Dave Miller Mutual Ditch Company LLC

Water Plan Grant- Dave Miller Ditch Piping Project

Grant Number POGG1 2023-3518

Final Project Report

December 24, 2024

Report Prepared By

CRANE ASSOCIATES

29163 Stingley Gulch Road, Hotchkiss, CO 81419
jeff@craneassociates.net / (970) 261-5043

Summary

The Dave Miller Mutual Ditch Company (DMMDC) is an LLC mutual ditch company servicing 14 shareholders along Apple Valley Road in Lyons with 33.5 acre-feet of water rights. The water is allocated primarily for agricultural use down valley but is also available to residential homeowners. The Dave Miller Ditch was severely damaged in the 2013 flood. A new solar-powered pump station was constructed in 2019 to replace the destroyed irrigation diversion on North St. Vrain Creek upstream of Apple Valley Road in Lyons. The project was funded by the Community Development Block Grant-Disaster Recovery program during flood recovery. The Dave Miller Mutual Ditch Company received a $328,000 grant from the Community Development Block Grant-Disaster Relief Program (CDBG-DR) from the Department of Housing & Urban Development (HUD) through the Watershed Resilience Pilot Program administered by the Colorado Dept of Local Affairs. The contract number was CDBG-DR WI 18-102. The new diversion allows for fish passage and safe recreational boating. The solar array funds the electricity cost to pump water into the ditch.

However, the ditch itself was also damaged and could not service most of its shareholders. The ditch is approximately one mile long but can only service the first 1,000 feet. A $46,875 Water Supply Reserve Fund grant from the South Platte Basin Roundtable and the Colorado Water Conservation Board (CWCB) (Grant Number POGG1 2022-2299) funded the design and engineering of a 10” pipeline to replace the damaged ditch. The engineering grant was matched with funds from the DMMDC. A new alignment was developed to remove the old ditch alignment out of the Apple Valley Road right-of-way and place the new piped ditch away from other utilities.

This construction-ready project re-aligned 5,100 feet of the ditch with 10” SDR 41 PVC pipe to service approximately 45 acres of agricultural use down valley. The piping conserves water by minimizing infiltrative and evaporative losses, reduces maintenance costs and maximizes the 1.43 cubic feet per second (cfs) water right for agricultural purposes. The ditch has been in use for hay production since 1874. The piping project has been designed to accommodate 3 cfs because additional water may be available for purchase from the St. Vrain and Lefthand Water Conservancy District. Construction began in April 2024 by Jim McCain of the St Vrain Erosion Control Company. The start date was delayed due to permitting delays at Boulder County. Construction was completed on November 14, 2024 and all the objectives of the project were met. Irrigation water now services all of the historically irrigated property down valley.

Grant Summary

The Dave Miller Mutual Ditch Company was granted a Water Plan grant from the CWCB (Grant Number POGG1 2023-3518) for $84,325 on April 26, 2023, with an effective date of May 9, 2023 and an expiration date of May 9, 2028. The funds were used for construction of the pipeline. The estimated total project cost was $187,194. The actual project cost was $184,781.69. The total awarded grant of $84,325 was designed to fund 45.047% of the

project with a proposed total match of $102,869 (54.953% of the project) coming from a Bureau of Reclamation WaterSMART Small-Scale Water Efficiency Projects grant for Fiscal Year 2022 (SWEP-145) for $84,325 with the remainder coming from a St. Vrain Lefthand Water Conservancy District grant for $35,000. The actual CWCB funds totaled allocated to the project was $83,254.50 with $101,527.19 coming from the match sources.

Objectives and Tasks

The objective of this construction project was to restore water deliveries to the Dave Miller Ditch shareholders that were disrupted as a result of the 2013 flood through the construction of a pipeline. That objective was met with the conclusion of pipeline construction.

Task 1- Install pipeline and auxiliary infrastructure.
The construction portion of the project began on April 24, 2024. Ditch excavation 2 to 3 feet deep for 100-200 feet at a time occurred, then pipe was installed, backfilled, drill seeded, and hydro mulched (see Appendix A for photos). This minimized erosion and disturbance. It proceeded without complication until May 9th, 2024, when an unusually early spring runoff raised the water table in the overflow channel section of the project approximately 2,300 feet downstream of the start of the project. Consequently, construction ceased in that part of the pipeline and construction moved approximately 1,500 feet downstream to another section of the project. When the water table lowered in late June the contractor had already moved on to another job and did not come back to finish the project until August 22nd. The project was completed on November 14th without incident.

Approximately 1,450 feet of the alignment was placed beneath the flowline of the existing Soucy irrigation ditch to minimize any disturbance to the riparian or pasture vegetation and mitigate any Preble Mouse habitat disruptions. The construction method was the same as the other sections. The new pipeline entered the Soucy ditch at approximately station 36+50 (see pipeline as-built survey in Appendix C) and followed the ditch to the end at station 51+00. The Soucy ditch is diverted from North St Vrain Creek downstream of the Dave Miller diversion and is solely owned by one property owner. That owner is Matt Rooney, the president of the Dave Miller Ditch Company and is used to irrigate hay fields owned by Mr. Rooney at the end of the ditch

The pipeline installation is 100% complete and backfilled. A drain valve was installed at the end of the line to allow the pipe to be evacuated by gravity into an existing ditch that returns to the river.

Each of the 14 shareholders had a 2” turnout pipe installed on their property with a manual valve and a remote controlled valve. Each shareholder will be responsible for developing their own irrigation system on their own property with the water allocated to them. There is a sprinkler control unit in the middle of the ditch that will be set up this spring to allow each

shareholder to automatically have their water turned on and off according to their number of shares.

Revegetation with the Foothills grass seed mix has been established with approximately 50-60% growth primarily along the northern part of the project. It is anticipated that the remainder of the pipeline, outside the Soucy ditch will revegetate as successfully as the northern portion. Weeds will be mitigated next spring with inspection and hand pulling by individual property owners. The staging areas were minimally disturbed with only knocked down grass and no dirt exposure. We altered the route between stations 17+00 and 28+00 to save about 10 large mature trees. This decision was made with the property owner, contractor and the president of the ditch company prior to starting their section.

The start of construction was delayed because of permitting at Boulder County. Plans were delivered in February 2023 and comments about erosion control were addressed by the engineer immediately, but permits were not issued until April of 2024. The installation also took longer than expected due to the early spring runoff and other obligations the contractor needed to attend to after runoff. He returned to the project as soon as he could. Despite the delay, he performed well.

Weekly stormwater erosion monitoring was performed and documented by the president of the ditch company. The county stormwater agent came on site to inspect every 45 days. One section needed additional erosion control and an additional coir roll was installed immediately. The completed as-built survey and easement legal description will be submitted to the land office at Boulder County Open Space as well as the County Clerk for recording.

The objective and all permitting requirements were met. This project provides irrigation water to the 14 shareholders in the most efficient manner possible. The new pipeline replaces the original irrigation ditch which was located within the Apple Valley Road right-of-way alongside several utility easements. The 2013 flood washed out four different sections of the ditch along Apple Valley Road. Restoring the ditch at the original location would have caused substantial tree destruction, easement complications, and excessive cost. The ditch company discussed this with the engineer and it was decided by the ditch company not to pursue an alternative analysis at the original location and instructed the engineer to look at alignments away from the road. Installing the pipe in the new alignment conserves water and provides irrigation to small agricultural farms and gardens along the North St Vrain Creek corridor.

Appendices

Appendix A – Construction Photos
Appendix B – Notice of Substantial Completion by the project engineer
Appendix C - Pipeline As-Built Survey
Appendix D - Stamped “For Construction” drawing set
Appendix E – Erosion Control Reports

Appendix A

Figure 1-Fresh hydromulch after seeding in riparian section

Figure 2-Grass establishing following first snow in the upper section

Figure 3 - Upper riparian alignment post installation of pipe

Figure 4 - Middle section of pipeline following installation

Figure 5 - As-built pipeline with survey documentation

Figure 6 - Snow following hydromulch

Figure 7 - Sousy ditch following installation of pipe below flowline

Figure 8 - 10" PVC pipe in ditch prior to backfill

Figure 9 - Pipe in ditch

Figure 10 - Hydroseeding Sousy ditch following pipeline installation

Figure 11 - Hydromulch lower section of project

Appendix B

December 7, 2024

Matthew B. Rooney, DVM, MS, DACVS
The Dave Miller Mutual Ditch Company
1636 Apple Valley Rd
Lyons, CO 80540-9032
matt@farmbearcreek.com
(970) 420-2263

Reference: Final Engineer's Construction Observation
The Dave Miller Mutual Ditch Company
Dave Miller Ditch Relocation
Boulder County Building Permit BP-23-3083
1636 Apple Valley Rd
Lyons, CO 80540-9032
Alliance Consulting Project No. 20060

Dear Matthew:

On December 7th, 2024, Alliance Consulting Engineers and Surveyors performed a final construction observation of The Dave Miller Mutual Ditch Company's Ditch Relocation Project located along the Apple Valley Road bordering the North St. Vrain Creek in Lyons Colorado.

The Dave Miller Ditch was originally constructed in 1874 and used to irrigate 63 acres of agricultural land along the west side of North St. Vrain Creek. The Dave Miller Ditch Relocation construction project installed approximately 5000 lf of ten inch PVC pipe to service 14 land/shareholders with water along a new alignment through the shareholders properties. This project was constructed in 2024 and is now complete.

This final engineer's observation report is written to comply with Boulder County's Building Permit number BP-23-3083 (copy attached) grading requirements, surveyed record drawings, vegetation and tree preservation plan, stormwater quality, staging, Preble's Meadow Jumping Mouse, easements, and erosion control requirements.

The grading work has been accomplished in substantial conformance with the final grading plans dated 2023-12-11 attached to this report.

Record drawings of the alignment of the pipe and easements through the project have been surveyed in the field and final documentation has been prepared by Rock Creek Surveying and are attached to this final engineering observation report.

Boulder Conty Public Works MS-4 oversight inspections were performed to assure that the Boulder County Stormwater program was administered consistently and effectively. Copies of the oversight inspections are attached to this final observation report.

Revegetation has been installed per the approved plan through the application of seeding, mulching, and hydro mulching of the disturbed areas.

The final alignment of the pipe in the ditch relocation construction varied slightly from the approved construction drawings to minimize grading, avoid removal of trees, avoid existing utilities and farm structures, and facilitate construction. The final alignments are shown on the surveyed record drawings and proposed easement documents attached.

The following pictures show a representative sample of the installed pipeline through the shareholders properties and Boulder County Open Space Property.


Photograph No. 1: North Portion of Ditch


Photograph No. 2: North Portion of Ditch


Photograph No.1: North/Central Portion


Photograph No.2: North/Central Portion

Photograph No. 1: Central Portion of Ditch

Photograph No. 2: Central Portion of Ditch

Photograph No. 1: Central Portion of Ditch

Photograph No. 2: Central Portion of Ditch

Photograph No. 1: South Portion of Ditch

Photograph No. 2: South Portion of Ditch

Photograph No. 1: South Portion of Ditch

Photograph No. 2: South Portion of Ditch

In conclusion, The Dave Miller Mutual Ditch Company's Ditch Relocation Project located along the Apple Valley Road bordering the North St. Vrain Creek in Lyons Colorado has been completed in substantial conformance to the final grading plans dated 2023-12-11 by Alliance Consulting Engineers and Surveyors. The alignment of the pipe slightly varies from the locations shown on the final grading plans, however, the constructed locations of the pipeline are shown on the Record Drawings prepared by Rock Creek Surveying.

Please accept this final construction engineering observation as the final report in compliance with Boulder County Building Permit Number BP-23-3083.

Please contact us if you require additional information.

Sincerely,

COLORADO LICENSED
DAVID E. MOORE
22495
12/7/24
PROFESSIONAL ENGINEER

David E Moore MSCE PE
Alliance Consulting
Engineers and Surveyors

Attachments: Dave Miller Ditch Construction Drawings; As-Built Survey; MS-4 Inspection Reports and Building Permit BP-23-3083.

DAVE MILLER DITCH RELOCATION
LYONS, COLORADO

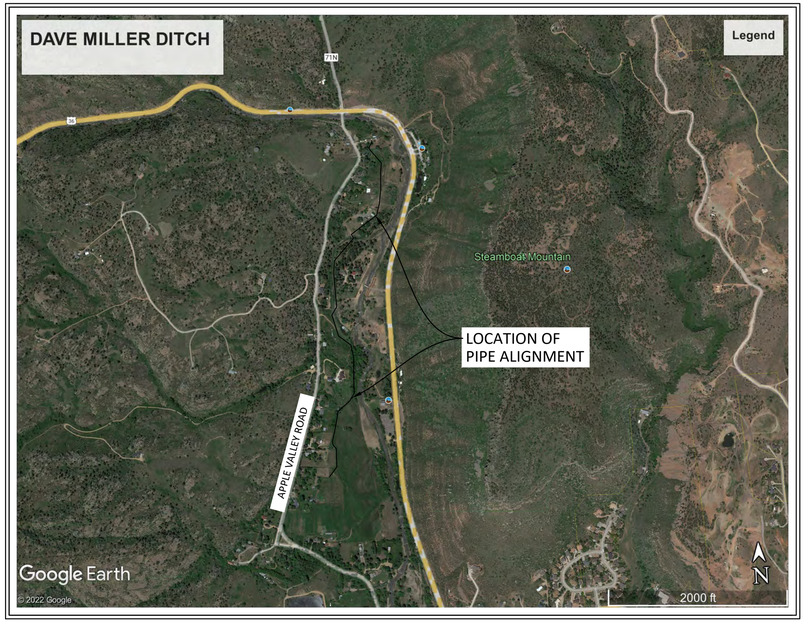
LOCATED IN SECTIONS 12 AND 13, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.,
COUNTY OF BOULDER, STATE OF COLORADO

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

GENERAL NOTES:

1. A 20-FOOT DAVE MILLER MUTUAL DITCH COMPANY EASEMENT EXISTS FIFTEEN FEET ON ONE SIDE AND FIVE FEET ON THE OTHER SIDE OF THE PROPOSED NEW TEN-INCH DITCH PIPELINE FOR CONSTRUCTION ACCESS, EQUIPMENT STAGING, MATERIAL STOCKPILING AND CONSTRUCTION OF THE DITCH EXTENSION PROJECT. SEE TYPICAL DITCH CONSTRUCTION EASEMENT DETAIL THIS SHEET.
2. BOULDER COUNTY OWTS REGULATIONS REQUIRES A TEN-FOOT SEPARATION BETWEEN THE DITCH PIPELINE AND SEPTIC TANKS AND SOIL TREATMENT AREAS.
3. THE NORTH ST. VRAIN CREEK FLOODPLAIN IS CURRENTLY BEING REVISED BY BOULDER COUNTY. THE NEW REGULATORY FLOOD RISK ZONES ARE IN A FINAL PRELIMINARY STAGE. BOULDER COUNTY HAS REQUESTED THAT THE PRELIMINARY AND REGULATORY FLOOD RISK ZONES BE APPLIED TO THIS PROJECT. FLOODPLAIN INFORMATION ON THESE DRAWINGS REFLECT THE NEW PRELIMINARY AND REGULATORY FLOOD RISK ZONES.
4. DURING CONSTRUCTION, ALL MATERIALS, MACHINERY, DUMPSTERS, AND OTHER ITEMS SHALL BE STAGED ON THE SUBJECT PROPERTY IN APPROVED, DESIGNATED STAGING LOCATIONS SHOWN ON THE PLANS. NO CONSTRUCTION STAGING IS ALLOWED ALONG APPLE VALLEY ROAD. WORKER VEHICLES SHALL BE PARKED ON SITE OR TO ONE SIDE OF APPLE VALLEY ROAD, AS FAR OUT OF THE TRAVEL AREA AS POSSIBLE.
5. THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN, OR A SIMILARLY QUALIFIED COLORADO-LICENSED DESIGN PROFESSIONAL, IS TO OBSERVE THE GRADING AND SUBMIT A STAMPED REPORT TO BUILDING SAFETY & INSPECTION SERVICES FOR REVIEW AND APPROVAL. THE FINAL REPORT IS TO STATE THAT THE WORK HAS BEEN COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED ENGINEERING PLANS.
6. POST CONSTRUCTION OF THE PIPELINE SHALL NOT CHANGE OR ALTER THE EXISTING TOPOGRAPHY OR DRAINAGE PATTERNS.
7. ALL EQUIPMENT USED FOR THE CONSTRUCTION OF THE DITCH IS REQUIRED TO BE CLEANED USING HIGH PRESSURE, HOT WATER, PRIOR TO BEING TRANSPORTED TO THE SITE.
8. SILT FENCE SHOWN ALONG THE DOWN HILL EASEMENT LINE MAY BE SUBSTITUTED WITH A WADDLE BMP.



VICINITY MAP
NOT TO SCALE

SHEET LIST TABLE	
Sheet Number	Sheet Title
C1	COVER SHEET
C2	STA. 4+75 - STA. 14+00
C3	STA. 14+00 - STA. 23+00
C4	STA. 23+00 - STA. 32+00
C5	STA. 32+00 - STA. 41-00
C6	STA. 41+00 - STA. 50+00
C7	STA. 50+00 - STA. 53+80
C8	DETAILS SHEET 1
C9	DETAILS SHEET 2
C10	DETAILS SHEET 3
C11	REVEGETATION PLAN

EROSION CONTROL LEGEND:

- VTC VEHICLE TRACKING DEVICE
- EP ECCO PAN
- CWA CONCRETE WASHOUT
- SCL SEDIMENT CONTROL LOG
- SF SILT FENCE

LEGEND

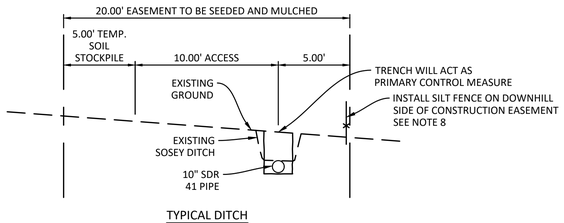
	EXISTING	PROPOSED
RIGHT-OF-WAY		
LOT LINE		
SANITARY SEWER	SS	4" S/S
STORM SEWER	18" ST/L	18" ST/L
WATER LINE	W	3/4" W/S
CONTOUR LINE	5501	5501
	5501	5501
CURB & GUTTER		
EDGE OF ASPHALT		
CHAINLINK FENCE	x	
SANITARY SEWER MH		
STORM SEWER MH		
INLET		
WATER VALVE		
FIRE HYDRANT		
ELECTRICAL TRANSFORMER		
NOTED SIGNS		
STREET LIGHT		
BUILDING LIGHT		
YARD LIGHT		
DOWNSPOUT		

BASIS OF BEARINGS:

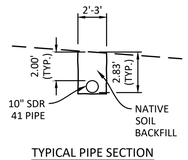
THE NORTHEASTERLY LINE OF THE TOWN OF LYONS TRACT A, RECORDED JULY 22, 1970 AS RECEPTION NO. 949264 BEARS NORTH 26 DEGREES, 26 MINUTES, 28 SECONDS WEST BETWEEN A FOUND YELLOW PLASTIC CAP WITH ILLEGIBLE STAMPING ON TOP OF A 6" DIAMETER WOOD FENCE POST AT THE SOUTHEAST CORNER OF SAID TRACT A AND A FOUND NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "MD JOHNSON LS 6716" AT THE NORTHEAST CORNER OF SAID TRACT A, WITH ALL BEARINGS CONTAINED HEREIN BEING RELATIVE THERETO. BASIS OF BEARINGS.

PROJECT BENCHMARK:

TOP OF ORANGE PLASTIC CAP STAMPED "CONTROL POINT" ON NO. 4 REBAR
ELEV = 5503.43 FEET (NAVD'88 VERTICAL DATUM). POINT IS 25.4 FEET WEST OF THE NORTHWEST CORNER OF THE CONCRETE WALL AT THE DITCH DIVERSION STRUCTURE ON THE SOUTH BANK OF THE NORTH ST. VRAIN CREEK.



TYPICAL DITCH CONSTRUCTION EASEMENT
SCALE: 1" = 5'



TYPICAL PIPE SECTION
SCALE: 1" = 5'

ENGINEER:
ALLIANCE CONSULTING
16415 WEST 85TH LANE UNIT B
ARVADA, COLORADO 80007
ATTN: DAVID E. MOORE, PE
PHONE: (720) 625-1571

OWNER/DITCH REPRESENTATIVE:
DAVE MILLER MUTUAL DITCH COMPANY LLC
C/O MATTHEW B. ROONEY, DVM, MS, DACVS
1636 APPLE VALLEY ROAD
LYONS, COLORADO 80540-9032
PHONE: (970) 420-2263
EMAIL: matt@farmbearcreek.com

SURVEYOR:
ROCK CREEK SURVEY, LLC
3021 GARDENIA WAY
SUPERIOR, COLORADO 80027
ATTN: ROBERT RICKARD, PLS
PHONE: (303) 521-7376
EMAIL: rockcreeksurvey@gmail.com

PROJECT MANAGER:
CRANE ASSOCIATES LLC
600 CRYSTAL LANE
CARBONDALE, COLORADO 81623
ATTN: JEFF CRANE
PHONE: (970) 261-5043
EMAIL: jeff@craneassociates.net

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REVISIONS

NO	DESCRIPTION	DATE	BY

COLORADO LICENSED DAVID E. MOORE 22495 PROFESSIONAL ENGINEER 12/11/23

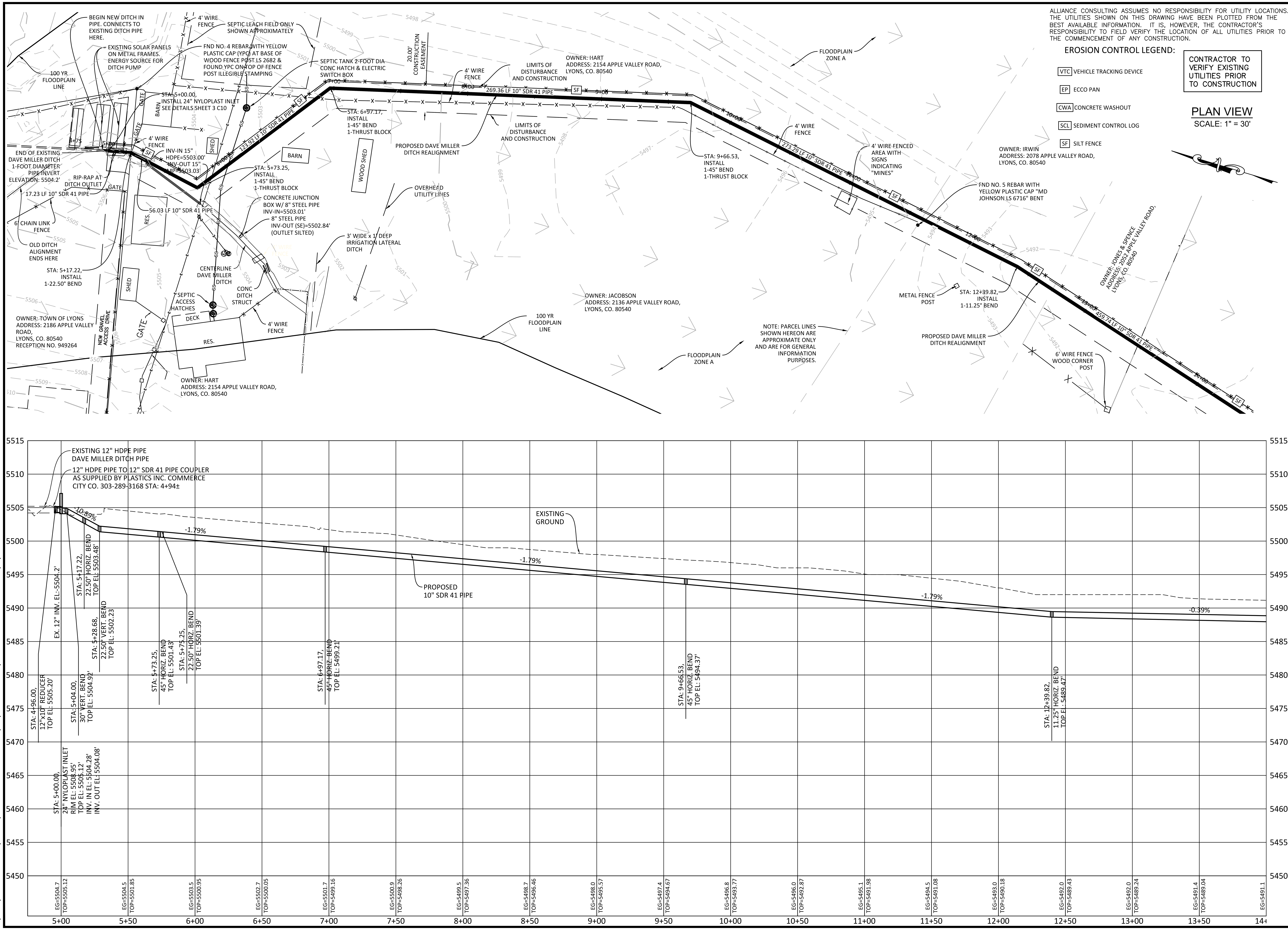
Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
**PROJECT MANAGEMENT * SURVEYING*
16415 W. 85TH LANE UNIT B * ARVADA, CO. 80007 * PH. (720) 625-1571
EMAIL: dmoore@allianceengineer.com

DAVE MILLER DITCH
COVER SHEET
prepared for
CRANE ASSOCIATES LLC

DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
PSD	PSD	COVER SHEET	

JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C1 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\COVER SHEET.DWG PLOTTED: 12/11/2023



C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987
www.uncc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND ARE NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER 22495 12/11/23

Alliance Consulting Engineers & Surveyors
"PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT" "PROJECT MANAGEMENT * SURVEYING"
16415 W. 85TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 625-1571

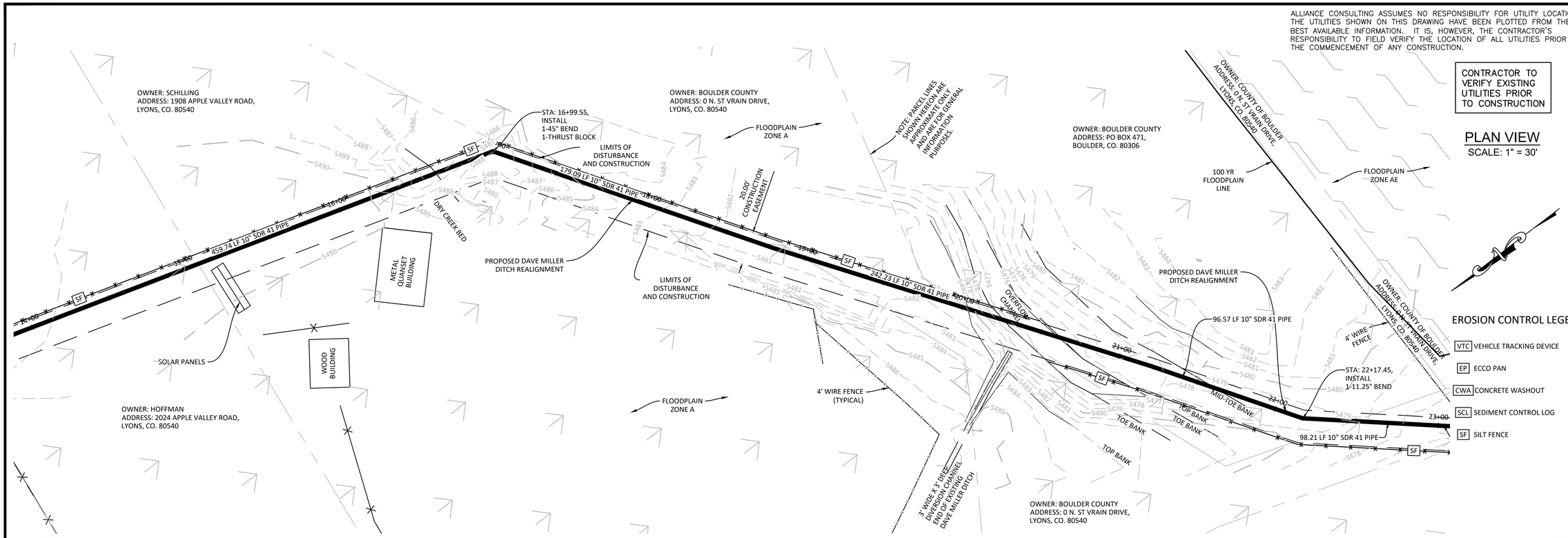
DAVE MILLER DITCH
STA. 4+75 - STA. 14+00 PLAN AND PROFILE
prepared for CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: PSD
DRAWING NAME
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C2 of C11

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

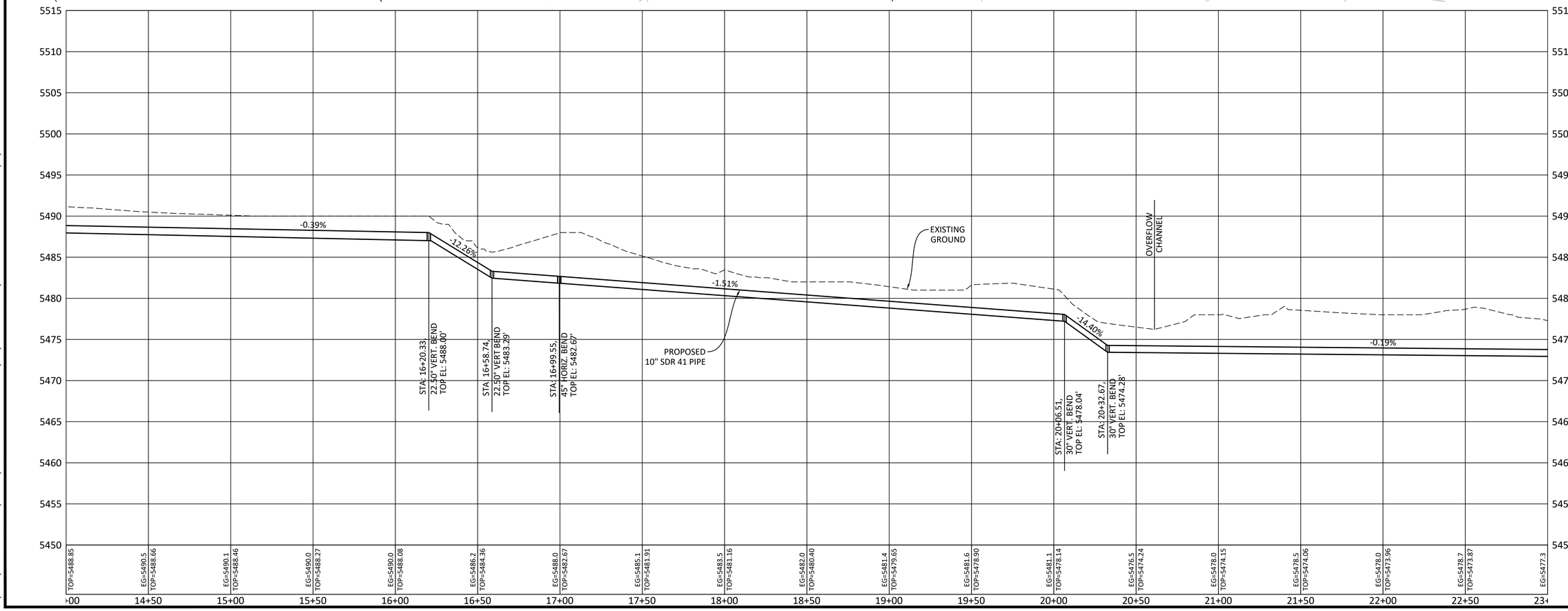
CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

PLAN VIEW
SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC — VEHICLE TRACKING DEVICE
- EP — ECCO PAN
- CWA — CONCRETE WASHOUT
- SCL — SEDIMENT CONTROL LOG
- SF — SILT FENCE



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. 811 DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED DAVID E. MOSER 22485 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
*PROJECT MANAGEMENT * SURVEYING*
16415 N. 86TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 805-1571
E-MAIL: demoser@allianceengineer.com

DAVE MILLER DITCH
STA. 14+00 - STA. 23+00
PLAN AND PROFILE

prepared for
CRANE ASSOCIATES LLC

DRAWN BY:	DESIGNED BY:	APPROVED BY:
PSD	PSD	

DRAWING NAME

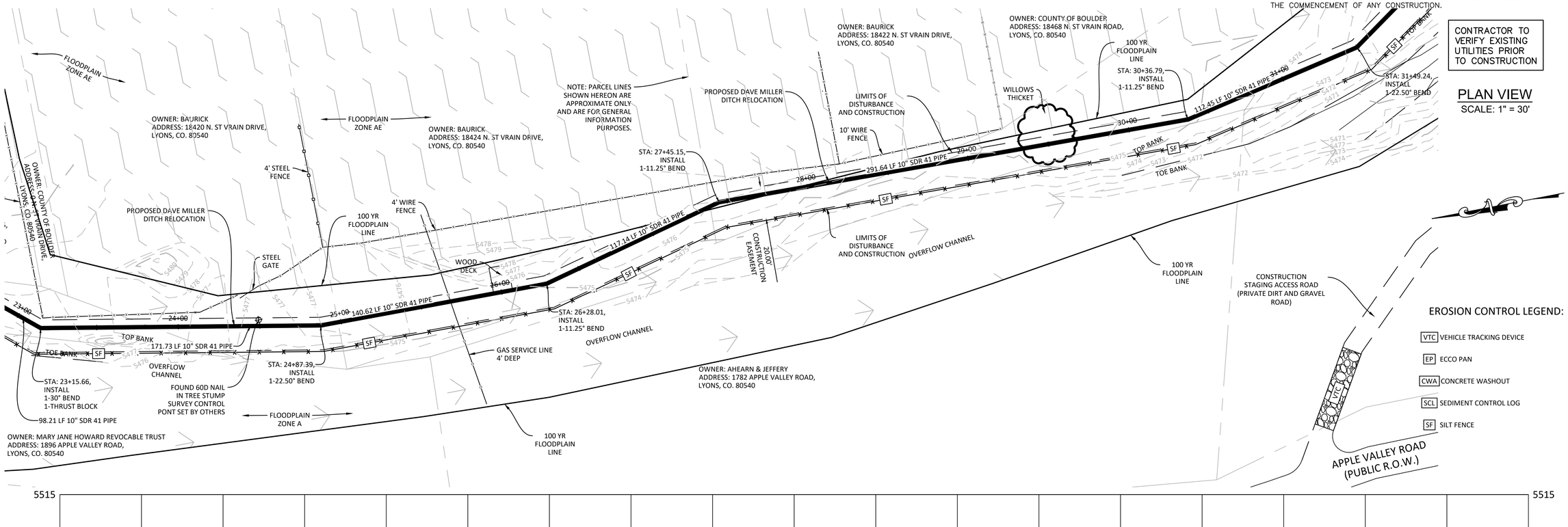
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C3 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

PLAN VIEW
SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC — VEHICLE TRACKING DEVICE
- EP — ECCO PAN
- CWA — CONCRETE WASHOUT
- SCL — SEDIMENT CONTROL LOG
- SF — SILT FENCE

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

NO	DESCRIPTION	DATE	BY
	REVISIONS		

COLORADO LICENSED DAVID E. PRATT 22485 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 N. BERRY LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 605-1571
E-MAIL: dmoomaw@allianceengineer.com

DAVE MILLER DITCH
STA. 23+00 - STA. 32+00
PLAN AND PROFILE
prepared for
CRANE ASSOCIATES LLC

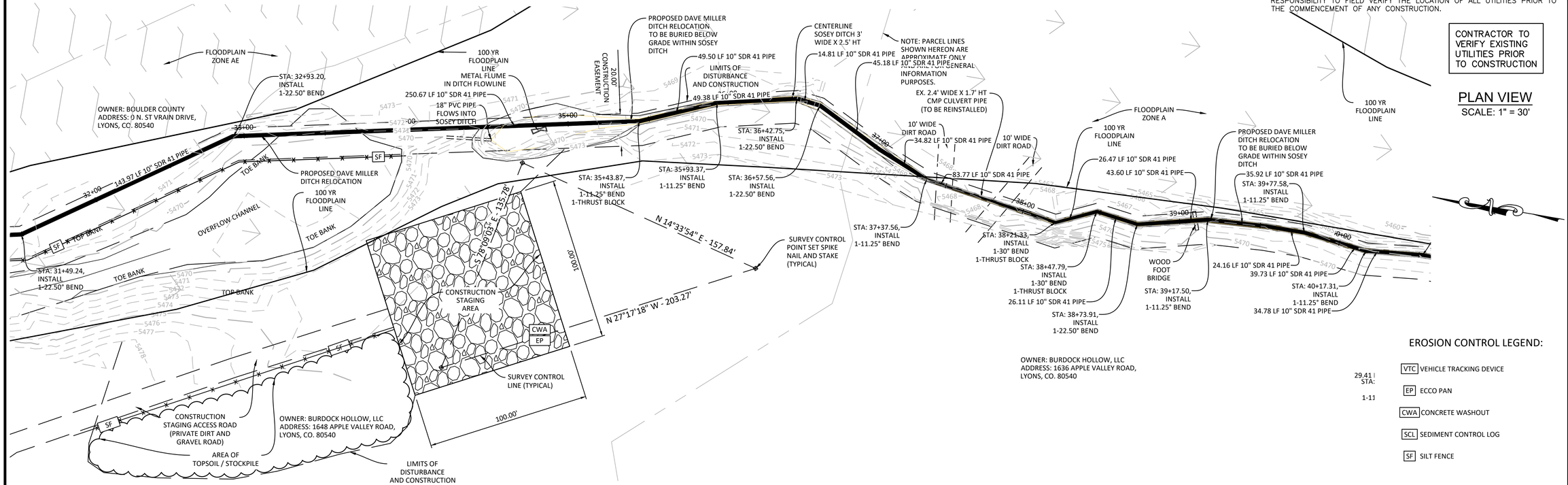
DRAWN BY:	PSD
DESIGNED BY:	PSD
DRAWING NAME:	
APPROVED BY:	
JOB NUMBER:	20060
DATE:	12/11/2023
SCALE:	AS NOTED
SHEET NO:	C4 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

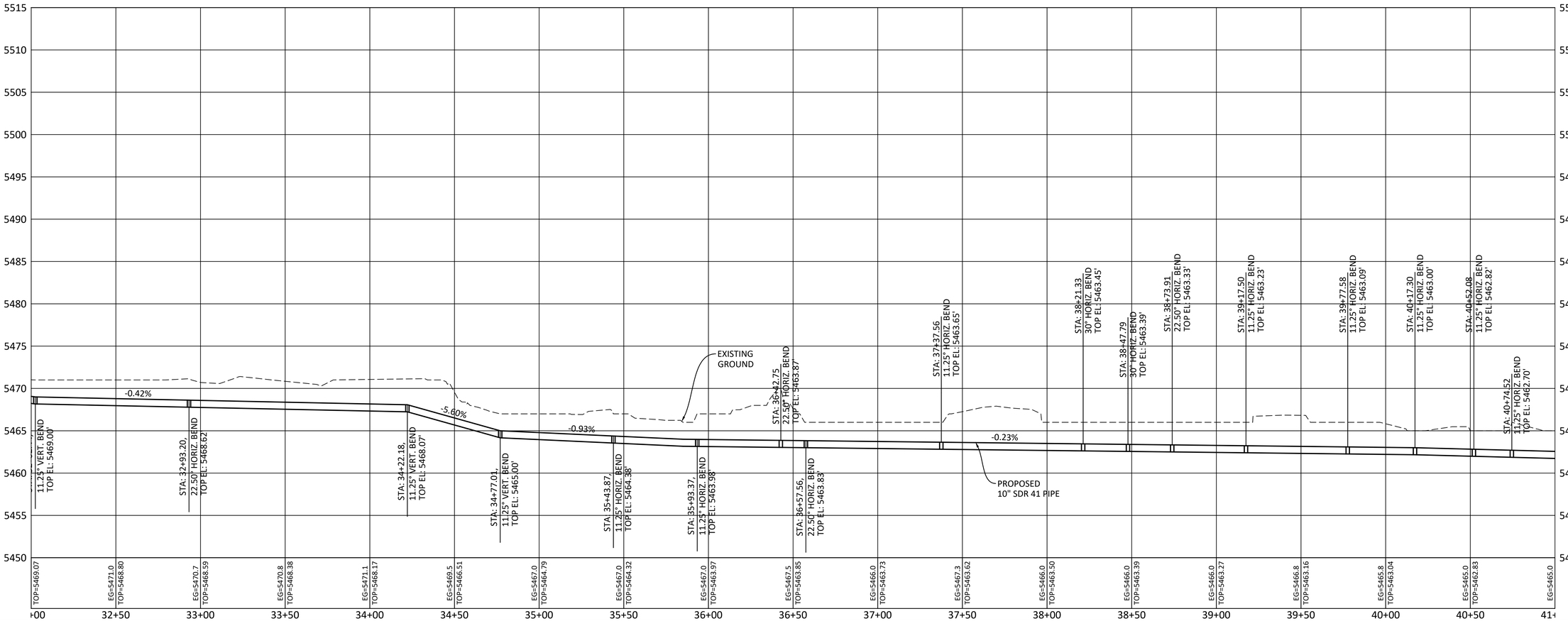
CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

PLAN VIEW
SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC — VEHICLE TRACKING DEVICE
- EP — ECCO PAN
- CWA — CONCRETE WASHOUT
- SCL — SEDIMENT CONTROL LOG
- SF — SILT FENCE



C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigTessafely1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO	DESCRIPTION	DATE	BY

COLORADO LICENSED DAVID E. MOORE 22495 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 N. 86TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 805-1571
E-MAIL: dmoore@allianceengineer.com

DAVE MILLER DITCH
STA. 32+00 - STA. 41-00
PLAN AND PROFILE

prepared for
CRANE ASSOCIATES LLC

DRAWN BY:	DESIGNED BY:	APPROVED BY:
PSD	PSD	
DRAWING NAME		

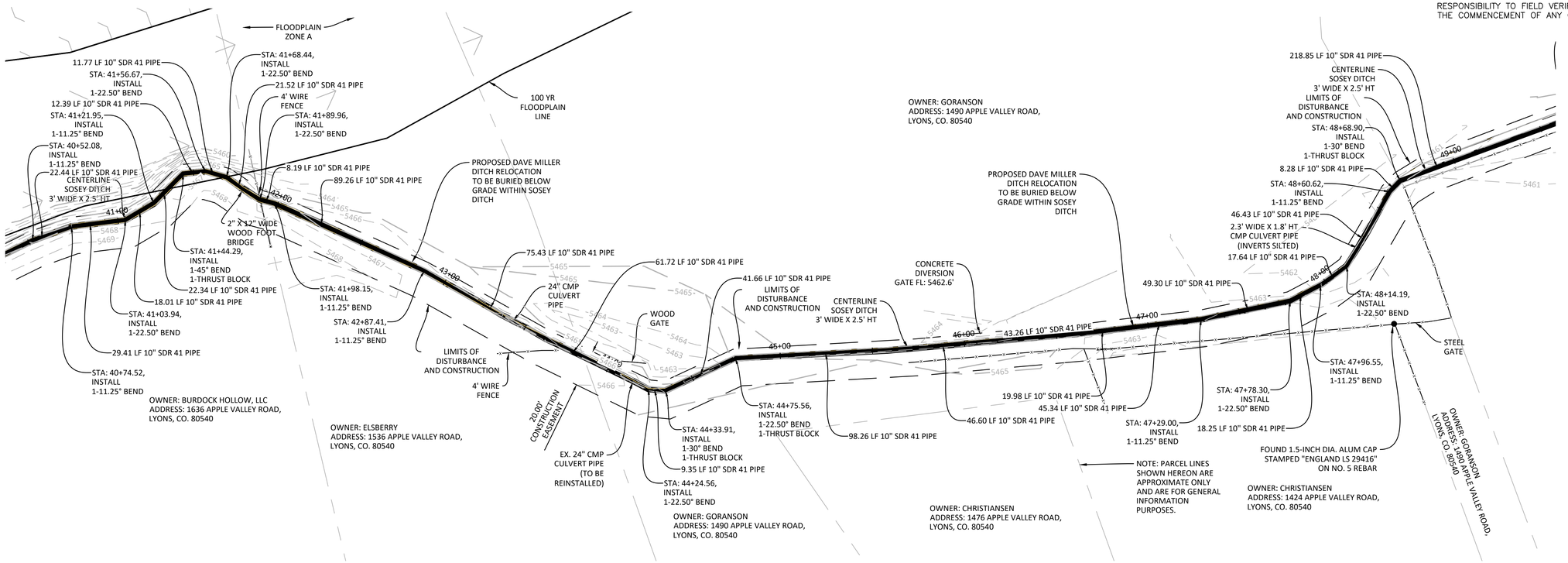
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C5 of C11

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

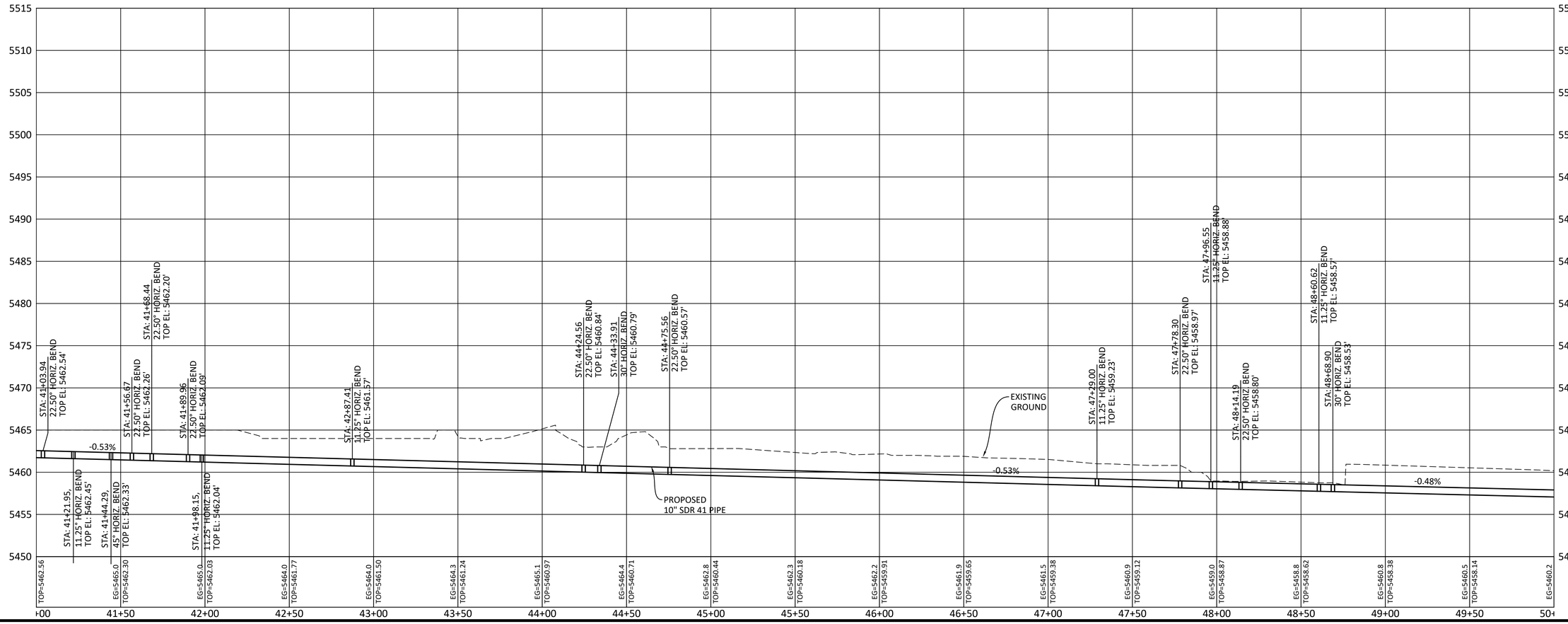
PLAN VIEW

SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC VEHICLE TRACKING DEVICE
- EP ECCO PAN
- CWA CONCRETE WASHOUT
- SCL SEDIMENT CONTROL LOG
- SF SILT FENCE



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO	DESCRIPTION	DATE	BY

COLORADO LICENSED DAVID E. MOORE 22485 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 N. 86TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 805-1571
E-MAIL: dmoore@allianceengineer.com

DAVE MILLER DITCH

STA. 41+00 - STA. 50+00
PLAN AND PROFILE

prepared for
CRANE ASSOCIATES LLC

DRAWN BY:	PSD
DESIGNED BY:	PSD
DRAWING NAME:	
APPROVED BY:	
JOB NUMBER:	20060
DATE:	12/11/2023
SCALE:	AS NOTED
SHEET NO:	C6 of C11

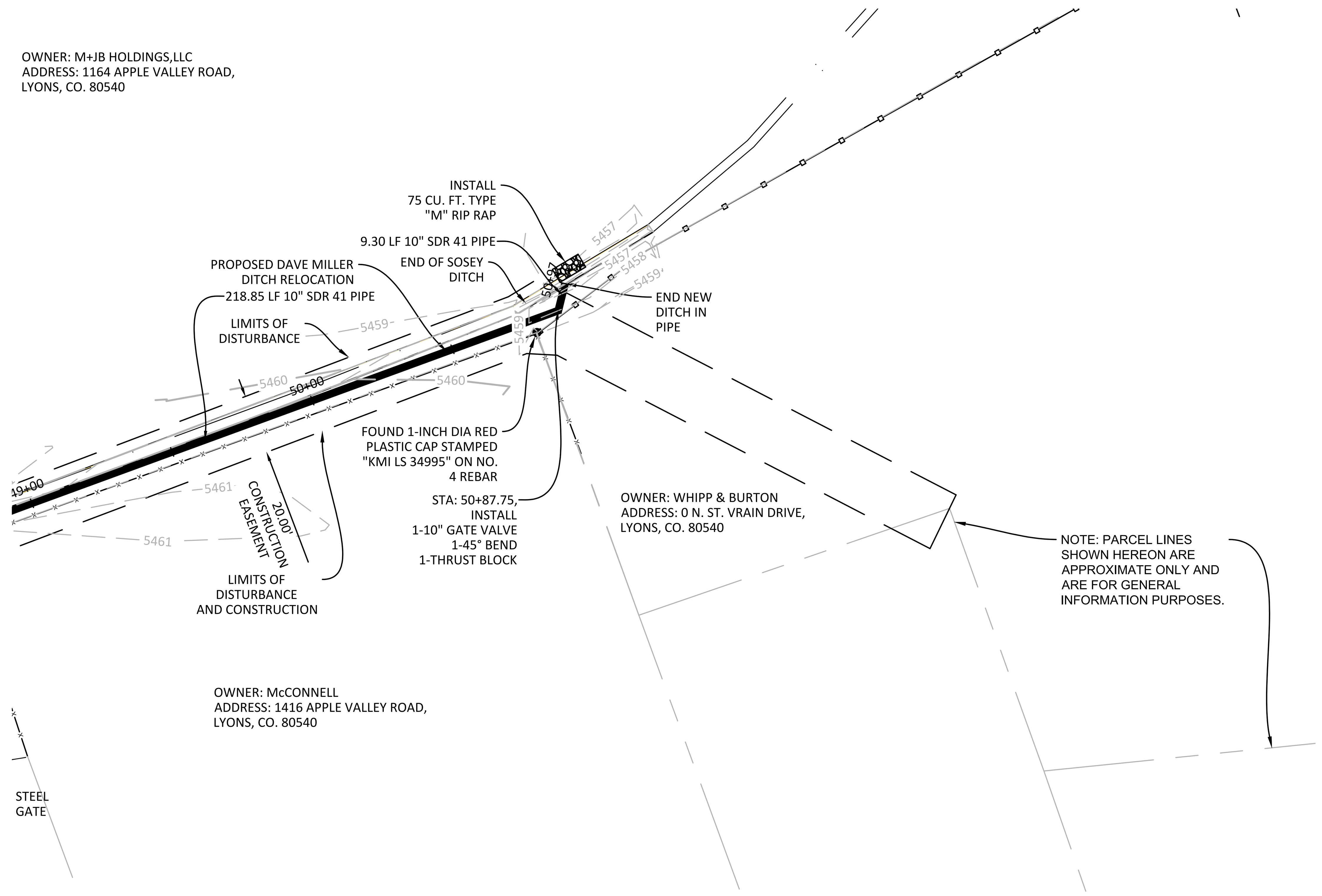
C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

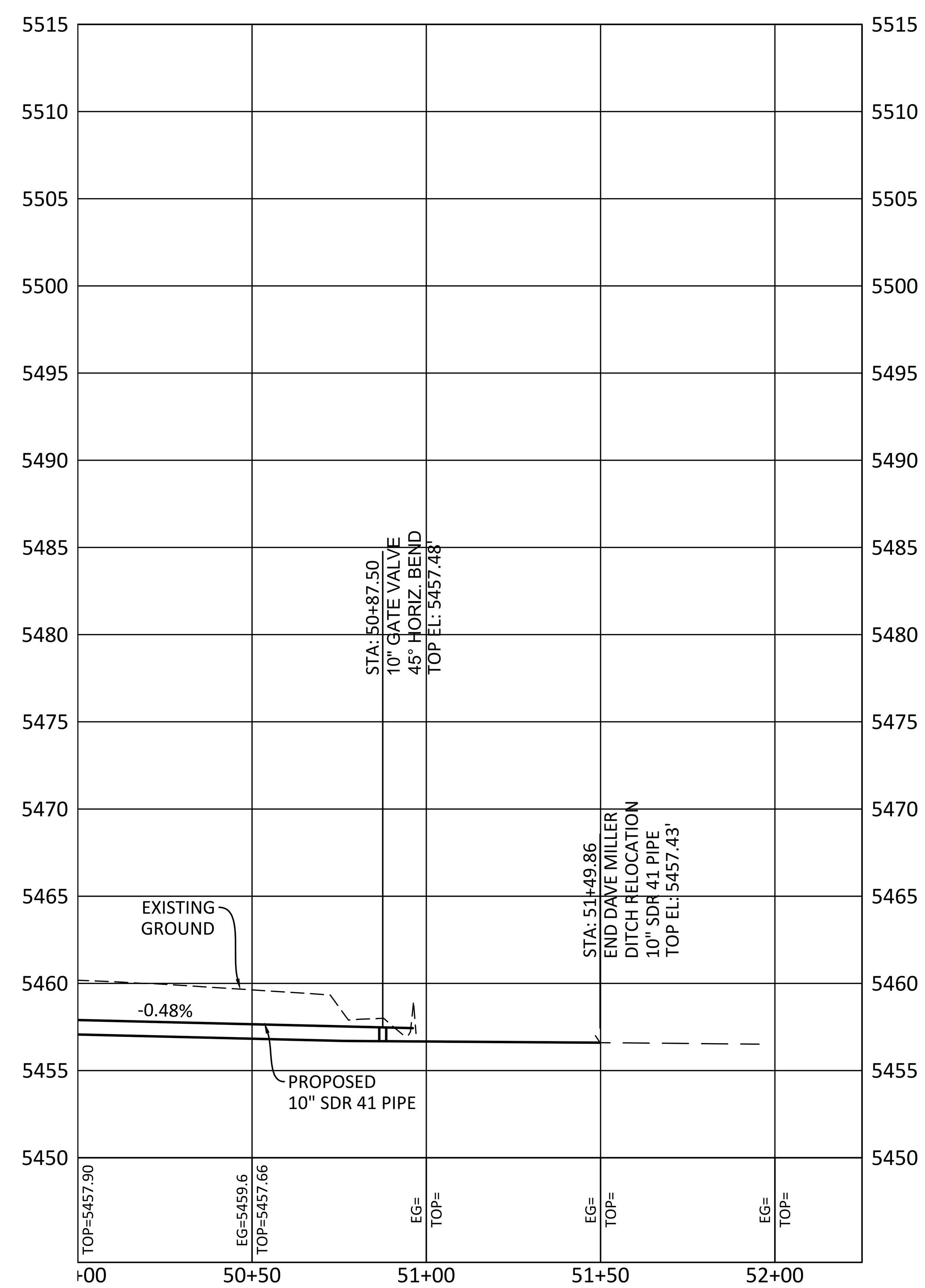
PLAN VIEW

SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC VEHICLE TRACKING DEVICE
- EP ECCO PAN
- CWA CONCRETE WASHOUT
- SCL SEDIMENT CONTROL LOG
- SF SILT FENCE



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely. 1-800-922-1987
www.uncc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER 22495 12/11/23

Alliance Consulting Engineers & Surveyors
"PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* "PROJECT MANAGEMENT * SURVEYING"
16415 W. 85TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 625-1571

DAVE MILLER DITCH

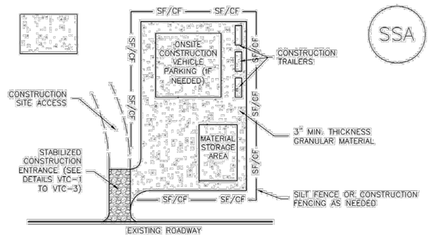
STA. 50+00 - STA. 53+80
PLAN AND PROFILE

prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: PSD
DRAWING NAME:
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C7 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF STAGING AREA(S).
   -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

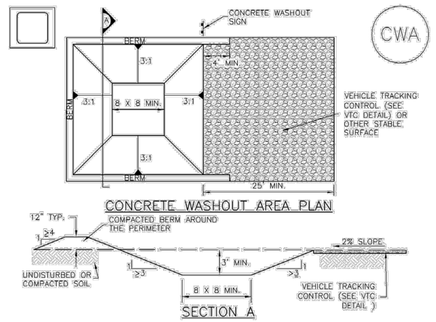
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

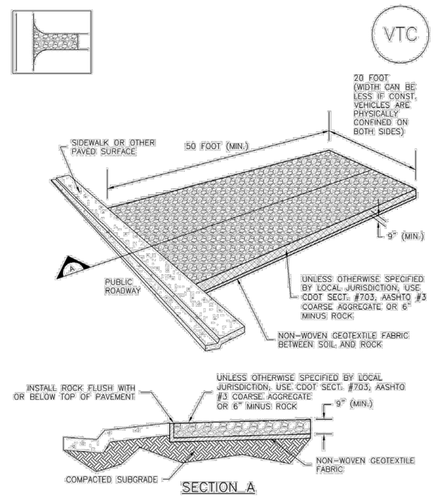
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely1-800-922-1987 www.uncc.org for marking of underground member utilities.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED
DAVID E. MOORE
22485
12/11/23
PROFESSIONAL ENGINEER

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
*PROJECT MANAGEMENT * SURVEYING*
16415 W. 86TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 635-1571
EMAIL: demoore@allianceengineer.com

DAVE MILLER DITCH
EROSION CONTROL
DETAILS SHEET 1
prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: DEM
DRAWING NAME: DETAILS
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C8 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\DETAILS.DWG PLOTTED: 12/11/2023

BEST MANAGEMENT PRACTICES

1. CONTRACTOR/PERMITTEE SHALL PERIODICALLY INSPECT ALL INSTALLED BMPS, PROVIDE MAINTENANCE, AND MAKE REPAIRS AS NECESSARY TO PREVENT THEIR FAILURE.

2. SILT FENCE OR AN EQUIVALENT SHALL BE PLACED AS PERIMETER CONTROL ON ALL CONSTRUCTION ACTIVITIES THAT OCCUR ON LAND. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR OTHERWISE REQUESTED, REMOVE PERIMETER CONTROLS WITHIN 30 DAYS AFTER THE DATE OF WARRANTY PERFORMANCE OF THE WORK OR IN ACCORDANCE WITH BMPS.

3. VEHICLE TRACKING CONTROLS SHALL BE USED AT ALL VEHICLE AND EQUIPMENT ACCESS POINTS TO THE SITE TO PREVENT SEDIMENT EXITING THE PROJECT SITE ONTO PAVED PUBLIC ROADS. ACCESS SHALL BE PROVIDED ONLY AT LOCATIONS APPROVED BY THE ENGINEER. VEHICLE TRACKING CONTROL LOCATIONS SHALL BE RECORDED ON THE SWMP SITE MAP.

4. ALL INLETS AND CULVERTS SHALL BE PROTECTED DURING ONSITE CONSTRUCTION ACTIVITIES. INLET PROTECTION LOCATIONS SHALL BE RECORDED ON THE SWMP SITE MAP.

5. CONCRETE WASTED IN DESIGNATED DEWATERING AREAS SHALL BE COLLECTED, REMOVED FROM THE PROJECT SITE, AND DISPOSED OF PROPERLY. WASTED CONCRETE ALSO INCLUDES EXCESS CONCRETE REMOVED FROM FORMS, SPILLS, SLOP, AND ALL OTHER UNUSED CONCRETE THAT ENDS UP ON THE GROUND.

6. THE CONTRACTOR/PERMITTEE MUST MAINTAIN A SPILL KIT ON SITE WHEN WORKING AROUND SURFACE WATERS. IF POLLUTANTS ARE SPILLED INTO ANY SURFACE WATERS DURING THE COURSE OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR/PERMITTEE MUST NOTIFY THE OWNER'S REPRESENTATIVE OR ENGINEER IMMEDIATELY.

7. ALL EXISTING MATURE TREES WITHIN THE DESIGNATED PROJECT AREA ARE TO BE FENCE PROTECTED IN PLACE AT DRIPLINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PRIOR TO THE INITIATION OF WORK, THE ENGINEER SHALL MARK ANY TREES AND/OR LARGE SHRUBS TO BE REMOVED AS PART OF CONSTRUCTION ACTIVITIES. AREAS OF TREE REMOVAL SHALL BE DETERMINED AND MARKED IN COLLABORATION BETWEEN THE CONTRACTOR/PERMITTEE AND THE ENGINEER.

8. ALL EXCAVATION ACTIVITIES OCCURRING WITHIN 10 FEET OF THE DRIPLINE SHALL BE PERFORMED BY HAND AND IF NECESSARY, ROOTS SHALL BE CLEANLY CUT NOT TORN OR RIPPED. IF EXPOSED, TREE ROOTS SHALL BE BACKFILLED AND WATERED ON THE SAME DAY OF CUTTING AND APPROVED ROOT STIMULATOR SHALL BE APPLIED. SOILS SHALL NOT BE COMPACTED WITHIN THE DRIPLINE OF MATURE TREES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

WASTE MANAGEMENT

9. THE CONTRACTOR/PERMITTEE SHALL NOT BURN, BURY, OR OTHERWISE DISCHARGE CONSTRUCTION OR DEMOLITION WASTE ON THE SITE UNLESS SPECIFIED OTHERWISE.

10. THE CONTRACTOR/PERMITTEE SHALL PROVIDE A PORTABLE TOILET AND ASSOCIATED MAINTENANCE SCHEDULE FOR THE CONSTRUCTION AREA SUFFICIENT TO ACCOMMODATE THE CONSTRUCTION CREW AND ALL OTHER AUTHORIZED PERSONS TO BE ONSITE DURING CONSTRUCTION ACTIVITIES.

HAZARDOUS MATERIALS

11. THE CONTRACTOR/PERMITTEE SHALL TRANSPORT, USE, AND STORE HAZARDOUS MATERIALS IN ACCORDANCE WITH ALL REGULATORY REQUIREMENTS. SPILLED HAZARDOUS MATERIALS, INCLUDING HAZARDOUS LIQUID WASTES, SHALL BE REMOVED FROM THE SITE AND THE PROPERTY RESTORED TO ITS PRE-SPILL STATE IN ACCORDANCE WITH REGULATORY REQUIREMENTS.

12. THE CONTRACTOR/PERMITTEE SHALL IMMEDIATELY REPORT SPILLS TO THE PROPER REGULATORY AUTHORITY AND SHALL IMMEDIATELY NOTIFY THE ENGINEER.

13. HANDLING OF CONSTRUCTION FUELS AND LUBRICANTS:

A. THE CONTRACTOR/PERMITTEE SHALL EMPLOY PERSONS QUALIFIED TO HANDLE CONSTRUCTION EQUIPMENT FUELS AND LUBRICANTS.

B. THE CONTRACTOR/PERMITTEE SHALL REFUEL AND SERVICE EQUIPMENT AWAY FROM FLOODPLAINS OF RIVERS, STREAMS, AND OTHER BODIES OF WATER. THE CONTRACTOR/PERMITTEE SHALL ENSURE EQUIPMENT THAT ENTERS THE WATER IS FREE FROM EXTERNAL GREASE, OIL, AND MUD.

C. THE CONTRACTOR/PERMITTEE SHALL PREVENT HANDLING AND FUELING OPERATIONS FROM CONTAMINATING THE GROUND, SURFACE WATER, AND GROUND WATER. THE CONTRACTOR/PERMITTEE SHALL USE CONTAINMENT BERMS AND AN IMPERMEABLE BASE COURSE OR OTHER SYSTEM TO CONTAIN SPILLED FUEL.

GENERAL CARE OF WATER

CARE OF WATER SHALL INCLUDE THE DESIGN OF ALL TEMPORARY CARE OF WATER PROVISIONS INCLUDING COFFER DAMS, SUMPS, PUMPING SYSTEMS, PIPELINES, CHANNELS, FLUMES, DRAINS, AND OTHER PROTECTIVE AND DEWATERING WORKS TO ALLOW FOR WORK TO BE PERFORMED UNDER DRY CONDITIONS.

14. NO CONSTRUCTION EQUIPMENT SHALL BE OPERATED BELOW THE EXISTING WATER SURFACE UNLESS SPECIFICALLY AUTHORIZED BY THE STORMWATER QUALITY PERMIT ISSUED BY BOULDER COUNTY, AND ANY OTHER APPLICABLE LOCAL, STATE, OR FEDERAL LICENSE OR PERMIT.

15. THE CONTRACTOR/PERMITTEE IS RESPONSIBLE FOR ALL CARE OF WATER INCLUDING BUT NOT LIMITED TO DESIGNING, SUPPLYING, CONSTRUCTING, OPERATING, AND REMOVING ALL CARE OF WATER PROVISION INCLUDING COFFER DAMS AND SEDIMENT REMOVAL SYSTEMS; DESIGNING, SUPPLYING, INSTALLING, MAINTAINING, AND REMOVING PROTECTIVE WORKS FOR WINTER OPERATIONS OF CARE OF WATER SYSTEMS.

16. THE CONTRACTOR/PERMITTEE SHALL COMPLY WITH ALL USACE 404 PERMIT REQUIREMENTS INCLUDING ANY SPECIAL CARE REQUIREMENTS ISSUED FOR THIS PROJECT.

17. WHEN REQUIRED THE CONTRACTOR/PERMITTEE SHALL DESIGN TEMPORARY STREAM DIVERSIONS TO FACILITATE UPSTREAM FISH PASSAGE. INSTREAM VELOCITIES SHALL BE LIMITED TO 7 FT/SEC WHEN THIS PROVISION IS REQUIRED.

18. CARE OF WATER SHALL INCLUDE PROVISIONS FOR HANDLING GROUNDWATER, RAINSTORM RUNOFF, SNOW, SNOWMELT, AND ICE THAT MAY ENTER THE WORK AREA.

19. PROTECTIVE WORKS SHALL BE DESIGNED BY THE CONTRACTOR/PERMITTEE AS NECESSARY TO INCLUDE ENCLOSURES, INSULATION, AND HEATING SYSTEMS TO ENSURE THAT DEWATERING SYSTEMS OPERATE CONTINUOUSLY AND DO NOT BECOME FROZEN DURING COLD WEATHER.

20. THE CONTRACTOR/PERMITTEE SHALL PROVIDE AND MAINTAIN SEDIMENT PONDS OR OTHER MEANS, REMOVE SEDIMENT FROM WATERS COLLECTED WITHIN ACTIVE CONSTRUCTION AREAS PRIOR TO ALLOWING IT TO ENTER OR RETURN INTO THE WATERCOURSE. CONTRACTOR/PERMITTEE SHALL DISPOSE OF SEDIMENTS IN A SUITABLE OFFSITE WASTE DISPOSAL FACILITY.

21. THE CONTRACTOR/PERMITTEE SHALL MONITOR WATER TURBIDITY DURING CONSTRUCTION ACTIVITIES AND SHALL SHUT DOWN WORKS AT TIMES OF EXCESS TURBIDITY IN ORDER TO ALLOW THE WATER TO CLEAR PRIOR TO RECOMMENCEMENT OF IN-STREAM WORK.

22. TURBIDITY IS EXPECTED DURING PLACEMENT AND REMOVAL OF WATER CONTROL. IF WATERS BECOME NOTICEABLY TURBID, CONTRACTOR/PERMITTEES SHOULD PROMPTLY HALT OPERATIONS TO ALLOW WATERS TO CLEAR PRIOR TO RESUMING OPERATIONS. FURTHERMORE, SHUTDOWNS FOR SILTY OR TURBID WATER MAY BE SPECIFIED BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE, AT THEIR DISCRETION.

23. IN THE EVENT OF UNSCHEDULED CONSTRUCTION ACTIVITY THAT RESULTS IN A VISUALLY CONSPICUOUS PLUME OF SEDIMENT, CONTRACTOR/PERMITTEE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND UNDERTAKE MITIGATION ACTIONS NECESSARY TO COMPLY WITH THE SPECIFIED CLEAN WATER CRITERIA.

COFFER DAMS

24. THE CONTRACTOR/PERMITTEE IS RESPONSIBLE FOR THE FINAL LAYOUT, CONFIGURATION, MAINTENANCE, AND REMOVAL IN THEIR ENTIRETY OF ALL COFFER DAMS TO BE CONSTRUCTED WITHIN THE PROJECT SITE.

25. THE CONTRACTOR/PERMITTEE IS RESPONSIBLE FOR THE RECLAMATION, TO ORIGINAL OR BETTER CONDITION, OF ALL AREAS IMPACTED BY THE CONSTRUCTION OF COFFER DAMS. RECLAMATION MAY INCLUDE BUT IS NOT LIMITED TO THE RESTORATION OF STABLE SLOPES TYPICALLY EQUAL TO OR LESS THAN 3H:1V, INSTALLATION OF APPROVED EROSION CONTROL FABRIC, AND INSTALLATION OF AN APPROVED NATIVE SEED MIX.

26. COFFERDAMS LOCATED IN THE WATERWAY SHALL BE PLACED IN A MANNER TO PREVENT THEIR EROSION FROM NORMAL OR EXPECTED HIGH FLOWS. FURTHERMORE, THEY SHOULD BE PLACED TO A SUFFICIENT ELEVATION TO PREVENT THEIR OVERTOPPING DURING REASONABLY ANTICIPATED FLOOD EVENTS THAT MAY COMPROMISE THE DESIGN AND PERFORMANCE OF THE COFFERDAM.

27. THE USE OF RIPRAP OR OTHER PROTECTION MEASURES ON THE SURFACES OF THE COFFERDAM, INCLUDING THE TOE OF COFFERDAM SLOPES EXPOSED TO HIGH VELOCITIES, IS REQUIRED.

28. ALL TEMPORARY FILLS MUST BE REMOVED IN THEIR ENTIRETY FOLLOWING CONSTRUCTION ACTIVITIES AND AFFECTED AREAS GRADED TO PROPOSED CONDITIONS.

29. COFFER DAMS SHALL PROVIDE A BYPASS WATERWAY THAT IS ARMORED AND OF THE MINIMUM DIMENSIONS SHOWN IN THE TYPICAL WATER CONTROL CHANNEL DETAIL.

30. ANY COFFER DAM FAILURES OR OTHER WORKS EFFORTS THAT CAUSE A PLUME OF TURBID WATER TO FLOW DOWNSTREAM SHALL BE REPORTED TO THE ENGINEER.

HEAVY EQUIPMENT OPERATIONS AND MAINTENANCE

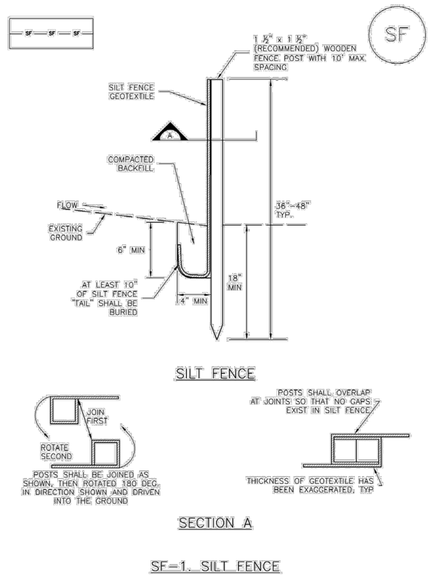
31. EQUIPMENT OPERATED BELOW THE ORDINARY HIGH-WATER MARK OF THE RIVER CHANNEL, MUST BE INSPECTED AND CLEAN OF FUEL, LUBRICANT LEAKS, AND INVASIVE AQUATIC SPECIES.

32. TO MINIMIZE THE SPREAD OF INVASIVE SPECIES, ALL EQUIPMENT SHALL BE POWER-WASHED AND FREE OF WEEDS PRIOR TO ITS DELIVERY TO THE PROJECT AREA. IF EQUIPMENT WAS USED IN ANOTHER WET AREA WITHIN 10 DAYS OF INITIATING WORK, DECONTAMINATION PRACTICES SHOULD BE EMPLOYED TO MINIMIZE THE SPREAD OF DIDYMOSPHENIA, NEW ZEALAND MUD SNAILS, WHIRLING DISEASE, ZEBRA MUSSELS, AND OTHER AQUATIC HITCHHIKERS.

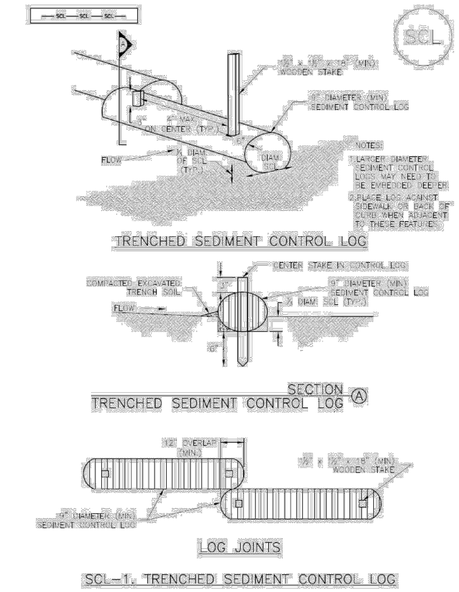
33. EQUIPMENT OPERATING WITHIN OR ADJACENT TO ANY SURFACE WATERS SHALL BE FREE OF FLUID LEAKS. BIODEGRADABLE HYDRAULIC FLUIDS SHALL BE UTILIZED FOR ALL EQUIPMENT OPERATING IN SURFACE WATERS. THE CONTRACTOR/PERMITTEE SHALL SUBMIT A LIST OF EQUIPMENT OPERATING WITH CERTIFIED NON-TOXIC, BIODEGRADABLE HYDRAULIC FLUIDS TO THE ENGINEER PRIOR TO USE. ALL FUELING, OILING, OR MAINTENANCE OF EQUIPMENT SHALL BE PERFORMED IN DESIGNATED UPLAND LOCATIONS, WITH ADEQUATE BMPS TO CONTAIN POTENTIAL SPILLS.

C:\USERS\PATRICK S DOMACALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\DETAILS.DWG PLOTTED: 12/11/2023

Silt Fence (SF) SC-1



Sediment Control Log (SCL) SC-2



SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR IBY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SC-2 Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND GAPING MESH.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES; HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

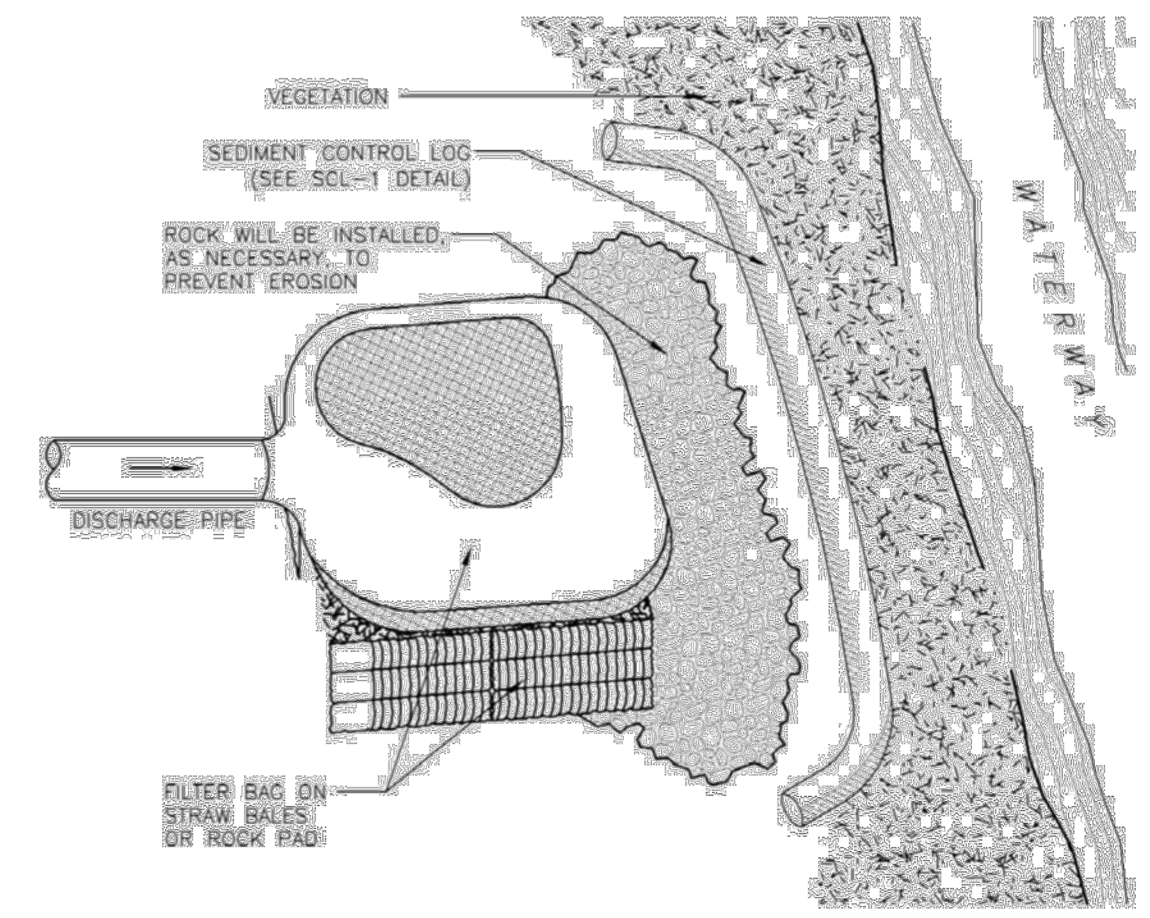
NO	DESCRIPTION	DATE	BY

COLORADO LICENSED
MATTHEW E. MOORE
22495
12/11/23
PROFESSIONAL ENGINEER

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
*PROJECT MANAGEMENT * SURVEYING*
10475 W. 80TH LANE, UNIT B * ARVADA, CO. 80007 * PH: (720) 626-1571
E-MAIL: dmoorepe@allianceengineer.com

DAVE MILLER DITCH
EROSION CONTROL
DETAILS SHEET 2
prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: DEM
DRAWING NAME: DETAILS
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C9 of C11



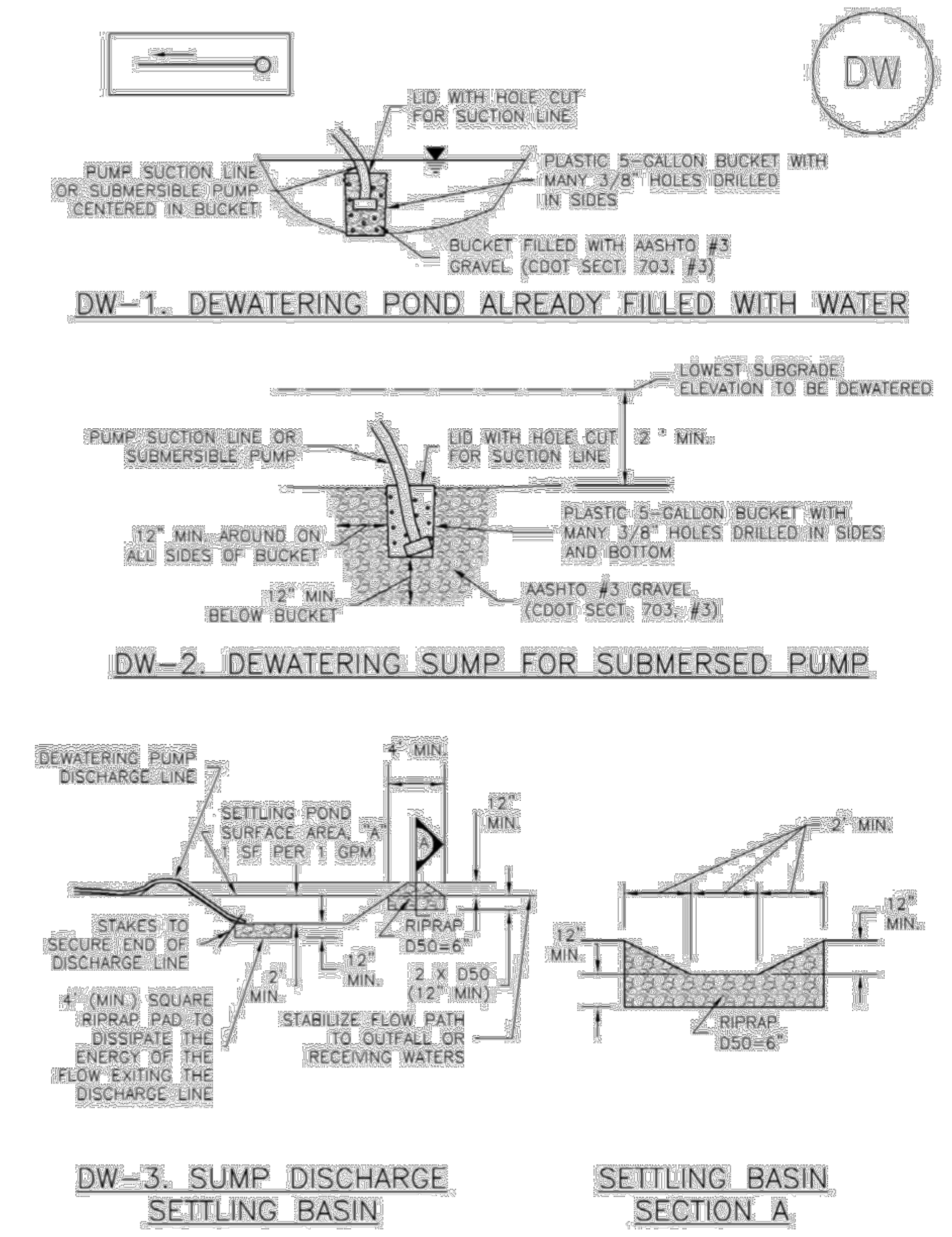
DW-4. DEWATERING FILTER BAG

DEWATERING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF DEWATERING EQUIPMENT.
   -TYPE OF DEWATERING OPERATION (DW-1 TO DW-4).

2. THE OWNER OR CONTRACTOR SHALL OBTAIN A CONSTRUCTION DISCHARGE (DEWATERING) PERMIT FROM THE STATE PRIOR TO ANY DEWATERING OPERATIONS DISCHARGING FROM THE SITE. ALL DEWATERING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT.

3. THE OWNER OR OPERATOR SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY TO PERMIT EXCAVATION AND SUBSEQUENT CONSTRUCTION IN DRY CONDITIONS AND TO LOWER AND MAINTAIN THE GROUNDWATER LEVEL A MINIMUM OF 2-FEET BELOW THE LOWEST POINT OF EXCAVATION AND CONTINUOUSLY MAINTAIN EXCAVATIONS FREE OF WATER UNTIL BACK-FILLED TO FINAL GRADE.



DEWATERING INSTALLATION NOTES

4. DEWATERING OPERATIONS SHALL USE ONE OR MORE OF THE DEWATERING SUMPS SHOWN ABOVE, WELL POINTS, OR OTHER MEANS APPROVED BY THE LOCAL JURISDICTION TO REDUCE THE PUMPING OF SEDIMENT, AND SHALL PROVIDE A TEMPORARY SEDIMENT BASIN OR FILTRATION BMP TO REDUCE SEDIMENT TO ALLOWABLE LEVELS PRIOR TO RELEASE OFF SITE OR TO A RECEIVING WATER. A SEDIMENT BASIN MAY BE USED IN LIEU OF SUMP DISCHARGE SETTLING BASIN SHOWN ABOVE IF A 4-FOOT-SQUARE RIPRAP PAD IS PLACED AT THE DISCHARGE POINT AND THE DISCHARGE END OF THE LINE IS STAKED IN PLACE TO PREVENT MOVEMENT OF THE LINE.

DEWATERING MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

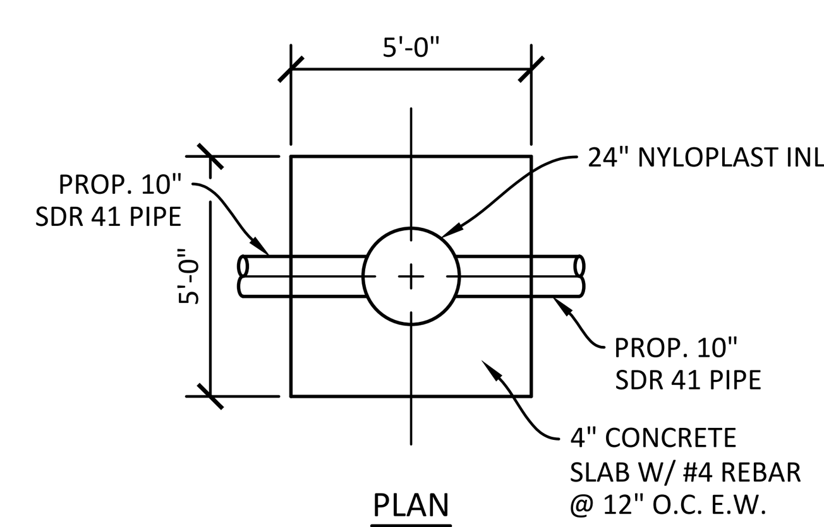
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. DEWATERING BMPs ARE REQUIRED IN ADDITION TO ALL OTHER PERMIT REQUIREMENTS.

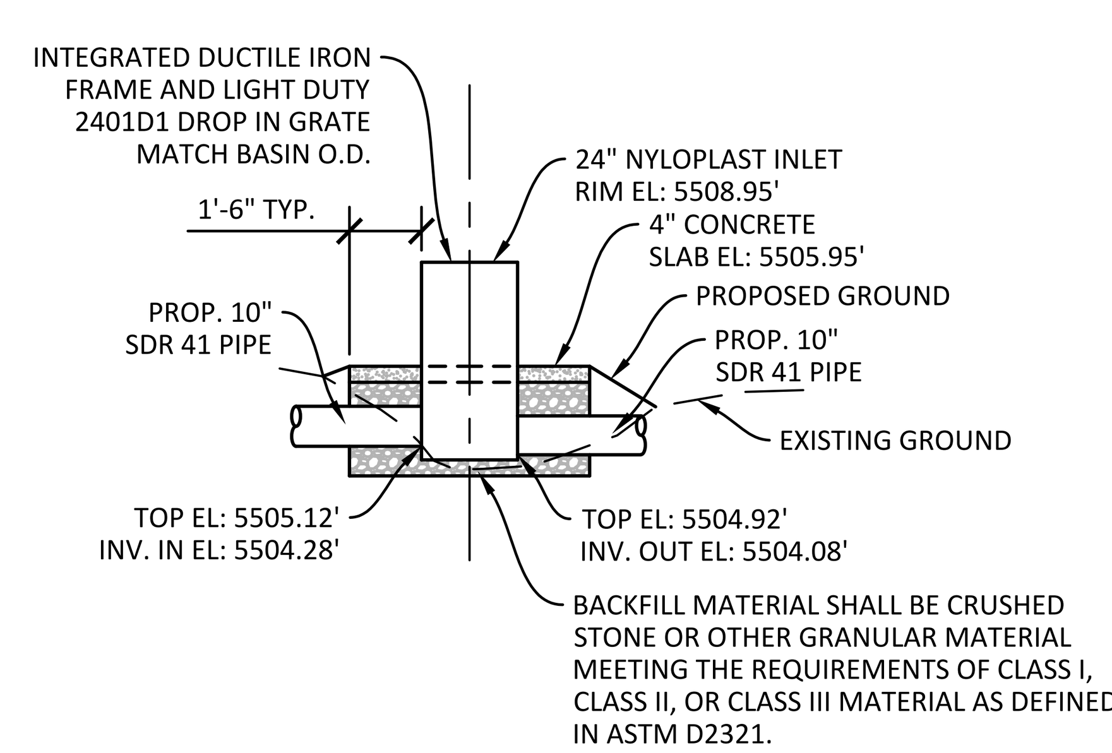
5. TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)



PLAN



PROFILE

24" NYLOPLAST INLET DETAIL
PLAN AND PROFILE
SCALE: 1/4" = 1'-0"

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER DAVID E. MOORE 22495 12/11/23

Alliance Consulting Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 W. 85TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 625-1571
E-MAIL: demoore@allianceengineer.com

DAVE MILLER DITCH
EROSION CONTROL DETAILS SHEET 3
prepared for CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: DEM
DRAWING NAME: DETAILS
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C10 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\DETAILS.DWG PLOTTED: 12/11/2023

TREE PRESERVATION PLAN:

1. GENERALLY, THE PROPOSED LOCATION OF THE IRRIGATION PIPELINE WAS INTENTIONALLY LAID OUT AND DESIGNED TO AVOID ANY TREE REMOVAL. THE LOCATION OF THE PROPOSED IRRIGATION PIPELINE IS APPROXIMATE AND CAN BE ALTERED IN THE FIELD TO MINIMIZE TREE REMOVAL. THE CONTRACTOR SHALL MINIMIZE DAMAGE TO EXISTING TREES.

2. ONLY VEGETATION NECESSARY TO CLEAR THE GRADING SITE AND PROVIDE ACCESS DURING CONSTRUCTION MAY BE REMOVED FROM THE FLOOD "OVERFLOW" CHANNEL.

3. ANY TREES OR GROUND VEGETATION THAT WILL BE REMOVED IN THE FLOOD "OVERFLOW" CHANNEL DURING CONSTRUCTION MUST BE IDENTIFIED AND REPLACED IN THE CHANNEL.

4. AT FINAL INSPECTION, THE FULL INSTALLATION OF THE APPROVED TREE PRESERVATION PLAN MUST BE INSPECTED AND APPROVED BY CPP STAFF.

REVEGETATION NOTES:

REVEGETATION SHALL CONSIST OF RE-SEEDING THE 20' WIDE CONSTRUCTION EASEMENT (DELINEATED ON THE PLAN) THE ENTIRE LENGTH OF THE PROJECT. SEE SEED MIX THIS PAGE.

AREA OF DISTURBANCE = 117,875± SQ. FT. = 2.71± AC

SLOPE AND REVEGETATION:

DEGREE OF SLOPE	SOIL PREP	TOPSOIL/ STOCKPILE	MULCH	MATTING/ HYDROMULCH
LEVEL TO 3:1	*	*		
3:1 TO 2:1	*	*	*	
2:1 TO 1.5:1	*	*	*	*

TOPSOIL/STOCKPILE:

STOCKPILING ENTAILS SCRAPING OFF THE TOPSOIL - OR THE UPPERMOST, FERTILE LAYER OF THE SOIL - AND SETTING IT ASIDE UNTIL NEEDED. AFTER CONSTRUCTION, THIS TOPSOIL SHOULD BE SPREAD OUT TO A DEPTH OF 3" OR MORE ON ALL SURFACES THAT ARE TO BE SEEDED. THE ADDITION OF FERTILIZER IS USUALLY UNNECESSARY FOR NATIVE GRASSES, AND IT CAN PROMOTE THE GROWTH OF ANNUAL WEEDS.

SOIL PREPARATION:

A GOOD SEEDBED IS CRUCIAL TO SUCCESSFUL REVEGETATION. SLOPES SHOULD BE GRADED TO AVOID CONCENTRATED WATER FLOW AND SUBSEQUENT EROSION. IF POSSIBLE, ANY AREAS SEVERELY COMPACTED BY MACHINERY AND EQUIPMENT DURING CONSTRUCTION SHOULD BE RIPPED BY TRACTOR OR BACKHOE TO LOOSEN SOILS AND ALLOW FOR WATER INFILTRATION AND ROOT GROWTH. CLODS LARGER THAN 3" SHOULD BE BROKEN, AND ANY WEEDS CONTROLLED BY TILLING THE SOIL.

SEEDING:

SEEDING CAN TAKE PLACE FROM THE FALL UNTIL SPRING, INCLUDING THE WINTER MONTHS AS LONG AS THE SOIL IS WORKABLE. MANY NATIVE SEEDS REQUIRE A PERIOD OF COLD TO GERMINATE AND ARE NOT HARMED BY BEING IN THE SOIL OVER WINTER. THE BEST TIME WINDOW FOR SEEDING ON THE PLAINS IS NOVEMBER 1 TO MARCH 31. AT HIGHER ELEVATIONS, SEEDING CAN BE DONE LATER INTO THE SPRING AND EARLY SUMMER.

IF POSSIBLE, DRILL SEEDING WILL BE THE BEST SEEDING METHOD. IF THE AREA IS TOO SMALL OR STEEP FOR A TRACTOR TO OPERATE, BROADCASTING THE SEED BY HAND OR WITH A MECHANICAL SPREADER IS ACCEPTABLE. BOULDER COUNTY DOES NOT RECOMMEND HYDROSEEDING; IT DOES NOT WORK IN OUR ARID CLIMATE. IN CONTRAST, HYDROMULCHING AFTER SEEDING IS FINE. PAY CLOSE ATTENTION TO THE RECOMMENDED RATES OF SEED APPLICATION. BROADCAST SEED NEEDS TO BE APPLIED AT DOUBLE THE RATE OF DRILLED SEED. AFTER BROADCASTING, SEED NEEDS TO BE RAKED IN LIGHTLY BY HAND TO PROVIDE BETTER SOIL CONTACT. NOT ALL SEED NEEDS TO BE BURIED; IT IS FINE IF SOME IS STILL VISIBLE.

MULCH:

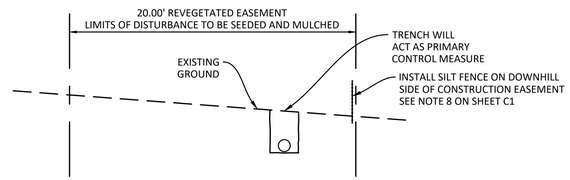
FOR STEEPER SLOPES, A MULCH IS NECESSARY TO KEEP THE SEED AND TOPSOIL IN PLACE. MULCH ALSO PROVIDES SHADE TO THE SEEDLINGS AND HELPS TO RETAIN SOIL MOISTURE. ON SLOPES OF 3:1 OR LESS, THE MULCH CAN BE WEED-FREE STRAW. THE STRAW SHOULD BE APPLIED AT 1.5 TO 2 TONS PER ACRE. THIS IS ROUGHLY ONE STANDARD STRAW BAIL PER 650 SQUARE FEET. DO NOT MULCH TO THICKLY; SOME OF THE SOIL SHOULD STILL BE VISIBLE TO ALLOW SOLAR WARMING. IF A TRACTOR IS AVAILABLE THE STRAW CAN BE "CRIMPED" INTO THE SOIL WITH A CRIMPING TOOL. CRIMPING ORIENTS SOME OF THE STRAW VERTICALLY AND KEEPS IT IN PLACE, MINIMIZING WIND EROSION. THIS CAN BE SIMULATED BY HAND USING A SHOVEL AND JABBING THE STRAW INTO THE GROUND. HYDROMULCHING IS ANOTHER OPTIONFOR LARGER AREAS. FOR SMALL AREAS IN THE MOUNTAINS, SPREADING PINE NEEDLES OVER RACKED-IN SEED IS ACCEPTABLE.

EROSION MATTING:

SLOPES STEEPER THE 2:1 REQUIRE EROSION MATTING. COMMON TYPES OF MATTING INCLUDE COIR (COCONUT OR JUTE FIBER), STRAW, ASPEN FIBERS, OR A BLEND OF THESE. STEEPER SLOPES WILL REQUIRE MORE DURABLE BLANKETS. TALK TO A VENDER ABOUT WHICH PRODUCT WILL WORK FOR YOUR SITUATION. WHEN POSSIBLE, SPECIFY BIODEGRADABLE NETTING SINCE THIS BREAKS DOWN MORE QUICKLY AND IS LESS OF A HAZARD TO WILDLIFE.

FOOTHILLS SEED MIX
5,500 FEET TO 7,000 FEET ELEVATION

COMMON NAME	SPECIES NAME	VARIETY	% OF MIX	#PLS/ACRE
SIDE OATS GRAMA	BOUTELOUA CURTIPENDULA	VAUGHN	10%	1.82
BLUE GRAMA	BOUTELOUA GRACILIS	NATIVE, ALMA, OR HACHITA	15%	0.63
SLENDER WHEATGRASS	ELYMUS TRACHYCAULUS	SAN LUIS	20%	4.38
JUNEGRASS	KOELERIA MACRANTHA	NATIVE	10%	0.15
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	ARRIBA	10%	3.17
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	NATIVE	10%	3.17
SWITCHGRASS	PANICUM VIRGATUM	BLACKWELL OR NEBRASKA 28	7%	0.63
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	CIMARRON OR PASTURA	8%	1.07
GREEN NEEDLEGRASS	STIPA VIRIDULA	LODORM OR NATIVE	10%	1.93
		TOTALS:	**100%**	**16.95**



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely1-800-922-1987 811 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT THE WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO	DESCRIPTION	DATE	BY

COLORADO LICENSED
DAVID E. MOSER
22485
PROFESSIONAL ENGINEER
12/11/23

*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
*PROJECT MANAGEMENT * SURVEYING*
Alliance Consulting Engineers & Surveyors
10415 W. 85TH LANE, UNIT B * ARVADA, CO. 80007 * PH: (720) 626-1571
E-MAIL: dmoser@allianceengineer.com

DAVE MILLER DITCH

REVEGETATION PLAN

prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: DEM
DRAWING NAME: DETAILS
APPROVED BY:

JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C11 of C11

C:\USERS\PATRICK S DOMACALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\DETAILS.DWG PLOTTED: 12/11/2023

AS-BUILT SURVEY

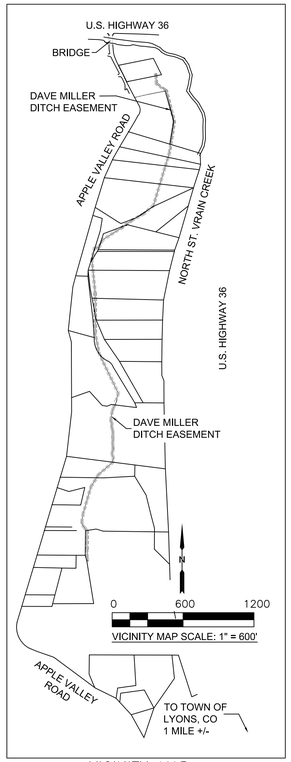
IRRIGATION PIPELINE AND 20-FOOT-WIDE EASEMENT FOR THE DAVE MILLER MUTUAL DITCH COMPANY, LLC
LOCATED IN THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF
SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.
COUNTY OF BOULDER, STATE OF COLORADO.

DITCH CENTERLINE TABLE:

LINE	BEARING	DISTANCE
L1	S 15°24'35" E	5.98'
L2	S 03°40'56" E	19.18'
L3	S 03°47'29" E	59.57'
L4	S 54°49'27" E	104.54'
L5	S 14°16'26" E	268.66'
L6	S 09°04'03" W	271.66'
L7	S 16°53'58" W	462.62'
L8	S 50°02'39" W	111.72'
L9	S 61°51'49" W	108.35'
L10	S 53°50'55" W	111.40'
L11	S 57°41'38" W	186.96'
L12	S 25°03'53" W	71.09'
L13	S 80°11'42" W	41.77'
L14	S 11°07'48" W	103.84'
L15	S 05°50'18" E	273.94'
L16	S 00°03'14" E	341.58'
L17	S 11°01'28" E	182.79'
L18	S 25°46'47" E	369.97'
L19	S 17°21'48" W	57.51'
L20	S 12°39'37" E	5.57'
L21	S 06°56'37" W	14.81'
L22	S 26°44'23" W	45.18'
L23	S 22°25'31" W	34.82'
L24	S 08°48'05" W	83.77'
L25	S 24°39'44" E	26.47'
L26	S 07°43'06" W	26.11'
L27	S 13°34'32" E	43.60'
L28	S 03°20'33" E	35.92'
L28A	S 00°20'04" E	24.16'
L29	S 06°42'00" W	39.73'
L30	S 05°34'39" E	34.78'
L31	S 00°45'39" W	22.44'
L32	S 13°32'18" W	29.41'
L33	S 10°02'55" E	18.01'
L34	S 24°55'32" E	22.34'
L35	S 14°40'17" W	12.39'
L36	S 11°33'24" W	28.10'
L37	S 50°36'38" W	17.79'
L38	S 49°00'23" W	138.72'
L39	S 31°52'12" W	121.27'
L40	S 16°19'52" W	238.79'
L41	S 08°48'38" W	68.43'
L42	S 37°13'25" E	44.10'
L43	S 00°28'02" W	105.46'
L44	S 01°29'09" E	114.12'
L45	S 06°41'38" E	35.62'
L46	N 07°55'49" E	4164.16'

LEGEND

- UTILITY POLE
- OVERHEAD UTILITY LINES
- ELECTRIC METER
- ELECTRIC BOX ON POLE
- GATE VALVE 4-FOOT HEIGHT
- SEPTIC ACCESS HATCH
- SANITARY SEWER SERVICE LINE
- P.V.C. RISER PIPE
- ELECTRICAL BOX
- 4-FOOT WIRE FENCE
- SET NO. 5 REBAR WITH 1.25 INCH DIAMETER YELLOW PLASTIC CAP STAMPED "ROCK CREEK SURVEYING" "LS 28283" ALSO SET 4-FOOT WOOD LATH WITH BLUE PAINT AND LIME GREEN FLAGGING AT APPARENT CENTERLINE ANGLE POINT OF 20-FOOT WIDE DITCH EASEMENT



VICINITY MAP

GENERAL NOTES:

1) THE PURPOSE OF THIS AS-BUILT SURVEY IS TO DEPICT THE FINAL CONSTRUCTED LOCATION OF THE DAVE MILLER DITCH PIPELINE AND SHOW A 20-FOOT-WIDE PRIVATE EASEMENT FOR DAVE MILLER MUTUAL DITCH.COMPANY, LLC.

2) THIS EXHIBIT IS NOT A LAND SURVEY PLAT PER CRS 38-51-106 OR AN IMPROVEMENT SURVEY PLAT PER CRS 38-51-102(9).

3) BASIS OF BEARINGS: THE NORTHEASTERLY LINE OF THE TOWN OF LYONS TRACT A, RECORDED AS RECEPTION NO. 90949264 BEARS NORTH 26 DEGREES, 26 MINUTES, 28 SECONDS WEST BETWEEN A FOUND YELLOW PLASTIC CAP WITH ILLEGIBLE STAMPING ON TOP OF A 6" DIAMETER WOOD FENCE POST AT THE SOUTHEAST CORNER OF SAID TRACT A AND A FOUND NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "MD JOHNSON LS 6716 AT THE NORTHEAST CORNER OF SAID TRACT A.

4) EXISTING IMPROVEMENTS IN THE VICINITY OF THE NEWLY CONSTRUCTED PIPELINE ARE SHOWN FOR GENERAL ORIENTATION AND INFORMATION PURPOSES. SOME UNDERGROUND UTILITIES ARE ALSO SHOWN. ALL IMPROVMENTS AND UNDERGROUND UTILITIES ARE NOT SHOWN.

5) FIELD SURVEY CONDUCTED ON NOVEMBER 12, 2024. THE DITCH PIPELINE WAS BURIED BELOW GRADE AND NOT OBSERVED, EXCEPT FOR A PORTION WITHIN THE SOSEY DITCH AT 2136 APPLE VALLEY ROAD AND AT THE SOUTH OUTFALL END OF THE DITCH PIPE. THE PIPELINE PIPELINE CONTRACTOR DID NOT SET STAKES OR REBARS TO MARK THE LOCATION OF PIPELINE ANGLE POINTS. THE CENTERLINE OF THE PIPE WAS LOCATED APPROXIMATELY USING VISUAL OBSERVATION OF THE BACKFILLED EXCAVATION LIMITS. NO POTHOLING OF THE PIPE WAS CONDUCTED TO VERIFY DEPTH OR LOCATION. NO. 5 REBARS WITH 1.25-INCH DIAMETER YELLOW PLASTIC CAPS STAMPED LS 28283 WERE SET TO MARK APPARENT DITCH CENTERLINE ANGLE POINTS AT SOME LOCATIONS AS LABELED HEREON.

6) PARCEL LINES SHOWN HEREON ARE APPROXIMATE AND WERE DERIVED FROM BOULDER COUNTY'S ONLINE GIS MAPPING AND ARE FOR GENERAL INFORMATION PURPOSES ONLY. LAND SURVEYS OF INDIVIDUAL OWNERSHIP PARCELS AT OR NEAR THE EASEMENT WERE NOT CONDUCTED. FOUND SURVEY MONUMENTS ARE SHOWN AND LABELED HEREON. SOME FOUND SURVEY MONUMENTS AND EXISTING SURVEY CONTROL POINTS ARE TIED WITH BEARINGS AND DISTANCES TO DITCH CENTERLINE ANGLE POINTS, SET WITH NO. 5 REBAR WITH 1.25-INCH DIAMETER YELLOW PLASTIC CAP MONUMENTS STAMPED LS 28283, FOR SURVEY INFORMATION PURPOSES.

7) DISTANCES SHOWN HEREON ARE U.S. SURVEY FEET.

8) BENCHMARK: TOP OF ORANGE PLASTIC CAP STAMPED "CONTROL POINT" ON NO 4 REBAR, 0.5 FEET ABOVE GROUND. ELEVATION 5503.43 FEET. NAVD'88 VERTICAL DATUM PER SURVEY DATA PREPARED BY J. DAOUD, PLS OF AZIMUTH SURVEYING, INC. FOR THE PREVIOUS DAVE MILLER DITCH CONCRETE DIVERSION STRUCTUE AND PIPE PROJECT, AS SHOWN AND LABELED HEREON.

DITCH EASEMENT LEGAL DESCRIPTION:

A 20-FOOT-WIDE DITCH EASEMENT, BEING PART OF THE NORTHEAST AND SOUTHEAST QUARTERS OF SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO, LYING 10 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BASIS OF BEARINGS: THE NORTHEASTERLY LINE OF THE TOWN OF LYONS TRACT A, RECORDED JULY 22, 1970 AS RECEPTION NO. 90949264 BEARS NORTH 26 DEGREES, 26 MINUTES, 28 SECONDS WEST BETWEEN A FOUND YELLOW PLASTIC CAP WITH ILLEGIBLE STAMPING ON TOP OF A 6" DIAMETER WOOD FENCE POST AT THE SOUTHEAST CORNER OF SAID TRACT A AND A FOUND NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "MD JOHNSON LS 6716" AT THE NORTHEAST CORNER OF SAID TRACT A, WITH ALL BEARINGS CONTAINED HEREIN BEING RELATIVE THERETO.

COMMENCING AT A FOUND NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "MD JOHNSON LS 6716 AT THE NORTHEAST CORNER OF TRACT A OF THE TOWN OF LYONS PROPERTY WITH DEED RECORDED JULY 22, 1970 AS RECEPTION NO. 90949264; THENCE S 08°06'17" E A DISTANCE OF 133.53 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG THE CENTERLINE OF SAID 20-FOOT WIDE DITCH EASEMENT THE FOLLOWING (41) COURSES AND DISTANCES:

1) S 15°24'35" E A DISTANCE OF 5.98 FEET;
2) THENCE S 03°40'56" E A DISTANCE OF 19.18 FEET;
3) THENCE S 03°47'29" E A DISTANCE OF 59.57 FEET;
4) THENCE S 54°49'27" E A DISTANCE OF 104.54 FEET;
5) THENCE S 14°16'26" E A DISTANCE OF 268.66 FEET;
6) THENCE S 09°04'03" W A DISTANCE OF 271.66 FEET;
7) THENCE S 16°53'58" W A DISTANCE OF 462.62 FEET;
8) THENCE S 50°02'39" W A DISTANCE OF 111.72 FEET;
9) THENCE S 61°51'49" W A DISTANCE OF 108.35 FEET;
10) THENCE S 53°50'55" W A DISTANCE OF 111.40 FEET;
11) THENCE S 57°41'38" W A DISTANCE OF 186.96 FEET;
12) THENCE S 25°03'53" W A DISTANCE OF 71.09 FEET;
13) THENCE S 80°11'42" W A DISTANCE OF 41.77 FEET;
14) THENCE S 11°07'48" W A DISTANCE OF 103.84 FEET;
15) THENCE S 05°50'18" E A DISTANCE OF 273.94 FEET;
16) THENCE S 00°03'14" E A DISTANCE OF 341.58 FEET;
17) THENCE S 11°01'28" E A DISTANCE OF 182.79 FEET;
18) THENCE S 25°46'47" E A DISTANCE OF 369.97 FEET;
19) THENCE S 17°21'48" W A DISTANCE OF 57.51 FEET;
20) THENCE S 12°39'37" E A DISTANCE OF 5.57 FEET;
21) THENCE S 06°56'37" W A DISTANCE OF 14.81 FEET;
22) THENCE S 26°44'23" W A DISTANCE OF 45.18 FEET;
23) THENCE S 22°25'31" W A DISTANCE OF 34.82 FEET;
24) THENCE S 08°48'05" W A DISTANCE OF 83.77 FEET;
25) THENCE S 24°39'44" E A DISTANCE OF 26.47 FEET;
26) THENCE S 07°43'06" W A DISTANCE OF 26.11 FEET;
27) THENCE S 13°34'32" E A DISTANCE OF 43.60 FEET;
28) THENCE S 03°20'33" E A DISTANCE OF 35.92 FEET;
29) THENCE S 00°20'04" E A DISTANCE OF 24.16 FEET;
30) THENCE S 06°42'00" W A DISTANCE OF 39.73 FEET;
31) THENCE S 05°34'39" E A DISTANCE OF 34.78 FEET;
32) THENCE S 00°45'39" W A DISTANCE OF 22.44 FEET;
33) THENCE S 13°32'18" W A DISTANCE OF 29.41 FEET;
34) THENCE S 10°02'55" E A DISTANCE OF 18.01 FEET;
35) THENCE S 24°55'32" E A DISTANCE OF 22.34 FEET;
36) THENCE S 14°40'17" W A DISTANCE OF 12.39 FEET;
37) THENCE S 11°33'24" W A DISTANCE OF 28.10 FEET;
38) THENCE S 50°36'38" W A DISTANCE OF 17.79 FEET;
39) THENCE S 49°00'23" W A DISTANCE OF 138.72 FEET;
40) THENCE S 31°52'12" W A DISTANCE OF 121.27 FEET;
41) THENCE S 16°19'52" W A DISTANCE OF 238.79 FEET;

THENCE S 08°48'38" W A DISTANCE OF 68.43 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 58.82 FEET, A CHORD THAT BEARS S 21°27'10" E WITH A CHORD DISTANCE OF 45.76 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 47.00 FEET;

THENCE DEPARTING SAID CURVE ALONGTHE FOLLOWING (4) COURSES AND DISTANCES:

42) THENCE S 37°13'25" E A DISTANCE OF 44.10 FEET;
43) THENCE S 00°28'02" W A DISTANCE OF 105.46 FEET;
44) THENCE S 01°29'09" E A DISTANCE OF 114.12 FEET;
45) THENCE S 06°41'38" E A DISTANCE OF 35.62 TO THE POINT OF TERMINUS.

EASEMENT CONTAINS: 92,780.6 SQ FT, 2.13 ACRES MORE OR LESS.

SURVEYOR'S CERTIFICATION:

I, ROBERT A. RICKARD, A COLORADO LICENSED SURVEYOR, DO HEREBY CERTIFY TO THE DAVE MILLER MUTUAL DITCH COMPANY, LLC THAT I PREPARED THIS AS-BUILT SURVEY ON DECEMBER 5, 2024, AS IS BASED ON A FIELD SURVEY CONDUCTED NOVEMBER 12, 2024 AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY 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 THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON,

ROBERT A. RICKARD, PLS NO. 28283
FOR AND ON BEHALF OF
ROCK CREEK SURVEYING, LLC

COLORADO LICENSED ROBERT A. RICKARD 28283 PROFESSIONAL LAND SURVEYOR

Reg. # 28283
12-5-2024

AS-BUILT SURVEY
DAVE MILLER MUTUAL DITCH COMPANY, LLC

REVISIONS

ROCK CREEK SURVEYING, LLC.
3021 GARDENIA WAY
SUPERIOR, CO 80027
303-521-7376

DRAWN: RAR
FIELD DATE: NOVEMBER 12, 2024

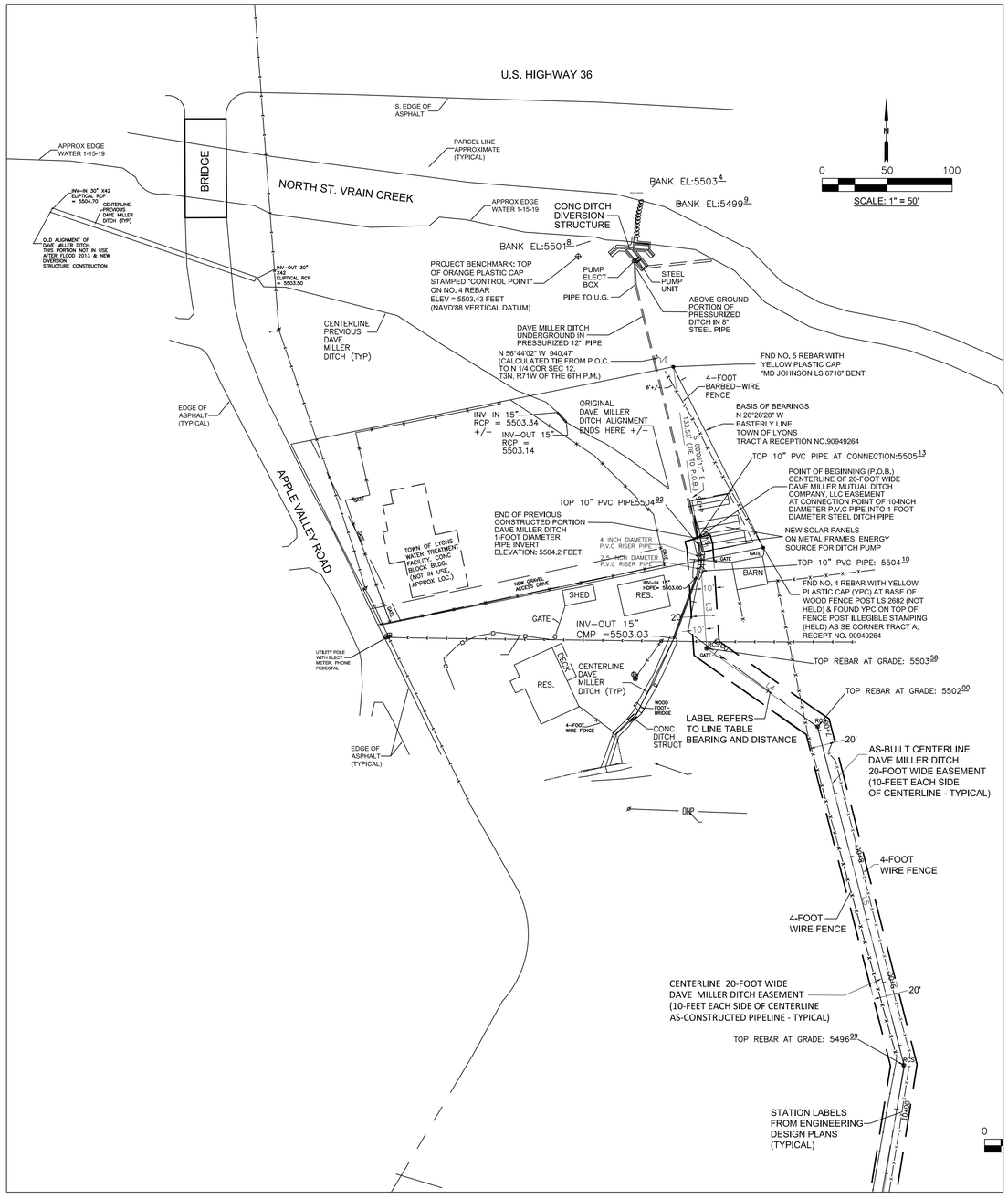
REVISIONS:

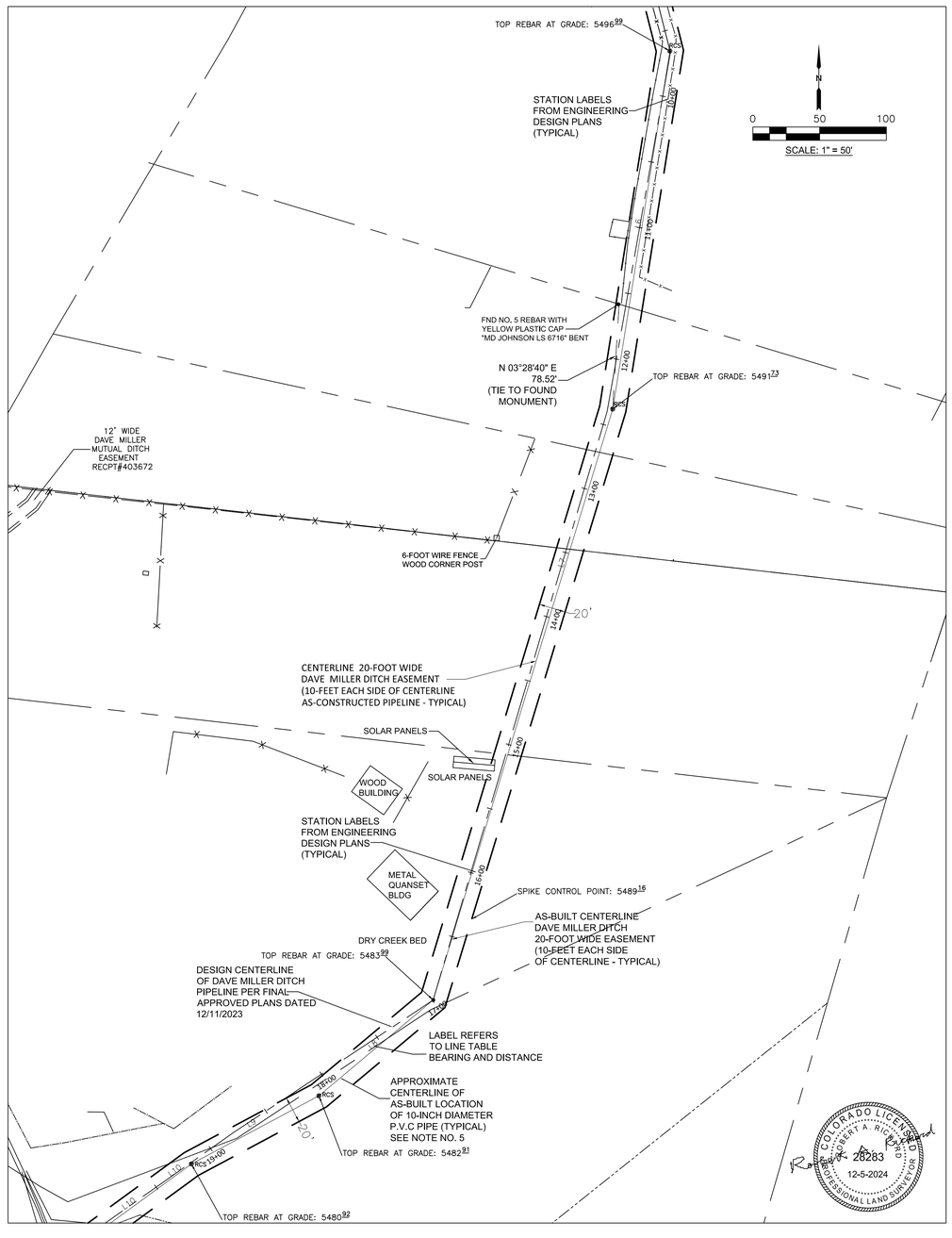
SCALE: 1" = 50'
DATE: 12-5-24

AS-BUILT SURVEY

IRRIGATION PIPELINE AND 20-FOOT-WIDE EASEMENT FOR THE DAVE MILLER MUTUAL DITCH COMPANY, LLC
LOCATED IN THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF
SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.
COUNTY OF BOULDER, STATE OF COLORADO.

SHEET 2 OF 4



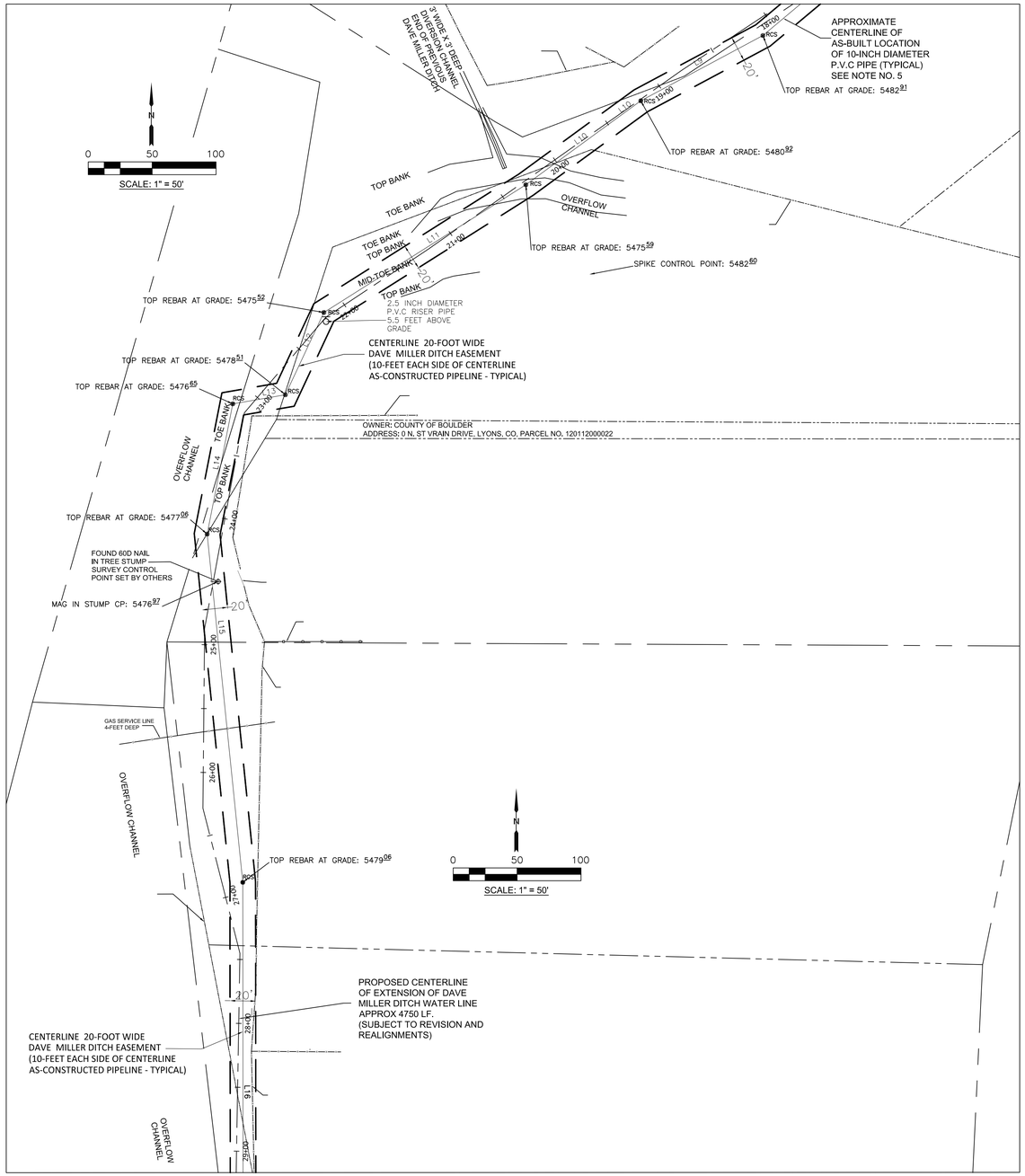


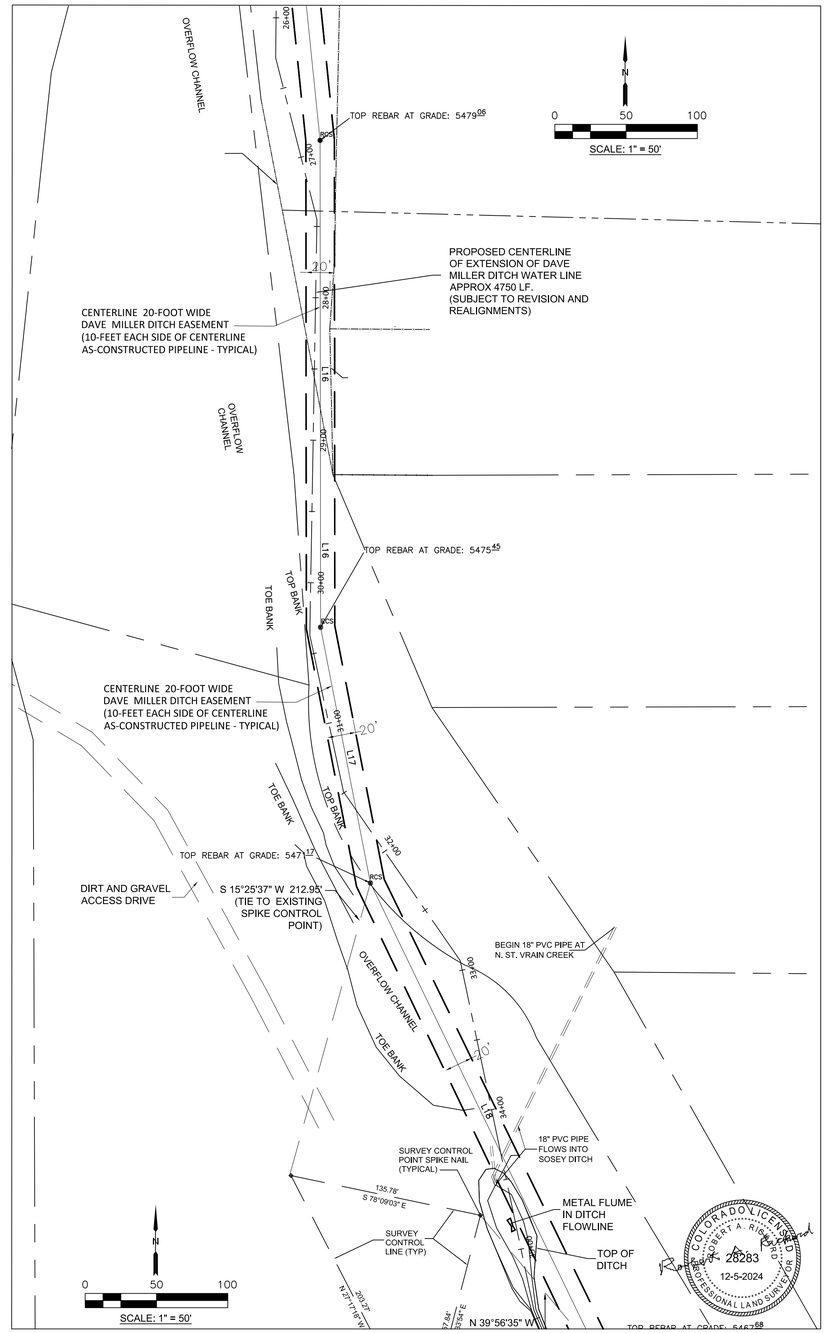
AS-BUILT SURVEY DAVE MILLER MUTUAL DITCH COMPANY, LLC	REVISIONS	ROCK CREEK SURVEYING, LLC. 3021 GARDENIA WAY SUPERIOR, CO 80027 303-521-7376	DRAWN: RAR FIELD DATE: NOVEMBER 12, 2024	REVISIONS:	SCALE: 1" = 50' DATE: 12-5-24

AS-BUILT SURVEY

IRRIGATION PIPELINE AND 20-FOOT-WIDE EASEMENT FOR THE DAVE MILLER MUTUAL DITCH COMPANY, LLC
LOCATED IN THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF
SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.
COUNTY OF BOULDER, STATE OF COLORADO.

SHEET 3 OF 4





ROBERT A. RICKARD
28283
12-5-2024

AS-BUILT SURVEY
DAVE MILLER MUTUAL DITCH COMPANY, LLC

REVISIONS

ROCK CREEK SURVEYING, LLC.
3021 GARDENIA WAY
SUPERIOR, CO 80027
303-521-7376

DRAWN: RAR

FIELD DATE: NOVEMBER 12, 2024

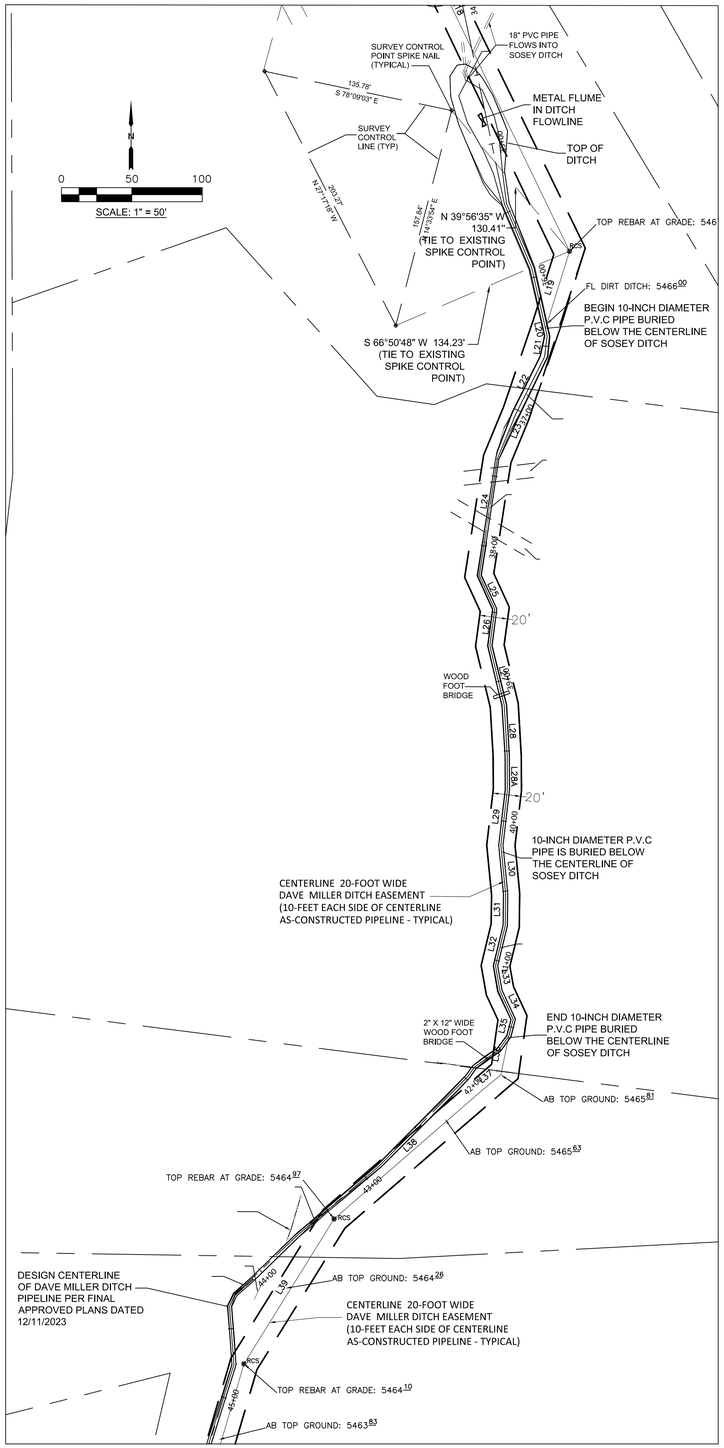
REVISIONS:

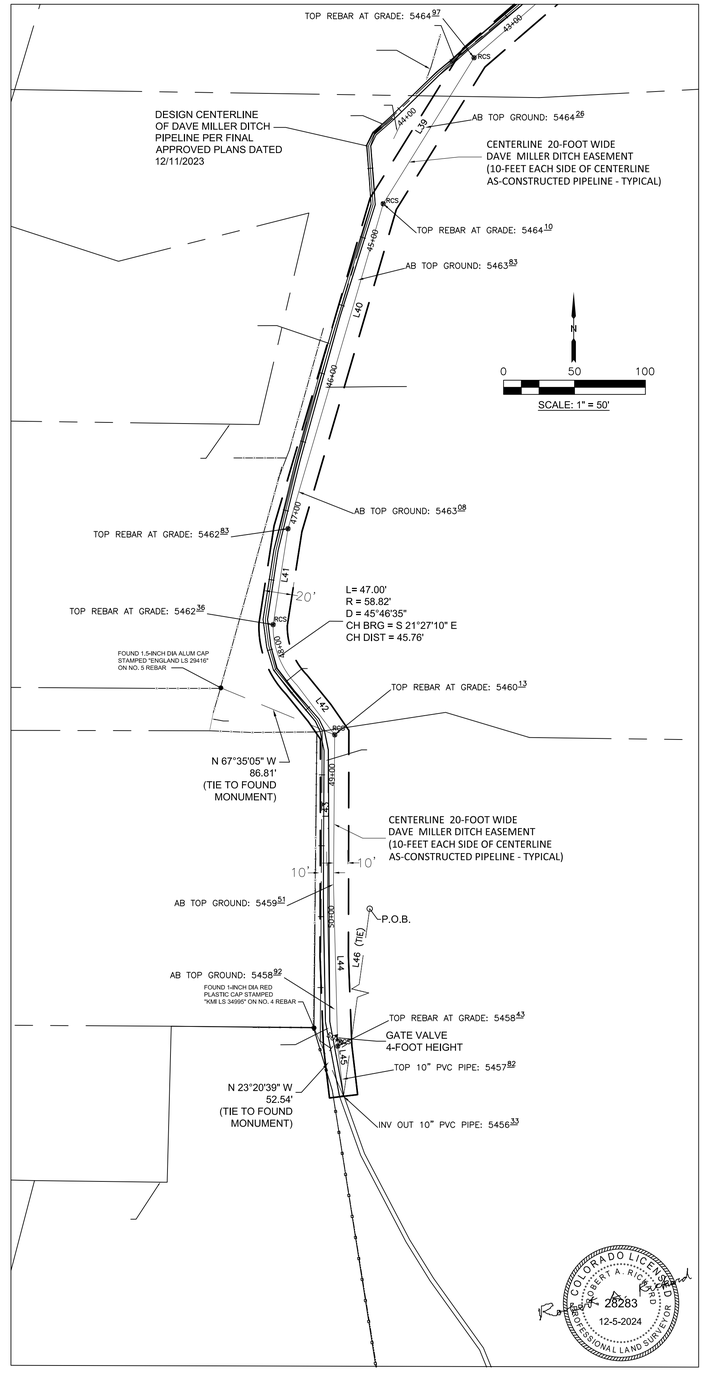
SCALE: 1" = 50'

DATE: 12-5-24

AS-BUILT SURVEY

IRRIGATION PIPELINE AND 20-FOOT-WIDE EASEMENT FOR THE DAVE MILLER MUTUAL DITCH COMPANY, LLC
LOCATED IN THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF
SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.
COUNTY OF BOULDER, STATE OF COLORADO.





COLORADO LICENSED
ROBERT A. RICHARDS
PROFESSIONAL LAND SURVEYOR
P.L.S. 28283
12-5-2024

AS-BUILT SURVEY DAVE MILLER MUTUAL DITCH COMPANY, LLC	REVISIONS	ROCK CREEK SURVEYING, LLC. 3021 GARDENIA WAY SUPERIOR, CO 80027 303-521-7376	DRAWN: RAR FIELD DATE: NOVEMBER 12, 2024	REVISIONS:	SCALE: 1" = 50' DATE: 12-5-24

Public Works Department
MS4 OVERSIGHT INSPECTION

Project Information

Project Name: David Miller Ditch Realignment	Date of Inspection: 09/06/2024
Boulder County Permit No.: SWQP- 22-023	Does the project drain to the County's MS4? N

Reason(s) for Inspection

- ☐ Initial Inspection
- ☑ 45 Calendar Day Routine Inspection for MS4 Oversight
- ☐ 14 Calendar Day Indicator Inspection Screening/Drive-by
- ☑ 14 Calendar Day Compliance Inspection corrective action follow-up

90 Calendar Day Reduced Inspection for
☐ inactive sites ☐ stormwater management program
☐ SWMP staff vacancy (check one)

☐ Complaint:
Date reported/identified:

Construction Site Assessment (Pollutants, Controls, and Discharge Evaluations)

Observations	Status	Corrective Action Needed and Notes, if Applicable
1. Did the project fail to implement control measures?	○ Yes ◉ No ☐ N/A	
2. Were inadequate control measures observed at the time of the inspection?	◉ Yes ○ No ☐ N/A	See photos. Some findings resolved as of 9/6/24.
3. Were any offsite discharges observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
If yes to questions 1-3, a follow up inspection or operator compliance form is required within 14 days. See Inspection Results for details.		
4. Did any control measures need routine maintenance at the time of the inspection?	○ Yes ◉ No ☐ N/A	
5. Were all potential pollutant sources evaluated?	◉ Yes ○ No ☐ N/A	

6. Is there a Stormwater Management Facility (SWMF) associated with the site? ○ Yes ◉ No
If yes, describe type of SWMF and the status and condition of the SWMF

7. Has there been a major or minor modification since the last MS4 inspection? ○ Yes ◉ No
If yes, describe

8. Other Observations/Field Notes:
This inspection serves as both a routine and a follow-up, as the entire site was evaluated, including outstanding deficiencies from the 8/20 inspection. Photos 1 and 4 in the 8/20 inspection have been resolved. Photos 2 and 3 were discussed with the contractor and it was determined that these items could be resolved with placement of some strategic control measures (forthcoming)

Inspection Results

- ☐ Passing Inspection: No deficiencies exist.
- ☐ Passing Inspection: No deficiencies exist but routine maintenance identified.
- ☑ Deficiencies Exist: Please note corrective actions must be addressed immediately in most cases.
- ☐ Notice of non-compliance: Numerous deficiencies are noted.
- ☐ Notice of Violation: **Indicates a site with site-wide or systematic BMP issues, chronic site violations, and/or repeated non-compliance items which must be resolved immediately.**

Contractor/Operator compliance form and photographs are due by (insert date): 9/10/24

If this form is not received by this date, a follow up inspection will be scheduled within 14 days of the original MS4 Inspection

Public Works Department

MS4 OVERSIGHT INSPECTION

Inspection Certification

I certify that the information in this Inspection Report is, to the best of my knowledge and belief, true, accurate, and complete. This report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

MS4 Compliance Inspector Name: Lily Montesano Date: 9/6/24

MS4 Compliance Inspector Signature: Lily Montesano

Please note, this report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

David Miller Ditch Routine MS4 Inspection - 9/6/24

Photo 1 - Correction: Additional vegetation has been coming up due to recent rains. Contractor confirmed use of drill seeding.

Photo 2 - Implemented stabilization is inadequate. Per discussion with contractor, this will be addressed via SCL in a strategically-placed location.

Photo 3 - Implemented stabilization is inadequate. Per discussion with contractor, this will be addressed via SCL in a strategically-placed location.

Photo 4 - Correction: Additional vegetation has been coming up due to recent rains. Contractor confirmed use of drill seeding.

Public Works Department
MS4 OVERSIGHT INSPECTION

Project Information

Project Name: David Miller Ditch Realignment	Date of Inspection: 09/06/2024
Boulder County Permit No.: SWQP- 22-023	Does the project drain to the County's MS4? N

Reason(s) for Inspection

- ☐ **Initial Inspection**
- ☐ 45 Calendar Day **Routine Inspection** for MS4 Oversight
- ☐ 14 Calendar Day **Indicator Inspection** Screening/Drive-by
- ☑ 14 Calendar Day **Compliance Inspection** corrective action follow-up

90 Calendar Day **Reduced Inspection** for
☐ inactive sites ☐ stormwater management program
☐ SWMP staff vacancy (check one)

☐ **Complaint:**
Date reported/identified:

Construction Site Assessment (Pollutants, Controls, and Discharge Evaluations)

Observations	Status	Corrective Action Needed and Notes, if Applicable
1. Did the project fail to implement control measures?	☐ Yes ◉ No ☐ N/A	
2. Were inadequate control measures observed at the time of the inspection?	☐ Yes ◉ No ☐ N/A	See photos. Some findings resolved as of 9/6/24.
3. Were any offsite discharges observed at the time of the inspection?	☐ Yes ◉ No ☐ N/A	
If yes to questions 1-3, a follow up inspection or operator compliance form is required within 14 days. See Inspection Results for details.		
4. Did any control measures need routine maintenance at the time of the inspection?	☐ Yes ◉ No ☐ N/A	
5. Were all potential pollutant sources evaluated?	☐ Yes ◉ No ☐ N/A	

6. Is there a Stormwater Management Facility (SWMF) associated with the site? ☐ Yes ◉ No
If yes, describe type of SWMF and the status and condition of the SWMF

7. Has there been a major or minor modification since the last MS4 inspection? ☐ Yes ◉ No
If yes, describe

8. Other Observations/Field Notes:
This inspection serves as both a routine and a follow-up, as the entire site was evaluated, including outstanding deficiencies from the 8/20 inspection. Photos 1 and 4 in the 8/20 inspection have been resolved. Photos 2 and 3 were discussed with the contractor and it was determined that these items could be resolved with placement of some strategic control measures (forthcoming)

Inspection Results

- ☑ **Passing Inspection:** No deficiencies exist.
- ☐ **Passing Inspection:** No deficiencies exist but routine maintenance identified.
- ☐ **Deficiencies Exist:** Please note corrective actions must be addressed immediately in most cases.
- ☐ **Notice of non-compliance:** Numerous deficiencies are noted.
- ☐ **Notice of Violation:** **Indicates a site with site-wide or systematic BMP issues, chronic site violations, and/or repeated non-compliance items which must be resolved immediately.**

Contractor/Operator compliance form and photographs are due by (insert date): 9/10/24

If this form is not received by this date, a follow up inspection will be scheduled within 14 days of the original MS4 Inspection

Public Works Department

MS4 OVERSIGHT INSPECTION

Inspection Certification

I certify that the information in this Inspection Report is, to the best of my knowledge and belief, true, accurate, and complete. This report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

MS4 Compliance Inspector Name: Lily Montesano Date: 9/6/24

MS4 Compliance Inspector Signature: Lily Montesano

Please note, this report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

SWQP-22-023 David Miller Ditch Realignment Follow-up Inspection Photos

A sediment control log has been added at a strategic location where disturbances of concern drain drain to a channelized area.

Photo 2

Photo 3

Photo 4

Public Works Department
MS4 OVERSIGHT INSPECTION

Project Information

Project Name: David Miller Ditch Realignment	Date of Inspection: 09/06/2024
Boulder County Permit No.: SWQP- 22-023	Does the project drain to the County's MS4? N

Reason(s) for Inspection

- ☐ Initial Inspection
- ☑ 45 Calendar Day Routine Inspection for MS4 Oversight
- ☐ 14 Calendar Day Indicator Inspection Screening/Drive-by
- ☐ 14 Calendar Day Compliance Inspection corrective action follow-up

90 Calendar Day Reduced Inspection for
☐ inactive sites ☐ stormwater management program
☐ SWMP staff vacancy (check one)

☐ Complaint:
Date reported/identified:

Construction Site Assessment (Pollutants, Controls, and Discharge Evaluations)

Observations	Status	Corrective Action Needed and Notes, if Applicable
1. Did the project fail to implement control measures?	○ Yes ◉ No ☐ N/A	
2. Were inadequate control measures observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	See photos. Some findings resolved as of 9/6/24.
3. Were any offsite discharges observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
If yes to questions 1-3, a follow up inspection or operator compliance form is required within 14 days. See Inspection Results for details.		
4. Did any control measures need routine maintenance at the time of the inspection?	○ Yes ◉ No ☐ N/A	
5. Were all potential pollutant sources evaluated?	◉ Yes ○ No ☐ N/A	

6. Is there a Stormwater Management Facility (SWMF) associated with the site? ○ Yes ◉ No
If yes, describe type of SWMF and the status and condition of the SWMF

7. Has there been a major or minor modification since the last MS4 inspection? ○ Yes ◉ No
If yes, describe

8. Other Observations/Field Notes:
This inspection serves as both a routine and a follow-up, as the entire site was evaluated, including outstanding deficiencies from the 8/20 inspection. Photos 1 and 4 in the 8/20 inspection have been resolved. Photos 2 and 3 were discussed with the contractor and it was determined that these items could be resolved with placement of some strategic control measures (forthcoming)

Inspection Results

- ☑ Passing Inspection: No deficiencies exist.
- ☐ Passing Inspection: No deficiencies exist but routine maintenance identified.
- ☐ Deficiencies Exist: Please note corrective actions must be addressed immediately in most cases.
- ☐ Notice of non-compliance: Numerous deficiencies are noted.
- ☐ Notice of Violation: **Indicates a site with site-wide or systematic BMP issues, chronic site violations, and/or repeated non-compliance items which must be resolved immediately.**

Contractor/Operator compliance form and photographs are due by (insert date): 9/10/24

If this form is not received by this date, a follow up inspection will be scheduled within 14 days of the original MS4 Inspection

Public Works Department

MS4 OVERSIGHT INSPECTION

Inspection Certification

I certify that the information in this Inspection Report is, to the best of my knowledge and belief, true, accurate, and complete. This report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

MS4 Compliance Inspector Name: Lily Montesano Date: 9/6/24

MS4 Compliance Inspector Signature: Lily Montesano

Please note, this report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

BUILDING PERMIT

Community Planning & Permitting Department Building Safety and Inspection Division
Courthouse Annex - 2045 13th St. - 13th & Spruce Streets
P.O. Box 471 Boulder Colorado 80306-0471
www.bouldercounty.org

Permit Number	Application Date
BP-23-3083	11/17/2023

PROJECT LOCATION

Project Address	Unit	Nearest Town or Neighborhood	General Neighborhood
1636 APPLE VALLEY ROAD			LYONS

Parcel Number	Asr. Account No.	Subdivision Name	Section	Township	Range	Jurisdiction	GIS Property Area (Acres)
120112000034	R0603802	TR, NBR 962 LYONS AREA	12	3N	71	Boulder County	9.3

OWNER

Owner Name & Address	Phone
Burdock Hollow Llc 1636 Apple Valley Rd Lyons, CO 80540	9704202263
Email	
matt@farmbearcreek.com	

CONTRACTOR/AGENT

Contractor Name & Address	Phone 1
ROCKY MOUNTAIN IMPROVEMENTS LLC Cassidy Thomas Hoffmann PO Box 1462 Lyons, CO 80540	720-737-1269
	Phone 2
Email	
cassidy@rmibuilds.com	

WORK DESCRIPTION

Grading - Installation of irrigation pipe (SPR-21-0072)

APPLICATION DETAILS

Application Type	Project Valuation	Zoning District	Occupancy Load	HERS Required	HERS Estimated	Onsite Renew Offset Req'd
Grading	$175,000	RR,A				

Structure Type	Construction Type	Snow Load (PSF)	Wind Speed (MPH)	Wildfire Hazard	Sprinkler Required
329 - Structures not Buildings, pools, hot tubs,					

GRADING

Type	Proposed cubic yards
09 Other Cut	1310
10 Other Fill	1207
	0

FEES

Fee Item	Paid Date	Amount
Application Deposit Fee	04/02/2024	$200.00
Application Deposit Fee (Adjustment)	04/02/2024	($200.00)
Grading Permit Fee	04/02/2024	$92.98
Grading Plan Review fee	04/02/2024	$60.44
Zoning and Public Health Review Fee - Grading	04/02/2024	$50.00
Technology Fee - Other	04/02/2024	$50.00
	Total Taxes	
	Total Paid	**$253.42**

UTILITIES AND SERVICES

Water Provider	Sanitation Provider
Gas Provider	Electric Provider
Fire Service Provider	

Approved by Chief Building Official	Date of Issue
Ron Flax	04/02/2024

The approval of plans and specifications does not permit the violation of any section of the Boulder County Building Code, Land Use Code, or any other Ordinance or State Law.

Permit shall become null and void if construction is not commenced within 180 days of issuance, or if work is suspended or abandoned for a period of 180 days after the work is commenced.

REQUIREMENTS AND REMARKS

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
B4 IN SO	**Grading**				Applied	Michelle Huebner	11/20/2

This permit is issued for grading work only. No other work is permitted. Structural work must be applied for on a separate building permit.

Engineering Observations. Observation reports from the design engineer or another qualified engineer stating that the grading work has been accomplished in substantial conformance with the approved grading plans will be required to be submitted to Building Safety & Inspection Services for review and approval prior to final approval of the work covered by the grading permit.

Please email this stamped, signed and sealed inspection report to ezbp@bouldercounty.gov

Please contact our office for the following required grading inspections:
• Silt Barrier, when applicable for the project (11)
• Final Grading & Drainage (61)
• Planning/Final SPR to inspect revegetation (68)

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
ON BP BLDG	**GRADING**				Applied	Sarah Stubbs	11/28/2

This permit is issued for grading work only. No other work is permitted. Structural work must be applied for on a separate building permit.

Engineering Observations. Observation reports from the design engineer or another qualified engineer stating that the grading work has been accomplished in substantial conformance with the approved grading plans will be required to be submitted to Building Safety & Inspection Services for review and approval prior to final approval of the work covered by the grading permit.

Please email this signed, sealed and dated inspection report to ezbp@bouldercounty.gov

Please contact our office for the following required grading inspections:
• Silt Barrier, when applicable for the project (11)
• Final Grading & Drainage (61)
• Planning/Final SPR to inspect revegetation (68)

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
B4 IN SO	**Access & Engineering - Final Inspection Required**				Applied	Ian Brighton	2/21/24

A final Access & Engineering inspection is required to verify all access improvements are complete, all disturbed areas stabilized, and all construction materials have been removed. Approval of the final access inspection is required for permit closeout.

Prior to final inspection, the applicant must submit to CPP a copy of a signed easement from Boulder County for 0 N St Vrain Drive (Parcel #120112000018).

To request an inspection, use the online portal or call 303-441-3925 and enter inspection code 82. Once a request is received, staff will schedule the inspection. Please note that photo confirmation of completed work may be required prior to scheduling.

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
B4 IN SO	**EXISTING VEGETATION AND TREE PRESERVATION PLAN**				Applied	Ainsley McElwee	3/28/24

Prior to issuance of grading permits, submit to CPP staff, for review and approval, a Tree Preservation Plan that indicates which trees – if any – will be removed from the channel. The Tree Preservation Plan can be included as part of the Revegetation Plan required at the time of permit application (see Standard 12 discussion below). Any trees or ground vegetation that will be removed in the flood "overflow" channel during construction must be identified and replaced in the channel

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
B4 IN SO	**REVEGETATION**				Applied	Ainsley McElwee	3/28/24

Revegetation must be installed per the approved plan, inspected and approved prior to Certificate of Occupancy or final inspection.

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
ON BP BLDG	**Project summary**				Applied	Michelle Huebner	11/20/2

Installation of approximately 5000 lf of ten inch irrigation pipe for the Dave Miller Ditch, Lyons Colorado

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
ON BP TRAN	**Stormwater Quality Permit**				Applied	Allison Kelly	2/15/24

No earthwork may occur except for the purpose of initial control measure installation until an initial inspection is performed and the Boulder County Stormwater Quality Permit (SWQP-22-023) is issued. Email stormwater@bouldercounty.gov or call 720-237-2384 for an initial SWQP inspection.

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
ON BP TRAN	**Construction Staging**				Applied	Ian Brighton	2/21/24

During construction, all materials, machinery, dumpsters, and other items shall be staged in approved, designated staging locations shown on the plans. No construction staging is allowed along Apple Valley Road. Worker vehicles shall be parked on site or to one side of Apple Valley Road, as far out of the travelway as possible.

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
ON BP ZON	**PREBLE'S MEADOW JUMPING MOUSE: THREATENED SPECIES**				Applied	Ainsley McElwee	3/28/24

"Project activities are expected to last one week and are planned for March of 2023, before Preble's meadow jumping mice emerge from hibernation... The Service concurs that the impacts resulting from the realignment of the Dave Miller Mutual Ditch Project are unlikely to result in take of a listed species because existing trees and shrubs will be avoided, no riparian vegetation is known to occur within the project alignment, activities will occur before mice emerge from hibernation, and all areas that are temporarily disturbed will be re-seeded and mulched immediately following construction. In addition, all treatment measures from the previous biological opinion will be followed."

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
ON BP ZON	**Equipment Cleaning**				Applied	Ainsley McElwee	3/28/24

Prior to being transported to the site, the equipment used to dig the ditch must be cleaned using high pressure, hot water to prevent the transference of non-native species to the site. CPP staff must receive confirmation of equipment treatment.

Type	Requirement/Remark	Complied	Complied By	Date	Status	Applied By	Date
ON BP ZON	**Silt Barrier and Catch Fence**				Applied	Ainsley McElwee	3/28/24

PRIOR TO ANY GRADING OR SITE DISTURBANCE, the silt barrier and catch fencing location and materials must be installed as required per the approved plans.

At the time of building inspections, the Community Planning & Permitting Department must confirm the silt barrier and catch fence location and materials have been installed as required per the approved plans on sheet XX dated XX. Any other areas on site are subject to installation of silt barriers and/or catch fencing, if needed.

INSPECTION RECORD

Inspector must date and initial each inspection pertaining to this job.

1636 APPLE VALLEY ROAD

BP-23-3083

DO NOT CONCEAL ANY WORK UNTIL APPROVED BY INSPECTOR

ROUGH BUILDING INSPECTIONS

Inspection	Appd.	Not Appd.	Other	Date	Insp.	Comments
Catch Fence (13)						
Silt Barriers (11)						
Footings, Pads (12)						
Building Envelope						
Setback Survey						
Foundation Walls-Reinforcing (14)						
Concrete Encased Electrode (15)						
Damp Proofing						
Underground Electric (21)						
Underground Plumbing (22)						
Underground Gas Piping (23)						
Manual J and D						
Sprinkler Plan Review						
Rough Sprinkler						
Height Survey						
Pre-Rough Wildfire Mitigation						
Structural Framing						
Rough Complete (40)						
Rough Framing (41)						
Rough Heating and Ventilation (42)						
Rough Electric (43)						
Rough Plumbing (44)						
Rough Gas Piping (45)						
Rough Other (49)						
Insulation (51)						
Wallboard (52)						

FINAL BUILDING INSPECTIONS

Inspection	Appd.	Not Appd.	Other	Date	Insp.	Comments
Final Grading and Drainage (61)						
Final Framing (62)						
Final Heat and Ventilation (63)						
Final Electric (64)						
Final Plumbing (65)						
Final Roof (66)						
Final HERS or Prescriptive						
Final Recycling Receipts						
Final Sprinkler						
Final Other (69)						
Building Inspection Complete						
Final Wildfire (67)						
Planning/Final SPR (68)						
Stream Restoration Inspection (81)						

METER RELEASES

Inspection	Appd.	Not Appd.	Other	Date	Insp.	Comments
Temporary Electric Meter (71)						
Electric Meter Release (72)						
Gas Meter Release (73)						
Net Meter (74)						
Electrical for Lift Station (90)						

Building division staff informs utility companies of released meters on the business day following the meter release inspection.

OTHER AGENCY FINAL INSPECTIONS

Inspection	Appd.	Not Appd.	Other	Date	Insp.	Comments
Public Health Inspection						
Access and Engineering (82)						
Transportation Floodplain						
Fire District						
Other Agency Inspection						

ALL REQUIREMENTS COMPLETE

Inspection	Date	Staff	Comments
All Requirements Complete			

All inspection requests must be received by 3:30pm, in order to be scheduled for the following business day. You will need to have your permit number to schedule an inspection. Please call (303) 441-3925 and press 1 to schedule an inspection.

Appendix C

AS-BUILT SURVEY

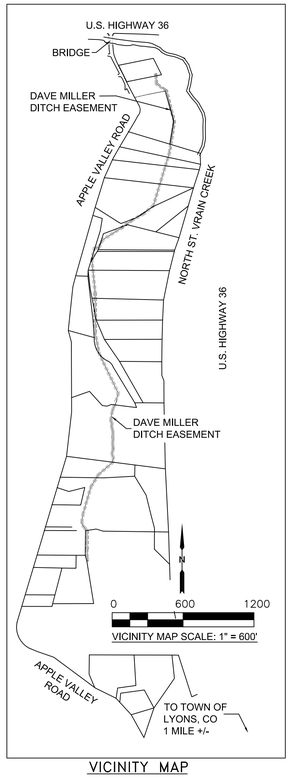
IRRIGATION PIPELINE AND 20-FOOT-WIDE EASEMENT FOR THE DAVE MILLER MUTUAL DITCH COMPANY, LLC
LOCATED IN THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF
SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.
COUNTY OF BOULDER, STATE OF COLORADO.

DITCH CENTERLINE TABLE:

LINE	BEARING	DISTANCE
L1	S 15°24'35" E	5.98'
L2	S 03°40'56" E	19.18'
L3	S 03°47'29" E	59.57'
L4	S 54°49'27" E	104.54'
L5	S 14°16'26" E	268.66'
L6	S 09°04'03" W	271.66'
L7	S 16°53'58" W	462.62'
L8	S 50°02'39" W	111.72'
L9	S 61°51'49" W	108.35'
L10	S 53°50'55" W	111.40'
L11	S 57°41'38" W	186.96'
L12	S 25°03'53" W	71.09'
L13	S 80°11'42" W	41.77'
L14	S 11°07'48" W	103.84'
L15	S 05°50'18" E	273.94'
L16	S 00°03'14" E	341.58'
L17	S 11°01'28" E	182.79'
L18	S 25°46'47" E	369.97'
L19	S 17°21'48" W	57.51'
L20	S 12°39'37" E	5.57'
L21	S 06°56'37" W	14.81'
L22	S 26°44'23" W	45.18'
L23	S 22°25'31" W	34.82'
L24	S 08°48'05" W	83.77'
L25	S 24°39'44" E	26.47'
L26	S 07°43'06" W	26.11'
L27	S 13°34'32" E	43.60'
L28	S 03°20'33" E	35.92'
L28A	S 00°20'04" E	24.16'
L29	S 06°42'00" W	39.73'
L30	S 05°34'39" E	34.78'
L31	S 00°45'39" W	22.44'
L32	S 13°32'18" W	29.41'
L33	S 10°02'55" E	18.01'
L34	S 24°55'32" E	22.34'
L35	S 14°40'17" W	12.39'
L36	S 11°33'24" W	28.10'
L37	S 50°36'38" W	17.79'
L38	S 49°00'23" W	138.72'
L39	S 31°52'12" W	121.27'
L40	S 16°19'52" W	238.79'
L41	S 08°48'38" W	68.43'
L42	S 37°13'25" E	44.10'
L43	S 00°28'02" W	105.46'
L44	S 01°29'09" E	114.12'
L45	S 06°41'38" E	35.62'
L46	N 07°55'49" E	4164.16'

LEGEND

- UTILITY POLE
- OVERHEAD UTILITY LINES
- ELECTRIC METER
- ELECTRIC BOX ON POLE
- GATE VALVE 4-FOOT HEIGHT
- SEPTIC ACCESS HATCH
- SANITARY SEWER SERVICE LINE
- P.V.C. RISER PIPE
- ELECTRICAL BOX
- 4-FOOT WIRE FENCE
- SET NO. 5 REBAR WITH 1.25 INCH DIAMETER YELLOW PLASTIC CAP STAMPED "ROCK CREEK SURVEYING" "LS 28283" ALSO SET 4-FOOT WOOD LATH WITH BLUE PAINT AND LIME GREEN FLAGGING AT APPARENT CENTERLINE ANGLE POINT OF 20-FOOT WIDE DITCH EASEMENT



VICINITY MAP

GENERAL NOTES:

1) THE PURPOSE OF THIS AS-BUILT SURVEY IS TO DEPICT THE FINAL CONSTRUCTED LOCATION OF THE DAVE MILLER DITCH PIPELINE AND SHOW A 20-FOOT-WIDE PRIVATE EASEMENT FOR DAVE MILLER MUTUAL DITCH.COMPANY, LLC.

2) THIS EXHIBIT IS NOT A LAND SURVEY PLAT PER CRS 38-51-106 OR AN IMPROVEMENT SURVEY PLAT PER CRS 38-51-102(9).

3) BASIS OF BEARINGS: THE NORTHEASTERLY LINE OF THE TOWN OF LYONS TRACT A, RECORDED AS RECEPTION NO. 90949264 BEARS NORTH 26 DEGREES, 26 MINUTES, 28 SECONDS WEST BETWEEN A FOUND YELLOW PLASTIC CAP WITH ILLEGIBLE STAMPING ON TOP OF A 6" DIAMETER WOOD FENCE POST AT THE SOUTHEAST CORNER OF SAID TRACT A AND A FOUND NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "MD JOHNSON LS 6716 AT THE NORTHEAST CORNER OF SAID TRACT A.

4) EXISTING IMPROVEMENTS IN THE VICINITY OF THE NEWLY CONSTRUCTED PIPELINE ARE SHOWN FOR GENERAL ORIENTATION AND INFORMATION PURPOSES. SOME UNDERGROUND UTILITIES ARE ALSO SHOWN. ALL IMPROVMENTS AND UNDERGROUND UTILITIES ARE NOT SHOWN.

5) FIELD SURVEY CONDUCTED ON NOVEMBER 12, 2024. THE DITCH PIPELINE WAS BURIED BELOW GRADE AND NOT OBSERVED, EXCEPT FOR A PORTION WITHIN THE SOSEY DITCH AT 2136 APPLE VALLEY ROAD AND AT THE SOUTH OUTFALL END OF THE DITCH PIPE. THE PIPELINE CONTRACTOR DID NOT SET STAKES OR REBARS TO MARK THE LOCATION OF PIPELINE ANGLE POINTS. THE CENTERLINE OF THE PIPE WAS LOCATED APPROXIMATELY USING VISUAL OBSERVATION OF THE BACKFILLED EXCAVATION LIMITS. NO POTHOLING OF THE PIPE WAS CONDUCTED TO VERIFY DEPTH OR LOCATION. NO. 5 REBARS WITH 1.25-INCH DIAMETER YELLOW PLASTIC CAPS STAMPED LS 28283 WERE SET TO MARK APPARENT DITCH CENTERLINE ANGLE POINTS AT SOME LOCATIONS AS LABELED HEREON.

6) PARCEL LINES SHOWN HEREON ARE APPROXIMATE AND WERE DERIVED FROM BOULDER COUNTY'S ONLINE GIS MAPPING AND ARE FOR GENERAL INFORMATION PURPOSES ONLY. LAND SURVEYS OF INDIVIDUAL OWNERSHIP PARCELS AT OR NEAR THE EASEMENT WERE NOT CONDUCTED. FOUND SURVEY MONUMENTS ARE SHOWN AND LABELED HEREON. SOME FOUND SURVEY MONUMENTS AND EXISTING SURVEY CONTROL POINTS ARE TIED WITH BEARINGS AND DISTANCES TO DITCH CENTERLINE ANGLE POINTS, SET WITH NO. 5 REBAR WITH 1.25-INCH DIAMETER YELLOW PLASTIC CAP MONUMENTS STAMPED LS 28283, FOR SURVEY INFORMATION PURPOSES.

7) DISTANCES SHOWN HEREON ARE U.S. SURVEY FEET.

8) BENCHMARK: TOP OF ORANGE PLASTIC CAP STAMPED "CONTROL POINT" ON NO 4 REBAR, 0.5 FEET ABOVE GROUND. ELEVATION 5503.43 FEET. NAVD'88 VERTICAL DATUM PER SURVEY DATA PREPARED BY J. DAOUD, PLS OF AZIMUTH SURVEYING, INC. FOR THE PREVIOUS DAVE MILLER DITCH CONCRETE DIVERSION STRUCTUE AND PIPE PROJECT, AS SHOWN AND LABELED HEREON.

DITCH EASEMENT LEGAL DESCRIPTION:

A 20-FOOT-WIDE DITCH EASEMENT, BEING PART OF THE NORTHEAST AND SOUTHEAST QUARTERS OF SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF BOULDER, STATE OF COLORADO, LYING 10 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BASIS OF BEARINGS: THE NORTHEASTERLY LINE OF THE TOWN OF LYONS TRACT A, RECORDED JULY 22, 1970 AS RECEPTION NO. 90949264 BEARS NORTH 26 DEGREES, 26 MINUTES, 28 SECONDS WEST BETWEEN A FOUND YELLOW PLASTIC CAP WITH ILLEGIBLE STAMPING ON TOP OF A 6" DIAMETER WOOD FENCE POST AT THE SOUTHEAST CORNER OF SAID TRACT A AND A FOUND NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "MD JOHNSON LS 6716" AT THE NORTHEAST CORNER OF SAID TRACT A, WITH ALL BEARINGS CONTAINED HEREIN BEING RELATIVE THERETO.

COMMENCING AT A FOUND NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "MD JOHNSON LS 6716 AT THE NORTHEAST CORNER OF TRACT A OF THE TOWN OF LYONS PROPERTY WITH DEED RECORDED JULY 22, 1970 AS RECEPTION NO. 90949264; THENCE S 08°06'17" E A DISTANCE OF 133.53 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG THE CENTERLINE OF SAID 20-FOOT WIDE DITCH EASEMENT THE FOLLOWING (41) COURSES AND DISTANCES:

1) S 15°24'35" E A DISTANCE OF 5.98 FEET;
2) THENCE S 03°40'56" E A DISTANCE OF 19.18 FEET;
3) THENCE S 03°47'29" E A DISTANCE OF 59.57 FEET;
4) THENCE S 54°49'27" E A DISTANCE OF 104.54 FEET;
5) THENCE S 14°16'26" E A DISTANCE OF 268.66 FEET;
6) THENCE S 09°04'03" W A DISTANCE OF 271.66 FEET;
7) THENCE S 16°53'58" W A DISTANCE OF 462.62 FEET;
8) THENCE S 50°02'39" W A DISTANCE OF 111.72 FEET;
9) THENCE S 61°51'49" W A DISTANCE OF 108.35 FEET;
10) THENCE S 53°50'55" W A DISTANCE OF 111.40 FEET;
11) THENCE S 57°41'38" W A DISTANCE OF 186.96 FEET;
12) THENCE S 25°03'53" W A DISTANCE OF 71.09 FEET;
13) THENCE S 80°11'42" W A DISTANCE OF 41.77 FEET;
14) THENCE S 11°07'48" W A DISTANCE OF 103.84 FEET;
15) THENCE S 05°50'18" E A DISTANCE OF 273.94 FEET;
16) THENCE S 00°03'14" E A DISTANCE OF 341.58 FEET;
17) THENCE S 11°01'28" E A DISTANCE OF 182.79 FEET;
18) THENCE S 25°46'47" E A DISTANCE OF 369.97 FEET;
19) THENCE S 17°21'48" W A DISTANCE OF 57.51 FEET;
20) THENCE S 12°39'37" E A DISTANCE OF 5.57 FEET;
21) THENCE S 06°56'37" W A DISTANCE OF 14.81 FEET;
22) THENCE S 26°44'23" W A DISTANCE OF 45.18 FEET;
23) THENCE S 22°25'31" W A DISTANCE OF 34.82 FEET;
24) THENCE S 08°48'05" W A DISTANCE OF 83.77 FEET;
25) THENCE S 24°39'44" E A DISTANCE OF 26.47 FEET;
26) THENCE S 07°43'06" W A DISTANCE OF 26.11 FEET;
27) THENCE S 13°34'32" E A DISTANCE OF 43.60 FEET;
28) THENCE S 03°20'33" E A DISTANCE OF 35.92 FEET;
29) THENCE S 00°20'04" E A DISTANCE OF 24.16 FEET;
30) THENCE S 06°42'00" W A DISTANCE OF 39.73 FEET;
31) THENCE S 05°34'39" E A DISTANCE OF 34.78 FEET;
32) THENCE S 00°45'39" W A DISTANCE OF 22.44 FEET;
33) THENCE S 13°32'18" W A DISTANCE OF 29.41 FEET;
34) THENCE S 10°02'55" E A DISTANCE OF 18.01 FEET;
35) THENCE S 24°55'32" E A DISTANCE OF 22.34 FEET;
36) THENCE S 14°40'17" W A DISTANCE OF 12.39 FEET;
37) THENCE S 11°33'24" W A DISTANCE OF 28.10 FEET;
38) THENCE S 50°36'38" W A DISTANCE OF 17.79 FEET;
39) THENCE S 49°00'23" W A DISTANCE OF 138.72 FEET;
40) THENCE S 31°52'12" W A DISTANCE OF 121.27 FEET;
41) THENCE S 16°19'52" W A DISTANCE OF 238.79 FEET;

THENCE S 08°48'38" W A DISTANCE OF 68.43 FEET TO THE BEGINNING OF A NON-TANGENT CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 58.82 FEET, A CHORD THAT BEARS S 21°27'10" E WITH A CHORD DISTANCE OF 45.76 FEET; THENCE ALONG THE ARC OF SAID CURVE A DISTANCE OF 47.00 FEET;

THENCE DEPARTING SAID CURVE ALONGTHE FOLLOWING (4) COURSES AND DISTANCES:

42) THENCE S 37°13'25" E A DISTANCE OF 44.10 FEET;
43) THENCE S 00°28'02" W A DISTANCE OF 105.46 FEET;
44) THENCE S 01°29'09" E A DISTANCE OF 114.12 FEET;
45) THENCE S 06°41'38" E A DISTANCE OF 35.62 TO THE POINT OF TERMINUS.

EASEMENT CONTAINS: 92,780.6 SQ FT, 2.13 ACRES MORE OR LESS.

SURVEYOR'S CERTIFICATION:

I, ROBERT A. RICKARD, A COLORADO LICENSED SURVEYOR, DO HEREBY CERTIFY TO THE DAVE MILLER MUTUAL DITCH COMPANY, LLC THAT I PREPARED THIS AS-BUILT SURVEY ON DECEMBER 5, 2024, AS IS BASED ON A FIELD SURVEY CONDUCTED NOVEMBER 12, 2024 AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY 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 THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON,

ROBERT A. RICKARD, PLS NO. 28283
FOR AND ON BEHALF OF
ROCK CREEK SURVEYING, LLC

COLORADO LICENSED ROBERT A. RICKARD 28283 PROFESSIONAL LAND SURVEYOR

Reg. # 28283
12-5-2024

AS-BUILT SURVEY
DAVE MILLER MUTUAL DITCH COMPANY, LLC

REVISIONS

ROCK CREEK SURVEYING, LLC.
3021 GARDENIA WAY
SUPERIOR, CO 80027
303-521-7376

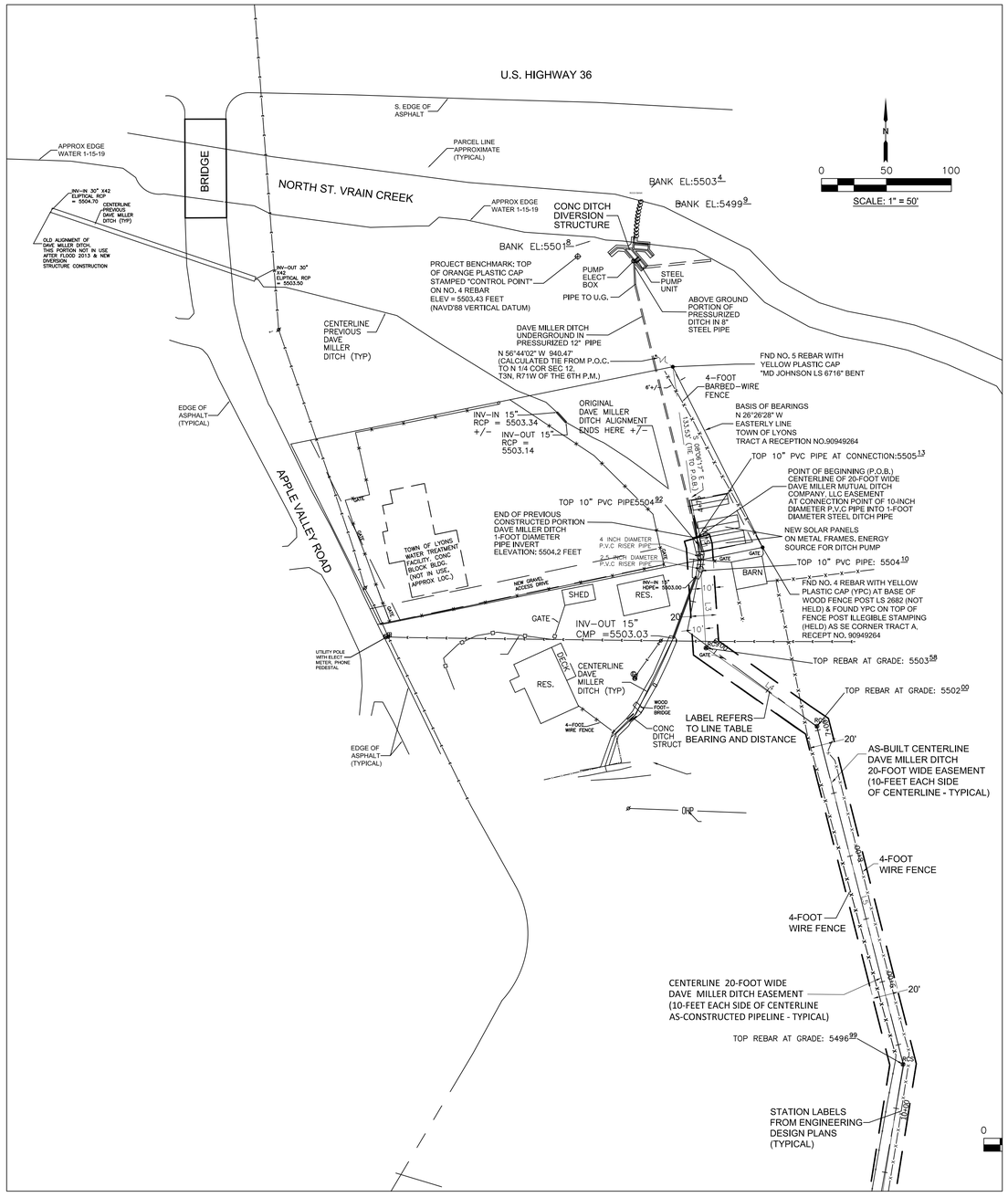
DRAWN: RAR
FIELD DATE: NOVEMBER 12, 2024

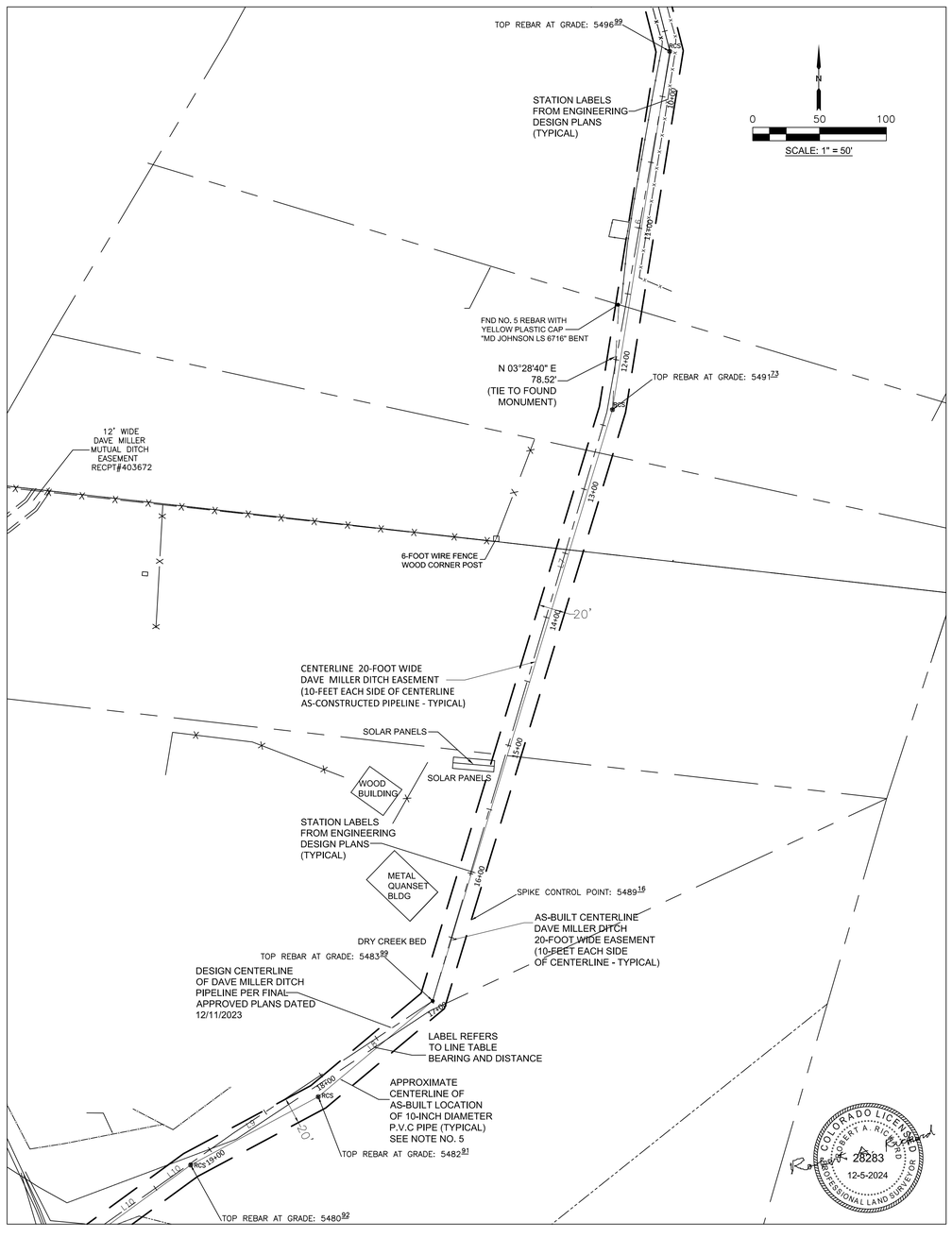
REVISIONS:

SCALE: 1" = 50'
DATE: 12-5-24

AS-BUILT SURVEY

IRRIGATION PIPELINE AND 20-FOOT-WIDE EASEMENT FOR THE DAVE MILLER MUTUAL DITCH COMPANY, LLC
LOCATED IN THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF
SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.
COUNTY OF BOULDER, STATE OF COLORADO.



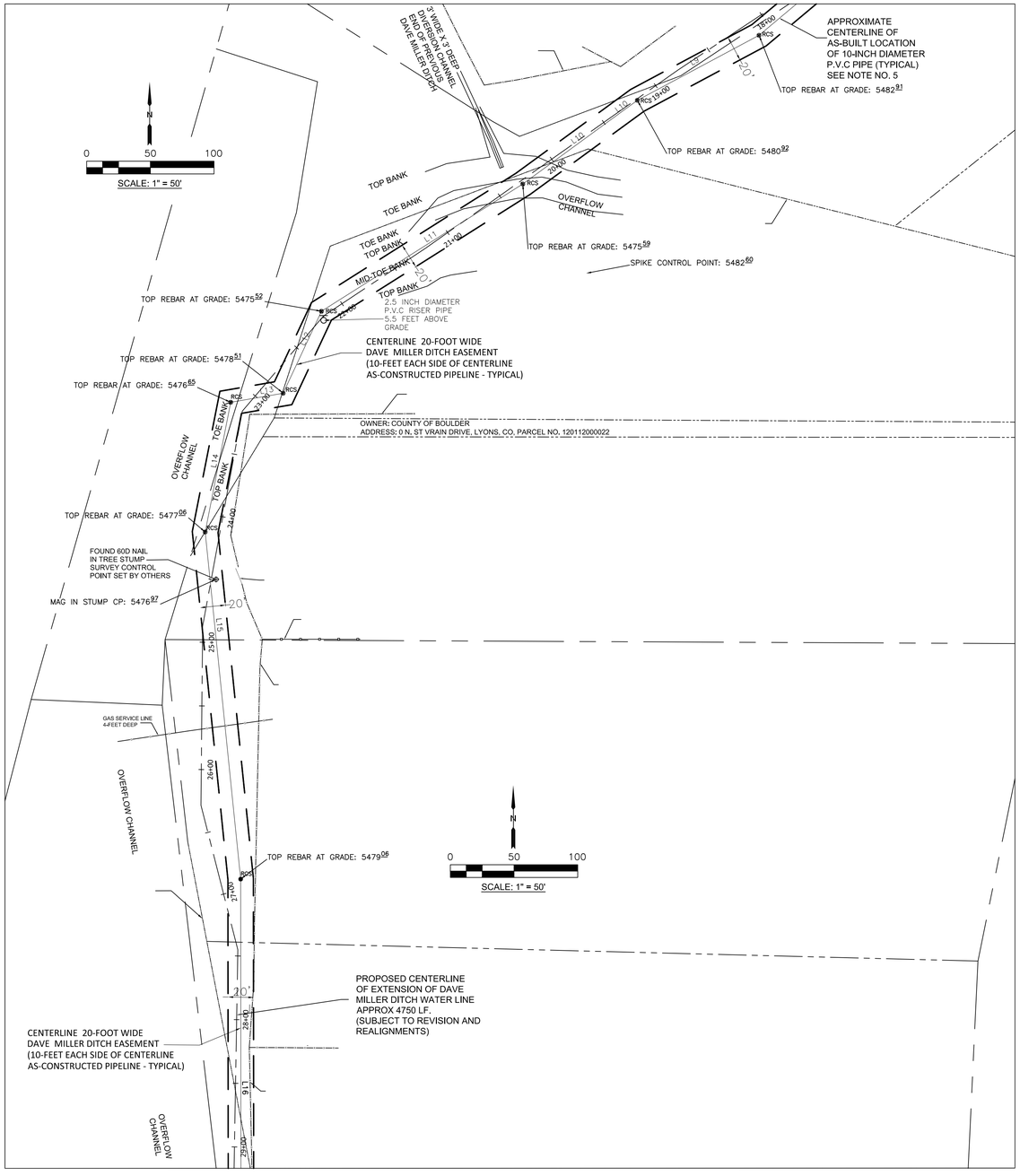


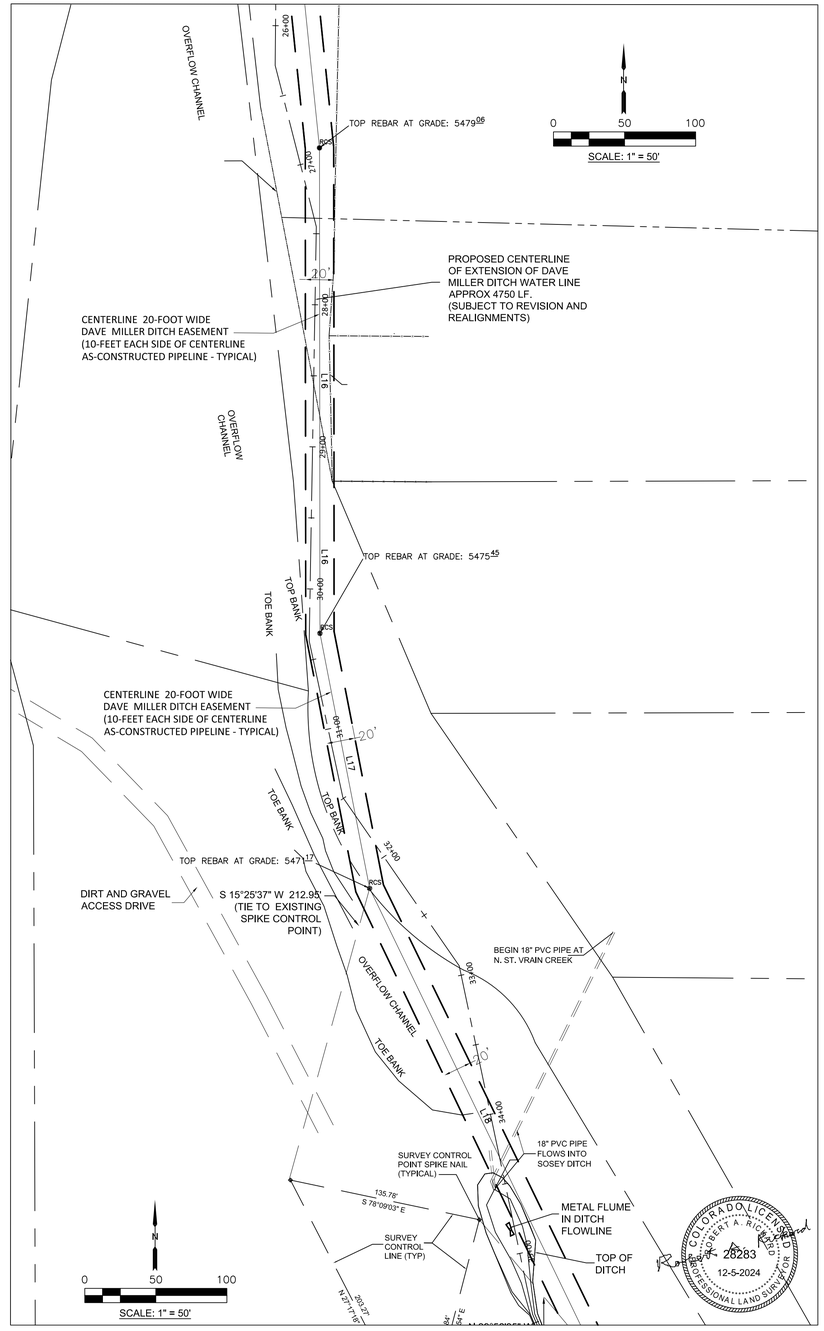
AS-BUILT SURVEY DAVE MILLER MUTUAL DITCH COMPANY, LLC	REVISIONS	ROCK CREEK SURVEYING, LLC. 3021 GARDENIA WAY SUPERIOR, CO 80027 303-521-7376	DRAWN: RAR FIELD DATE: NOVEMBER 12, 2024	REVISIONS:	SCALE: 1" = 50' DATE: 12-5-24

AS-BUILT SURVEY

IRRIGATION PIPELINE AND 20-FOOT-WIDE EASEMENT FOR THE DAVE MILLER MUTUAL DITCH COMPANY, LLC
LOCATED IN THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF
SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.
COUNTY OF BOULDER, STATE OF COLORADO.

SHEET 3 OF 4



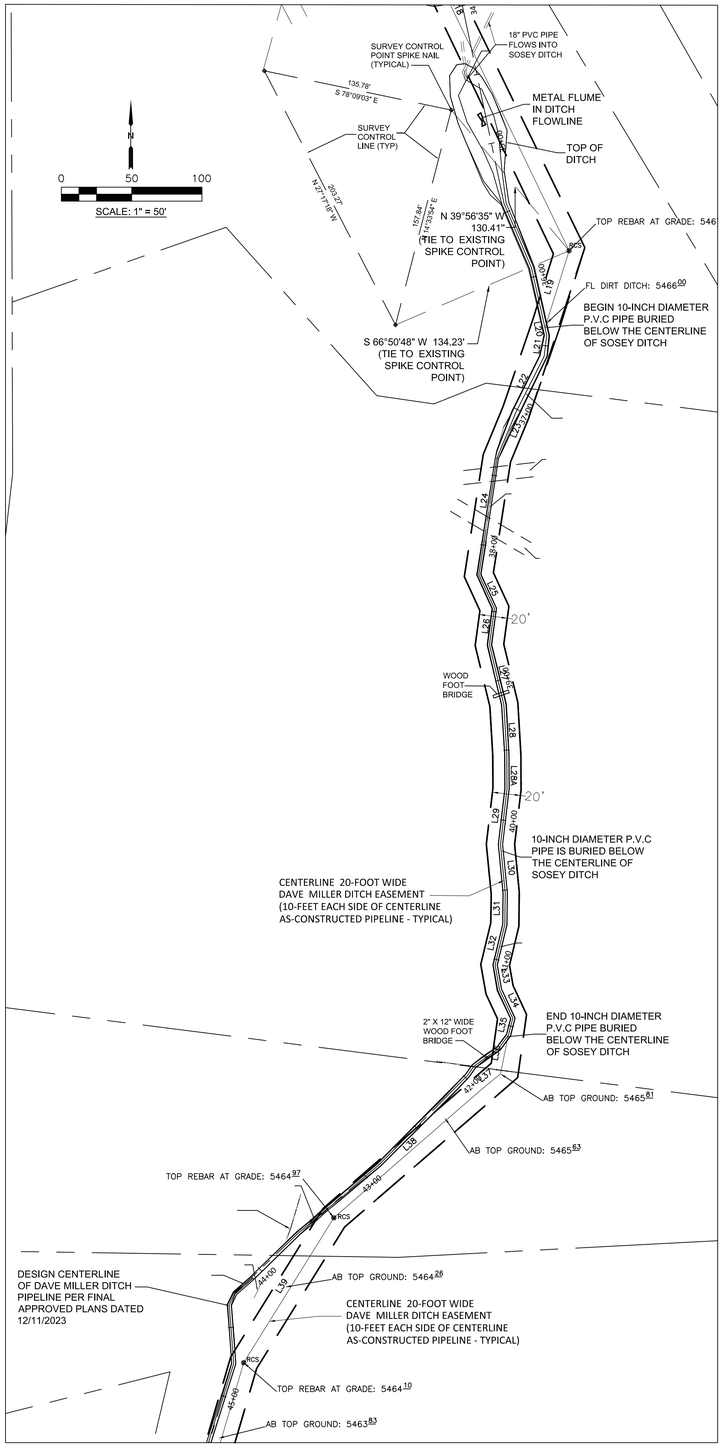


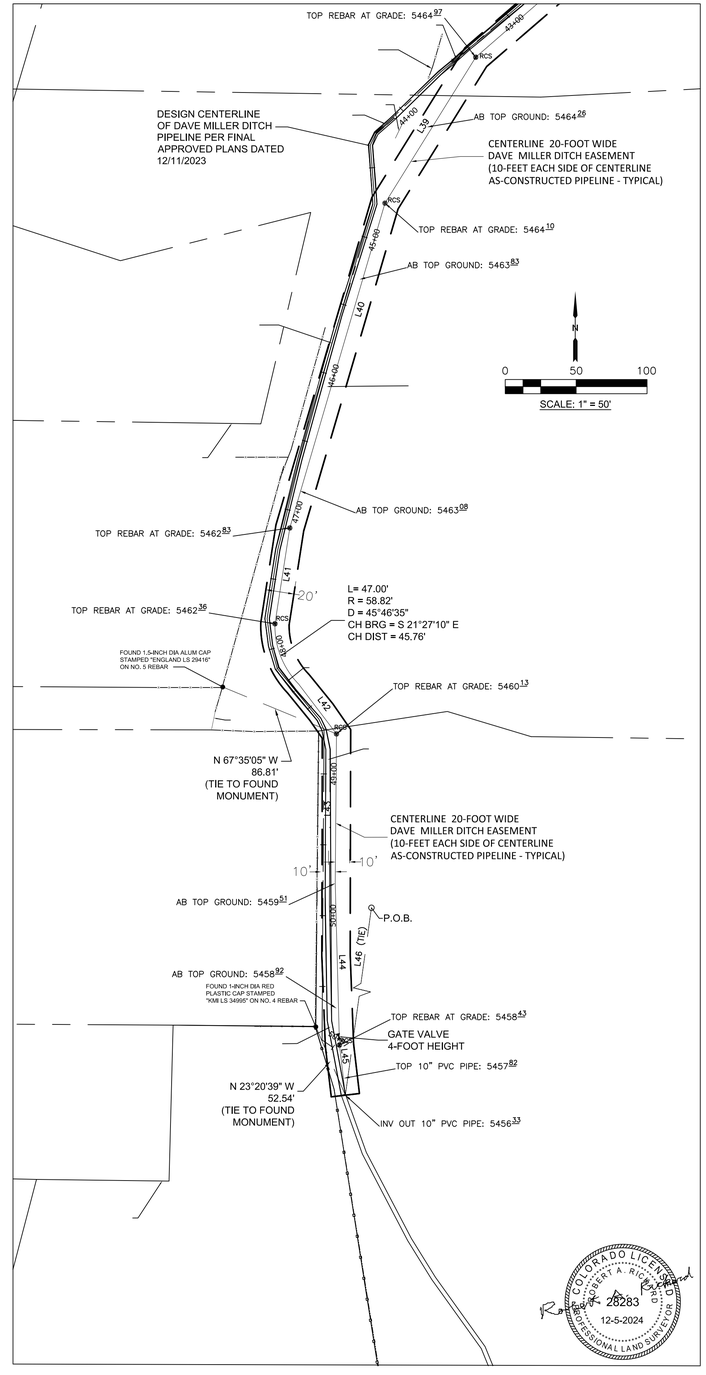
AS-BUILT SURVEY DAVE MILLER MUTUAL DITCH COMPANY, LLC	REVISIONS	ROCK CREEK SURVEYING, LLC. 3021 GARDENIA WAY SUPERIOR, CO 80027 303-521-7376	DRAWN: RAR FIELD DATE: NOVEMBER 12, 2024	REVISIONS:	SCALE: 1" = 50' DATE: 12-5-24

AS-BUILT SURVEY

IRRIGATION PIPELINE AND 20-FOOT-WIDE EASEMENT FOR THE DAVE MILLER MUTUAL DITCH COMPANY, LLC
LOCATED IN THE NORTHEAST QUARTER AND THE SOUTHEAST QUARTER OF
SECTION 12, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.
COUNTY OF BOULDER, STATE OF COLORADO.

SHEET 4 OF 4





AS-BUILT SURVEY DAVE MILLER MUTUAL DITCH COMPANY, LLC	REVISIONS	ROCK CREEK SURVEYING, LLC. 3021 GARDENIA WAY SUPERIOR, CO 80027 303-521-7376	DRAWN: RAR FIELD DATE: NOVEMBER 12, 2024	REVISIONS:	SCALE: 1" = 50' DATE: 12-5-24

Appendix D

DAVE MILLER DITCH RELOCATION
LYONS, COLORADO

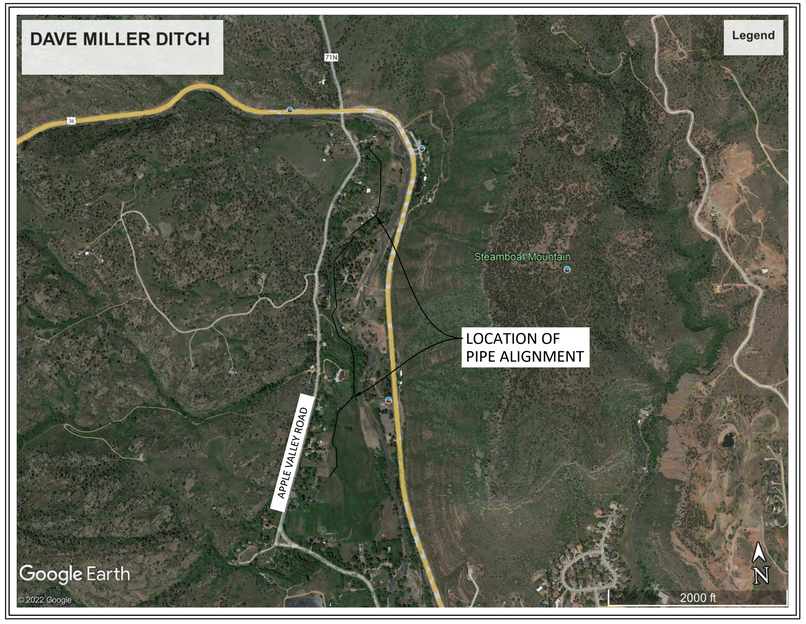
LOCATED IN SECTIONS 12 AND 13, TOWNSHIP 3 NORTH, RANGE 71 WEST OF THE 6TH P.M.,
COUNTY OF BOULDER, STATE OF COLORADO

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

GENERAL NOTES:

1. A 20-FOOT DAVE MILLER MUTUAL DITCH COMPANY EASEMENT EXISTS FIFTEEN FEET ON ONE SIDE AND FIVE FEET ON THE OTHER SIDE OF THE PROPOSED NEW TEN-INCH DITCH PIPELINE FOR CONSTRUCTION ACCESS, EQUIPMENT STAGING, MATERIAL STOCKPILING AND CONSTRUCTION OF THE DITCH EXTENSION PROJECT. SEE TYPICAL DITCH CONSTRUCTION EASEMENT DETAIL THIS SHEET.
2. BOULDER COUNTY OWTS REGULATIONS REQUIRES A TEN-FOOT SEPARATION BETWEEN THE DITCH PIPELINE AND SEPTIC TANKS AND SOIL TREATMENT AREAS.
3. THE NORTH ST. VRAIN CREEK FLOODPLAIN IS CURRENTLY BEING REVISED BY BOULDER COUNTY. THE NEW REGULATORY FLOOD RISK ZONES ARE IN A FINAL PRELIMINARY STAGE. BOULDER COUNTY HAS REQUESTED THAT THE PRELIMINARY AND REGULATORY FLOOD RISK ZONES BE APPLIED TO THIS PROJECT. FLOODPLAIN INFORMATION ON THESE DRAWINGS REFLECT THE NEW PRELIMINARY AND REGULATORY FLOOD RISK ZONES.
4. DURING CONSTRUCTION, ALL MATERIALS, MACHINERY, DUMPSTERS, AND OTHER ITEMS SHALL BE STAGED ON THE SUBJECT PROPERTY IN APPROVED, DESIGNATED STAGING LOCATIONS SHOWN ON THE PLANS. NO CONSTRUCTION STAGING IS ALLOWED ALONG APPLE VALLEY ROAD. WORKER VEHICLES SHALL BE PARKED ON SITE OR TO ONE SIDE OF APPLE VALLEY ROAD, AS FAR OUT OF THE TRAVEL AREA AS POSSIBLE.
5. THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN, OR A SIMILARLY QUALIFIED COLORADO-LICENSED DESIGN PROFESSIONAL, IS TO OBSERVE THE GRADING AND SUBMIT A STAMPED REPORT TO BUILDING SAFETY & INSPECTION SERVICES FOR REVIEW AND APPROVAL. THE FINAL REPORT IS TO STATE THAT THE WORK HAS BEEN COMPLETED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED ENGINEERING PLANS.
6. POST CONSTRUCTION OF THE PIPELINE SHALL NOT CHANGE OR ALTER THE EXISTING TOPOGRAPHY OR DRAINAGE PATTERNS.
7. ALL EQUIPMENT USED FOR THE CONSTRUCTION OF THE DITCH IS REQUIRED TO BE CLEANED USING HIGH PRESSURE, HOT WATER, PRIOR TO BEING TRANSPORTED TO THE SITE.
8. SILT FENCE SHOWN ALONG THE DOWN HILL EASEMENT LINE MAY BE SUBSTITUTED WITH A WADDLE BMP.



VICINITY MAP
NOT TO SCALE

SHEET LIST TABLE	
Sheet Number	Sheet Title
C1	COVER SHEET
C2	STA. 4+75 - STA. 14+00
C3	STA. 14+00 - STA. 23+00
C4	STA. 23+00 - STA. 32+00
C5	STA. 32+00 - STA. 41-00
C6	STA. 41+00 - STA. 50+00
C7	STA. 50+00 - STA. 53+80
C8	DETAILS SHEET 1
C9	DETAILS SHEET 2
C10	DETAILS SHEET 3
C11	REVEGETATION PLAN

EROSION CONTROL LEGEND:

- VTC VEHICLE TRACKING DEVICE
- EP ECCO PAN
- CWA CONCRETE WASHOUT
- SCL SEDIMENT CONTROL LOG
- SF SILT FENCE

LEGEND

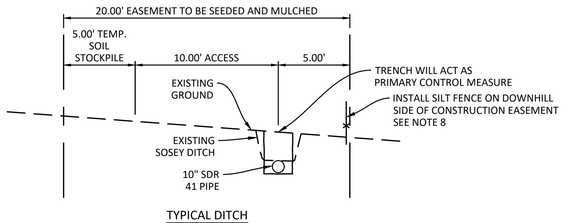
	EXISTING	PROPOSED
RIGHT-OF-WAY		
LOT LINE		
SANITARY SEWER	SS	4" S/S
STORM SEWER	18" ST/L	18" ST/L
WATER LINE	W	3/4" W/S
CONTOUR LINE	5501	5501
	5501	5501
CURB & GUTTER		
EDGE OF ASPHALT		
CHAINLINK FENCE	x	
SANITARY SEWER MH		
STORM SEWER MH		
INLET		
WATER VALVE		
FIRE HYDRANT		
ELECTRICAL TRANSFORMER		
NOTED SIGNS		
STREET LIGHT		
BUILDING LIGHT		
YARD LIGHT		
DOWNSPOUT		

BASIS OF BEARINGS:

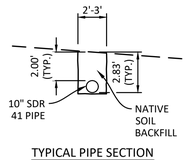
THE NORTHEASTERLY LINE OF THE TOWN OF LYONS TRACT A, RECORDED JULY 22, 1970 AS RECEPTION NO. 949264 BEARS NORTH 26 DEGREES, 26 MINUTES, 28 SECONDS WEST BETWEEN A FOUND YELLOW PLASTIC CAP WITH ILLEGIBLE STAMPING ON TOP OF A 6" DIAMETER WOOD FENCE POST AT THE SOUTHEAST CORNER OF SAID TRACT A AND A FOUND NO. 5 REBAR WITH YELLOW PLASTIC CAP STAMPED "MD JOHNSON LS 6716" AT THE NORTHEAST CORNER OF SAID TRACT A, WITH ALL BEARINGS CONTAINED HEREIN BEING RELATIVE THERETO. BASIS OF BEARINGS.

PROJECT BENCHMARK:

TOP OF ORANGE PLASTIC CAP STAMPED "CONTROL POINT" ON NO. 4 REBAR
ELEV = 5503.43 FEET (NAVD'88 VERTICAL DATUM). POINT IS 25.4 FEET WEST OF THE NORTHWEST CORNER OF THE CONCRETE WALL AT THE DITCH DIVERSION STRUCTURE ON THE SOUTH BANK OF THE NORTH ST. VRAIN CREEK.



TYPICAL DITCH CONSTRUCTION EASEMENT
SCALE: 1" = 5'



TYPICAL PIPE SECTION
SCALE: 1" = 5'

ENGINEER:
ALLIANCE CONSULTING
16415 WEST 85TH LANE UNIT B
ARVADA, COLORADO 80007
ATTN: DAVID E. MOORE, PE
PHONE: (720) 625-1571

OWNER/DITCH REPRESENTATIVE:
DAVE MILLER MUTUAL DITCH COMPANY LLC
C/O MATTHEW B. ROONEY, DVM, MS, DACVS
1636 APPLE VALLEY ROAD
LYONS, COLORADO 80540-9032
PHONE: (970) 420-2263
EMAIL: matt@farmbearcreek.com

SURVEYOR:
ROCK CREEK SURVEY, LLC
3021 GARDENIA WAY
SUPERIOR, COLORADO 80027
ATTN: ROBERT RICKARD, PLS
PHONE: (303) 521-7376
EMAIL: rockcreeksurvey@gmail.com

PROJECT MANAGER:
CRANE ASSOCIATES LLC
600 CRYSTAL LANE
CARBONDALE, COLORADO 81623
ATTN: JEFF CRANE
PHONE: (970) 261-5043
EMAIL: jeff@craneassociates.net

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REVISIONS

NO	DESCRIPTION	DATE	BY

COLORADO LICENSED DAVID E. MOORE 22495 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
**PROJECT MANAGEMENT * SURVEYING*
16415 W. 85TH LANE UNIT B * ARVADA, CO. 80007 * PH. (720) 625-1571
EMAIL: dmoore@allianceengineer.com

DAVE MILLER DITCH
COVER SHEET
prepared for
CRANE ASSOCIATES LLC

DRAWN BY:	DESIGNED BY:	DRAWING NAME:	APPROVED BY:
PSD	PSD	COVER SHEET	

JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C1 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\COVER SHEET.DWG PLOTTED: 12/11/2023

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

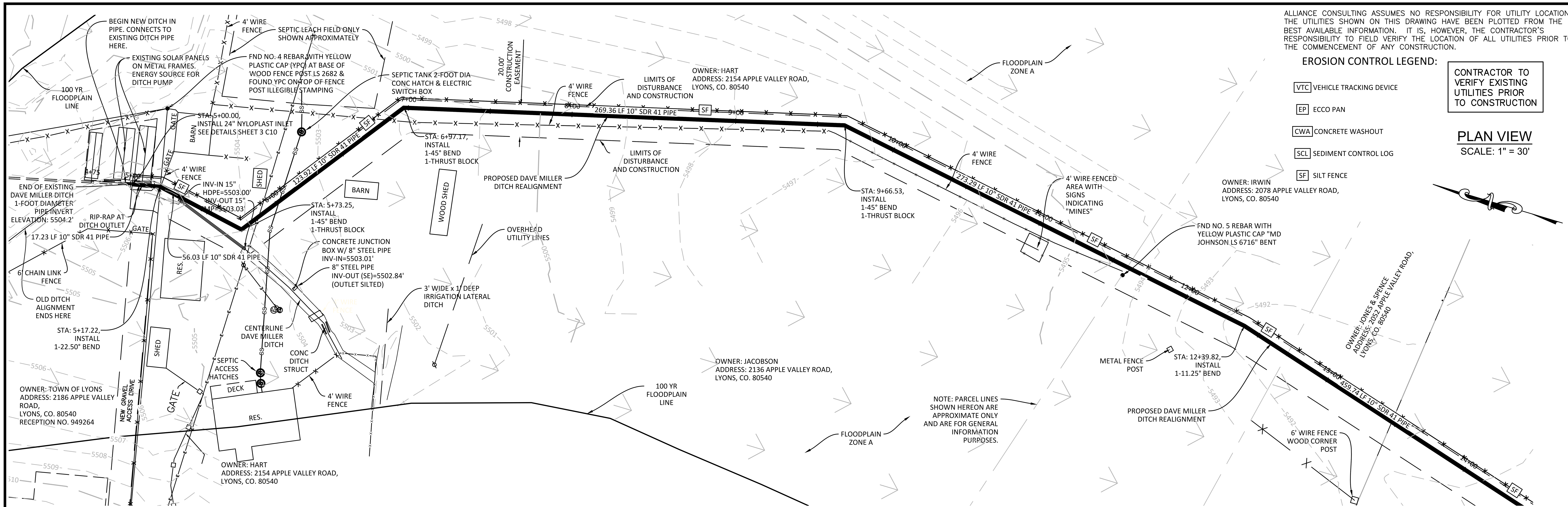
EROSION CONTROL LEGEND:

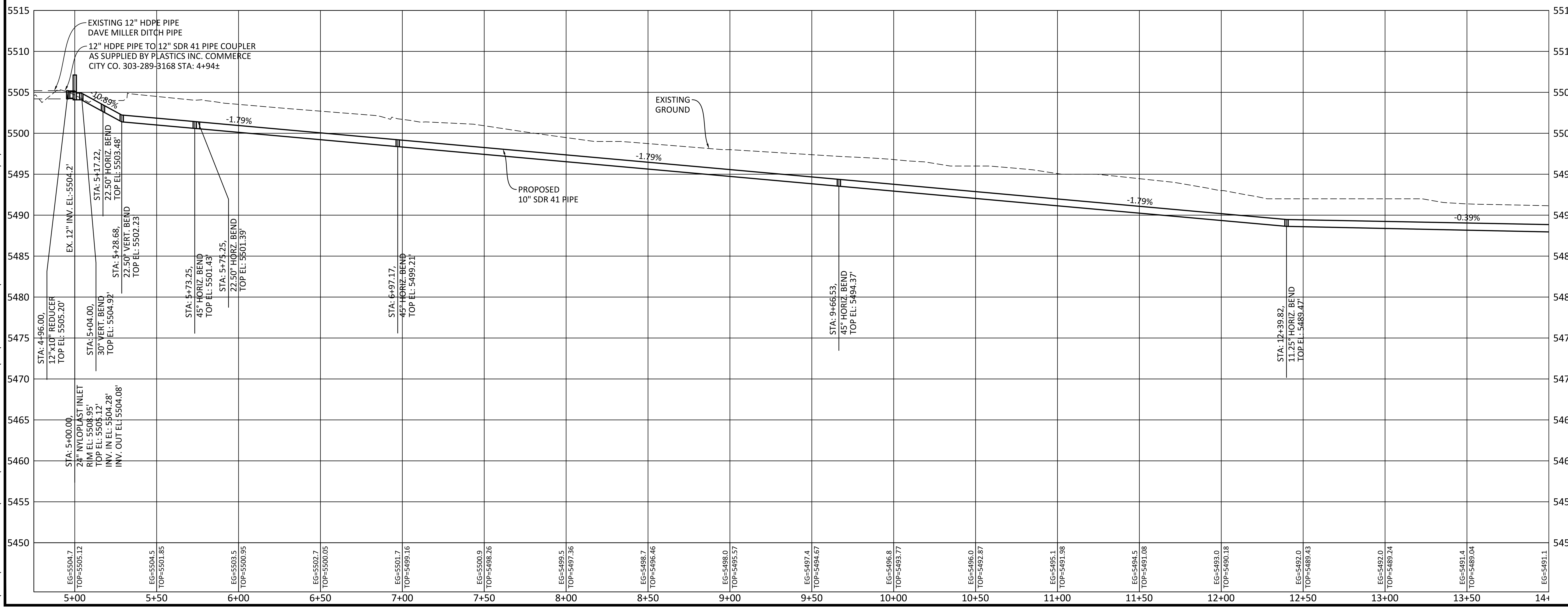
- VTC VEHICLE TRACKING DEVICE
- EP ECCO PAN
- CWA CONCRETE WASHOUT
- SCL SEDIMENT CONTROL LOG
- SF SILT FENCE

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

PLAN VIEW

SCALE: 1" = 30'





C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

SCALE VERIFICATION: BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. Dig Safely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT: THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND ARE NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

NO.	DESCRIPTION	DATE	BY

REVISIONS

COLORADO LICENSED PROFESSIONAL ENGINEER 22495 12/11/23

Alliance Consulting Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 W. 85TH LANE, UNIT B • ARVADA, CO. 80007 • PH. (720) 625-1571
E-MAIL: domagall@allianceengineer.com

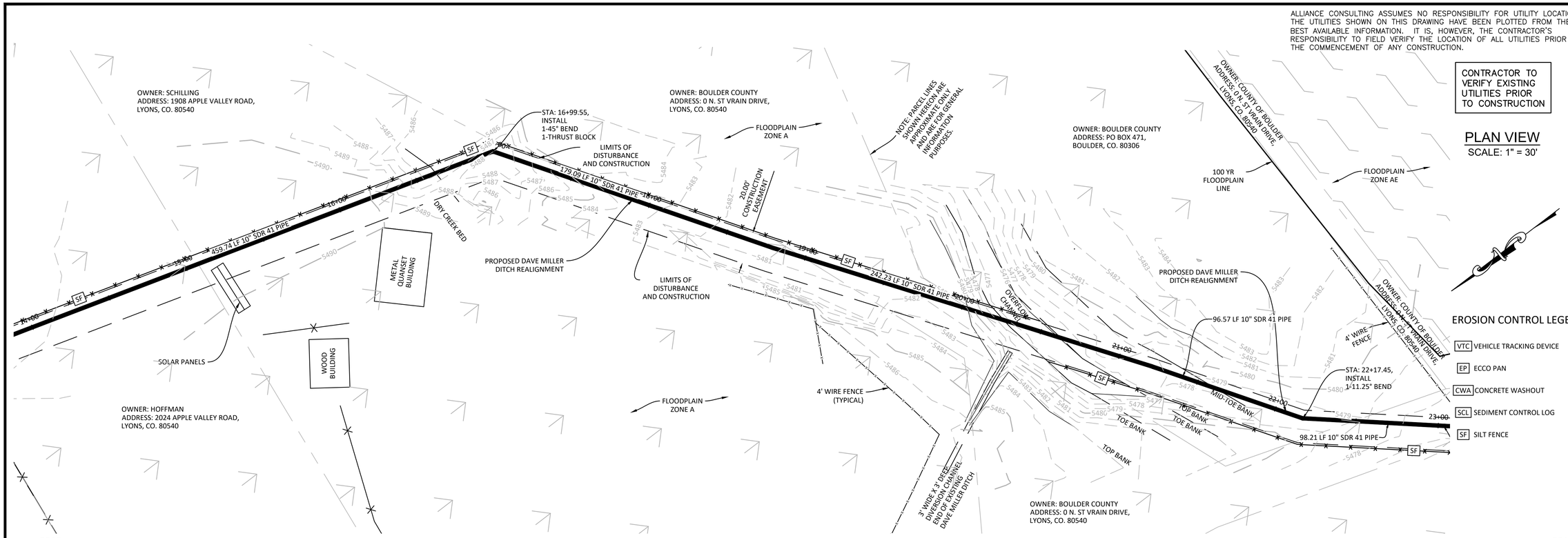
DAVE MILLER DITCH
STA. 4+75 - STA. 14+00
PLAN AND PROFILE
prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: PSD
DRAWING NAME:
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C2 of C11

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

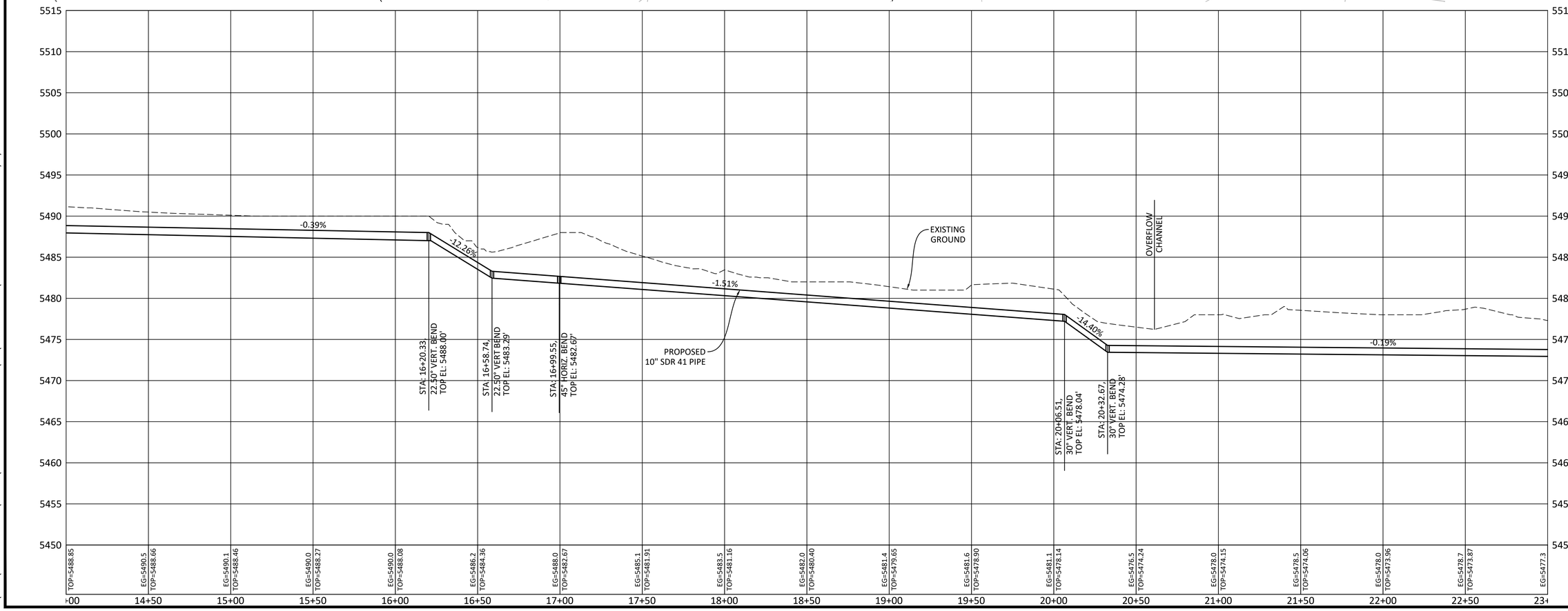
CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

PLAN VIEW
SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC — VEHICLE TRACKING DEVICE
- EP — ECCO PAN
- CWA — CONCRETE WASHOUT
- SCL — SEDIMENT CONTROL LOG
- SF — SILT FENCE



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. 811 DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED DAVID E. MOSER 22485 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
*PROJECT MANAGEMENT * SURVEYING*
16415 N. 86TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 805-1571
E-MAIL: demoser@allianceengineer.com

DAVE MILLER DITCH
STA. 14+00 - STA. 23+00
PLAN AND PROFILE

prepared for
CRANE ASSOCIATES LLC

DRAWN BY:	DESIGNED BY:	APPROVED BY:
PSD	PSD	

DRAWING NAME

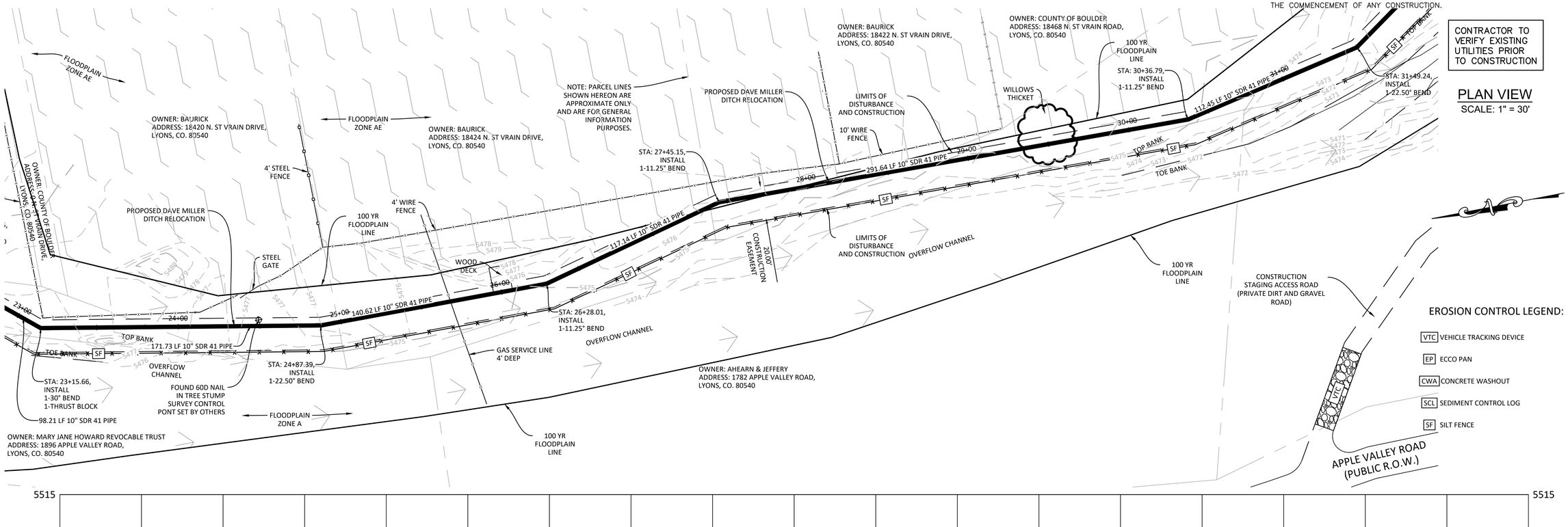
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C3 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

PLAN VIEW
SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC — VEHICLE TRACKING DEVICE
- EP — ECCO PAN
- CWA — CONCRETE WASHOUT
- SCL — SEDIMENT CONTROL LOG
- SF — SILT FENCE

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

NO	DESCRIPTION	DATE	BY
	REVISIONS		

COLORADO LICENSED DAVID E. PRATT 22485 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 N. BERRY LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 605-1571
E-MAIL: dmoomaw@allianceengineer.com

DAVE MILLER DITCH
STA. 23+00 - STA. 32+00
PLAN AND PROFILE
prepared for
CRANE ASSOCIATES LLC

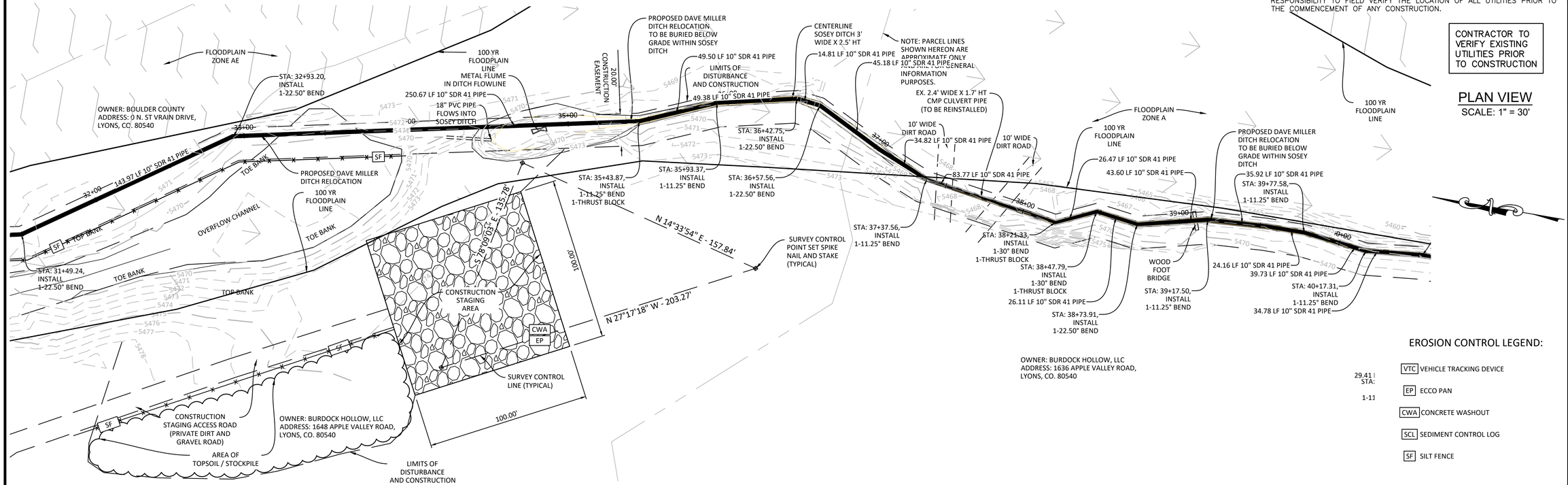
DRAWN BY:	PSD
DESIGNED BY:	PSD
DRAWING NAME:	
APPROVED BY:	
JOB NUMBER:	20060
DATE:	12/11/2023
SCALE:	AS NOTED
SHEET NO:	C4 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

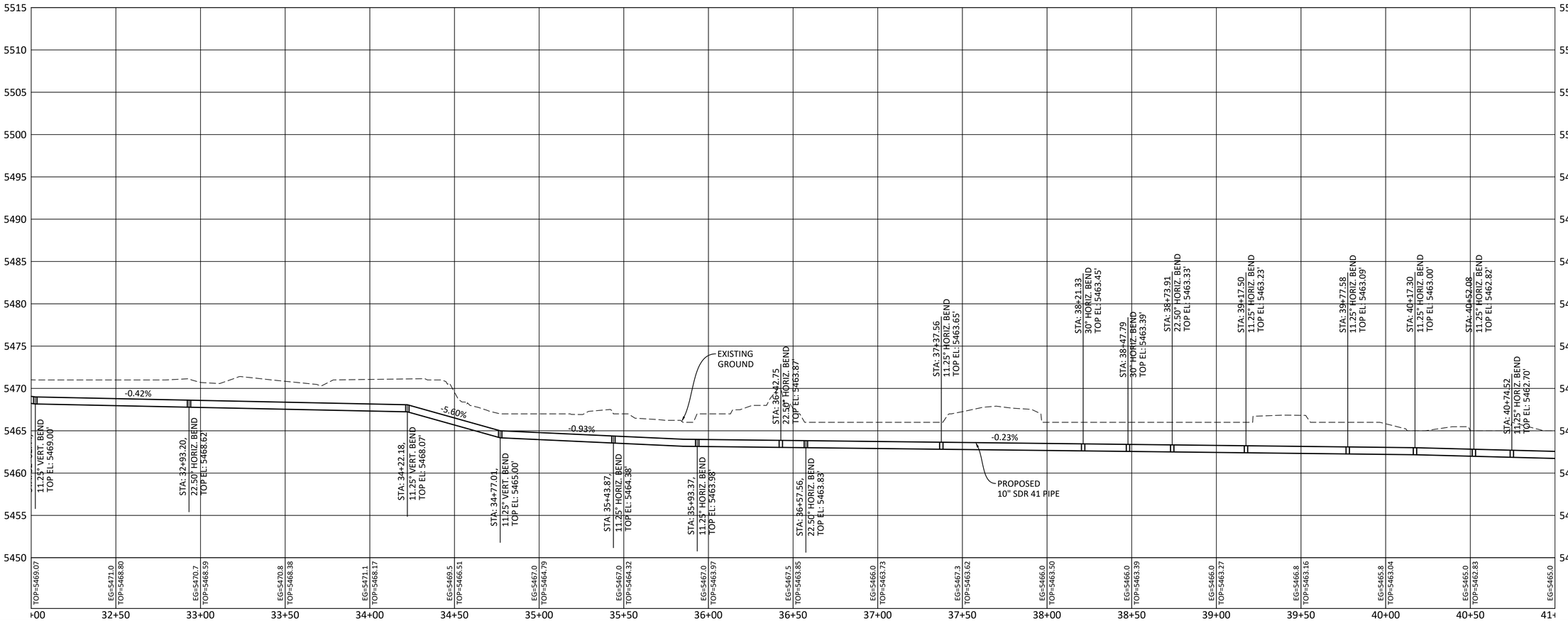
CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

PLAN VIEW
SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC — VEHICLE TRACKING DEVICE
- EP — ECCO PAN
- CWA — CONCRETE WASHOUT
- SCL — SEDIMENT CONTROL LOG
- SF — SILT FENCE



C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigTessafely1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO	DESCRIPTION	DATE	BY

COLORADO LICENSED DAVID E. MOORE 22495 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 N. 86TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 805-1571
E-MAIL: dmoore@allianceengineer.com

DAVE MILLER DITCH
STA. 32+00 - STA. 41-00
PLAN AND PROFILE

prepared for
CRANE ASSOCIATES LLC

DRAWN BY:	DESIGNED BY:	APPROVED BY:
PSD	PSD	
DRAWING NAME		

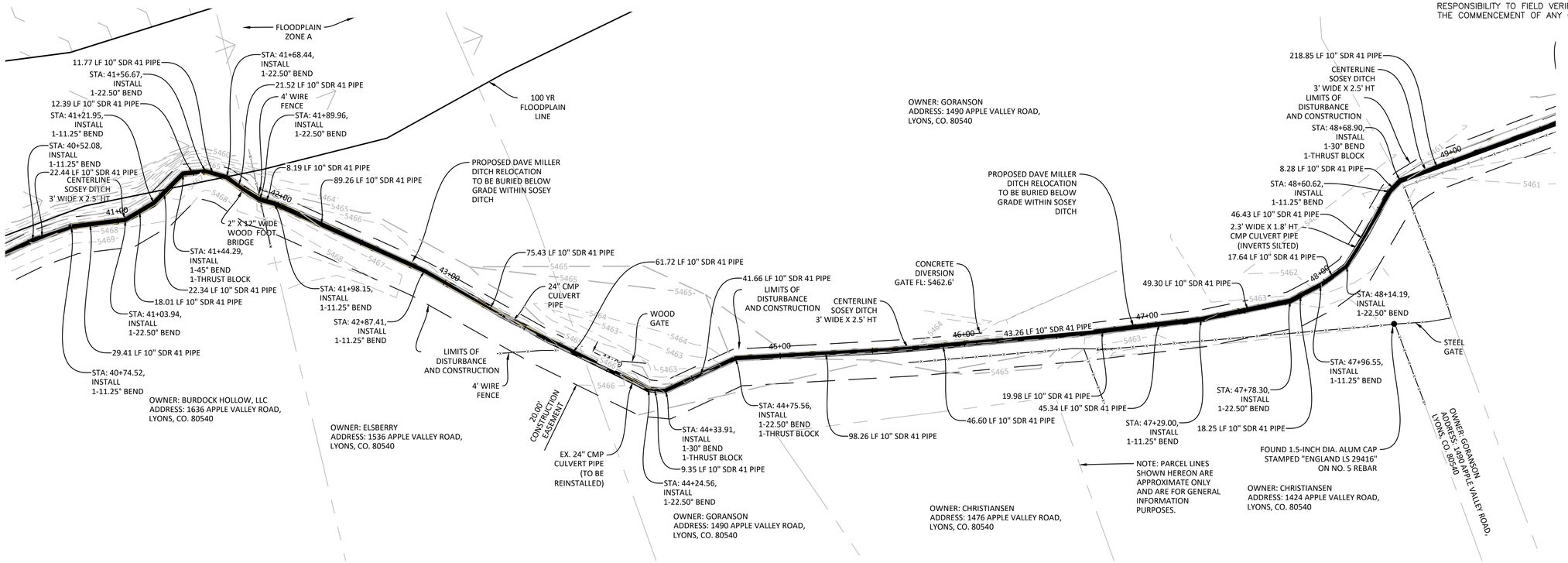
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C5 of C11

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

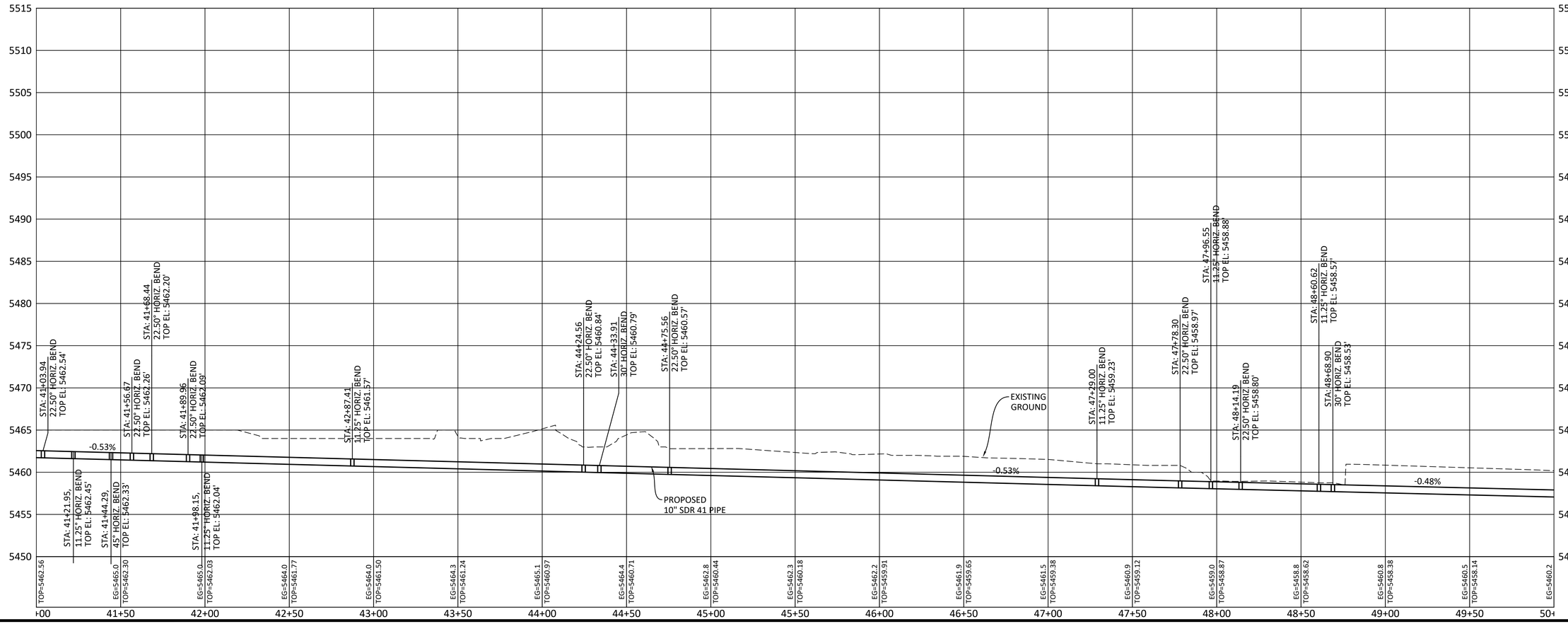
PLAN VIEW

SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC VEHICLE TRACKING DEVICE
- EP ECCO PAN
- CWA CONCRETE WASHOUT
- SCL SEDIMENT CONTROL LOG
- SF SILT FENCE



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO	DESCRIPTION	DATE	BY

COLORADO LICENSED DAVID E. MOORE 22485 PROFESSIONAL ENGINEER 12/11/23

Alliance Consulting Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 N. 86TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 805-1571
E-MAIL: dmoore@allianceengineer.com

DAVE MILLER DITCH

STA. 41+00 - STA. 50+00
PLAN AND PROFILE

prepared for
CRANE ASSOCIATES LLC

DRAWN BY:	PSD
DESIGNED BY:	PSD
DRAWING NAME:	
APPROVED BY:	
JOB NUMBER:	20060
DATE:	12/11/2023
SCALE:	AS NOTED
SHEET NO:	C6 of C11

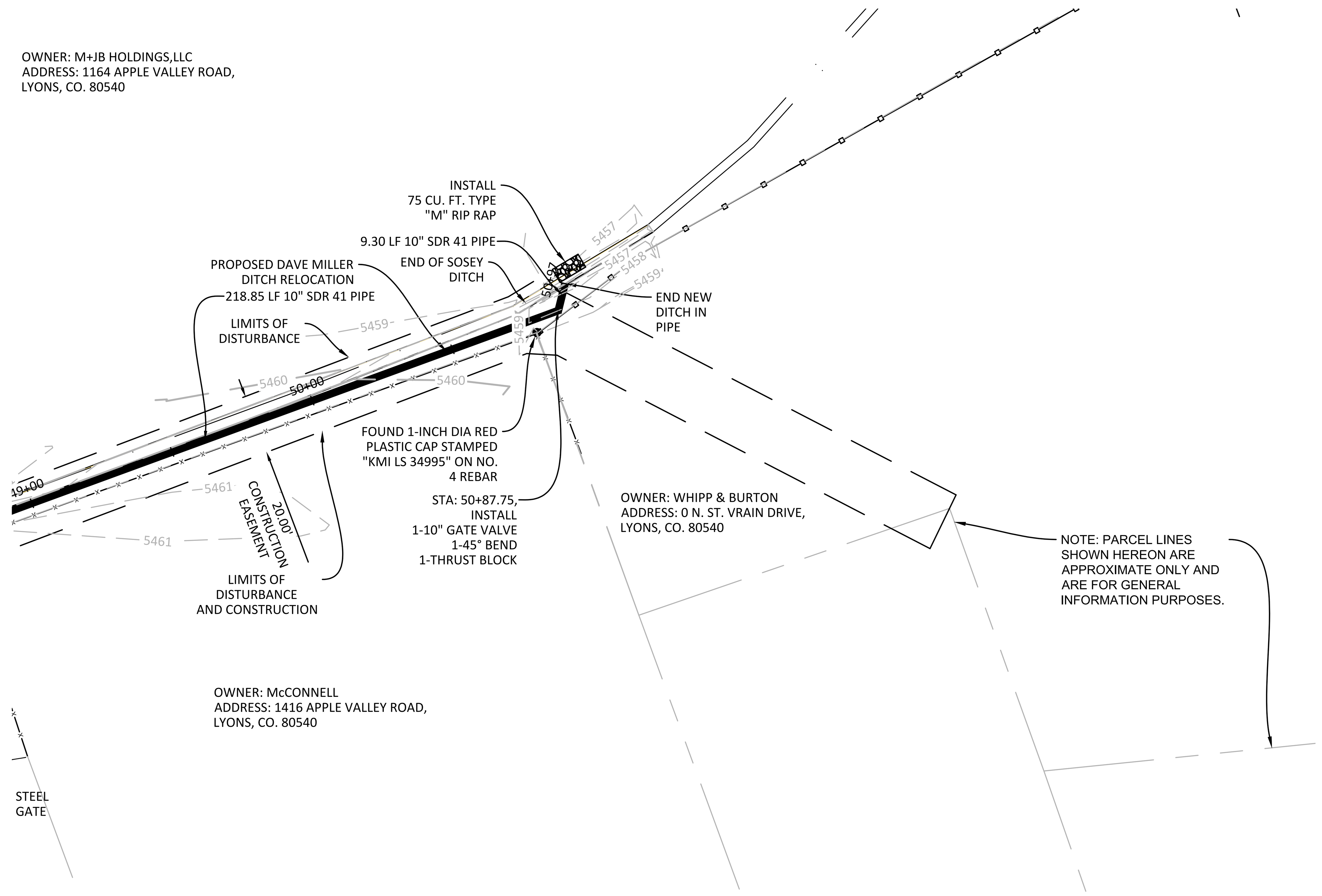
C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

ALLIANCE CONSULTING ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

CONTRACTOR TO VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION

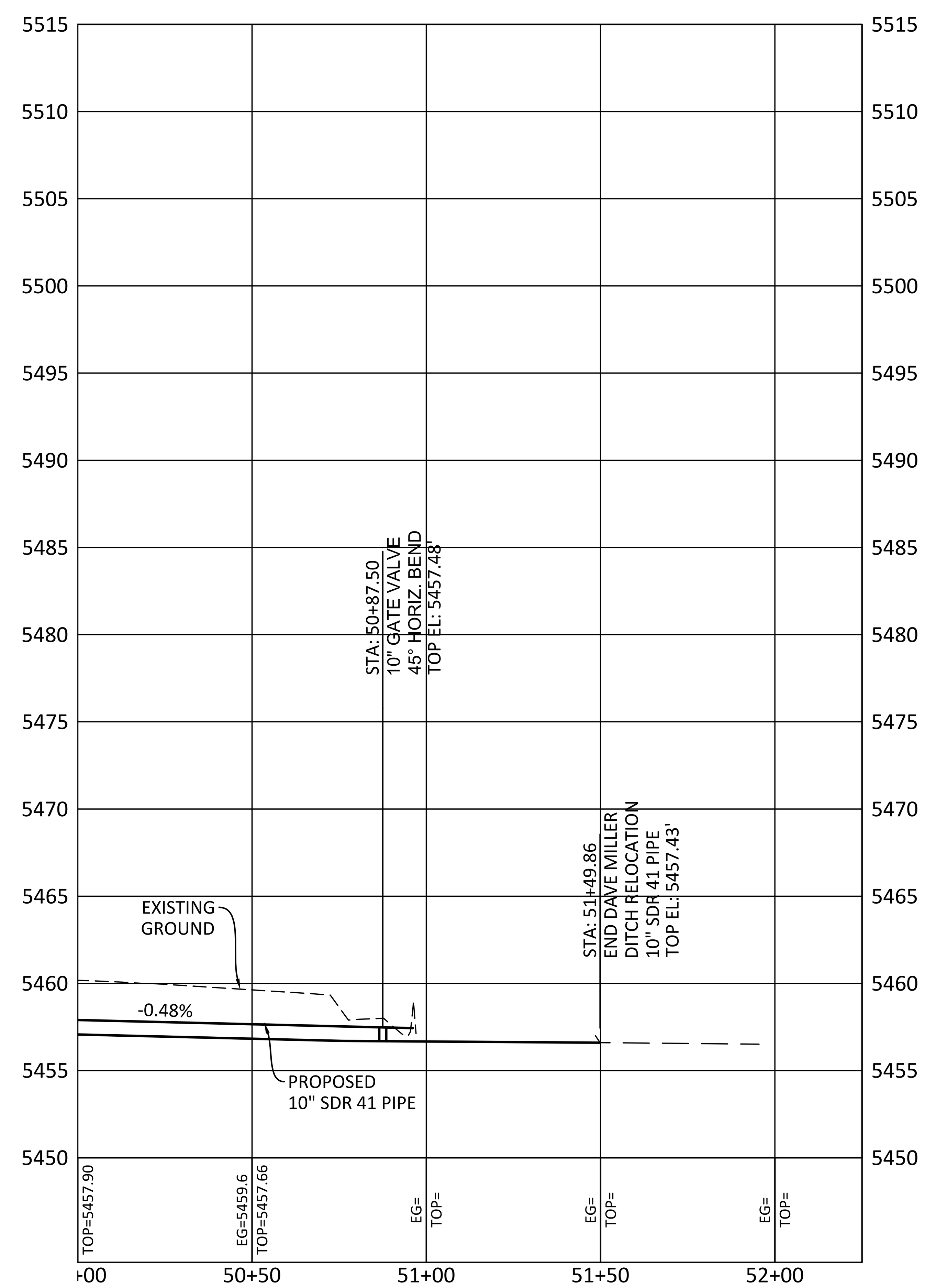
PLAN VIEW

SCALE: 1" = 30'



EROSION CONTROL LEGEND:

- VTC VEHICLE TRACKING DEVICE
- EP ECCO PAN
- CWA CONCRETE WASHOUT
- SCL SEDIMENT CONTROL LOG
- SF SILT FENCE



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. Dig Safely 1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER 22495 12/11/23

Alliance Consulting Engineers & Surveyors
"PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 W. 85TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 625-1571

DAVE MILLER DITCH

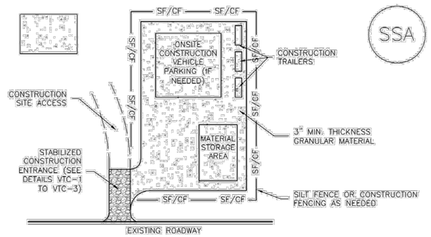
STA. 50+00 - STA. 53+80
PLAN AND PROFILE

prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: PSD
DRAWING NAME:
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C7 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\PLAN AND PROFILE.DWG PLOTTED: 12/11/2023

Stabilized Staging Area (SSA) SM-6



SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF STAGING AREA(S).
   -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

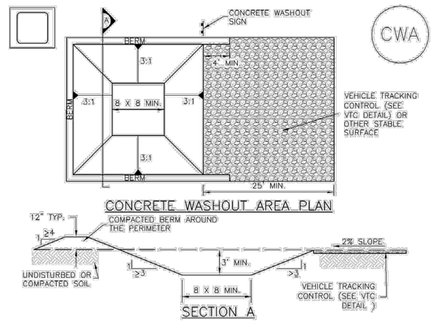
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

Concrete Washout Area (CWA) MM-1



CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.

3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.

4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.

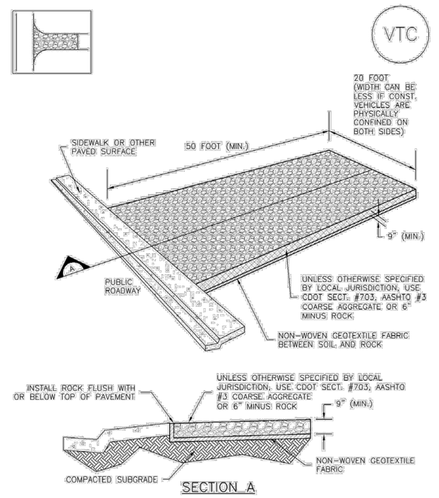
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.

7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

Vehicle Tracking Control (VTC) SM-4



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely1-800-922-1987 www.uncc.org for marking of underground member utilities.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED
DAVID E. MOORE
22485
12/11/23
PROFESSIONAL ENGINEER

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
*PROJECT MANAGEMENT * SURVEYING*
16415 W. 86TH LANE, UNIT B * ARVADA, CO. 80007 * PH. (720) 635-1571
EMAIL: demoore@allianceengineer.com

DAVE MILLER DITCH
EROSION CONTROL
DETAILS SHEET 1
prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: DEM
DRAWING NAME: DETAILS
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C8 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\DETAILS.DWG PLOTTED: 12/11/2023

BEST MANAGEMENT PRACTICES

1. CONTRACTOR/PERMITTEE SHALL PERIODICALLY INSPECT ALL INSTALLED BMPS, PROVIDE MAINTENANCE, AND MAKE REPAIRS AS NECESSARY TO PREVENT THEIR FAILURE.

2. SILT FENCE OR AN EQUIVALENT SHALL BE PLACED AS PERIMETER CONTROL ON ALL CONSTRUCTION ACTIVITIES THAT OCCUR ON LAND. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS, OR OTHERWISE REQUESTED, REMOVE PERIMETER CONTROLS WITHIN 30 DAYS AFTER THE DATE OF WARRANTY PERFORMANCE OF THE WORK OR IN ACCORDANCE WITH BMPS.

3. VEHICLE TRACKING CONTROLS SHALL BE USED AT ALL VEHICLE AND EQUIPMENT ACCESS POINTS TO THE SITE TO PREVENT SEDIMENT EXITING THE PROJECT SITE ONTO PAVED PUBLIC ROADS. ACCESS SHALL BE PROVIDED ONLY AT LOCATIONS APPROVED BY THE ENGINEER. VEHICLE TRACKING CONTROL LOCATIONS SHALL BE RECORDED ON THE SWMP SITE MAP.

4. ALL INLETS AND CULVERTS SHALL BE PROTECTED DURING ONSITE CONSTRUCTION ACTIVITIES. INLET PROTECTION LOCATIONS SHALL BE RECORDED ON THE SWMP SITE MAP.

5. CONCRETE WASTED IN DESIGNATED DEWATERING AREAS SHALL BE COLLECTED, REMOVED FROM THE PROJECT SITE, AND DISPOSED OF PROPERLY. WASTED CONCRETE ALSO INCLUDES EXCESS CONCRETE REMOVED FROM FORMS, SPILLS, SLOP, AND ALL OTHER UNUSED CONCRETE THAT ENDS UP ON THE GROUND.

6. THE CONTRACTOR/PERMITTEE MUST MAINTAIN A SPILL KIT ON SITE WHEN WORKING AROUND SURFACE WATERS. IF POLLUTANTS ARE SPILLED INTO ANY SURFACE WATERS DURING THE COURSE OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR/PERMITTEE MUST NOTIFY THE OWNER'S REPRESENTATIVE OR ENGINEER IMMEDIATELY.

7. ALL EXISTING MATURE TREES WITHIN THE DESIGNATED PROJECT AREA ARE TO BE FENCE PROTECTED IN PLACE AT DRIPLINE UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PRIOR TO THE INITIATION OF WORK, THE ENGINEER SHALL MARK ANY TREES AND/OR LARGE SHRUBS TO BE REMOVED AS PART OF CONSTRUCTION ACTIVITIES. AREAS OF TREE REMOVAL SHALL BE DETERMINED AND MARKED IN COLLABORATION BETWEEN THE CONTRACTOR/PERMITTEE AND THE ENGINEER.

8. ALL EXCAVATION ACTIVITIES OCCURRING WITHIN 10 FEET OF THE DRIPLINE SHALL BE PERFORMED BY HAND AND IF NECESSARY, ROOTS SHALL BE CLEANLY CUT NOT TORN OR RIPPED. IF EXPOSED, TREE ROOTS SHALL BE BACKFILLED AND WATERED ON THE SAME DAY OF CUTTING AND APPROVED ROOT STIMULATOR SHALL BE APPLIED. SOILS SHALL NOT BE COMPACTED WITHIN THE DRIPLINE OF MATURE TREES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

WASTE MANAGEMENT

9. THE CONTRACTOR/PERMITTEE SHALL NOT BURN, BURY, OR OTHERWISE DISCHARGE CONSTRUCTION OR DEMOLITION WASTE ON THE SITE UNLESS SPECIFIED OTHERWISE.

10. THE CONTRACTOR/PERMITTEE SHALL PROVIDE A PORTABLE TOILET AND ASSOCIATED MAINTENANCE SCHEDULE FOR THE CONSTRUCTION AREA SUFFICIENT TO ACCOMMODATE THE CONSTRUCTION CREW AND ALL OTHER AUTHORIZED PERSONS TO BE ONSITE DURING CONSTRUCTION ACTIVITIES.

HAZARDOUS MATERIALS

11. THE CONTRACTOR/PERMITTEE SHALL TRANSPORT, USE, AND STORE HAZARDOUS MATERIALS IN ACCORDANCE WITH ALL REGULATORY REQUIREMENTS. SPILLED HAZARDOUS MATERIALS, INCLUDING HAZARDOUS LIQUID WASTES, SHALL BE REMOVED FROM THE SITE AND THE PROPERTY RESTORED TO ITS PRE-SPILL STATE IN ACCORDANCE WITH REGULATORY REQUIREMENTS.

12. THE CONTRACTOR/PERMITTEE SHALL IMMEDIATELY REPORT SPILLS TO THE PROPER REGULATORY AUTHORITY AND SHALL IMMEDIATELY NOTIFY THE ENGINEER.

13. HANDLING OF CONSTRUCTION FUELS AND LUBRICANTS:

A. THE CONTRACTOR/PERMITTEE SHALL EMPLOY PERSONS QUALIFIED TO HANDLE CONSTRUCTION EQUIPMENT FUELS AND LUBRICANTS.

B. THE CONTRACTOR/PERMITTEE SHALL REFUEL AND SERVICE EQUIPMENT AWAY FROM FLOODPLAINS OF RIVERS, STREAMS, AND OTHER BODIES OF WATER. THE CONTRACTOR/PERMITTEE SHALL ENSURE EQUIPMENT THAT ENTERS THE WATER IS FREE FROM EXTERNAL GREASE, OIL, AND MUD.

C. THE CONTRACTOR/PERMITTEE SHALL PREVENT HANDLING AND FUELING OPERATIONS FROM CONTAMINATING THE GROUND, SURFACE WATER, AND GROUND WATER. THE CONTRACTOR/PERMITTEE SHALL USE CONTAINMENT BERMS AND AN IMPERMEABLE BASE COURSE OR OTHER SYSTEM TO CONTAIN SPILLED FUEL.

GENERAL CARE OF WATER

CARE OF WATER SHALL INCLUDE THE DESIGN OF ALL TEMPORARY CARE OF WATER PROVISIONS INCLUDING COFFER DAMS, SUMPS, PUMPING SYSTEMS, PIPELINES, CHANNELS, FLUMES, DRAINS, AND OTHER PROTECTIVE AND DEWATERING WORKS TO ALLOW FOR WORK TO BE PERFORMED UNDER DRY CONDITIONS.

14. NO CONSTRUCTION EQUIPMENT SHALL BE OPERATED BELOW THE EXISTING WATER SURFACE UNLESS SPECIFICALLY AUTHORIZED BY THE STORMWATER QUALITY PERMIT ISSUED BY BOULDER COUNTY, AND ANY OTHER APPLICABLE LOCAL, STATE, OR FEDERAL LICENSE OR PERMIT.

15. THE CONTRACTOR/PERMITTEE IS RESPONSIBLE FOR ALL CARE OF WATER INCLUDING BUT NOT LIMITED TO DESIGNING, SUPPLYING, CONSTRUCTING, OPERATING, AND REMOVING ALL CARE OF WATER PROVISION INCLUDING COFFER DAMS AND SEDIMENT REMOVAL SYSTEMS; DESIGNING, SUPPLYING, INSTALLING, MAINTAINING, AND REMOVING PROTECTIVE WORKS FOR WINTER OPERATIONS OF CARE OF WATER SYSTEMS.

16. THE CONTRACTOR/PERMITTEE SHALL COMPLY WITH ALL USACE 404 PERMIT REQUIREMENTS INCLUDING ANY SPECIAL CARE REQUIREMENTS ISSUED FOR THIS PROJECT.

17. WHEN REQUIRED THE CONTRACTOR/PERMITTEE SHALL DESIGN TEMPORARY STREAM DIVERSIONS TO FACILITATE UPSTREAM FISH PASSAGE. INSTREAM VELOCITIES SHALL BE LIMITED TO 7 FT/SEC WHEN THIS PROVISION IS REQUIRED.

18. CARE OF WATER SHALL INCLUDE PROVISIONS FOR HANDLING GROUNDWATER, RAINSTORM RUNOFF, SNOW, SNOWMELT, AND ICE THAT MAY ENTER THE WORK AREA.

19. PROTECTIVE WORKS SHALL BE DESIGNED BY THE CONTRACTOR/PERMITTEE AS NECESSARY TO INCLUDE ENCLOSURES, INSULATION, AND HEATING SYSTEMS TO ENSURE THAT DEWATERING SYSTEMS OPERATE CONTINUOUSLY AND DO NOT BECOME FROZEN DURING COLD WEATHER.

20. THE CONTRACTOR/PERMITTEE SHALL PROVIDE AND MAINTAIN SEDIMENT PONDS OR OTHER MEANS, REMOVE SEDIMENT FROM WATERS COLLECTED WITHIN ACTIVE CONSTRUCTION AREAS PRIOR TO ALLOWING IT TO ENTER OR RETURN INTO THE WATERCOURSE. CONTRACTOR/PERMITTEE SHALL DISPOSE OF SEDIMENTS IN A SUITABLE OFFSITE WASTE DISPOSAL FACILITY.

21. THE CONTRACTOR/PERMITTEE SHALL MONITOR WATER TURBIDITY DURING CONSTRUCTION ACTIVITIES AND SHALL SHUT DOWN WORKS AT TIMES OF EXCESS TURBIDITY IN ORDER TO ALLOW THE WATER TO CLEAR PRIOR TO RECOMMENCEMENT OF IN-STREAM WORK.

22. TURBIDITY IS EXPECTED DURING PLACEMENT AND REMOVAL OF WATER CONTROL. IF WATERS BECOME NOTICEABLY TURBID, CONTRACTOR/PERMITTEES SHOULD PROMPTLY HALT OPERATIONS TO ALLOW WATERS TO CLEAR PRIOR TO RESUMING OPERATIONS. FURTHERMORE, SHUTDOWNS FOR SILTY OR TURBID WATER MAY BE SPECIFIED BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE, AT THEIR DISCRETION.

23. IN THE EVENT OF UNSCHEDULED CONSTRUCTION ACTIVITY THAT RESULTS IN A VISUALLY CONSPICUOUS PLUME OF SEDIMENT, CONTRACTOR/PERMITTEE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND UNDERTAKE MITIGATION ACTIONS NECESSARY TO COMPLY WITH THE SPECIFIED CLEAN WATER CRITERIA.

COFFER DAMS

24. THE CONTRACTOR/PERMITTEE IS RESPONSIBLE FOR THE FINAL LAYOUT, CONFIGURATION, MAINTENANCE, AND REMOVAL IN THEIR ENTIRETY OF ALL COFFER DAMS TO BE CONSTRUCTED WITHIN THE PROJECT SITE.

25. THE CONTRACTOR/PERMITTEE IS RESPONSIBLE FOR THE RECLAMATION, TO ORIGINAL OR BETTER CONDITION, OF ALL AREAS IMPACTED BY THE CONSTRUCTION OF COFFER DAMS. RECLAMATION MAY INCLUDE BUT IS NOT LIMITED TO THE RESTORATION OF STABLE SLOPES TYPICALLY EQUAL TO OR LESS THAN 3H:1V, INSTALLATION OF APPROVED EROSION CONTROL FABRIC, AND INSTALLATION OF AN APPROVED NATIVE SEED MIX.

26. COFFERDAMS LOCATED IN THE WATERWAY SHALL BE PLACED IN A MANNER TO PREVENT THEIR EROSION FROM NORMAL OR EXPECTED HIGH FLOWS. FURTHERMORE, THEY SHOULD BE PLACED TO A SUFFICIENT ELEVATION TO PREVENT THEIR OVERTOPPING DURING REASONABLY ANTICIPATED FLOOD EVENTS THAT MAY COMPROMISE THE DESIGN AND PERFORMANCE OF THE COFFERDAM.

27. THE USE OF RIPRAP OR OTHER PROTECTION MEASURES ON THE SURFACES OF THE COFFERDAM, INCLUDING THE TOE OF COFFERDAM SLOPES EXPOSED TO HIGH VELOCITIES, IS REQUIRED.

28. ALL TEMPORARY FILLS MUST BE REMOVED IN THEIR ENTIRETY FOLLOWING CONSTRUCTION ACTIVITIES AND AFFECTED AREAS GRADED TO PROPOSED CONDITIONS.

29. COFFER DAMS SHALL PROVIDE A BYPASS WATERWAY THAT IS ARMORED AND OF THE MINIMUM DIMENSIONS SHOWN IN THE TYPICAL WATER CONTROL CHANNEL DETAIL.

30. ANY COFFER DAM FAILURES OR OTHER WORKS EFFORTS THAT CAUSE A PLUME OF TURBID WATER TO FLOW DOWNSTREAM SHALL BE REPORTED TO THE ENGINEER.

HEAVY EQUIPMENT OPERATIONS AND MAINTENANCE

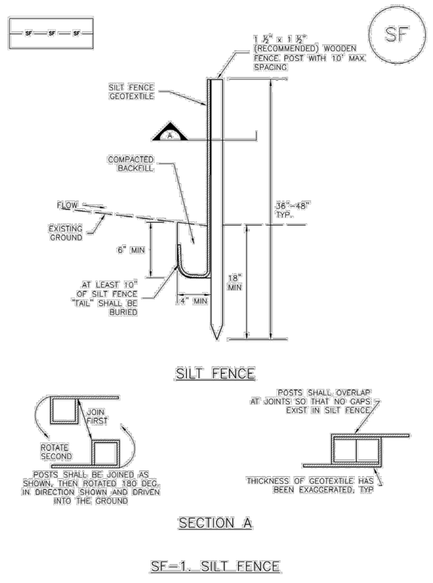
31. EQUIPMENT OPERATED BELOW THE ORDINARY HIGH-WATER MARK OF THE RIVER CHANNEL, MUST BE INSPECTED AND CLEAN OF FUEL, LUBRICANT LEAKS, AND INVASIVE AQUATIC SPECIES.

32. TO MINIMIZE THE SPREAD OF INVASIVE SPECIES, ALL EQUIPMENT SHALL BE POWER-WASHED AND FREE OF WEEDS PRIOR TO ITS DELIVERY TO THE PROJECT AREA. IF EQUIPMENT WAS USED IN ANOTHER WET AREA WITHIN 10 DAYS OF INITIATING WORK, DECONTAMINATION PRACTICES SHOULD BE EMPLOYED TO MINIMIZE THE SPREAD OF DIDYMOSPHENIA, NEW ZEALAND MUD SNAILS, WHIRLING DISEASE, ZEBRA MUSSELS, AND OTHER AQUATIC HITCHHIKERS.

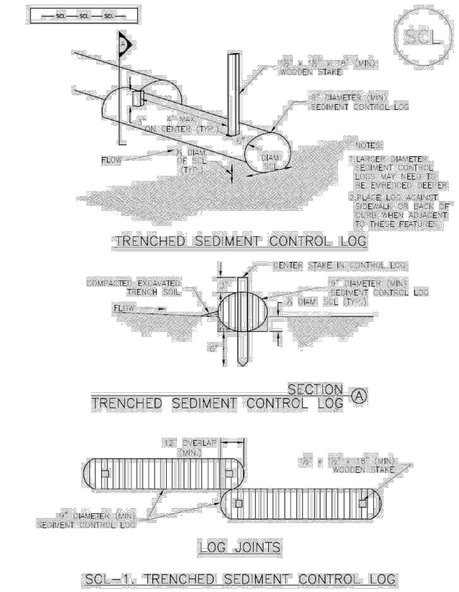
33. EQUIPMENT OPERATING WITHIN OR ADJACENT TO ANY SURFACE WATERS SHALL BE FREE OF FLUID LEAKS. BIODEGRADABLE HYDRAULIC FLUIDS SHALL BE UTILIZED FOR ALL EQUIPMENT OPERATING IN SURFACE WATERS. THE CONTRACTOR/PERMITTEE SHALL SUBMIT A LIST OF EQUIPMENT OPERATING WITH CERTIFIED NON-TOXIC, BIODEGRADABLE HYDRAULIC FLUIDS TO THE ENGINEER PRIOR TO USE. ALL FUELING, OILING, OR MAINTENANCE OF EQUIPMENT SHALL BE PERFORMED IN DESIGNATED UPLAND LOCATIONS, WITH ADEQUATE BMPS TO CONTAIN POTENTIAL SPILLS.

C:\USERS\PATRICK S DOMACALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\DETAILS.DWG PLOTTED: 12/11/2023

Silt Fence (SF) SC-1



Sediment Control Log (SCL) SC-2



SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR IBY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SC-2 Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND GAPING MESH.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES; HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely1-800-922-1987 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO	DESCRIPTION	DATE	BY

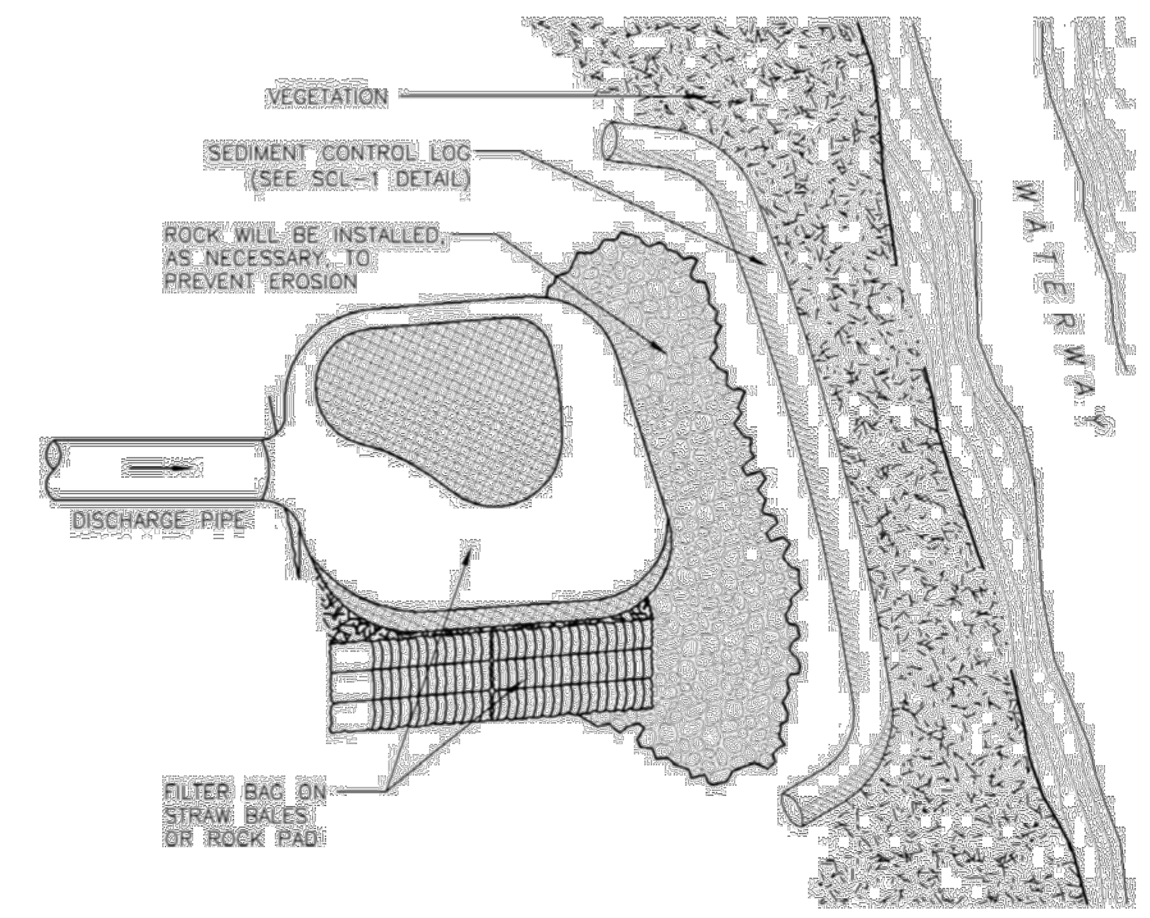
COLORADO LICENSED
MATTHEW E. MOORE
22495
12/11/23
PROFESSIONAL ENGINEER

Alliance Consulting
Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
*PROJECT MANAGEMENT * SURVEYING*
10475 W. 80TH LANE, UNIT B * ARVADA, CO. 80007 * PH: (720) 626-1571
E-MAIL: dmoorepe@allianceengineer.com

DAVE MILLER DITCH
EROSION CONTROL
DETAILS SHEET 2
prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: DEM
DRAWING NAME: DETAILS
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C9 of C11

SM-9 Dewatering Operations (DW)



DW-4. DEWATERING FILTER BAG

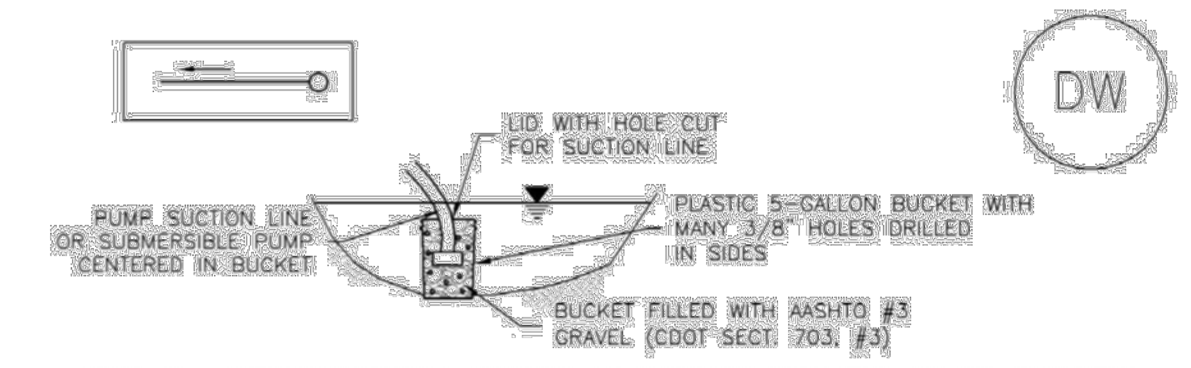
DEWATERING INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   - LOCATION OF DEWATERING EQUIPMENT.
   - TYPE OF DEWATERING OPERATION (DW-1 TO DW-4).

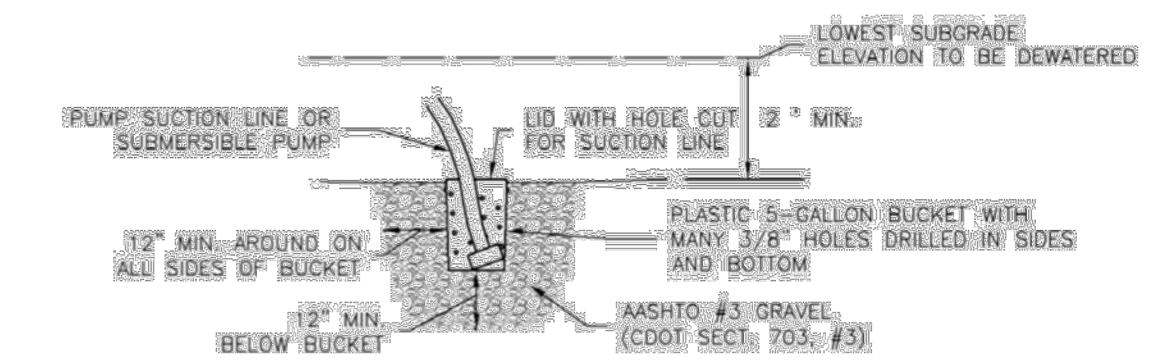
2. THE OWNER OR CONTRACTOR SHALL OBTAIN A CONSTRUCTION DISCHARGE (DEWATERING) PERMIT FROM THE STATE PRIOR TO ANY DEWATERING OPERATIONS DISCHARGING FROM THE SITE. ALL DEWATERING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT.

3. THE OWNER OR OPERATOR SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY TO PERMIT EXCAVATION AND SUBSEQUENT CONSTRUCTION IN DRY CONDITIONS AND TO LOWER AND MAINTAIN THE GROUNDWATER LEVEL A MINIMUM OF 2-FEET BELOW THE LOWEST POINT OF EXCAVATION AND CONTINUOUSLY MAINTAIN EXCAVATIONS FREE OF WATER UNTIL BACK-FILLED TO FINAL GRADE.

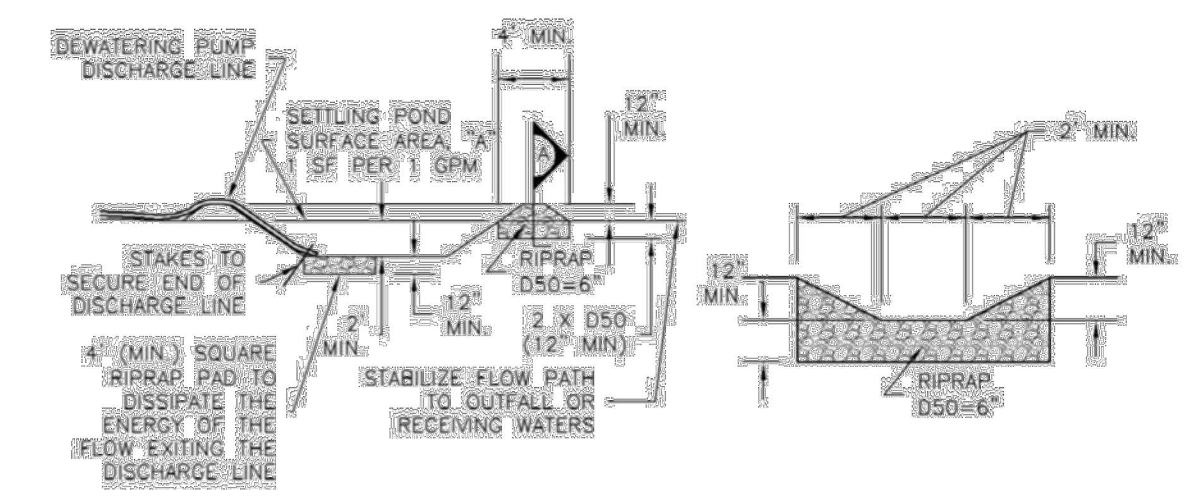
Dewatering Operations (DW) SM-9



DW-1. DEWATERING POND ALREADY FILLED WITH WATER

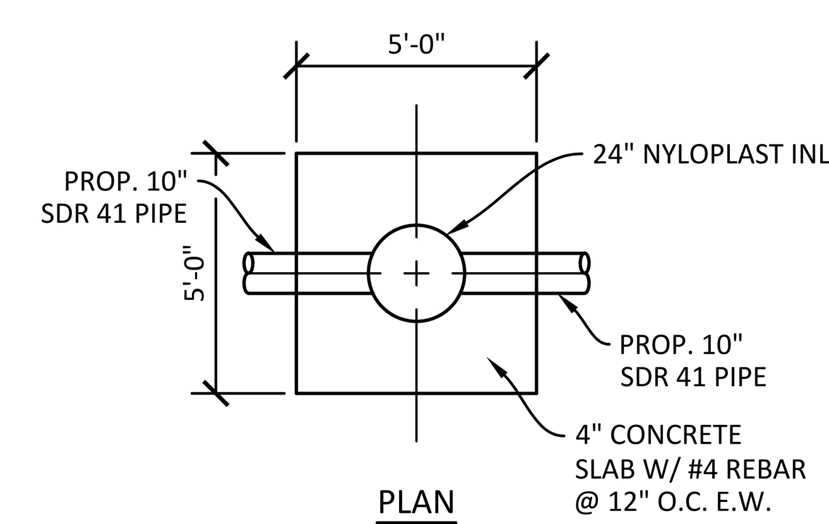


DW-2. DEWATERING SUMP FOR SUBMERSED PUMP

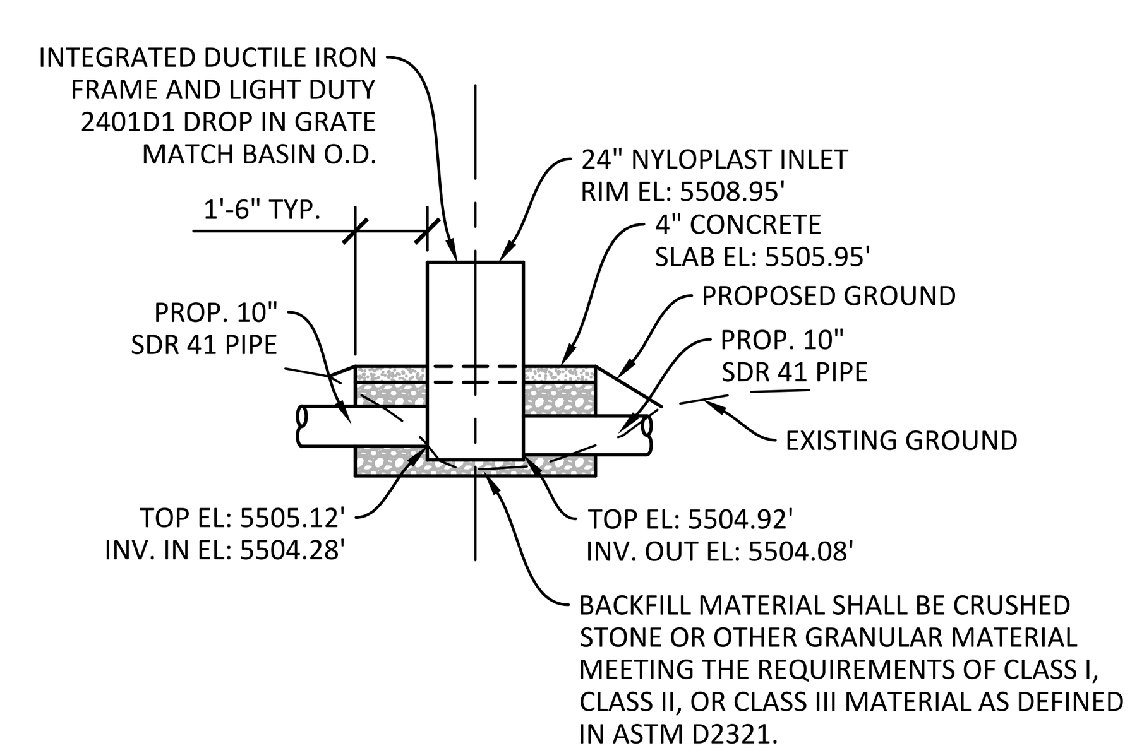


DW-3. SUMP DISCHARGE SETTLING BASIN

SETTLING BASIN SECTION A



PLAN



PROFILE

24" NYLOPLAST INLET DETAIL
PLAN AND PROFILE
SCALE: 1/4" = 1'-0"

Dewatering Operations (DW) SM-9

DEWATERING INSTALLATION NOTES

4. DEWATERING OPERATIONS SHALL USE ONE OR MORE OF THE DEWATERING SUMPS SHOWN ABOVE, WELL POINTS, OR OTHER MEANS APPROVED BY THE LOCAL JURISDICTION TO REDUCE THE PUMPING OF SEDIMENT, AND SHALL PROVIDE A TEMPORARY SEDIMENT BASIN OR FILTRATION BMP TO REDUCE SEDIMENT TO ALLOWABLE LEVELS PRIOR TO RELEASE OFF SITE OR TO A RECEIVING WATER. A SEDIMENT BASIN MAY BE USED IN LIEU OF SUMP DISCHARGE SETTLING BASIN SHOWN ABOVE IF A 4-FOOT-SQUARE RIPRAP PAD IS PLACED AT THE DISCHARGE POINT AND THE DISCHARGE END OF THE LINE IS STAKED IN PLACE TO PREVENT MOVEMENT OF THE LINE.

DEWATERING MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. DEWATERING BMPs ARE REQUIRED IN ADDITION TO ALL OTHER PERMIT REQUIREMENTS.

5. TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig.
Dig Safely 1-800-922-1987
www.uncc.org
for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO.	DESCRIPTION	DATE	BY

COLORADO LICENSED PROFESSIONAL ENGINEER 22495 12/11/23

Alliance Consulting Engineers & Surveyors
*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT* *PROJECT MANAGEMENT * SURVEYING*
16415 W. 85TH LANE, UNIT B * ARVADA, CO 80007 * PH. (720) 625-1571
E-MAIL: demoore@allianceengineer.com

DAVE MILLER DITCH
EROSION CONTROL DETAILS SHEET 3
prepared for CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: DEM
DRAWING NAME: DETAILS
APPROVED BY:
JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C10 of C11

C:\USERS\PATRICK S DOMAGALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\DETAILS.DWG PLOTTED: 12/11/2023

TREE PRESERVATION PLAN:

1. GENERALLY, THE PROPOSED LOCATION OF THE IRRIGATION PIPELINE WAS INTENTIONALLY LAID OUT AND DESIGNED TO AVOID ANY TREE REMOVAL. THE LOCATION OF THE PROPOSED IRRIGATION PIPELINE IS APPROXIMATE AND CAN BE ALTERED IN THE FIELD TO MINIMIZE TREE REMOVAL. THE CONTRACTOR SHALL MINIMIZE DAMAGE TO EXISTING TREES.

2. ONLY VEGETATION NECESSARY TO CLEAR THE GRADING SITE AND PROVIDE ACCESS DURING CONSTRUCTION MAY BE REMOVED FROM THE FLOOD "OVERFLOW" CHANNEL.

3. ANY TREES OR GROUND VEGETATION THAT WILL BE REMOVED IN THE FLOOD "OVERFLOW" CHANNEL DURING CONSTRUCTION MUST BE IDENTIFIED AND REPLACED IN THE CHANNEL.

4. AT FINAL INSPECTION, THE FULL INSTALLATION OF THE APPROVED TREE PRESERVATION PLAN MUST BE INSPECTED AND APPROVED BY CPP STAFF.

REVEGETATION NOTES:

REVEGETATION SHALL CONSIST OF RE-SEEDING THE 20' WIDE CONSTRUCTION EASEMENT (DELINEATED ON THE PLAN) THE ENTIRE LENGTH OF THE PROJECT. SEE SEED MIX THIS PAGE.

AREA OF DISTURBANCE = 117,875± SQ. FT. = 2.71± AC

SLOPE AND REVEGETATION:

DEGREE OF SLOPE	SOIL PREP	TOPSOIL/ STOCKPILE	MULCH	MATTING/ HYDROMULCH
LEVEL TO 3:1	*	*		
3:1 TO 2:1	*	*	*	
2:1 TO 1.5:1	*	*	*	*

TOPSOIL/STOCKPILE:

STOCKPILING ENTAILS SCRAPING OFF THE TOPSOIL - OR THE UPPERMOST, FERTILE LAYER OF THE SOIL - AND SETTING IT ASIDE UNTIL NEEDED. AFTER CONSTRUCTION, THIS TOPSOIL SHOULD BE SPREAD OUT TO A DEPTH OF 3" OR MORE ON ALL SURFACES THAT ARE TO BE SEEDED. THE ADDITION OF FERTILIZER IS USUALLY UNNECESSARY FOR NATIVE GRASSES, AND IT CAN PROMOTE THE GROWTH OF ANNUAL WEEDS.

SOIL PREPARATION:

A GOOD SEEDBED IS CRUCIAL TO SUCCESSFUL REVEGETATION. SLOPES SHOULD BE GRADED TO AVOID CONCENTRATED WATER FLOW AND SUBSEQUENT EROSION. IF POSSIBLE, ANY AREAS SEVERELY COMPACTED BY MACHINERY AND EQUIPMENT DURING CONSTRUCTION SHOULD BE RIPPED BY TRACTOR OR BACKHOE TO LOOSEN SOILS AND ALLOW FOR WATER INFILTRATION AND ROOT GROWTH. CLODS LARGER THAN 3" SHOULD BE BROKEN, AND ANY WEEDS CONTROLLED BY TILLING THE SOIL.

SEEDING:

SEEDING CAN TAKE PLACE FROM THE FALL UNTIL SPRING, INCLUDING THE WINTER MONTHS AS LONG AS THE SOIL IS WORKABLE. MANY NATIVE SEEDS REQUIRE A PERIOD OF COLD TO GERMINATE AND ARE NOT HARMED BY BEING IN THE SOIL OVER WINTER. THE BEST TIME WINDOW FOR SEEDING ON THE PLAINS IS NOVEMBER 1 TO MARCH 31. AT HIGHER ELEVATIONS, SEEDING CAN BE DONE LATER INTO THE SPRING AND EARLY SUMMER.

IF POSSIBLE, DRILL SEEDING WILL BE THE BEST SEEDING METHOD. IF THE AREA IS TOO SMALL OR STEEP FOR A TRACTOR TO OPERATE, BROADCASTING THE SEED BY HAND OR WITH A MECHANICAL SPREADER IS ACCEPTABLE. BOULDER COUNTY DOES NOT RECOMMEND HYDROSEEDING; IT DOES NOT WORK IN OUR ARID CLIMATE. IN CONTRAST, HYDROMULCHING AFTER SEEDING IS FINE. PAY CLOSE ATTENTION TO THE RECOMMENDED RATES OF SEED APPLICATION. BROADCAST SEED NEEDS TO BE APPLIED AT DOUBLE THE RATE OF DRILLED SEED. AFTER BROADCASTING, SEED NEEDS TO BE RAKED IN LIGHTLY BY HAND TO PROVIDE BETTER SOIL CONTACT. NOT ALL SEED NEEDS TO BE BURIED; IT IS FINE IF SOME IS STILL VISIBLE.

MULCH:

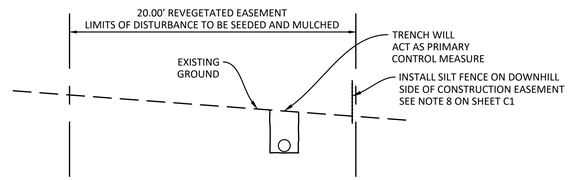
FOR STEEPER SLOPES, A MULCH IS NECESSARY TO KEEP THE SEED AND TOPSOIL IN PLACE. MULCH ALSO PROVIDES SHADE TO THE SEEDLINGS AND HELPS TO RETAIN SOIL MOISTURE. ON SLOPES OF 3:1 OR LESS, THE MULCH CAN BE WEED-FREE STRAW. THE STRAW SHOULD BE APPLIED AT 1.5 TO 2 TONS PER ACRE. THIS IS ROUGHLY ONE STANDARD STRAW BAIL PER 650 SQUARE FEET. DO NOT MULCH TO THICKLY; SOME OF THE SOIL SHOULD STILL BE VISIBLE TO ALLOW SOLAR WARMING. IF A TRACTOR IS AVAILABLE THE STRAW CAN BE "CRIMPED" INTO THE SOIL WITH A CRIMPING TOOL. CRIMPING ORIENTS SOME OF THE STRAW VERTICALLY AND KEEPS IT IN PLACE, MINIMIZING WIND EROSION. THIS CAN BE SIMULATED BY HAND USING A SHOVEL AND JABBING THE STRAW INTO THE GROUND. HYDROMULCHING IS ANOTHER OPTIONFOR LARGER AREAS. FOR SMALL AREAS IN THE MOUNTAINS, SPREADING PINE NEEDLES OVER RACKED-IN SEED IS ACCEPTABLE.

EROSION MATTING:

SLOPES STEEPER THE 2:1 REQUIRE EROSION MATTING. COMMON TYPES OF MATTING INCLUDE COIR (COCONUT OR JUTE FIBER), STRAW, ASPEN FIBERS, OR A BLEND OF THESE. STEEPER SLOPES WILL REQUIRE MORE DURABLE BLANKETS. TALK TO A VENDER ABOUT WHICH PRODUCT WILL WORK FOR YOUR SITUATION. WHEN POSSIBLE, SPECIFY BIODEGRADABLE NETTING SINCE THIS BREAKS DOWN MORE QUICKLY AND IS LESS OF A HAZARD TO WILDLIFE.

FOOTHILLS SEED MIX
5,500 FEET TO 7,000 FEET ELEVATION

COMMON NAME	SPECIES NAME	VARIETY	% OF MIX	#PLS/ACRE
SIDE OATS GRAMA	BOUTELOUA CURTIPENDULA	VAUGHN	10%	1.82
BLUE GRAMA	BOUTELOUA GRACILIS	NATIVE, ALMA, OR HACHITA	15%	0.63
SLENDER WHEATGRASS	ELYMUS TRACHYCAULUS	SAN LUIS	20%	4.38
JUNEGRASS	KOELERIA MACRANTHA	NATIVE	10%	0.15
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	ARRIBA	10%	3.17
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	NATIVE	10%	3.17
SWITCHGRASS	PANICUM VIRGATUM	BLACKWELL OR NEBRASKA 28	7%	0.63
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	CIMARRON OR PASTURA	8%	1.07
GREEN NEEDLEGRASS	STIPA VIRIDULA	LODORM OR NATIVE	10%	1.93
		TOTALS:	**100%**	**16.95**



SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

Call utility notification center of Colorado 2-business days in advance before you dig. DigSafely1-800-922-1987 811 www.uncc.org for marking of underground member utilities.

REUSE OF DOCUMENT
THE IDEAS & DESIGN INCORPORATED HEREON, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS AND IS NOT TO BE USED IN WHOLE OR PART FOR ANY PURPOSE WITHOUT THE WRITTEN AUTHORIZATION OF ALLIANCE CONSULTING ENGINEERS & SURVEYORS.

REVISIONS

NO	DESCRIPTION	DATE	BY

COLORADO LICENSED
DAVID E. MOSER
22485
PROFESSIONAL ENGINEER
12/11/23

*PLANNING * ENGINEERING * CONSTRUCTION MANAGEMENT*
*PROJECT MANAGEMENT * SURVEYING*
Alliance Consulting Engineers & Surveyors
10415 W. 85TH LANE, UNIT B * ARVADA, CO. 80007 * PH: (720) 626-1571
E-MAIL: dmoser@allianceengineer.com

DAVE MILLER DITCH

REVEGETATION PLAN

prepared for
CRANE ASSOCIATES LLC

DRAWN BY: PSD
DESIGNED BY: DEM
DRAWING NAME: DETAILS
APPROVED BY:

JOB NUMBER: 20060
DATE: 12/11/2023
SCALE: AS NOTED
SHEET NO: C11 of C11

C:\USERS\PATRICK S DOMACALL\DROPBOX\20060 DAVE MILLER DITCH LYONS\DWG\WORKING DRAWINGS\DETAILS.DWG PLOTTED: 12/11/2023

Appendix E

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	
Date of Inspection	6/5/24	Weather Conditions	sunny / partly cloudy. no precip
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

	YES	NO
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection

At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

	YES	NO
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☐	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	
Date of Inspection	6/5/24	Weather Conditions	sunny / partly cloudy / precipitation
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

	YES	NO
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection

At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
● This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
● Post-storm inspections at temporarily idle sites	☐
● Inspections at completed sites/area	☐
● Winter conditions exclusion	☐

	YES	NO
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☐	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	
Date of Inspection	6/2/24	Weather Conditions	sunny / partly cloudy / precipitation
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	YES	NO
	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection	
At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
● This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
● Post-storm inspections at temporarily idle sites	☐
● Inspections at completed sites/area	☐
● Winter conditions exclusion	☐

Have there been any deviations from the minimum inspection schedule? If yes, describe below.	YES	NO
	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☐	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	
Date of Inspection	6/25/24	Weather Conditions	sunny / partly cloudy, warm
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	YES	NO
	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection

At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
● This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
● Post-storm inspections at temporarily idle sites	☐
● Inspections at completed sites/area	☐
● Winter conditions exclusion	☐

Have there been any deviations from the minimum inspection schedule? If yes, describe below.	YES	NO
	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☐	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	Sunny hot. no rain
Date of Inspection	8/2/24	Weather Conditions	
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

	YES	NO
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection

At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

	YES	NO
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☒	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed
8/22/24	See email from jessica.halvorsen@state.co.us			

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	
Date of Inspection	9/5/24	Weather Conditions	Sunny hot. no rain
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

	YES	NO
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection

At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

	YES	NO
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☒	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed
8/22/24	See email from jessica.halvorsen@state.co.us			Sept 7, 24

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	Sunny hot. no rain
Date of Inspection	9/5/2024	Weather Conditions	
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

	YES	NO
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection	
At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

	YES	NO
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☒	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed
8/22/24	See email from jessica.halvorsen@state.co.us			Sept 7, 24

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	Sunny hot. no rain
Date of Inspection	9/27/2024	Weather Conditions	
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	YES	NO
	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection

At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

Have there been any deviations from the minimum inspection schedule? If yes, describe below.	YES	NO
	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☒	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed
8/22/24	See email from jessica.halvorsen@state.co.us			Sept 7, 24

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	
Date of Inspection	6/5/2024	Weather Conditions	Sunny hot. no rain
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	YES	NO
	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection

At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

Have there been any deviations from the minimum inspection schedule? If yes, describe below.	YES	NO
	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☒	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed
8/22/24	See email from jessica.halvorsen@state.co.us			Sept 7, 24

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	
Date of Inspection	6/5/2024	Weather Conditions	Sunny hot. no rain
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	YES	NO
	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection	
At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

Have there been any deviations from the minimum inspection schedule? If yes, describe below.	YES	NO
	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☒	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed
8/22/24	See email from jessica.halvorsen@state.co.us			Sept 7, 24

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

Stormwater Inspection Report Template

Facility Name	DMD	Permittee	
Date of Inspection	6/5/2024	Weather Conditions	Sunny hot. no rain.
Permit Certification #		Disturbed Acreage	
Phase of Construction	partial complete	Inspector Title	
Inspector Name	Matthew Rooney		

Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	YES	NO
	☑	☐

INSPECTION FREQUENCY

Check the box that describes the minimum inspection frequency utilized when conducting each inspection	
At least one inspection every 7 calendar days	☑
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐

Have there been any deviations from the minimum inspection schedule? If yes, describe below.	YES	NO
	☐	☑

INSPECTION REQUIREMENTS*

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in the specifications to minimize pollutant discharges

   a. Assess the adequacy of control measures for pumped stormwater (e.g. sediment plume, suspended solids, unusual color, decreased clarity, presence of odor or foam, etc).

ii. Determine if there are new potential sources of pollutants

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges

iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action(s) in accordance with Part I.B.1.c.

*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED

Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?

	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☑	☐	
All disturbed areas, including areas that are temporarily stabilized	☑	☐	
Designated haul routes	☑	☐	
Material and waste storage areas exposed to precipitation	☑	☐	N/A
Locations of pumped stormwater	☑	☐	N/A

Locations where stormwater has the potential to discharge offsite, including visible erosion and sedimentation	☑	☐	N/A
Locations where vehicles exit the site	☑	☐	
Locations of installed control measures	☑	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring routine maintenance?	NO	YES	
	☐	☒	If "YES" document below

Date Observed	Location	Control Measure	Routine Maintenance Required	Date Completed
8/22/24	See email from jessica.halvorsen@state.co.us			Sept 7, 24

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

	NO	YES	
Are there inadequate control measures requiring corrective action?	☐	☐	If "YES" document below

	NO	YES	
Are there additional control measures needed that were not in place at the time of inspection?	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

REPORTING REQUIREMENTS

The permittee shall report the following circumstances on the division's submission form within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall submit to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances.

All Noncompliance Requiring 24-Hour Notification per Part II.L.7 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.7.a.i of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.a.ii of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.a.iii of the Permit)
- Daily maximum violations (See Part II.L.6.a.iv of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

	NO	YES	
Has there been an incident of noncompliance requiring 24-hour notification?	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

"I verify that, to the best of my knowledge and belief, that if any corrective action items were identified during the inspection, those corrective actions are complete, and the site is currently in compliance with the permit"

_____ _____

Name of Qualified Stormwater Manager Title of Qualified Stormwater Manager

_____ _____

Signature of Qualified Stormwater Manager Date

Notes/Comments

PROJECT COMPLETED 11/20/24! All disturbed areas seeded and hydromulched. Finally.

Public Works Department

MS4 OVERSIGHT INSPECTION

Project Information

Project Name: David Miller Ditch Realignment	Date of Inspection: 6/5/24
Boulder County Permit No.: SWQP- 22-023	Does the project drain to the County's MS4? N

Reason(s) for Inspection

- ☐ Initial Inspection
- ☑ 45 Calendar Day Routine Inspection for MS4 Oversight
- ☐ 14 Calendar Day Indicator Inspection Screening/Drive-by
- ☐ 14 Calendar Day Compliance Inspection corrective action follow-up

90 Calendar Day Reduced Inspection for
☐ inactive sites ☐ stormwater management program
☐ SWMP staff vacancy (check one)

☐ Complaint:
Date reported/identified:

Construction Site Assessment (Pollutants, Controls, and Discharge Evaluations)

Observations	Status	Corrective Action Needed and Notes, if Applicable
1. Did the project fail to implement control measures?	○ Yes ◉ No ☐ N/A	
2. Were inadequate control measures observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
3. Were any offsite discharges observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
If yes to questions 1-3, a follow up inspection or operator compliance form is required within 14 days. See Inspection Results for details.		
4. Did any control measures need routine maintenance at the time of the inspection?	○ Yes ◉ No ☐ N/A	
5. Were all potential pollutant sources evaluated?	◉ Yes ○ No ☐ N/A	

6. Is there a Stormwater Management Facility (SWMF) associated with the site? ○ Yes ◉ No
   If yes, describe type of SWMF and the status and condition of the SWMF

7. Has there been a major or minor modification since the last MS4 inspection? ○ Yes ◉ No
   If yes, describe

8. Other Observations/Field Notes:

Inspection Results

- ☑ Passing Inspection: No deficiencies exist.
- ☐ Passing Inspection: No deficiencies exist but routine maintenance identified.
- ☐ Deficiencies Exist: Please note corrective actions must be addressed immediately in most cases.
- ☐ Notice of non-compliance: Numerous deficiencies are noted.
- ☐ Notice of Violation: **Indicates a site with site-wide or systematic BMP issues, chronic site violations, and/or repeated non-compliance items which must be resolved immediately.**

Contractor/Operator compliance form and photographs are due by (insert date):

If this form is not received by this date, a follow up inspection will be scheduled within 14 days of the original MS4 Inspection

Public Works Department

MS4 OVERSIGHT INSPECTION

Inspection Certification

I certify that the information in this Inspection Report is, to the best of my knowledge and belief, true, accurate, and complete. This report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

MS4 Compliance Inspector Name: Lily Montesano Date: 7/12/24

MS4 Compliance Inspector Signature: Lily Montesano

Please note, this report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

Public Works Department

MS4 OVERSIGHT INSPECTION

Project Information

Project Name: David Miller Ditch Realignment	Date of Inspection: 6/5/24
Boulder County Permit No.: SWQP- 22-023	Does the project drain to the County's MS4? N

Reason(s) for Inspection

- ☐ Initial Inspection
- ☑ 45 Calendar Day Routine Inspection for MS4 Oversight
- ☐ 14 Calendar Day Indicator Inspection Screening/Drive-by
- ☐ 14 Calendar Day Compliance Inspection corrective action follow-up

90 Calendar Day Reduced Inspection for
☐ inactive sites ☐ stormwater management program
☐ SWMP staff vacancy (check one)

☐ Complaint:
Date reported/identified:

Construction Site Assessment (Pollutants, Controls, and Discharge Evaluations)

Observations	Status	Corrective Action Needed and Notes, if Applicable
1. Did the project fail to implement control measures?	○ Yes ◉ No ☐ N/A	
2. Were inadequate control measures observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
3. Were any offsite discharges observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
If yes to questions 1-3, a follow up inspection or operator compliance form is required within 14 days. See Inspection Results for details.		
4. Did any control measures need routine maintenance at the time of the inspection?	○ Yes ◉ No ☐ N/A	
5. Were all potential pollutant sources evaluated?	◉ Yes ○ No ☐ N/A	

6. Is there a Stormwater Management Facility (SWMF) associated with the site? ○ Yes ◉ No
   If yes, describe type of SWMF and the status and condition of the SWMF

7. Has there been a major or minor modification since the last MS4 inspection? ○ Yes ◉ No
   If yes, describe

8. Other Observations/Field Notes:

Inspection Results

- ☑ Passing Inspection: No deficiencies exist.
- ☐ Passing Inspection: No deficiencies exist but routine maintenance identified.
- ☐ Deficiencies Exist: Please note corrective actions must be addressed immediately in most cases.
- ☐ Notice of non-compliance: Numerous deficiencies are noted.
- ☐ Notice of Violation: **Indicates a site with site-wide or systematic BMP issues, chronic site violations, and/or repeated non-compliance items which must be resolved immediately.**

Contractor/Operator compliance form and photographs are due by (insert date):

If this form is not received by this date, a follow up inspection will be scheduled within 14 days of the original MS4 Inspection

Public Works Department

MS4 OVERSIGHT INSPECTION

Inspection Certification

I certify that the information in this Inspection Report is, to the best of my knowledge and belief, true, accurate, and complete. This report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

MS4 Compliance Inspector Name: Lily Montesano Date: 9/6/24

MS4 Compliance Inspector Signature: Lily Montesano

Please note, this report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

David Miller Ditch Routine MS4 Inspection - 9/6/24

Photo 1 - Correction: Additional vegetation has been coming up due to recent rains. Contractor confirmed use of drill seeding.

Photo 2 - Implemented stabilization is inadequate. Per discussion with contractor, this will be addressed via SCL in a strategically-placed location.

Photo 3 - Implemented stabilization is inadequate. Per discussion with contractor, this will be addressed via SCL in a strategically-placed location.

Photo 4 - Correction: Additional vegetation has been coming up due to recent rains. Contractor confirmed use of drill seeding.

Public Works Department

MS4 OVERSIGHT INSPECTION

Project Information

Project Name: David Miller Ditch Realignment	Date of Inspection: 6/5/24
Boulder County Permit No.: SWQP- 22-023	Does the project drain to the County's MS4? N

Reason(s) for Inspection

- ☐ Initial Inspection
- ☑ 45 Calendar Day Routine Inspection for MS4 Oversight
- ☐ 14 Calendar Day Indicator Inspection Screening/Drive-by
- ☐ 14 Calendar Day Compliance Inspection corrective action follow-up

90 Calendar Day Reduced Inspection for
☐ inactive sites ☐ stormwater management program
☐ SWMP staff vacancy (check one)

☐ Complaint:
Date reported/identified:

Construction Site Assessment (Pollutants, Controls, and Discharge Evaluations)

Observations	Status	Corrective Action Needed and Notes, if Applicable
1. Did the project fail to implement control measures?	○ Yes ◉ No ☐ N/A	
2. Were inadequate control measures observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
3. Were any offsite discharges observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
If yes to questions 1-3, a follow up inspection or operator compliance form is required within 14 days. See Inspection Results for details.		
4. Did any control measures need routine maintenance at the time of the inspection?	○ Yes ◉ No ☐ N/A	
5. Were all potential pollutant sources evaluated?	◉ Yes ○ No ☐ N/A	

6. Is there a Stormwater Management Facility (SWMF) associated with the site? ○ Yes ◉ No
   If yes, describe type of SWMF and the status and condition of the SWMF

7. Has there been a major or minor modification since the last MS4 inspection? ○ Yes ◉ No
   If yes, describe

8. Other Observations/Field Notes:

Inspection Results

- ☑ Passing Inspection: No deficiencies exist.
- ☐ Passing Inspection: No deficiencies exist but routine maintenance identified.
- ☐ Deficiencies Exist: Please note corrective actions must be addressed immediately in most cases.
- ☐ Notice of non-compliance: Numerous deficiencies are noted.
- ☐ Notice of Violation: **Indicates a site with site-wide or systematic BMP issues, chronic site violations, and/or repeated non-compliance items which must be resolved immediately.**

Contractor/Operator compliance form and photographs are due by (insert date):

If this form is not received by this date, a follow up inspection will be scheduled within 14 days of the original MS4 Inspection

Public Works Department

MS4 OVERSIGHT INSPECTION

Inspection Certification

I certify that the information in this Inspection Report is, to the best of my knowledge and belief, true, accurate, and complete. This report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

MS4 Compliance Inspector Name: Lily Montesano Date: 9/8/24

MS4 Compliance Inspector Signature: Lily Montesano

Please note, this report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

SWQP-22-023 David Miller Ditch Realignment Follow-up Inspection Photos

A sediment control log has been added at a strategic location where disturbances of concern drain drain to a channelized area.

Photo 2

Photo 3

Photo 4

Public Works Department

MS4 OVERSIGHT INSPECTION

Project Information

Project Name: David Miller Ditch Realignment	Date of Inspection: 6/5/24
Boulder County Permit No.: SWQP- 22-023	Does the project drain to the County's MS4? N

Reason(s) for Inspection

- ☐ Initial Inspection
- ☑ 45 Calendar Day Routine Inspection for MS4 Oversight
- ☐ 14 Calendar Day Indicator Inspection Screening/Drive-by
- ☐ 14 Calendar Day Compliance Inspection corrective action follow-up

90 Calendar Day Reduced Inspection for
☐ inactive sites ☐ stormwater management program
☐ SWMP staff vacancy (check one)

☐ Complaint:
Date reported/identified:

Construction Site Assessment (Pollutants, Controls, and Discharge Evaluations)

Observations	Status	Corrective Action Needed and Notes, if Applicable
1. Did the project fail to implement control measures?	○ Yes ◉ No ☐ N/A	
2. Were inadequate control measures observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
3. Were any offsite discharges observed at the time of the inspection?	○ Yes ◉ No ☐ N/A	
If yes to questions 1-3, a follow up inspection or operator compliance form is required within 14 days. See Inspection Results for details.		
4. Did any control measures need routine maintenance at the time of the inspection?	○ Yes ◉ No ☐ N/A	
5. Were all potential pollutant sources evaluated?	◉ Yes ○ No ☐ N/A	

6. Is there a Stormwater Management Facility (SWMF) associated with the site? ○ Yes ◉ No
   If yes, describe type of SWMF and the status and condition of the SWMF

7. Has there been a major or minor modification since the last MS4 inspection? ○ Yes ◉ No
   If yes, describe

8. Other Observations/Field Notes:

Inspection Results

- ☑ Passing Inspection: No deficiencies exist.
- ☐ Passing Inspection: No deficiencies exist but routine maintenance identified.
- ☐ Deficiencies Exist: Please note corrective actions must be addressed immediately in most cases.
- ☐ Notice of non-compliance: Numerous deficiencies are noted.
- ☐ Notice of Violation: **Indicates a site with site-wide or systematic BMP issues, chronic site violations, and/or repeated non-compliance items which must be resolved immediately.**

Contractor/Operator compliance form and photographs are due by (insert date):

If this form is not received by this date, a follow up inspection will be scheduled within 14 days of the original MS4 Inspection

Public Works Department

MS4 OVERSIGHT INSPECTION

Inspection Certification

I certify that the information in this Inspection Report is, to the best of my knowledge and belief, true, accurate, and complete. This report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.

MS4 Compliance Inspector Name: Lily Montesano Date: 11/27/24

MS4 Compliance Inspector Signature: Lily Montesano

Please note, this report may not include all deficiencies on your site. This MS4 oversight inspection is designed to assist the County in determining if this site's stormwater program is being consistently and effectively implemented.