IRON RIDGE FIGLING NO. 1 & 2

A PORTION OF THE SOUTHEAST QUARTER OF SECTION 14, TOWNSHIP 11 SOUTH, RANGE 66 WEST OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO

CONSTRUCTION DOCUMENTS AND GEC PLANS

Please split construction drawings for Filing No. 1 and 2 into two separate sets.

Engineering comments for the Construction Drawings are provided on the copy submitted under Filing No. 1 (SF2613). Please refer to that submission to view all applicable comments.

PCD No. for Iron Ridge Filing No. 2 is SF2612.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

1. ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).

3. CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
   a. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
   b. CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
   c. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
   d. CDOT M & S STANDARDS

4. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

5. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.

6. CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD) – INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.

8. CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.

9. ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.

10. CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.

11. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.

12. SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.

13. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DPW AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]

14. CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.

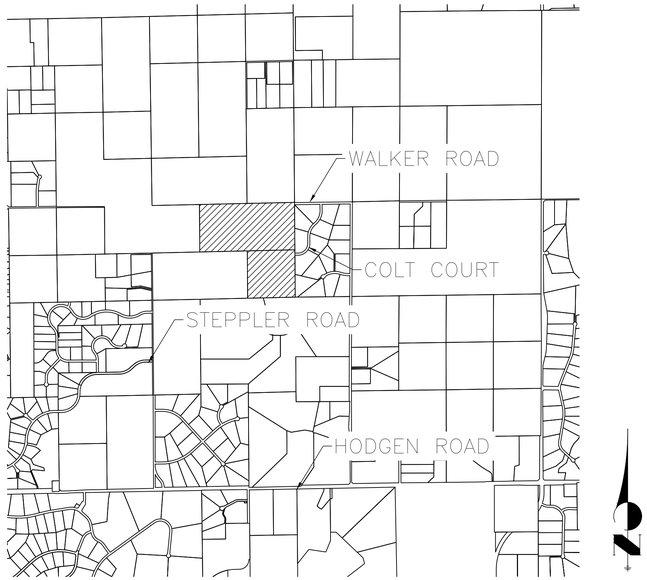
15. THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

ABBREVIATIONS:

ASCE – AMERICAN SOCIETY OF CIVIL ENGINEERS
BLDG – BUILDING
BW – BOTTOM OF WALL
CG – CURB AND GUTTER
CIP – CAST IRON PIPE
CL – CENTERLINE
CMP – CORRUGATED METAL PIPE
CONC – CONCRETE
DIP – DUCTILE IRON PIPE
DS – DOWNSPOUT
EL – ELEVATION
ESMT – EASEMENT
EX – EXISTING
FES – FLARED END SECTION
FL – FLOWLINE
GB – GRADE BREAK
HP – HIGH POINT
HYD – HYDRANT
INV – INVERT ELEVATION
LF – LINEAR FEET
LP – LOW POINT
MH – MANHOLE
MIN – MINIMUM
OH – OVERHEAD
PB – PUBLIC
PC – POINT OF CURVATURE
PCC – POINT OF COMPOUND CURVATURE
PCR – POINT OF CURB RETURN
PR – PROPOSED
PRC – POINT OF REVERSE CURVATURE
PVC – POLYVINYL CHLORIDE PIPE
PVT – PRIVATE
PT – POINT OF TANGENCY
P.U.E – PUBLIC UTILITY EASEMENT
P.U.A.E – PUBLIC UTILITY & ACCESS EASEMENT
P.U.D.E – PUBLIC UTILITY & DRAINAGE EASEMENT
P.I.E – PUBLIC IMPROVEMENT EASEMENT
R – RADIUS
RIM – RIM ELEVATION
STM – STORM
TBC – TOP BACK OF CURB
TW – TOP OF WALL
TYP – TYPICAL
UD – UNDERDRAIN
UT – UTILITY
WTR – WATER
XPAN – CROSSPAN

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

811 Know what's below. Call before you dig.



VICINITY MAP
SCALE: 1"=250'

SHEET INDEX

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FLOODPLAIN STATEMENT:

THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOOD INSURANCE RATE MAP NO. 08041C0305G EFFECTIVE DATE DECEMBER 7, 2018, INDICATES THE PARCEL OF LAND TO BE LOCATED IN ZONE X.

BASIS OF BEARINGS:

THE BASIS OF BEARINGS IS THE WEST LINE OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER, MONUMENTED AT THE SOUTHWEST CORNER BY A FOUND 2" ALUMINUM CAP, PLS 23890, AND AT THE NORTHWEST CORNER BY A FOUND 2" ALUMINUM CAP, PLS 23890, ASSUMED TO BEAR NORTH 0 DEGREES 33 MINUTES 44 SECONDS WEST

BENCHMARK:

NAVD 88, CONFIRMED BY CHECKING INTO BENCHMARK V-395 (KK1315) WITH AN ELEVATION OF 7346.57

CONTACTS:

OWNER/DEVELOPER	ATTICUS LAND, LLC PO BOX 88010 COLORADO SPRINGS, CO 80908
ENGINEER	ALL TERRAIN ENGINEERING LLC 1004 W VAN BUREN ST COLORADO SPRINGS, CO 80907 ATTN: NICHOLAS JOKERST (530) 391-7635
SURVEYOR	GOULD LAND SURVEYING PO BOX 7123 WOODLAND PARK, CO 80863 (719) 687-8385
FIRE PROTECTION	BLACK FOREST FIRE & RESCUE 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 (719) 495-4300
EL PASO COUNTY	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS CO 80910
ELECTRIC	MOUNTAIN VIEW ELECTRIC 11140 E WOODMEN ROAD FALCON, CO 80831
GAS	BLACK HILLS ENERGY 105 S VICTORIA AVENUE PUEBLO, CO 81003

EL PASO COUNTY STATEMENT

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILE IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THESE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTORS DISCRETION.

JOSHUA J. PALMER P.E. — DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

NAME — DATE

ANTLER RANGE LLC
PO BOX 38939
COLORADO SPRINGS, 80937

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLAN AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. — DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

EL PASO COUNTY PLANNING & COMMUNITY DEVELOPMENT NUMBER: SF26X

ALL TERRAIN ENGINEERING
NICHOLAS J. JOKERST, PE
530.391.7635 - NICK@ATERRAINENG.COM
RYAN E. BURNS, PE
303.517.8656 - RYAN@ATERRAINENG.COM

PREPARED FOR:
ATTICUS LAND, LLC
PO BOX 88010
COLORADO SPRINGS, CO 80908
ATTN: JAKE DECOTO
206.419.4533
DECOTO@GMAIL.COM

UNTIL SUCH TIME AS THESE DRAWIGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

REV	DESCRIPTION	DATE

JOB NO: 25009 LOCATION: ####

IRON RIDGE FIGLING NO. 1 & 2

COVER SHEET

DESIGN: NOJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 1" = 2,000
V-SCALE: NA

SHEET 01 OF 24

PLANEMETRICS

	EXISTING	PROPOSED
SECTION LINE		
RIGHT–OF–WAY		
PARCEL LINE		
EASEMENT LINE		
BOUNDARY LINE		
CENTER LINE		

CONSTRUCTION

	EXISTING	PROPOSED
C&G		
EDGE OF ASPHALT		
CONCRETE		
SIDE WALK		
CROSS PAN		
PARKING LOT STRIPING		
ROADWAY STRIPING – DHASED		
ROADWAY STRIPING – DOTTED		
GUARDRAIL		
FENCE		X X X X X
SOUNDWALL		
DEMO		
GRAVEL		
RIPRAP		
DIRT		
TRAIL/PATH		
RAIL LINE		

GRADING

	EXISTING	PROPOSED
CONTOUR INTERMEDIATE		
CONTOUR INDEX		
TOP OF SLOPE		
TOE OF SLOPE		
CUT/FILL BOUNDARY		
LIMITS OF GRADING		LOG LOG LOG LOG LOG
LIMITS OF DISTURBANCE		

UTILITIES

	EXISTING	PROPOSED
SANITARY SEWER		SS SS SS SS
SANITARY SEWER SERVICE		
POTABLE WATER MAIN		W W W W
POTABLE WATER SERVICE		
RAW WATER MAIN	RAW	RAW RAW RAW
IRRIGATION MAIN		
SANITARY FORCE MAIN	FM	FM FM FM FM
UNDER–DRAIN	UD	UD UD UD UD
GAS PIPE	G	G G G G G
HIGH PRESSURE GAS	HPG	HPG HPG HPG HPG
OIL/PETROLEUM LINE	O	O O O O
UNDER–GROUND ELECTRIC	UGE	UGE UGE UGE UGE
OVER–HEAD ELECTRIC	OHU	OHU OHU OHU
FIBER OPTIC	FO	FO FO FO FO
COMMUNICATION LINES MISC.	COM	COM COM COM
STORM PIPE		
HGL MINOR		
HGL MAJOR		

DRAINAGE

	EXISTING	PROPOSED
BASE FLOOD ELEVATION		
100–YR FLOOD PLAIN	100YR	100YR 100YR
500–YR FLOOD PLAIN	500YR	500YR 500YR
FLOODWAY	FLOOD	FLOOD FLOOD
SWALE/DITCH		
THALWEG (STREAM/CREEK)		
LIMITS OF WETLANDS		
EDGE OF WATER		
SILT FENCE		
CONSTRUCTION FENCE/MARKERS		CF CF CF CF

UTILITY SYMBOLS

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET – SQUARE		
AREA INLET – ROUND		
FLARED END SECTION		

TRAFFIC

	EXISTING	PROPOSED
TRAFFIC SIGNAL BOX		
TRAFFIC SIGNAL POLE		
SIGN		
STREET LIGHT		
STREET LIGHT – SINGLE		
STREET LIGHT – DOUBLE		
LUMINAIRE		

LANDSCAPE

	EXISTING	PROPOSED
TREE – CONIFEROUS		
TREE – DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		FP

UTILITY SYMBOLS

	EXISTING	PROPOSED
SANITARY		
LINE MARKER	Mkr San	
SERVICE MARKER		
CLEAN–OUT		
MANHOLE	S	
WATER		
LINE MARKER	Mkr W	
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE	W	
BEND		
BLOW–OFF VALVE		
WELL	WELL	WELL
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
GAS		
MARKER	Mkr G	
SERVICE MARKER		
METER		
DRY UTILITIES		
CABLE TV MARKER	Mkr TV	
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER	Mkr E	
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER–OPTIC MARKER	Mkr FO	
IRRIGATION PEDESTAL		
TELEPHONE MARKER	Mkr T	
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE	VP	VP
TEST HOLE DESIGNATOR	TH# FIRM FIRM/AGENCY	

GRADING AND EROSION CONTROL STANDARD NOTES

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON–SITE OR OFF–SITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE–DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE–EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
14. DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
15. EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
17. WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
18. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF–SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF–SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
19. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON–SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
24. OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING INC. AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WQCD – PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246–1530
ATTN: PERMITS UNIT

ENGINEER'S STATEMENT

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COLORADO REGISTERED RYAN E. BURNS PROFESSIONAL ENGINEER
54412

RYAN E. BURNS, P.E. — DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

ALL TERRAIN ENGINEERING

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REV	DESCRIPTION	DATE

JOB NO: 25009
LOCATION: EPC

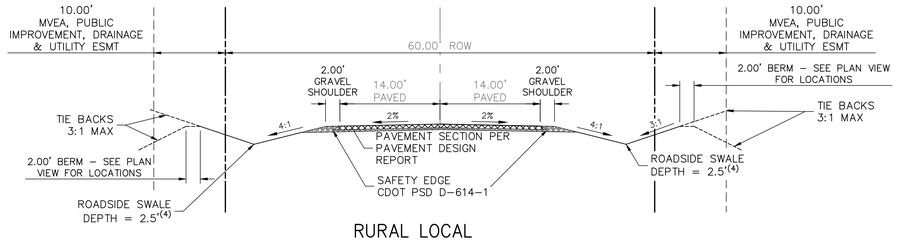
IRON RIDGE FIGLING NO. 1 & 2

LEGEND

DESIGN: NOJ
REVIEW: REB
DATE: 5/22/26

H–SCALE: 1" = 50
V–SCALE: 1" = 5

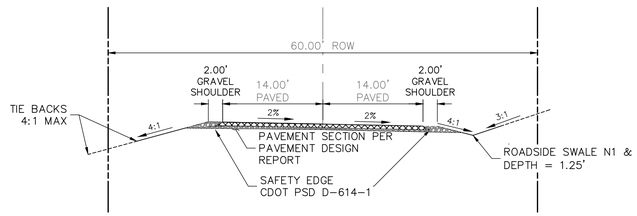
SHEET
02 OF 24



RURAL LOCAL TYPICAL SECTION

SCALE: NTS

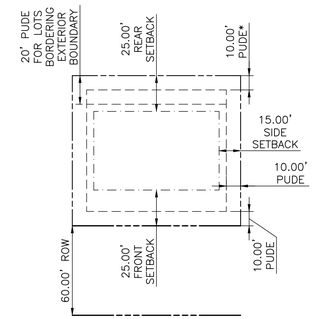
1. BROWN ROAD & COLT COURT (EXCEPT STA: 5+00 – 8+24.14
2. POSTED SPEED = 25 MPH
3. DESIGN SPEED = 30 MPH
4. ALL ROADSIDE SWALES SHALL BE 2.5' DEEP MININMUM, EXCEPT SWALES N1 & N2 SHALL BE 1.25' MIN.
5. SEE GEC PLANS FOR ROADSIDE SWALE LINING REQUIREMENTS



RURAL LOCAL TYPICAL SECTION (SUPER)

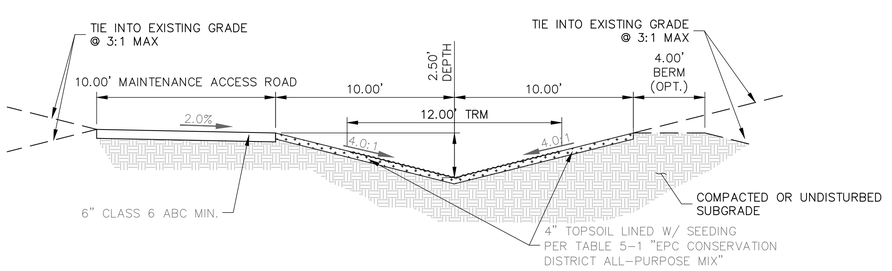
SCALE: NTS

1. COLT COURT STA: 5+00 – 8+24.14
2. POSTED SPEED = 25 MPH
3. DESIGN SPEED = 30 MPH
4. SEE GEC PLANS FOR ROADSIDE SWALE LINING REQUIREMENTS



LOT TYPICAL

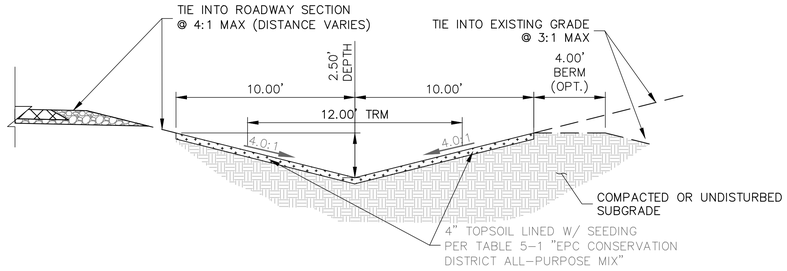
SCALE: NTS



SWALE DP3.1 – DP4 & DP13 – 14

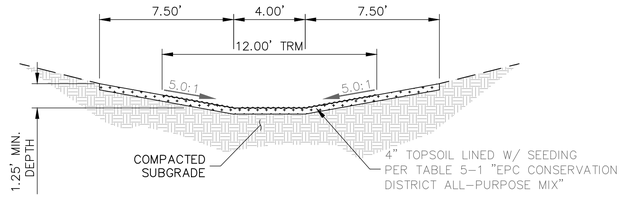
SCALE: NTS

1. TRM – TURF REINFORCEMENT MAT SHALL BE V –MAX S200 OR P300
2. TRM SHALL BE INSTALLED TO THE EXTENTS SHOWN IN PLAN VIEW



SWALE DP3 – DP3.1

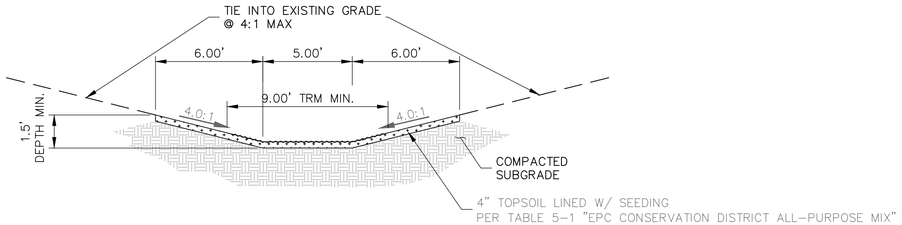
SCALE: NTS



DP4.1 – POND 1 OUTFALL SWALE

SCALE: NTS

1. TRM – TURF REINFORCEMENT MAT SHALL BE V –MAX S200 OR P300



DP14.1 OUTFALL

SCALE: NTS

1. TRM – TURF REINFORCEMENT MAT SHALL BE V –MAX S200 OR P300

GENERAL CONSTRUCTION NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
2. THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
3. ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
4. ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED PER THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PCD.
5. ALL STATIONING IS CENTERLINE OF IMPROVEMENTS UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED AS TOP BACK OF CURB (TBC), ASPHALT (ASP), OR TOP OF INLET OR BOX (TOB).
6. ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO EPC ECM APPENDIX K – 1.2C.
7. ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" VERTICAL IN THIS AREA.
8. ALL CULVERTS AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 – CULVERTS.
9. ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT THE TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DEVELOPMENT SERVICES ENGINEERING DIVISION PRIOR TO CONSTRUCTION.

SIGNING AND STRIPING NOTES:

1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
3. ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
4. ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
5. STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
6. ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
7. ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS"
8. ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
9. ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
10. ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
11. ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
12. ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
13. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
14. THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

ENGINEER'S STATEMENT

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COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

ALL TERRAIN ENGINEERING

RYAN E. BURNS, P.E. – 970.247.2.
555 311 7655 – RYAN@ATERRAINENG.COM

RYAN T. BURNS, P.E. – 970.577.8668 – RYAN@ATERRAINENG.COM

PREPARED FOR:
ATTICUS LAND, LLC
PO BOX 88010
COLORADO SPRINGS, CO 80908
ATTN: JAKE DECOTO
206.419.4533
DECOTO@GMAIL.COM

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REV	DESCRIPTION	DATE

LOCATION: EPC
JOB NO: 25009

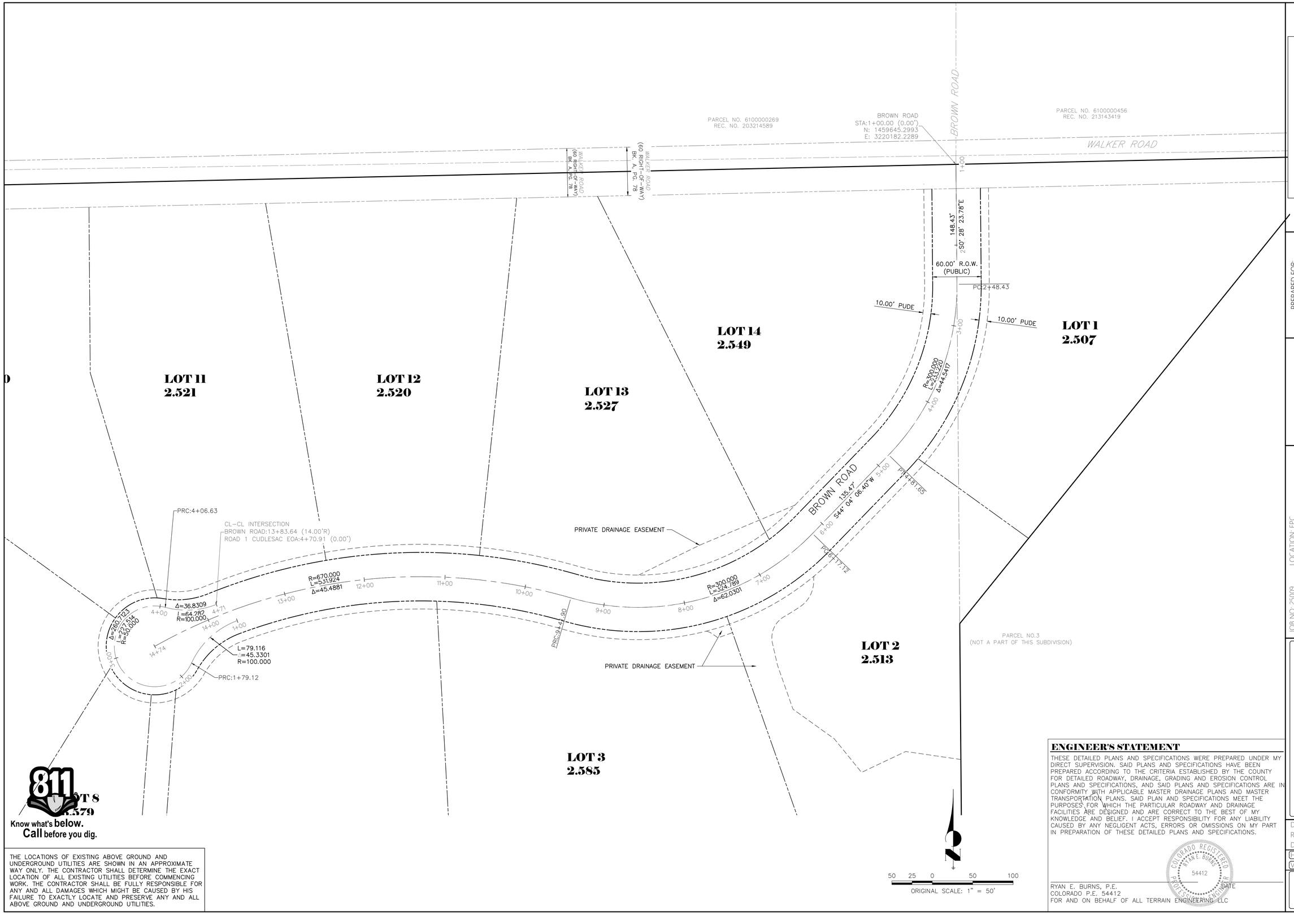
IRON RIDGE FIGLING NO. 1 & 2

TYPICAL SECTIONS

DESIGN: NOJ
REVIEW: REB
DATE: 5/22/26

H-SCALE: 1" = 50
V-SCALE: 1" = 5'

SHEET
03 OF 24



THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

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NICHOLAS Q. JOVICEVIC, P.E.
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JOB NO: 25009
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IRON RIDGE FIGLING NO. 1 & 2

HORIZONTAL CONTROL

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REVIEW: REB
DATE: 5/22/26
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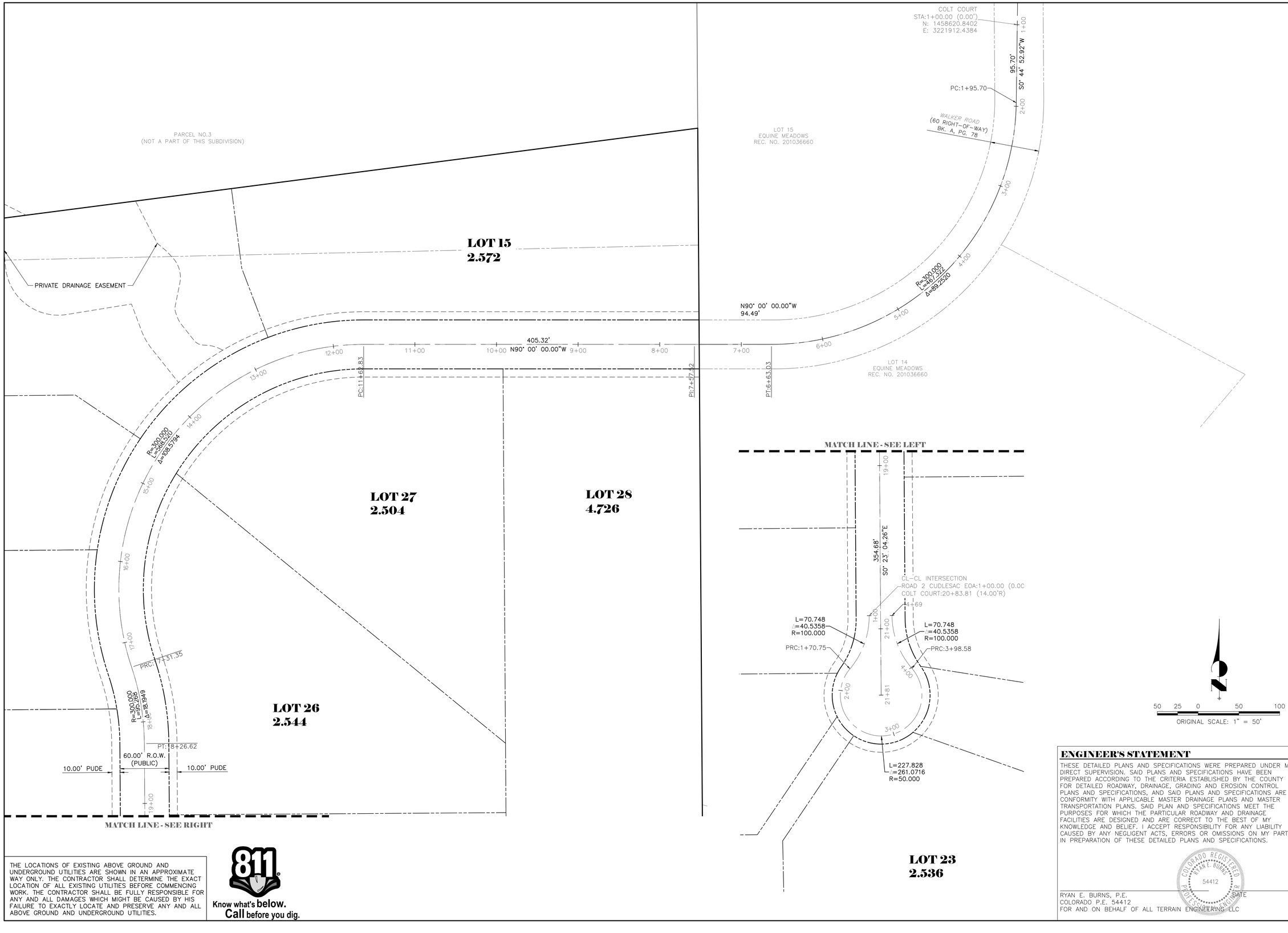
SHEET
04 OF 24



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HORIZONTAL CONTROL

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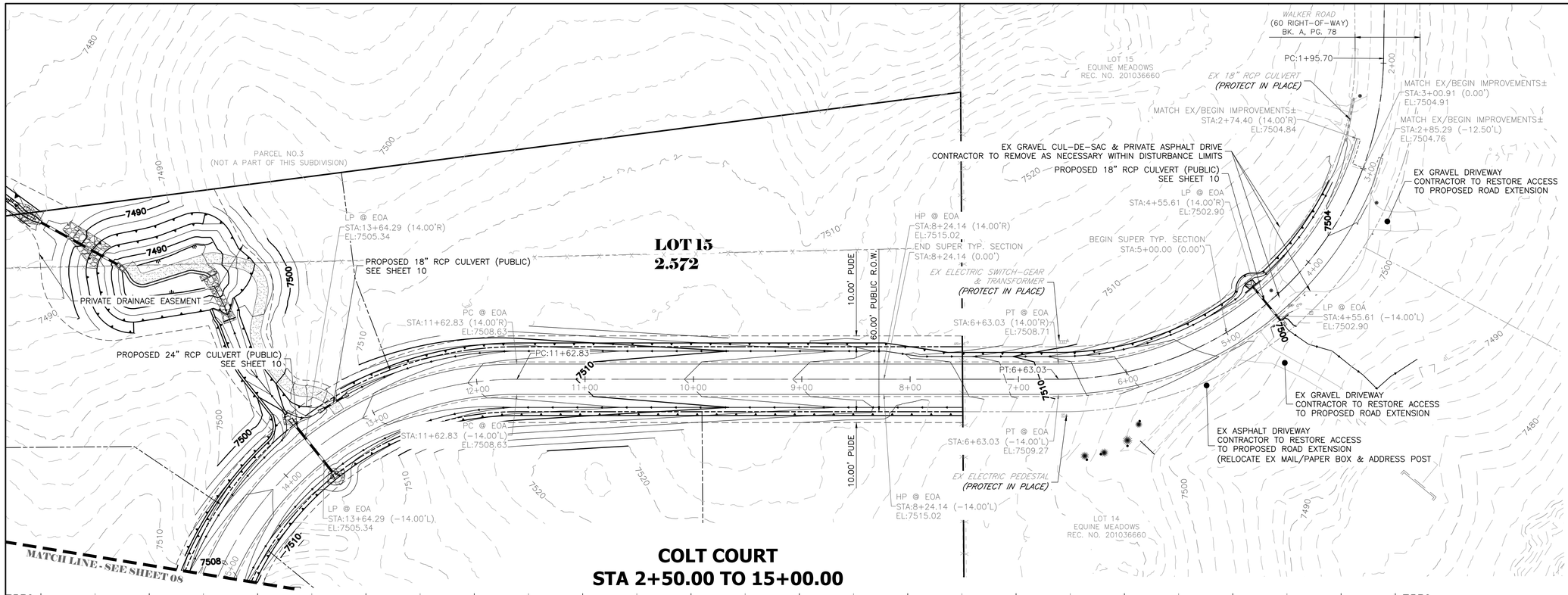
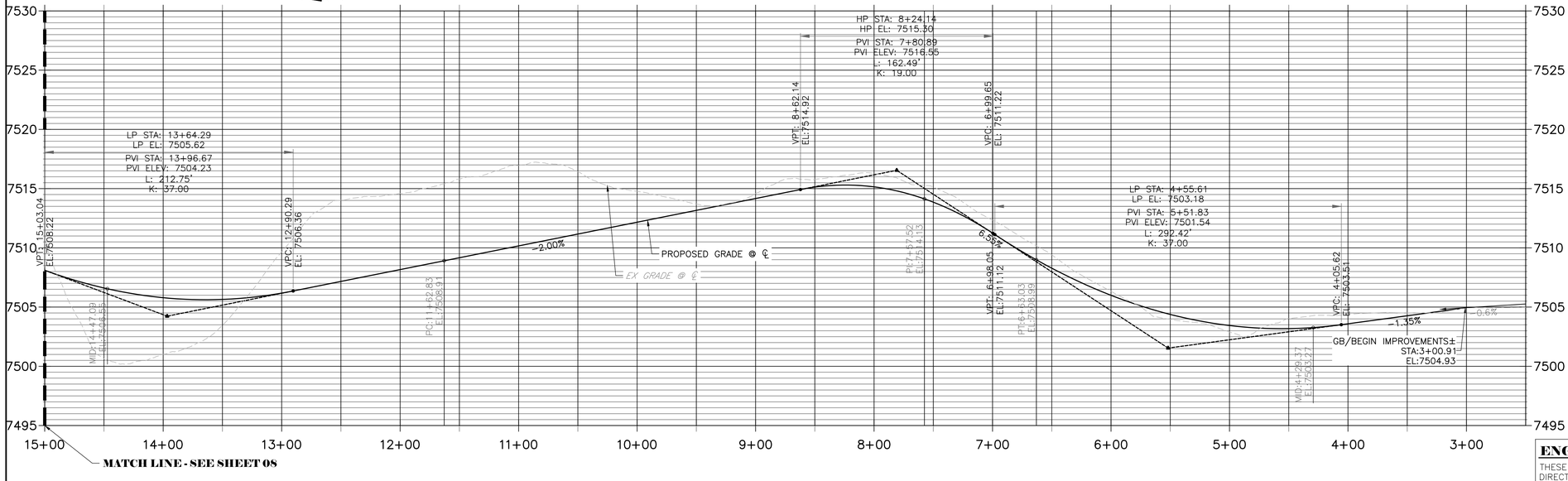


COLT COURT
STA 2+50.00 TO 15+00.00



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NOTES:

1. SEE SHEET 1 FOR ABBREVIATIONS AND GENERAL NOTES.
2. SEE SHEET 2 FOR LINE TYPE LEGEND AND STANDARD NOTES.
3. SEE SHEET 3 FOR TYPICAL SECTIONS OF ROADWAYS AND SWALES.
4. CONTRACTOR TO FAMILIARIZE SELF WITH SITE, PLANS, EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY QUESTIONS, DISCREPANCIES, CONFLICTS, OR REQUIRED CHANGES PRIOR TO COMMENCING CONSTRUCTION.
5. PLEASE NOTE, EXISTING UTILITY LOCATIONS SHOULD BE VERIFIED PRIOR TO CONSTRUCTION AND MAY DIFFER THAN WHAT IS SHOWN IN THESE PLANS.

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

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IRON RIDGE FIGLING NO. 1 & 2

STREET IMPROVEMENTS

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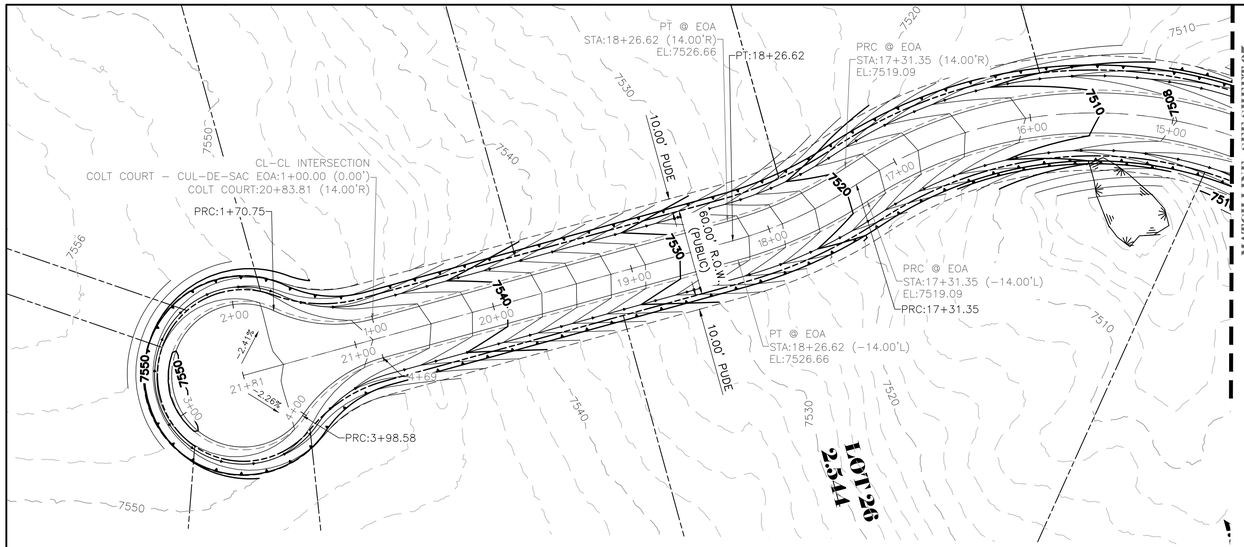
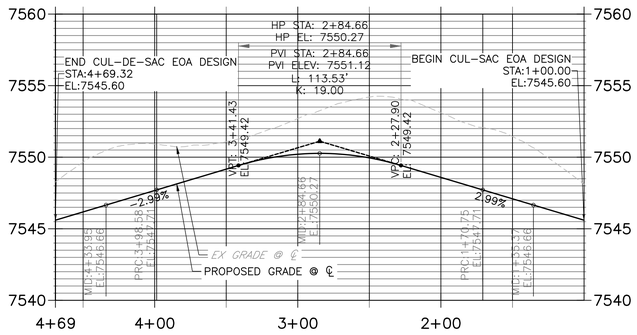
SHEET
06 OF 24



COLT COURT - CUL-DE-SAC EOA
STA 1+00.00 TO 4+69.32



COLT COURT (1)
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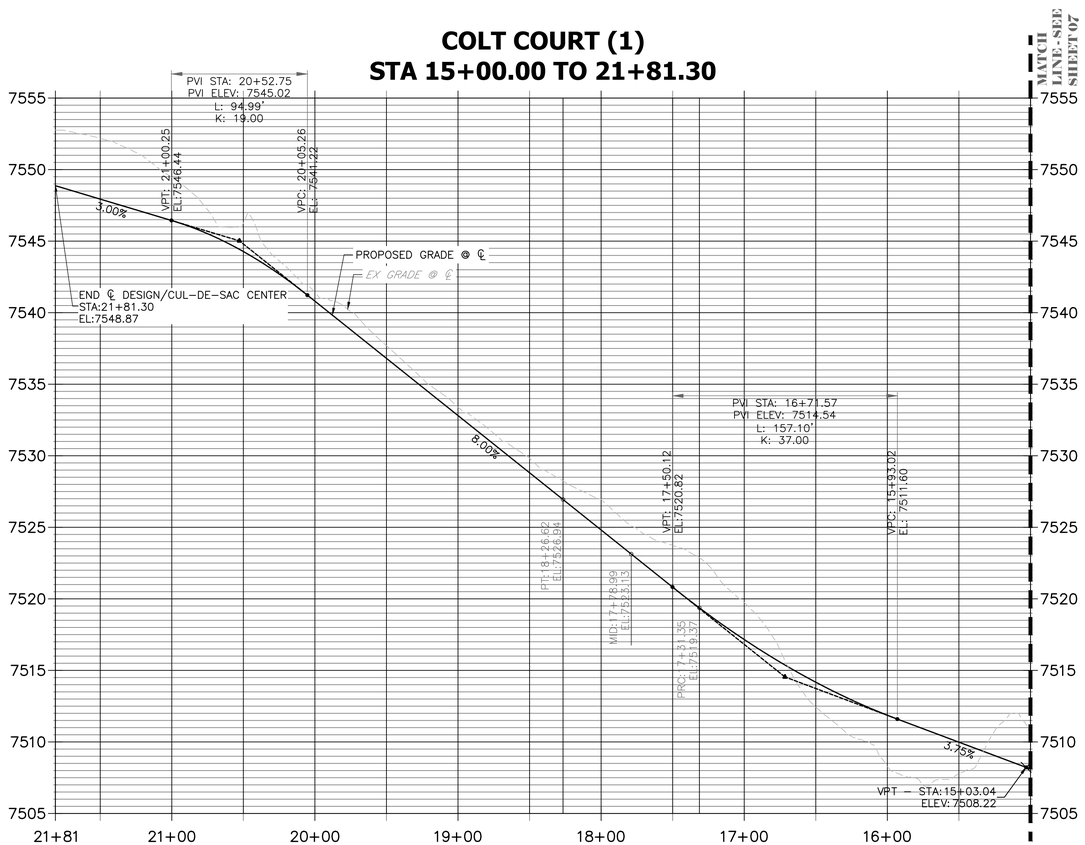

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50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

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COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

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MICHAEL G. JOVICEVIC, PE
530.391.1655 - MJOVICEVIC@ATERENGINEERING.COM

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JOB NO: 25009 LOCATION: EPC

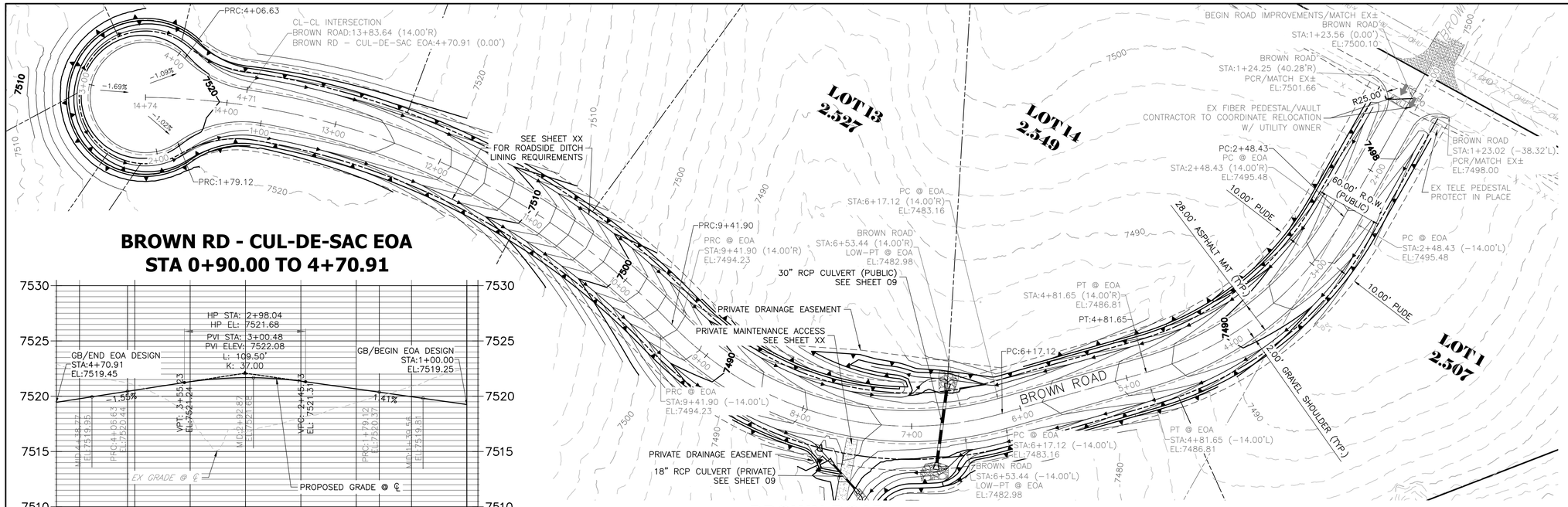
REV	DESCRIPTION	DATE

IRON RIDGE FIGLINO NO. 1 & 2

STREET IMPROVEMENTS

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 1" = 50
V-SCALE: 1" = 5'

SHEET
07 OF 24



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COLORADO REGISTERED PROFESSIONAL ENGINEER — STATE OF — RYAN E. BURNS — 54412

RYAN E. BURNS, P.E. — DATE
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JOB NO: 25009 LOCATION: EPC

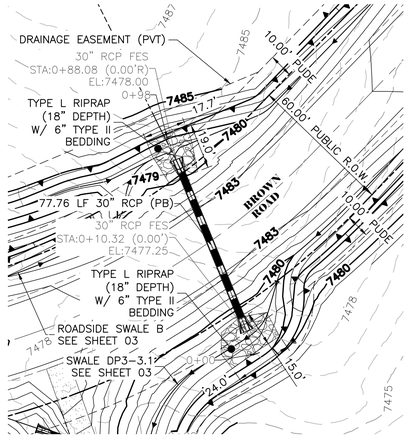
REV	DESCRIPTION	DATE

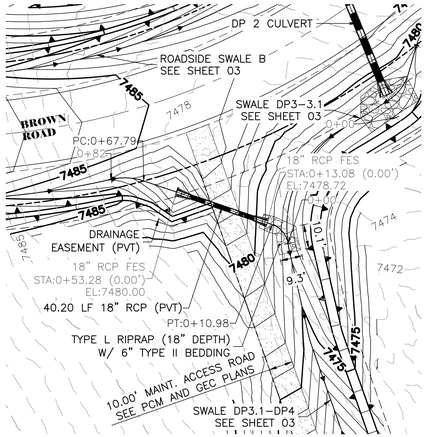
IRON RIDGE FIGLING NO. 1 & 2

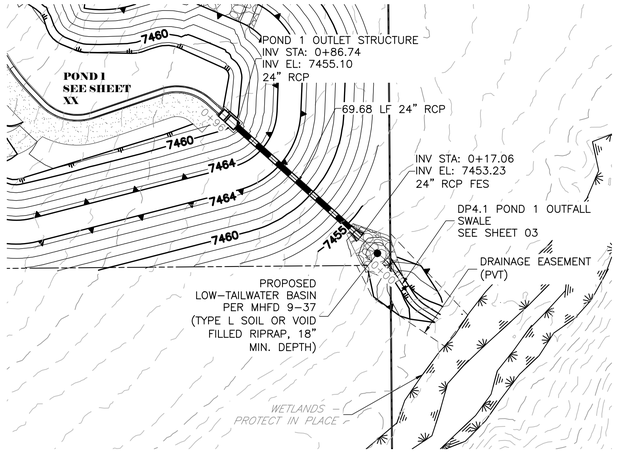
STREET IMPROVEMENTS

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 1" = 50
V-SCALE: 1" = 5'

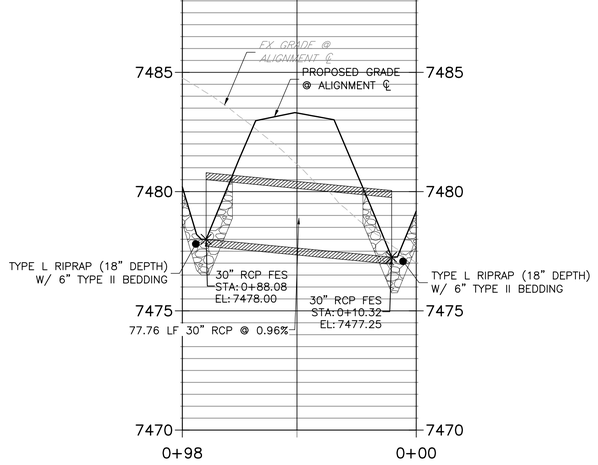
SHEET
08 OF 24



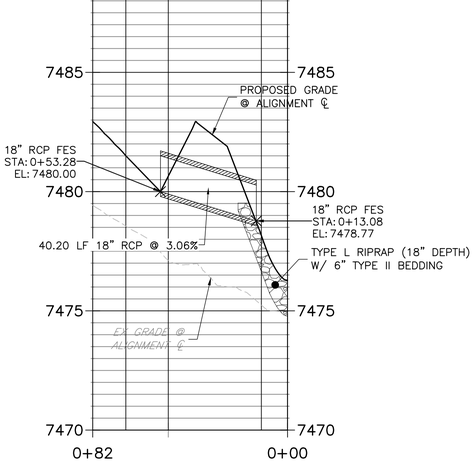




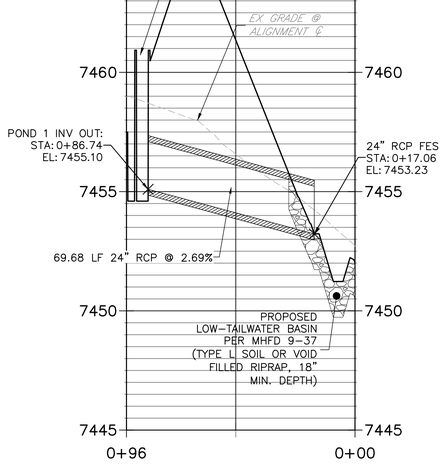
DP2 - CULVERT
STA 0+00.00 TO 0+98.08

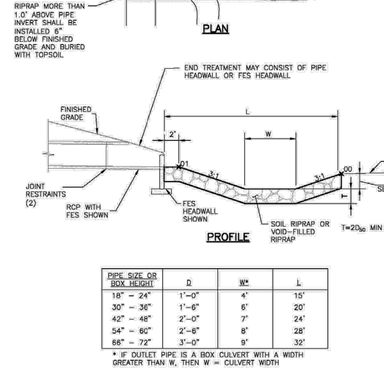


BASIN D - CULVERT
STA 0+00.00 TO 0+81.67



DP4.1
STA 0+00.00 TO 0+95.81





PIPE SIZE OR BOX HEIGHT	D	W*	L
18" - 24"	1'-0"	4'	15'
30" - 36"	1'-6"	6'	20'
42" - 48"	2'-0"	7'	24'
54" - 60"	2'-6"	8'	28'
66" - 72"	3'-0"	9'	32'

* IF OUTLET PIPE IS A BOX CULVERT WITH A WIDTH GREATER THAN W, THEN W = CULVERT WIDTH

Figure 9-37. Low tailwater riprap basin

Know what's **below.**
Call before you dig.

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4. HEADWALLS/TOE WALL REINFORCING SHALL BE PER CDOT M-601-10 & WALL SHALL BE CONSTRUCTED TO THE DIMENSION SHOWN @ A MINIMUM.

30 15 0 30 60
ORIGINAL SCALE: 1" = 30'

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REV	DESCRIPTION	DATE

JOB NO: 25009 LOCATION: EPC

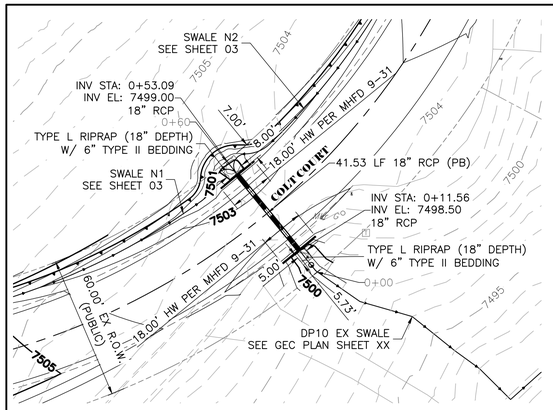
IRON RIDGE FIGLING NO. 1 & 2

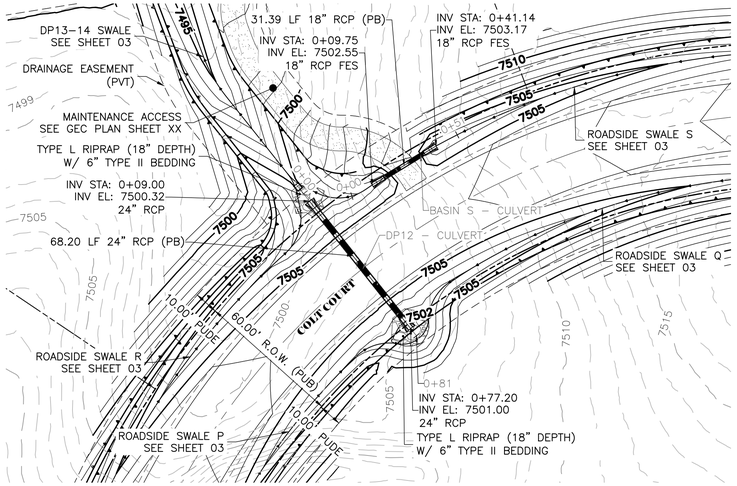
STORM SEWER

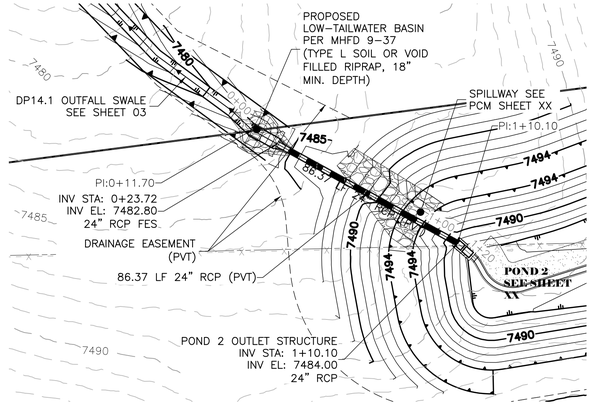
DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26

H-SCALE: 1" = 50
V-SCALE: 1" = 5'

SHEET
09 OF 24

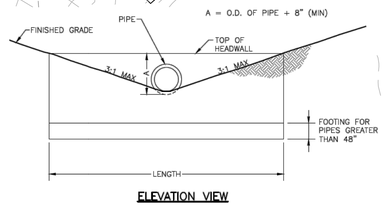






HEADWALL DESIGN TABLE

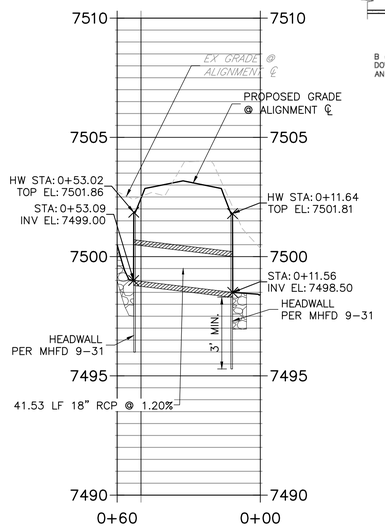
PIPE SIZE	LENGTH, MIN
18"	15'-9"
24"	19'-6"
30"	23'-4"
36"	27'-0"
42"	30'-9"
48"	34'-6"

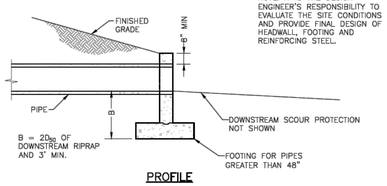


ELEVATION VIEW

Figure 9-31. Pipe headwall concept

DP09 - CULVERT
STA 0+00.00 TO 0+60.00

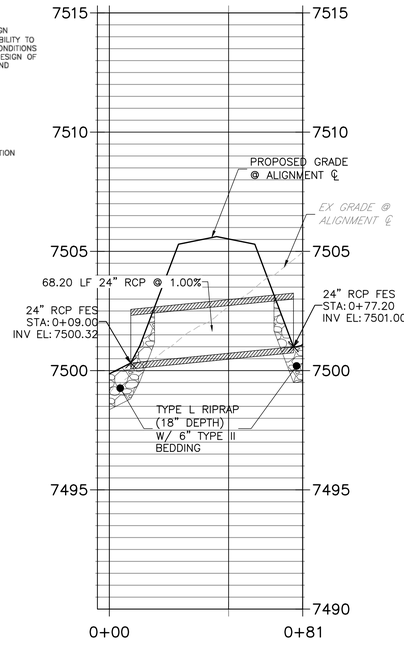




PROFILE

NOTE: IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO EVALUATE THE SITE CONDITIONS AND PROVIDE FINAL DESIGN OF HEADWALL, FOOTING AND REINFORCING STEEL.

DP12 - CULVERT
STA -0+05.00 TO 0+81.09



BASIN S - CULVERT
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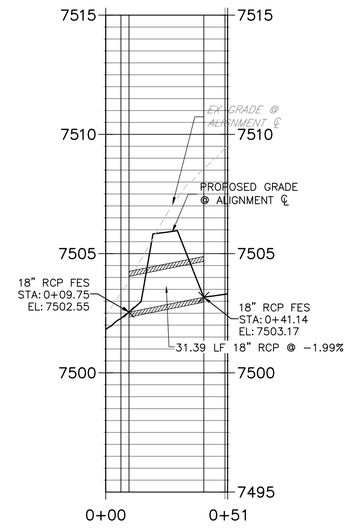

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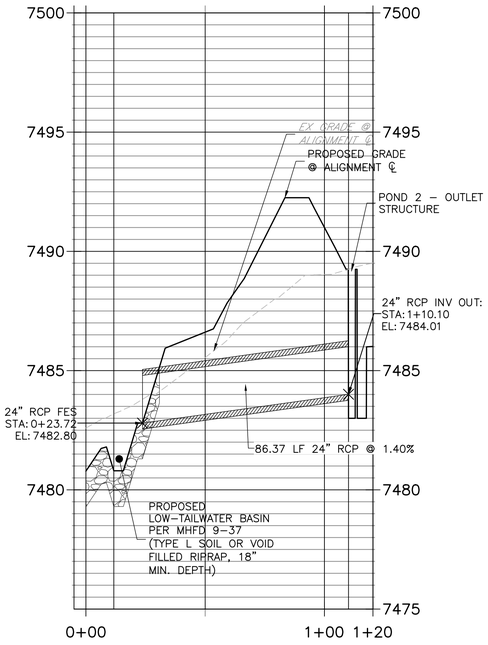

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RYAN E. BURNS, P.E. — DATE
COLORADO P.E. 54412
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PAUL C. JEVERT, PE
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JOB NO. 25009 LOCATION: EPC

REV	DESCRIPTION	DATE

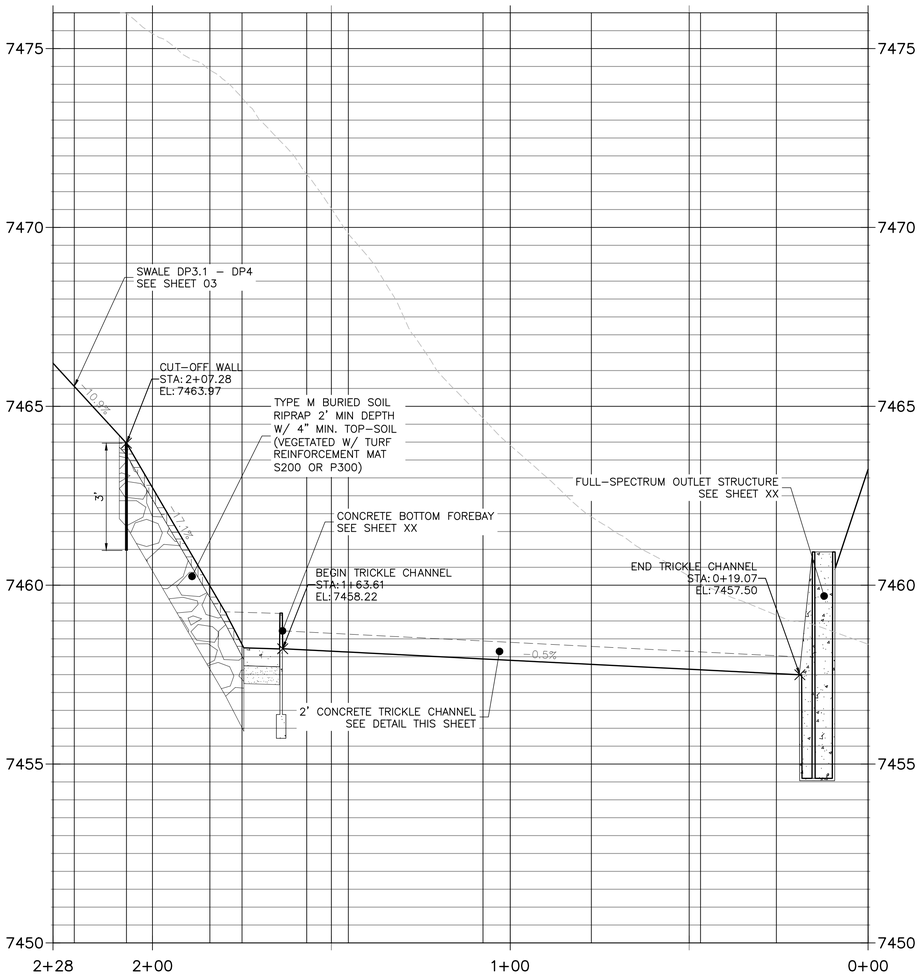
IRON RIDGE FIGLING NO. 1 & 2

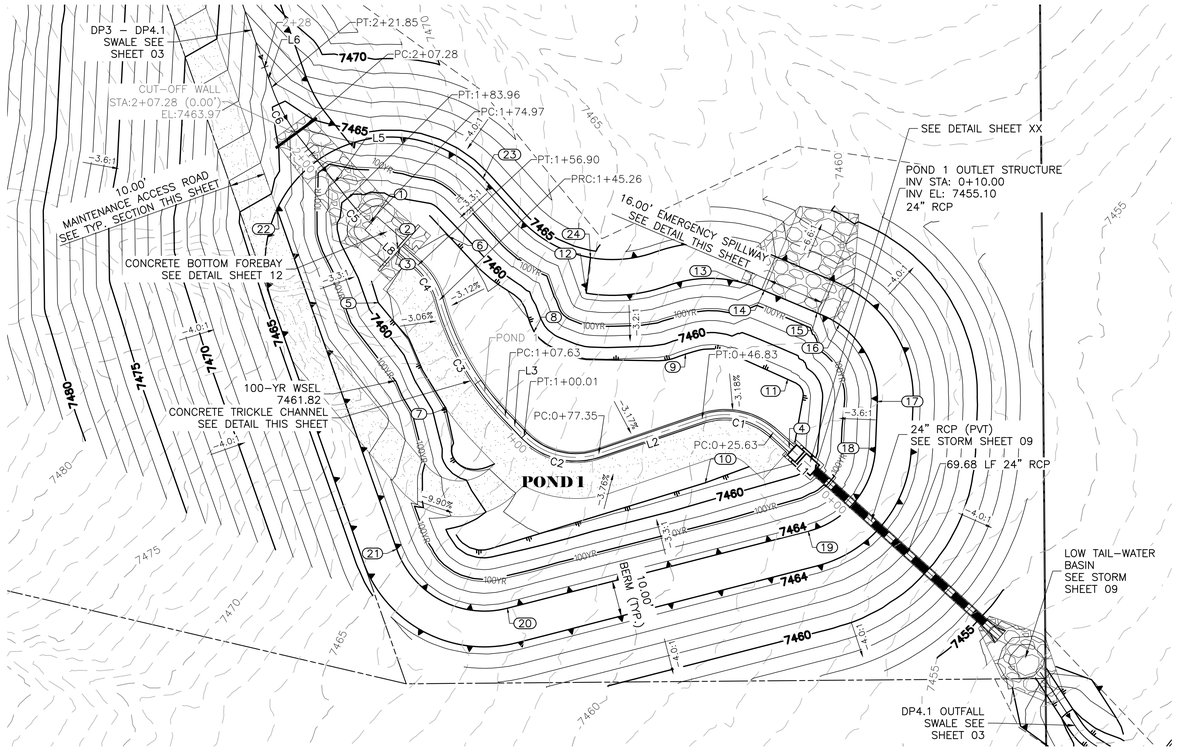
STORM SEWER

DESIGN: NOJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 1" = 50
V-SCALE: 1" = 5'

SHEET
10 OF 24

POND 1
STA 0+00.00 TO 2+27.81





Structure Table				
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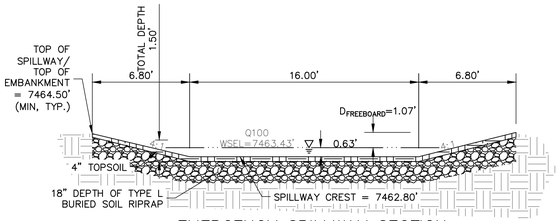
2	FOREBAY BOTTOM @ NOTCH	1458890.6	3220008.38	7458.22
3	TC FL @ FOREBAY WEIR WALL	1458890.1	3220008.97	7459.01
4	TC FL @ OUTLET SRUCTURE	1458834.6	3220117.79	7457.50
5	TOE/GB	1458875.0	3220002.94	7459.11
6	TOE/GB	1458893.5	3220022.80	7459.00
7	TOE/GB	1458845.5	3220021.86	7458.80
8	TOE/GB	1458866.9	3220046.47	7458.97
9	TOE/GB	1458860.7	3220088.82	7458.66
10	TOE/GB	1458824.7	3220094.37	7458.58
11	TOE/GB	1458853.6	3220117.36	7458.46
12	TOP EMBANKMENT	1458877.7	3220061.07	7464.50
13	TOP EMBANKMENT/SPILLWAY	1458880.8	3220104.24	7464.50
14	SPILLWAY CREST	1458878.4	3220110.84	7462.80
15	SPILLWAY CREST	1458872.2	3220125.57	7462.80
16	TOP EMBANKMENT/SPILLWAY	1458868.9	3220131.80	7464.50
17	TOP EMBANKMENT	1458847.5	3220142.43	7464.50
18	TOP EMBANKMENT	1458834.4	3220141.90	7464.50
19	TOP EMBANKMENT	1458811.2	3220123.12	7464.50
20	TOP EMBANKMENT	1458789.6	3220039.05	7464.50
21	TOP EMBANKMENT	1458806.2	3220008.08	7464.50
22	TOP/MAINT. EDGE	1458901.1	3219974.62	7464.50
23	TOP	1458909.9	3220032.26	7464.50
24	TOP EMBANKMENT	1458887.6	3220062.26	7464.50

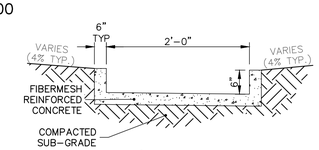


EMERGENCY SPILLWAY SECTION

SCALE: NTS

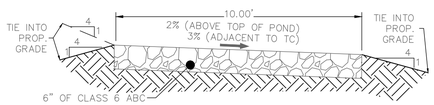
LINE TABLE		
LINE	BEARING	DISTANCE
L1	N48°04'53.94"W	25.63
L2	S71°12'18.29"W	30.52
L3	N43°52'44.30"W	7.62
L8	N48°28'19.89"W	18.07
L5	N38°10'14.17"W	23.32
L6	S19°24'46.20"E	5.96

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	21.19	20.00	60.71
C2	22.66	20.00	64.92
C3	37.63	75.00	28.75
C4	11.64	20.00	33.34
C5	8.99	50.00	10.30
C6	14.57	50.00	16.70



2.0' CONCRETE TRICKLE CHANNEL

SCALE: NTS



10' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.

811 Know what's below. Call before you dig.

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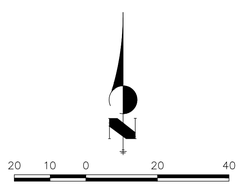
NOTES:

1. SEE SHEET 1 FOR ABBREVIATIONS AND GENERAL NOTES.
2. SEE SHEET 2 FOR LINE TYPE LEGEND AND STANDARD NOTES.
3. SEE SHEET 3 FOR TYPICAL SECTIONS OF ROADWAYS AND SWALES.
4. CONTRACTOR TO FAMILIARIZE SELF WITH SITE, PLANS, EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY QUESTIONS, DISCREPANCIES, CONFLICTS, OR REQUIRED CHANGES PRIOR TO COMMENCING CONSTRUCTION.
5. PLEASE NOTE, EXISTING UTILITY LOCATIONS SHOULD BE VERIFIED PRIOR TO CONSTRUCTION AND MAY DIFFER THAN WHAT IS SHOWN IN THESE PLANS.

STORM NOTES:

1. FES' SHALL HAVE JOINT RESTRAINS FOR LAST (2) JOINTS
2. WHERE TYPE II BEDDING IS SHOWN, SOIL RIPRAP CAN BE SUBSTITUTED FOR PLAIN RIPRAP AND THE BEDDING CAN BE ELIMINATED.
3. RIPRAP AND BEDDING SHALL BE BE INSTALLED TO THE LIMITS SHOWN ON THE PLANS AND IN ACCORDANCE W/ MHFD SECTION 31–37–00
4. HEADWALLS/TOE WALL REINFORCING SHALL BE PER CDOT M–601–10 & WALL SHALL BE CONSTRUCTED TO THE DIMENSION SHOWN @ A MINIMUM.



ORIGINAL SCALE: 1" = 20'

ENGINEER'S STATEMENT

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COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. — DATE

COLORADO P.E. 54412

FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

ALL TERRAIN ENGINEERING

RYAN E. BURNS, PE — 303.917.8668 – RYAN@ALLTERRAINENGINEERING.COM

NICHOLAS G. JOVICEVIC, PE — 530.391.1668 – NICK@ALLTERRAINENGINEERING.COM

PREPARED FOR:
ATTICUS LAND, LLC
PO BOX 88010
COLORADO SPRINGS, CO 80908
ATTN: JAKE DECOTO
206.419.4533
DECOTO@GMAIL.COM

UNTIL SUCH TIME AS THESE DRAWIGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

JOB NO: 25009 LOCATION: EPC

REV	DESCRIPTION	DATE

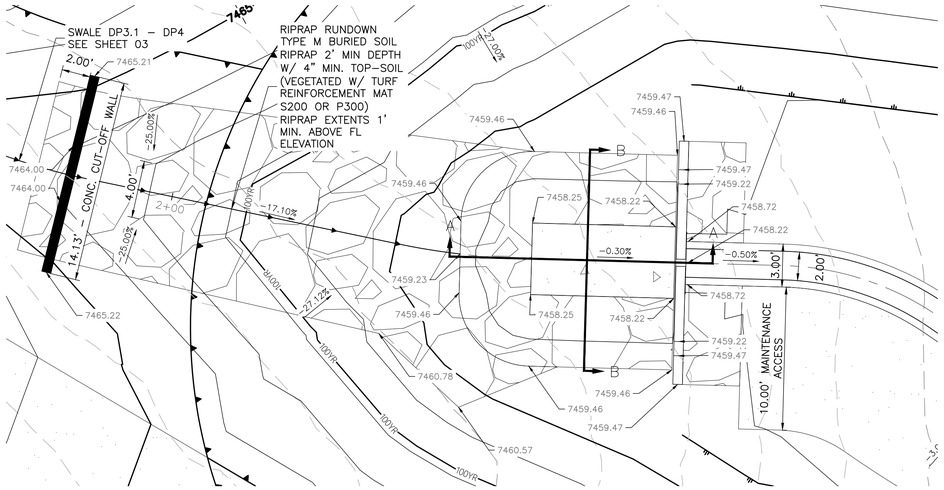
IRON RIDGE FIGLINO NO. 1 & 2

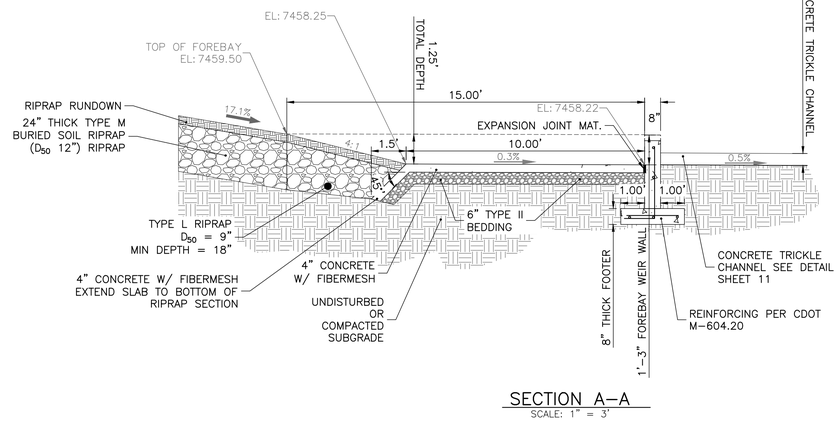
POND 1 GRADING

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26

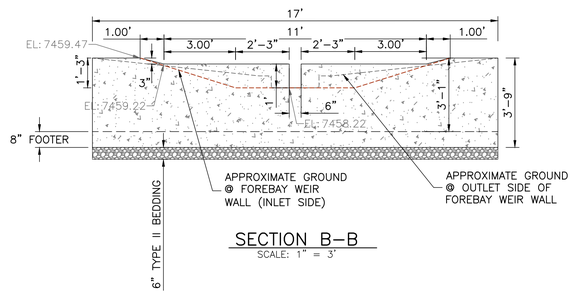
H-SCALE: 1" = 50
V-SCALE: 1" = 5'

SHEET 11 OF 24

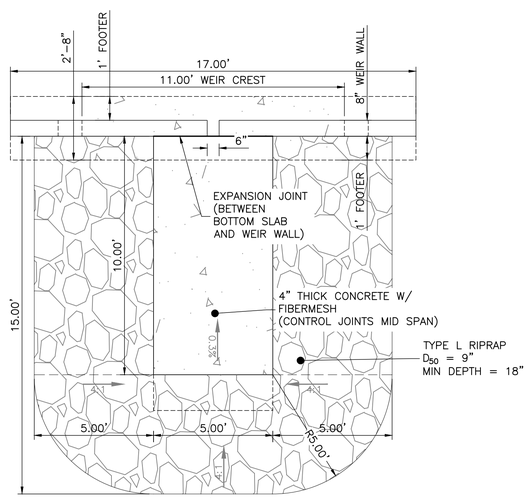




SECTION A–A
SCALE: 1" = 3'



SECTION B–B
SCALE: 1" = 3'



TOP VIEW
SCALE: 1" = 3'

STORM NOTES:

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COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E.
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC
DATE

ALL TERRAIN ENGINEERING

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303.517.1668 - RYAN@ALLTERRAINENGINEERING.COM

ANTHONY G. GIOVERT, PE
530.391.1655 - ANTHONY@ALLTERRAINENGINEERING.COM

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JOB NO: 25009 LOCATION: EPC

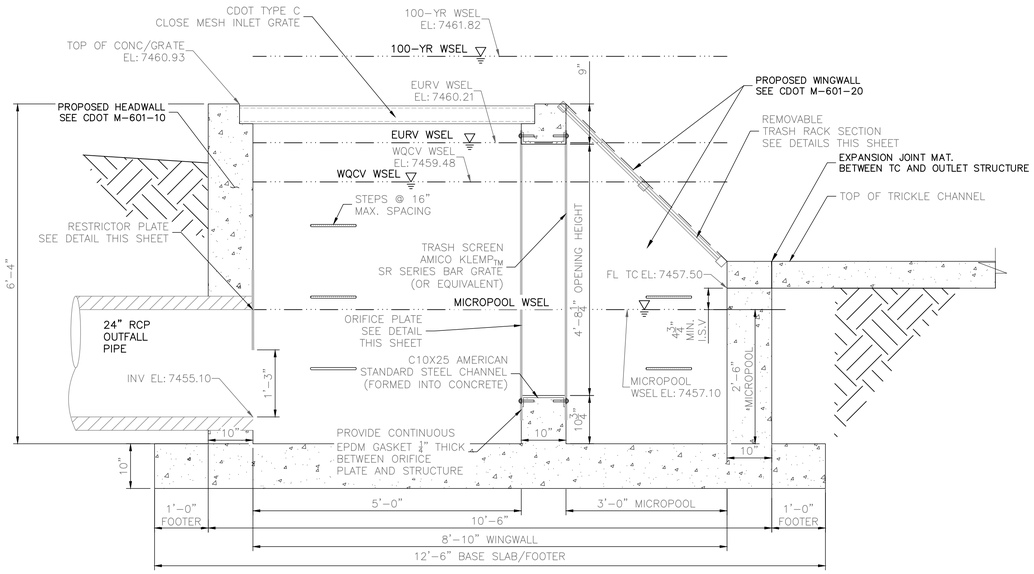
REV	DESCRIPTION	DATE

IRON RIDGE FIGLING NO. 1 & 2

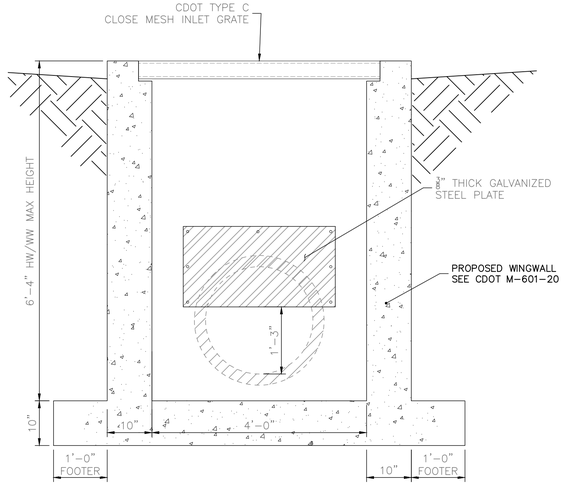
POND 1 FOREBAY

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 1" = 50
V-SCALE: 1" = 5'

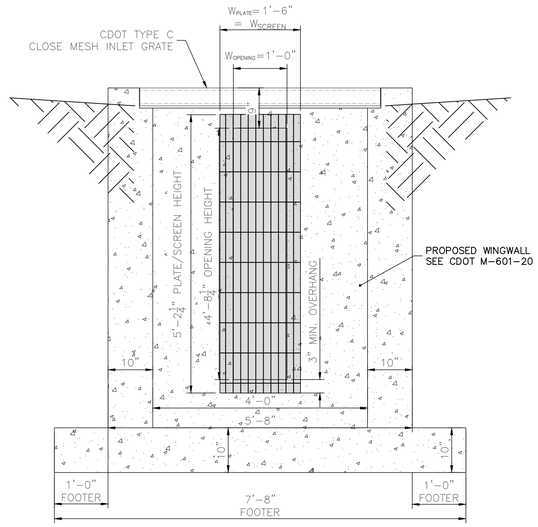
SHEET
12 OF 24



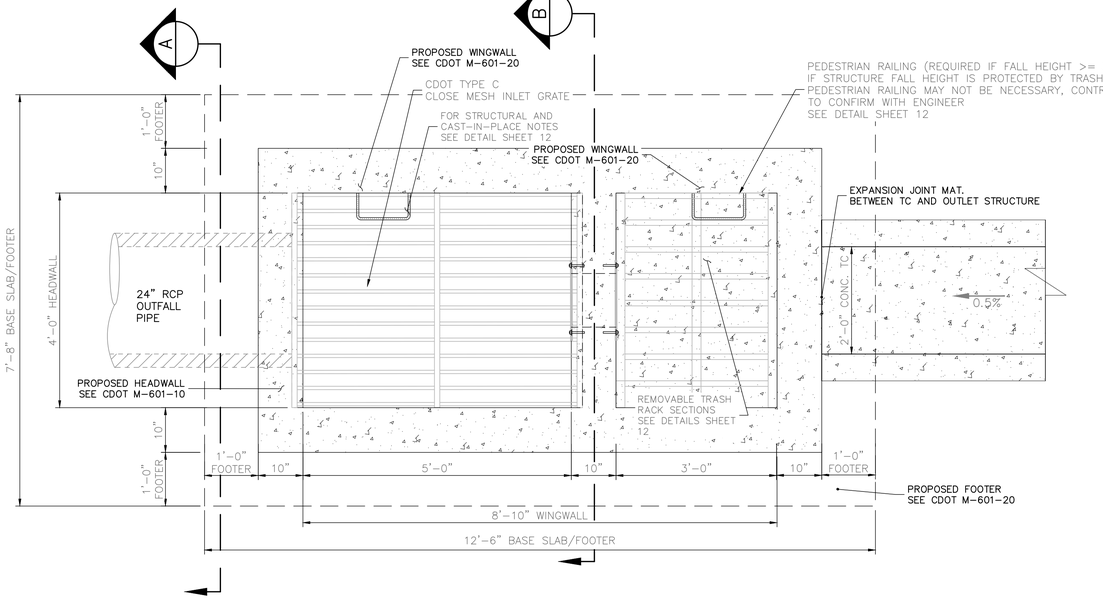
POND 1
OUTLET STRUCTURE PROFILE
SCALE: 3/4"=1'



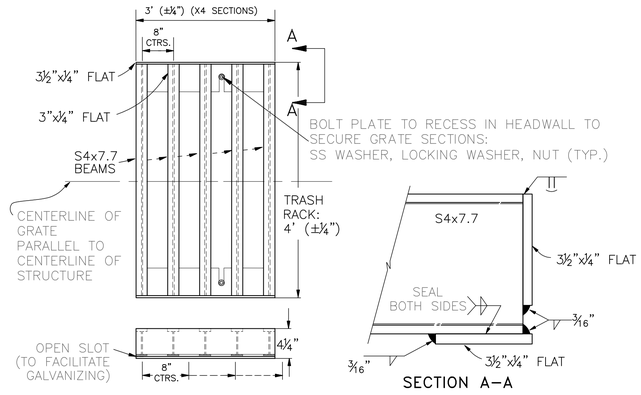
A A–A SECTION
SCALE: 3/4"=1'



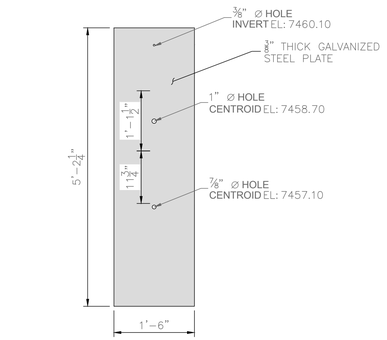
B B–B SECTION
SCALE: 3/4"=1'



POND 1
OUTLET STRUCTURE PLAN
SCALE: 3/4"=1'



TRASH RACK DETAILS
N.T.S.



ORIFICE PLATE DETAIL
SCALE: 3/4"=1'

CAST-IN-PLACE STRUCTURAL NOTES:

1. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
2. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
5. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
6. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION. REINFORCING SHOWN IS FOR INFORMATION ONLY.
7. HEADWALLS FOR PIPES SHALL BE CONSTRUCTED PER CDOT M-601-10.
8. WINGWALLS SHALL BE CONSTRUCTED PER CDOT M-601-20.
9. WINGWALL FOOTINGS AND FLOOR TO BE POURED MONOLITHICALLY.
10. REINFORCING STEEL SHALL BE GRADE 60 & MIN. SLICE LENGTHS PER CDOT STANDARDS AND APPLICABLE M-STANDARD DRAWINGS FOR HEADWALLS AND WINGWALLS
11. SEE GENERAL STRUCTURE NOTES ON SHEET ####.

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RYAN E. BURNS, P.E. — DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

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JOB NO: 25009 LOCATION: EPC

REV	DESCRIPTION	DATE

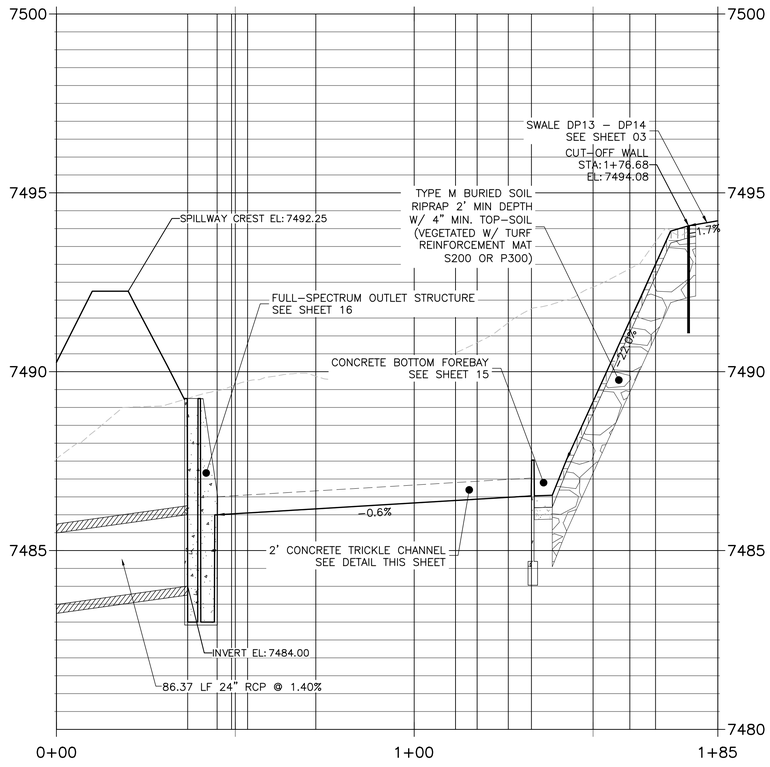
IRON RIDGE FIGLING NO. 1 & 2

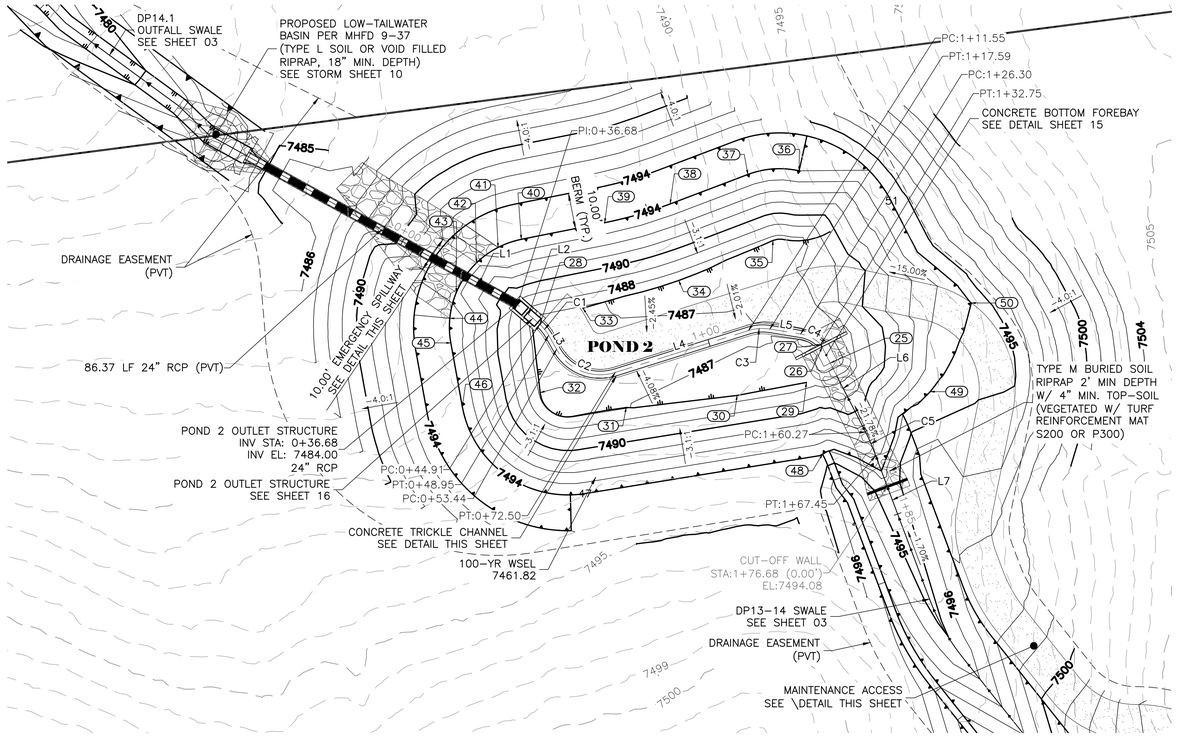
POND 1 - OUTLET STRUCTURE DETAILS

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 3/4" = 1'
V-SCALE: 3/4" = 1'

SHEET 13 OF 24

POND 2
STA 0+00.00 TO 1+84.86

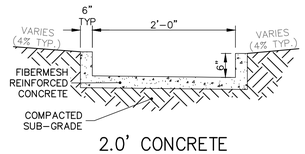




Structure Table				
#	DESC.	NORTHING	EASTING	ELEVATION
25	FOREBAY BOTTOM	1458318.6	3220830.20	7486.55
26	FOREBAY BOTTOM @ NOTCH	1458323.1	3220827.92	7486.53
27	BEGIN TRICKLE CHANNEL	1458323.8	3220827.54	7486.91
28	END TRICKLE CHANNEL	1458329.4	3220749.09	7486.00
29	TOE/GB	1458331.2	3220823.54	7487.65
30	TOE/GB	1458309.6	3220804.17	7487.45
31	TOE/GB	1458306.2	3220773.18	7486.93
32	TOE/GB	1458310.4	3220749.11	7486.87
33	TOE/GB	1458334.0	3220761.07	7486.83
34	TOE/GB	1458341.7	3220787.87	7487.23
35	TOE/GB	1458352.9	3220814.18	7487.63
36	TOP OF POND/BERM	1458372.4	3220821.49	7494.00
37	TOP OF POND/BERM	1458371.4	3220807.18	7494.00
38	TOP OF POND/BERM	1458363.1	3220785.44	7494.00
39	TOP OF POND/BERM	1458357.9	3220767.16	7494.00
40	TOP OF POND/BERM	1458353.2	3220743.86	7494.00
41	TOP OF SPILLWAY/BERM	1458351.0	3220737.37	7494.00
42	SPILLWAY CREST	1458346.6	3220731.31	7492.25
43	SPILLWAY CREST	1458338.4	3220725.68	7492.25
44	TOP OF SPILLWAY/BERM	1458331.1	3220723.86	7494.00
45	TOP OF POND/BERM	1458324.3	3220724.15	7494.00
46	TOP OF POND/BERM	1458306.4	3220727.37	7494.00
47	TOP OF POND	1458282.1	3220761.68	7494.00
48	TOP OF POND	1458293.2	3220828.06	7493.99
49	TOP OF POND	1458310.6	3220858.15	7494.01
50	TOP OF POND	1458335.4	3220869.60	7494.00
51	TOP OF POND	1458364.0	3220847.16	7494.00

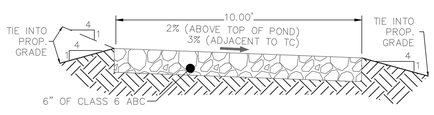
LINE TABLE		
LINE	BEARING	DISTANCE
L1	S61°10'18.47"E	36.68
L2	S48°44'10.73"E	8.23
L3	S29°27'41.27"E	4.49
L4	N72°32'53.77"E	39.05
L5	S80°50'33.41"E	8.72
L6	S27°06'00.50"E	27.51
L7	S20°34'52.67"E	17.41

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	4.04	12.00	19.27
C2	19.06	14.00	77.99
C3	6.04	13.00	26.61
C4	6.45	10.00	36.96
C5	7.18	54.60	7.53



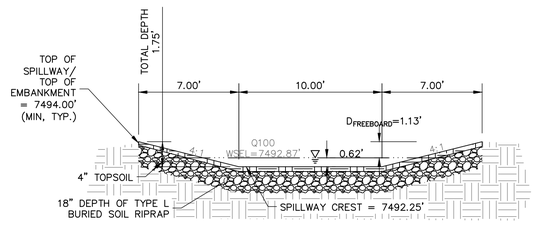
2.0' CONCRETE TRICKLE CHANNEL

SCALE: NTS



10' GRAVEL MAINTENANCE ACCESS ROAD TYPICAL SECTION

N.T.S.



EMERGENCY SPILLWAY SECTION

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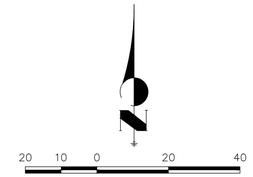
2. WHERE TYPE II BEDDING IS SHOWN, SOIL RIPRAP CAN BE SUBSTITUTED FOR PLAIN RIPRAP AND THE BEDDING CAN BE ELIMINATED.
3. RIPRAP AND BEDDING SHALL BE BE INSTALLED TO THE LIMITS SHOWN ON THE PLANS AND IN ACCORDANCE W/ MHFD SECTION 31–37–00
4. HEADWALLS/TOE WALL REINFORCING SHALL BE PER CDOT M–601–10 & WALL SHALL BE CONSTRUCTED TO THE DIMENSION SHOWN @ A MINIMUM.



ORIGINAL SCALE: 1" = 20'

ENGINEER'S STATEMENT

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COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

ALL TERRAIN ENGINEERING

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UNTIL SUCH TIME AS THESE DRAWIGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

JOB NO: 25009 LOCATION: EPC

REV	DESCRIPTION	DATE

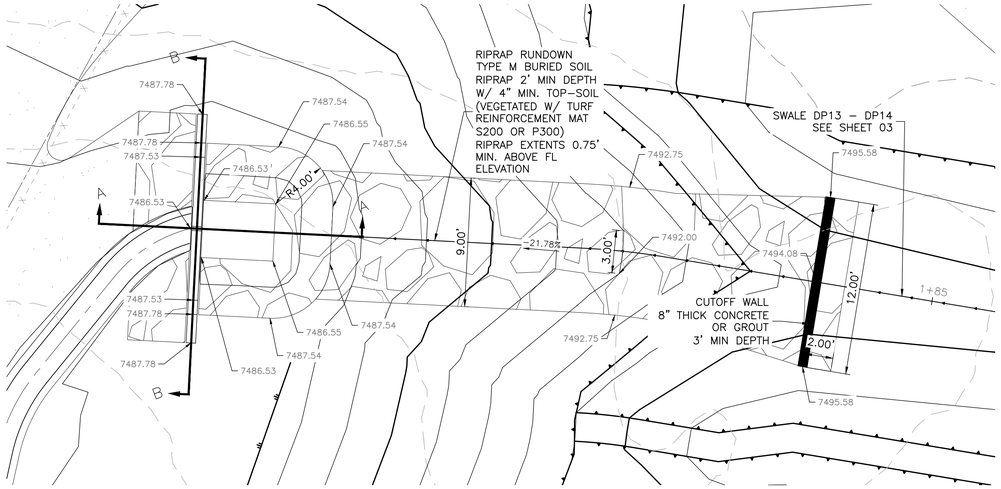
IRON RIDGE FIGLING NO. 1 & 2

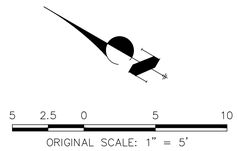
POND 2 - GRADING

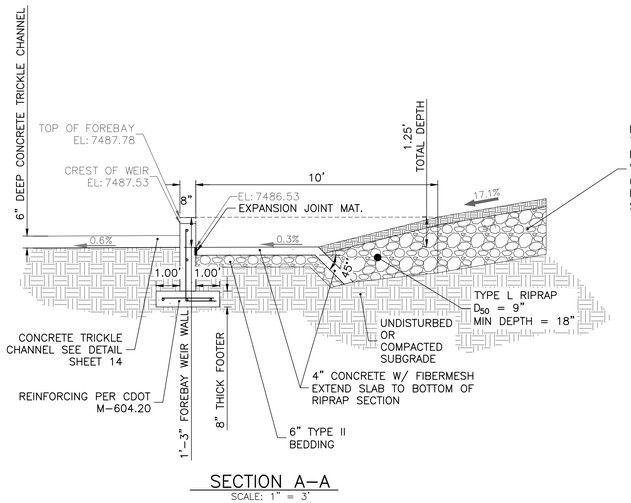
DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26

H-SCALE: 1" = 50
V-SCALE: 1" = 5'

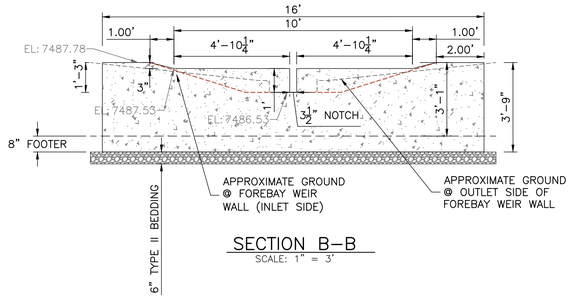
SHEET
14 OF 24



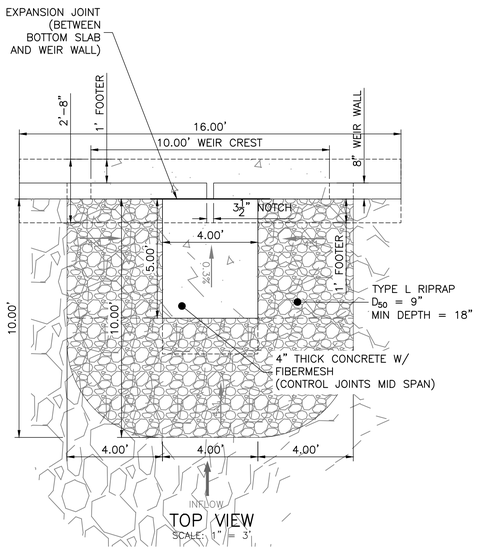




SECTION A–A
SCALE: 1" = 3'



SECTION B–B
SCALE: 1" = 3'



TOP VIEW
SCALE: 1" = 3'

STORM NOTES:

1. FES' SHALL HAVE JOINT RESTRAINS FOR LAST (2) JOINTS
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4. HEADWALLS/TOE WALL REINFORCING SHALL BE PER CDOT M-601-10 & WALL SHALL BE CONSTRUCTED TO THE DIMENSION SHOWN @ A MINIMUM.

NOTES:

1. SEE SHEET 1 FOR ABBREVIATIONS AND GENERAL NOTES.
2. SEE SHEET 2 FOR LINE TYPE LEGEND AND STANDARD NOTES.
3. SEE SHEET 3 FOR TYPICAL SECTIONS OF ROADWAYS AND SWALES.
4. CONTRACTOR TO FAMILIARIZE SELF WITH SITE, PLANS, EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY QUESTIONS, DISCREPANCIES, CONFLICTS, OR REQUIRED CHANGES PRIOR TO COMMENCING CONSTRUCTION.
5. PLEASE NOTE, EXISTING UTILITY LOCATIONS SHOULD BE VERIFIED PRIOR TO CONSTRUCTION AND MAY DIFFER THAN WHAT IS SHOWN IN THESE PLANS.

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL ABOVE GROUND AND UNDERGROUND UTILITIES.

ENGINEER'S STATEMENT

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RYAN E. BURNS, P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

ALL TERRAIN ENGINEERING

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AUTHORIZED BY: JEFF SCHEIDT, PE
303.991.1933 - AUTHORIZED@ATERRAINENGINEERING.COM

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JOB NO: 25009 LOCATION: EPC

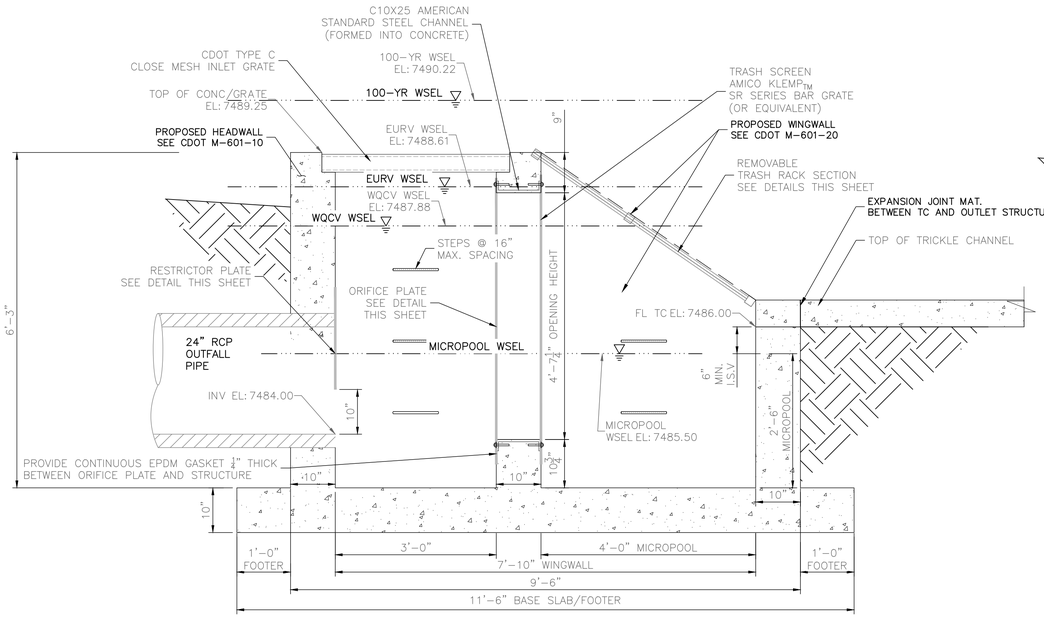
REV	DESCRIPTION	DATE

IRON RIDGE FIGLING NO. 1 & 2

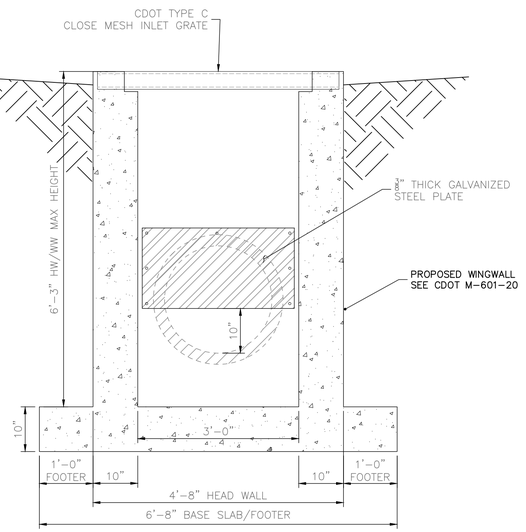
POND 2 - FOREBAY

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 1" = 50
V-SCALE: 1" = 5'

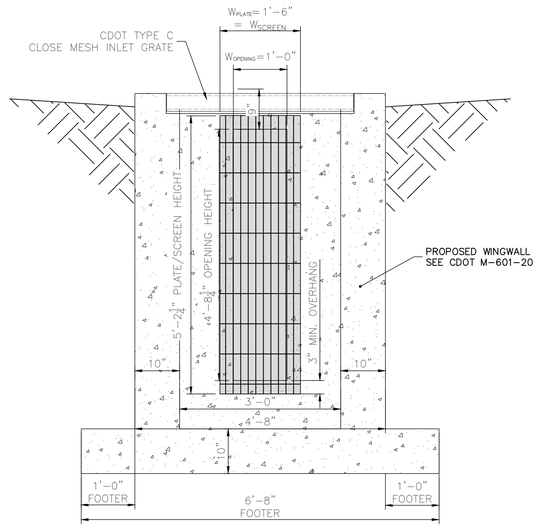
SHEET
15 OF 24



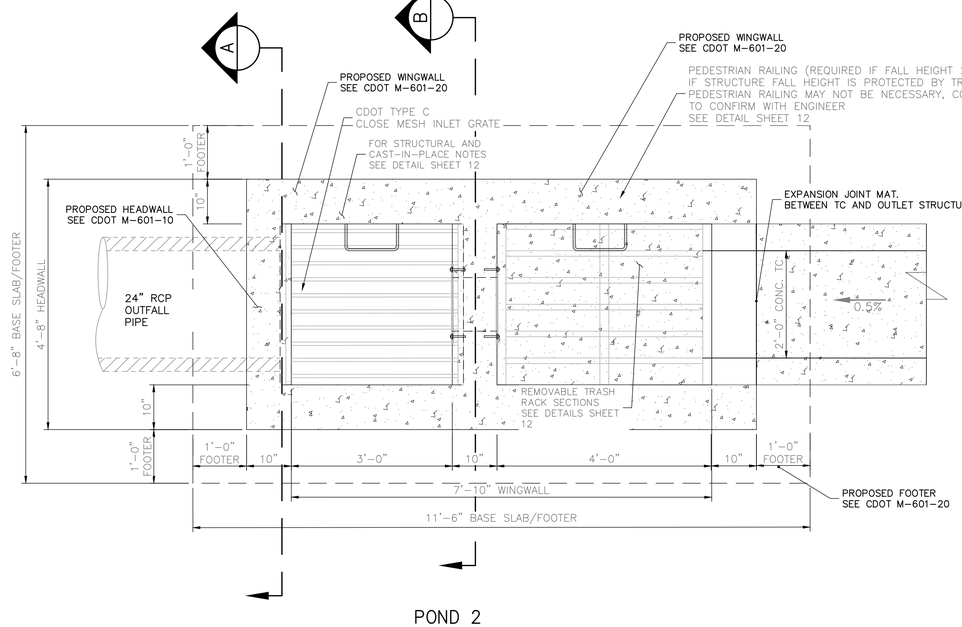
POND 2
OUTLET STRUCTURE PROFILE
SCALE: 3/4"=1'



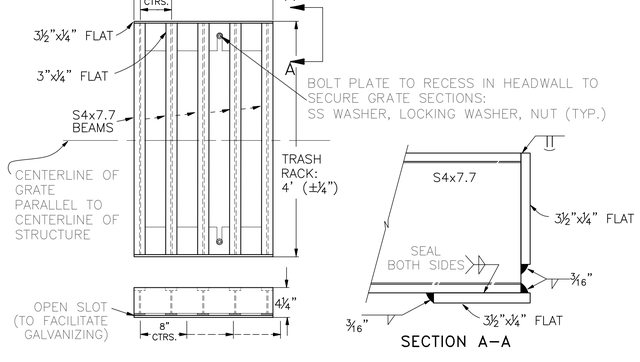
A A-A SECTION
SCALE: 3/4"=1'



B B-B SECTION
SCALE: 3/4"=1'

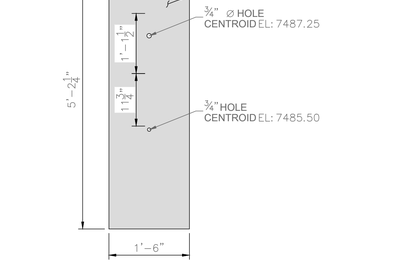


POND 2
OUTLET STRUCTURE PLAN
SCALE: 3/4"=1'



TRASH RACK DETAILS
N.T.S.

SECTION A-A



ORIFICE PLATE DETAIL
SCALE: 3/4"=1'

CAST-IN-PLACE STRUCTURAL NOTES:

1. ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED BEFORE FRESH CONCRETE IS POURED.
2. ALL CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE APPROVED BY THE ENGINEER.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.
4. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED DESIGN STRENGTH, F'c.
5. ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾".
6. CONTRACTOR SHALL SUBMIT STEEL REINFORCING SHOP DRAWINGS FOR ALL CAST-IN-PLACE STRUCTURES FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION. REINFORCING SHOWN IS FOR INFORMATION ONLY.
7. HEADWALLS FOR PIPES SHALL BE CONSTRUCTED PER CDOT M-601-10.
8. WINGWALLS SHALL BE CONSTRUCTED PER CDOT M-601-20.
9. WINGWALL FOOTINGS AND FLOOR TO BE POURED MONOLITHICALLY.
10. REINFORCING STEEL SHALL BE GRADE 60 & MIN. SLICE LENGTHS PER CDOT STANDARDS AND APPLICABLE M-STANDARD DRAWINGS FOR HEADWALLS AND WINGWALLS
11. SEE GENERAL STRUCTURE NOTES ON SHEET ####.

ENGINEER'S STATEMENT

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ALL TERRAIN ENGINEERING
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JOB NO: 25009 LOCATION: EPC

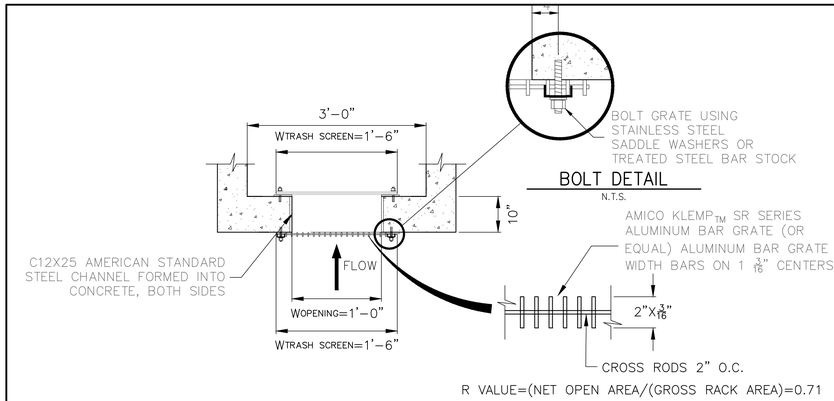
REV	DESCRIPTION	DATE

IRON RIDGE FIGLING NO. 1 & 2

POND 2 - OUTLET

DESIGN: NOJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 3/4" = 1'
V-SCALE: 3/4" = 1'

SHEET
16 OF 24

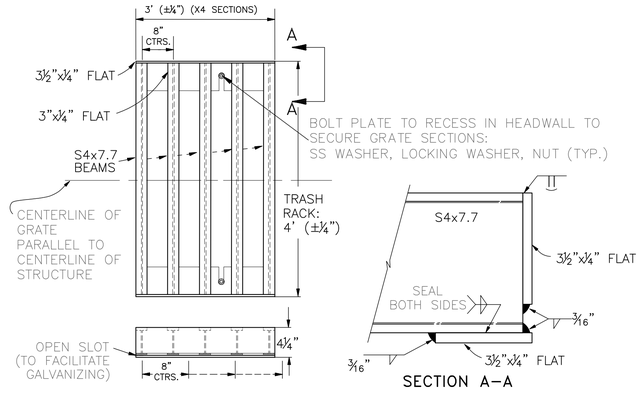


BOLT DETAIL
N.T.S.

R VALUE=(NET OPEN AREA/(GROSS RACK AREA)=0.71

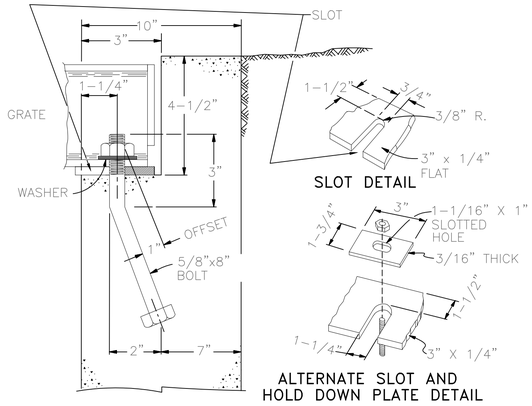
TRASH SCREEN DETAIL
N.T.S.

TRASH SCREEN AND PLATE DETAIL (PLAN)
N.T.S.



SECTION A-A

TRASH RACK DETAILS
N.T.S.



OVERFLOW GRATE/TRASH RACK INSTALLATION DETAIL
N.T.S.

GENERAL STRUCTURE NOTES:

ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OR COUNTY STANDARD CONSTRUCTION SPECIFICATIONS.
EXCEPT AS SHOWN IN THE PLANS, STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH CDOT M-206-1, AND M-206-2 EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213

THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO A 1-800-922-1987 AT LEAST 2 DAYS (NOT INCLUDING THE DAY OF NOTIFICATION) PRIOR TO ANY EXCAVATION OF OTHER.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DESIGNING AND PROVIDING ALL BRACING AND SHORING AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE EXCAVATION PROCEDURES INCLUDING ANY SHORING REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL METHODS AND MEANS OF CONSTRUCTION AS WELL AS ALL JOB SITE SAFETY & HEALTH PRECAUTIONS.

ALL SOILS WORK INCLUDING (BUT NOT LIMITED TO) PIER DRILLING AND CONSTRUCTION, SOILS EXCAVATION, FILL PLACEMENT, AND STRUCTURE BACKFILL SHALL BE IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT, UNLESS MORE STRINGENT REQUIREMENTS ARE PRINTED ON THE "IRRIGATION NOTES".

BACKFILL SHALL NOT BEGIN UNTIL CONCRETE WALLS REACH COMPRESSION STRENGTH AT LEAST 80 PERCENT OF THE REQUIRED 28 DAY STRENGTH, 0.8fc'.

REINFORCED CONCRETE:
CLASS D CONCRETE: fc'=4,500 psi
REINFORCING STEEL: fy=60,000 psi
ALL CAST-IN-PLACE CONCRETE SHALL BE CLASS D UNLESS NOTED OTHERWISE.

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60 U.N.O.
REINFORCING BARS TO BE WELDED SHALL CONFORM TO ASTM A706, GRADE 60.
ALL REINFORCING, EXCEPT PIER REINFORCING, SHALL BE EPOXY COATED AND SHALL CONFORM TO ASTM A775.
ALL REINFORCING SHALL HAVE 2" CONCRETE COVER, U.N.O. ON PLANS, 3" AGAINST GROUND (BOTTOM SLAB)
ALL REINFORCING SHALL BE HOOKED AROUND CORNERS AND LAPPED, SEE DETAILS.
ALL LAP SPLICE LOCATIONS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

THE FOLLOWING TABLE GIVES THE MINIMUM CLASS B (STAGGERED) LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS PLACE IN ACCORDANCE WITH SUBSECTION 602.06. THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER. INCREASED BY 40% FOR HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE BELOW (TOP BARS.), AND INCREASED BY 75% IF BOTH CONDITIONS EXIST. THE INCREASES ABOVE FOR #6 THRU #11 BARS MAY BE 25%, 13%, AND 42% RESPECTIVELY.

#4	1'-3"	#5	1'-7"
#6	2'-5"	#7	2'-10"
#8	3'-8"	#9	4'-8"
#10	5'-11"	#11	7'-3"

WHEN THE CONTRACTOR ELECTS TO SUBSTITUTE EPOXY COATED REINFORCEMENT FOR BLACK REINFORCING BARS. THE MINIMUM LAP SPLICE SHALL BE AS DESCRIBED ABOVE.

STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

THE CONTRACTOR SHALL SUBMIT REINFORCING STEEL PLACING DRAWINGS (PRIOR TO CONSTRUCTION) TO THE ENGINEER FOR REVIEW FOR CONFORMANCE WITH THE DESIGN DRAWINGS. THE DESIGN DRAWINGS SHALL GOVERN OVER PLACING DRAWINGS IN ALL CASES UNLESS MODIFICATIONS ARE APPROVED IN WRITING BY ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

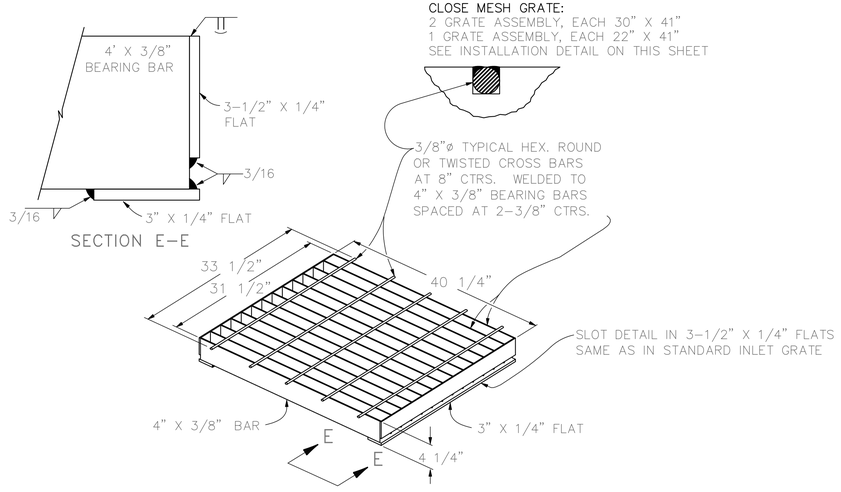
E.F.	= EACH FACE	O.F.	= OUTSIDE FACE
F.E.	= FAR FACE	T.&B.	= TOP AND BOTTOM
N.F.	= NEAR FACE	T.F.	= TOP FACE
I.F.	= INSIDE FACE	B.F.	= BOTTOM FACE
T.W.	= TWO WAY	T.F.	= TWO FACES
E.S.	= EACH SIDE	Lp	= LAP LENGTH

OUTLET STRUCTURE PLATE, GRATE, AND RAIL NOTES:

ORIFICE PLATE:
1. PROVIDE CONTINUOUS EPDM GASKET ¼" THICK BETWEEN ORIFICE PLATE AND STRUCTURE.
2. THE GASKET SHALL BE MADE OF 1/4-INCH THICK, 60 DUROMETER EPDM RUBBER IN A CONTINUOUS SHEET THE SIZE OF THE ORIFICE PLATE. THE SHEET SHALL BE PLACED BETWEEN THE ORIFICE PLATE AND THE CONCRETE WALL, WITH THE WIDTH OF THE OVERLAP BETWEEN THE PLATE AND THE CONCRETE. OPENINGS SHALL BE CUT INTO THE SHEET CORRESPONDING TO THE PLATE BOLT HOLES AND THE CONCRETE WALL OPENING, CUTS MADE EITHER BY THE CONTRACTOR IN THE FIELD OR BY THE MANUFACTURER. OR EQUIVALENT APPROVED BY EPC.
3. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.

TRASH RACKS & GRATES:
4. RACKS AND GRATE OPEN AREAS ARE FOR THE SPECIFIED MATERIALS/MANUFACTURERS. ALTERNATIVE MANUFACTURERS AND MATERIALS WITH DIFFERING DIMENSIONS ARE ACCEPTABLE PROVIDED THEY MEET THE THE GROSS OPEN AREA RATIO (R VALUE) AND ARE CONSIDERED EQUAL BY THE ENGINEER AND EPC. SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PROCUREMENT.
5. TRASH RACKS SHALL BE 1¼" SCH.40 STEEL PIPE, GALVANIZED, @ 6" CENTERS. SUPPORT BARS SHALL BE ¼"x2" STEEL RECTANGULAR BARS, GALVANIZED, @ 36". ALL TRASH RACKS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE.
6. REMOVABLE TRASH RACK SECTIONS SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED & LOCKABLE OR BOLTABLE ACCESS PANELS AS SHOWN ON THE PLANS.
7. STEEL TRASH RACKS SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.
8. STRUCTURAL STEEL FOR GRATES, ORIFICE PLATES, AND BARS SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH CDOT STANDARD SPECIFICATIONS, SUBSECTION 712.06.
9. ALL HARDWARE, BOLTS, AND FASTENERS SHALL BE STAINLESS STEEL.
10. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL PLATES AND GRATING FOR ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION.

HAND RAILS:
11. WELD PLATES MAY BE SUBSTITUTED FOR PIPE EMBEDMENT.
12. STRUCTURES THAT CREATE A 30" OR GREATER DROP HEIGHT REQUIRE HAND RAILS FOR FALL PROTECTION.
13. CONTRACTOR TO ENSURE HANDRAIL DESIGN AND MOUNTING SYSTEM IS COMPATBLE WITH HW/WW DESIGN AND REINFORCING.
14. DESIGN CRITERIA SHALL BE ACCORDANCE W/ AASHTO



CLOSE MESH GRATE DETAIL
N.T.S.

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RYAN E. BURNS, P.E. DATE
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555 MIDDLE CREEK PARKWAY, SUITE 200 - COLORADO SPRINGS, CO 80921 - 719.375.8658

FRANK E. EVERTZ, P.E. - FRANK@ATERRAIN.COM
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COLORADO SPRINGS, CO 80908
ATTN: JAKE DECOTO
206.419.4533
DECOTO@GMAIL.COM

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JOB NO: 25009 LOCATION: EPC

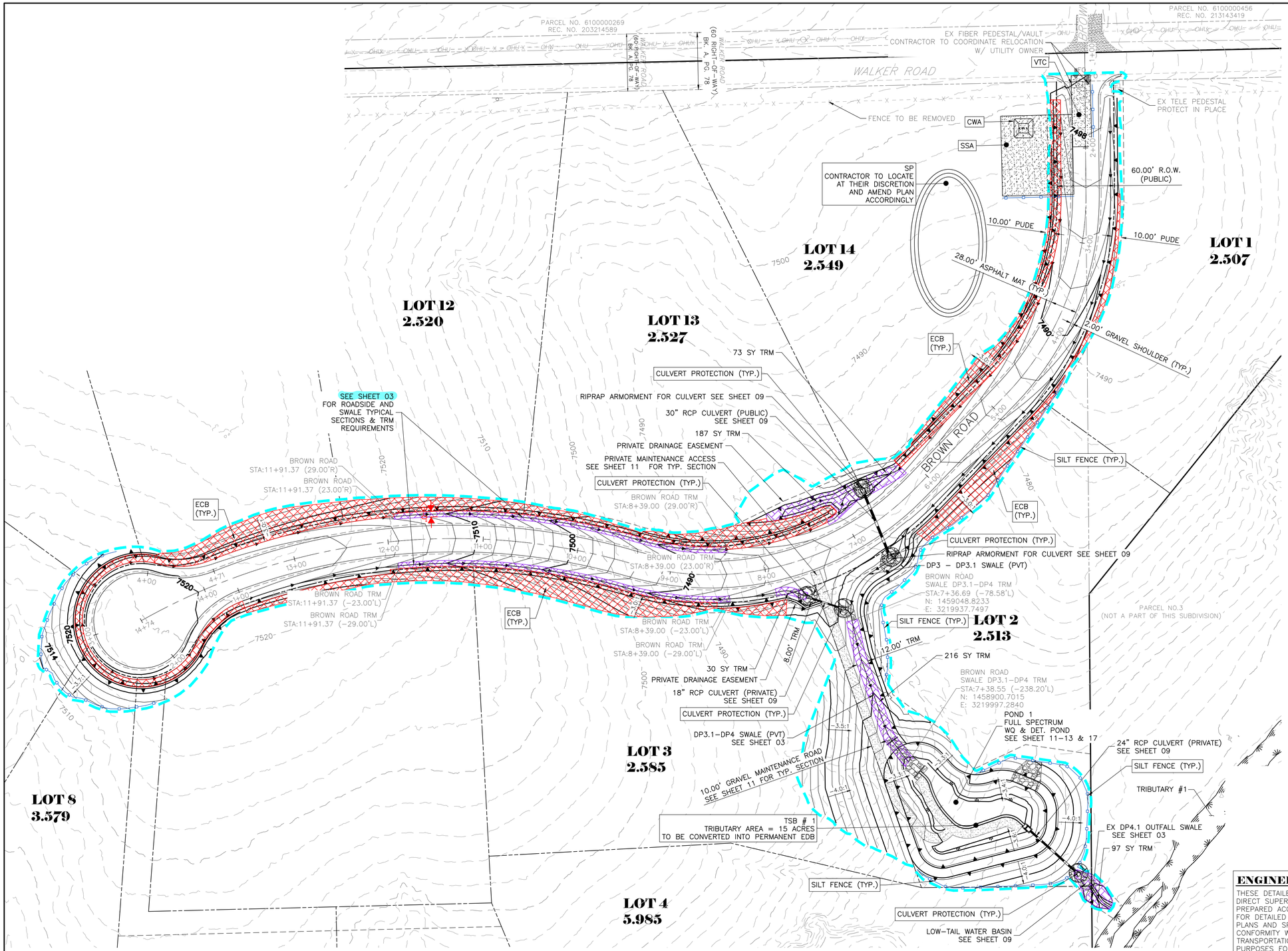
REV	DESCRIPTION	DATE

IRON RIDGE FIGLING NO. 1 & 2

POND STANDARD DET. & NOTES

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: NTS
V-SCALE: NTS

SHEET
17 OF 24



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811 Know what's below. Call before you dig.

NOTES:

1. SEE SHEET 1 FOR ABBREVIATIONS AND GENERAL NOTES.
2. SEE SHEET 2 FOR LINE TYPE LEGEND AND STANDARD NOTES.
3. SEE SHEET 3 FOR TYPICAL SECTIONS OF ROADWAYS AND SWALES.
4. CONTRACTOR TO FAMILIARIZE SELF WITH SITE, PLANS, EXISTING CONDITIONS AND NOTIFY ENGINEER OF ANY QUESTIONS, DISCREPANCIES, CONFLICTS, OR REQUIRED CHANGES PRIOR TO COMMENCING CONSTRUCTION.
5. PLEASE NOTE, EXISTING UTILITY LOCATIONS SHOULD BE VERIFIED PRIOR TO CONSTRUCTION AND MAY DIFFER THAN WHAT IS SHOWN IN THESE PLANS.

50 25 0 50 100
ORIGINAL SCALE: 1" = 50'

ENGINEER'S STATEMENT

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECT SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLAN AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

COLORADO REGISTERED PROFESSIONAL ENGINEER RYAN E. BURNS 54412

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

ALL TERRAIN ENGINEERING

RYAN E. BURNS, PE 303.917.1668 - RYAN@ALLTERRAINENG.COM

MICHAEL G. JOVICEVIC, PE 530.391.1668 - MJOVICEVIC@ALLTERRAINENG.COM

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JOB NO: 25009 LOCATION: EPC

REV	DESCRIPTION	DATE

IRON RIDGE FIGLING NO. 1 & 2

GEC PLAN

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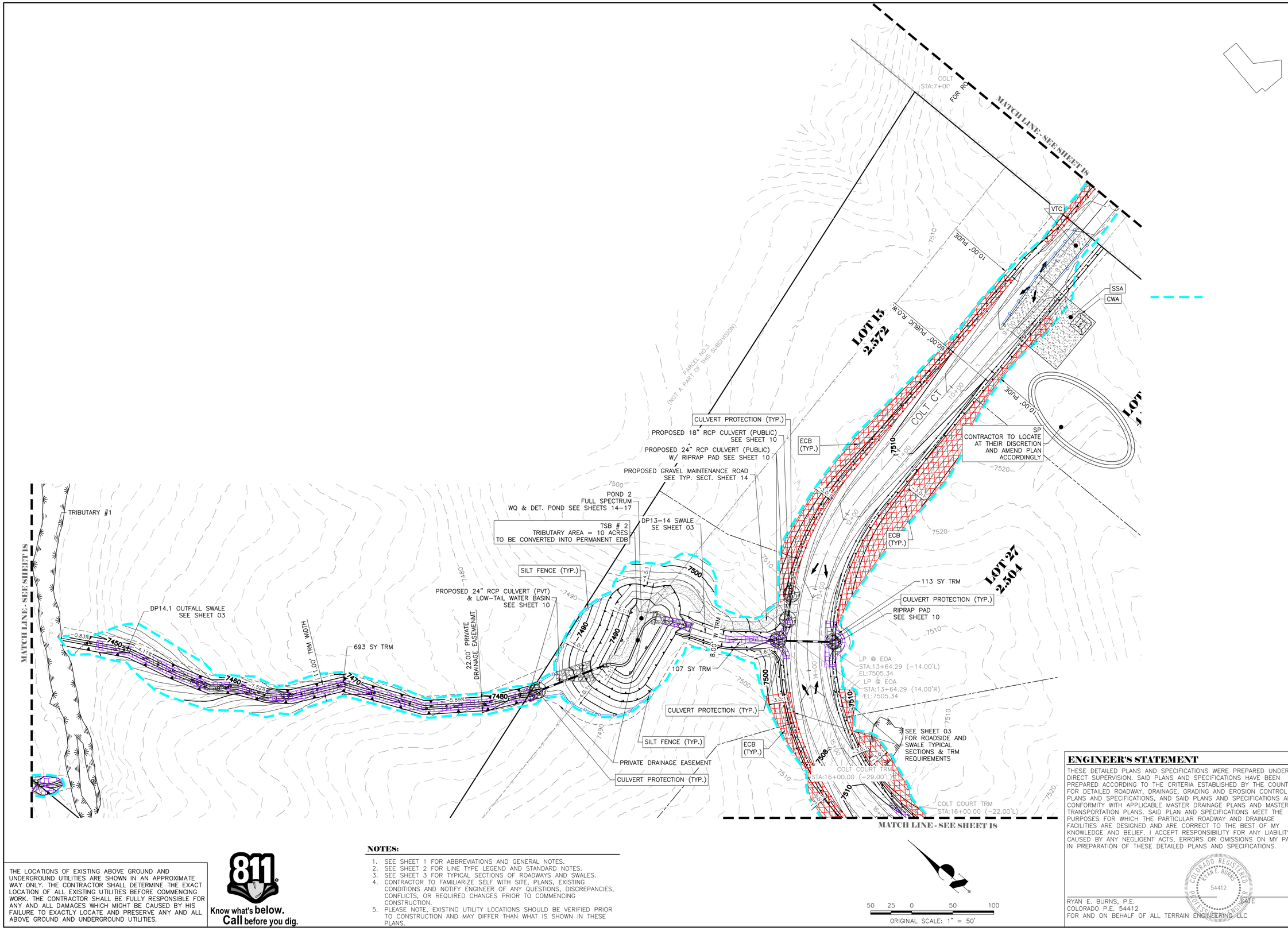
SHEET
18 OF 24



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COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. DATE
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REV	DESCRIPTION	DATE

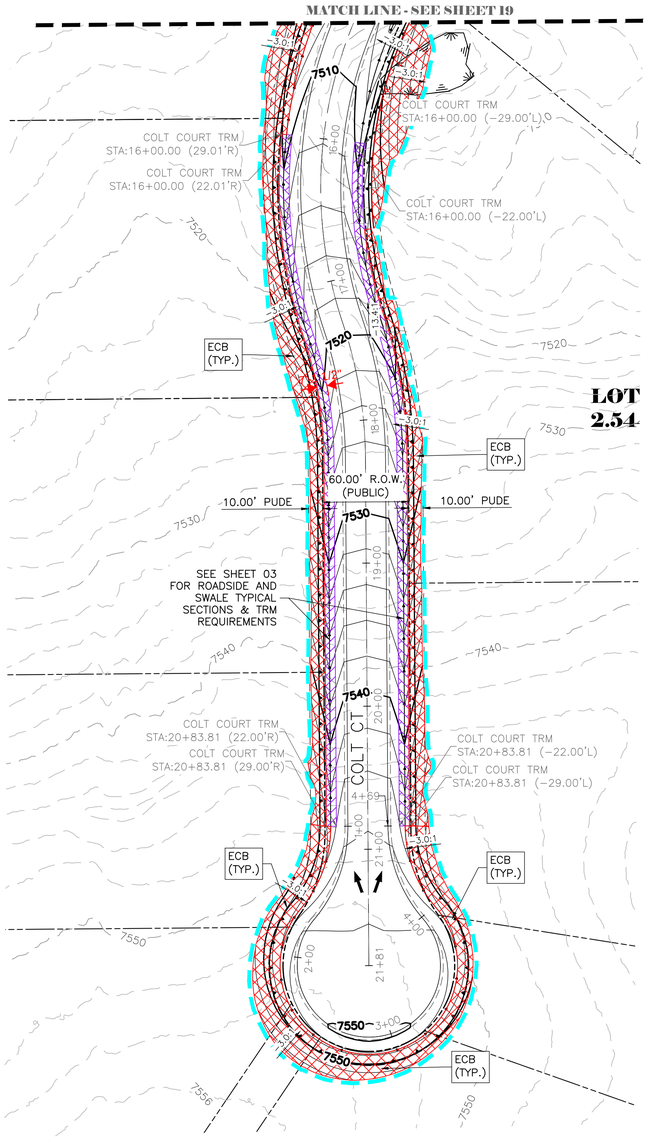
JOB NO: 25009 LOCATION: EPC

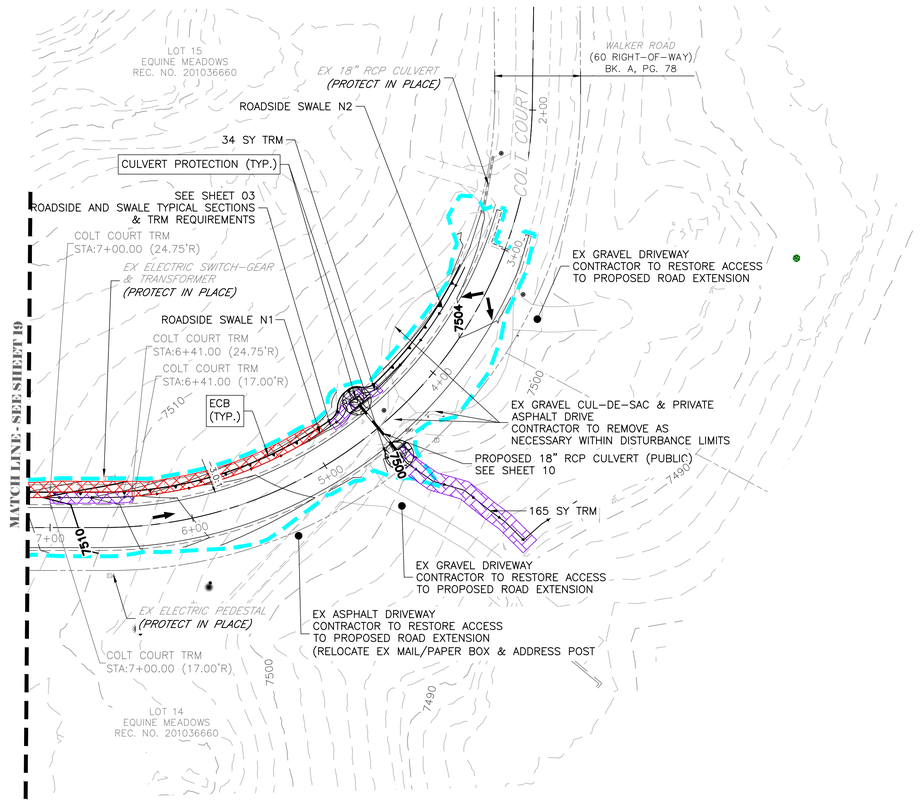
IRON RIDGE FIGLING NO. 1 & 2

GEC PLAN

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: 1" = 50
V-SCALE: 1" = 5'

SHEET 19 OF 24





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ALL TERRAIN ENGINEERING

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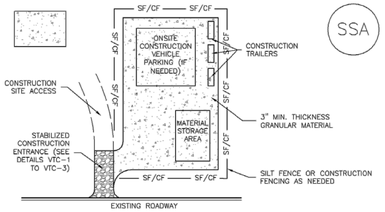
SHEET 20 OF 24



SSA

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.

STABILIZED STAGING AREA MAINTENANCE NOTES

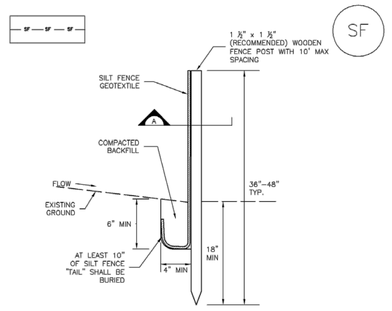
5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

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.

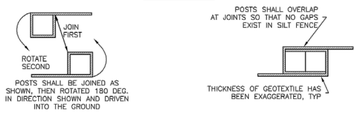
NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE–ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

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)



SILT FENCE



SECTION A

SF–1. SILT FENCE

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 BY 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)

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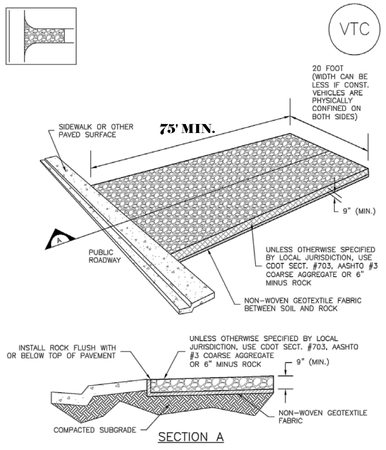
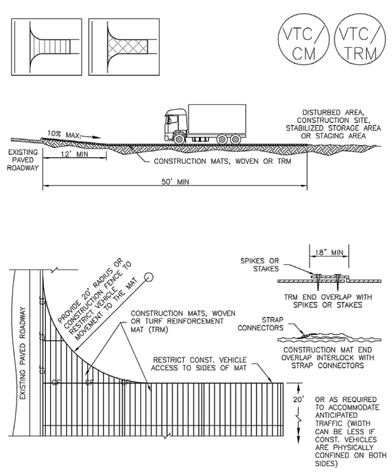
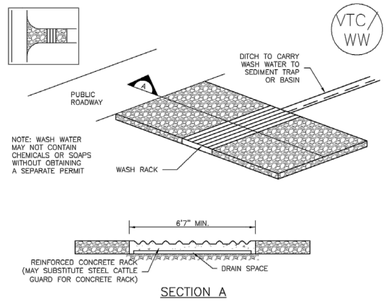


SECTION A

VTC–1. AGGREGATE VEHICLE TRACKING CONTROL



VTC–3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)



SECTION A

VTC–2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

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.

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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.

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

ALL TERRAIN ENGINEERING
RYAN E. BURNS, P.E. - 5/22/2026
535 1ST. TASS - RYAN@ALLTERRAINENG.COM
PAMY E. BURNS, P.E. - 5/22/2026
205 1ST. AVE. - PAMY@ALLTERRAINENG.COM

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JOB NO: 25009 LOCATION: EPC

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IRON RIDGE FIGLING NO. 1 & 2

GEC DETAILS

DESIGN: NOJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: NA
V-SCALE: NA

SHEET
21 OF 24

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. DATE
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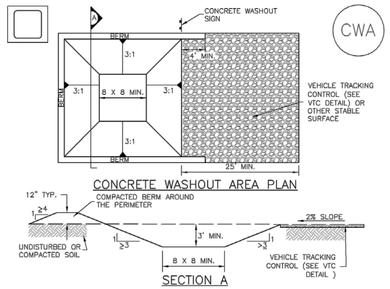
Concrete Washout Area (CWA) MM-1



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 (18 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.

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'.

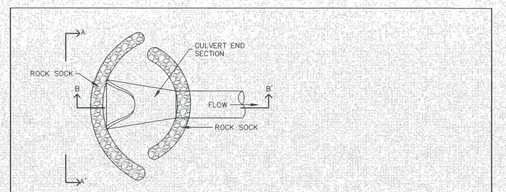
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER–TIGHT CONTAINER AND DISPOSED OF PROPERLY.

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.

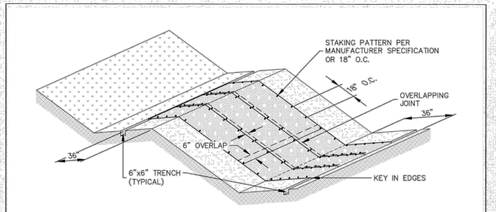


INSTALLATION NOTES
1. SEE ROCK SOCK DETAIL.

MAINTENANCE NOTES
1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS ½ HEIGHT OF THE ROCK SOCK.
3. CULVERT INLET PROTECTION SHALL REMAIN UNTIL THE UPSTREAM AREA IS PERMANENTLY STABILIZED.

CIP

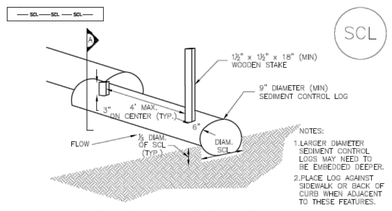
STORMWATER ENTERPRISE | CULVERT INLET PROTECTION | APPROVED: | CHIEF MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-CIP



ECB

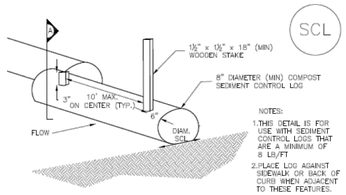
STORMWATER ENTERPRISE | EROSION CONTROL BLANKET | APPROVED: | CHIEF MANAGER | ISSUED: 10/7/19 | REVISED: 8/19/2020 | DRAWING NO. 900-ECB-1

Sediment Control Log (SCL) SC-2



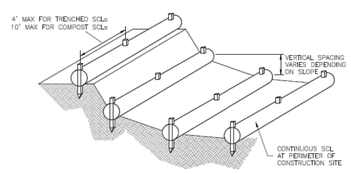
SCL–1. TRENCHED SEDIMENT CONTROL LOG

SC-2 Sediment Control Log (SCL)



SCL–2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

Sediment Control Log (SCL) SC-2



SCL–3. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

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 OBVIOUS WEAR.

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.

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

54412

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

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PREPARED FOR:
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UNTIL SUCH TIME AS THESE DRAWIGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, ALL TERRAIN ENGINEERING APPROVES THEIR USE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

REV	DESCRIPTION	DATE

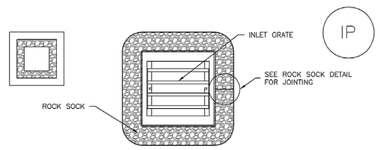
JOB NO: 25009 LOCATION: EPC

IRON RIDGE FIGLING NO. 1 & 2

GEC DETAILS

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: NA
V-SCALE: NA

SHEET
22 OF 24

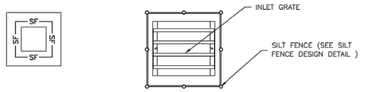


IP–3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP–4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.

3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

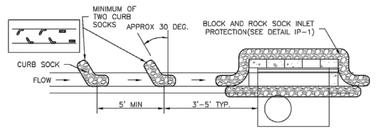
IP–1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.

3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP–2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

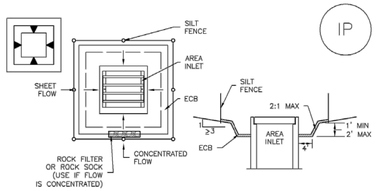
CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.

2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.

3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.

4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.



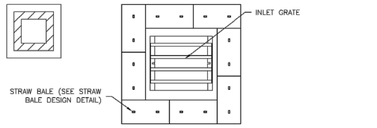
IP–5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.

2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.

3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.

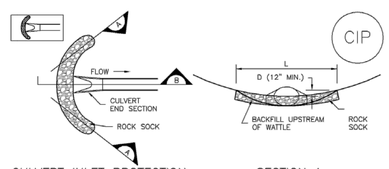


IP–6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.

2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.



CULVERT INLET PROTECTION PLAN

SECTION A

SECTION B

CIP–1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR –LOCATION OF CULVERT INLET PROTECTION.

2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

CULVERT INLET PROTECTION 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 CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS ½ THE HEIGHT OF THE ROCK SOCK.

5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM 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.

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR: –LOCATION OF INLET PROTECTION. –TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6)

2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.

3. 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.

INLET PROTECTION 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 INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR ¼ OF THE HEIGHT FOR STRAW BALES.

5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.

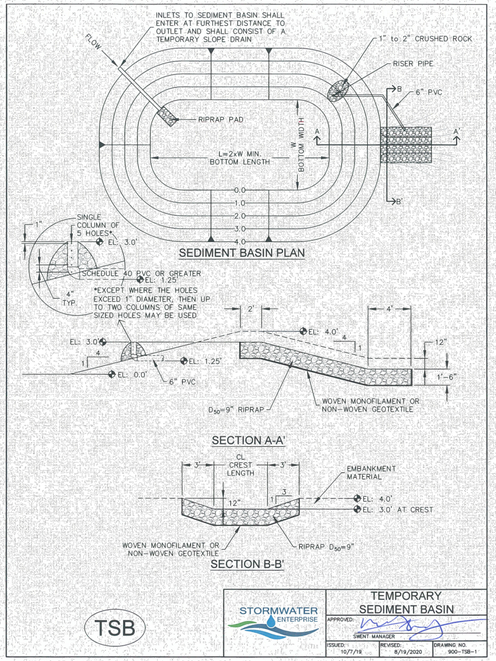
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, 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.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.



SEDIMENT BASIN PLAN

SECTION A-A'

SECTION B-B'

TSB

STORMWATER ENTERPRISE

TEMPORARY SEDIMENT BASIN

APPROVED: CHIEF MANAGER

ISSUED:	REVISED:	DRAWING NO.
10/7/19	8/19/2020	900-TSB-1

UPSTREAM DRAINAGE AREA (ROUNDED TO NEAREST ACRE), (AC)	BASIN BOTTOM WIDTH (W), (FT)	SPILLWAY CREST LENGTH (CL), (FT)	HOLE DIAMETER (HD), (IN)	
1	12½'	2	3/32	
2	21	3	5/32	
3	28	5	7/32	
4	33½	6	9/32	
5	38½	8	23/32	
6	43	9	25/32	
7	47¼	11	27/32	
8	51	12	29/32	
9	55	13	31/32	
10	58½	15	1 3/32	TSB 2
11	61	16	1 5/32	
12	64	18	1 7/32	
13	67½	19	1 9/32	
14	70½	21	1 11/32	
15	73¼	22	1 13/32	TSB 1

TABLE SB–1, SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

INSTALLATION NOTES

1. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
2. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES, AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE No. 200 SIEVE.
3. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-698.
4. PIPE SCHEDULE 40 OR GREATER SHALL BE USED.
5. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES. DESIGN CALCULATIONS MUST BE APPROVED PRIOR TO IMPLEMENTATION.

MAINTENANCE NOTES

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN CONTROL MEASURE EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E. TWO FEET BELOW SPILLWAY CREST).
3. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SEDIMENT BASIN REMOVAL.

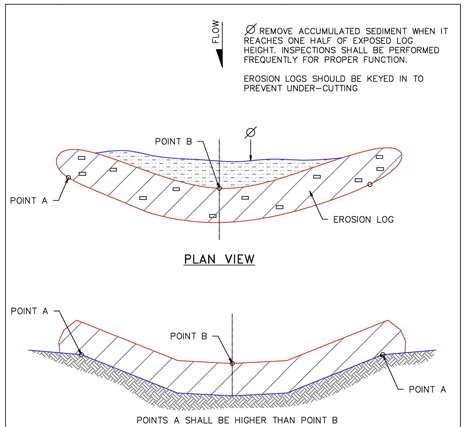
TSB

STORMWATER ENTERPRISE

TEMPORARY SEDIMENT BASIN

APPROVED: CHIEF MANAGER

ISSUED:	REVISED:	DRAWING NO.
10/7/19	8/19/2020	900-TSB-2



PLAN VIEW

ELEVATION

EROSION LOG DETAIL DITCH INSTALLATION

NOTE: EROSION LOGS SHALL BE TIGHTLY ABUTTED WITH NO GAPS.

DATE APPROVED:	Erosion Log Check Dams	
1/1/08	Standard Drawing	
John A. McCarty, DEPARTMENT OF TRANSPORTATION	REVISION DATE: 7/17/07	FILE NAME: SD_3-85

EL PASO COUNTY DEPARTMENT OF TRANSPORTATION

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

COLORADO REGISTERED RYAN E. BURNS 54412 PROFESSIONAL ENGINEER

RYAN E. BURNS, P.E. DATE
COLORADO P.E. 54412
FOR AND ON BEHALF OF ALL TERRAIN ENGINEERING, LLC

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JOB NO. 25009 LOCATION: EPC

REV	DESCRIPTION	DATE

IRON RIDGE FIGLING NO. 1 & 2

GEC DETAILS

DESIGN: NQJ
REVIEW: REB
DATE: 5/22/26
H-SCALE: NA
V-SCALE: NA

SHEET 23 OF 24

soil amendments and rototill them into the soil to a depth of 6 inches or more.

Topsoil should be salvaged during grading operations for use and spread on areas to be revegetated later. Topsoil should be viewed as an important resource to be utilized for vegetation establishment, due to its water-holding capacity, structure, texture, organic matter content, biological activity, and nutrient content. The rooting depth of most native grasses in the semi-arid Denver metropolitan area is 6 to 18 inches. At a minimum, the upper 6 inches of topsoil should be stripped, stockpiled, and ultimately respread across areas that will be revegetated.

Where topsoil is not available, subsoils should be amended to provide an appropriate plant-growth medium. Organic matter, such as well digested compost, can be added to improve soil characteristics conducive to plant growth. Other treatments can be used to adjust soil pH conditions when needed. Soil testing, which is typically inexpensive, should be completed to determine and optimize the types and amounts of amendments that are required.

If the disturbed ground surface is compacted, rip or rototill the surface prior to placing topsoil. If adding compost to the existing soil surface, rototilling is necessary. Surface roughening will assist in placement of a stable topsoil layer on steeper slopes, and allow infiltration and root penetration to greater depth.

Prior to seeding, the soil surface should be rough and the seedbed should be firm, but neither too loose nor compacted. The upper layer of soil should be in a condition suitable for seeding at the proper depth and conducive to plant growth. Seed-to-soil contact is the key to good germination.

Seed Mix for Temporary Vegetation

To provide temporary vegetative cover on disturbed areas which will not be paved, built upon, or fully landscaped or worked for an extended period (typically 30 days or more), plant an annual grass appropriate for the time of planting and mulch the planted areas. Annual grasses suitable for the Denver metropolitan area are listed in Table TS/PS-1. These are to be considered only as general recommendations when specific design guidance for a particular site is not available. Local governments typically specify seed mixes appropriate for their jurisdiction.

Seed Mix for Permanent Revegetation

To provide vegetative cover on disturbed areas that have reached final grade, a perennial grass mix should be established. Permanent seeding should be performed promptly (typically within 14 days) after reaching final grade. Each site will have different characteristics and a landscape professional or the local jurisdiction should be contacted to determine the most suitable seed mix for a specific site. In lieu of a specific recommendation, one of the perennial grass mixes appropriate for site conditions and growth season listed in Table TS/PS-2 can be used. The pure live seed (PLS) rates of application recommended in these tables are considered to be absolute minimum rates for seed applied using proper drill-seeding equipment.

If desired for wildlife habitat or landscape diversity, shrubs such as rubber rabbitbrush (*Chrysothamnus nauseosus*), fourwing saltbush (*Atriplex canescens*) and skunkbrush sumac (*Rhus trilobata*) could be added to the upland seedmixes at 0.25, 0.5 and 1 pound PLS/acre, respectively. In riparian zones, planting root stock of such species as American plum (*Prunus americana*), woods rose (*Rosa woodsii*), plains cottonwood (*Populus sargentii*), and willow (*Populus spp.*) may be considered. On non-topsoiled upland sites, a legume such as Ladak alfalfa at 1 pound PLS/acre can be included as a source of nitrogen for perennial grasses.

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-3 for appropriate seeding dates.

Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species[a] (Common name)	Growth Season[b]	Pounds of Pure Live Seed (PLS)/acre[c]	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	½
5. Millet	Warm	3 - 15	½ - ¾
6. Sudangrass	Warm	5–10	½ - ¾
7. Sorghum	Warm	5–10	½ - ¾
8. Winter wheat	Cool	20–35	1 - 2
9. Winter barley	Cool	20–35	1 - 2
10. Winter rye	Cool	20–35	1 - 2
11. Triticale	Cool	25–40	1 - 2

[a] Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

[b] See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

[c] Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses

Common[a] Name	Botanical Name	Growth Season[b]	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Alakali Soil Seed Mix					
Alkali sacaton	*Sporobolus airoides*	Cool	Bunch	1,750,000	0.25
Basin wildrye	*Elymus cinereus*	Cool	Bunch	165,000	2.5
Sodar streambank wheatgrass	*Agropyron riparium 'Sodar'*	Cool	Sod	170,000	2.5
Jose tall wheatgrass	*Agropyron elongatum 'Jose'*	Cool	Bunch	79,000	7.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**17.75**
Fertile Loamy Soil Seed Mix					
Ephriam crested wheatgrass	*Agropyron cristatum 'Ephriam'*	Cool	Sod	175,000	2.0
Dural hard fescue	*Festuca ovina 'duriuscula'*	Cool	Bunch	565,000	1.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Sodar streambank wheatgrass	*Agropyron riparium 'Sodar'*	Cool	Sod	170,000	2.5
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	7.0
Total					**15.5**
High Water Table Soil Seed Mix					
Meadow foxtail	*Alopecurus pratensis*	Cool	Sod	900,000	0.5
Redtop	*Agrostis alba*	Warm	Open sod	5,000,000	0.25
Reed canarygrass	*Phalaris arundinacea*	Cool	Sod	68,000	0.5
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Pathfinder switchgrass	*Panicum virgatum 'Pathfinder'*	Warm	Sod	389,000	1.0
Alkar tall wheatgrass	*Agropyron elongatum 'Alkar'*	Cool	Bunch	79,000	5.5
Total					**10.75**
Transition Turf Seed Mix[c]					
Ruebens Canadian bluegrass	*Poa compressa 'Ruebens'*	Cool	Sod	2,500,000	0.5
Dural hard fescue	*Festuca ovina 'duriuscula'*	Cool	Bunch	565,000	1.0
Citation perennial ryegrass	*Lolium perenne 'Citation'*	Cool	Sod	247,000	3.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Total					**7.5**

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses (cont.)

Common Name	Botanical Name	Growth Season[b]	Growth Form	Seeds/ Pound	Pounds of PLS/acre
Sandy Soil Seed Mix					
Blue grama	*Bouteloua gracilis*	Warm	Sod-forming bunchgrass	825,000	0.5
Camper little bluestem	*Schizachyrium scoparium 'Camper'*	Warm	Bunch	240,000	1.0
Prairie sandreed	*Calamovilfa longifolia*	Warm	Open sod	274,000	1.0
Sand dropseed	*Sporobolus cryptandrus*	Cool	Bunch	5,298,000	0.25
Vaughn sideoats grama	*Bouteloua curtipendula 'Vaughn'*	Warm	Sod	191,000	2.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**10.25**
Heavy Clay, Rocky Foothill Seed Mix					
Ephriam crested wheatgrass[d]	*Agropyron cristatum 'Ephriam'*	Cool	Sod	175,000	1.5
Oahe Intermediate wheatgrass	*Agropyron intermedium 'Oahe'*	Cool	Sod	115,000	5.5
Vaughn sideoats grama[e]	*Bouteloua curtipendula 'Vaughn'*	Warm	Sod	191,000	2.0
Lincoln smooth brome	*Bromus inermis leyss 'Lincoln'*	Cool	Sod	130,000	3.0
Arriba western wheatgrass	*Agropyron smithii 'Arriba'*	Cool	Sod	110,000	5.5
Total					**17.5**

[a] All of the above seeding mixes and rates are based on drill seeding followed by crimped straw mulch. These rates should be doubled if seed is broadcast and should be increased by 50 percent if the seeding is done using a Brillion Drill or is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

[b] See Table TS/PS-3 for seeding dates.

[c] If site is to be irrigated, the transition turf seed rates should be doubled.

[d] Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

[e] Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sideoats grama.

Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses

	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
Seeding Dates	**Warm**	**Cool**	**Warm**	**Cool**
January 1–March 15			✓	✓
March 16–April 30	4	1,2,3	✓	✓
May 1–May 15	4		✓	
May 16–June 30	4,5,6,7			
July 1–July 15	5,6,7			
July 16–August 31				
September 1–September 30		8,9,10,11		
October 1–December 31			✓	✓

Mulch

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP Fact Sheet for additional guidance.

Maintenance and Removal

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Reseed and mulch these areas, as needed.

An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Protect seeded areas from construction equipment and vehicle access.

- Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface. This can be accomplished mechanically by crimping or with the aid of tackifiers or nets. Anchoring with a crimping implement is preferred, and is the recommended method for areas flatter than 3:1. Mechanical crimpers must be capable of tucking the long mulch fibers into the soil to a depth of 3 inches without cutting them. An agricultural disk, while not an ideal substitute, may work if the disk blades are dull or blunted and set vertically; however, the frame may have to be weighted to afford proper soil penetration.
- Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed. Alternatively, native species of grass hay may be purchased, but can be difficult to find and are more expensive than straw. Purchasing and utilizing a certified weed-free straw is an easier and less costly mulching method. When using grass hay, follow the same guidelines as for straw (provided above).
- On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.
- Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher. For steeper slopes, up to 2000 pounds per acre may be required for effective hydroseeding. Hydromulch typically requires up to 24 hours to dry; therefore, it should not be applied immediately prior to inclement weather. Application to roads, waterways and existing vegetation should be avoided.
- Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch. Normally, use of these products will be restricted to relatively small areas. Biodegradable mats made of straw and jute, straw-coconut, coconut fiber, or excelsior can be used instead of mulch. (See the ECM/TRM BMP for more information.)
- Some tackifiers or binders may be used to anchor mulch. Check with the local jurisdiction for allowed tackifiers. Manufacturer's recommendations should be followed at all times. (See the Soil Binder BMP for more information on general types of tackifiers.)
- Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization. The rock mulch layer should be thick enough to provide full coverage of exposed soil on the area it is applied.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

Table 5-1. El Paso County Conservation District All-Purpose Mix for Upland, Transition and Permanent Control Measure Areas

Common Name	Scientific Name	Growth Season / Form	% of Mix	Pounds PLS: • Irrigated broadcast • Irrigated hydroseeded (80 seeds/sq ft)	Pounds PLS: • Non-irrigated broadcast • Non-irrigated hydroseeded • Irrigated drilled (40 seeds/sq ft)	Pounds PLS: • Non-irrigated drilled (20 seeds/sq ft)
Bluestem, big	*Andropogon gerardii*	Warm, sod	20	4.4	2.2	1.1
Grama, blue	*Bouteloua gracilis*	Warm, bunch	10	0.5	0.25	0.13
Green needlegrass[2]	*Nassella viridula*	Cool, bunch	10	2	1	0.5
Wheatgrass, western[2]	*Pascopyrum smithii*	Cool, sod	20	6.4	3.2	1.6
Grama, sideoats	*Bouteloua curtipendula*	Warm, bunch	10	2	1	0.5
Switchgrass[2]	*Panicum virgatum*	Warm, bunch/sod	10	0.8	0.4	0.2
Prairie sandreed	*Calimovilfa longifolia*	Warm, sod	10	1.2	0.6	0.3
Yellow indiangrass[2]	*Sorghastrum nutans*	Warm, sod	10	2	1	0.5
			Seed rate (lbs PLS/acre)	19.3	9.7	4.8

[1]For portions of facilities located near or on the bottom or where wet soil conditions occur. Planting of potted nursery stock wetland plants 2-foot on-center is recommended for sites with wetland hydrology.

[2]Species that will do well in the bottom of pond areas.

MUST BE USED IN ALL PCM AREAS

ROLLMAX™
ROLLED EROSION CONTROL

Specification Sheet
VMax® S200® Turf Reinforcement Mat

DESCRIPTION

The composite turf reinforcement mat (C-TRM) shall be a machine-produced mat of 100% straw fiber matrix incorporated into permanent three-dimensional turf reinforcement matting. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between a heavy duty UV stabilized nettings with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, an heavy UV stabilized, dramatically corrugated (crimped) intermediate netting with 0.5 x 0.5 inch (1.27 x 1.27 cm) openings, and covered by an heavy duty UV stabilized nettings with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings. The middle corrugated netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 1.50 inch (3.81cm) centers with UV stabilized polypropylene thread to form permanent three-dimensional turf reinforcement matting. All mats shall be manufactured with a colored thread stitched along both outer edges as an overlap guide for adjacent mats.

The S200 shall meet Type 5A, 5B, and 5C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.50 in. (12.70 mm)
Resiliency	ASTM 6524	70%
Density	ASTM D792	0.91 g/cm³
Mass/Unit Area	ASTM 6566	12.0 oz/sy (408 g/m)
UV Stability	ASTM D4355/ 1000 HR	80%
Porosity	ECTC Guidelines	99%
Light Penetration	ASTM D6567	15%
Tensile Strength – MD	ASTM D6818	450 lbs/ft (6.67 kN/m)
Elongation – MD	ASTM D6818	35%
Tensile Strength – TD	ASTM D6818	450 lbs/ft (6.67 kN/m)
Elongation – TD	ASTM D6818	20%

Material Content		
Matrix	100% Straw Fiber	0.50 lb/sq yd (0.19 kg/sm)
Netting	Tcp and Bottom, UV-Stabilized Polypropylene	3 lb/1000 sq ft (.147 kg/100 sm)
	Middle, Corrugated UV-Stabilized Polypropylene	16 lb/1000 sf (.7.81 kg/100 sm)
Thread	Polypropylene, UV Stable	

Standard Roll Sizes		
Width	6.5 ft (2.0 m)	8 ft (2.44m)
Length	55.5 ft (16.9 m)	90 ft (27.4 m)
Weight ± 10%	34 lbs (15.42 kg)	70 lbs (31.8 kg)
Area	40 sq yd (33.4 sm)	80 sq. yd. (66.8 sm)

Design Permissible Shear Stress	Short Duration	Long Duration
Phase 1: Unvegetated	2.3 psf (110 Pa)	2.3 psf (110 Pa)
Phase 2: Partially Veg.	7.5 psf (360 Pa)	7.5 psf (360 Pa)
Phase 3: Fully Veg.	10.0 psf (480 Pa)	8.0 psf (383 Pa)
Unvegetated Velocity	8.5 fps (2.6 m/s)	
Vegetated Velocity	18 fps (5.5 m/s)	

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