

VICINITY MAP  
N.T.S.

Site Coordinates (Lat/Long): 39.0808, -104.7858  
 Address: 17090 Sahara Road, Monument, CO  
 Parcel No. 6121003005

# TRI-STATE

Generation and Transmission  
 Association, Inc.



## Fox Run Substation Construction of a New Substation including Grading, Drainage, and Surface Improvements El Paso County, Colorado

Construction Plans prepared in cooperation with:

**DEL-MONT CONSULTANTS, INC.**  
**ENGINEERING ▾ SURVEYING ▾ PLANNING**  
 125 Colorado Ave. ▼ Montrose, CO 81401 ▼ (970) 249-2251 ▼ (970) 249-2342 FAX  
 www.del-mont.com ▼ service@del-mont.com

**ENGINEER'S STATEMENT:**

These detailed plans and specifications were prepared under my direction and 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 plans 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.

*Kent Utley* 3/30/21  
 Engineer of Record Signature Date

**OWNER'S 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.

Tri-State Generation and Transmission Association, Inc.  
 By: *Barry W. Ingold* Mar 31, 2023  
 Owner Signature Date  
 Barry W. Ingold  
 Chief Operating Officer

**EL PASO COUNTY:**

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. Filed 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, the plans will need to be resubmitted for approval, including payment of review fees at the Planning and Community Development Director's discretion.

Joshua Palmer, P.E. \_\_\_\_\_ Date \_\_\_\_\_  
 County Engineer Signature/ECM Administrator

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7	6	5	4	3	2	1	No.	Date	Dwn.	Appd.	M.F.	M.F.	Dwg. No.	M.F.	Reference Drawings	Drawing Title																
																	FOX RUN SUBSTATION COVER SHEET															
																	TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED															
																	A Touchstone Energy Cooperative															
																	1100 W. 116th Ave. P.O. Box 33695 Denver, Colorado 80233 303-452-6111															
																	Tri-State Generation and Transmission Association, Inc.															
																	A Touchstone Energy Cooperative															
KENT G. UTLEY 47786 PROFESSIONAL ENGINEER																																
Dwn: TMC Date: 3/30/23																																
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S1172-A-01-001																																
PCD File No. PPR2244																																



**BID SET**

PATH: \\08214\Projects\Active Projects\2021\171036-1557 Monument Sub Station & C&T\Facility\GIS\Sheets\S1172-A-01-SHEETS.dwg

**GENERAL NOTES:**

1. THE OWNER (TSGT) WILL PROVIDE THE CONTRACTOR WITH DOCUMENTATION NECESSARY TO RECOVER THE SURVEY MONUMENTS TO ESTABLISH HORIZONTAL AND VERTICAL CONTROL. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF CONSTRUCTION STAKING WITH THE RESIDENT PROJECT REPRESENTATIVE.
2. THE CONTRACTOR SHALL SCHEDULE WORK SUCH THAT THE DURATION OF IMPACT TO ADJACENT PUBLIC ROADS AND RIGHTS-OF-WAY IS MINIMIZED.
3. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT HIS PERSONNEL AND SUBCONTRACTOR PERSONNEL ARE AWARE OF PROPER SAFETY PROCEDURES
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL WATER NECESSARY FOR CONSTRUCTION.
5. THE CONTRACTOR SHALL INFORM THE OWNER OF DAILY WORK ACTIVITIES AND LOCATIONS IN GENERAL. THIS DAILY PLANNING SHALL INCLUDE A DISCUSSION OF SPECIFIC SAFETY MEASURES TO BE TAKEN DURING THE DAY'S WORK.
6. THE CONTRACTOR SHALL COOPERATE WITH THE OWNER AND THE TESTING LABORATORY TO FACILITATE OWNER'S MANAGEMENT AND QUALITY CONTROL OF THE PROJECT CONSTRUCTION.
7. THE CIVIL WORKS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HIS OWN PROJECT OFFICE, TOILET FACILITIES AND ALL OTHER NECESSARY BUILDINGS OR SHELTERS. THE OWNER WILL NOT PROVIDE ANY FACILITIES TO THE CONTRACTOR DURING CONSTRUCTION. ALL FACILITIES AND SERVICES FOR THE RESIDENT PROJECT REPRESENTATIVE(RPR) SHALL BE PROVIDED BY THE CIVIL WORKS CONTRACTOR AND SHALL BE SUBSIDIARY TO THE VARIOUS BID ITEMS ON THIS PROJECT. THE CONTRACTOR SHALL PROVIDE LOCKABLE AND SEPARATE OFFICE SPACE FOR THE RPR; FAX MACHINE WITH SUPPLIES AND DEDICATED SERVICE, COPY MACHINE AND SUPPLIES, OFFICE DESK, FILING CABINETS, DRAFTING TABLE, MEETING TABLE, CHAIRS, ENTRANCE STEPS, AIR CONDITIONING/HEATING, AND INSIDE TOILET. TOILET FACILITIES SHALL BE MAINTAINED IN WORKING CONDITION BY THE CONTRACTOR AT ALL TIMES.
8. THE CONTRACTOR'S PROJECT MANAGER SHALL ATTEND ALL SCHEDULED ROUTINE PROGRESS MEETINGS DURING THE DURATION OF THE PROJECT, AND PROVIDE UPDATED SCHEDULES AS REQUESTED. WEEKLY PROGRESS MEETINGS ARE MANDATORY.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MARKING ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES. THE CONTRACTOR WILL BE REQUIRED TO WORK WITH ALL DUE CAUTION IN THE AREAS OF THE LOCATED UNDERGROUND UTILITIES IN ORDER TO AVOID DAMAGING SAID UTILITIES. IN THE EVENT OF UTILITY DAMAGE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING IMMEDIATE REPAIRS AND NOTIFICATION OF THE PROPER AUTHORITIES AND SERVICE PROVIDERS.
10. THE CONTRACTOR SHALL SUBMIT HIS CONSTRUCTION WORK SCHEDULE TO THE OWNER PROJECTING HIS UPCOMING WORK FOR THE NEXT THREE WEEKS. THE OWNER SHALL REVIEW THIS PLAN WEEKLY WITH THE CONTRACTOR SO THAT EVERYONE IS AWARE OF UPCOMING CONSTRUCTION EVENTS.
11. THE CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE CONSTRUCTION WORK AREA. THE CONTRACTOR SHALL PERFORM CLEAN-UP OPERATIONS ON A DAILY BASIS.
12. THE CONTRACTOR SHALL HAVE SUFFICIENT EQUIPMENT AND PERSONNEL ON SITE TO ACCOMPLISH EFFICIENT AND PROMPT CONSTRUCTION OF THE VARIOUS WORK ITEMS, INCLUDING WORK ON MORE THAN ONE WORK ITEM SIMULTANEOUSLY.
13. NO TRENCHES IN OR DIRECTLY ADJACENT TO OPERATIONAL PAVEMENT SHALL REMAIN OPEN OVERNIGHT OR WHEN THE CONTRACTOR FINISHES WORK FOR THE DAY IN THE AREA. TRENCHES NOT BACKFILLED SHALL BE COVERED WITH STEEL PLATES TO ALLOW FOR SAFE PASSAGES BY VEHICLES ACROSS THE TRENCH, IF APPROVED BY THE OWNER.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO EXISTING FACILITIES NOT DESIGNATED FOR RECONSTRUCTION OR REPLACEMENT, AT HIS EXPENSE.
15. DAMAGE TO EXISTING PAVEMENTS DUE TO MOVING OR USAGE OF HEAVY EQUIPMENT OR THE TRANSPORT OF MATERIALS TO OR ON THE SITE SHALL BE REPAIRED TO EQUAL OR BETTER QUALITY BY THE CONTRACTOR AT HIS EXPENSE.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE REPAIR OF ANY DAMAGE TO UNDERGROUND CABLES ENCOUNTERED.
17. ALL ABOVE GROUND AND GROUND LEVEL ELECTRICAL RELATED APPURTENANCES (I.E., LIGHTS, CABLE BOXES, CABLE AND/OR DUCT MARKERS, TELEPHONE PEDESTALS, UTILITY POLES, CONDUIT, ETC.) SHALL BE PROTECTED AT ALL TIMES. ANY DAMAGE DONE TO SAID APPURTENANCES BY THE CONTRACTOR SHALL BE REPAIRED TO LIKE QUALITY AT THE CONTRACTOR'S EXPENSE. THE REPAIRS SHALL BE PERFORMED TO THE SATISFACTION OF THE OWNER'S PROJECT MANAGER, AND ANY RESPONSIBLE UTILITY PROVIDER.
18. CONSTRUCTION WORKERS WILL NOT BE ALLOWED TO ESTABLISH OVERNIGHT RESIDENCE ON THE PREMISES. ALL CONSTRUCTION WORKERS SHALL LEAVE THE CONSTRUCTION SITE AT THE END OF THEIR WORK PERIOD.
19. WORK CANNOT COMMENCE UNTIL:
  - 19.1. THE CONTRACTOR'S STORMWATER MANAGEMENT PERIMETER CONTROLS INCLUDING THE STABILIZED CONSTRUCTION ENTRANCE AND DISCHARGE POINT CONTROLS ARE IN PLACE.
  - 19.2. ALL SAFETY EQUIPMENT FOR PERSONNEL AND CONSTRUCTION EQUIPMENT IS IN PLACE AND OPERABLE.
20. A COMPLETE PROJECT SCHEDULE IS TO BE SUBMITTED WITHIN 10 DAYS OF NOTICE TO PROCEED.
21. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND RESTRICTIONS FOR SERVICING AND MAINTAINING EQUIPMENT AND DISPOSAL OF USED LUBRICANTS, ETC.

**EMBANKMENT AND GRADING NOTES:**

1. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID DAMAGING EXISTING PAVEMENT THAT MUST REMAIN IN SERVICE. DAMAGE MUST BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
2. DESIGN CONTOURS AND SPOT ELEVATIONS SHOWN IN PLANS REPRESENT FINAL FINISHED SURFACE ELEVATIONS UNLESS OTHERWISE NOTED.
3. ESTIMATED QUANTITIES OF EXCAVATION AND EMBANKMENT IN THESE PLANS WERE CALCULATED BASED ON THE REMOVAL OF 6" OF TOPSOIL WITH AN ASSUMED SETTLEMENT OF 0%.
4. QUANTITIES OF EXCAVATION AND EMBANKMENT TO BE MEASURED AND PAID FOR WILL BE BASED ON THE PLAN QUANTITIES ON THIS SHEET. THE METHOD OF COMPUTATION FOR QUANTITIES, WAS BASED ON A PRISMOIDAL VOLUMETRIC COMPUTATION VALIDATED THROUGH AVERAGE END AREA OF CROSS SECTIONS WITH ALLOWANCE FOR MATERIAL DEFORMATION THROUGH THE PROCESS OF EXCAVATION AND PLACEMENT.
5. EXCAVATED ROCK (8" DIAMETER AND GREATER) MAY BE USED ONLY IN LOWER LEVELS OR OUTER PORTIONS OF FILLS, NOT LIKELY TO RECEIVE TRAFFIC, SUBJECT TO THE OWNER'S APPROVAL. THE MAXIMUM ALLOWABLE SIZE OF MATERIAL IN THE TOP 6" OF SUBGRADE IS 4" DIAMETER.
6. EARTHEN EMBANKMENTS AND TRENCH BACKFILL SHALL BE PLACED IN ACCORDANCE WITH TSGT SPECIFICATIONS.
7. SOIL MATERIAL, OTHER THAN TOPSOIL, FOUND UNFIT FOR USE IN THE CONSTRUCTION OF EMBANKMENTS SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE.
8. EXPOSED SUBGRADE SHALL BE SCARIFIED AND RECOMPACTED TO THE DEPTH REQUIREMENTS IN THE PROJECT SPECIFICATIONS, PRIOR TO BEGINNING PLACEMENT OF EMBANKMENT LIFTS AND BASE MATERIAL. RECOMPACTION SHALL COMPLY WITH THE COMPACTION REQUIREMENTS IN THE PROJECT SPECIFICATIONS.
9. OVERALL ACCESS ROAD EXCAVATION AND EXCAVATION OF THE DETENTION POND ARE INCLUDED IN THE UNCLASSIFIED EXCAVATION QUANTITY.
10. APPROPRIATE GRADING SHALL BE DONE AROUND EACH END OF CULVERTS AND HEADWALLS TO INSURE THAT RUNOFF IS PROPERLY CHANNLED INTO AND OUT OF THE CULVERTS.
11. THE GRADES AND SLOPES FOR THE CONSTRUCTION REPRESENTED IN THESE PLANS ARE NECESSARY TO PROVIDE FOR THE PROPER DRAINAGE AND UTILITY OF THE SITE. CONTRACTOR SHALL PROVIDE FOR ACCURATE AND CONSISTENT MEASUREMENT OF ELEVATIONS TO ACHIEVE THE GRADES NOTED IN THESE PLANS.
12. RIP RAP MATERIAL AND PLACEMENT SHALL BE IN COMPLIANCE WITH TSGT SPECIFICATIONS.
13. CONTRACTOR SHALL REMOVE TOPSOIL IN AREAS DESIGNATED BY TSGT AS STOCKPILE LOCATIONS PRIOR TO STOCKPILING MATERIALS OTHER THAN TOPSOIL.

**TOPSOIL NOTES:**

1. ORGANIC MATERIAL IS PRESENT IN THE TOP 6" OF THE SITE. THIS MATERIAL IS NOT CONSIDERED TO BE ACCEPTABLE AS STRUCTURAL EMBANKMENT. EARTHEN MATERIAL WITH ORGANIC CONTAMINATION SHALL BE CONSIDERED TOPSOIL.
2. TOPSOIL MATERIAL REMOVED FROM THE CONSTRUCTION AREAS ON THE SITE SHALL BE STOCKPILED ON-SITE FOR RE-USE IN TOPSOIL PLACEMENT AFTER OVERALL GRADING IS COMPLETE. EXCESS TOPSOIL MATERIAL REMAINING AFTER CONSTRUCTION SHALL BE SPREAD OVER BORROW AREAS ON-SITE OR HAULED OFF.
3. TOPSOIL SHALL BE REMOVED TO A MINIMUM DEPTH OF 6" IN THE AREA OF THE SWITCH YARD, COMMUNICATIONS YARD, FENCE APRONS, POND BERM AREA, AND ACCESS DRIVeways. THE CONTRACTOR SHALL VERIFY WITH THE OWNER THAT THE EXPOSED MATERIAL IS AN ACCEPTABLE SUBGRADE. AS NECESSARY AND DIRECTED BY THE OWNER, THE CONTRACTOR SHALL REMOVE ADDITIONAL MATERIAL TO ESTABLISH AN ACCEPTABLE SUBGRADE SURFACE.

**DEMOLITION NOTES:**

1. CONDITIONS OF THE PROJECT AREA UPON COMPLETION OF THE JOB SHALL BE AS GOOD AS OR BETTER THAN THE CONDITIONS PRIOR TO STARTING WORK, IN ADDITION TO THE WORK ITEMS LISTED.
2. THE PROJECT AREA SHALL BE FREE OF ANY CONTRACTOR STOCKPILE MATERIALS UPON COMPLETION OF THE JOB UNLESS OTHERWISE DIRECTED BY THE OWNER.
3. UPON COMPLETION OF THE PROJECT, ALL OF THE HAUL ROUTES SHALL BE PROPERLY CLEANED TO PREVENT OBSTRUCTION AND/OR CAUSE INCONVENIENCE TO NORMAL REGULAR TRAFFIC. ALL TEMPORARY HAUL ROUTES SHALL BE REMOVED AND BROUGHT BACK TO ORIGINAL CONDITION OR BETTER. ALL RUTTED AREAS SHALL BE GRADED SMOOTH. SEEDING SHALL BE APPLIED AS INCIDENTAL.
4. THE JOB TRAILER, ALL OF THE CONSTRUCTION EQUIPMENT, AND ANY FACILITIES TEMPORARILY PLACED ON SITE FOR THE PROJECT SHALL BE REMOVED FROM THE SITE.
5. ANY PROPERTIES BELONGING TO THE OWNER SHALL BE RETURNED TO THE OWNER.
6. PROPER DRAINAGE (NO LOCALIZED PONDING) SHALL BE MAINTAINED, PRIOR TO, DURING AND AFTER MOBILIZATION.
7. DEMOLITION SHALL BE DONE TO THE SATISFACTION OF THE OWNER.
8. DEMOLITION SHALL BE DONE IN A MANNER THAT WILL NOT CAUSE ANY INCONVENIENCE TO SITE OPERATIONS OR THE CONTINUED CONSTRUCTION OF THE OTHER APPURTENANCES ON THE SITE.
9. ANY DAMAGE TO PROPERTIES DURING DEMOLITION SHALL BE REPAIRED AND PAID FOR AT THE CONTRACTOR'S EXPENSE.
10. SAFETY REGULATIONS SHALL BE OBSERVED AT ALL TIMES DURING DEMOLITION.
11. THE COST FOR DEMOLITION SHALL BE CONSIDERED SUBSIDIARY TO THE PAY ITEM FOR MOBILIZATION.

TABLE OF ESTIMATED QUANTITIES					
UNIT NO.	BID UNIT	NAME AND DESCRIPTION OF CONSTRUCTION ASSEMBLY UNIT	NO. OF UNITS	U.O.M.	AS-CONSTRUCTED NO. OF UNITS
1	M-08.01	STRIP 6" TOPSOIL AND STOCKPILE ONSITE LOCATION	6,170	CY	
2	M-08.02	EXCAVATION (IN-SITU VOLUME)	23,840	CY	
3	M-08.03	GRADE, PROCESS AND COMPACT EXISTING SURFACE AND SUB-SURFACE MATERIAL	32,690	SY	
4	M-08.04	EMBANKMENT, COMPACTED, COMPLETE, IN PLACE	19,500	CY	
5	M-08.05	IMPORT AND INSTALL 8" THICK MODIFIED CLASS 5 BASE MATERIAL, COMPACTED, COMPLETE, IN PLACE (YARD)	4,050	CY	
6	M-08.06	IMPORT AND INSTALL 3" THICK SURFACE AGGREGATE (YARD)	1,520	CY	
7	M-08.07	IMPORT AND INSTALL 12" THICK CLASS 5 BASE MATERIAL, COMPACTED, COMPLETE, IN PLACE (DRIVEWAY)	520	CY	
8	M-08.08	GEOTEXTILE FABRIC UNDERLAYER (DRIVEWAY)	1,540	SY	
9	M-08.09	12" PERFORATED ADS N-12 PIPE (SUBDRAIN). COMPLETE, IN PLACE	540	LF	
10	M-08.10	12" NON-PERFORATED ADS N-12 PIPE (SUBDRAIN). COMPLETE, IN PLACE	810	LF	
11	M-08.11	15" CLASS III REINFORCED CONCRETE PIPE (SUBDRAIN OUTLET), COMPLETE IN PLACE	8	LF	
12	M-08.12	18" CLASS III REINFORCED CONCRETE PIPE (POND OUTLET), COMPLETE IN PLACE	60	LF	
13	M-08.13	24" CLASS III REINFORCED CONCRETE PIPE (ACCESS ROAD CULVERTS), COMPLETE IN PLACE	80	LF	
14	M-08.14	FLARED END SECTION FOR 15" REINFORCED CONCRETE PIPE CULVERT	1	EA	
15	M-08.15	FLARED END SECTION FOR 18" REINFORCED CONCRETE PIPE CULVERT	1	EA	
16	M-08.16	FLARED END SECTION FOR 24" REINFORCED CONCRETE PIPE CULVERT	4	EA	
17	M-08.17	DETENTION POND CONCRETE OUTLET STRUCTURE, COMPLETE, IN PLACE	1	EA	
18	M-08.18	DETENTION POND CONCRETE FOREBAY, COMPLETE, IN PLACE	1	EA	
19	M-08.19	6' CONCRETE TRICKLE CHANNEL (DETENTION POND), COMPLETE, IN PLACE	164	LF	
20	M-08.20	STONE STRONG RETAINING WALL (PER BLOCK COUNT ON SHEET 11), INCLUDING FOOTER, COMPLETE IN PLACE	1	LS	
21	M-08.21	D50=6" RIP RAP DISCHARGE PAD, INCL. UNDERLINER, COMPLETE IN PLACE	38	SY	
22	M-08.22	D50=6" RIP RAP RUN-DOWN ARMORING, INCL. UNDERLINER, COMPLETE IN PLACE (POND SPILLWAY & SOUTH SWALE)	500	SY	
23	M-08.23	SITE RESTORATION (INCL. SURFACE GRADING AND TOPSOIL SPREADING)	1	LS	
24	M-08.24	SEEDING	3.10	AC	
25	M-08.25	CONCRETE WASHOUT (WITH LOCATION SIGN), COMPLETE, IN PLACE	1	EA	
26	M-08.26	EROSION CONTROL BMP INSTALLATION AND MAINTENANCE FOR DURATION OF PROJECT	1	EA	
27	M-08.27	WATER TRUCK FOR DUST MITIGATION	1	LS	
28	N-08.01	CHAIN LINK FENCE W/ VINYL SLATS, COMPLETE, IN PLACE (SUBSTATION YARD)	1,600	LF	
29	N-08.02	30' WIDE CHAIN LINK FABRIC GATE (2-15' GATES, SUBSTATION YARD), COMPLETE, IN PLACE	1	EA	

**STANDARD NOTES FOR EL PASO COUNTY GRADING AND EROSION CONTROL PLANS:**

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 (SWMP) 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 EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECOM 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 INFESTED AND SPECIFICALLY RECOMMENDED 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 LOOSENEED 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 ECOM 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 ECOM 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 PERMITEE 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 YEH AND ASSOCIATES (DATED NOV. 11, 2021) 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

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**FOX RUN SUBSTATION**

**CONSTRUCTION NOTES**

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED

UPDATED BY: TOLEMET 3/30/2023 9:58 AM Contract: 5035-452-0111  
 \DMS\Projects\Active Projects\2021\21036-TSGT-Monument-Sub-Survey & Civil\Facility\Civil\Sheets\51172-A-01-SHEETS.dwg

WCD - PERMITS

47786

*Kent Athey*

PROFESSIONAL ENGINEER

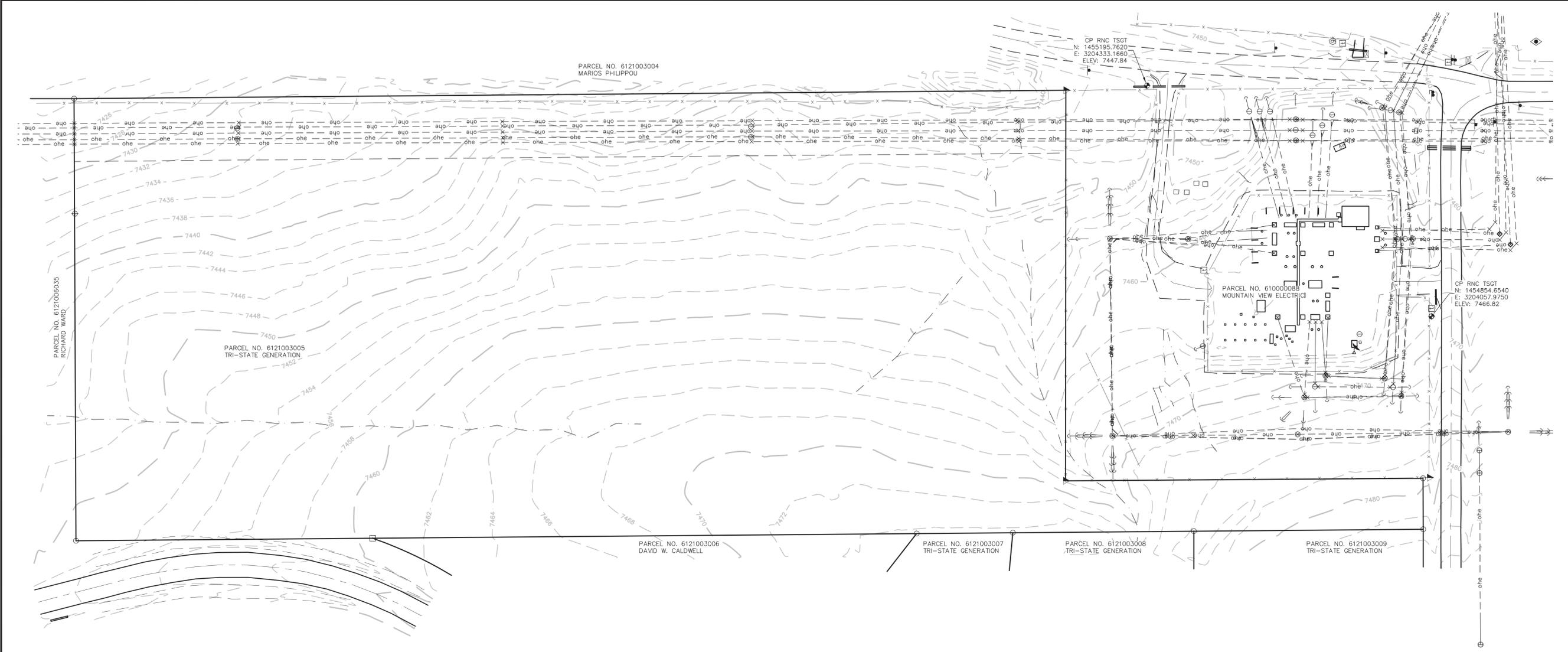
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Appd: _____	Date: _____

**51172-A-01-002**  
PCD File No. PPR2244



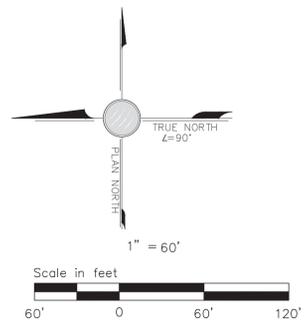
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**LEGEND**

	EXISTING PROPERTY FENCE
	EXISTING UNDERGROUND POWER
	EXISTING COUNTY ROAD R.O.W.
	EXISTING CULVERT
	PROPOSED SUBDRAIN
	PROPOSED CULVERT
	PROPOSED GRADE BRAKE LINE
	PROPOSED SUBSTATION FENCE
	PROPOSED DRAINAGE FLOWLINE
	PROPOSED RIPRAP

- NOTE:**
- COORDINATE SYSTEM NAD83 COLORADO CENTRAL ZONE
  - SCALE FACTOR 1.0003608453



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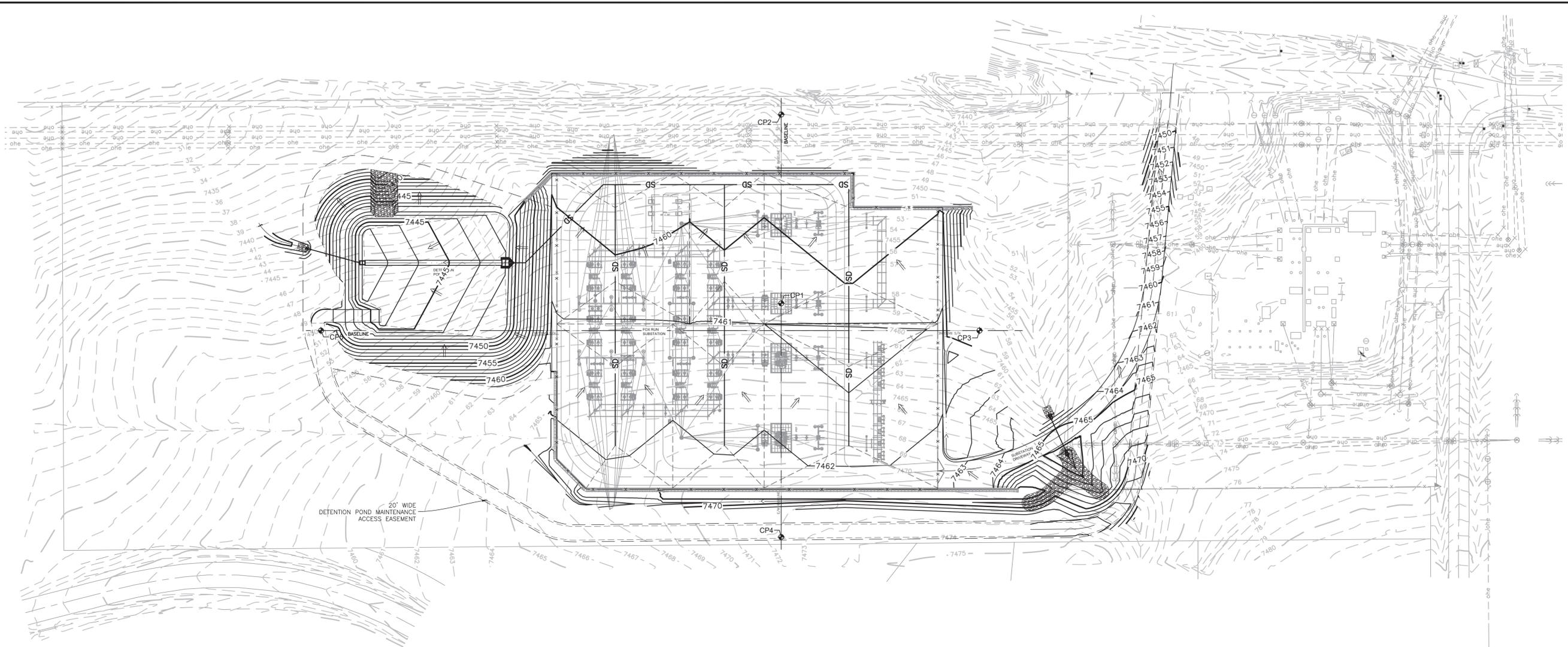
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<b>FOX RUN SUBSTATION</b>	
<b>EXISTING CONDITIONS</b>	
TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED	
1100 W. 116th Ave. P.O. Box 336905 Denver, Colorado 80233 303-452-6111	
UPDATED BY: TOLENT 3/30/2023 9:58 AM Contract: .	
PATH: \\DMS1A\Projects\Active Projects\2021\21036-TSGT Monument Sub Survey & Civil\Facility\Civil\Sheets\S1172-A-01-SHEETS.dwg	
 A Touchstone Energy Cooperative 1100 W. 116th Ave. P.O. Box 336905 Denver, Colorado 80233 303-452-6111	COLORADO LICENSED KENT UTLEY 47786 PROFESSIONAL ENGINEER
Dwn: TMC Appd:	Date: 3/30/23 Date:
S1172-A-01-003	
PCD File No. PPR2244	

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Dwg. No.	Mgr.	Reference Drawings



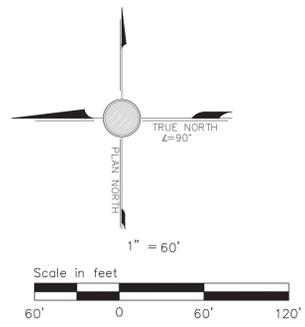
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	EXISTING UNDERGROUND POWER
	EXISTING COUNTY ROAD R.O.W.
	EXISTING CULVERT
	PROPOSED SUBDRAIN
	PROPOSED CULVERT
	PROPOSED GRADE BRAKE LINE
	PROPOSED SUBSTATION FENCE
	PROPOSED DRAINAGE FLOWLINE
	PROPOSED RIPRAP

**NOTE:**

1. THE HORIZONTAL LOCATION FOR THE CONTROL POINT AT THE INTERSECTION OF THE TWO BASELINES IS FIXED. LOCATIONS FOR OTHER CONTROL POINTS MAY BE ADJUSTED ALONG THE BASELINE AS NECESSARY TO PROVIDE FOR CLEAR LINES OF SIGHT AROUND EXISTING VEGETATION TO REMAIN.
2. SURVEYOR SHALL SET THE CONTROL POINTS OUTSIDE THE SWITCHYARD SECURITY FENCE IN-THE-FIELD, AND REPORT THE COORDINATES AND ELEVATIONS TO THE OWNER'S AUTHORIZED TECHNICAL REPRESENTATIVE (OATR).

Point #	Control Point	Northing	Easting
5001	CP1	1455632.15	3204080.98
5002	CP2	1455632.15	3204303.24
5003	CP3	1455397.89	3204048.98
5004	CP4	1455632.15	3203805.94
5005	CP5	1456175.92	3204048.98



**FOX RUN SUBSTATION  
OVERALL SITE**

TRI-STATE GENERATION & TRANSMISSION  
ASSOCIATION, INCORPORATED  
1100 W. 116th Ave.  
P.O. Box 338905  
Denver, Colorado 80233  
303-452-6111

**TRI-STATE**  
Generation and Transmission  
Association, Inc.  
A Touchstone Energy Cooperative  
1100 W. 116th Ave.  
P.O. Box 338905  
Denver, Colorado 80233  
303-452-6111

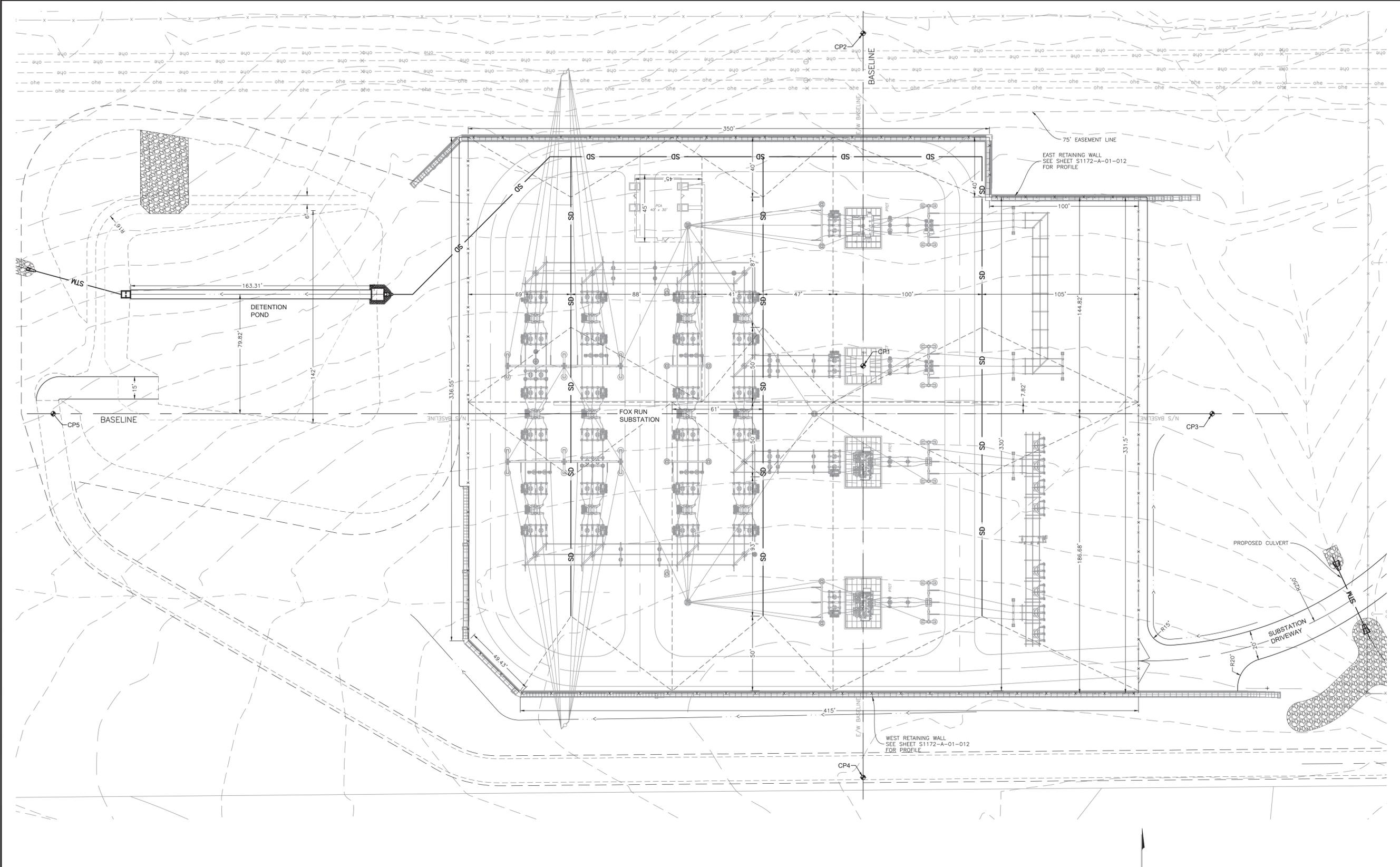
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PCD File No. PPR2244

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Dwg. No.  
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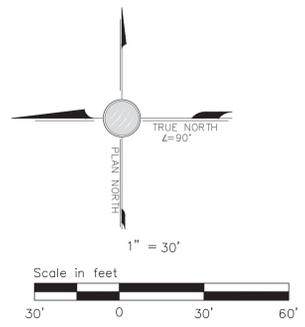
**LEGEND**

- EXISTING PROPERTY FENCE
- EXISTING UNDERGROUND POWER
- EXISTING COUNTY ROAD R.O.W.
- EXISTING CULVERT
- PROPOSED SUBDRAIN
- PROPOSED SUBDRAIN
- PROPOSED GRADE BRAKE LINE
- PROPOSED SUBSTATION FENCE
- PROPOSED DRAINAGE FLOWLINE
- PROPOSED RIPRAP

**NOTE:**

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5003	CP3	1455397.89	3204048.98
5004	CP4	1455632.15	3203805.94
5005	CP5	1456175.92	3204048.98



**FOX RUN SUBSTATION**

**SITE LAYOUT**

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED

1100 W. 116th Ave.  
P.O. Box 33895  
Denver, Colorado 80233  
303-452-6111

UPDATED BY: TCM/EMT 3/30/2023 9:58 AM Contract: S1172-A-01-SHEETS.dwg

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Date

Appd.

Dwn.

Revision

M.F.

Reference Drawings

Mgr.

Dwg. No.

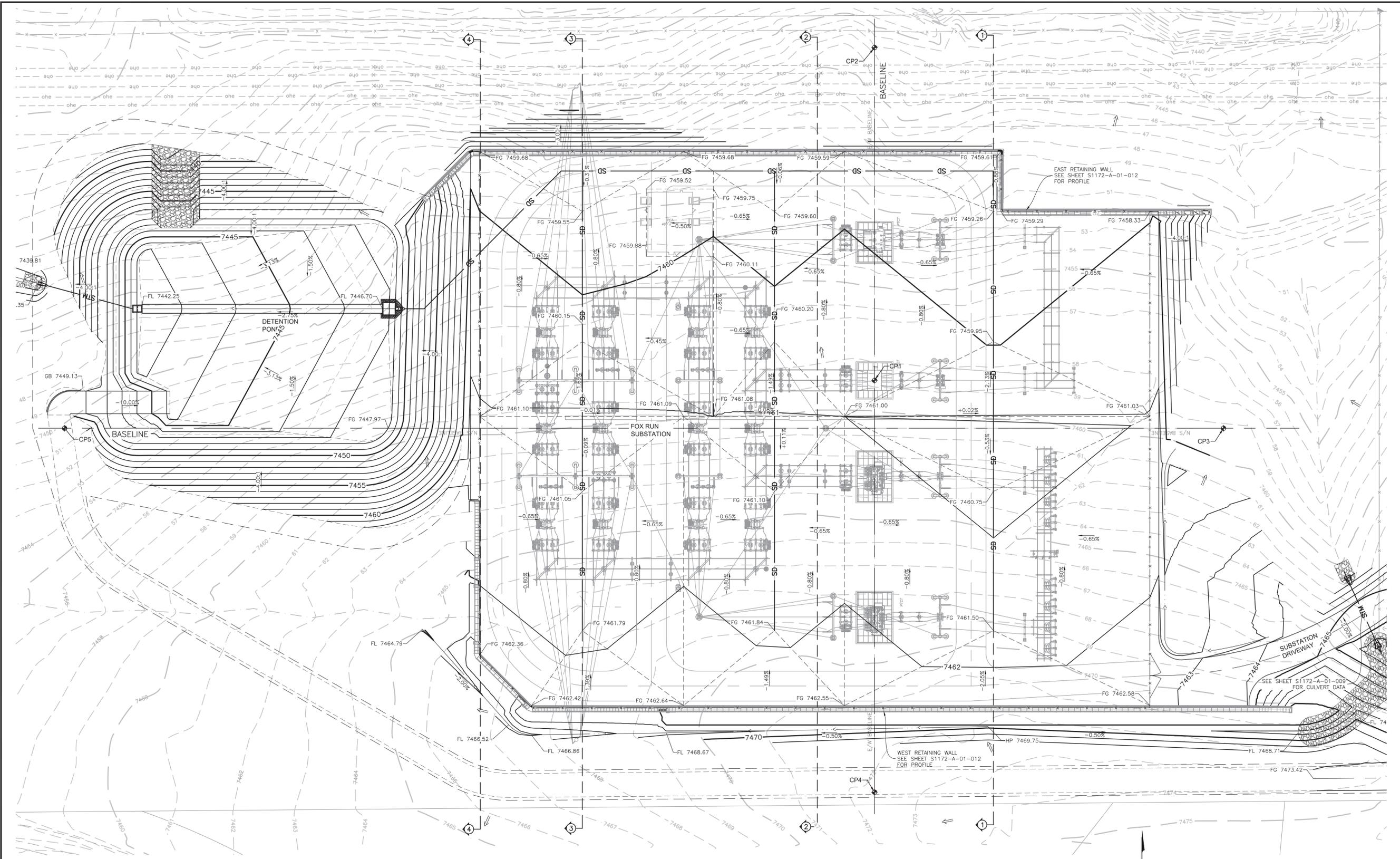
Revision

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S1172-A-01-005

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**LEGEND**

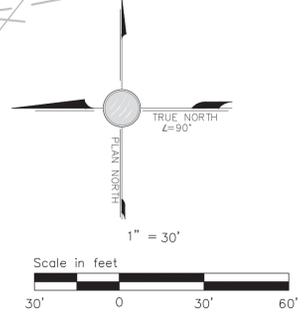
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	EXISTING CULVERT
	PROPOSED SUBDRAIN
	PROPOSED CULVERT
	PROPOSED GRADE BRAKE LINE
	PROPOSED SWITCHYARD SECURITY FENCE
	PROPOSED DRAINAGE FLOWLINE
	PROPOSED RIPRAP

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**Construction Control Point Table**

Point #	Control Point	Northing	Easting
5001	CP1	1455632.15	3204080.98
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5003	CP3	1455397.89	3204048.98
5004	CP4	1455632.15	3203805.94
5005	CP5	1456175.92	3204048.98



**FOX RUN SUBSTATION  
GRADING PLAN**

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED  
 1100 W. 116th Ave.  
 P.O. Box 338905  
 Denver, Colorado 80233  
 303-452-6111

**TRI-STATE**  
 Generation and Transmission Association, Inc.  
 A Touchstone Energy Cooperative

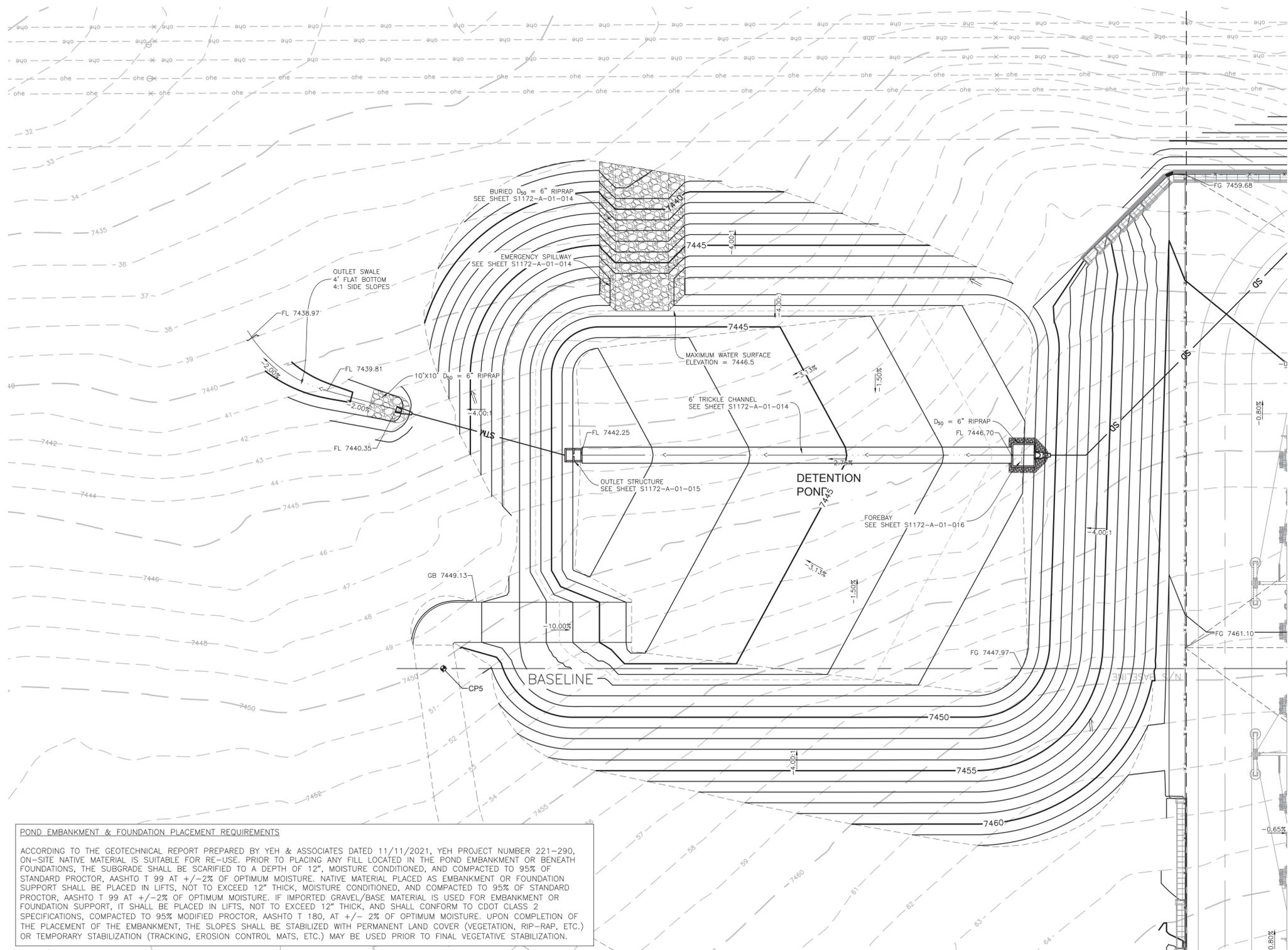
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S1172-A-01-006  
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Dwg. No. Mgr. Reference Drawings



**POND EMBANKMENT & FOUNDATION PLACEMENT REQUIREMENTS**

ACCORDING TO THE GEOTECHNICAL REPORT PREPARED BY YEH & ASSOCIATES DATED 11/11/2021, YEH PROJECT NUMBER 221-290, ON-SITE NATIVE MATERIAL IS SUITABLE FOR RE-USE. PRIOR TO PLACING ANY FILL LOCATED IN THE POND EMBANKMENT OR BENEATH FOUNDATIONS, THE SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF 12", MOISTURE CONDITIONED, AND COMPACTED TO 95% OF STANDARD PROCTOR, AASHTO T 99 AT +/-2% OF OPTIMUM MOISTURE. NATIVE MATERIAL PLACED AS EMBANKMENT OR FOUNDATION SUPPORT SHALL BE PLACED IN LIFTS, NOT TO EXCEED 12" THICK, MOISTURE CONDITIONED, AND COMPACTED TO 95% OF STANDARD PROCTOR, AASHTO T 99 AT +/-2% OF OPTIMUM MOISTURE. IF IMPORTED GRAVEL/BASE MATERIAL IS USED FOR EMBANKMENT OR FOUNDATION SUPPORT, IT SHALL BE PLACED IN LIFTS, NOT TO EXCEED 12" THICK, AND SHALL CONFORM TO CDOT CLASS 2 SPECIFICATIONS, COMPACTED TO 95% MODIFIED PROCTOR, AASHTO T 180, AT +/- 2% OF OPTIMUM MOISTURE. UPON COMPLETION OF THE PLACEMENT OF THE EMBANKMENT, THE SLOPES SHALL BE STABILIZED WITH PERMANENT LAND COVER (VEGETATION, RIP-RAP, ETC.) OR TEMPORARY STABILIZATION (TRACKING, EROSION CONTROL MATS, ETC.) MAY BE USED PRIOR TO FINAL VEGETATIVE STABILIZATION.

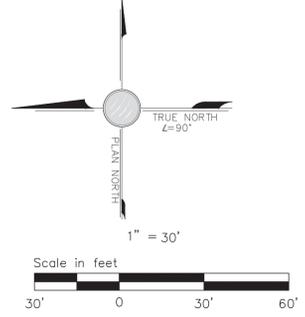
**LEGEND**

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	EXISTING UNDERGROUND POWER
	EXISTING COUNTY ROAD R.O.W.
	EXISTING CULVERT
	PROPOSED SUBDRAIN
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	PROPOSED RIPRAP

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**FOX RUN SUBSTATION**  
**DETENTION POND GRADING**

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED

1100 W. 116th Ave.  
P.O. Box 33895  
Denver, Colorado 80233  
303-452-6111

UPDATED BY: TC/LEMIT 3/30/2023 9:58 AM Contract: .  
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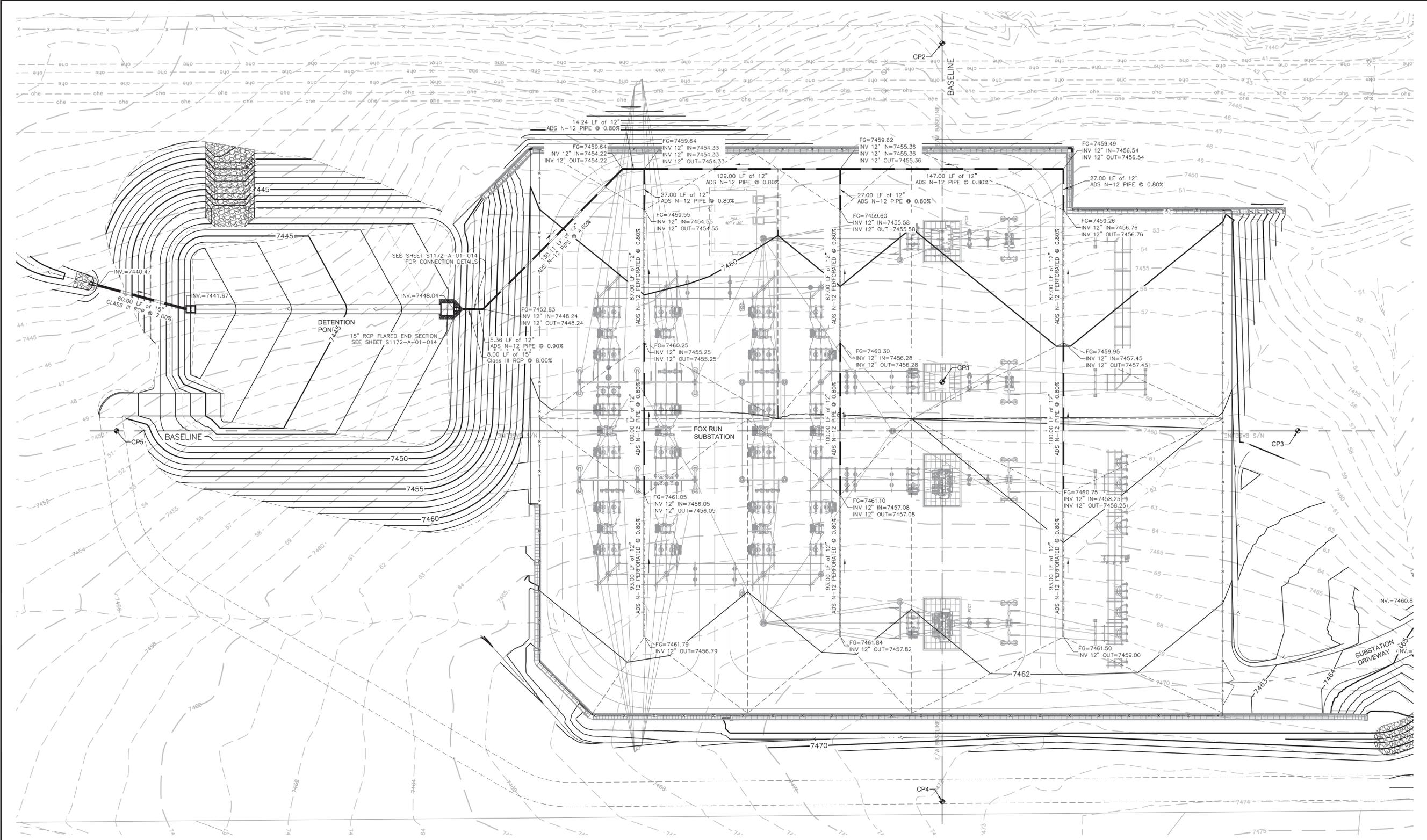
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Dwn: TMC Date: 3/30/23

Appd: Date:

S1172-A-01-007

PCD File No. PPR2244



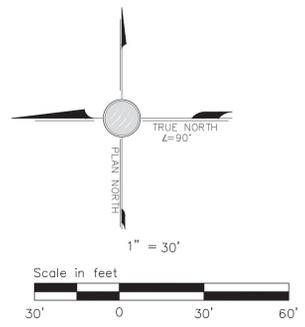
**LEGEND**

- EXISTING PROPERTY FENCE
- EXISTING UNDERGROUND POWER
- EXISTING COUNTY ROAD R.O.W.
- EXISTING CULVERT
- PROPOSED SUBDRAIN
- PROPOSED CULVERT
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- PROPOSED SWITCHYARD SECURITY FENCE
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5003	CP3	1455397.89	3204048.98
5004	CP4	1455632.15	3203805.94
5005	CP5	1456175.92	3204048.98



**FOX RUN SUBSTATION**  
**SUBDRAIN PLAN**  
 TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED  
 1100 W. 116th Ave.  
 P.O. Box 338905  
 Denver, Colorado 80233  
 303-452-6111  
 UPDATED BY: TCLEMENT 3/30/2023 9:58 AM Contract: 106514\Projects\Active Projects\2021\21036-1657-Monument Sub Survey & Civil\Facility\Civil\Sheets\1172-A-01-SHEETS.dwg

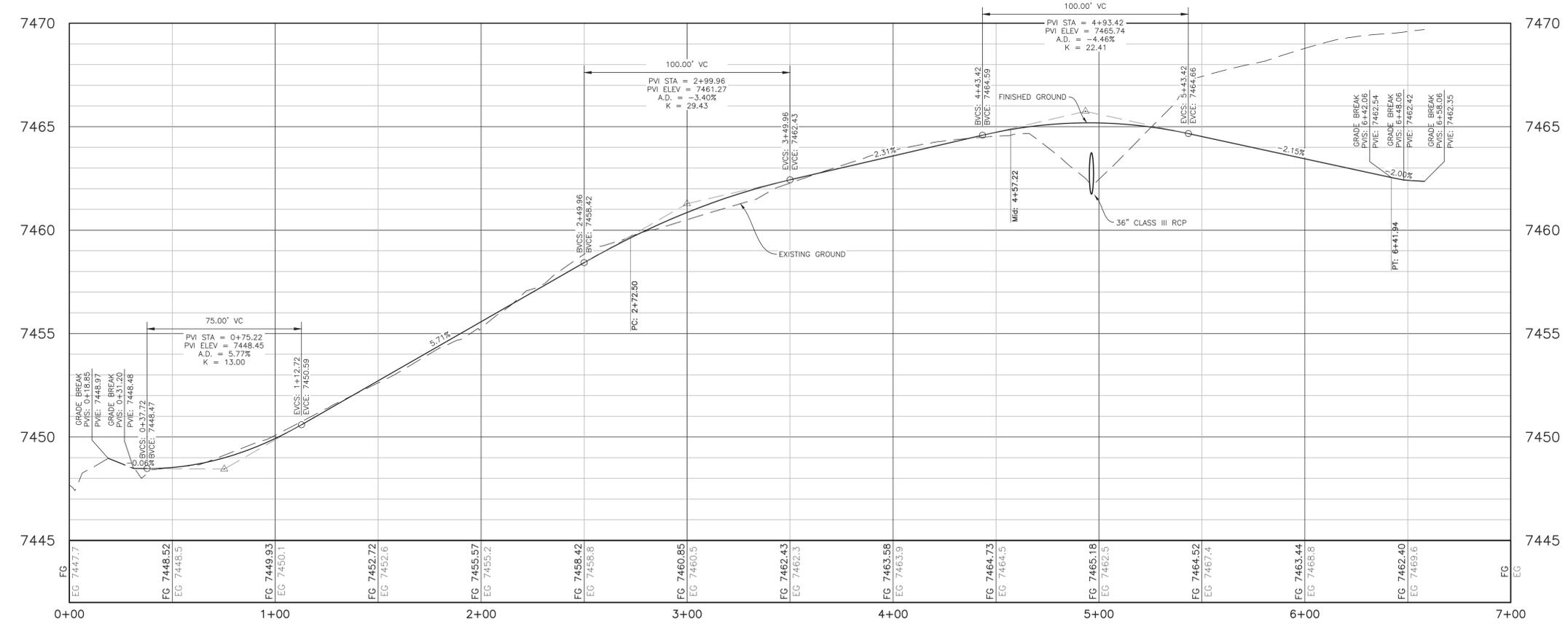
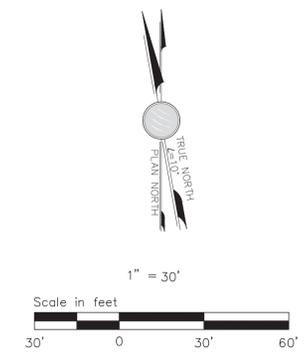
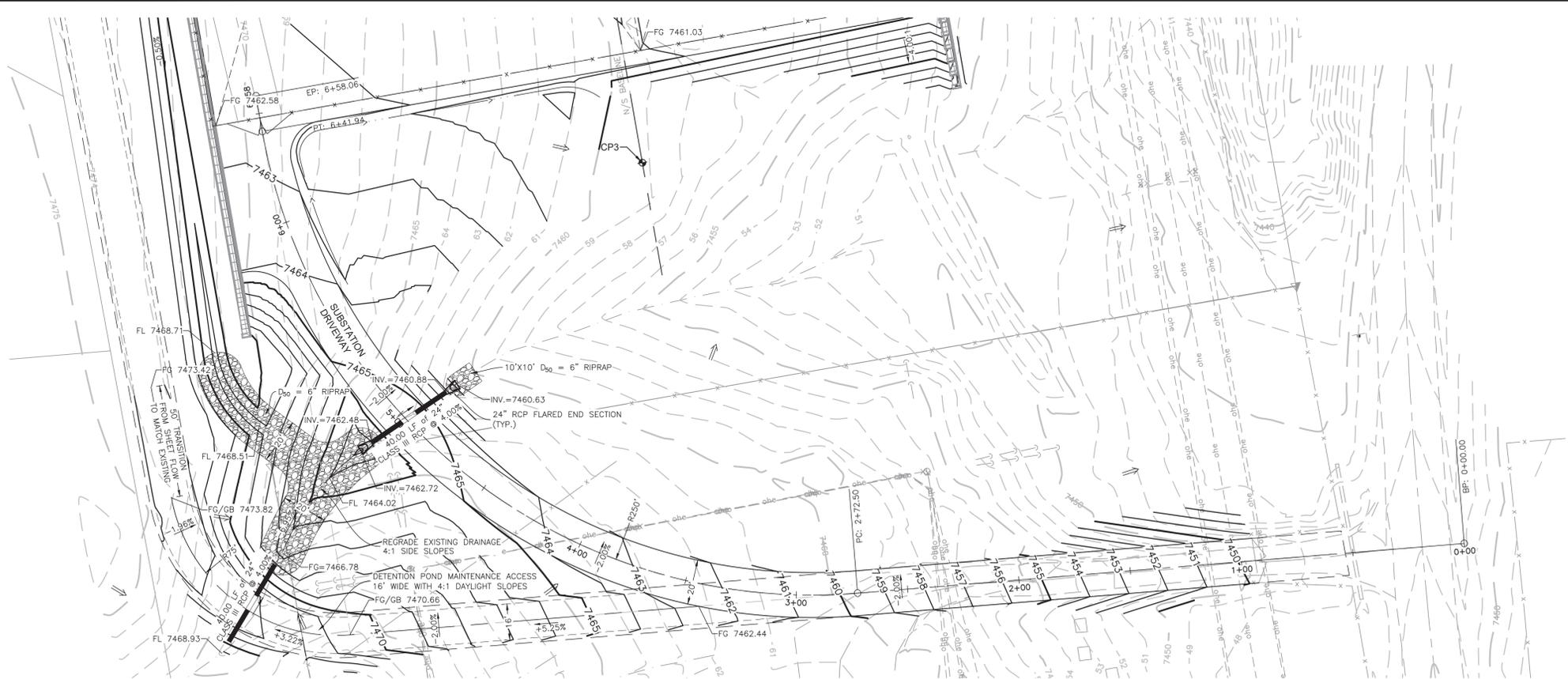
**TRI-STATE**  
 Generation and Transmission Association, Inc.  
 A Touchstone Energy Cooperative  
 1100 W. 116th Ave.  
 P.O. Box 338905  
 Denver, Colorado 80233  
 303-452-6111

Dwn: TMC Date: 3/30/23  
 Appd: Date:

**BID SET**  
 PCD File No. PPR2244

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Dwg. No. Mgr. Drawing Title  
 Reference Drawings



**TRI-STATE**  
 Generation and Transmission  
 Association, Inc.  
 A Touchstone Energy Cooperative  
 1100 W. 116th Ave.  
 P.O. Box 33893  
 Denver, Colorado 80233  
 303-452-6111

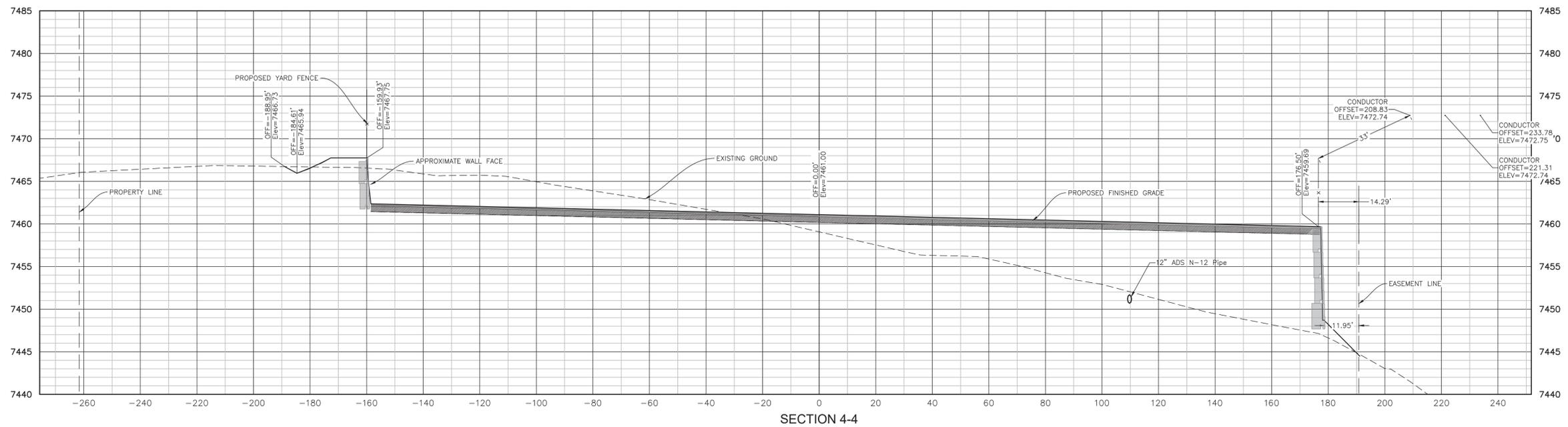
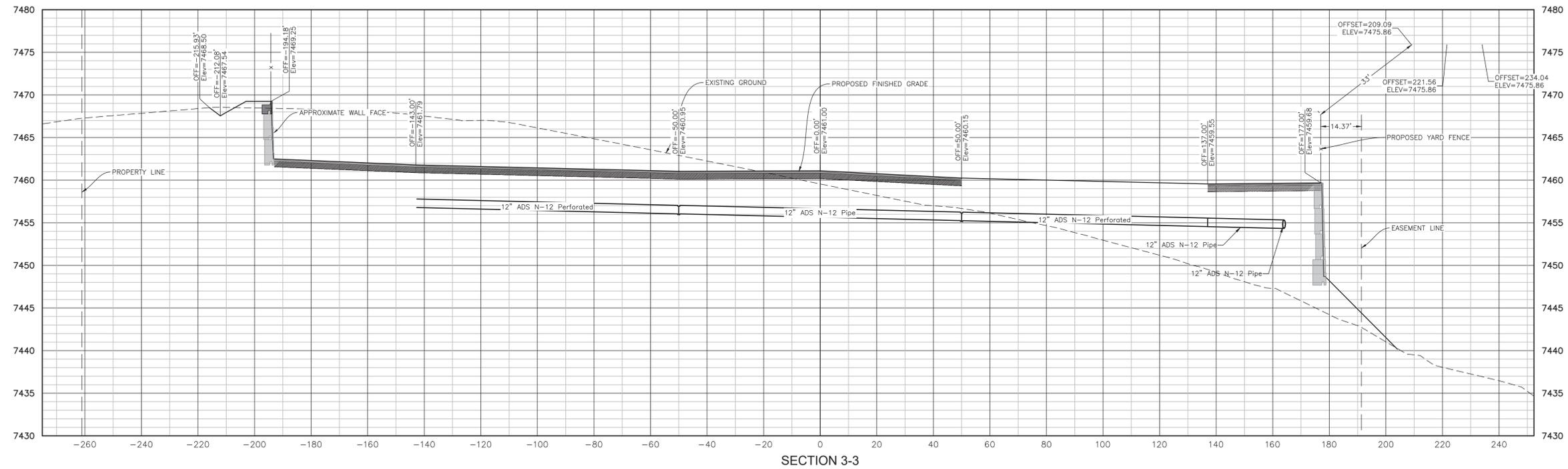
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**SUBSTATION DRIVEWAY**  
**PLAN & PROFILE**  
 TRI-STATE GENERATION & TRANSMISSION  
 ASSOCIATION, INCORPORATED  
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**BID SET**





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**FOX RUN SUBSTATION**  
YARD SECTIONS

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED

UPDATED BY: TC/LEMENT 3/30/2023 9:58 AM Contract: . . .  
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**TRI-STATE**  
Generation and Transmission Association, Inc.  
A Touchstone Energy Cooperative

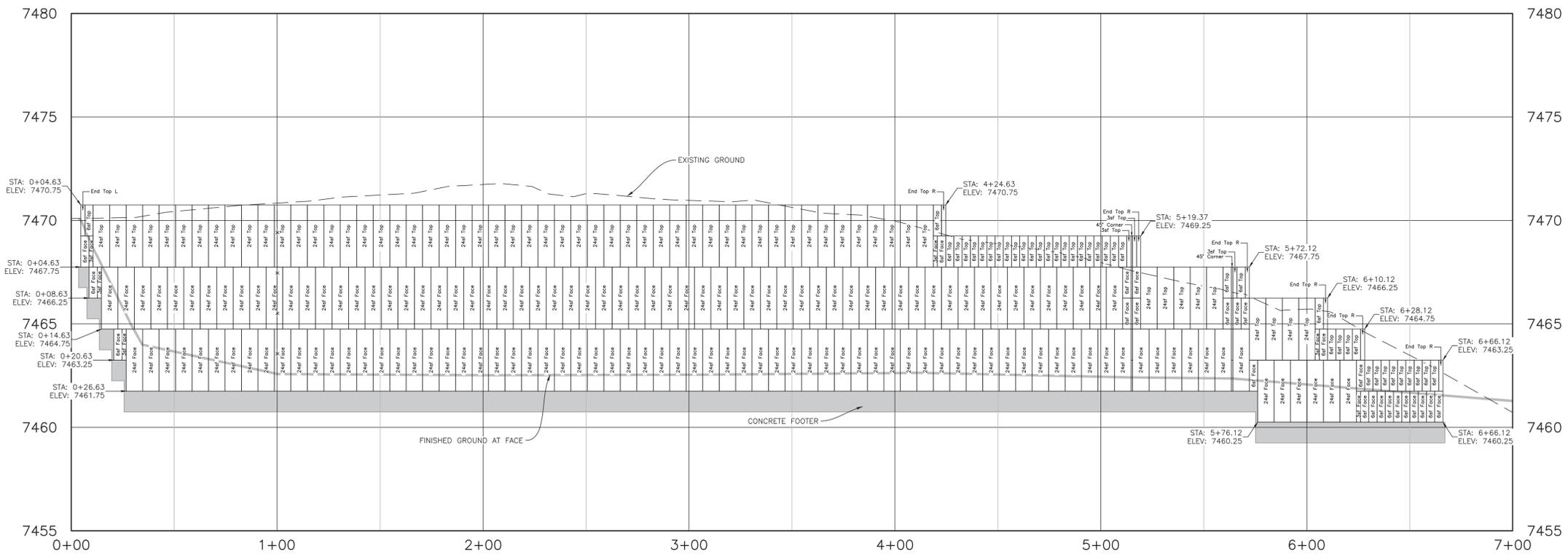
1100 W. 116th Ave.  
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Denver, Colorado 80233  
303-452-6111

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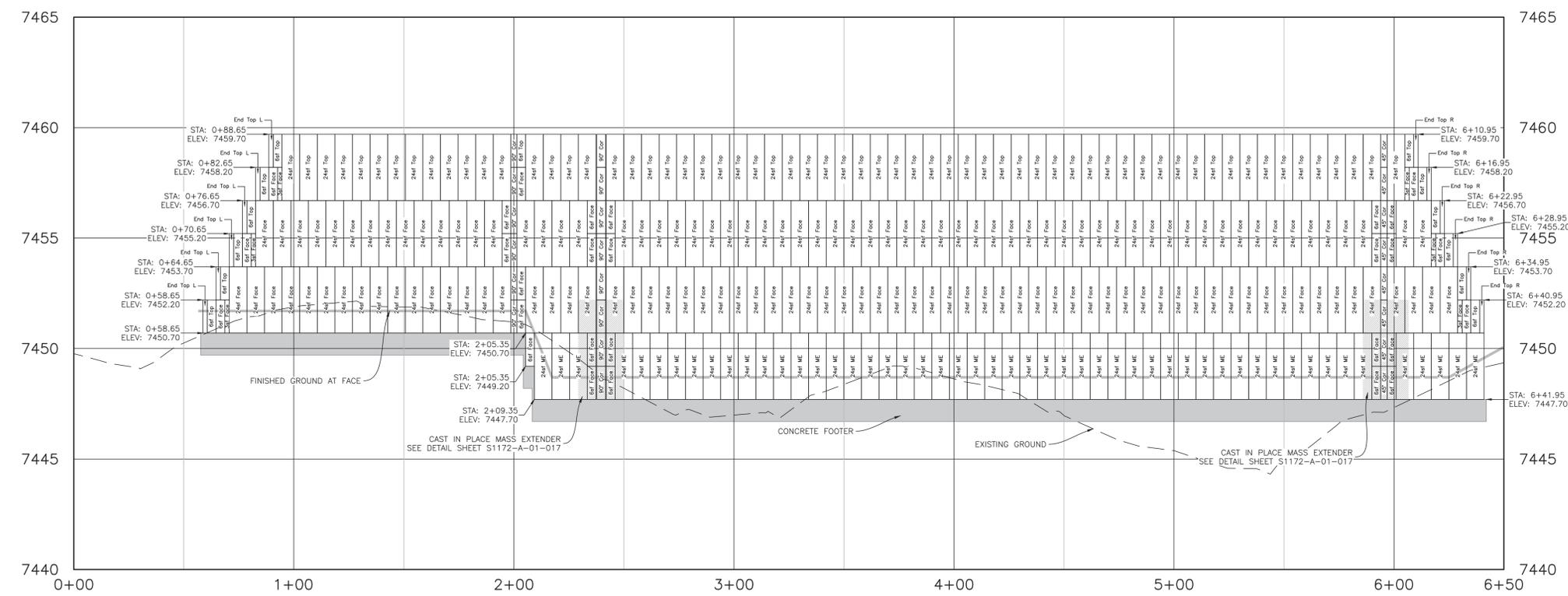
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PCD File No. PPR2244



**BID SET**



WEST WALL



EAST WALL

STONE STRONG RETAINING WALL SYSTEMS		
LABEL	DESCRIPTION	QTY.
24SF Face	24SF Block	267
24SF Top	24SF Top Block	122
24SF ME	24SF Mass Extender	51
6SF Face	6SF Block	52
6SF Top	6SF Top Block	53
3SF Face	3SF Block	12
3SF Top	3SF Top Block	3
End Top L	End Top Block Left	7
End Top R	End Top Block Right	12
Half DF	Half Dual Face	0
Full DF	Full Dual Face	0
45° COR	45° Corner Block	17
90° COR	90° Corner Block	14

FOX RUN SUBSTATION  
RETAINING WALL PROFILES

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED

1100 W. 116th Ave.  
Denver, Colorado 80233  
303-452-6111



Dwn: TMC Date: 3/30/23  
Appd: Pent Utley Date:

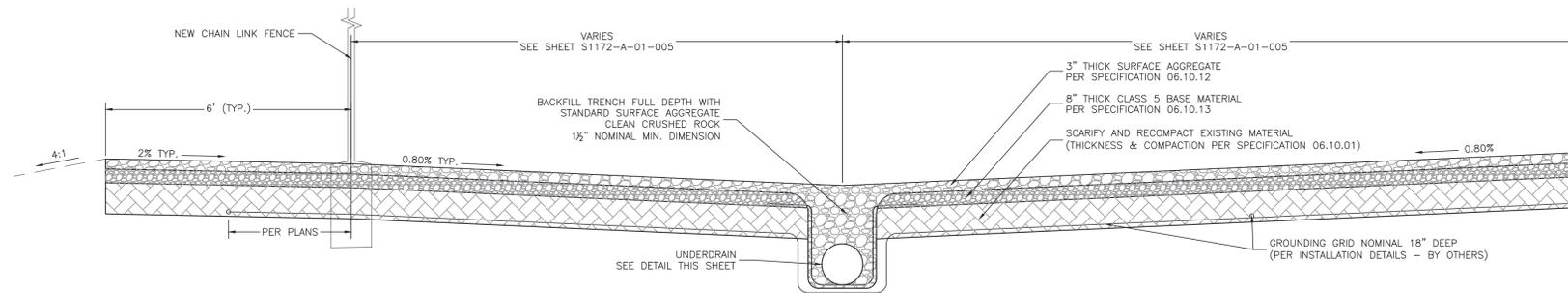
S1172-A-01-012  
PCD File No. PPR2244

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Dwg. No. Mgr. Drawing Title  
Reference Drawings

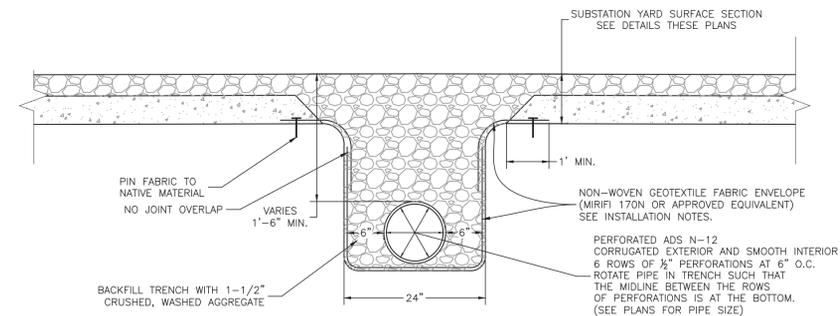
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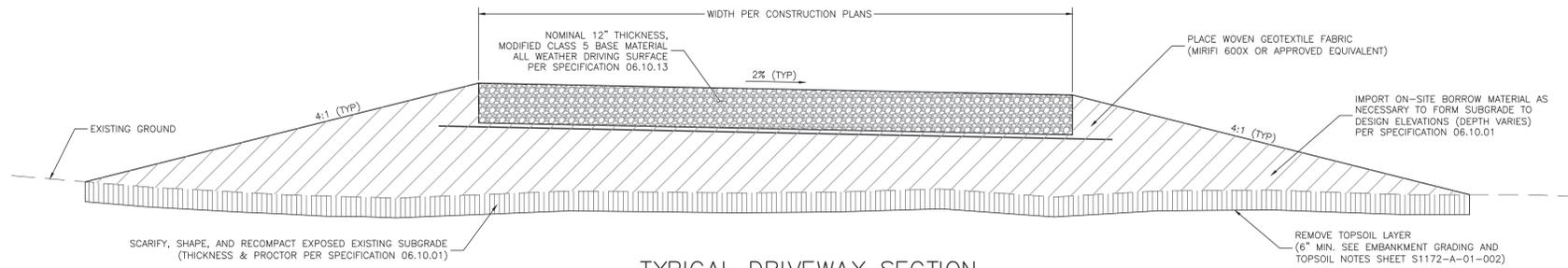


TYPICAL INTERIOR UNDERDRAIN & YARD SECTION  
N.T.S.

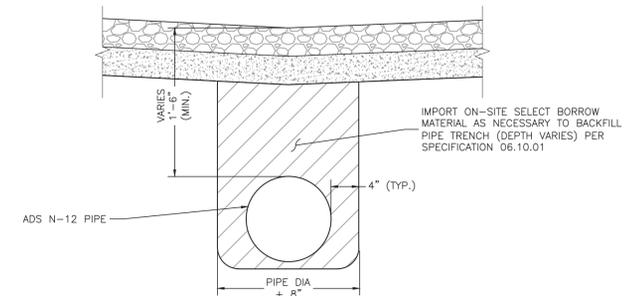
- PIPE, AGGREGATE, & FABRIC INSTALLATION NOTES:
1. LAY FABRIC IN TRENCH PRIOR TO PLACEMENT OF AGGREGATE.
  2. INSTALL PERFORATED PIPE TO DESIGN GRADES WITH PERFORATIONS PER DETAIL.
  3. BACKFILL TO DESIGN SURFACE GRADES AND ELEVATIONS WITH 1/2" CRUSHED AGGREGATE PER SPECIFICATIONS.
  4. ALL BURIED PIPE ENDS SHALL BE CAPPED



TYPICAL PERFORATED SUBDRAIN DETAIL  
N.T.S.



TYPICAL DRIVEWAY SECTION  
N.T.S.



TYPICAL SOLID SUBDRAIN DRAIN DETAIL  
N.T.S.

Reference Drawings	Mgr.	Dwg. No.	M.F.

No.	Date	Dwn.	Appd.	Revision
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FOX RUN SUBSTATION  
CIVIL DETAILS

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED

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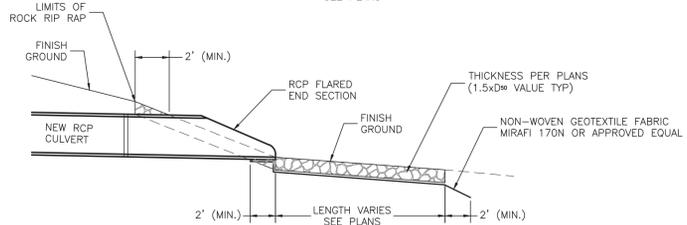
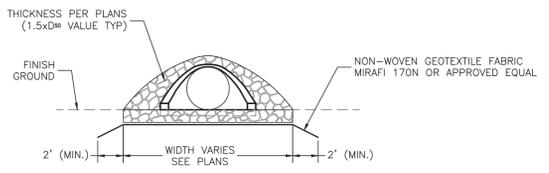
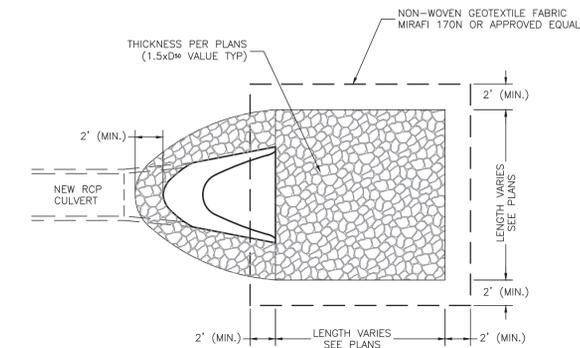
TRI-STATE Generation and Transmission Association, Inc.  
A Touchstone Energy Cooperative  
1100 W. 116th Ave.  
P.O. Box 338905  
Denver, Colorado 80233  
303-452-6111

DATE: 3/30/23  
DWN: TMC  
APPD:

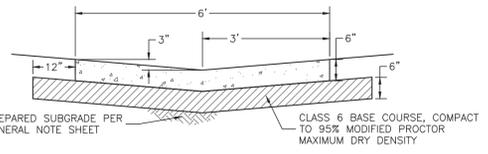


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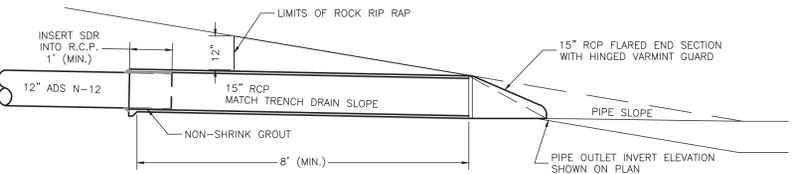
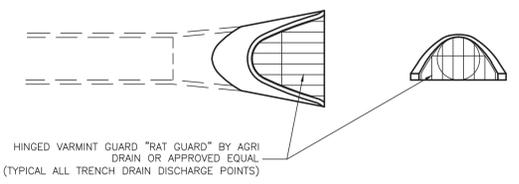
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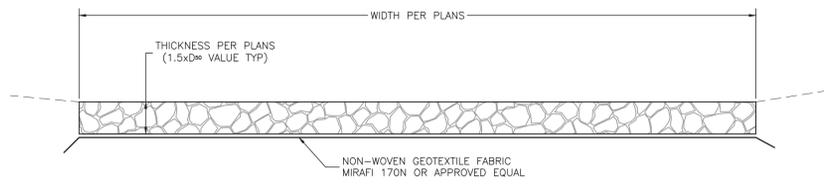
RCP CULVERT OUTLET DETAIL  
N.T.S.



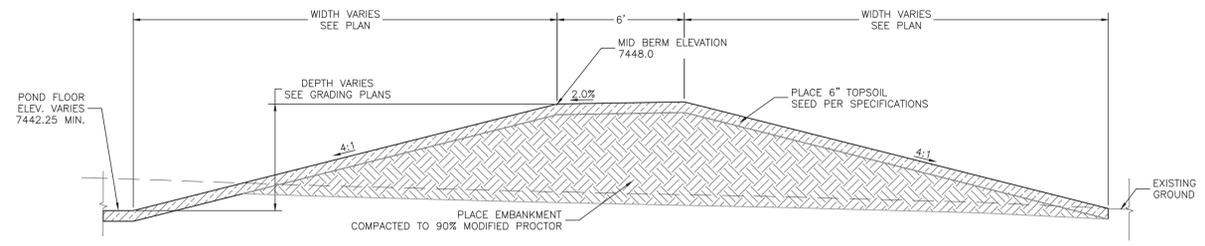
6' TRICKLE CHANNEL  
N.T.S.



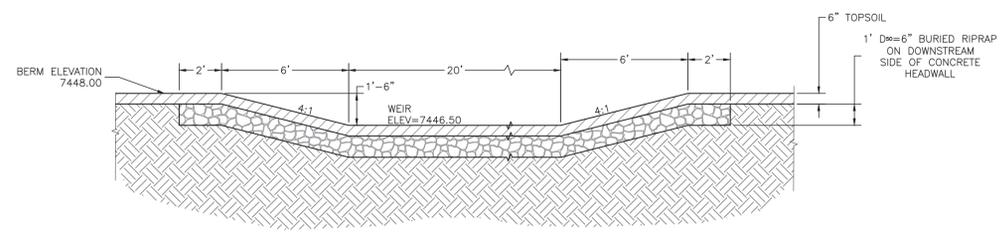
ADS SUBDRAIN OUTLET ASSEMBLY  
N.T.S.



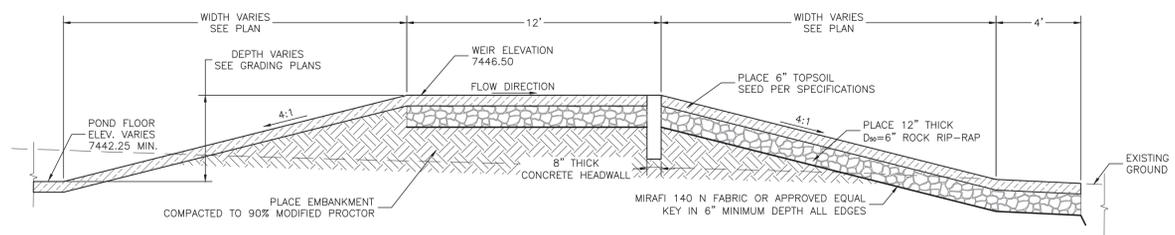
TYPICAL RIP RAP INSTALLATION  
N.T.S.



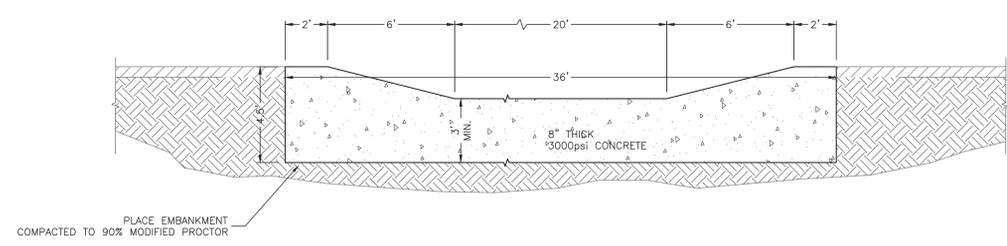
TYPICAL POND BERM SECTION  
N.T.S.



DETENTION BERM EMERGENCY WEIR DETAIL  
N.T.S.



TYPICAL POND BERM & OVERFLOW WEIR SECTION  
N.T.S.



DETENTION BERM EMERGENCY WEIR  
CONCRETE HEADWALL DETAIL  
N.T.S.

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FOX RUN SUBSTATION  
DRAINAGE DETAILS

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED

1100 W. 116th Ave.  
P.O. Box 33890  
Denver, Colorado 80233  
303-452-6111

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TRI-STATE Generation and Transmission Association, Inc.  
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P.O. Box 33890  
Denver, Colorado 80233  
303-452-6111

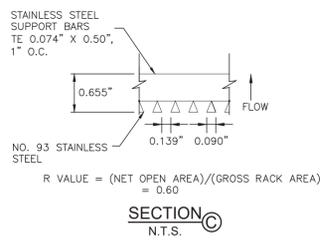
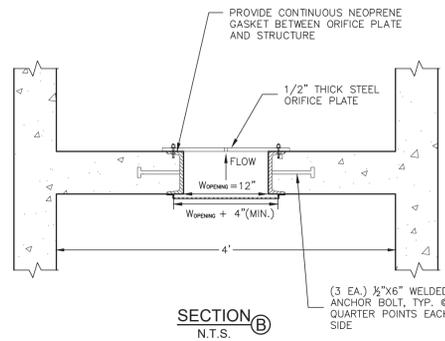
Colorado Licensed  
Kent G. Utley  
47786  
Professional Engineer

Dwn: TMC Date: 3/30/23  
Appd: Date:

S1172-A-01-014  
PCD File No. PPR2244

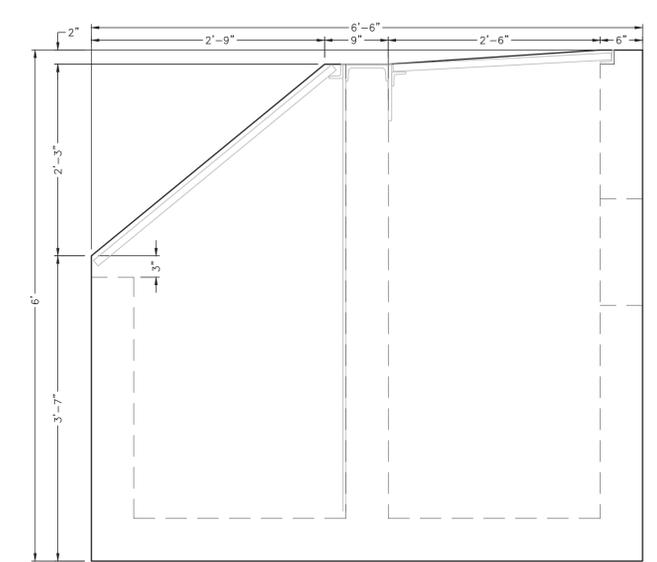
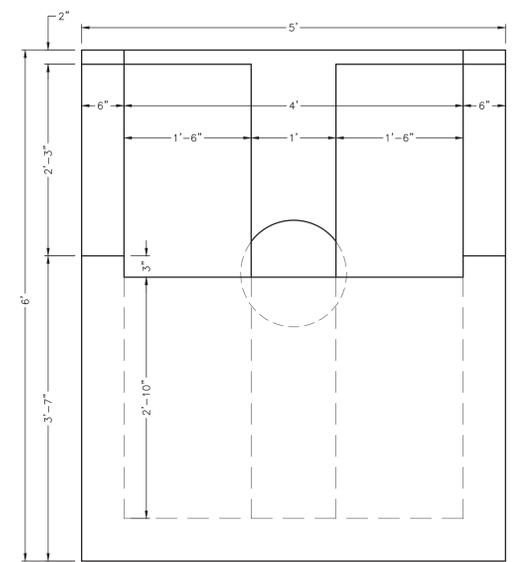
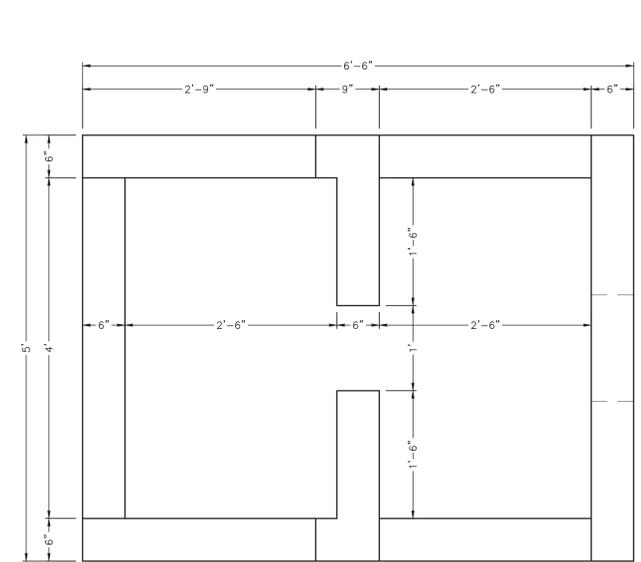
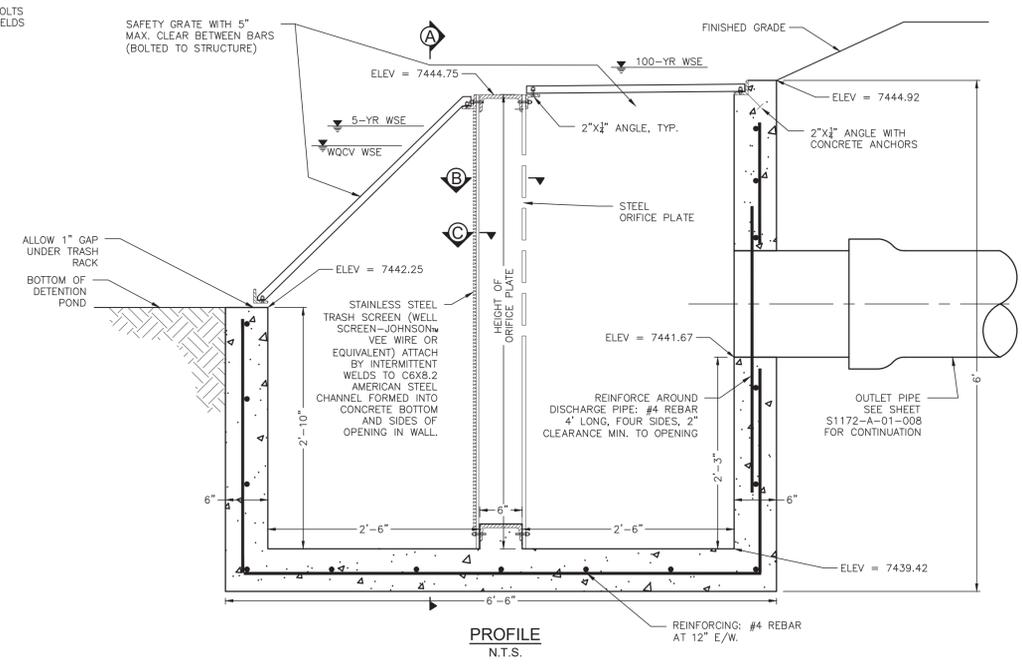
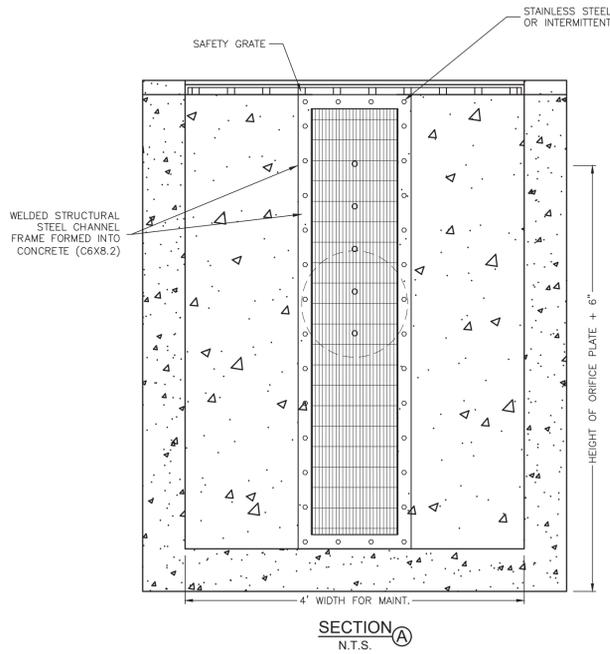
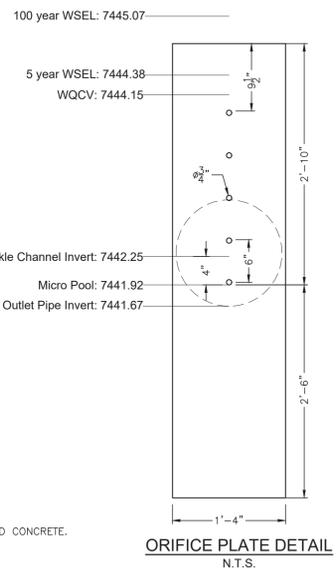


BID SET



- ORIFICE PLATE NOTES:**
1. PROVIDE CONTINUOUS NEOPRENE GASKET MATERIAL BETWEEN THE ORIFICE PLATE AND CONCRETE.
  2. BOLT PLATE TO CONCRETE 12" MAX. ON CENTER.
- WQCV TRASH RACKS:**
1. WELL-SCREEN TRASH RACKS SHALL BE STAINLESS STEEL AND SHALL BE ATTACHED BY INTERMITTENT WELDS ALONG THE EDGE OF THE MOUNTING FRAME.
- OVERFLOW SAFETY GRATES:**
1. ALL SAFETY GRATES SHALL BE MOUNTED USING STAINLESS STEEL HARDWARE AND PROVIDED WITH HINGED AND LOCKABLE OR BOLTABLE ACCESS PANELS.
  2. SAFETY GRATES SHALL BE STAINLESS STEEL, ALUMINUM, OR STEEL. STEEL GRATES SHALL BE HOT DIP GALVANIZED AND MAY BE HOT POWDER COATED AFTER GALVANIZING.

**ORIFICE PLATE AND TRASH RACK DETAILS AND NOTES**



**CONCRETE OUTLET STRUCTURE TOP VIEW**  
N.T.S.

**CONCRETE OUTLET STRUCTURE FRONT VIEW**  
N.T.S.

**CONCRETE OUTLET STRUCTURE SIDE VIEW**  
N.T.S.

Reference Drawings	Mgr.	Dwg. No.	M.F.

No.	Date	Dwn.	Appd.	Revision
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**FOX RUN SUBSTATION**  
**OUTLET STRUCTURE DETAILS**

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED  
1100 W. 116th Ave.  
P.O. Box 336905  
Denver, Colorado 80233  
303-452-6111

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**TRI-STATE**  
Generation and Transmission Association, Inc.  
A Touchstone Energy Cooperative  
1100 W. 116th Ave.  
P.O. Box 336905  
Denver, Colorado 80233  
303-452-6111

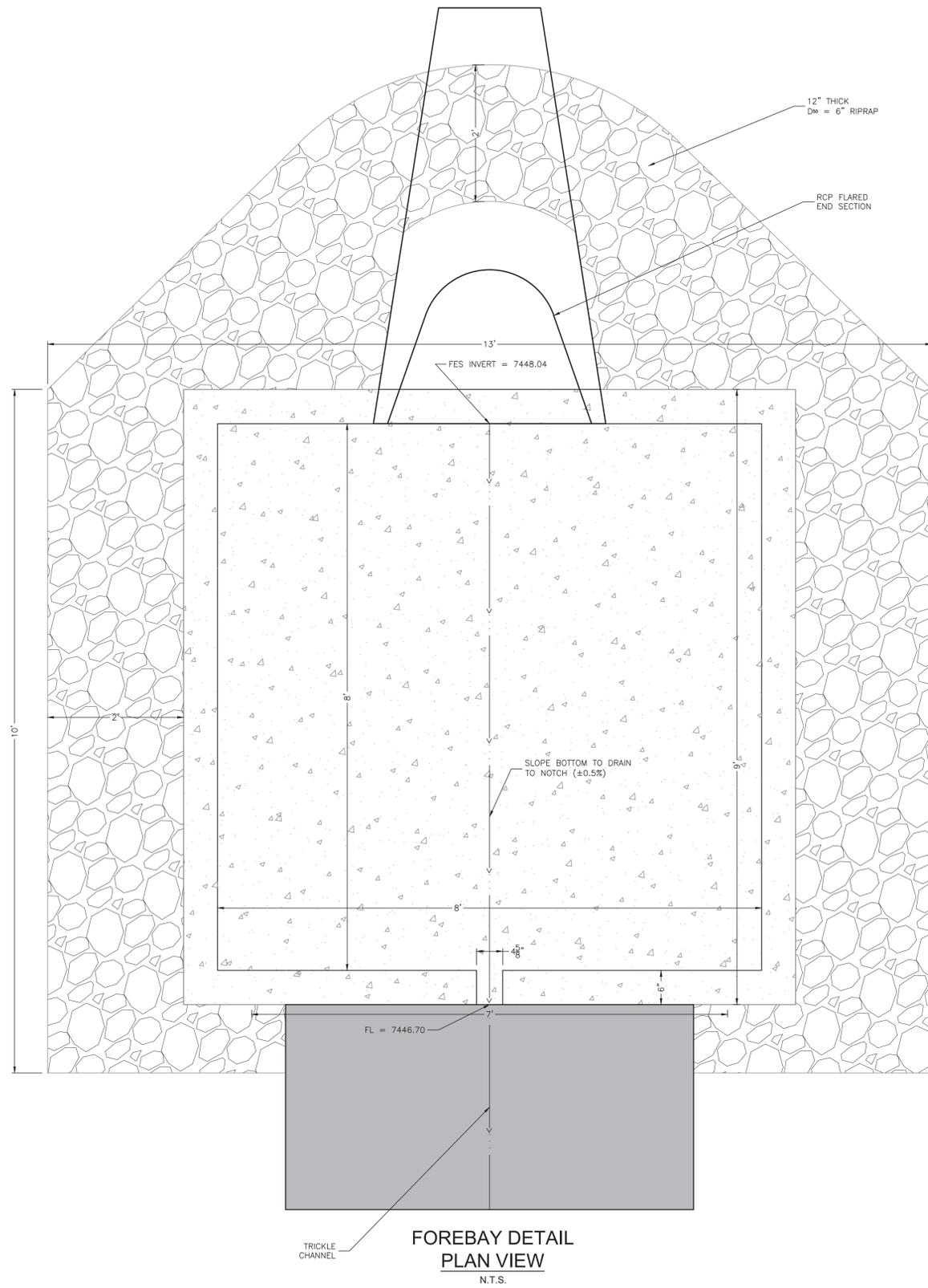
Colorado Licensed  
**Kent Utley**  
47786  
PROFESSIONAL ENGINEER

Dwn: TMC Date: 3/30/23  
Appd: Date:

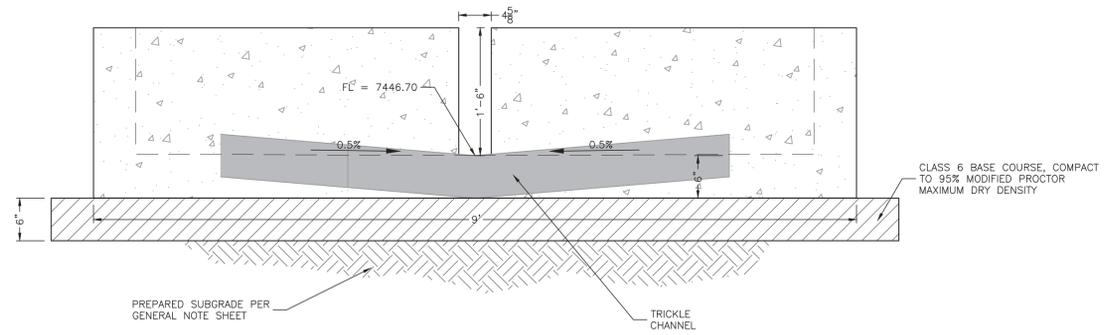
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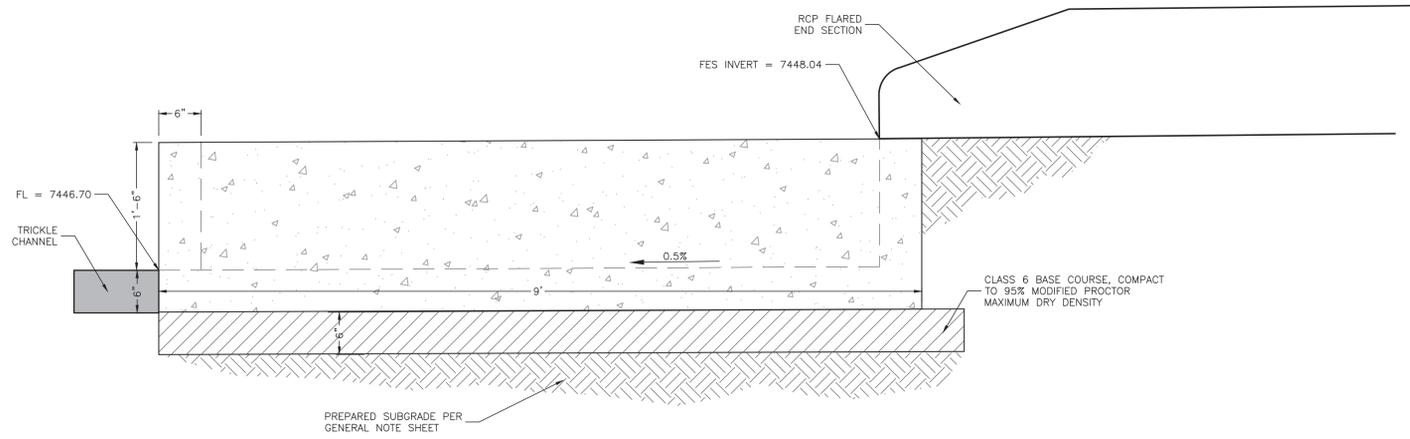
**BID SET**



**FOREBAY DETAIL  
PLAN VIEW**  
N.T.S.



**FOREBAY DETAIL  
SECTION VIEW**  
N.T.S.



**FOREBAY DETAIL  
PROFILE VIEW**  
N.T.S.

Dwg. No.	Mgr.	Reference Drawings

No.	Date	Dwn.	Appd.	Revision
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**FOX RUN SUBSTATION**  
**FOREBAY DETAILS**

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED

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Generation and Transmission Association, Inc.

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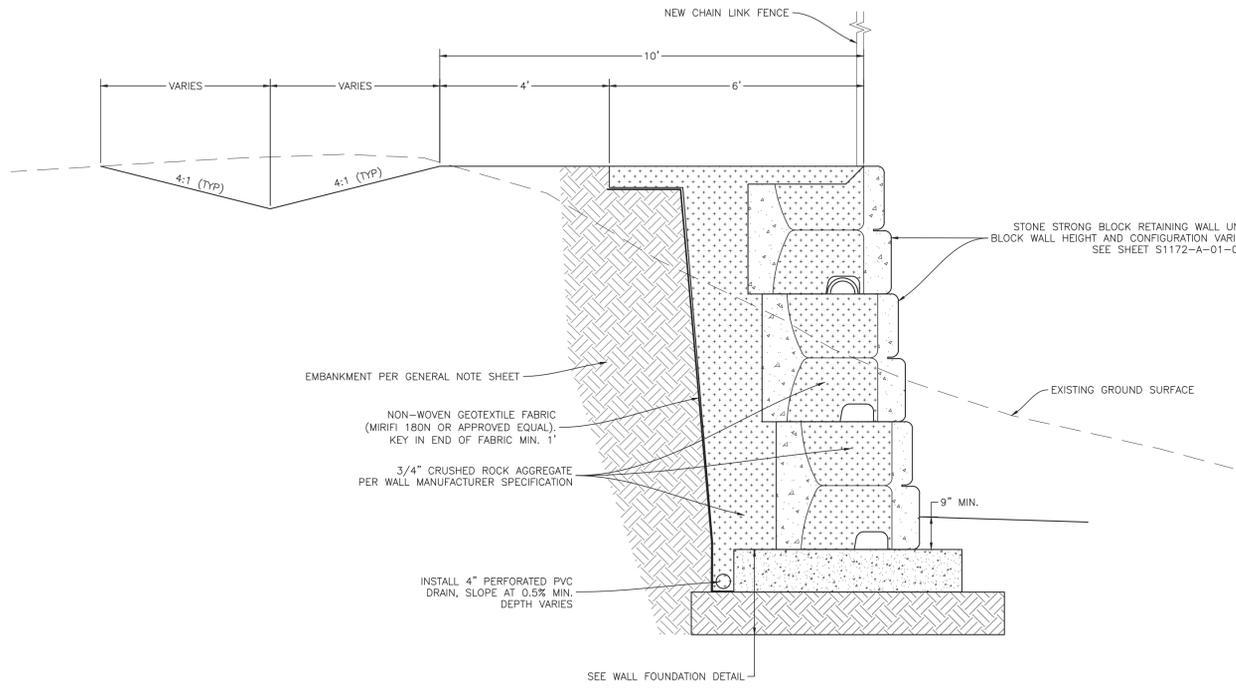
1100 W. 116th Ave.  
P.O. Box 338905  
Denver, Colorado 80233  
303-452-6111

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Appd: Date:

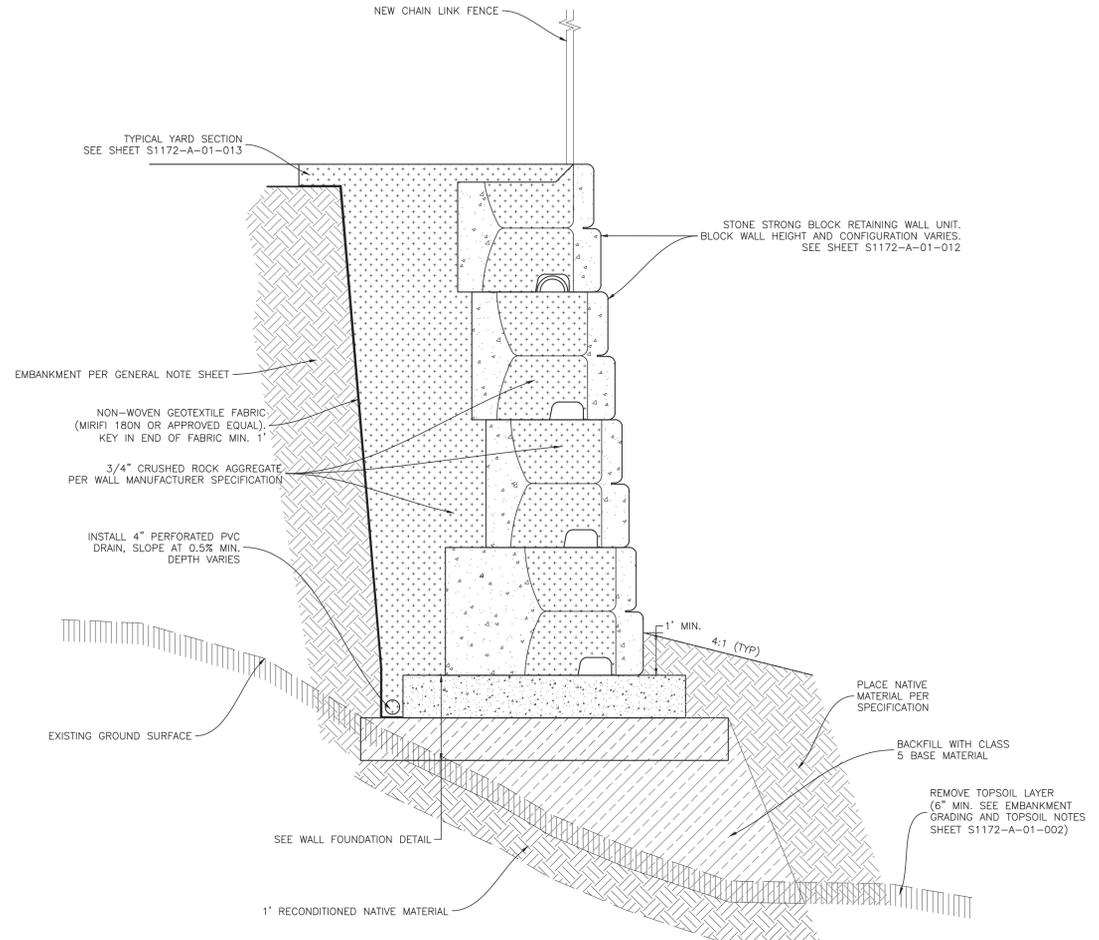
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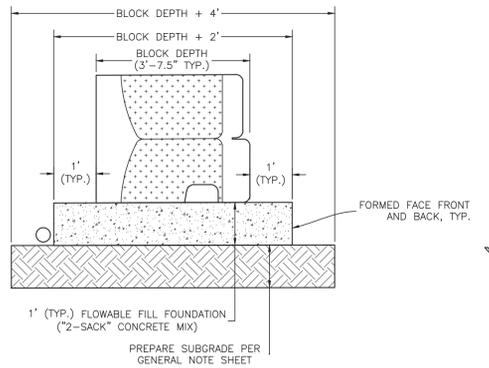
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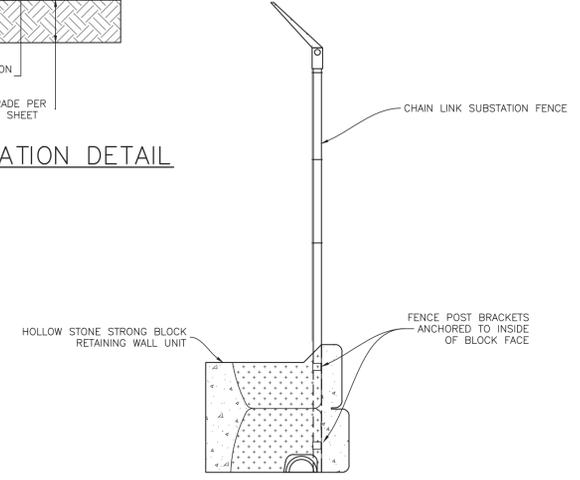
TYPICAL SECTION WEST RETAINING WALL  
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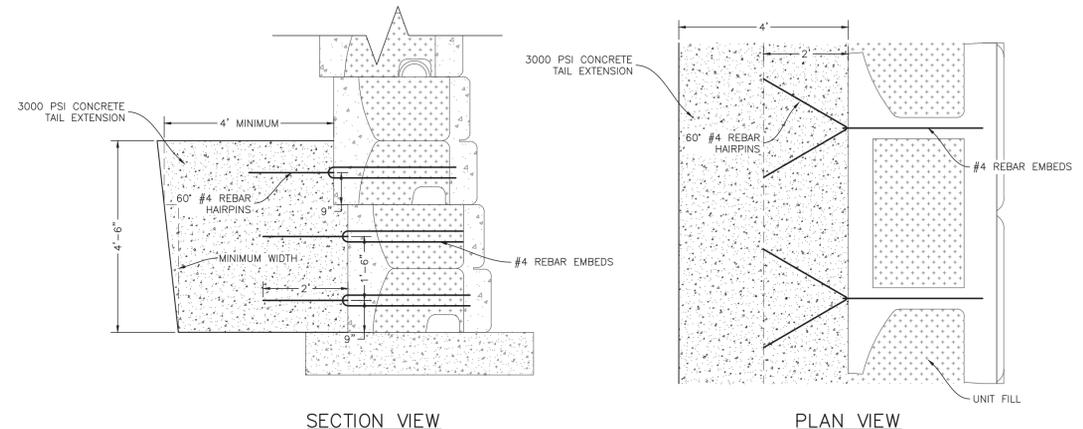
TYPICAL SECTION EAST RETAINING WALL  
N.T.S.



TYPICAL WALL FOUNDATION DETAIL  
N.T.S.



TYPICAL STONE STRONG FENCE MOUNTING  
N.T.S.



SECTION VIEW PLAN VIEW

CAST IN PLACE MASS EXTENDER DETAIL  
N.T.S.

Dwg. No.	Mgr.	Reference Drawings

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FOX RUN SUBSTATION  
RETAINING WALL DETAILS  
TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED  
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Generation and Transmission Association, Inc.  
A Touchstone Energy/Cooperative  
1100 W. 116th Ave.  
P.O. Box 33890  
Denver, Colorado 80233  
303-452-6111

DATE: 3/30/23  
APPD: *Kent Utley*  
PROFESSIONAL ENGINEER

S1172-A-01-017  
PCD File No. PPR2244



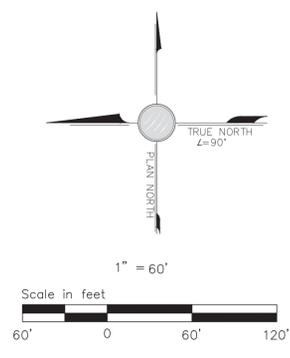
**BID SET**



- NOTES:
1. EXISTING VEGETATION CONSISTS OF NATIVE GRASSES AND WEEDS AT 30-60% GROUND COVER.
  2. NO BATCH PLANTS WILL BE UTILIZED ON SITE.
  3. NO PART OF THE SITE LIES WITHIN THE FEMA 100 YEAR FLOODPLAIN.
  4. OUTLET STRUCTURE MUST BE INSTALLED IN ORDER TO USE DETENTION POND AS A TEMPORARY SEDIMENT POND DURING CONSTRUCTION.

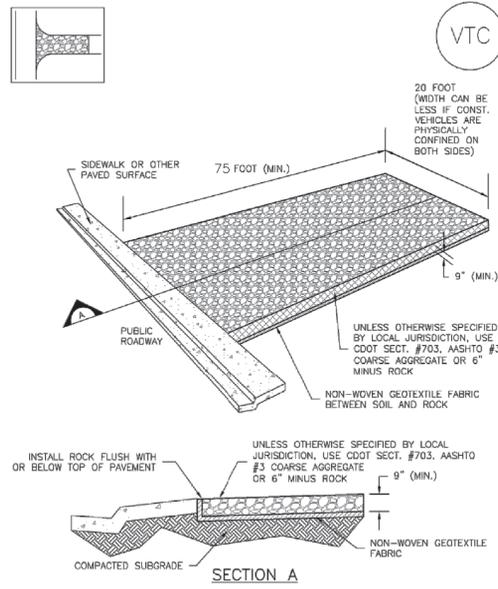
**LEGEND**

	PROPERTY BOUNDARY		EXISTING OVERHEAD POWER LINE
	LIMITS OF CONSTRUCTION / DISTURBANCE		EXISTING FENCE
	TOE OF FILL SLOPE		EXISTING UTILITY POLE
	TOP OF CUT SLOPE		EXISTING GUY ANCHOR
	DD DIVERSION DITCH (INITIAL)		EXISTING INDEX CONTOUR
	TB TOPSOIL BERM (INITIAL)		EXISTING INTERMEDIATE CONTOUR
	ST SEDIMENT TRAP (INITIAL/INTERIM)		PROPOSED SUBDRAIN LINE
	SW STRAW WATTLE (INITIAL/INTERIM)		PROPOSED FENCE
	CP CULVERT PROTECTION (INITIAL/INTERIM)		PROPOSED CULVERT
	VEG SEEDING (FINAL)		PROPOSED INDEX CONTOUR
	GRV GRAVEL (FINAL)		PROPOSED INTERMEDIATE CONTOUR
	TP TRACKING PAD (INITIAL/INTERIM)		PROPOSED DRAINAGE FLOWLINE
	CONC. WASH-OUT (WITH LOCATION SIGN)		PROPOSED DRAINAGE FLOW ARROW
	W/C PORTABLE TOILET		EXISTING DRAINAGE FLOW ARROW



<b>FOX RUN SUBSTATION</b>	
<b>EROSION CONTROL PLAN</b>	
TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED	
1100 W. 116th Ave. P.O. Box 33895 Denver, Colorado 80233 303-452-6111	
UPDATED BY: TCE/MENT 3/30/2023 9:58 AM Contract: \\\\DMS1A\Projects\Active Projects\2021\21038-1857-Monument Sub Survey & Civil\Facility\Civil\Sheets\S1172-A-01-SHEETS.dwg	
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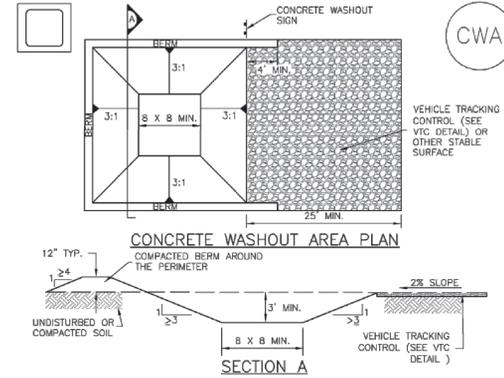
**Vehicle Tracking Control (VTC) SM-4**



VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 VTC-3

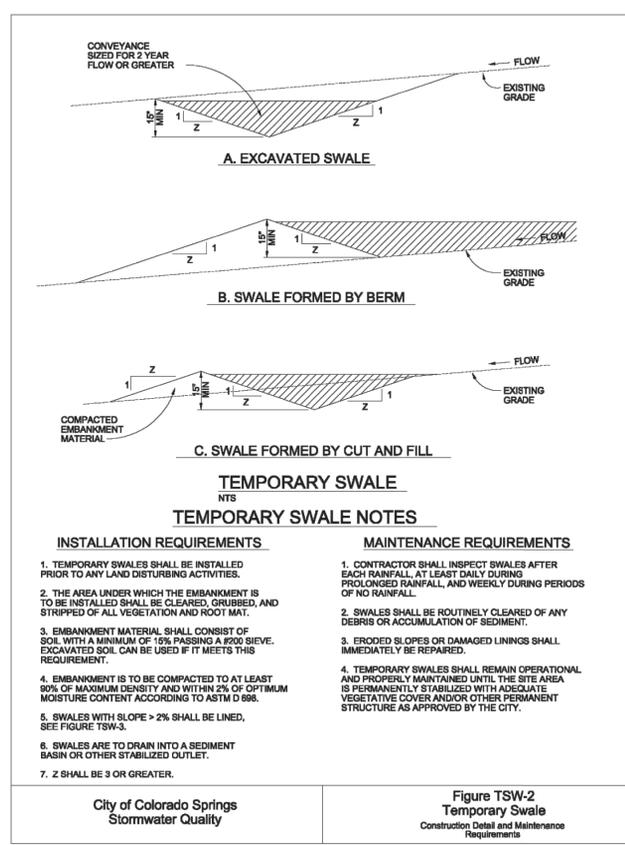
**Concrete Washout Area (CWA) MM-1**



CWA-1. CONCRETE WASHOUT AREA

- CWA INSTALLATION NOTES**
- SEE PLAN VIEW FOR -CWA INSTALLATION LOCATION.
  - DO NOT LOCATE AN UNLINED CWA WITHIN 1,000' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
  - THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
  - 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.
  - BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
  - VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
  - 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.
  - USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

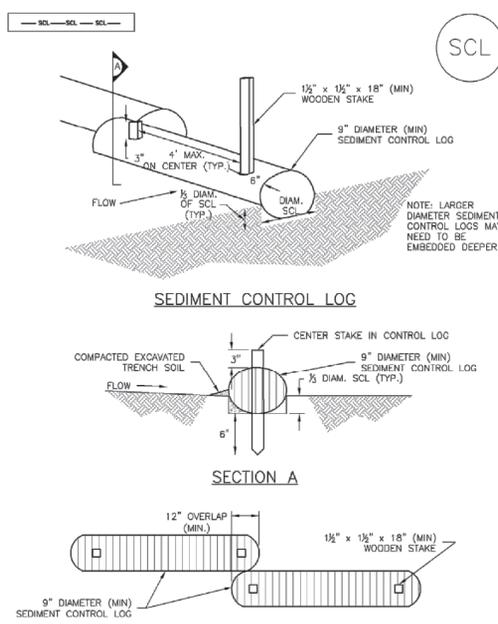
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3



City of Colorado Springs Stormwater Quality Figure TSW-2 Temporary Swale Construction Detail and Maintenance Requirements

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3

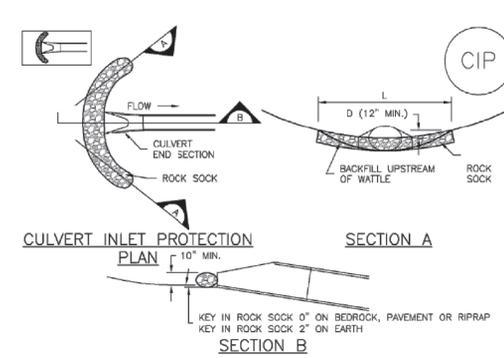
**Sediment Control Log (SCL) SC-2**



SCL-1. SEDIMENT CONTROL LOG

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SCL-3

**Inlet Protection (IP) SC-6**

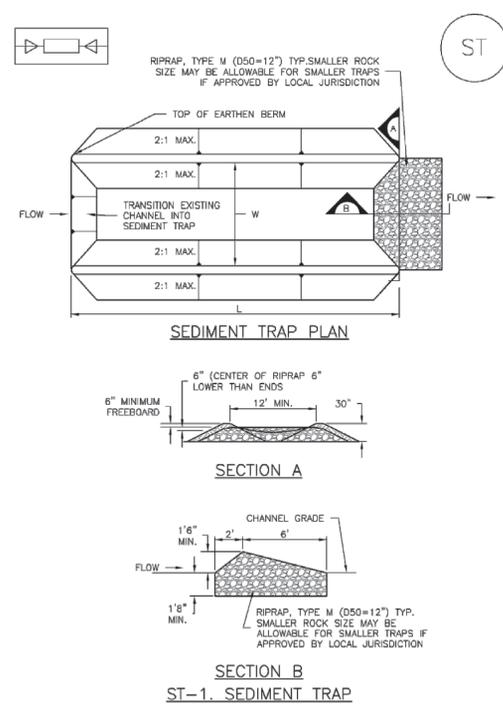


CIP-1. CULVERT INLET PROTECTION

- CULVERT INLET PROTECTION INSTALLATION NOTES**
- SEE PLAN VIEW FOR -LOCATION OF CULVERT INLET PROTECTION.
  - SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.
- CULVERT INLET PROTECTION MAINTENANCE NOTES**
- 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.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1/2 THE HEIGHT OF THE ROCK SOCK.
  - 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 LDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 IP-7

**SC-8 Sediment Trap (ST)**



ST-1. SEDIMENT TRAP

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 ST-2

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		Reference Drawings	
		Drawing Title	

**FOX RUN SUBSTATION**  
EROSION CONTROL DETAILS

TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INCORPORATED  
1100 W. 116th Ave.  
P.O. Box 338905  
Denver, Colorado 80233  
303-452-6111

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Colorado Licensed Professional Engineer  
Kent G. Utecht  
47786

Dwn: TMC Date: 3/30/23  
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S1172-A-01-019  
PCD File No. PPR2244