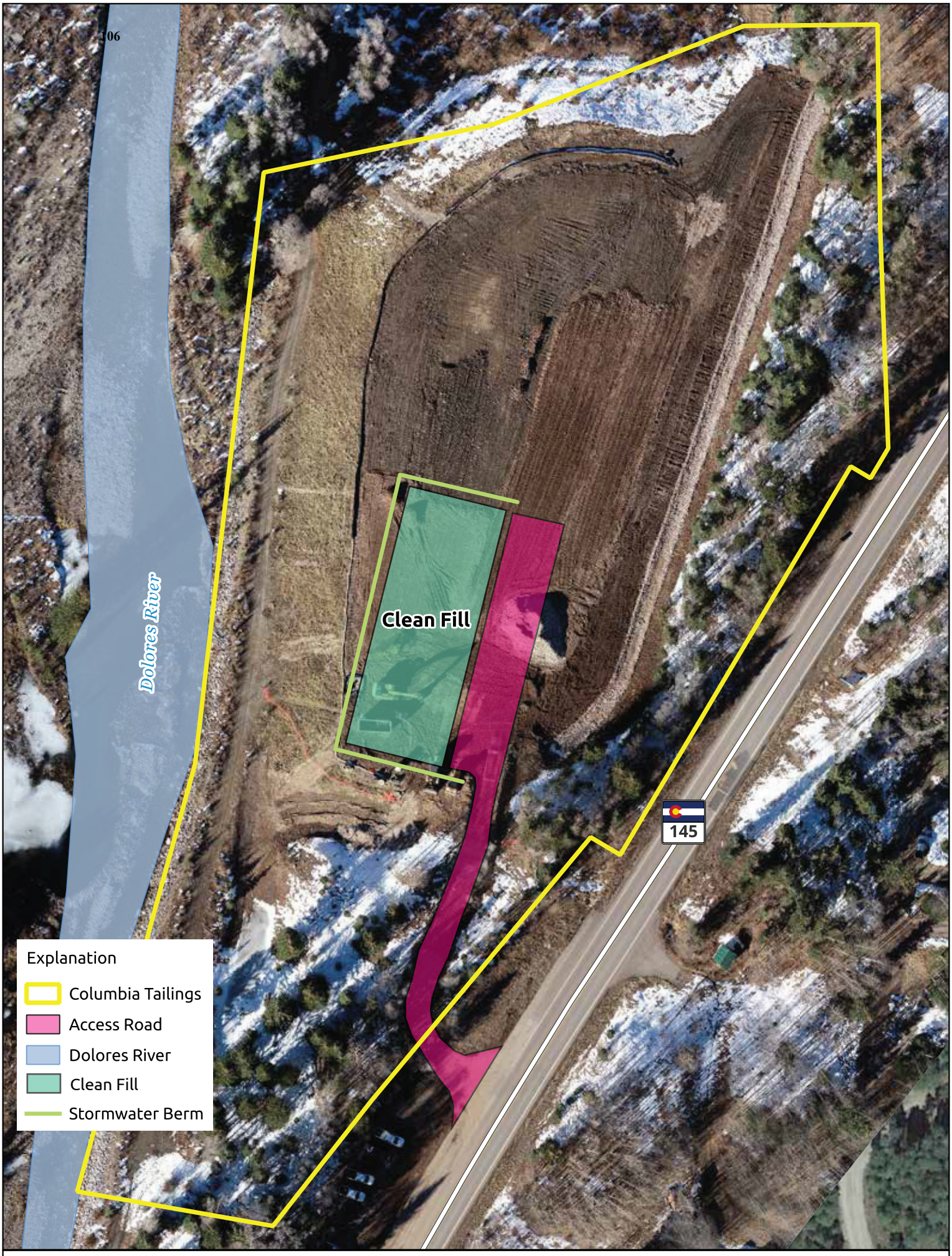
Appropriate berms and stormwater run-on/run-off controls will be installed to prevent erosion and migration of stockpiled materials.

Access to the stockpiled material will be coordinated through AR on an individual basis pursuant to the Overlay Zone Regulations permitting process; but will occur only during normal business hours (Monday through Friday, 9am-4pm).

The material imported for the stockpile located at the Columbia Tailings Site will be tested to confirm its suitability for use in soil remediation as clean cover soil (with lead concentration less than 100 mg/kg).

Health and Safety and Dust Control

In addition to compliance with general health, safety, security, and environment (HSSE) requirements, appropriate dust suppression measures associated with the stockpile will be implemented, including application of water from a water truck, and, if necessary, work will be stopped and additional dust control measures will be implemented prior to resuming work.



0 100 200 ft

VCUP COVER SOIL STOCKPILES
COLUMBIA TAILINGS
RICO, COLORADO

Trihydro

2/17/25

TOWN OF RICO
INCORPORATED OCTOBER 11, 1879
2 North Commercial Street
Post Office Box 9
Rico, Colorado 81332
Office # 970.967.2861
Fax # 970.967.2862
www.ricocolorado.gov

To: Rico Board of Trustees 03/05/2025
From: Chauncey McCarthy, Town Manager
Subject: Carter Way Alley extension disturbance permit review

823. Disturbance permit application submittal requirements:
In addition to other submittal requirements for development applications, an Applicant shall submit the information identified below for any development that requires a Disturbance Permit pursuant to these Wetland Protection Regulations. Upon request, the Town Planner may perform a site inspection, verify that no wetland, water areas, or associated buffer zone exist on the site, and waive this submittal requirement.

Wetlands delineation report included in the packet

823.1 Boundary Map. A map or diagram separately depicting the boundary of water areas, wetlands, and riparian areas, depicting the boundary of the restrictive inner buffer zone from water areas and wetlands, depicting any site specific triggers for a variable outer buffer zone listed in 824.3, and depicting the boundary of the proposed disturbance in wetland areas, water areas and buffer zone areas.

Submittal requirement met.

823.2 Proposed Disturbance. A description of the proposed activity causing disturbance, including the amount, location, and acreage of water area or wetland fill, removal, or other alteration proposed, and location and extent of proposed disturbance in the buffer zone.

Submittal requirement met. (Alley construction within the buffer zone 1800sqft)

823.3 Grading Plan. A grading and erosion control plan, utilizing soil stabilization measures and practices to minimize the impacts of the proposed disturbance described in 827, including a timeframe for installation of erosion control measures.

Submittal requirement met (Timeframe not provided)

823.4 Re-vegetation Plan. Plan showing quantity and type of plant material to be used for re-vegetation, time frame for re-vegetation, and proposed soil stabilization measures.

Revegetation plan provided on sheet C100 of plans quantity not provided

823.5 Mitigation Plan. A plan to mitigate the impacts of proposed fill of water areas or wetlands showing the proposed on-site restoration improvements, including information of those wetland areas to be restored and/or created, in accordance with 828.

Components of mitigation plan included in civil plans.

823.6 Alternative Analysis. A statement and analysis of any practicable on-site development configuration alternatives to the proposed development activity causing disturbance which reduce or avoid such disturbances, including reduction in the scale of the proposed development.

Standard met, see request for private drive agreement for lots 13-20, block 17, Town of Rico document in packet

823.7 Army Corps. For activities that involve the fill of wetland areas, evidence of compliance acceptance of the Plan by the U.S. Army Corp of Engineers

The driveway improvements as proposed are only within the buffer zone and would not impact the wetlands. The power extension as proposed will cross under an active stormwater channel.

Section 825 Review Standards for Disturbance Permit states:

The reviewing entity shall use the standards in this section for review of Disturbance Permits for site development in wetlands, water areas, and buffer zones. The reviewing entity must find that the application meets at least one of the following standards in order to issue a Disturbance Permit. In all cases where an application for a Disturbance Permit meets one of the standards below, an acceptable Disturbance Plan that meets the standards in 826 and, if required, an acceptable Mitigation Plan that meets the standards in 827 are required as a condition to issuance of a Disturbance Permit. Unless otherwise approved by Town, the requirements set out in the Disturbance Permit shall be completed prior to acceptance of any improvements involving wetland disturbance.

The proposed disturbance is within the buffer zone of the wetlands and meets the following standards

825.2 The proposed activity is necessary to achieve access to property or provide utility service to property, and no other access route avoiding wetland and buffer zone areas is practical or the proposed access route results in better overall design of the site development;

826. DISTURBANCE PLAN PRACTICE STANDARDS.

A Disturbance Permit for site development in a wetland area, water area or associated buffer zone include a Disturbance Plan that meets the following standards for development practices to the extent practicable. *A disturbance plan was provided by the engineer on page C100 of: BLOCK 17 LOTS 13-20 TOWN OF RICO, CO DRIVEWAY IMPROVEMENT PLANS Dated 1/29/25*

826.1 Disturbed wetland soils shall be retained for on-site revegetation, on-site mitigation, or off-site mitigation, as set forth in the Disturbance Permit;

Standard met

826.2 Site development in wetland, water areas, and buffer zones shall be confined to the designated boundaries of the Disturbance Permit;

Standard met

826.3 Appropriate erosion and siltation controls must be utilized. Areas not meant for development shall be protected with silt fence, snow fence, or other such barriers, and all exposed soil and other fill shall be permanently stabilized at the earliest practicable date;

Standard met

826.4 Grading and construction shall be timed to minimize soil exposure to heavy run-off and rainy periods;

Timeframe not provided

826.5 Runoff from impervious surfaces such as walkways, parking areas and driveways shall be detained and infiltrated;

Standard met

826.6 The grade of exposed slopes shall be minimized and erosion shall be controlled by utilizing mulching, erosion control blankets, barriers, such as straw bale dikes and silt fencing, and other appropriate means;

Standard met

826.7 Runoff velocities shall be maintained to prevent high erosion by using flow barriers (i.e., vegetation, rip-rap, etc);

Standard met

826.8 Drainage ways and outlets shall be protected from increased flows;

Standard met

826.9 On-site sediment shall be trapped by using check dams, temporary diversions, detention basins, straw bales, silt fences, or other appropriate means;

Standard met

826.10 Disturbed areas shall be revegetated with native vegetation or other appropriate vegetation acceptable to Town;

Standard met

826.11 Existing hydrologic flow shall be maintained through the site through the use of culverts, French drains, or other devices;

Standard met

826.12 Cut and fill shall be minimized;

Standard met

826.13 Heavy equipment working within a wetland area shall use measures to minimize soil disturbance;

Standard met

826.14 Security in the amount of one hundred twenty five percent (125%) of the written estimated cost of the disturbance plan measures shall be provided;

Opinion of probable cost included

826.15 Any other appropriate measure as deemed necessary by the reviewing entity shall be followed;

To be determined

826.16 The project's runoff shall not violate other applicable regulations and laws (e.g., state water quality regulations, Endangered Species Act, National Environmental Policy Act), or significantly degrade wetland or water areas.

Standard met

827 Mitigation Plan. A Mitigation Plan for proposed fill of, or impact to, wetland areas shall include the following information

A mitigation plan was not included with this application. These proposed improvements are only within the buffer zone and will not impact the wetlands to the east of the driveway.

TOWN OF RICO
INCORPORATED OCTOBER 11, 1879
2 North Commercial Street
Post Office Box 9
Rico, Colorado 81332
Office # 970.967.2861
Fax # 970.967.2862
www.ricocolorado.gov

To: Rico Board of Trustees 03/05/2025
From: Chauncey McCarthy, Town Manager
Subject: Carter Way Alley extension road building application permit review

Since this application proposes driveway improvements within the town right-of-way, the review process incorporated both road building standards and driveway standards to evaluate the submittal materials Below is a review of the application and civil plans titled BLOCK 17 LOTS 13-20 TOWN OF RICO, CO DRIVEWAY IMPROVEMENT PLANS Dated 1/29/25 to the submittal requirements.

475. Road building application submittal requirements:
Road Building applications shall contain the following materials and information in addition to a completed Road Building permit application form provided by Town.
475.1. Site map showing location and extent of work to be performed;
Standard met
475.2. proposed design specifications, including two-foot contour lines and cross sections at five-foot intervals which adequately illustrate significant grading and drainage conditions;
Standard met
475.3. copy of a certified survey;
Standard met
475.4. proposed off-street parking plan;
Standard met based upon conceptual site plan
475.5. proposed snow removal plan;
Standard met
475.6. Statement describing the proposed use of the road; and
Standard met
475.7. where applicable, an improvements agreement with acceptable financial guarantees for Road Building applications that are not part of a subdivision application
Standard met; Opinion of probable cost included in the packet.
478. Road design standards
The following standards of this section apply to Road Building applications. All Road Building applications shall be reviewed by the Town Engineer who may require additional improvements or conditions. The Town Board shall have the right to approve Road Building applications that vary from the

standards set forth below where the variance in design does not result in safety, emergency vehicle access, or long-term maintenance problems.

The plans that were submitted have been reviewed by one of the town's contract engineers. Memo has been included in the packet

498. Standards for driveway permits

The following standards shall apply to Excavation Permits for construction of a driveway access.

498.1 Existing Road. Driveways shall not alter the grade or drainage of existing roads, except as they may comply with 498.2.

Standard met

498.2 Drainage. All water diversions shall be installed to prevent flooding downhill, erosion of the shoulder, and water run-off from the drainage system flowing onto private property. Culverts or cement surface drains shall be installed wherever water runoff crosses the roadway and at every intersection. All paved streets shall install curb and gutters. Unpaved streets shall include a bar ditch sufficient to provide adequate drainage.

Standard met

498.3 Grade. Driveways shall be constructed with a maximum grade of 12%.

Variance requested/ 16% grade proposed

498.4 Width. Driveways shall be a minimum of ten (10) feet in width when serving one (1) dwelling unit, or fourteen (14) feet wide when serving more than one dwelling unit or when serving commercial, accommodations, short term rental, or light industrial use.

Standard met, driveway as proposed would allow access to one dwelling unit

498.5 Road Cuts. Any road cuts which are created during construction that are higher than four vertical feet measured from the bottom of the cut to the top of the cut shall include a re-vegetation and landscaping plan. Re-vegetation and landscaping shall use native species of grasses, plants, and trees. Road cuts which result in slopes exceeding 35% that are greater than four vertical feet shall use a rock retaining wall to stabilize the slope. At the request of the Town Engineer, a slope stability analysis shall be required for any road cuts requiring a retaining wall.

Standard met

498.6 Compliance with Rico Regional Master Plan. The proposed driveway access shall not provide access to a use or development which does not comply with the Rico Regional Master Plan.

Standard met

Additional Considerations

Per the civil plans power is to be extended to lots 13-20 from a transformer located on private land to the north. Staff have contacted SMPA planning staff and they are currently reviewing records to determine if they hold an easement for this transformer.

As proposed, the power extension from the transformer would also have to cross under an active stormwater channel. Staff also contacted SMPA lineman that would review and inspect the power extension to discuss the stormwater channel crossing. SMPA lineman stated that they would like to conduct a site walk to see if crossing the channel is possible or if power should be extended from a different transformer further to the north.

These issues should not affect this application and review process. The issues can be resolved prior to the extension of power between SMPA, private land over, Town staff, and the applicants.

BUCKHORN ENGINEERING

MEMORANDUM

TO: Chauncey McCarthy, Town of Rico Manager

FROM: Dan Quigley, P.E.

DATE: January 20, 2025

SUBJECT: 3rd Design Review Private Driveway Request – Lots 13-20, Block 17

Mr. McCarthy:

We have completed our third review of the private driveway plans for access to Lots 13-20 in Block 17 in the Town of Rico. We reviewed revised design plans and drainage calculations for that driveway improvement that were provided by Mountain Civil Consulting and dated December 10, 2024. Those plans and calculations support the applicant's request for two variances from Town's Land Use which are: (1) That the Town enter into a private driveway agreement with the owners of Lots 13-20 and (2) That the driveway grade of 16% be approved since the maximum grade of 12% is unachievable within the existing Town alley right-of-way in Block 17.

We have reviewed the revised plans labeled *Block 17 Lots 13-20, Town of Rico, CO, Driveway Improvement Plans*, prepared by Mountain Civil Consulting (Andrew Rapiejko, PE) and take no exceptions to the plans and calculations as submitted to our office on January 16, 2025.

Recommendations

Pending approval by Town administration and trustees of the proposed variances to the Town's driveway standards, we recommend that the applicant's proposed driveway plans be accepted for construction.

Thank you for the opportunity to provide plan review for this project. Please contact me at (970) 497-8852 or dquigley@buckhornengineering.com with any questions about our comments.

Best regards,
BUCKHORN ENGINEERING, INC

Daniel C. Quigley, P.E.
Senior Project Manager

REVOCABLE ENCROACHMENT LICENSE, MAINTENANCE, SECURITY AGREEMENT

THIS REVOCABLE ENCROACHMENT LICENSE, MAINTENANCE AND SECURITY AGREEMENT (the "Agreement") is made this _____ day of _____ 2025 between the TOWN OF RICO, COLORADO, a Colorado home-rule municipality, with an address of 2 Commercial Street, Rico, Colorado 81332 (the "Town"), and ERIC J. BREITENBACH AND JENNIFER L. BREITENBACH, whose address is _____, Rico, Colorado 81332 (the "Licensees"). The Town and the Licensees may be referred to individually as a "Party" or collectively as the "Parties".

RECITALS

WHEREAS, the Town owns that real estate located in The Town of Rico, Colorado, consisting of that alley right-of-way that extends south off of S. Garfield Street which is known as Carter Way (the "Right-of-Way"); and

WHEREAS, Licensees own that real estate, known as lots 13-20, Block 17, Town of Rico, Colorado (the "Property"), which has access to and from E. Mantz Ave. via the Right-of-Way abutting the west boundary line of the Property; and

WHEREAS, Licensees applied for a Driveway Building Permit pursuant to the Rico Land Use Code ("RLUC") to construct a 10 foot wide private driveway within the Right-of-Way to provide access to the Property together with related drainage and snow storage improvements (the "Improvement"); and

WHEREAS, the Board of Trustees considered the Driveway Building Permit application on _____, 2025 and approved the application subject to the conditions that (1) the Licensee and Town enter into an agreement granting an encroachment license for use and access related to construction, maintenance, repair, and replacement of the Encroachment and the Improvements therein, and (2) that the agreement is recorded for all lots and the obligations pass to any subsequent owners of the Property or the Sites; and

WHEREAS, Licensees seek to obtain an encroachment license from the Town for the construction maintenance, repair, and replacement of the Improvements owned by Licensees within that encroachment area located within the Right-of-Way as described and depicted on ***Exhibit A*** (the "Encroachment"); and

WHEREAS, the Town wishes to grant a license for the Encroachment pursuant to this this Agreement, and to further authorize construction, maintenance, repair, and replacement of the Improvements within the Right-of-Way at Licensees own expense, and to limit authorized use of the Encroachment for access to one residence on the Property unless the Town approves expansion of the use in writing; and

WHEREAS, to ensure that the Improvements are not left in an unfinished state that becomes a nuisance to the Town, before commencing construction of the Improvements, Licensees

are required to deposit an amount equal to 125% of the projected costs of the Improvements to the specifications in the permit and the RLUC (the "Security Funds").

NOW THEREFORE, in consideration of the mutual promises contained herein, the Town and Licensees agree as follows:

1. License. Town hereby grants to Licensees a revocable exclusive right-of-way License for the Encroachment pursuant to this Agreement.

2. Scope of Use. The License granted in this Agreement is limited to use and access to one residential dwelling, and for construction, maintenance, repair, or replacement of the Improvements located within the Encroachment. The Town may revoke this License if use is expanded to provide access to more than one residential dwelling. Alternatively, the Town may approve an amendment of this Agreement if the Improvements are widened to 14 feet in compliance with the RLUC § 498.4.

3. Construction. Licensees may construct, at their expense, the Improvements within the Encroachment in accordance with the permit and Driveway Improvement Plans attached as ***Exhibit B***. Upon completion of construction of the Improvements, Licensees shall provide the Town with as-built drawings of the Encroachment in the format specified by the Town Manager. After construction of the Improvements is completed, use of the Encroachment and the Improvements shall be for ingress and egress to and from the Property by the owners thereof, their tenants, guests and invitees, and for maintenance, repair or replacement of the Encroachment or the Improvements. Use of the Improvements shall not be extended to other members of the public, or for access to additional residences on the Property or other lots within the Town without an amendment to this Agreement. The License granted by this Agreement is conditioned upon Licensees' completion of the Improvements within three (3) years of this Agreement, and continuing use of the Encroachment and the Improvements for ingress and egress to and from E. Mantz Avenue and the Property.

4. Security Funds. Prior to commencement of construction, Owner shall deposit the Security Funds with the Town in an amount equal to 125% of the projected construction costs shown in the attached ***Exhibit C***. The Parties agree that the amounts in Exhibits C do not necessarily reflect what the actual cost to the Town would be if it were required to fund construction of all the Improvements, or to repair any damage to public facilities caused in connection with the construction of same. As the Improvements are completed, Licensees may apply to the Town Manager for release for all or part of the security, which release shall be approved by the Town Engineer.

5. Maintenance, Repair or Replacement. Upon commencement of construction of the Improvements, Licensees shall be responsible for maintenance, repair, or replacement of the Encroachment and the Improvements therein at their own expense. Without limiting the generality of the foregoing, Licensees responsibilities include the following:

(a) Licensees shall be responsible for snow removal on the Improvements.

(b) Snow removed from the Encroachment shall be stored in the snow storage areas depicted on Sheet 1 of the Driveway Improvement Plans, attached hereto as Exhibit B to this

Agreement. Licensees shall not place snow removed from the Encroachment in any location that impedes or obstructs access to the Right-of-Way or E. Mantz Avenue and shall be obligated to remove any snow that impedes access to or obstructs E. Mantz Avenue.

(c) Licensees shall maintain the Encroachment and Improvements and any associated drainage structures in a manner that directs water into existing drainage structures along the east side of the Right-of-Way to Mantz Avenue and does not cause erosion impacts to any existing road surface or drainage structures within the Town.

(d) Licensees shall undertake any work on any portion of the Encroachment which would jeopardize the soundness, safety or integrity of the Right-of-Way without the Town's prior written consent. Licensees shall not alter, modify or expand the Improvements in any manner without the written consent of the Town.

6. Destruction or Damage. If Licensees damage any portion of the Right-of-Way at any time that this Agreement is effective, they shall repair the Right-of-Way to its pre-existing condition at their sole expense. Under such circumstances, the Town may demand that the Licensees repair or reconstruct the damaged portion to such condition as existed prior to the damage. If the Licensees do not commence such repair or reconstruction within 10 calendar days of a written demand, the Town may do so at the expense of the responsible Party.

7. Abatement, Repair, or Removal. The Town shall have the legal authority, but not the obligation, to maintain and repair the Encroachment as may be necessary, and to assess the resulting costs the Property, and to collect the same through any available administrative or legal means, including pursuant to C.R.S. § 31-20-105. The Town shall, prior to maintenance of the Encroachment, provide 30 days' written notice to Licensees, during which time Licensees shall have the right to abate the condition of the Encroachment. The condition of the Encroachment shall constitute a nuisance, as provided for in the RLUC, if not abated within said 30 day period. Licensees acknowledge and agree that if the Town, its employees, officers, officials, agents, or contractors are required to remove, alter, or repair the Encroachment due to Licensees' failure to maintain or repair same, the Licensees shall be responsible for the full cost of such repair, alteration, or removal.

8. Indemnification. Licensees agree to release, indemnify, defend, and hold harmless the Town, its employees, officers, officials, agents, and contractors, from any and all liability, claims, damages, expenses including attorneys' fees and litigation costs, resulting from or arising out of the Encroachment or Improvements. Licensees' Indemnification shall not extend to any gross negligence or willful misconduct by the Town, its employees, officials, agents, contractor and subcontractors.

9. Insurance. Licensee shall obtain and maintain general liability insurance coverage relating to Licensee's use of the Encroachment in limits of no less than $1,000,000 per occurrence and $2,000,000 aggregate to the extent such coverage is reasonably available. Licensee's policy: shall name the Town as an additional insured; shall be primary to the Town's insurance and not contributory with it; and shall not be canceled without 30 days prior written notice to the Town. Prior to commencement of construction of the Improvements, and annually until Licensee assigns this Agreement pursuant to paragraph 7 below, Licensee shall provide the Town with a

certificate of insurance together with such copies of information or declaration pages confirming compliance with this Agreement to the extent such insurance is reasonably available. Upon assignment of this Agreement, the assignee shall be responsible for compliance with the forgoing insurance requirements.

10. Revocation. The Town may revoke this Agreement upon 90 days' written notice if one of the following events occur, and is not properly remedied:

(a) construction of the Improvements is not completed, or an extension to complete the construction is not granted by the Town by March 19, 2028;

(b) use of the Encroachment and the Improvements for ingress and egress ceases or is terminated by operation of an alternate route of access to the Property being provided, or upon dedication of the Improvements to the Town and the Town's acceptance of same;

(c) the Town determines at a public hearing that Licensees' activities have become incompatible with any other lawful use of the Encroachment; or

(d) if any provision of this Agreement is breached by Licensees and not properly remedied by Licensees within 90 days of receiving written notice.

Notwithstanding the foregoing provisions, the Town shall not revoke this Agreement after a building permit is issued for construction of a residential dwelling on the Property and there are no other means of ingress and egress to and from the Property and a public or private roadway exist.

11. Limited Assignment. The License shall not be assignable in whole or in part without the Town's prior written consent, which shall not be unreasonably withheld.

12. Future Ownership. By mutual written agreement of the Parties, Licensees may be permitted to convey the Encroachment and Improvements to the Town, subject to the execution of a new agreement between the Parties.

13. Binding Effect. This Agreement shall constitute a covenant running with the land and be binding upon all successors and assigns of Licensee.

14. Entire Agreement. This Agreement, along with any exhibits, attachments, or addenda hereto, constitutes the entire agreement between the Parties. The provisions of this Agreement may be amended only by written instrument signed by both Parties.

15. Governing Law and Venue. This Agreement shall be governed by the laws of the State of Colorado, and venue shall be in the County of Dolores, State of Colorado.

16. Attorneys' Fees. The prevailing party in any dispute related to this Agreement shall be entitled to recovery of costs in connection therewith, including but not limited to reasonable attorneys' fees and expert witness fees. All rights concerning remedies and attorneys' fees shall survive any termination of this Agreement.

17. Recording. Upon execution by the Parties, this Revocable Right-of-Way Encroachment License shall be duly recorded with the Dolores County Clerk and Recorder.

TOWN OF RICO, COLORADO

_____

Patrick Fallon, Mayor

ATTEST:

_____

Anna Wolf, Town Clerk

APPROVED AS TO FORM:

_____

Wilton E. Anderson, Town Attorney

LICENSEES

_____

Eric J. Breitenbach

Date: _____

_____

Jennifer L. Breitenbach

Date: _____

Attachments:

Exhibit A, Survey and Legal Description of the Encroachment Area; and

Exhibit B, Civil Construction Documents and Plan Sheets.

Disturbance Permit Application

Applicant Name Eric and Jennifer Breitenbach Phone Number _____

Address PO Box 657, Dolores, CO 81323 Cell Phone Number 970-394-4157

Email jeneric6@gmail.com Fax Number _____

Street Address of Subject Property Existing Right-Of-Way

Legal Description of Subject Property Alley Right-Of-Way, Block 17, Town of Rico

Zone District of Subject Property Residential

Contractor Name Jones and Son Phone Number 970-739-8481

Address _____ Cell Phone Number _____

Email tmjonesfire9014@gmail.com Fax Number _____

Attachments Required:

☒ Two (2) 24" by 36" Site Plans and (1) electronic (pdf) site plan showing the following:

North Arrow	Boundary areas: Water. wetlands, riparian areas, inner buffer zone, and boundary of proposed disturbance
Scale not greater than 1" = 20' unless the entire site will not fit on a 24"x 36" sheet	Topography 5 foot interval maximum, 2 foot preferred
Vicinity Map	Proposed grading and drainage
Lot lines with dimensions	Location of existing buildings if applicable
Easements with dimensions	Location of proposed building if applicable
Acreage of lot	Location of existing utilities if applicable
Adjacent streets with labels	Location of proposed utilities if applicable

☒ Proposed Disturbance description : Including: activity causing disturbance, amount, location and acreage of water are or wetland fill, removal or other alteration proposed, and location and extend of proposed disturbance in buffer zone.

☒ Grading, re-vegetation, and mitigation plan

☐ Alternative Analysis N/A

☐ Army Corps. Permit (if required) N/A

☐ Letter of agency if applicant is other than the owner of the property N/A

☒ An application fee in the amount of $400.00.

☐ A copy of the deed for the property. N/A

Flood planes must be determined by an Engineer licensed in the state of Colorado. Wetlands must be delineated by a certified technician and surveyed.

I swear that the information provided in this application is true and correct and that I am the owner of the property or otherwise authorized to act on behalf of the owner of the property.

Signature: Eric J. Shutterly Date 4-2-24

Date Application Received _____ Application Reviewed by _____

Application Fee Received _____ Date of Hearing _____

Application Complete _____ Rico Planning Commission Action _____

Mailing Notice Complete _____ Approval Subject to Conditions _____

Other comments:

A small area is proposed to be disturbed in the wetlands per the existing Town of Rico Hazard Wetlands maps. This disturbance is required to create a usable access for the existing original platted lots within the Town of Rico.

Road Building Application

Applicant Name Eric and Jennifer Breitenbach

Phone Number _____

Address PO Box 657, Dolores, CO 81323

Cell Phone Number 970-394-4157

Email jeneric6@gmail.com

Fax Number _____

Address of Subject Property Existing Right-Of-Way - no address

Legal Description of Subject Property Alley Right-Of-Way, Block 17, Town of Rico

Zone District of Subject Property Residential

Attachments Required:

☒ Site map showing location and extent of work to be performed

☒ proposed design specifications, including two-foot contour lines and cross sections at twenty-five foot intervals which adequately illustrate significant grading and drainage conditions;

☐ Proposed off-street parking plan N/A

☒ Proposed snow removal plan

☒ Statement describing the proposed use of the road; and

☐ Where applicable, an improvements agreement with acceptable financial guarantees for Road Building applications that are not part of a subdivision application.

☒ An application fee in the amount of $350.00

I swear that the information provided in this application is true and correct and that I am the owner of the property or otherwise authorized to act on behalf of the owner of the property.

Signature: Eric J. Bretschneider Date 4-2-24

Date Application Received _____

Application Fee Received _____

Application Complete _____

Mailing Notice Complete _____

Application Reviewed by _____

Date of Hearing _____

Rico Planning Commission Action _____

Approval Subject to Conditions _____

Other comments:

NOTICE OF PENDING ROAD BUILDING AND DISTURBANCE PERMIT APPLICATION

Date: 1-22-2025

RE: Public Hearing on Road Building Application

Dear Property Owner,

You are receiving this public notice as required by the Town of Rico Land Use Code because you own property adjacent to the proposed road construction and/or within 200 feet of the proposed disturbance.

Name of Applicant:

Type of Development Application(s): Road Building and Disturbance Permit Application

Legal Description: NA - Town Platted Right of Way perpendicular to S. Mantz and east/parallel to S Commercial St on Carter Way

Address: NA - Town Platted Right of Way perpendicular to S. Mantz and east/parallel to S Commercial St on Carter Way

Review Authority: Rico Planning Commission and Rico Board of Trustees

Rico Planning Commission Hearing Date: February 12, 2025 6:00 PM

Rico Board of Trustees Hearing Date: March 19, 2025 7:00 PM

Location of Public Hearing: Rico Town Hall, 2 Commercial Street, Rico Colorado, 81332

The application is available for public inspection in the Town Clerks office during normal operating hours.

Send emailed comments addressed to the townmanager@ricocolorado.gov

Or by surface mail to:

Chauncey McCarthy

Town of Rico

PO Box 9

Rico Colorado, 81332

Breitenbach 200'

	ANAME1	AADDR1	AADDR3	AADDR4	ASTA	AZIPCD	APADDR
1	HEIL JOLYNN H. & ERIC J. HEIL(JT		1022 SUMMIT DRIVE	DILLON	CO	804350000	209 E. MANTZ AVE
2	FOLSOM ROBERT STANLEY		P.O. BOX 178	DOLORES	CO	813230000	15 S. SILVER ST.
3	DOW FAMILY TRUST		3418 RIDGELINE DRIVE	MONTROSE	CO	814010000	39 S. SILVER STREET
	DOW FAMILY TRUST		3418 RIDGELINE DRIVE	MONTROSE	CO	814010000	39 S. SILVER STREET
4	MULDOON BARBARA D.		17013 6458 RD	MONTROSE	CO	814017827	35 S. SILVER STREET
5	KEEP AUDREY M.	C/O PAUL DOW	3418 RIDGELINE DRIVE	MONTROSE	CO	814017305	35 S. SILVER STREET
	DOW FAMILY TRUST		3418 RIDGELINE DRIVE	MONTROSE	CO	814010000	34 S. SILVER STREET
6	RICO TOWN OF		P.O. BOX 9	RICO	CO	813320000	
7	SCHWAB MARK R. & DEBI A. (JT)		5350 TAMPICO WAY	FARMINGTON	NM	874020000	24 S. SILVER ST.
8	OFF LIVING TRUST HAROLD C. &	PHYLLIS W.	1209 EAST 24TH STREET	FARMINGTON	NM	874010000	16 S. SILVER STREET
	BREITENBACH ERIC J. & JENNIFER L	BREITENBACH (JT)	P.O. BOX 657	DOLORES	CO	813230000	
	BREITENBACH ERIC J. & JENNIFER	L. BREITENBACH (JT)	P.O. BOX 657	DOLORES	CO	813230000	25.S. GARFIELD STREET
9	MOORE PETER M.		P.O. BOX 2875	TELLURIDE	CO	814354202	21 S. GARFIELD ST
	STRACHAN FRANK G. & MADELINE	STRACHAN (JT)	P.O. BOX 211	RICO	CO	813320000	15 S.GARFIELD ST.
10	O'NEAL MICHAEL L. & JANICE M.	O'NEAL (JT)	P.O. BOX 13130	OKLAHOMA CITY	OK	731130000	301 E. MANTZ AVE

	ANAME1	AADDR1	AADDR3	AADDR4	ASTA	AZIPCD	APADDR
11	JONES GREGG W.		6058 LONGPOINT RD.	BURTON	TX	778350000	NO STREET ACCESS
12	CLICK ALLAN		10813 DECKER LANE	AUSTIN	TX	787240000	
13	TIERRA VERDE INVESTMENTS CORP.		2091 OCEAN VIEW DRIVE	TIERRA VERDE	FL	337150000	102 S. SILVER STREET
14	GREEN HARRIS		P.O. BOX 178	CROSS PLAINS	TN	370490000	SILVER ST.
15	NESIS DAVID A.		P.O. BOX 1	RICO	CO	813320000	25 S. SILVER STREET
	DOW FAMILY TRUST		3418 RIDGELINE DRIVE	MONTROSE	CO	814010000	31 S. SILVER STREET

Folsom, Robert Stanley
PO Box 178
Dolores, CO 81323

Nesis, David A.
PO Box 1
Rico, CO 81332

DOW Family Trust
3418 Ridgeline Drive
Montrose, CO 81401

Keep, Audrey
C/O Paul Dow
3418 Ridgeline Drive
Montrose, CO 81401

Muldoon, Barbra D.
17013 6458 Rd
Montrose, CO 81401

Off Living Trust Harold C.
1209 E 24th Street
Farmington, NM 87401

Schwab Family Trust
5350 Tampico Way
Farmington, NM 87402

Calle G. Revocable Trust
755 E. Mulberry, Suite 400
San Antonio, TX 78212

Moore, Peter M.
P.O. Box 2875
Telluride, CO 81435

Jones, Gregg
6058 Longpoint Rd.
Burton, TX 77835

Click, Alan
10813 Decker Lane
Austin, TX 78724

Tierra Verde Investments
2091 Ocean View Drive
Tierra Verde, FL 33715

Green, Harris
P.O. Box 178
Cross Plains, TN 37049


Calle G. Revocable Trust
Off Living Trust Harold C.
Folsom, Robert Stanley
Moore, Peter M.
Jones, Gregg W.
Schwar Family Trust
Nesis David A
Dow Family Trust
Dow Family Trust
Keep, Audrey
Middleton, Barbra D.
Click, Alan
Dow Family Trust
Tierra Verde Investments
Dow Family Trust
Green, Harris

Cap Allen Engineering

Cap Allen, P.E.- 14757 Road 26—Dolores, Colorado, 81323 **970-799-0623**

Chauncey McCarthy
Town Manager
Rico, Colorado

Ref: Request for Private Drive Agreement for Lots 13-20, Block 17, Town of Rico

Following a Zoom meeting between Dan Quigley, Rico Town Engineer, and Chauncey McCarthy, Rico Town Manager and Cap Allen, Engineer, on June 5, 2024 the owners of the above property have agreed to make the following request for a Private Drive Agreement to their properties including issues discussed at that Zoom meeting.

Lots 13-20 of Block 17 were platted with the original Rico townsite in 1879, and they have existed as tradeable tender for about 145 years, being bought and sold, with the expectation of at some point becoming single family developed home sites.

The difficulty of developing some of the "remaining" sites in Rico varies wildly-- with some remaining 25 x100 foot lots having real questions how they will ever be utilized. Lots 13-20 are developable at this time. Some locations are far far more difficult for future access than the subject lots and a reasonable approach to allowing owners to develop those properties is needed when public rights of way are involved.

There has been significant conversation, engineering work, and planning, prior to the above Zoom meeting as to what standard the current owners of Lots 13-20 would be held to in their attempts to access those lots and construct a single family home using a Town alley way. We believe the approach of development of the alley as a Town maintained street is not a feasible option considering road widths, cul de sac needs, and general maneuverability. Thus the request here for a simple private driveway access. This request is separate from later building permit request issues. Issues as to impact to slopes, stability, foundation requirements, utility needs, will be approached at that time.

This proposal for Lots 13-20 is for a Private Driveway Agreement, unique to those properties, which would relieve the Town of any snow plowing, direct fire fighting responsibility, allow the owners driveway access to their property, and still allow for any feasible uses of the alley to the South, though unlikely, and for any utility installation needs within that alley right of way.

This is not a request for abandonment of the Town alley, only for a right of simple access to be laid upon that portion of the alley while eliminating Town efforts to maintain that alley.

We request that a driveway surface of 9-10' in width with a standard gravel section and grade of 16% be allowed to Lots 13-20 in this Agreement.

This Agreement would serve to solve several issues the owners have encountered in development of their property.

This request may outline a new approach to Rico private property access, and we believe it relieves the Town of many burdens in future development.

Current Conditions-

Lots 13-20 currently have their only reasonable access off of the alley between Garfield Street and Silver Street and South of Mantz Avenue. Garfield Street, the actual platted frontage street for Lots 13-20 is simply infeasible as access to Lots 13-20.

Site examination shows that utilization of Lots 13-20 has happened historically. The alley was obviously at one time excavated, graded, as either a roadway or utility extension platform and the lots themselves have evidence of some kind of habitation due to a man made rock wall and evidence of past excavation and

creation of fill/spoil pile. Details are unknown.

A water meter for Town water service exists adjacent to the lots at present, indicating certain intent to develop at some point as the Town accepted water service fees. Certainly the Town intended to serve those properties by selling a water tap to them.

The alley has been developed with a home on Lot 8, and a recently brushed and cleared set of lots further South on Lots 10,11,12. The roadway to these two single family accesses is primitive, narrow, and steep.

Current roadway width is of the "two track" variety, or 8-9 feet wide maximum, with very coarse non standard/specification roadway material placed as a driving surface. No attempt at Town standard has been made.

As shown on the plans provided by Alpine Land Consulting submitted to the Town previously, current grades to the existing home and newly cleared lots are in the 10% to16% range. It is unknown what formal arrangements (or formal approvals) these lots have with the Town of Rico for maintenance of that primitive roadway, if any. However, it appears that the properties are regularly accessible with the current level of driveway/roadway.

Access to lots 13-20 would be taken about 300 feet in from Mantz Avenue along the same currently used steep access. Of necessity as shown on the Alpine Land Consulting plans, grade to Lots 13-20 is unavoidably 16%. There is no remedy for that grade. That is the available slope.

According to the Alpine Land Consulting plans steepness beyond the suggested limits of the 16% driveway is extreme to the South and unlikely to have any surface use at any later time save for utility installation.

Apparently Town of Rico code states that driveway grades in town are limited to 12%. This will become a very impractical limit as more of the difficult lots attempt development. **This request for Agreement asks that the 16% grade existing to Lots 13-20 be allowed whether that be a variance or simply a unique tenet of the Agreement.** 16% is very steep but in most conditions, with modern specialized vehicles, can be accommodated. The lot owners have no choice. The grade cannot be reduced.

There will be times of snow or ice where this driveway cannot be utilized and the owners understand that they would not hold the Town responsible in those periods. However, access via the Private Driveway Agreement is solely the responsibility of the lot owner to procure. Town snow plowing and normal fire response (although it is hard to imagine any condition where a fire department ignores a fire completely) are not expected.

It is a future burden on the Town of Rico to take on roads and accesses of this nature and we believe this Agreement relieves the Town of any further burden. It offers a mechanism for private access to privately owned property without liability or infrastructure on the part of the Town of Rico.

Additional Conditions-

The owners of Lots 13-20 are willing to discuss some improvements beyond the simple construction of their driveway. However, it is apparent that current conditions in the alley up to Lots 13-20, a stretch of alley currently in use by others, should not be the problem of Lots 13-20 to "correct". That current use would of course continue with- or without- improvements to Lots 13-20.

The issue of what is fair as improvements to the first 300 feet of the alley, currently in use, and substantially below Town of Rico standards for road width, base, grade, drainage, etc, needs to be discussed. However, holding Lots 13-20 to a higher standard than the existing users is not sensible.

Drainage- in accordance with Colorado Law, the owners of Lots 13-20 would agree to contain their drainage to an alignment along the East side of the alley to Mantz Avenue. There are already certain improvements in that respect. In an only 16' wide alley section, it is very difficult to create substantial drainageways and without cooperation from lot owners to the North, there may be inadequate space. The owners of Lots 13-20 are willing to use their property East of the Alley to improve drainage when needed. Best efforts should prevail.

Wetlands- It is apparent that in the past a wetland determination of general scope was made for the Town of Rico. These kinds of broad brush studies are common in Colorado to define starting points for later detail. However, the alley itself is not in wetlands, only the lands to the East. An attempt at mapping the extent of this wetland from that rough mapping by Alpine Land Consulting shows the wetland line just West of the current alley. There seems to be no need for impact during construction of the Lot 13-20 driveway.

We understand the Corps of Engineers has been consulted and their statement was that work in the alley would not create material damages within the wetlands and there is no need for further permitting. Given that wetlands impacts are a Section 404 Corps of Engineers issue, we would assume that is the last word on that issue and the Town of Rico would accept that opinion. (we do not understand the history and details of operations of Lots 10,11,12 in completely removing the mapped wetland areas along with fill activities but assume that is an issue the Town is addressing separately with that owner).

Slope Stability- The private lot area of Lots 13-20 lies on some very steep slopes, up to 50%. Surficial investigation indicates that small "pistol butted" aspen trees exist on the Lot 13-20 area but also on many areas observed throughout Rico on the North facing slopes, leading this engineer to determine that it is a result of snow loading and not surficial movement. No past surficial slipping or scarp tears are seen. The material of the hillside of Lots 13-20 is typical Quartenary Alluvium and consists of large angular rock, smaller rock, sand and clay. No characteristic surface signs of slope movement are evident.

Impacts due to improvement of the alley for a driveway are minimal, as mentioned, visual inspection shows that the alley has been graded out in cut and fill fashion in the past. That is how you know where the alley goes of course. Time has allowed erosion to fill some of that. But fill slopes on the West side of the alley are quite evident (and historically exceeded the alley ROW width).

As shown in the Alpine Land Consulting plans alley revival only consists of cuts in the region of one to two feet, not in need of retention, the cuts for which can be wholly within Lots 13-20. This minor excavation should not trigger any instability, and similar cuts in that range throughout this area of the Town have been previously excavated with no ill effects.

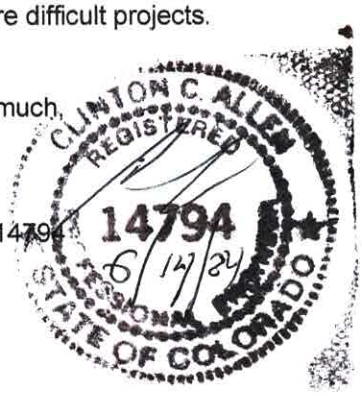
No further study is needed to complete the suggested alley improvement. Past cuts and fills have occurred within the alley to Lots 13-20 with no ill effects of **larger height** than needed for Lots 13-20. In addition, **larger cuts** on streets such as Silver Street to the South and West have occurred with no evident slope movement.

As this application for a Private Driveway Agreement is independent from any building permit activity, it is assumed that the owners will need to tackle on their own any future issues they may have with site construction in association with their architectural and structural engineering professionals. If significant slope stability concerns must be addressed they will be during that design process. That is a step taken based on the judgement of the lot owners and their professionals.

Conclusion-

We feel that the completion of a Private Driveway Agreement for Lots 13-20 using the Town alley frees the owners from most of the previous semantics and conditions associated with the idea of making it a public access. We feel the public access approach is impossible. We also feel that the Agreement makes it ultimately much easier on the Town of Rico in terms of maintenance responsibilities and it may be a template for future difficult projects.

Thank you very much,



Cap Allen, P.E. 14794
June 13, 2024

PROPERTY DESCRIPTION:

Lots 15, 16, 17, 18, 19 and 20 in Block 17, Town of Rico according to the plat thereof filed for record September 29, 1978 in Book 2 at Page 1 in the office of the Clerk and Recorder.
County of Dolores,
State of Colorado.

SURVEYOR'S CERTIFICATE:

I, Thomas A, Clark, being a Colorado Licensed Land Surveyor, do hereby certify that this Topographic Survey of Lots 17-20, Block 17, town of Rico, was made by me and under my direct supervision, responsibility, and checking. This Topographic Survey does not constitute a Land Survey Plat or Improvement Survey Plat as defined by Title 38, Article 51 C.R.S.

Thomas A. Clark PLS. 38014

COLORADO LICENSED THOMAS A. CLARK 38014 11/10/2023 PROFESSIONAL LAND SURVEYOR

NOTES:

1. Easement research and property description provided by Mon Do Title Co., Inc.*, File Number 2021-09-04 effective on 09-07-2021 at 8:00 A.M.*

2. Field work was performed in October 2023.

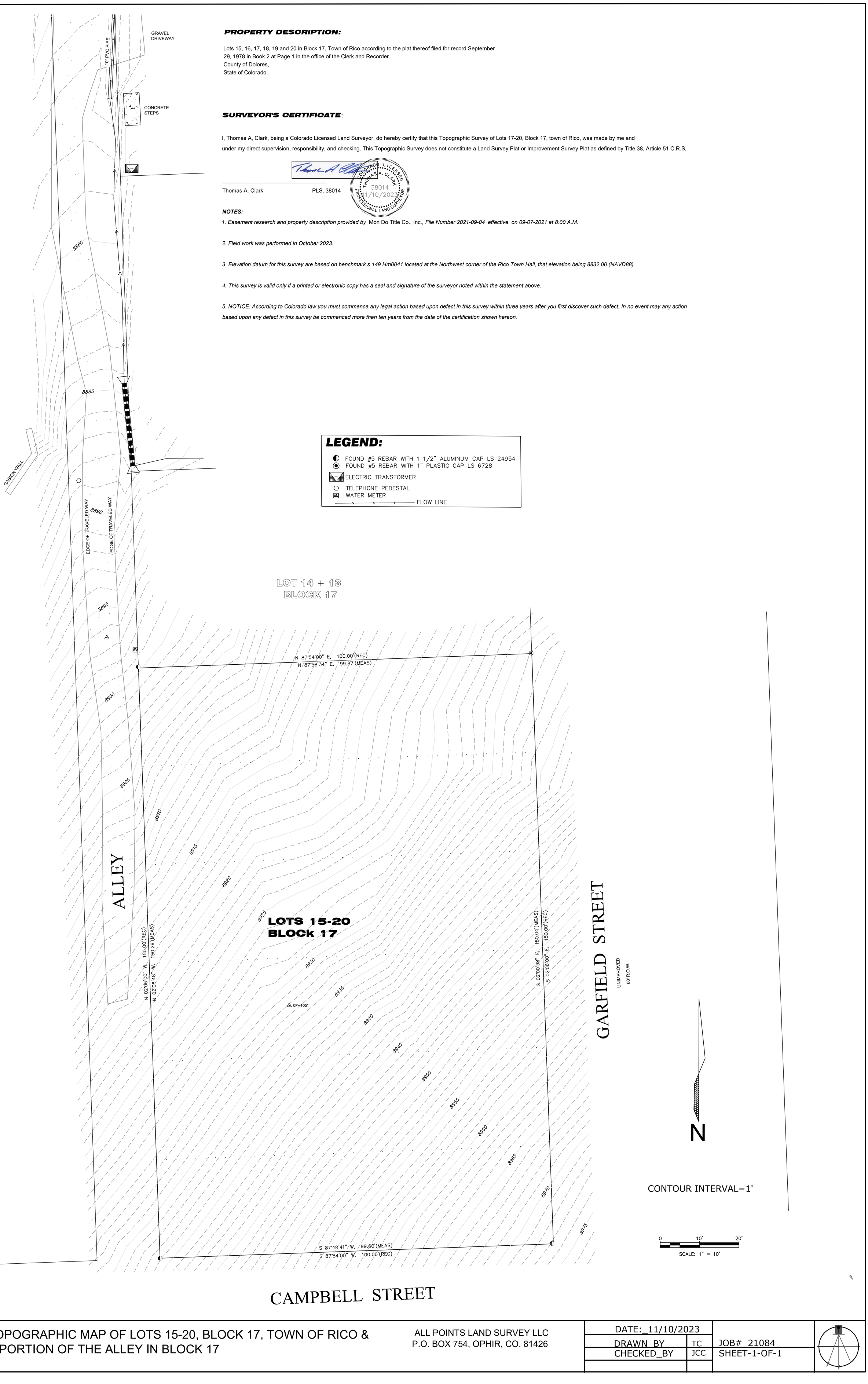
3. Elevation datum for this survey are based on benchmark s 149 Hm0041 located at the Northwest corner of the Rico Town Hall, that elevation being 8832.00 (NAVD88).

4. This survey is valid only if a printed or electronic copy has a seal and signature of the surveyor noted within the statement above.

5. NOTICE: According to Colorado law you must commence any legal action based upon defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more then ten years from the date of the certification shown hereon.

LEGEND:

- FOUND #5 REBAR WITH 1 1/2" ALUMINUM CAP LS 24954
- FOUND #5 REBAR WITH 1" PLASTIC CAP LS 6728
- ELECTRIC TRANSFORMER
- TELEPHONE PEDESTAL
- WATER METER
- FLOW LINE



TOPOGRAPHIC MAP OF LOTS 15-20, BLOCK 17, TOWN OF RICO &
A PORTION OF THE ALLEY IN BLOCK 17

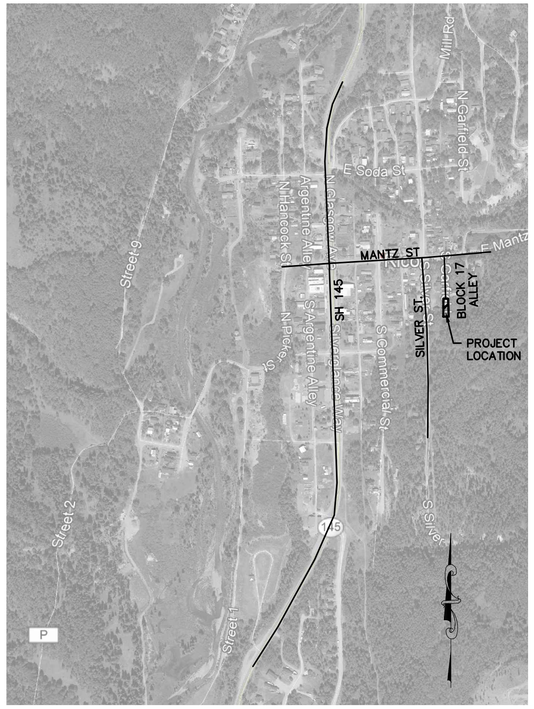
ALL POINTS LAND SURVEY LLC
P.O. BOX 754, OPHIR, CO. 81426

DATE:_11/10/2023		
DRAWN_BY	TC	JOB# 21084
CHECKED_BY	JCC	SHEET-1-OF-1

BLOCK 17 LOTS 13-20
TOWN OF RICO, CO
DRIVEWAY IMPROVEMENT PLANS

FOR CONSTRUCTION

1/29/25



LOCATION MAP:
1"=300'

VARIANCE REQUESTS:

1. LUC 478 – ROAD DESIGN STANDARDS

   THE PROPOSED IMPROVEMENTS WILL PROVIDE ACCESS TO TOWN OF RICO BLOCK 17 LOTS 13–20 USING TOWN OF RICO ALLEY ROW. THE ALLEY ROW IS 16' WIDTH. THE ACCESS IS PROPOSED AS A PRIVATE DRIVEWAY BEGINNING AT LOT 13 AS SHOWN IN THE PLANS. THE PRIVATE DRIVEWAY SHALL BE OWNED AND MAINTAINED BY THE OWNER OF LOTS–20 AS SET FORTH IN THE PRIVATE DRIVEWAY AGREEMENT.

2. LUC 498.3 – STANDARDS FOR DRIVEWAY PERMIT GRADE

   THE PROPOSED DRIVEWAY GRADE IS 16% WHICH EXCEEDS THE MAXIMUM GRADE OF 12% IN THE LUC. THE 16% GRADE IS PROPOSED AS THAT IS THE AVAILABLE GRADE WHICH CAN BE CONSIDERED FUNCTIONAL. THIS 16% GRADE IS EXCEEDED ALONG EXISTING PORTIONS OF THE BLOCK 17 ALLEY TO THE NORTH.

SHEET INDEX

LEGEND

ITEM	EXISTING	PROPOSED
WATER MAIN	W	W
SEWER MAIN	S	S
CULVERT		
SWALE/FLOWLINE		
ELECTRIC LINE	E	E
TELECOM	T	T
OVERHEAD POWER	OHE	OHE
GRAVEL ROAD/DRIVEWAY		
TREE		
FENCE		
STRAW WATTLE	SW	SW
WETLAND		
WETLAND BUFFER		
CONTOUR		
LANDSCAPE WALL		

BENCHMARK:

1. BENCHMARK INDICATED ON TOPOGRAPHIC MAP OF LOTS 15–20, BLOCK 17, TOWN OF RICO PROVIDED BY ALL POINTS LAND SURVEYING. CONTACT SURVEYOR TO ESTABLISH SITE BENCHMARK AND CONSTRUCTION CONTROL AS REQUIRED.

GENERAL NOTES:

1. THESE PLANS ARE FOR PRIVATE DRIVEWAY IMPROVEMENTS ONLY AS INDICATED IN THE PLANS. SITE PLAN INFORMATION IS SHOWN FOR CONCEPTUAL REVIEW ONLY. FINAL SITE AND BUILDING PLANS SHALL BE APPROVED WITH BUILDING PERMIT.
2. EXISTING CONDITIONS SHOWN IN THESE PLANS IS FROM TOPOGRAPHIC SURVEY DATA PROVIDED BY ALL POINTS LAND SURVEYING.
3. ALL MATERIALS AND CONSTRUCTION SHALL BE COMPLETED PER TOWN OF RICO LAND USE CODE AND/OR STANDARDS AND REQUIREMENTS, MOST CURRENT VERSION. WHERE TOWN OF RICO STANDARDS AND REQUIREMENTS DO NOT COVER THE SCOPE OF WORK, CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SHALL APPLY.
4. THE CONTRACTOR SHALL HAVE ONE APPROVED AND SIGNED (TOWN AND ENGINEER) COPY OF THE PLANS ON THE JOB SITE AT ALL TIMES. CONTRACTOR SHALL ALSO HAVE THE JOB SPECIFICATIONS, AND CONSTRUCTION STANDARDS ON SITE.
5. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL HAVE A COPY OF ALL APPLICABLE PERMITS ON SITE.
6. AT LEAST TWO (2) FULL WORKING DAYS PRIOR TO CONSTRUCTION ACTIVITIES OF ANY KIND THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1–800–922–1987 OR 811 TO OBTAIN AN INQUIRE IDENTIFICATION NUMBER AND TO REQUEST THE UTILITY OWNERS TO MARK THE LOCATION OF ALL UNDERGROUND UTILITIES WHICH MAY BE IMPACTED BY CONSTRUCTION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UTILITIES, INCLUDING UTILITIES NOT SHOWN ON THE CONSTRUCTION DRAWINGS. PRIOR TO ADJUSTING ANY UTILITIES THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE UTILITY OWNER.
8. IF THERE ARE EXISTING UTILITIES IN CONFLICT WITH THE PROPOSED IMPROVEMENTS THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE OWNER, ENGINEER, AND UTILITY OWNER TO DETERMINE A SOLUTION FOR THE CONFLICT. THE CONTRACTOR SHALL PROTECT ALL UTILITIES AND STRUCTURES FOUND AT THE SITE UNLESS OTHERWISE INDICATED IN THESE PLANS.
9. ALL TRENCHING CONSTRUCTION SHALL MEET OSHA STANDARDS AND REQUIREMENTS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING CONSTRUCTION ACTIVITIES STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES. CONTRACTOR SHALL OBTAIN ALL REQUIRED LOCAL AND STATE CONSTRUCTION ACTIVITIES STORMWATER MANAGEMENT PERMITS.
11. IMPROVEMENTS SHOWN IN THIS PLAN INCLUDE ROAD BUILDING / DRIVEWAY IMPROVEMENTS TO PROVIDE ACCESS TO TOWN OF RICO BLOCK 17 LOTS 13–20 THROUGH TOWN ROW.
12. SNOW REMOVAL SHALL BE RESPONSIBILITY OF OWNER FOR PRIVATE DRIVEWAY, TOWN ROW SHALL BE USED BY TOWN OF RICO FOR SNOW STORAGE AS SHOWN ON THESE PLANS.
13. CONSTRUCTION OF THE ALLEY IMPROVEMENTS WITHIN THE 10' WETLAND BUFFER ZONE IS PROPOSED UNDER CONDITIONS OF TOWN OF RICO LAND USE CODE SECTION 825.2 AND 825.4.
14. ALL DISTURBED AREAS NOT RECEIVING FINISHED IMPROVEMENTS (ALLEY, DRIVEWAY, PAVEMENT, BUILDING, LANDSCAPING, ETC...) SHALL BE ESTABLISHED WITH NATIVE SEED AND MULCH.

GRADING AND EROSION CONTROL NOTES:

1. PRIVATE DRIVEWAY AND ALLEY CONSTRUCTION SHALL BE COMPLETED PER TOWN OF RICO STANDARDS AND SPECIFICATIONS.
2. EARTHWORK SHALL NOT BE COMPLETED WHEN THE GROUND IS FROZEN.
3. TOPSOIL SHALL BE STOCKPILED FOR USE ON FINAL LANDSCAPING. STOCKPILES SHALL BE PROTECTED FROM EROSION.
4. AT ALL TIMES THE CONSTRUCTION SHALL INCORPORATE TECHNIQUES TO LIMIT WIND–CAUSED EROSION INCLUDING BUT NOT LIMITED TO WATERING.
5. CONTRACTOR SHALL KEEP STREET CLEAN OF DEBRIS AT ALL TIMES. CONTRACTOR SHALL CLEAN STREET AND ADJACENT PROPERTIES AS REQUIRED.
6. CONTRACTOR SHALL ESTABLISH A CONSTRUCTION ENTRANCE AND STORAGE/STAGING AREA.
7. ALL CULVERT INLETS AND OUTLETS SHALL RECEIVE RIP RAP PROTECTION.
8. CONTRACTOR SHALL SALVAGE AND REUSE EXISTING ROAD BASE MATERIALS AS POSSIBLE.
9. ALL CUT AND FILL SLOPES SHAL BE REVEGETATED WITH NATIVE SEED AND PROTECTED WITH ROLLED EROSION CONTROL PRODUCTS.

WATER UTILITY NOTES:

1. ALL WATER MAIN OR SERVICE LINE UTILITY WORK, MATERIALS, AND CONSTRUCTION SHALL BE COMPLETED PER TOWN OF RICO WATER OPERATIONS RULES AND REGULATIONS, MOST CURRENT VERSION.
2. CONTRACTOR TO POTHOLE AND VERIFY DEPTH OF WATER MAIN WITHIN PROPOSED ALLEY IMPROVEMENTS. IF WATER MAIN COVER IS LESS THEN 6' UPON FINAL GRADING, CONTRACTOR SHALL INSTALL 2" RIGID POLYSTYRENE INSULATION OVER WATER MAIN FOR EVERY 1' OF COVER LESS THAN 6', 2' EITHER SIDE OF WATER MAIN.

FRANCHISE UTILITY NOTES:

1. FRANCHISE UTILITIES (ELECTRIC, GAS, TELECOM, ETC..) WILL BE EXTENDED TO THE PROJECT PER FRANCHISE UTILITY AGREEMENT REQUIREMENTS. CONCEPTUAL ALIGNMENTS SHOWN.
2. CONTRACTOR SHALL PROVIDE TRENCHING AND CONDUIT INSTALLATION FOR SMPA PRIMARY POWER EXTENSION AND PRIMARY TELECOM SERVICE.

SNOW STORAGE NOTES:

1. SNOW REMOVAL AND STORAGE FOR THE PRIVATE DRIVEWAY SHALL BE THE RESPONSIBILITY OF THE OWNERS OF BLOCK 17 LOTS 13–20. THE 16' ALLEY ROW SHALL BE USED FOR TOWN OF RICO SNOW STORAGE.

DRIVEWAY MAINTENANCE NOTES:

1. MAINTENANCE OF THE PRIVATE DRIVEWAY FRONTING BLOCK 17 LOTS 13–20 SHALL BE PROVIDED PER THE PRIVATE DRIVEWAY AGREEMENT.

WETLAND NOTES:

1. WETLANDS SHOWN IN THESE PLANS WERE DELINEATED BY TERRA FIRMA, OCTOBER 2024.
2. SEE SHEET C100 FOR WETLAND DISTURBANCE PERMIT NOTES AND INFORMATION.

GEOHAZARD NOTES:

1. TOWN OF RICO, BLOCK 17 LOTS 13–20, AND ALLEY ROW ARE LOCATED IN AN AREA DEFINED BY THE TOWN OF RICO GEOLOGIC HAZARD MAP AS HAVING POTENTIALLY UNSTABLE SLOPES. IT IS THIS ENGINEERS DETERMINATION THAT NO FURTHER STUDY GEOHAZARD OR GEOTECH STUDY IS REQUIRED TO COMPLETE THE WORK PROPOSED IN THESE PLANS.
2. THE LOTS ARE RELATIVELY STEEP, WITH A SLOPES UP TO 50%, WHICH IS SIMILAR TO EXISTING GRADE FOR THE SURROUNDING LOTS CONTAINING EXISTING RESIDENTIAL DEVELOPMENT AND ACCESS IMPROVEMENTS WITH NO SIGNS OF FAILURE.
3. THERE WERE NO SIGNS OF SURFICIAL INSTABILITY, THE SITE IS WELL VEGETATED WITH NATIVE GRASSES, SHRUBS AND TREES.
4. THE MATERIAL OF THE HILLSIDE IS QUARTENARY ALLUVIUM AND GENERALLY CONSISTS OF LARGE ANGULAR ROCK, SMALLER ROCKS, SANDS, AND CLAYS, PROVIDING A STABLE SLOPE WITH NO SIGNS OF FAILURE OR SLOPE MOVEMENT.
5. IMPACTS FROM THE PROPOSED DRIVEWAY/ALLEY CONSTRUCTION ARE SIMILAR TO CUT/FILL SLOPES FOR THIS ALLEY IN THROUGHOUT THE TOWN OF RICO WHICH SHOW NO SIGNS OF INSTABILITY, SEE ILLUSTRATION ON SHEET C200.
6. THE PROPOSED CUT/FILL SLOPES SHALL BE REVEGETATED WITH NATIVE SEED AND COVERED WITH ROLLED EROSION CONTROL PRODUCT UNTIL ESTABLISHED WITH VEGETATION.
7. IN THE EVENT THAT SLOPE FAILURE OCCURS POST CONSTRUCTION, ROCK WALLS OR GABION BASKETS WALLS SHALL BE INSTALLED AS SHOWN ON SHEET C200.

DRAINAGE CALCULATIONS AND NOTES:

1. DRAINAGE CALCULATIONS WERE COMPLETED FOR THE PROPOSED IMPROVEMENTS IN THE EXISTING AND PROPOSED CONDITION. THE ANALYSIS WAS COMPLETED USING THE FOLLOWING:
   - 1.1. MODIFIED RATIONAL METHOD
   - 1.2. TYPE B SOILS
   - 1.3. NOAA ATLAS 14 RAINFALL DATA (RICO STATION)
   - 1.4. MIN. Tc = 10 MIN.
   - 1.5. MHFCD RATIONAL METHOD WORKSHEETS WERE USED TO DETERMINE RUNOFF COEFFICIENTS AND HYDROLOGIC CALCULATIONS AS SUMMARIZED IN THE TABLES BELOW.
2. THE PROPOSED ROADSIDE DITCH AND DRIVEWAY CULVERT PROVIDE ADEQUATE CAPACITY TO CONVEY RUNOFF FROM THE PROJECT TO THE EXISTING TOWN OF RICO STORM WATER MANAGEMENT SYSTEM WITHIN THE EAST SIDE OF EXISTING ALLEY OF BLOCK 17.

Block 17 Lots 13-20
Driveway and Site Improvements
Drainage Calculations

Existing	Area (ac.)	Building (ac.)	Gravel Road (ac.)	Native (ac.)	% IMP
Lots 13-20	0.459	0.000	0.000	0.459	2%
Alley ROW	0.073	0.000	0.011	0.062	8%

Proposed	Area (ac.)	Building (ac.)	Gravel Road (ac.)	Native (ac.)	% IMP
Lots 13-20	0.459	0.021	0.009	0.429	7%
Alley ROW	0.073	0.000	0.023	0.051	14%

Land Use	% Imp[2]
Native	2%
Gravel Road	40%
Building	90%

Existing	Q2 (cfs)	Q10 (cfs)	Q100 (cfs)
Lots 13-20	0.007	0.089	1.029
Alley ROW	0.005	0.023	0.174
Existing Total	**0.012**	**0.112**	**1.203**
Proposed	**Q2 (cfs)**	**Q10 (cfs)**	**Q100 (cfs)**
Lots 13-20	0.03	0.138	1.084
Alley ROW	0.0105	0.033	0.184
Proposed Total	**0.0405**	**0.171**	**1.268**
Difference (cfs)	0.029	0.059	0.065

Notes:
1) Type B Soil
2) MHFCD Table 6-3
3) Rational method applied

TOWN OF RICO APPROVAL

PRINTED NAME _____

SIGNATURE _____ DATE _____

COLORADO 811 KNOW WHAT'S BELOW CALL BEFORE YOU DIG

COLORADO LICENSED ANDREW B. MILLER 40308 1/29/25 PROFESSIONAL ENGINEER

Revisions:

#	DATE	DESCRIPTION

BLOCK 17 LOTS 13-20
DRIVEWAY IMPROVEMENT PLANS
COVER SHEET
TOWN OF RICO, CO

MOUNTAIN CIVIL CONSULTING

MOUNTAIN CIVIL CONSULTING, LLC
712 Eagle- Pass
Durango, CO 81301
970-946-3175

C000

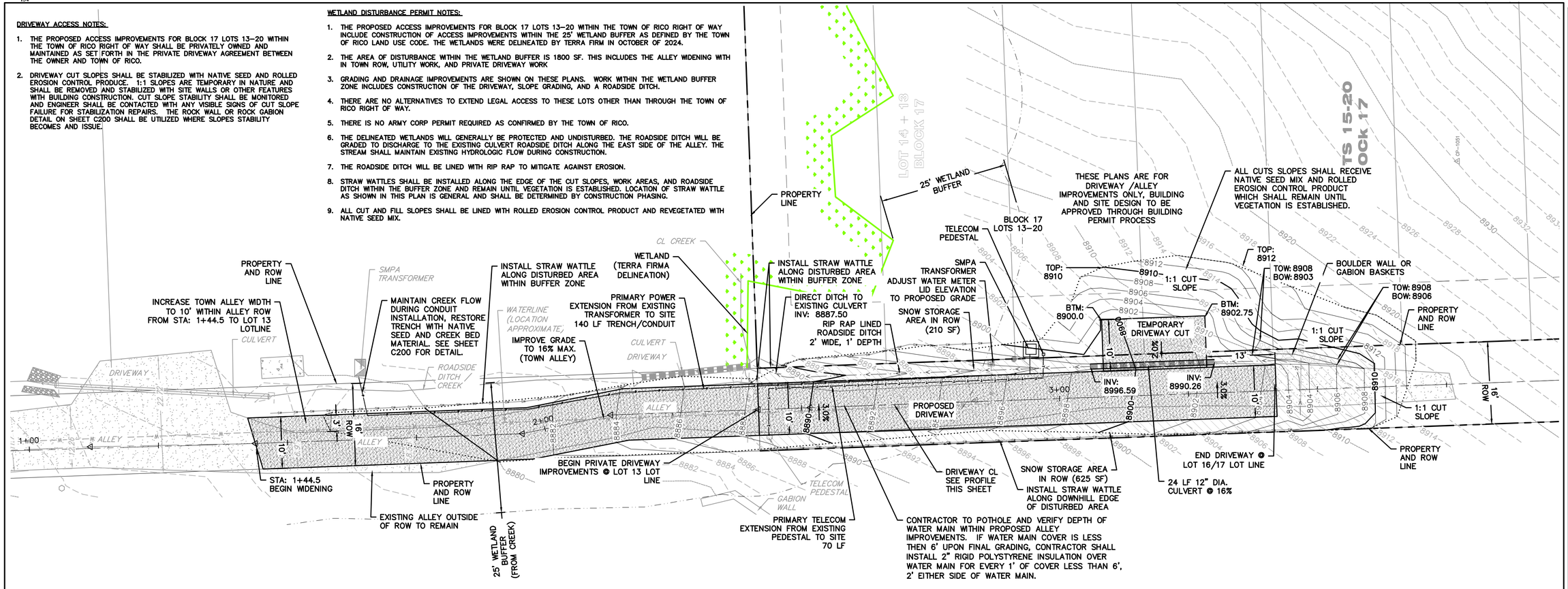
Sheet 1 of 3
MCC Project: 2023-017
Date issued: 1/29/25

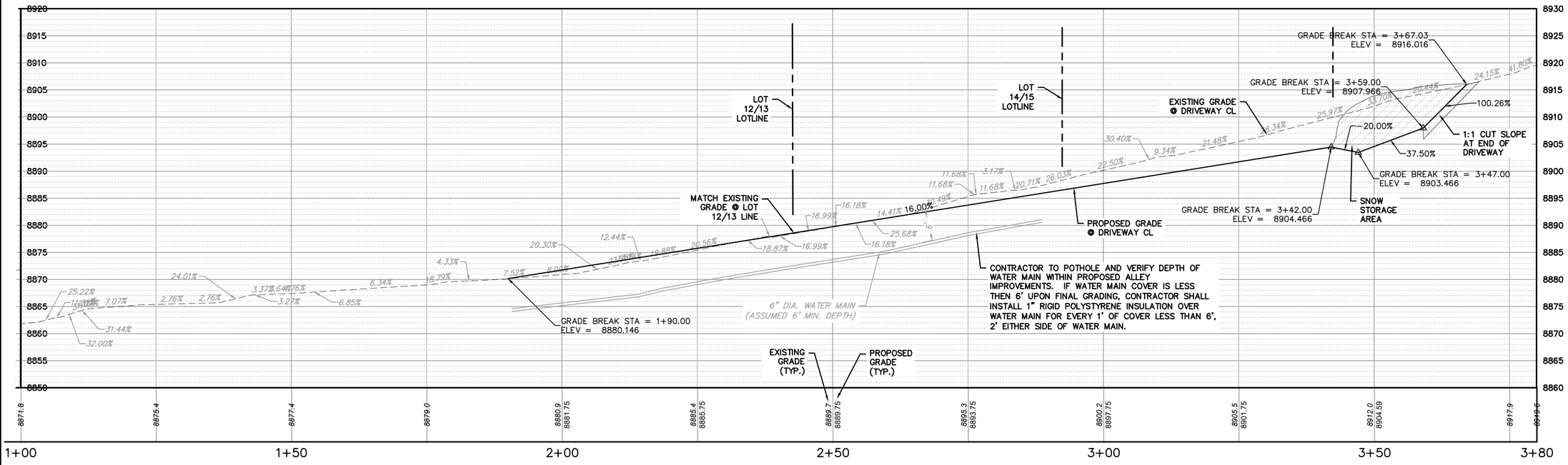
DRIVEWAY ACCESS NOTES:

1. THE PROPOSED ACCESS IMPROVEMENTS FOR BLOCK 17 LOTS 13–20 WITHIN THE TOWN OF RICO RIGHT OF WAY SHALL BE PRIVATELY OWNED AND MAINTAINED AS SET FORTH IN THE PRIVATE DRIVEWAY AGREEMENT BETWEEN THE OWNER AND TOWN OF RICO.
2. DRIVEWAY CUT SLOPES SHALL BE STABILIZED WITH NATIVE SEED AND ROLLED EROSION CONTROL PRODUCE. 1:1 SLOPES ARE TEMPORARY IN NATURE AND SHALL BE REMOVED AND STABILIZED WITH SITE WALLS OR OTHER FEATURES WITH BUILDING CONSTRUCTION. CUT SLOPE STABILITY SHALL BE MONITORED AND ENGINEER SHALL BE CONTACTED WITH ANY VISIBLE SIGNS OF CUT SLOPE FAILURE FOR STABILIZATION REPAIRS. THE ROCK WALL OR ROCK GABION DETAIL ON SHEET C200 SHALL BE UTILIZED WHERE SLOPES STABILITY BECOMES AND ISSUE.

WETLAND DISTURBANCE PERMIT NOTES:

1. THE PROPOSED ACCESS IMPROVEMENTS FOR BLOCK 17 LOTS 13–20 WITHIN THE TOWN OF RICO RIGHT OF WAY INCLUDE CONSTRUCTION OF ACCESS IMPROVEMENTS WITHIN THE 25' WETLAND BUFFER AS DEFINED BY THE TOWN OF RICO LAND USE CODE. THE WETLANDS WERE DELINEATED BY TERRA FIRM IN OCTOBER OF 2024.
2. THE AREA OF DISTURBANCE WITHIN THE WETLAND BUFFER IS 1800 SF. THIS INCLUDES THE ALLEY WIDENING WITH IN TOWN ROW, UTILITY WORK, AND PRIVATE DRIVEWAY WORK
3. GRADING AND DRAINAGE IMPROVEMENTS ARE SHOWN ON THESE PLANS. WORK WITHIN THE WETLAND BUFFER ZONE INCLUDES CONSTRUCTION OF THE DRIVEWAY, SLOPE GRADING, AND A ROADSIDE DITCH.
4. THERE ARE NO ALTERNATIVES TO EXTEND LEGAL ACCESS TO THESE LOTS OTHER THAN THROUGH THE TOWN OF RICO RIGHT OF WAY.
5. THERE IS NO ARMY CORP PERMIT REQUIRED AS CONFIRMED BY THE TOWN OF RICO.
6. THE DELINEATED WETLANDS WILL GENERALLY BE PROTECTED AND UNDISTURBED. THE ROADSIDE DITCH WILL BE GRADED TO DISCHARGE TO THE EXISTING CULVERT ROADSIDE DITCH ALONG THE EAST SIDE OF THE ALLEY. THE STREAM SHALL MAINTAIN EXISTING HYDROLOGIC FLOW DURING CONSTRUCTION.
7. THE ROADSIDE DITCH WILL BE LINED WITH RIP RAP TO MITIGATE AGAINST EROSION.
8. STRAW WATTLES SHALL BE INSTALLED ALONG THE EDGE OF THE CUT SLOPES, WORK AREAS, AND ROADSIDE DITCH WITHIN THE BUFFER ZONE AND REMAIN UNTIL VEGETATION IS ESTABLISHED. LOCATION OF STRAW WATTLE AS SHOWN IN THIS PLAN IS GENERAL AND SHALL BE DETERMINED BY CONSTRUCTION PHASING.
9. ALL CUT AND FILL SLOPES SHALL BE LINED WITH ROLLED EROSION CONTROL PRODUCT AND REVEGETATED WITH NATIVE SEED MIX.





COLORADO LICENSED
ANDREW B. RAMEY
40308
1/29/25
PROFESSIONAL ENGINEER

Revisions:

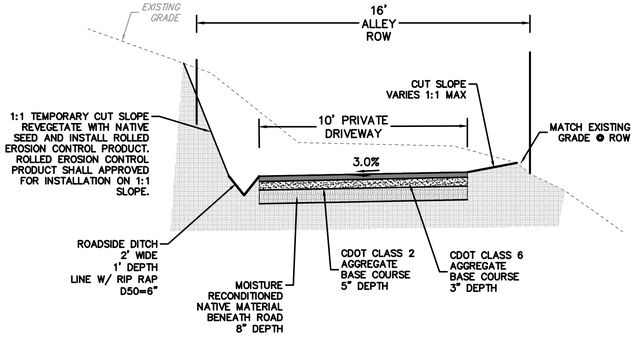
#	DATE	DESCRIPTION

BLOCK 17 LOTS 13-20
DRIVEWAY IMPROVEMENT PLANS
TOWN OF RICO, CO

MOUNTAIN CIVIL CONSULTING
MOUNTAIN CIVIL CONSULTING, LLC
712 Eagle- Pass
Durango, CO 81301
970-946-3175

C100

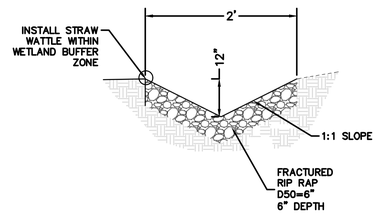
Sheet 2 of 3
MCC Project: 2024-025
Date issued: 1/29/25



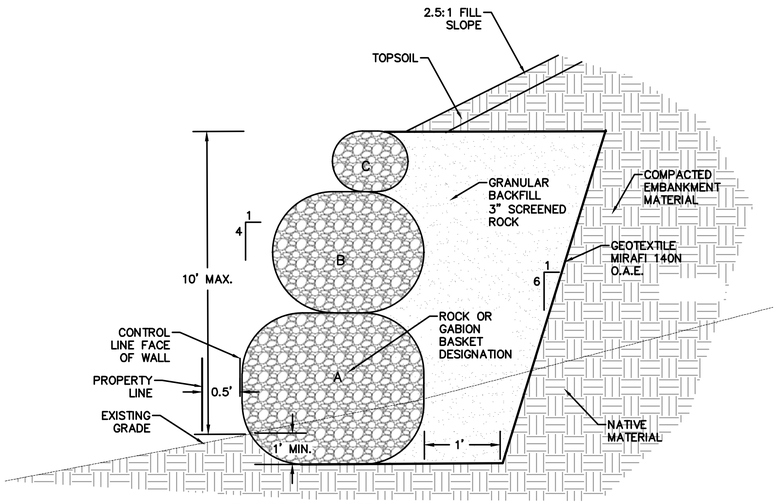
DRIVEWAY / ALLEY
TYPICAL SECTION

DRIVEWAY/ACCESS ROAD NOTES:

1. ALL ROAD WORK SHALL BE COMPLETED PER TOWN OF RICO ROAD CONSTRUCTION REQUIREMENTS OR CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WHERE TOWN STANDARDS DO NOT COVER THE SCOPE OF WORK.
2. SUBGRADE SHALL BE COMPACTED TO 90% MAX. DRY DENSITY MODIFIED PROCTOR AT ±2% OPTIMUM MOISTURE CONTENT.
3. CLASS 2 AND CLASS 6 BASE COURSE SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR AT ±2% OPTIMUM MOISTURE CONTENT.
4. DRIVEWAY SHALL BE PRIVATELY OWNED AND MAINTAINED.
5. ALL DISTURBED AREAS OUTSIDE OF ROAD SURFACE SHALL RECEIVE NATIVE SEED AND ROLLED EROSION BLANKETS WHERE SLOPE IS GREATER THAN 3:1.



ROADSIDE DITCH DETAIL



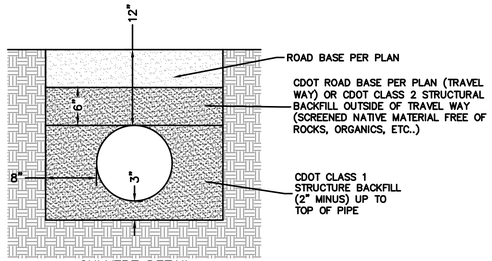
ROCKERY WALL DETAIL

ROCKERY WALL NOTES:

1. DETAIL SHALL BE USED ON DETENTION POND SITE WALLS ONLY.
2. CONTRACTOR MAY SUBSTITUTE BOULDER WALL WITH MANUFACTURED SITE WALL WITH OWNER APPROVAL. REDI ROCK O.A.E.
3. ALL ROCK MATERIAL SHALL BE RECTANGULAR AS POSSIBLE. NO STONE SHALL BE USED THAT DOES NOT EXTEND THROUGH THE WALL. ALL ROCK SHALL BE HARD, SOUND, DURABLE, AND FREE FROM WEATHERED PORTIONS, SEAMS, CRACKS, OR OTHER DEFECTS. ROCK DENSITY SHALL BE MIN. OF 160 LBS/CF.
4. STACKED ROCK SHALL FACING SHALL CONSIST OF UNIFORM STONE TO MATCH THE NATIVE MATERIAL AND APPROVED BY THE OWNER.
5. ROCK SELECTION AND PLACEMENT SHALL MINIMIZE VOID SPACES. IN THE EXPOSED FACE OF THE WALL, THERE SHALL BE NO OPEN VOIDS OVER 6 INCHES ACROSS IN ANY DIRECTION. THE FINAL COURSE SHALL HAVE A CONTINUOUS APPEARANCE AND BE PLACED TO MINIMIZE EROSION OF THE BACKFILL MATERIAL. THE ROCKS SHALL BE PLACED SUCH THAT THE WIDTH OF THE ROCK SHALL BE AT RIGHT ANGLES OR PERPENDICULAR TO THE ROCKERY FAE. THE ROCKS SHALL HAVE INCLINING FACES SLOPING TO THE BACK. EACH COURSE SHALL BE SEATED AS TIGHTLY AS AND EVENLY AS POSSIBLE ON THE COURSE BENEATH. AFTER SETTING EACH COURSE OF ROCK ALL VOIDS SHALL BE CHINKED ON THE BACK WITH QUARRY ROCK TO ELIMINATE ANY VOID LARGER THAN 2 INCHES.

ROCK SIZE DESIGNATION				
WALL HT.	A	B	C	
< 3'	3	2		
5' < 3'	4	3	2	
7' < 5'	4	3	3	
10' < 7'	4	4	3	

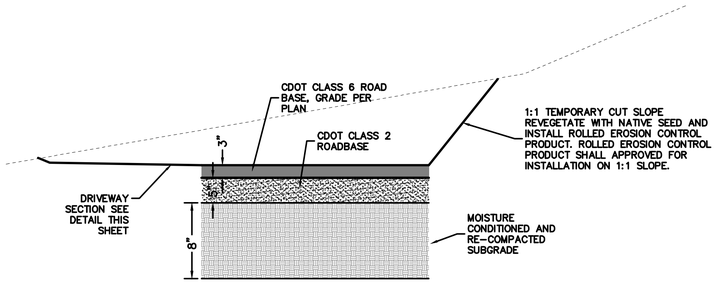
ROCK SIZE		
ROCK SIZE	ROCK WT. (LBS)	AVERAGE. DIM. (IN)
2	400–650	24–30
3	650–2,000	30–36
4	2,000–4,000	36–48



CULVERT DETAIL

NOTES:

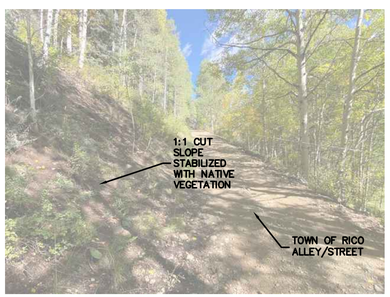
1. CONTRACTOR SHALL PROVIDE 2' OF COVER OVER CULVERT DURING CONSTRUCTION TO PROTECT PIPE FROM CONSTRUCTION EQUIPMENT TRAFFIC.



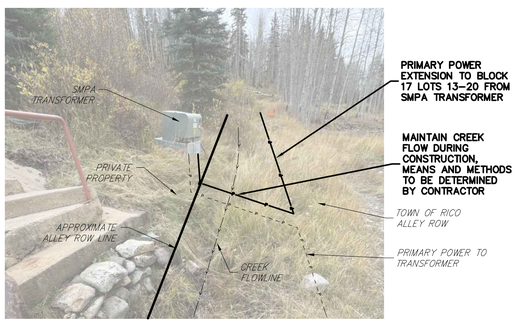
OFFSTREET PARKING
TYPICAL SECTION

NOTES:

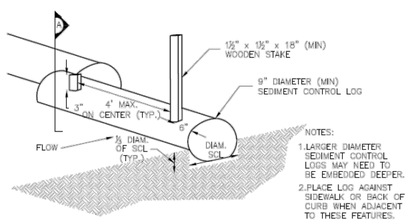
1. SUBGRADE SHALL BE SCARIFIED AND RECOMPACTED TO A DEPTH OF 8" TO 90% MAX DRY DENSITY MODIFIED PROCTOR AT ±2% OPTIMUM MOISTURE CONTENT.
2. CLASS 2 AND CLASS 6 BASE COURSE SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR AT ±2% OPTIMUM MOISTURE CONTENT.
3. ALL DISTURBED AREAS OUTSIDE OF ROAD BASE SHALL RECEIVE NATIVE SEED AND MULCH.



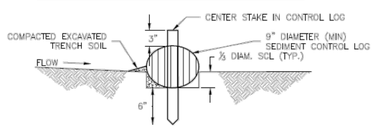
REPRESENTATIVE IMAGE OF TYPICAL ALLEY IN RICO W/ 1:1 CUT SLOPE



SMPA TRANSFORMER /
PRIMARY POWER EXTENSION
CREEK CROSSING DETAIL



TRENCHED SEDIMENT CONTROL LOG



STRAW WATTLE OR SEDIMENT
CONTROL LOG

COLORADO LICENSED
ANDREW B. RUMPEL
40308
1/29/25
PROFESSIONAL ENGINEER

Revisions:

#	DATE	DESCRIPTION

BLOCK 17 LOTS 13-20
DETAILS
TOWN OF RICO, CO

MOUNTAIN CIVIL CONSULTING

MOUNTAIN CIVIL CONSULTING, LLC
712 Eagle- Pass
Durango, CO 81301
970-946-3175

C200

Sheet 3 of 3
MCC Project: 2024-025
Date issued: 1/27/25

Block 17 Private Driveway
Alley ROW / Wetland Buffer Improvements Only
Town of Rico, CO
Opinion of Probable Cost
Prepared on : 02/06/25
Prepared By: ABR
Checked By:

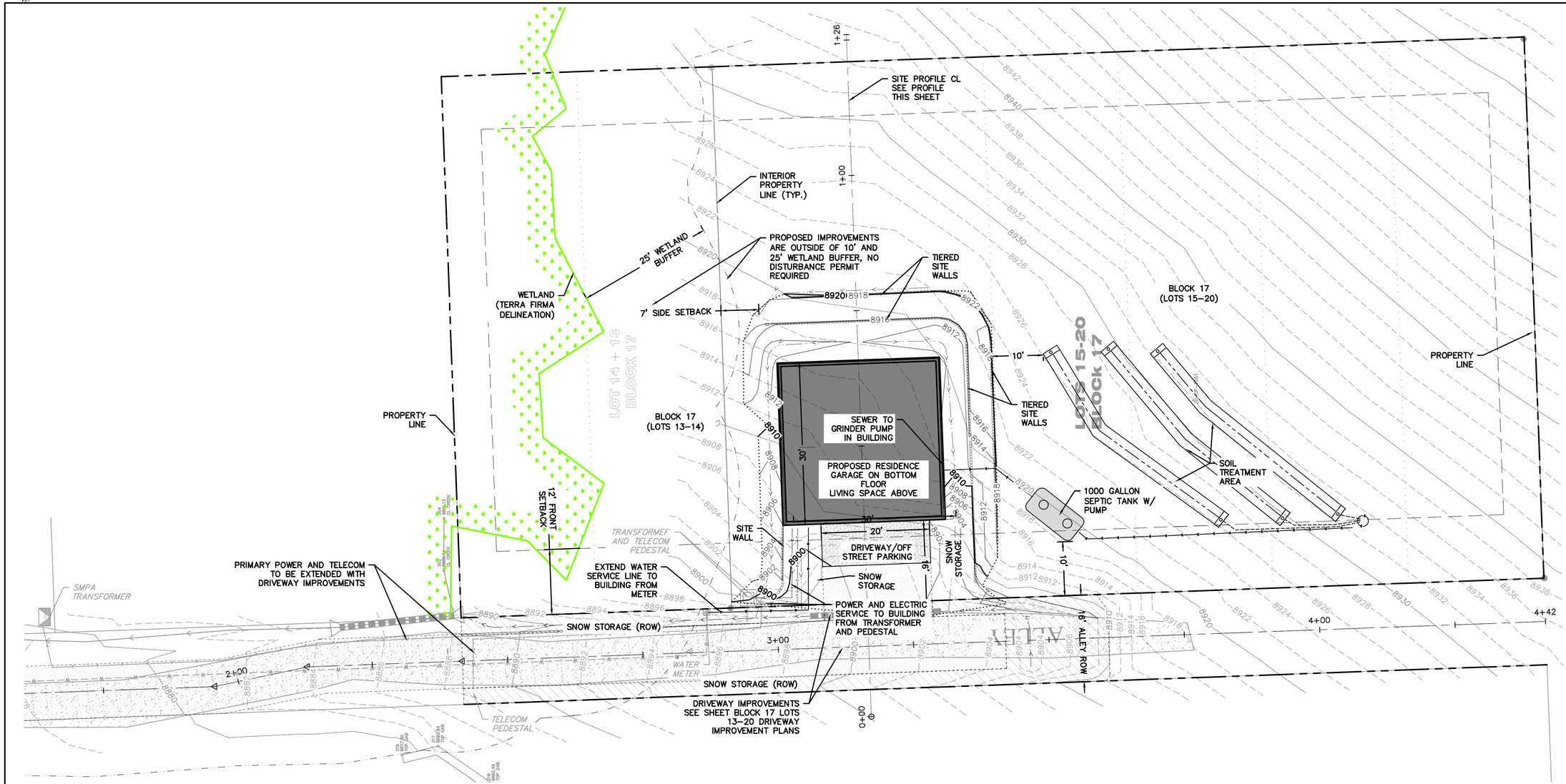
Item	Unit	Unit Price	Quantity	Cost
General Conditions (5% of Site, Access, Utility improvements below)				
Mobilization/Demobilization	LS	$ -	1	$ -
Construction Surveying	LS	$ -	1	$ -
As-builts, Punchlist and Closeout	LS	$ -	1	$ -
Subtotal				$ 346
Site Preparation				
Clearing/Grubbing/Demo/Site Prep	SF	$ 0.25	1,850	$ 462.5
Cut to Fill	CY	$ 10.0	-	$ -
Export	CY	$ 15.0	48	$ 720.0
Import	CY	$ 15.0	-	$ -
Subtotal				$ 1,183
Access Improvements				
CDOT Class 6	CY	$ 50.0	13	$ 650.0
CDOT Class 2	CY	$ 40.0	21	$ 840.0
Recompact Native Subgrade	CY	$ 15.0	34	$ 510.0
Straw Wattles	LF	$ 5.0	150	$ 750.0
Rolled Erosion Control Product / Native Seed	SF	$ 2.0	300	$ 600.0
Subtotal				$ 3,350
Utilities				
Storm Sewer				
Roadside Ditch - Rip Rap	LF	$ 10.0	43	$ 430.0
Water Main and Service				
Pothole Water Main to verify depth	EA	$ 250.0	1	$ 250.0
Franchise Utilities				
Electric Conduit and Trench	LF	$ 10.0	120	$ 1,200.0
Telecom Conduit and Trench	LF	$ 10.0	50	$ 500.0
Subtotal				$ 2,380.0
			Subtotal	$ 7,258
			Contingency (20%)	$ 1,452
			Total Cost	$ 8,710

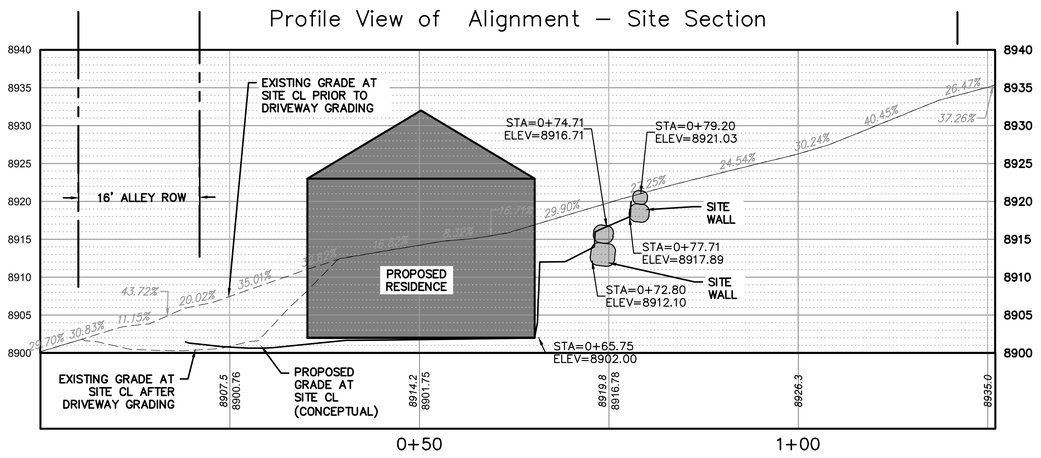
Notes
1) Quantites and scope of work per Rico Block 17 Driveway Improvement Plans Dated 1/31/25
2) Opinion of Probable Cost is for work within existing Alley ROW up to Block 17 Lot 13 and the wetland buffer zone

Disclaimer: This information was prepared by on good faith using best judgement as a professional familiar with the construction industry and actual project costs shall be obtained through private bid solicitation by the owner. The client acknowledges that the engineer has no control over the costs of said labor, materials, equipment, means and methods, bidding environment, unidentified field conditions, inflation, deflation or an other factors that may influence the actual cost of the project at the time of execution. Engineer does not warrant or represent that construction bids or negotiated prices will not vary for this project.

Andrew Rapiejko, PE

Date





SITE PROFILE

SITE PLAN NOTES:

1. SITE PLAN AS SHOWN IN THIS PLAN IS PROVIDED TO DEMONSTRATE POTENTIAL DEVELOPMENT OF BLOCK LOTS 13–20 AS REQUIRED BY THE TOWN ENGINEER TO APPROVE DRIVEWAY/ALLEY IMPROVEMENTS. THIS PLAN IS CONCEPTUAL AND WILL BE FINALIZED DURING BUILDING PERMIT PROCESS.
2. THIS CONCEPTUAL SITE PLAN PROVIDED PER TOWN OF RICO REQUEST AND IS NOT FOR CONSTRUCTION OR FORMAL APPROVAL REQUEST BY PLANNING COMMISSION OR BOARD OF TRUSTEES.

FEET
0 10
0 1
INCHES
SCALE

**FOR REVIEW ONLY
NOT FOR
CONSTRUCTION**

Revisions: #	DATE	DESCRIPTION

BLOCK 17 LOTS 13-20
PRELIMINARY SITE PLAN EXHIBIT
TOWN OF RICO, CO

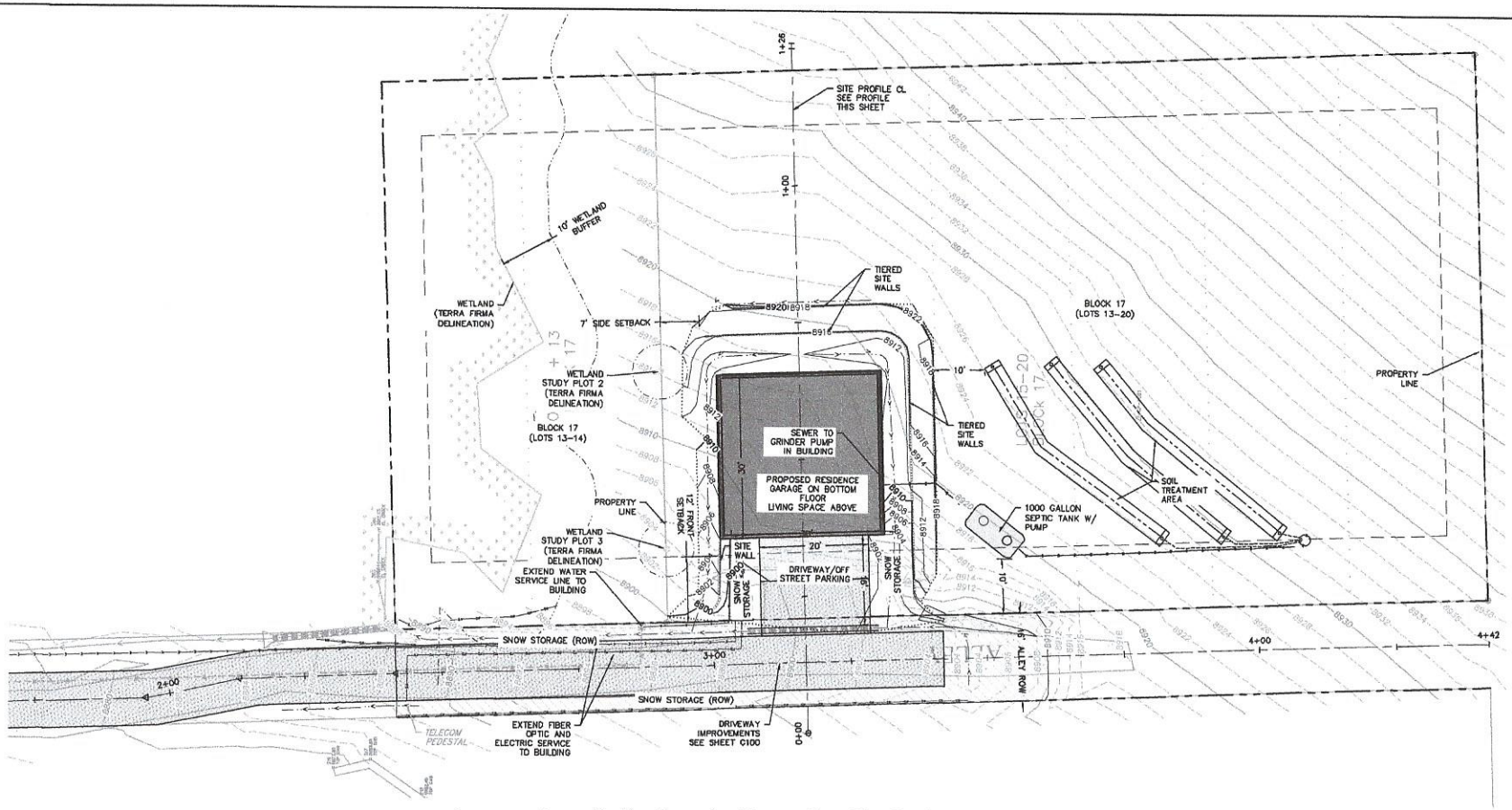
MOUNTAIN CIVIL CONSULTING

MOUNTAIN CIVIL
CONSULTING, LLC

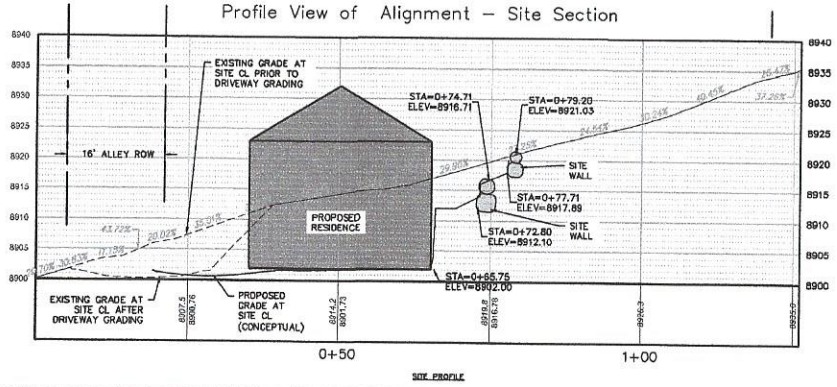
712 Eagle- Pass
Durango, CO 81301
970-946-3175

EX01

Sheet 1 of 1
MCC Project: 2024-025
Date issued: 1/29/25



Profile View of Alignment – Site Section



SITE PROFILE

SITE PLAN NOTES:

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2. THIS CONCEPTUAL SITE PLAN PROVIDED PER TOWN OF RICO REQUEST AND IS NOT FOR CONSTRUCTION

FEET
INCHES
SCALE

FOR REVIEW ONLY
NOT FOR
CONSTRUCTION

Revisions:

#	DATE	DESCRIPTION

BLOCK 17 LOTS 13-20
PRELIMINARY SITE PLAN EXHIBIT
TOWN OF RICO, CO

MOUNTAIN CIVIL CONSULTING
MOUNTAIN CIVIL CONSULTING, LLC
712 Eagle Pass
Durango, CO 81301
970-946-3175

EX01

Sheet 1 of 1
MCC Project: 2024-025
Date issued: 12/10/24

Preliminary Wetland Delineation Report

Lots 13-20 Block 17
Town of Rico, Dolores County, CO

Landowner:

Eric J. & Jennifer L. Breitenbach
POB 657
Dolores, CO 81323
jeneric6@gmail.com

Consultant:

The Terra Firm, Inc.
PO Box 362
Telluride, Colorado 81435
970.708.1221

Wetland Delineation Report Contents

Report Deliverable

The following report presents a summation of materials, which collectively meets the minimum contents of a Preliminary Wetland Delineation. This report can be used to request a Jurisdictional Determination from the Army Corps of Engineers (ACOE) or can be used for permit applications to the Army Corps of Engineers, if identified wetlands will be disturbed.

Background and Project Description

The Terra Firm Inc. was contracted by Jennifer and Eric Breitenbach (owners), to delineate all wetlands and other "Waters of the U.S." on Lots 13-20, Block 17, within the Town of Rico, Colorado. Lots 13 and 14 are assigned parcel ID 504736216023, and Lots 15-20 are assigned parcel ID 504736216008. All parcels are held under the same ownership and will be collectively referred to as the Site for the remainder of the report. The Site is located within Section 36, Township 40N, Range 11W, New Mexico Principal Meridian in Dolores County, Colorado (Latitude 37.69203 and Longitude -107.02919 WGS84) (see Figures 1, 2). The Terra Firm, Inc. completed a delineation of wetlands and other "Waters of the U.S." for the Site (see Figure 7) in early October, 2024. The following subsections document the methodology, results, and conclusions of the wetland delineation.

Methods

The Terra Firm, Inc. reviewed background information and mapping for the Site (e.g., aerial photography, National Wetlands Inventory, etc.) in August 2024. Following this review, C. Hazen and F. Hazen completed a field wetland delineation on-site on October 1st, 2024. Field work included flagging of all delineated wetland areas within the Site. All Points Land Survey surveyed the flagged wetland line following the delineation work and produced line work as shown on Figure 7.

The Terra Firm, Inc. completed the field wetland delineation following the accepted stepwise methods and criteria included in the Regional Supplement to the U.S. Army Corps of Engineers (Corps) Wetland Delineation Manual: Western Mountains, Valleys, and Coast Regions Version 2.0 (USACE 2010 ERDC/EL TR-08-13) and the Corps Wetlands Delineation Manual (U.S. Department of the Army 1987 Wetlands Research Program Technical Report Y-87-1, 1987). Other "Waters of the U.S." were delineated in the field following the applicable guidance provided by the EPA and the ACOE under the "Conforming Rule" for "Waters of the U.S." that became effective September 8th, 2023 and is provided by the EPA (https://www.epa.gov/wotus/current-implementation-waters-united-states).

Within Dolores County, wetlands are defined in Article 5, Section 2.V. of the Dolores County Development and Land Use Regulations (https://dolocnty.colorado.gov/sites/dolocnty/files/documents/Land-Use-Regulations.pdf). Wetlands include "*An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances, does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophilic vegetation.*"

Wetland Regulations within Dolores County are set forth in Article 4, Section 2.I. of the Dolores County Development and Land Use Regulations. The regulations state "*All new developments and changes in land use shall comply with the review procedures and requirements of the Army Corp of Engineers for wetland areas under their jurisdiction. Preservation rather than replacement of wetland areas is encouraged to enhance water quality, provide flood mitigation and habitat."*

Within the Town of Rico, Wetlands Protection Regulations are set forth in Article 8, Section 7 of the Town of Rico Land Use Code. The intent of the code, planning requirements, buffer zone, setback, disturbance and mitigation standards for wetland areas are all defined within in the Town of Rico Land Use Code (https://townofrico.colorado.gov/sites/townofrico/files/documents/Rico%20LUC_Amended_1-18-23%20.pdf)

Wetland Determination Data Forms were completed, and photographs taken, to document conditions and are included in Appendix 1 and 2, respectively. The sampling locations and photo points are shown on Figure 2 and Figure 7.

Setting and Topography

The Site is located within the Town of Rico, on the eastern side of HWY 145 (upslope). Property access is gained via Carter's Way alley off of E. Mantz Avenue. The parcels are bounded by the unimproved Carter's Way Alley to the west, residential parcels to the north, the unimproved Garfield Street ROW to the east and the E. Campbell Street ROW to the south. Neither of the subject parcels are addressed within Rico, and both are unimproved parcels of land.

The U.S. Geological Survey (USGS) Rico, Colorado map provides topographic information for the project area. The Site sits at approximately 8,900 feet in elevation within the San Juan Mountains, a rugged and high-altitude sub-range of the Southern Rocky Mountains. The Site is specifically located within the upper Dolores River watershed, a watershed feeding the Colorado River. Historically, large mines operated up and down the glacially carved valley, significantly altering portions of the landscape. Large dikes and levy features are prominent in and around the Town of Rico, and there are hundreds of miles of tunnels in and around the surrounding mountains. The extensive mining infrastructure present within the surrounding area also includes many collapsed and buried tunnels and shafts. These perforations act as conduits for groundwater and have created a multitude of seeps and springs across the Rico valley.

The Site is situated on sloped and forested terrain with a small bench feature in the center of the parcel. A prominent drainage swale bounds the Site to the north, with a small perennial creek almost parallelling the northern lot line. No other surface water features were noted at the Site.

National Wetlands Inventory

The U.S. Fish and Wildlife (USFWS) National Wetlands Inventory (NWI) mapping (https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/) did not identify any wetlands on the Site (Figure 3). Identification, interpretation, and distribution of Waters of the United States occurred utilizing 1:58,000 scale, color infrared imagery from 1986. Spatial distribution and wetland type presented on the NWI database is utilized as background information for the wetland delineation with the acknowledgement that wetlands and Waters of the United States are dynamic and data collection methodologies are coarse. Absence of wetlands on the NWI does not preclude wetlands from being on the Site.

Soil Survey

The National Resources Conservation Service (NRCS) Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm) was reviewed to identify which soil types are coarsely mapped in the vicinity of the study area. Spatial distribution of soils shown on Figure 5 and the

following table summarizes the mapped soil types within the specified area of interest. Data utilized by the NRCS Web Soil Survey for this area was collected September 6th, 2022 (V17).

Soil Types Lots 13-20 Block 17 Rico NRCS Web Soils Survey			
Soil Unit Type	**Acres in AOI**	**Percent of AOI**	**Hydric Rating**
Frisco-Horsethief complex, 30% - 75% slopes	1.4	100%	NO
Totals for Area of Interest	**1.4**	**100%**	

All delineated wetland areas on the Site occur within the Frisco-Horsethief complex.

The Frisco-Horsethief complex consists of approximately 60% Frisco and similar soils, 25% Horsethief and similar soils and 15% minor components. Frisco and similar soils form mountain slopes, they are derived from outwash, colluvium, and slope alluvium derived from granitic, volcanic, and sedimentary rocks and form 30% to 75% slopes. They are classified well drained, non-hydric soils with common depths to the water table of more than 80". Typical profiles present as slightly decomposed plant material from 0"-2", loam from 2"-11", cobbly loam from 11"-19", extremely stony sandy clay loam from 19"-48", and extremely stony loam from 48"-62".

Horsethief and similar soils form mountain slopes, are derived from colluvium and slope alluvium derived from sandstone, volcanic and igneous rocks, and form 30% - 75% slopes. They are classified well drained, non-hydric soils with common depths to the water table of more than 80". Typical profiles present as slightly decomposed plant material from 0"-2", loam from 2"-5", fine sandy loam from 5"-24", sandy clay loam from 24"-32" and very stony clay loam from 32"-62".

Floodplain

According to the Flood Insurance Rate Map by the Federal Emergency Management Agency (FEMA), Town of Rico, CO (Dolores CO.) map number 080048A effective date 08/5/1986, the entirety of the Project Area is classified as Zone C as shown on Figure 6. FEMA defines Zone C as an *area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain.*

Precipitation

The closest public weather station with similar attributes to the project area is a SNOTEL Site at Scotch Creek (9,195 feet), Dolores County (https://wcc.sc.egov.usda.gov/nwcc/site?sitenum=739) maintained by the Natural Resources Conservation Service (NRCS). The average total annual average precipitation is 28.4 inches, based on 30 years of record. Approximately 11.8 inches of measured precipitation occurs during the growing season (approximately May-October). The majority of the precipitation at the Site occurs as snowfall and consequently affects the region through replenishing aquifers and in the spring during snowmelt driven runoff.

Results

The spatial extents of the identified wetland areas on Lots 13-20 Block 17 (pin flag/photo points included) are shown on Figure 7. The required Wetland Determination Data Forms (Appendix A) and representative photographs with captioning (Appendix B) are additionally included.

One Palustrine Scrub-Shrub wetland was identified on the hillslopes and within the drainage feature at the northern extent of the Site. Of the delineated wetland area, 1,847 sqft, is located on the subject property. Perennially saturated hydric soils are present on the slopes located above, and south of, the perennial stream just off property to the north. These soils support hydrophytic vegetation and meet hydrology criteria for a wetland. All waters from the Site collect in a bar ditch/culvert system in the Carter's Way alley ROW before discharging into Silver Street and then the Dolores River.

One set of paired monitoring plots was utilized to determine the appropriate upland/wetland boundary across the Site. Within the set of paired plots, one plot was selected as representative of the wetland vegetation, soils and hydrology (even numbered plots) and the other was selected as representative of upland vegetation, soils and hydrology (odd numbered plots). A third plot, Monitoring Plot 3, is identified on the wetland survey. This was a quick monitoring hole dug to determine the presence of hydric soils or wetland hydrology within an isolated stand of willows, it was obviously evident that no hydric soils nor hydrologic conditions meeting standards of a wetland were present.

Vegetation

The majority of the wetland area identified at the Site was comprised of an overstory of *Lonicera involucrata, Picea pungens and Salix monticola,* with an herbaceous community predominately comprised of *Pyrola asarifolia, Fragaria virginiana* and a handful of other grasses forbs. High percentages of bare ground were observed on the hillslope due to the densely vegetated overstory. This wetland meets criteria for a Palustrine Scrub-Shrub wetland per Cowardin et. al, 1979. The willow dominated wetland present on the hillslope at the northern end of the property transitions to a Palustrine Emergent wetland near the toe of slope adjacent to the perennial stream.

Well-defined transitions to upland were noted across the southern boundary of the delineated wetland at the Site. An isolated stand of *Salix monticola* was identified on the property line between Lot 14 and Lot 15 at the location of Monitoring Plot 3. However, this location did not meet hydrologic or hydric soil criteria for a wetland.

Upland vegetation communities across the Site are very similar to commonly observed upland communities within aspen forests in the region. The overstory consisted of juvenile *Populus tremuloides.* The herbaceous community consisted of *Thalictrum occidentale, Bromus inermis, Fragaria virginiana* and *Potentilla gracilis*. Low percentages of bare ground within the herbaceous community were common within the upland community at the Site.

A comprehensive table of vegetation identified within the Project Area during delineation activities is included below. This table is not a comprehensive list of all vegetation on the Site only vegetation identified within a monitoring plot near a delineated wetland boundary. See attached Wetland Determination Data Forms, Appendix A, for more details.

Comprehensive Identified Vegetation – Wetland Delineation Lots 13-20 Block 17 Rico		
Scientific Name	**Indicator Status**	**Common Name**
Tree Stratum		
Picea pungens	FAC	Blue Spruce
Sapling/Shrub Stratum		
Lonicera involucrata	FAC	Four-Line Honeysuckle
Picea pungens	FAC	Blue Spruce
Populus tremuloides	FACU	Quaking Aspen
Salix monticola	OBL	Park Willow
Herb Stratum		
Achillea millefolium	FACU	Common Yarrow
Bromus inermis	UPL	Smooth Brome
Carex utriculata	OBL	Northwest Territory Sedge
Equisetum arvense	FAC	Field Horsetail
Erigeron speciosus	NO	Showy Fleabane
Fragaria virginiana	FACU	Virginia Strawberry
Frasera speciosa	NO	Green Gentian
Heracleum maximum	FAC	American Cow-Parsnip
Poa alpina	FAC	Alpine Blue Grass
Potentilla gracilis	FAC	Graceful Cinquefoil
Pyrola asarifolia	FACU	Pink Wintergreen
Rosa woodsii	FACU	Woods' Rose
Solidago canadensis	FACU	Canadian Goldenrod
Taraxacum officinale	FACU	Common Dandelion
Thalictrum occidentale	FACU	Western Meadow-Rue

Soils

Observed upland soils at the Site, within Monitoring Plots 1, were similar to the coarsely mapped Frisco-Horsethief complex (NRCS Web Soil Survey). This upland plot consisted of gravelly sandy loam from the surface to a depth of 18”. No hydric soil indicators were observed within Monitoring Plot 1.

Observed wetland soils at the Site, within Monitoring Plot 2, consisted of gravelly clayey loam from 0”-8” and clay soils with non-decomposed organics from 8”-12” of depth. Refusal encountered at a depth of 12” due to large cobbles or near-surface bedrock. Soils meet the “Other” criteria for hydric soils as they support hydrophytic vegetation and meet criteria for wetland hydrology.

See attached Wetland Determination Data Forms, Appendix A, for more details.

Hydrology

All waters from the Site collect into a seep face generated perennial stream on the north side of the Site. These flows collect into a culvert on the east side of Carter’s Way alley, draining to the north and continuing to collect surface and groundwater from the upslope wetlands. The flows then collect into a

culvert or a pipe that continues to the north and outlets into Silver Creek. Silver Creek is a tributary to the Dolores River in southwest Colorado.

The upland monitoring plot was dry to the bottom of the excavated soil profile and no wetland hydrology indicators were observed within the plot area. In the wetland monitoring plot, soils were saturated at a depth of 8". Non-decomposing organic "chips" below 8" of depth indicate perennial saturation within the soils below that point. Additionally, oxidized rhizospheres were noted along living roots.

See attached Wetland Determination Data Forms, Appendix A, for more details.

Conclusion

Following the 2024 wetland delineation field work on Lots 13-20 Block 17, one wetland area was identified on the parcel meeting the Army Corps of Engineers criteria and standards for a wetland (See Figure 7). These delineated wetlands were "*inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."* - Excerpt from definition of wetlands as used by the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency. Clear surface connectivity exists between the delineated wetlands and Silver Creek via bar ditches and a culvert.

The delineated and surveyed wetland at the Site (Figure 7) represent the maximum extent of wetlands that may be regulated on a federal or town level. This report serves as the foundational document supporting the October 1st, 2024 wetland delineation on Lots 13-20 Block 17 in the Town of Rico.

Attachments:

Included on the following pages.

Figure 1 – Vicinity Map

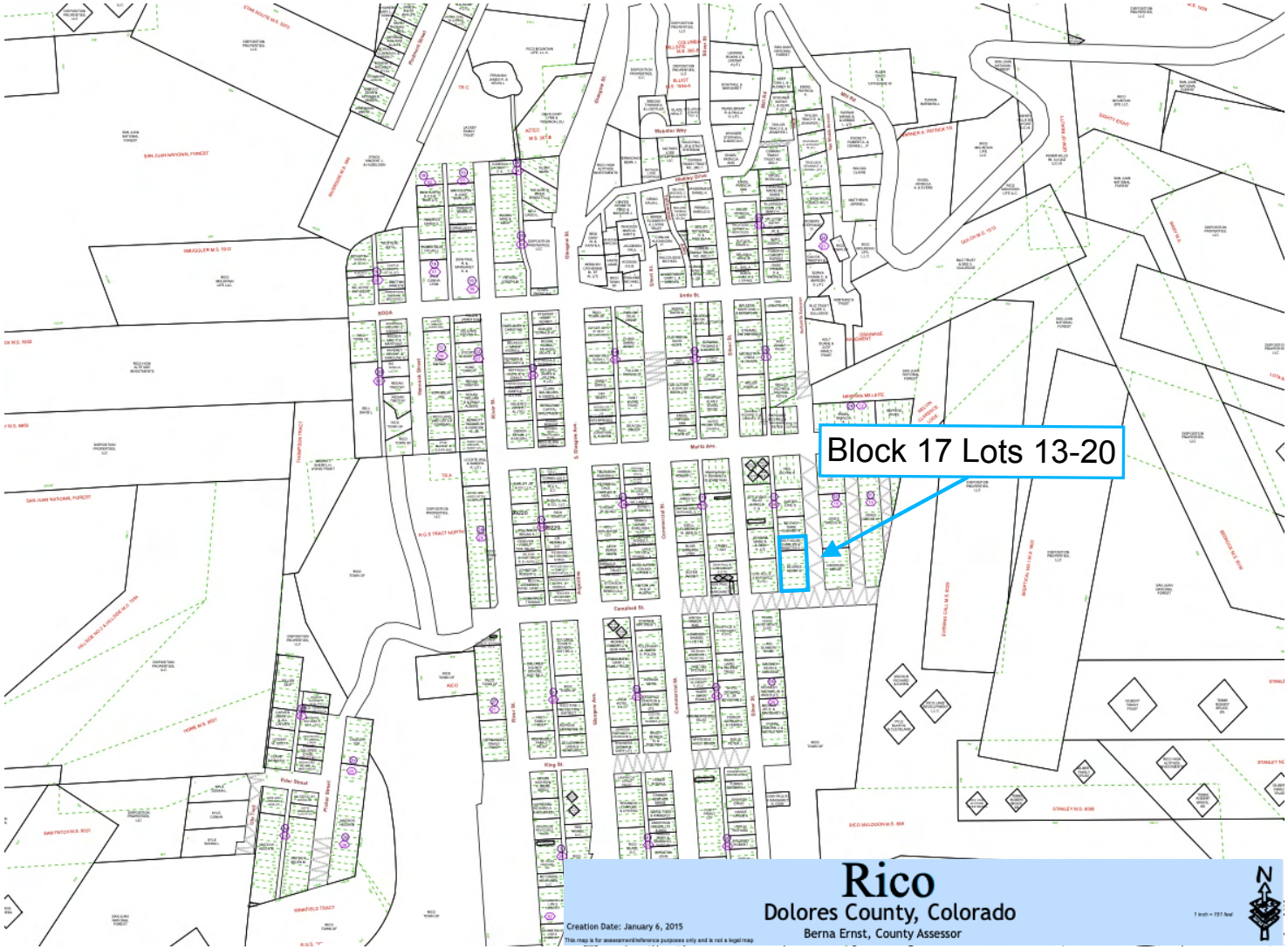


Figure 2 – Location Map

Figure 3 – NWI Map

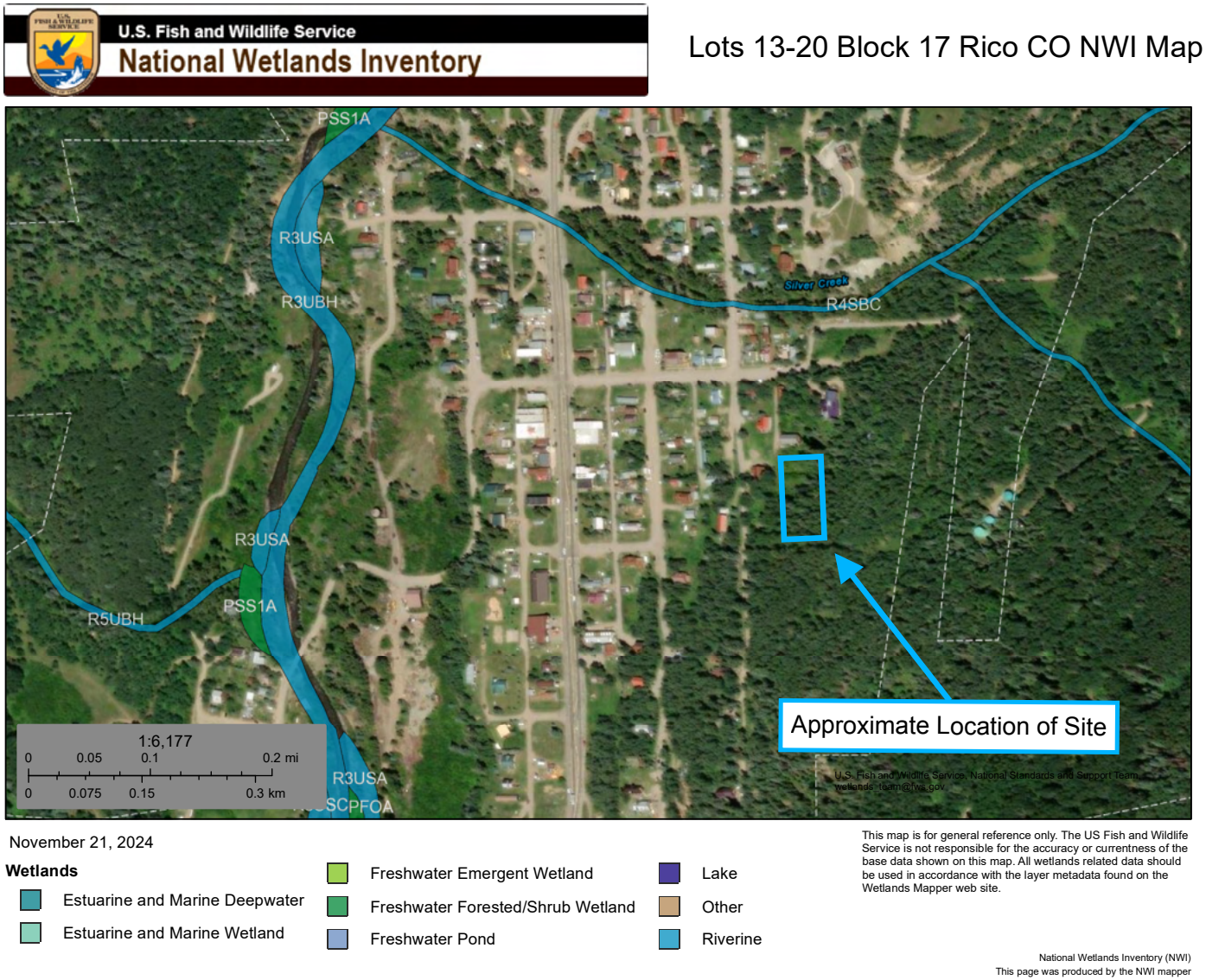


Figure 4 – Rico Wetlands Hazard Map

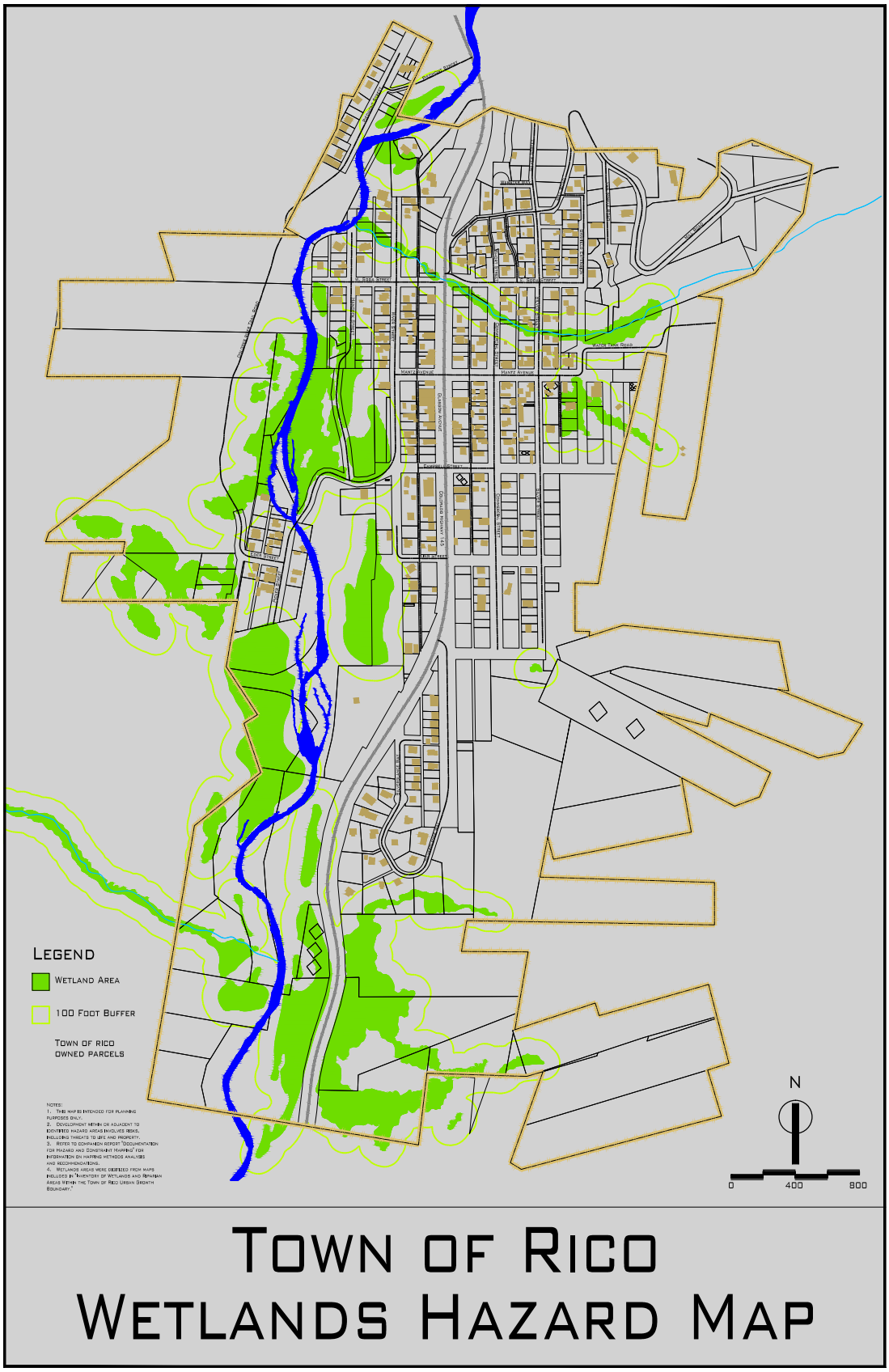


Figure 5 – Soils Map

Soil Map—Animas-Dolores Area, Colorado, Parts of Archuleta, Dolores, Hinsdale, La Plata, Montezuma, San Juan, and San Miguel Counties
(Lots 13-20 Block 17 Rico)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Animas-Dolores Area, Colorado, Parts of Archuleta, Dolores, Hinsdale, La Plata, Montezuma, San Juan, and San Miguel Counties
Survey Area Data: Version 19, Aug 29, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 23, 2021—Sep 10, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
154	Frisco-Horsethief complex, 30 to 75 percent slopes	1.4	100.0%
Totals for Area of Interest		**1.4**	**100.0%**

Figure 6 – FEMA Map

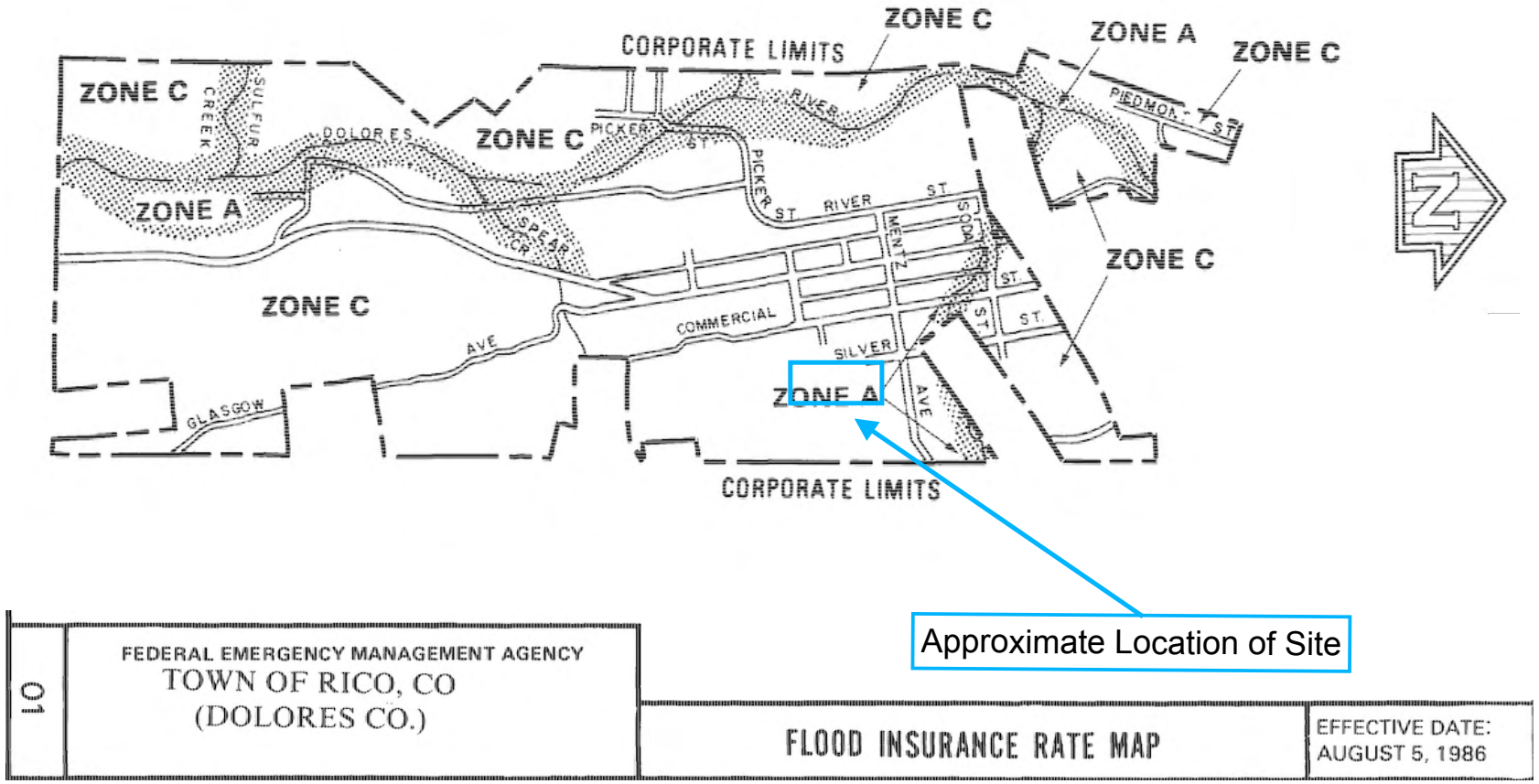
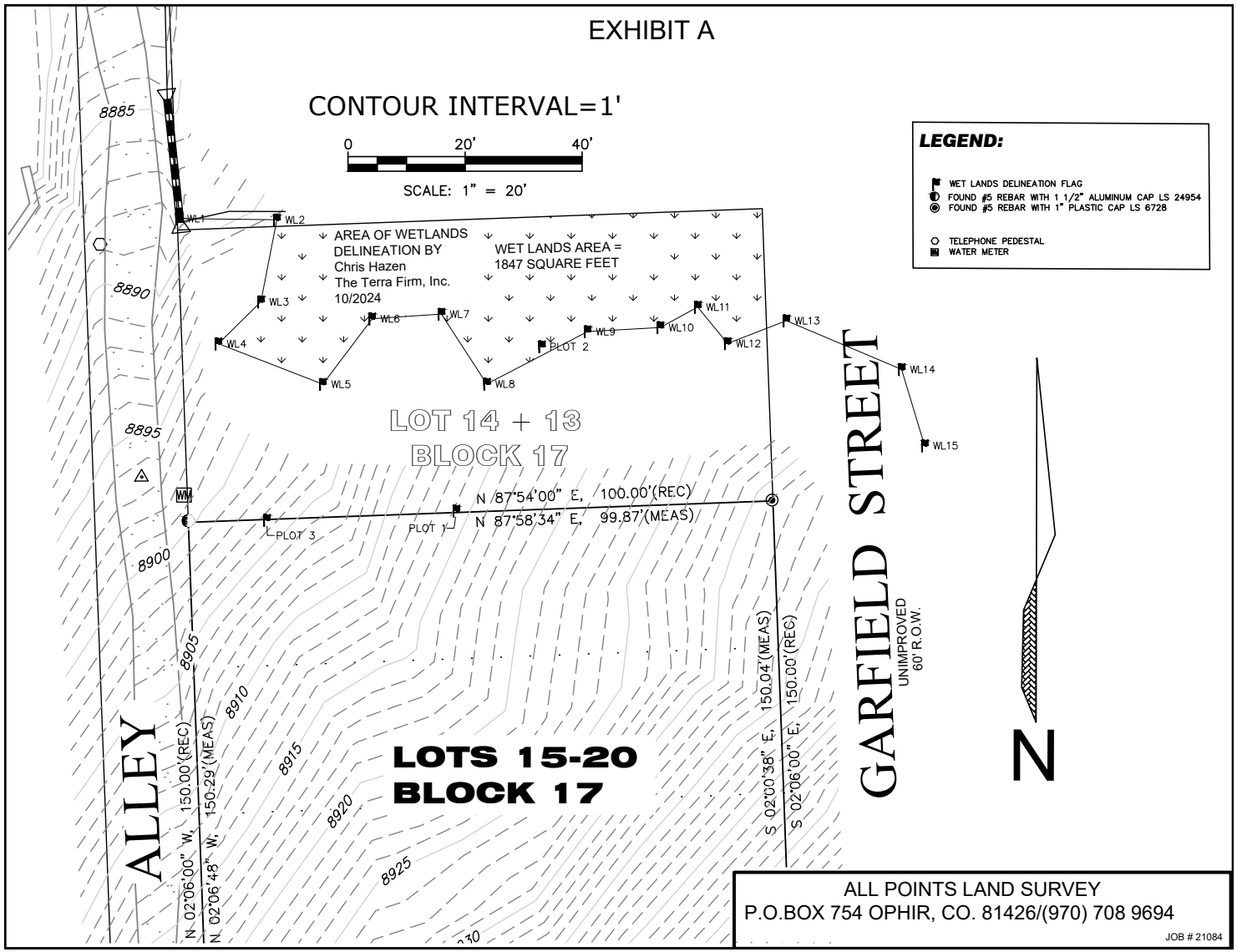


Figure 7 – Wetland Delineation Map



Appendix A – Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: LOT 13-20 BLOCK 17 City/County: RICO Sampling Date: 10/01/2024
Applicant/Owner: BREITENBACH State: CO Sampling Point: 01
Investigator(s): C HAZEN, F. HAZEN Section, Township, Range: S36 T40N R11W
Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONVEX Slope (%): ~10
Subregion (LRR): F Lat: 37.69203 Long: -107.02919 Datum: WGS84
Soil Map Unit Name: FRISCO - HORSE THIEF NWI classification: NO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks: PLOT LOCATED ON N/W FACING SLOPE ON ~LOT 14. FEW TREES OR SHRUBS PRESENT ROCKY SOILS + NO HYDROLOGIC INDICATORS OBSERVED

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15'X15')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15'X15')			
1. POPULUS TREMULOIDES	5	✓	FACU
2.			
3.			
4.			
5.			
	5 = Total Cover		
Herb Stratum (Plot size: 15'X15')			
1. BROMUS INERMIS	10	✓	UPL
2. FRAGARIA VIRGINIANA	10	✓	FACU
3. THALICTRUM OCCIDENTALE	10	✓	FACU
4. POTENTILLA GRACILIS	10	✓	FAC
5. ERIGERON SPECIOSUS	5		NO
6. SOLIDAGO CANADENSIS	5		FACU
7. TARAXACUM OFFICINALE	5		FACU
8. EQUISETUM ARVENSE	5		FAC
9. ACHILLEA MILLEFOLIUM	5		FACU
10. POA ALPINA	5		FAC
11. ROSA WOODSII	5		FACU
	75 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:
UPLAND VEG. SUITE COMMONLY OBSERVED IN THIS REGION, ON MEADOWS BETWEEN WILLOW COMMUNITIES + IN OPEN GLADE.

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SOIL

Sampling Point: 01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/2	100					MIN	SANDY LOAM W/ GRAVELS

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

GRAVELLY SANDY LOAM W/ SOME 4"- COBBLES PRESENT. NO HYDRIC INDICATORS OBSERVED ACROSS PROFILE.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

PROFILE DRY TO 18" OF DEPTH. NO HYDROLOGIC INDICATORS.

US Army Corps of Engineers

Western Mountains, Valleys, and Coast – Version 2.0

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: LOTS 13 – 20 BLOCK 17 City/County: RICO Sampling Date: 10/01/2024
Applicant/Owner: BREITENBACH State: CO Sampling Point: 02
Investigator(s): C. HAZEN, F. HAZEN Section, Township, Range: S 36 40N, 11W
Landform (hillslope, terrace, etc.): HILLSLOPE Local relief (concave, convex, none): CONVEX Slope (%): ~10
Subregion (LRR): E Lat: 37.691203 Long: -108.029919 Datum: WGS 84
Soil Map Unit Name: FRISCO – HORSETHIEF NWI classification: NO
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ✓ No ____
Hydric Soil Present? Yes ✓ No ____
Wetland Hydrology Present? Yes ✓ No ____
Is the Sampled Area within a Wetland? Yes ✓ No ____

Remarks: PLOT LOCATED ON HILLSLOPE CLOSE TO N. PROPERTY BOUNDARY OF LOT 13. A PERENNIAL STREAM IS LOCATED ALONG N. PROPERTY LINE & PERENNIALLY SATURATED SOILS WERE OBSERVED WITHIN WILLOW DOMINATED VEG COMMUNITY ON HILLSLOPES TO SOUTH OF CREEK.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10'x15')	Absolute % Cover	Dominant Species?	Indicator Status
1. PICEA PUNGENS	10	✓	FAC
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10'x15')			
1. SALIX MONTICOLA	80	✓	OBL
2. LONICERA INVOLUCRATA	5		FAC
3. PICEA PUNGENS	1		FAC
4.			
5.			
	86	= Total Cover	
Herb Stratum (Plot size: 10'x15')			
1. PYROLA ASARIFOLIA	10	✓	FACU
2. ERIGERON VIRGINIANA	5	✓	FACU
3. TARAXACUM OFFICINALE	2.5		FACU
4. EQUISETUM ARVENSE	2.5		FAC
5. CAREX UTRICULATA	1		OBL
6. FRASERA SPECIOSA	1		NO
7. HERACLEUM MAXIMUM	1		FAC
8. BROMUS INERMIS	1		UPL
9. POA ALPINA	1		FAC
10.			
11.			
	25	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 75

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 81	x 1 = 81
FACW species 0	x 2 = 0
FAC species 20.5	x 3 = 61.5
FACU species 17.5	x 4 = 70
UPL species 2	x 5 = 10
Column Totals: 121 (A)	222.5 (B)

Prevalence Index = B/A = 1.83

Hydrophytic Vegetation Indicators:
___ 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
X 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ 5 - Wetland Non-Vascular Plants[1]
___ Problematic Hydrophytic Vegetation[1] (Explain)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:
WILLOW DOMINATED HILLSLOPE W/ SPARSELY VEGETATED UNDERSTORY ON SLOPE ABOVE PERENNIAL STREAM.

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SOIL Sampling Point: D2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					MIN	CLAYEY LOAM
								4 GRAVELS &
								1-8" COBBLE
8-12	10YR 2/2	99	"RED"	1	C	PL	MIN	CLAY SOILS ;
								SMALL ORGANIC
								CHIPS, NON DECOMPOSED

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
Type: COLLUVIUM
Depth (inches): 12"

Hydric Soil Present? Yes ✓ No ___

Remarks: SOILS SUPPORT HYDROPHYTIC VEGETATION AND MEET HYDROLOGY CRITERIA. PERENNIALLY SATURATED CLAY SOILS w/ NON-DECOMPOSING ORGANICS. REFUSAL AT 12" DUE TO COLLUVIUM OR NEAR SURFACE BEDROCK/BOULDERS. PLOT JUST DOWNSLOPE OF "LANDSLIDE AREA" ON RICO HAZARD MAP.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) **(LRR A)**
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) **(LRR A)**
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___
Water Table Present? Yes ___ No X Depth (inches): ___
Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 8"

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: GROUNDWATER PRESENT AT 8" OF DEPTH, NON-DECOMPOSING ORGANICS w/in CLAY LOAM BELOW 8" INDICATE PERENNIAL SATURATION (ANEROBIC) CONDITIONS w/in SOILS.

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Appendix B – Photographs

Image 1: View of Monitoring Plot 1 (upland) located on the open hillslope in the center of the parcel. Dry soils and upland vegetation similar to other locations across the region were present. (10.01.2024)

Image 2: Closeup of Monitoring Plot 1 (upland). Dry sandy soils evident in the image. (10.01.2024)

Image 3: Closeup of Monitoring Plot 2 (wetland). Hard to see due to shadow, soils are saturated at a depth of 8". Refusal encountered due to shallow bedrock or large cobbles. (10.01.2024)

Image 4: View to the west from up near the northeast property corner. The hillside wetlands are present along the right side of the image. (10.01.2024)

Image 5: View to the southwest from the same location as Image 4. The open hillslope carries across the majority of the parcel to the south. No wetlands were identified south of the delineated wetlands located on Lots 13 and 14. (10.01.2024)

Image 6: View to the southwest from the center of the Site. Image representative of upland observed at the Site. (10.01.2024)

Image 7: Closeup of Plot 3, located in an isolated island of willows on the boundary between Lot 14 and Lot 15. No hydric soils or hydrology indicators were observed in the plot. (10.01.2024)

Image 8: View to the north from the Lot 14 and Lot 15 property corner looking up Carter's Way alley. The perennial stream that parallels the north property line of the Site drains into the bar ditch on the east side of the alley at the location of the gray truck in the image. (10.01.2024)

Image 9: View to the east from the northwest property corner for the Site looking up the perennial stream that supports the adjacent wetlands on the Site. The stream is hard to see in the image but live flows were present in October. Flows enter a culvert/bar ditch system in the bottom of the image and drain to the north. (10.01.2024)

Image 10: View to the southeast capturing the northwest property corner of the Site. The perennial stream drains from left to right at the tow of slope visible in the foreground of the image. Carter's Way alley continues south on the right side of the image. No bar ditch or drainage system observed south of this point along the alley. (10.01.2024)

165

Gmail

Chauncey McCarthy <townmanager@ricocolorado.gov>

Public hearing road build app
1 message

Cornelius Muldoon <cfmuldoon@gmail.com> Mon, Jan 27, 2025 at 11:44 AM
To: townmanager@ricocolorado.gov

To Whom It May Concern

I'm writing this on behalf of Paul and Margaret Dow and Dan and Audrey Keep and Neal and Barbara Muldoon.

We received your letter regarding road building. It's a disturbance permit application and they want a right of way perpendicular to south Mantz and east parallel to S. Commercial St. on Carter Way..
We would like to inform you that we are in the affirmative to go ahead with that we don't have any problem with it.

If you have any further questions, you can contact Barbara Muldoon at 970-209-3990
Thank you

Barbara Muldoon

TOWN OF RICO
INCORPORATED OCTOBER 11, 1879
2 North Commercial Street
Post Office Box 9
Rico, Colorado 81332
Office # 970.967.2861
Fax # 970.967.2862
www.ricocolorado.gov

March 19, 2025

The Office of Senator John Hickenlooper
B85 Russell Senate Office Building
Washington, DC 20510

The Office of Senator Michael Bennet
261 Russell Senate Office Building
Washington, DC 20510

Dear Senators Hickenlooper and Bennet,

Please accept this letter as an official request for FY26 Congressionally Directed Spending (CDS) on behalf of the Town of Rico, in support of funding for the reactivation of the Silver Creek Water System. This project is critical for the long-term sustainability of Rico's water infrastructure and will provide necessary capacity to support economic growth, resiliency, and workforce housing development.

Rico is a historic mining town in southwestern Colorado, located along the San Juan Scenic Byway, between Dolores and Telluride. As of the 2021 estimate from the Colorado Department of Local Affairs (DOLA), Rico has 304 full-time residents, with an additional 74 part-time or vacation homes. The town serves as a vital housing base for resort workers, tradesmen, teachers, healthcare professionals, and other middle-income employees who support the economy of both Rico and the surrounding region. However, a limited water supply is a major barrier to further workforce housing development and community sustainability.

Rico holds two water rights: the Original Rico Flume on Silver Creek and the North Rico Well Field. The Silver Creek Flume includes .28 cubic feet per second (CFS) of absolute rights and 2.72 CFS of conditional rights, while the North Rico Well Field has no absolute allocation and only .178 CFS of conditional rights. In 2014, the Town was forced to discontinue use of the Silver Creek Water System due to new surface water filtration requirements established by the Colorado Department of Public Health and Environment (CDPHE). Since then, Rico has relied entirely on the North Rico Well Field, which provides 80 gallons per minute (GPM)—sufficient for current demand but insufficient for long-term growth. According to a 2018 Preliminary Engineering Report (PER) prepared by SGM, Inc., a fully built-out Rico would require 155 GPM—nearly

double the current supply. Without reactivating the Silver Creek Water System, Rico cannot accommodate additional workforce housing, economic growth, or emergency water needs.

The cost of reactivating the Silver Creek Water System is prohibitively high for a town with a small utility base like Rico's, making federal support critical. Reactivating this system will provide several key benefits:

Workforce Housing Development – Rico has enacted a moratorium on new subdivisions and planned developments due to water limitations. Additional supply from Silver Creek would enable workforce housing development, ensuring that the town can support its year-round workforce, including employees who sustain the region's tourism, education, healthcare, and trades industries.

Water Supply Resiliency – The North Rico Well Field is the town's sole water source, located 2.5 miles north of town, relying on a single well, pump and river crossing with no redundancy. A failure during December 2024 almost left the town without water over the Christmas Holiday. Silver Creek's reactivation would diversify and secure water availability, ensuring long-term sustainability for Rico's residents and workforce.

Economic Sustainability – Since the 1970s mine closures, Rico has struggled to sustain a commercial core due to its small population and limited infrastructure. The town is working toward a centralized sewer system, but without increased water capacity, full buildout remains infeasible. Reactivating Silver Creek will enable responsible growth, supporting local businesses, employees, and year-round residents.

Health and Environmental Benefits – A new water filtration plant will be constructed to CDPHE's highest standards, ensuring residents have access to safe, high-quality drinking water for the foreseeable future.

Rico has conducted extensive research and planning for this project. In 2018, the Town received a DOLA grant to complete a USDA RUS-compliant Preliminary Engineering Report, which outlined the necessary steps for reactivating the Silver Creek Water System. Currently, the Town is progressing through the Project Needs Assessment, with design anticipated to take place in Q3–Q4 of 2025. This timeline positions the project to be shovel-ready in 2026, aligning with federal water infrastructure funding priorities and ensuring long-term benefits for both Rico and the broader southwestern Colorado region.

Thank you for your leadership and consideration of this request for FY26 Congressionally Directed Spending. Funding for this project is essential to ensuring a sustainable future for Rico, and we appreciate your continued support for rural infrastructure projects in Colorado.

Sincerely,

Patrick Fallon, Mayor
On behalf of the Town of Rico Board of Trustees

TOWN OF RICO
INCORPORATED OCTOBER 11, 1879
2 North Commercial Street
Post Office Box 9
Rico, Colorado 81332
Office # 970.967.2861
Fax # 970.967.2862
www.ricocolorado.gov

To: Rico Board of Trustees 02/15/2024
From: Chauncey McCarthy, Town Manager
Subject: Water rate review

Water rates

Staff are currently working on a redline of our Water Rules and Regulations. Through this process, rates, late fees, and escalated or tiered fee schedules have been researched. The Board of Trustees has not reviewed water rates since the end of 2020. (Many municipalities adjust rates yearly) Current residential rates are $38 a month and commercial $68 a month. If rates were to be adjusted for inflation over the past four years the residential rate would be increased to $44 a month and commercial $78 a month. The residential rate includes 3,000 gallons of water per month and a commercial rate includes 7,000 gallons of water per month. Once that amount of water is exceeded accounts are billed per 1000 gallons of water they consume. ($5 per thousand residential and $6 per thousand commercial.)

A common practice for Colorado water providers is to charge for additional consumption based upon a tiered rate schedule. Tiered water pricing is a critical tool used by water utilities to incentivize conservation.

Increasing block price schedules provide strong incentives for customers to conserve water. The lowest tier typically corresponds to an amount of water sufficient to meet basic indoor needs like drinking and bathing. Each subsequent tier charges a higher rate and is designed to discourage households from using water for non-essential things.

The Town historically charges 2 dollars a month plus 12% annum for late payments. This has been set up in the billing software since we first adopted RVS in 1995. The 2019 water rules and regulations allow for the town to charge $50 as a late fee plus 12% annum. $50 a month. This seems like usury and needs to be adjusted to more align with other utility providers ($10-25 late fee). With the new online billing software, paperless options, and auto bill pay, account holders have never had an easier way to remit payments or view their usage.

Provided below is the Town's current rate schedule, option 1, along with three other potential options to be considered by the Board of Trustees. Option 2 is the Town current rate structure with a 10% increase.

Option 3 is a tiered block rate scheduled. Option 4 is a tiered block rate schedule with a monthly connection fee and usage rates charge in addition to the monthly fee.

The board should be prepared to discuss what rate structure is most appropriate for the Town of Rico. Once a rate structure is decided upon the board will need to review the staff proposed rates and modify or adjust as needed before.

Current Rate Schedule (Option 1)	
Residential	$38 0 - 3000 Gallons
	$5.00 Per 1000 Gallons above 3,000
Commercial	$68 0 - 7,000 Gallons
	$6 Per 1000 gallons above 7,000
Late Fee	$50.00 + 12% per annum

Option 2	
Residential	$42 0 - 3000 Gallons
	$6.00 Per 1000 Gallons above 3,000
Commercial	$75 0 - 6,000 Gallons
	$6 Per 1000 gallons above 7,000
Late Fee	$15.00 + 12% per annum

Option 3				
Usage Tiers Residential	Minimum Monthly Charge 0 - 3000 Gallons	Rate for Use over 3,000 up to 8,000 Gallons per month	Rate for Use over 8,000 up to 12,000 Gallons per month	Rate for use over 12,000 Gallons Per Month
Residential	$42	$6/1000 gal.	$10/1000 gal.	$15/1000 gal.
Usage Tiers Commercial	Minimum Monthly Charge 0 - 6000 Gallons	Rate for Use over 6,000 up to 10,000 Gallons per month	Rate for Use over 10,000 up to 15,000 Gallons per month	Rate for use over 15,000 Gallons Per Month
Commercial	$75	$6/1000 gal.	$10/1000 gal.	$15/1000 gal.
Late Fee	$15.00 + 12% per annum			

Option 4					
Usage Tiers Residential	Monthly Connection fee	Rate for Use 0 up to 3,000 Gallons per month	Rate for Use over 3,000 up to 8,000 Gallons per month	Rate for Use over 8,000 up to 12,000 Gallons per month	Rate for use over 12,000 Gallons Per Month
Residential	$38	$2/1000 gal.	$6/1000 gal.	$10/1000 gal.	$15/1000 gal.
Usage Tiers Commercial	Monthly Connection fee	Rate for Use 0 up to 6,000 Gallons per month	Rate for Use over 6,000 up to 10,000 Gallons per month	Rate for Use over 10,000 up to 15,000 Gallons per month	Rate for use over 15,000 Gallons Per Month
Commercial	$58	$3/1000 gal.	$6/1000 gal.	$10/1000 gal.	$15/1000 gal.
Late Fee	$15.00 + 12% per annum				

APPENDIX A

All rates and fees set forth herein may be amended from time to time

WATER SERVICE RATES

	Minimum Monthly Charge for Use 0 to 3,000 gallons per month	Rate for Use over 3,000 gallons up to 8,000 gallons per month	Rate for Use over 8,000 gallons up to 12,000 gallons per month	Rate for Use over 12,000 gallons per month
Residential	$42	$6 / 1,000 gallons	$10 / 1,000 gallons	$15 / 1,000 gallons
Commercial	$75	$6 / 1,000 gallons	$10 / 1,000 gallons	$15 / 1,000 gallons
Late Fee	$15.00 + 12% per annum			
Shutoff Fee	$75.00			

TAP FEE SCHEDULE

Water Tap Size	Minimum Fee for Cost of Tap*
¾" Water Tap	$12,500
1" Water Tap	$22,500
1 ¼" Water Tap	$37,000
1 ½" Water Tap	$50,000
2" Water Tap	$86,000

*Water Taps shall be subject to a minimum fee as shown here in this Tap Fee Schedule, and applicants shall be required to submit a water demand analysis for the proposed project. The Building Official shall require an additional fee over and above the minimum fee as indicated by the water demand analysis.

SYSTEM IMPROVEMENT FEE SCHEDULE

Meter Size (inches)	EQR*
¾"	1
1"	1.67
1 ½"	3.33
2"	5.33
3"	10.7
4"	16.7
6"	33.3

*The cost of one (1) EQR shall be $6,110.00.

LEWIS EXCAVATION INC.

RICO PAVILLION PROJECT. / EXCAVATION AND CONCRETE ONLY/

11-26-2024 WORK TO BE DONE IN SPRING 2025

11-26-2024
BRYAN LEWIS
dirtguy20@yahoo.com

31801 Hwy 184
Mancos Co. 81328

970-560-8864

BID INCLUDES

REMOVAL AND DISPOSAL OF EXISTING CONCRETE FOOTINGS

COMPACTION OF NATIVE SOILS

LEVEL AREA TO SUB SLAB GRADE

EXCAVATION OF FOOTING AND STEM WALL TRENCH

FOOTING PREP ON 6" OF STRUCTURAL GRAVEL

BACKFILL AND COMPACTION OF INTERIOR OF FOUNDATION WITH STRUCTURAL GRAVEL

BACKFILL AND COMPACTION OF EXTERIOR OF FOUNDATION WITH SELECT NATIVE MATERIALS

12" SLAB PREP INSIDE OF FOUNDATION WITH STRUCTURAL MATERIALS

CONCRETE AS FOLLOWS;

Hey Bryan, I priced this project as follows:
100'x44'x5" thick slab 4,000 psi straight cement, with fiber mesh reinforcement and #4 rebar 2'oc on rebar chairs, 12"x18" perimeter footing with 2#4 rebar continuous and #4 rebar verticals 32" oc, 8"x34" perimeter wall with 2#4 rebar continuous and # 4 rebar dowels 2'oc in top of wall to be bent into slab, 8-6'6"x6'6"x12" column footings with 7#5 rebar each way and 6#5 rebar verticals in 4 and 8#5 verticals in 4, 4-4'6"x4'6"x12" column footings with 5#5 rebar each way and 6#5 rebar verticals, 4-columns 4'6"x2'6"x 3'4" with7#3 rebar ties and 10-3/3"x18" anchor bolts, 4-2'6"x2'x3'4" columns with 7#3 rebar ties and 6-3/4"x18" anchor bolts , 4-2'6" x2'x3'4" corner columns with 7#3 rebar ties and 4-3/4" x18" anchor bolts,
8 mainframe columns to have 1#5 hairpin around bolts into slab,
Includes: 4,000 psi straight cement concrete with fiber mesh for slab, 3,500
Psi concrete for footings, walls, columns, rebar, chairs, anchor bolts, concrete pumping, sawcut and apply clear sealer to slab, forms and labor

CONCRETE APRON OR GRAVEL AROUND EXTERIOR OF BUILDING NOT INCLUDED AT THIS TIME

TOTAL BID PRICING $169,830.00

A: P.O. Box 922, Montrose CO 81402

C: 970-209-6822 | P: 970-240-8012

E: bj@kuboske.com |Web: www.kuboske.com

Proposal

February 25, 2025

Town of Rico Pavilion

Rico, CO

Thank you for the opportunity to bid the proposed project. Below is a cost breakdown for the discussed scope of work. After review please don't hesitate to reach out with any questions.

Inclusions:

- Equipment mobilization to job site. **Please note: If we can roll into this project directly after the completion of the Town Maintenance Facility, we may be able to adjust the mobilization fee so we aren't doubling up.**
- Overall site build up. We have assumed a 200'x100' area being built up with 12" of fill dirt. **Please note: This is assuming that we are starting fresh with the foundation, not attempting to reuse anything that was installed previously. Final location TBD with owner.**
- Foundation/Slab Excavation, preparation and installation. We have assumed 12" of gravel under all concrete - foundation and slabs, in leu of the 6" on the foundation drawing.
- Pre-engineered metal building installation. All building materials provided by Owner.

Exclusions:

- Overtime hours, additional insurance, bonding & anything else not specifically called out in the inclusions or the cost breakdown.
- Electrical, plumbing, HVAC.
- PEMB materials to be supplied by the Owner - We have included installation price (This price doesn't include wall panels or insulation, just roof panels per drawings).

Terms and conditions: This estimate is valid for a period of 30 days from that date indicated above. If price is not accepted and approved, after this period, Kuboske Construction Company reserves the right to review and adjust or modify the cost estimate as necessary.

Cost Estimate

00 Scope Of Work		**$381,573.60**
01 00 00 - General Requirements		$6,960.00
Equipment Mobilization	1 each	$6,960.00
03 00 00 - Concrete		$173,271.60
Foundation Installation	1 each	$71,121.60
4" Slab Installation	1 each	$74,550.00
Pump/Travel/Mobilization	1 each	$27,600.00
13 00 00 - Special Construction		$61,920.00
Metal Building Installation - Labor Only	1 each	$61,920.00
31 00 00 - Earthwork		$139,422.00
Site Build Up - Equipment	1 each	$25,980.00
Site Build Up - Labor	1 each	$6,000.00
Site Build Up - Materials/Hauling	1 each	$27,600.00
Foundation/Slab Excavation - Equipment	1 each	$10,500.00
Foundation/Slab Excavation - Labor	1 each	$6,000.00
Foundation/Slab Preparation - Equipment	1 each	$22,980.00
Foundation/Slab Preparation - Labor	1 each	$7,800.00
Foundation/Slab Preparation - Materials/Hauling	1 each	$32,562.00
Base Price		**$381,573.60**

Sincerely,

Kuboske Construction Company, LLC