

STATE OF TENNESSEE

LOCATION MAP

N.T.S.

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SITE CIVIL PLANS

SR MARYVILLE PV

1.25 MWac

3121 MINT ROAD
MARYVILLE, BLOUNT COUNTY
TENNESSEE, 37803
35.688236°, -84.018070°

PREPARED FOR:
SR EPC, LLC
222 SECOND AVE. S, SUITE 1900
NASHVILLE, TN 37201

PREPARED BY:



3102 West End Avenue
Suite 400
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CONSULTANT TEAM LIST

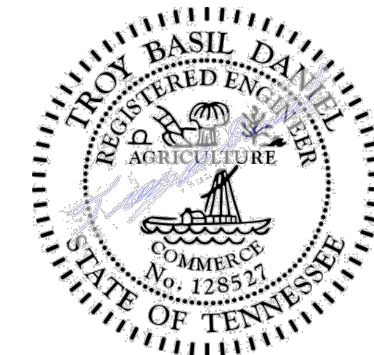
BL COMPANIES - CIVIL ENGINEER (ATTN: JIM JONES ~ JJONES@BLCOMPANIES.COM ~ (234) 294-6345)
BL COMPANIES - ELECTRICAL ENGINEER (ATTN: BRIAN POETL ~ BPOETL@BLCOMPANIES.COM ~ (203) 608-2487)
BL COMPANIES - STRUCTURAL ENGINEER - PILE DESIGN (ATTN: CHRIS ALBINO ~ CALBINO@BLCOMPANIES.COM ~ (203) 608-2509)
GPM - SCADA SUBCONSULTANT (ATTN: PETER KOBLISKA ~ (262) 844-8184)
SURVEY - PATTERSON & DEWAR (PROVIDED BY CLIENT - (770) 453-1410)
GEOTECHNICAL - SOME, INC - (PROVIDED BY CLIENT (800) 849-2517)
ENVIR., WETLANDS - HDR (PROVIDED BY CLIENT - (629) 228-7500)

ENGINEER'S CERTIFICATION

I, TROY B. DANIEL, P.E., A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TENNESSEE, HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THIS PLAN IS ACCURATE AND CORRECT AS INDICATED.

Troy B. Daniel

TROY B. DANIEL



CERTIFICATE OF EQUITABLE OWNERSHIP, OFFER OF DEDICATION, AND ACKNOWLEDGEMENT OF PLAN

STATE OF TENNESSEE
COUNTY OF BLOUNT

I, _____, BEING DULY SWORN ACCORDING TO LAW DEPOSE AND SAY THAT I AM THE SOLE OWNER OF THIS PROPERTY IN PEACEFUL POSSESSION OF THE SAME AND THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE THEREOF AND ALSO I HEREBY DEDICATE ALL PUBLIC IMPROVEMENTS SHOWN ON THIS PLAN FOR THE PUBLIC USE AND WE HEREBY AGREE TO EMPLOY A PROFESSIONAL LAND SURVEYOR TO PLACE ALL PROPERTY CORNERS AND MONUMENTS IN THE LOCATIONS SHOWN ON THESE PLANS IN ACCORDANCE WITH THE MINIMUM STANDARDS OF THE PROFESSIONAL LAND SURVEYORS MANUAL OF PRACTICE IN THE STATE OF TENNESSEE.

IN WITNESS WHEREOF, I HEREUNTO
SET MY HAND AND OFFICIAL SEAL

EQUITABLE OWNER

NOTARY

MY COMMISSION EXPIRES _____, 20____.

CERTIFICATE OF OWNERSHIP AND ACKNOWLEDGEMENT OF PLAN

TENNESSEE
COUNTY OF BLOUNT

I, _____, BEING DULY SWORN ACCORDING TO LAW DEPOSE AND SAY THAT I AM THE SOLE OWNER OF THIS PROPERTY IN PEACEFUL POSSESSION OF THE SAME AND THAT THERE ARE NO SUITS PENDING AFFECTING THE TITLE THEREOF AND ALSO I HEREBY DEDICATE ALL PUBLIC IMPROVEMENTS SHOWN ON THIS PLAN FOR THE PUBLIC USE AND WE HEREBY AGREE TO EMPLOY A PROFESSIONAL LAND SURVEYOR TO PLACE ALL PROPERTY CORNERS AND MONUMENTS IN THE LOCATIONS SHOWN ON THESE PLANS IN ACCORDANCE WITH THE MINIMUM STANDARDS OF THE PROFESSIONAL LAND SURVEYORS MANUAL OF PRACTICE IN THE STATE OF TENNESSEE.

IN WITNESS WHEREOF, I HEREUNTO
SET MY HAND AND OFFICIAL SEAL

OWNER

NOTARY

MY COMMISSION EXPIRES _____, 20____.

DATES

ISSUE DATE: MARCH 31ST, 2025

REVISIONS:

G001-TITLE SHEET

RECORDER OF DEEDS CERTIFICATE

PLAN REGISTERED IN THE OFFICE FOR THE REGISTER OF DEEDS OF BLOUNT COUNTY, TENNESSEE, AS INSTRUMENT NO. _____ ON THE _____ DAY OF _____, 20____.

REGISTER OF DEEDS



SITE WORK GENERAL NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION.
2. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT SPECIFICATION MANUAL; SR EPC CORPORATION STANDARDS, COUNTY STANDARDS AND SPECIFICATIONS, TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, 2010 ADA STANDARDS, AND STATE BUILDING CODE IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
3. REFER TO OTHER PLANS BY OTHER DISCIPLINES, DETAILS AND PROJECT MANUAL FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE AND BUILDING CONDITIONS IN THE FIELD AND CONTACT THE ARCHITECT IF THERE ARE ANY QUESTIONS OR CONCERNS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS, SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE OWNER'S CONSTRUCTION MANAGER PRIOR TO BIDDING.
4. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCURED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
5. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOSTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORD DRAWINGS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES AND STORMWATER SYSTEM) TO THE OWNER AT THE END OF CONSTRUCTION.
7. THE ARCHITECT OR ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
8. THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION, TRENCHING, AND TRENCH PROTECTION REQUIREMENTS.
9. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL OR COUNTY OR STATE RECORD MAPS AND/OR PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT TENNESSEB811 72 HOURS BEFORE COMMENCEMENT OF WORK AT (800) 351-1111 OR AT 811 AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROPOSED UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.
10. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN OVER SCALED DIMENSIONS.
11. SHOULD CONFLICTING INFORMATION BE FOUND WITHIN THE CONTRACT DOCUMENTS, IT IS INCUMBENT UPON THE CONTRACTOR TO REQUEST CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK. FOR BIDDING PURPOSES, THE CONTRACTOR SHALL CARRY THE COST OF THE HIGHER QUALITY/QUANTITY OF WORK UNTIL SUCH TIME THAT A CLARIFICATION IS RENDERED.
12. ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN COMPLETE DRAWING PLAN SETS FOR BIDDING AND CONSTRUCTION. PLAN SETS OR PLAN SET ELECTRONIC POSTINGS SHALL NOT BE DISASSEMBLED INTO PARTIAL PLAN SETS FOR USE BY CONTRACTORS AND SUBCONTRACTORS OF INDIVIDUAL TRACTS. IT SHALL BE THE CONTRACTOR'S AND SUBCONTRACTOR'S RESPONSIBILITY TO OBTAIN COMPLETE PLAN SETS OR COMPLETE PLAN SET ELECTRONIC POSTINGS FOR USE IN BIDDING AND CONSTRUCTION.
13. ALL NOTES AND DIMENSIONS DESIGNATED "TYPICAL" APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.
14. CONTRACTOR(S) TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.
15. BL COMPANIES WILL PREPARE FINAL CONSTRUCTION DOCUMENTS SUITABLE FOR BIDDING AND CONSTRUCTION. PROGRESS SETS OF THESE DOCUMENTS ARE NOT SUITABLE FOR THESE PURPOSES. IF THE ELECTRIC OR ENTER INTO CONSTRUCTION CONTRACT UTILIZING CONSTRUCTION DOCUMENTS THAT ARE NOT YET FINAL, CONSULTANT SHALL NOT BE RESPONSIBLE FOR ANY COSTS OR DELAY ARISING AS A RESULT.
16. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.
17. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT AND OBTAIN FROM COUNTY SOURCES ALL CONSTRUCTION PERMITS, INCLUDING ANY STATE DOT PERMITS, SEWER AND WATER CONNECTION PERMITS, AND ROADWAY CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
18. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS AND MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND CIVIL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW 3 WORKING DAYS FOR REVIEW OF RFS AND SUBMITTALS AND 5 WORKING DAYS FOR REVIEW OF MORE DETAILED SHOP DRAWINGS.
19. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE SWPPP PLAN.
20. OWNER SHOULD BE REFERENCE FOR APPROVAL OF ANY SIGNIFICANT CHANGES IN PRODUCT/MATERIAL SELECTION, DESIGN, OR DISCREPANCIES BETWEEN PLAN AND FIELD. IN ADDITION TO EOR (ENGINEER OF RECORD) WITH CONTRACTOR'S RESPONSIBILITY TO COORDINATE IN A TIMELY MANNER AS TO NOT IMPACT SCHEDULE, TOPSOIL TO BE STOCKPILED AND RE-SPREAD ON SITE. CONTRACTOR TO NOTIFY AND COORDINATE ANY POTENTIAL UTILITY IMPACTS PRIOR TO BEGINNING WORK. BMPs TO BE INSPECTED FOLLOWING SIGNIFICANT RAIN EVENTS AND REPAIRED RIGHT AWAY. REPEATED BMP FAILURES TO BE REVIEWED BY EOR TO DETERMINE IF DESIGN CHANGES OR INSTALLATION IMPROVEMENTS ARE NECESSARY TO AVOID SEDIMENT RELEASES.
21. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE CIVIL ENGINEER AND NOTIFY THE OWNER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
22. ALL SITE DIMENSIONS ARE REFERENCED TO THE EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED.
23. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TEMPORARY WALKWAYS, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED OR AS ORDERED BY THE ENGINEER OR AS REQUIRED BY THE LOCAL GOVERNING AUTHORITIES OR AS REQUIRED BY PERMIT REGULATIONS OR AS REQUIRED BY THE OWNER. CONTRACTOR SHALL MAINTAIN ALL TRAFFIC LANES AND PEDESTRIAN WALKWAYS FOR USE AT ALL TIMES UNLESS WRITTEN APPROVAL FROM THE APPROPRIATE GOVERNING AGENCY IS GRANTED.
24. TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE STATE DOT STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. SIGNS SHALL BE INSTALLED PLUMB WITH THE EDGE OF THE SIGN 2' OFF THE FACE OF THE CURB, AND WITH 7' VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.
25. THE CONTRACT LIMIT IS THE PROPERTY LINE OR LIMIT OF DISTURBANCE, WHICHEVER IS GREATER, UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
26. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS, SWALE, PAVEMENT MARKINGS, OR SIGNAGE DISTURBED DURING DEMOLITION AND/OR CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE CIVIL ENGINEER, AND TO THE SATISFACTION OF THE OWNER AND COUNTY.
27. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON DRAWING TITLED "ALTA/NSPS LAND TITLE SURVEY FOR: SILICON RANCH CORPORATION AND FIDELITY NATIONAL TITLE INSURANCE COMPANY" SCALE 1"=100', DATED 10/02/2024, BY PATTERSON & DEWAR.
28. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, CIVIL ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.
29. NO PORTION OF THE PROJECT PARCEL IS LOCATED WITHIN A FEMA ZONE X AREA OF MINIMAL FLOOD HAZARD.
30. FIRE LANES SHALL BE ESTABLISHED AND PROPERLY DESIGNATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE DISTRICT FIRE MARSHAL.
31. THE CONTRACTOR SHALL REMOVE CONFLICTING PAVEMENT MARKINGS IN THE ROADWAY BY METHOD APPROVED BY THE AUTHORITY HAVING JURISDICTION OR DOT AS APPLICABLE FOR THE LOCATION OF THE WORK.
32. CONSTRUCTION OCCURRING ON THIS SITE SHALL COMPLY WITH NFPA 241 STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS, AND CHAPTER 16 OF NFPA 1 UNIFORM FIRE CODE.
33. SEDIMENT AND EROSION CONTROLS AS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN AND/OR DEMOLITION PLAN SHALL BE INSTALLED BY THE DEMOLITION CONTRACTOR PRIOR TO START OF DEMOLITION AND CLEARING AND GRUBBING OPERATIONS.
34. THE CONTRACTOR SHALL SECURE ALL PERMITS FOR HIS DEMOLITION AND DISPOSAL OF HIS DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED. BUILDING DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITS AND DISPOSAL OF ALL BUILDING DEMOLITION DEBRIS IN AN APPROVED OFF-SITE LANDFILL.
35. ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL ABATEMENT CONTRACTOR.
36. THE CONTRACTOR SHALL PREPARE ALL MANIFEST DOCUMENTS AS REQUIRED PRIOR TO COMMENCEMENT OF DEMOLITION.
37. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS AND PROPERTY CORNERS DURING DEMOLITION AND CONSTRUCTION ACTIVITIES. ANY CONTRACTOR DISTURBED PINS, MONUMENTS, AND/OR PROPERTY CORNERS, ETC. SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
38. THE DEMOLITION CONTRACTOR SHALL STABILIZE THE SITE AND KEEP EROSION CONTROL MEASURES IN PLACE UNTIL THE COMPLETION OF HIS WORK OR UNTIL THE COMMENCEMENT OF WORK BY THE SITE CONTRACTOR, WHICHEVER OCCURS FIRST, AS REQUIRED OR DEEMED NECESSARY BY THE ENGINEER OR OWNER'S REPRESENTATIVE. THE SITE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE MAINTENANCE OF EXISTING EROSION AND SEDIMENTATION CONTROLS AND FOR INSTALLATION OF ANY NEW SEDIMENT AND EROSION CONTROLS AS PER THE SEDIMENT AND EROSION CONTROL PLAN, AT THAT TIME.
39. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT.
40. THE CONTRACTOR IS RESPONSIBLE FOR SECURING A DEMOLITION PERMIT FROM BLOUNT COUNTY AND MUST FURNISH THE REQUIRED APPLICATION MATERIAL AND PAY ALL FEES.
41. BACK FILL DEPRESSIONS, FOUNDATION HOLES AND REMOVED DRIVEWAY AREAS IN LOCATIONS NOT SUBJECT TO FURTHER EXCAVATION WITH SOIL MATERIAL APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER AND COMPACT, FERTILIZE, SEED AND MULCH DISTURBED AREAS NOT SUBJECT TO FURTHER SITE CONSTRUCTION. DEMOLISHED BUILDING FOUNDATION AREA AND BASEMENT IF PRESENT TO BE BACKFILLED WITH GRAVEL FILL OR MATERIAL SPECIFIED IN THE PROJECT GEOTECHNICAL REPORT IN LEFT THICKNESS SPECIFIED IN THE GEOTECHNICAL REPORT. COMPACT TO 95% MAX. DRY DENSITY PER ASTM D1557 AT MOISTURE CONTENT SPECIFIED IN GEOTECHNICAL REPORT AND EARTHWORK SPECIFICATION. EMPLOY WATERING EQUIPMENT FOR DUST CONTROL.
42. THE CONTRACTOR SHALL REPAIR PAVEMENTS BY INSTALLING TEMPORARY AND PERMANENT PAVEMENTS IN PUBLIC RIGHTS OF WAYS AS REQUIRED BY LOCAL GOVERNING AUTHORITIES AND THE STATE AND PER PERMIT REQUIREMENTS DUE TO DEMOLITION AND PIPE REMOVAL ACTIVITIES.
43. NO WORK ON THIS SITE SHALL BE INITIATED BY THE CONTRACTOR UNTIL A PRE-CONSTRUCTION MEETING WITH OWNER AND THE CIVIL ENGINEER IS PERFORMED. THE CONTRACTOR AVOIDS THE RELEASE OF ANY SITE INFORMATION AVAILABLE SUCH AS GEOTECHNICAL AND ENVIRONMENTAL REPORTS. THE CONTRACTOR SHALL HAVE TENNESSEB811 MARK OUTS OF EXISTING UTILITIES COMPLETED PRIOR TO MEETING.
44. THE CONTRACTOR SHALL NOT COMMENCE DEMOLITION UNTIL AUTHORIZED TO DO SO BY THE OWNER.
45. NO SALVAGE SHALL BE PERMITTED UNLESS PAID TO THE OWNER AS A CREDIT.
46. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS. REFER TO SEDIMENT AND EROSION CONTROL PLAN FOR LIMIT OF DISTURBANCE AND EROSION CONTROL NOTES.
47. ANY DISTURBED TOPSOIL WITHIN THE LIMITS OF DISTURBANCE SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.

OPERATION REQUIREMENTS

- CLEARING AND GRUBBING OPERATIONS
1. ALL SEDIMENT AND EROSION CONTROL MEASURES, INCLUDING THE CONSTRUCTION OF TEMPORARY SEDIMENTATION BASINS AND STONE CONSTRUCTION ERT ANTI-TRACKING PADS, WILL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.
2. FOLLOWING INSTALLATION OF ALL SEDIMENT AND EROSION CONTROL MEASURES, THE CONTRACTOR SHALL NOT PROCEED WITH GRADING, FILLING OR OTHER CONSTRUCTION OPERATIONS UNTIL THE OWNER/REPRESENTATIVE HAS INSPECTED AND APPROVED ALL INSTALLATIONS.
3. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CLEARING AND GRUBBING OPERATIONS SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR SEDIMENT AND EROSION CONTROL DEVICES.
4. FOLLOWING THE COMPLETION OF CLEARING AND GRUBBING OPERATIONS, ALL AREAS SHALL BE STABILIZED WITH TOPSOIL AND SEEDING (FOR PANEL ARRAY AREA) OR CRUSHED STONE (FOR ROADS AND PADS ONLY) AS SOON AS PRACTICAL.
- ROUGH GRADING OPERATIONS
1. DURING THE REMOVAL AND/OR PLACEMENT OF EARTH AS INDICATED ON THE GRADING PLAN, TOPSOIL SHALL BE STRIPPED AND APPROPRIATELY STOCKPILED FOR REUSE.
2. ALL STOCKPILED TOPSOIL SHALL BE SEED, MULCHED WITH HAY, AND ENCLOSED BY A SILTATION FENCE.
- FILLING OPERATIONS
1. PRIOR TO FILLING, ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PROPERLY IMPLEMENTED, MAINTAINED AND FULLY INSTALLED, AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THIS PLAN.
2. ALL FILL MATERIAL (NATIVE OR IMPORTED) SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE, SHALL BE PLACED IN LIFT THICKNESSES NOT GREATER THAN 8" PER THE GEOTECHNICAL REPORT. FILL MATERIAL WITH MORE THAN 5% FINES THAT DOES NOT PASS THROUGH A #200 SIEVE MAY NOT BE UTILIZED AS FILL. LIFTS SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT. FOR GRADING WITHIN THE ARRAY AREAS, OPEN SPACES, AND BASINS, 90% COMPACTION (PER ASTM D698) SHALL APPLY.
3. AS GENERAL GRADING OPERATIONS PROGRESS, ANY TEMPORARY DIVERSION DITCHES SHALL BE RAISED OR LOWERED, AS NECESSARY, TO DIVERT SURFACE RUNOFF TO THE SEDIMENT BASINS OR SEDIMENT TRAPS.
- PLACEMENT OF DRAINAGE STRUCTURES, UTILITIES, AND BUILDING CONSTRUCTION OPERATIONS.
1. SILT FENCES SHALL BE INSTALLED AT THE DOWNHILL SIDES OF BUILDING EXCAVATIONS, MUD PUMP DISCHARGES, AND UTILITY TRENCH MATERIAL STOCKPILES. HAY BALES/STRAW BALES MAY BE USED IF SHOWN ON THE SEDIMENT AND EROSION CONTROL PLANS OR IF DIRECTED BY THE CIVIL ENGINEER.
- FINAL GRADING AND PAVING OPERATIONS
1. ALL INLET AND OUTLET PROTECTION SHALL BE PLACED AND MAINTAINED AS SHOWN ON SEDIMENT AND EROSION CONTROL PLANS AND DETAILS, AND AS DESCRIBED IN SPECIFICATIONS AND AS DESCRIBED HEREIN.
2. NO CUT OR FILL SLOPES SHALL EXCEED 4:1 UNLESS SPECIFICALLY NOTED ON PLANS, EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL, BLANKETS, OR JUTE MESH AND VEGETATION. SLOPES STEEPER THAN 4:1 TO REQUIRE STABILIZATION (MATTING OR OTHER). ALL SLOPES SHALL BE SEED, AND ANY ROAD OR DRIVEWAY SHOULDER AND BANKS SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.
3. PAVEMENT SUB-BASE AND BASE COURSES SHALL BE INSTALLED OVER AREAS TO BE PAVED AS SOON AS FINAL SUB-GRADES ARE ESTABLISHED AND UNDERGROUND UTILITIES AND STORM DRAINAGE SYSTEMS HAVE BEEN INSTALLED.
4. AFTER CONSTRUCTION OF PAVEMENT, TOPSOIL, FINAL SEED, MULCH AND LANDSCAPING, REMOVE ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ONLY AFTER ALL AREAS HAVE BEEN PAVED AND/OR GRASS HAS BEEN WELL ESTABLISHED AND THE SITE IS STABLE AND HAS BEEN INSPECTED AND APPROVED BY THE COUNTY SOILS CONSERVATION DISTRICT.
- MAINTENANCE OPERATIONS
1. PERMANENT ACCESS ROADS SHALL BE MAINTAINED DURING CONSTRUCTION AND THROUGHOUT THE LIFE OF THE FACILITY.
2. THE ACCESS ROADS HAVE BEEN DESIGNED TO ACCOMMODATE LOADS DURING CONSTRUCTION AND LIGHT DUTY TRUCKS FOR LOW VOLUME USE IN NORMAL OPERATION CONDITIONS. THE ROAD IS NOT INTENDED FOR ALL WEATHER USE OR HIGH VOLUME HEAVY DUTY CONSTRUCTION LOADS. ANY DAMAGE TO ACCESS ROADS OCCURRING AS A RESULT OF CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

1. "GEOTECHNICAL REPORT" REFERS TO REPORT OF GEOTECHNICAL EXPLORATION AND PILE LOAD TESTING BY S&ME, DATED MAY 11TH, 2023.
2. "KARST REPORT" REFERS TO SR MARYVILLE II KARST STUDY BY TERRACON, DATED JUNE 21, 2023.
3. FILL PLACEMENT AND COMPACTION REQUIREMENTS
- A. THE CONTRACTOR SHALL COMPACT THE PIPE BACKFILL IN MAXIMUM 4"-8" LAYERS PER TO THE GEOTECHNICAL REPORT. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.
- B. MINIMUM COMPACTION REQUIREMENTS
- a. $\geq 95\%$ OF MAXIMUM DENSITY IN THE SUBSTATION AND BELOW EQUIPMENT SLABS.
- b. $\geq 90\%$ OF MAXIMUM DRY DENSITY IN THE ARRAY WHEN FILL IS ADDED.
- c. $\geq 95\%$ OF MAXIMUM DRY DENSITY FOR ACCESS ROAD SUBGRADES (INCLUDING UTILITY TRENCH CROSSINGS).
- d. $\geq 95\%$ OF MAXIMUM DRY DENSITY FOR THE ACCESS ROAD AGGREGATE BASE LAYER.
- e. $\geq 85\%$ OF THE MAXIMUM DRY DENSITY OR AS REQUIRED BY THE ELECTRICAL ENGINEER FOR UTILITY TRENCHES IN NON-STRUCTURAL AREAS.
4. ALL FILL MATERIAL, ADJACENT TO ANY WETLAND AREAS, IF APPLICABLE TO THIS PROJECT, SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE, SHALL BE PLACED IN LIFTS OF 4" - 8" PER THE GEOTECHNICAL REPORT. FILL MATERIAL WITH MORE THAN 5% FINES THAT DOES NOT PASS THROUGH A #200 SIEVE MAY NOT BE UTILIZED AS FILL. LIFTS SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT. FOR GRADING WITHIN THE ARRAY AREAS, OPEN SPACES, AND BASINS, 90% COMPACTION (PER ASTM D698) SHALL APPLY.
5. CONSTRUCTION OBSERVATION AND TESTING FREQUENCIES PER THE GEOTECHNICAL REPORT (ASTM D6938):
- A. EQUIPMENT SLABS
- a. A MINIMUM OF 1 TEST PER FOUNDATION PER VERTICAL FOOT OF FILL PLACED.
- B. SOLAR ARRAYS
- a. EACH VERTICAL FOOT OF FILL PLACED SHOULD BE TESTED AT A FREQUENCY OF 1 TEST PER EVERY 20,000 SF OF FILL PLACED, OR A MINIMUM OF 1 TEST PER SOLAR ARRAY BLOCK QUADRANT PER VERTICAL FOOT OF FILL PLACED.
- C. ACCESS DRIVE BASE AND SUBGRADE
- a. A MINIMUM OF 1 TEST PER 500 LINEAR FEET FOR EACH VERTICAL LIFT OF BASE, SUBGRADE, OR STRUCTURAL FILL.
- D. UTILITY TRENCH BACKFILL
- a. EACH VERTICAL FOOT OF FILL PLACED SHOULD BE TESTED AT AN INTERVAL OF EVERY 1,000 LINEAR FEET OF FILL PLACED FOR LOAD BEARING AREAS, AND EVERY 5,000 LINEAR FEET FOR NON-LOAD BEARING AREAS.
6. ACCESS ROAD SECTIONS
- A. BASED ON S&ME'S REPORT, THE STABILITY OF THE SUBGRADE SOILS IN THE AREA OF THE EQUIPMENT PADS AND ACCESS ROADS SHOULD BE EVALUATED BY AN EXPERIENCED GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE. THIS SHOULD INCLUDE OBSERVING PROOFROLLING OF THE SUBGRADE WITH A LOADED TANDER-AXLE DUMP TRUCK.
- B. TYPICAL UNPAVED SECTION - POST CONSTRUCTION TRAFFIC
- a. COMPACTED SUBGRADE (N) = 12
- b. BASE COURSE THICKNESS (N) = 6
- c. GEORID STABILIZATION - NX750 FG (IF NEEDED)
- i. SUBGRADE COMPACTED TO 98% OF STANDARD PROCTOR, +2% TO -3% OF OPTIMUM MOISTURE CONTENT.
- ii. BASE MATERIALS SHOULD MEET DOT STANDARDS OR OTHER ALTERNATE GRADATION AS APPROVED BY THE GEOTECHNICAL ENGINEER.
- iii. THICKNESS DESIGN IS BASED ON THE ASSUMPTION THAT THE SUBGRADE HAS BEEN PREPARED TO A CBR OF AT LEAST 3. POOR DRAINAGE CAN ALSO SIGNIFICANTLY REDUCE SUBGRADE STRENGTH UNDER REPEATED LOADING.
- iv. TENSAR NX 750 FG GRID OR COMPARABLE GRID SHOULD BE PLACED PER THE MANUFACTURER'S RECOMMENDATIONS.
- C. THERE WILL BE A NEED FOR AN ONGOING MAINTENANCE PROGRAM. RUTS OR POTHOLES THAT DEVELOP SHOULD BE FILLED WITH ADDITIONAL AGGREGATE BASE RATHER THAN BY RE-GRADING. ALL MAINTENANCE WORK IS TO BE COMPLETED BY THE CONTRACTOR PRIOR TO SITE TURN OVER TO SILICON RANCH.

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REVISIONS	
No.	Date
0	01/09/2025
1	01/09/2025
2	03/06/2025
3	03/06/2025
4	03/20/2025

Desig.	30% SUBMISSION
Drawn	60% SUBMISSION
Reviewed	80% SUBMISSION
Scale	90% SUBMISSION
Project No.	2300034
Date	2/6/2025
CAD File:	G2300034-01
Title	CIVIL NOTES AND SPECS
Sheet No.	C001

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SECTION 31 23 00 EARTHWORK AND WATER SYSTEMS SPECIFICATIONS

- PART 1 – GENERAL
- 1.1 SUMMARY
- A. SECTION INCLUDES:
1. EARTHWORK – EXCAVATION, FILLING, BACKFILLING, GRADING, COMPACTION, DISPOSAL OF WASTE AND SURPLUS MATERIALS, PLACING CRUSHED STONE, CONSTRUCTION OF BERMS, SHEETING, BRAZING, DEWATERING AND OTHER EARTHWORK RELATED WORK.
 2. WATER SYSTEMS – PRESERVATION AND/OR INSTALLATION OF WELLS AND/OR WATER TAPS AS DESIGNATED BY SR EPC FOR USE BY CONTRACTOR DURING CONSTRUCTION AND FOR LONG TERM O&M NEEDS
- 1.2 QUALITY ASSURANCE
- A. REFERENCED STANDARDS:
1. ASTM INTERNATIONAL (ASTM):
 - a. C33, STANDARD SPECIFICATION FOR CONCRETE AGGREGATES.
 - a. D698, STANDARD TEST METHODS FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT (12,400 FT-LB/FT²).
 - a. D1557, STANDARD TEST METHODS FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING MODIFIED EFFORT (56,000 FT-LB/FT²/2,700 KN-M/MT).
 - a. D2487, STANDARD PRACTICE FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM).
 - a. D3786, STANDARD TEST METHOD FOR BURSTING STRENGTH OF TEXTILE FABRICS—DIAPHRAGM BURSTING STRENGTH TESTER METHOD.
 - a. D4253, STANDARD TEST METHODS FOR MAXIMUM INDEX DENSITY AND UNIT WEIGHT OF SOILS USING A VIBRATORY TABLE.
 - a. D4254, STANDARD TEST METHODS FOR MINIMUM INDEX DENSITY AND UNIT WEIGHT OF SOILS AND CALCULATION OF RELATIVE DENSITY.
 - a. D4632, STANDARD TEST METHOD FOR GRADE BREAKING LOAD AND ELONGATION OF GEOTEXTILES.
 2. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA):
 - a. 29 CFR PART 1926.650, OCCUPATIONAL SAFETY AND HEALTH STANDARDS, REFERRED TO HEREIN AS OSHA STANDARDS.
 3. QUALIFICATIONS: HIRE AN INDEPENDENT SOILS LABORATORY TO CONDUCT IN-PLACE MOISTURE-DENSITY TESTS FOR BACKFILLING TO ASSURE THAT ALL WORK COMPLIES WITH THIS SPECIFICATION SECTION.
- 1.3 DEFINITIONS
- A. SWPPP: "SWPPP" STANDS FOR STORMWATER POLLUTION PREVENTION PLAN. ANY MENTION OF A SWPPP REFERS TO THE REQUIRED SUBMITTAL FOR THE CONSTRUCTION GENERAL PERMIT REQUIRED BY THE LOCAL AHJ.
- B. EXCAVATION
1. CONSISTS OF REMOVAL OF MATERIAL ENCOUNTERED TO SUBGRADE ELEVATIONS REQUIRED OR INDICATED.
 2. INCLUDES EXCAVATION OF SOILS, PAYMENTS AND OTHER OBSTRUCTIONS VISIBLE ON SURFACE, UNDERGROUND STRUCTURES, UTILITIES, AND OTHER ITEMS INDICATED TO BE DEMOLISHED AND REMOVED; Boulders, and ROCK.
- C. FOUNDATIONS: FOOTINGS, BASE SLABS, FOUNDATION WALLS, MAT FOUNDATIONS, GRADE BEAMS, PIERS AND ANY OTHER SUPPORT PLACED DIRECTLY ON SOIL OR ROCK.
- D. GEOTECHNICAL ENGINEER: INDEPENDENT GEOTECHNICAL SPECIALIST PROVIDING FIELD QUALITY CONTROL FOR THE PROJECT.
- E. NON-STRUCTURAL FILL/BACKFILL: SOIL MATERIALS PLACED AND COMPACTED TO ACHIEVE FINISH GRADE ELEVATIONS THAT DO NOT SUPPORT FOUNDATIONS, SLABS, PAVING, OR OTHER FLATWORK.
- F. STRUCTURE: BUILDINGS, FOUNDATIONS, SLABS, TANKS, CURBS, OR OTHER MAN-MADE STATIONARY FEATURES OCCURRING ABOVE OR BELOW GROUND SURFACE.
- G. SUBGRADE: THE EARTH OR SOIL LAYER IMMEDIATELY BELOW FOUNDATION BEARING ELEVATION, SUBBASE MATERIAL, FILL MATERIAL, BACKFILL MATERIAL, OR TOPSOIL MATERIALS.
- H. FLOWABLE FILL: CEMENTITIOUS SLURRY CONSISTING OF A MIXTURE OF FINE AGGREGATE OR FILLER, WATER, AND CEMENTITIOUS MATERIAL(S), WHICH IS USED PRIMARILY AS A BACKFILL IN AREAS OF COMPACTED EARTH.
- I. UNAUTHORIZED EXCAVATION:
1. CONSISTS OF REMOVAL OF MATERIALS BEYOND INDICATED SUBGRADE ELEVATIONS OR DIMENSIONS WITHOUT SPECIFIC DIRECTION OF ENGINEER OF RECORD.
 2. UNAUTHORIZED EXCAVATION, AS WELL AS ASSOCIATED REMEDIAL WORK AS DIRECTED BY ENGINEER OR GEOTECHNICAL ENGINEER, SHALL BE AT CONTRACTOR'S EXPENSE.
 3. UNSUITABLE SOIL MATERIALS: SOIL MATERIALS ENCOUNTERED AT OR BELOW SUBGRADE ELEVATION OF INSUFFICIENT STRENGTH AND STIFFNESS TO SUPPORT CONSTRUCTION AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
- J. WATER SYSTEM: ANY INFRASTRUCTURE, INCLUDING WATER TAPS, WELLS, WELL PUMPS, WELL HOUSES, ELECTRIC SERVICE CONNECTIONS SERVICES WELLS
- 1.4 SUBMITTALS
- A. SHOP DRAWINGS:
1. PRODUCT TECHNICAL DATA INCLUDING:
 - a. ACKNOWLEDGEMENT THAT PRODUCTS SUBMITTED MEET REQUIREMENTS OF STANDARDS REFERENCED.
 - a. MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 2. CERTIFICATIONS.
- B. SAMPLES:
1. CONTRACTOR SHALL COORDINATE SAMPLES AND TESTING FOR APPROVAL OF OFF-SITE MATERIALS WITH THE GEOTECHNICAL ENGINEER.
 2. TEST REPORTS.
 3. SEE ADDITIONAL SUBMITTAL REQUIREMENTS IN SECTION 48 08 00 COMMISSIONING, TESTING AND DOCUMENTATION OF GRID CONNECTED SYSTEMS
- 1.5 PROJECT CONDITIONS
- A. SALVAGEABLE ITEMS: CAREFULLY REMOVE ITEMS TO BE SALVAGED, AND STORE ON OWNER'S PREMISES UNLESS OTHERWISE DIRECTED.
- B. PRESERVATION/INSTALLATION OF WATER SYSTEMS: VERIFY AND REPORT TO SR EPC THE CONDITION AND LOCATION OF EXISTING WATER INFRASTRUCTURE, INCLUDING ALL WELLS AND/OR WATER TAPS ON PROPERTY
1. CONTRACTOR MAY BE ABLE TO USE THESE WATER SOURCES FOR CONSTRUCTION PURPOSES. CONTRACTOR SHALL VALIDATE THAT THERE ARE NO CONFLICTS WITH EXISTING WATER PROPOSED SYSTEM DESIGN AND SERVICE FEES UNDER FINAL COMPLETION, AND INCLUDE THESE SERVICE ARRANGEMENTS IN HAND OVER DOCUMENTS.
 2. WATER SOURCES ARE TO BE MAINTAINED THROUGHOUT CONSTRUCTION AND HANDLED OVER IN OPERABLE CONDITION DURING FINAL COMPLETION.
- C. DISPOSAL OF WASTE MATERIALS, LEGALY OFF SITE.
1. BURNING, AS A MEANS OF WASTE DISPOSAL IS NOT PERMITTED WITHOUT SR EPC APPROVAL.
- D. MAINTAIN ADEQUATE DISTANCE BETWEEN LOADING AND EDGES OF EXCAVATIONS AS TO PREVENT CAVE-INS OF EXCAVATED AREA, THIS INCLUDES EXCAVATED SPOLS.
1. MAINTAIN EXCAVATED MATERIALS STOCKPILES SUCH THAT IMPACTS TO THE PUBLIC AND ADJACENT PROPERTY OWNERS IS MINIMIZED.
- E. PROVIDE FULL ACCESS TO PUBLIC AND PRIVATE PREMISES AND FIRE HYDRANTS, AT STREET CROSSINGS, SIDEWALKS AND OTHER POINTS AS DESIGNATED BY SR EPC TO MAIN TRAVEL PATHWAYS.
- F. PROTECT AND MAINTAIN BENCHMARKS, MONUMENTS OR OTHER ESTABLISHED POINTS AND REFERENCE POINTS AND IF DISTURBED OR DESTROYED, REPLACE ITEMS TO FULL SATISFACTION OF SR EPC AND CONTROLLING AGENCY.
- G. VERIFY LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO ANY GROUND-DISTURBING ACTIVITIES.

- PART 2 – PRODUCTS
- 2.1 MATERIALS
- A. FILL AND BACKFILL: SELECTED MATERIAL APPROVED BY GEOTECHNICAL ENGINEER FROM SITE EXCAVATION OR FROM OFF-SITE BORROW.

- PART 3 – EXECUTION
- 3.1 EXCAVATION, FILLING, AND BACKFILLING FOR STRUCTURES
- A. GENERAL
1. IN GENERAL, WORK INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, EXCAVATION FOR STRUCTURES
 2. IN THIS SECTION OF THE SPECIFICATIONS, THE WORD "FOUNDATIONS" INCLUDES FOOTINGS, BASE SLABS, FOUNDATION WALLS, MAT FOUNDATIONS, PIERS AND ANY OTHER SUPPORT PLACED DIRECTLY ON SOIL.
 3. IN THE PARAGRAPHS OF THIS SECTION OF THE SPECIFICATIONS, THE WORD "SOIL" ALSO INCLUDES ANY TYPE OF ROCK SUBGRADE THAT MAY BE PRESENT AT OR BELOW EXISTING GRADE ELEVATION.
- B. EXCAVATION REQUIREMENTS FOR STRUCTURES:
1. GENERAL:
 - a. DO NOT COMMENCE EXCAVATION FOR FOUNDATIONS FOR STRUCTURES OR WATER INFRASTRUCTURE UNTIL SR EPC APPROVES:
 - 1) THE REMOVAL OF TOPSOIL AND OTHER UNSUITABLE AND UNDESIRABLE MATERIAL FROM EXISTING SUBGRADE.
 - 2) DENSITY AND MOISTURE CONTENT OF SITE AREA COMPACTED FULL MATERIAL MEETS REQUIREMENTS OF DRAWINGS.
 2. REMOVE AND STOCKPILE TOPSOIL FOR LATER RESPREADING ON GRADED AREAS.
 3. DIMENSIONS:
 - a. EXCAVATE TO ELEVATIONS AND DIMENSIONS AS SPECIFIED OR INDICATED ON THE DRAWINGS.
 - a. ALLOW ADDITIONAL SPACE AS REQUIRED FOR CONSTRUCTION OPERATIONS AND INSPECTION OF FOUNDATIONS.
 4. REMOVAL OF OBSTRUCTIONS AND UNDESIRABLE MATERIALS IN EXCAVATION INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, EXISTING CONSTRUCTION, UNSUITABLE SUBGRADE SOILS, EXPANSIVE TYPE SOILS, AND ANY OTHER MATERIALS WHICH MAY BE CONCEALED BENEATH EXISTING GRADE, AS REQUIRED TO EXECUTE WORK INDICATED ON CONTRACT DRAWINGS:
 - a. IF UNDESIRABLE MATERIAL AND OBSTRUCTIONS ARE ENCOUNTERED DURING EXCAVATION, REMOVE MATERIAL AND REPLACE AS DIRECTED BY ENGINEER.
 5. LEVEL OFF BOTTOMS OF EXCAVATIONS TO RECEIVE FOUNDATIONS, FLOOR SLABS, EQUIPMENT SUPPORT PADS, OR COMPACTED FILL.
 - a. REMOVE LOOSE MATERIALS AND BRING EXCAVATIONS INTO APPROVED CONDITION TO RECEIVE CONCRETE OR FILL MATERIAL.
 - a. DO NOT EXCAVATE BELOW DESIGNED GRADE UNLESS APPROVED BY ENGINEER.
 - a. IF ANY PART OF EXCAVATIONS IS CARRIED BELOW REQUIRED DEPTH WITHOUT AUTHORIZATION, MAINTAIN EXCAVATION AND START FOUNDATION FROM EXCAVATED LEVEL WITH CONCRETE OF SAME STRENGTH AS REQUIRED FOR SUPERIMPOSED FOUNDATION, AND NO EXTRA COMPENSATION WILL BE MADE TO CONTRACTOR, THEREFORE.
 6. EXCAVATIONS SHALL BE SUFFICIENT TO ALLOW FOR WORKING SPACE, FORMS, DAMP PROOFING, WATERPROOFING, AND INSPECTION.
 7. NOTIFY ENGINEER AS SOON AS EXCAVATION IS COMPLETED TO ALLOW, IF REQUIRED.
 - a. DO NOT COMMENCE FURTHER CONSTRUCTION UNTIL SUBGRADE UNDER COMPACTED FILL MATERIAL, UNDER FOUNDATIONS, UNDER FLOOR SLABS-ON-GRADE, AND UNDER EQUIPMENT SUPPORT PADS HAS BEEN INSPECTED AND APPROVED BY THE ENGINEER AS BEING FREE OF UNDESIRABLE MATERIAL, BEING OF COMPACTION DESIGN REQUIRED BY THIS SPECIFICATION, AND BEING CAPABLE OF SUPPORTING THE ALLOWABLE FOUNDATION DESIGN BEARING PRESSURES AND SUPERIMPOSED FOUNDATION, FILL, AND BUILDING LOADS TO BE PLACED THEREON.
 - b. ENGINEER SHALL BE GIVEN THE OPPORTUNITY TO INSPECT SUBGRADE BELOW FILL MATERIAL BOTH PRIOR TO AND AFTER SUBGRADE COMPACTION.
 - c. PLACE FOUNDATIONS, FLOOR SLABS-ON-GRADE, AND EQUIPMENT SUPPORT PADS AS SOON AS WEATHER CONDITIONS PERMIT AFTER EXCAVATION IS COMPLETED, INSPECTED AND APPROVED AND AFTER FORMS AND REINFORCING ARE INSPECTED AND APPROVED.
 - d. BEFORE CONCRETE OR FILL MATERIAL IS PLACED, PROTECT APPROVED SUBGRADE FROM BECOMING LOOSE, WET, FROZEN, OR SOFT DUE TO WEATHER, CONSTRUCTION OPERATIONS, OR OTHER REASONS.
- B. SUBGRADE STABILIZATION
- a. IF SUBGRADE UNDER FOUNDATIONS, FLOOR SLABS-ON-GRADE, OR EQUIPMENT SUPPORT PADS IS IN A FROZEN, LOOSE, WET, OR SOFT CONDITION BEFORE CONSTRUCTION IS PLACED, THEREON, REMOVE FROZEN, LOOSE, WET, OR SOFT MATERIAL AND REPLACE WITH APPROVED COMPACTED MATERIAL AS DIRECTED BY GEOTECHNICAL ENGINEER.
 - b. COMPACTION OF REPLACEMENT MATERIAL SHOULD FOLLOW ENGINEER'S GUIDANCE AND VERIFICATION OF COMPACTION SHOULD BE PROVIDED PER SECTION 48 08 00
 - c. LOOSE, WET, OR SOFT MATERIALS, WHEN APPROVED BY ENGINEER, MAY BE STABILIZED BY A COMPACTED WORKING MAT OF WELL GRADED CRUSHED STONE.
 - d. COMPACT STONE MAT THOROUGHLY INTO SUBGRADE TO AVOID FUTURE MIGRATION OF FINES INTO THE STONE VOIDS.
 - e. REMOVE AND REPLACE FROZEN MATERIALS AS DIRECTED BY ENGINEER.
 - f. METHOD OF STABILIZATION SHALL BE PERFORMED AS DIRECTED BY ENGINEER.
 - g. DO NOT PLACE FURTHER CONSTRUCTION ON THE REPAIRED SUBGRADES, UNTIL THE SUBGRADES HAVE BEEN APPROVED BY THE ENGINEER.
 - h. DO NOT POUR SLABS-ON-GRADE INCLUDING EQUIPMENT SUPPORT PADS UNTIL SUBGRADE BELOW HAS BEEN APPROVED, REINFORCEMENT PLACEMENT HAS BEEN APPROVED, AND CONTRACTOR RECEIVES APPROVAL TO COMMENCE SLAB CONSTRUCTION.
 - i. DO NOT PLACE BUILDING FLOOR SLABS-ON-GRADE INCLUDING EQUIPMENT SUPPORT PADS WHEN TEMPERATURE OF AIR SURROUNDING THE SLAB AND PADS IS OR IS EXPECTED TO BE BELOW 40 DEG F BEFORE STRUCTURE IS COMPLETED AND HEATED TO A TEMPERATURE OF AT LEAST 50 DEG F.
10. PROTECTION OF STRUCTURES:
- a. PREVENT NEW STRUCTURES AND EXISTING WATER INFRASTRUCTURE FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS OR OTHER REASONS.
 - b. PREVENT SUBGRADE UNDER NEW FOUNDATIONS FROM BECOMING WET AND UNDERMINED DURING CONSTRUCTION DUE TO PRESENCE OF SURFACE OR SUBSURFACE WATER OR DUE TO CONSTRUCTION OPERATIONS.
11. DRAINAGE:
- a. CONTROL, GRADING AROUND STRUCTURES SUCH THAT GROUND IS SLOPED TO PREVENT WATER FROM RUNNING INTO EXCAVATED AREAS OR DAMAGING STRUCTURES.
 - b. MAINTAIN EXCAVATIONS WHERE FOUNDATIONS, FLOOR SLABS, EQUIPMENT SUPPORT PADS OR FILL MATERIAL ARE TO BE PLACED FREE OF WATER.
 - c. PROVIDE PUMPING REQUIRED TO KEEP EXCAVATED SPACES CLEAR OF WATER DURING CONSTRUCTION.
 - d. EXISTING ANY WATER BE ENCOUNTERED IN THE EXCAVATION, NOTIFY ENGINEER.
 - e. PROVIDE FREE DISCHARGE OF WATER BY TRENCHES, PUMPS, WELLS, WELL POINTS, OR OTHER MEANS TO A DISCHARGE LOCATION THAT WILL NOT DAMAGE EXISTING CONSTRUCTION OR INTERFERE WITH CONSTRUCTION OPERATIONS.

32 13 10 ROADWAY SPECIFICATIONS

- PART 1 – GENERAL
- 1.1 SUMMARY
- A. SECTION INCLUDES:
1. THIS WORK CONSISTS OF ROADWAYS LEADING TO AND CIRCULATING THROUGHOUT THE PROJECT SITE AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY THE WORK.
- B. RELATED SPECIFICATION SECTIONS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO:
1. SECTION 31 23 00, EARTHWORK AND WATER SYSTEMS
- 1.2 DEFINITIONS
- A. MANUFACTURERS OR SUPPLIERS, AS USED IN THE CONTEXT OF "APPROVED MANUFACTURERS OR SUPPLIERS OF MAJOR EQUIPMENT", SHALL MEAN THE MANUFACTURERS OR SUPPLIERS LISTED IN THE MANUFACTURERS OR MAJOR EQUIPMENT PROVIDED IN THE EPC AGREEMENT.
- B. "LIGHT DUTY ROAD" SHALL BE DEFINED TO MEAN A ROAD DESIGNED TO SUPPORT INFREQUENT TRAFFIC BY RELATIVELY SMALL AND LIGHT VEHICLES AS NEEDED FOR GENERAL OPERATIONS AND MAINTENANCE (O&M) OF THE PV ARRAY FIELD. THIS ROAD SHALL APPLY TO ROADS WITHIN THE PV ARRAY FIELD PERIMETER FENCE AND BETWEEN SEPARATELY FENCED AREAS, OTHER THAN THOSE OTHERWISE CLASSIFIED AS "HEAVY DUTY ROAD".
- C. "HEAVY DUTY ROAD" SHALL BE DEFINED TO MEAN A ROAD DESIGNED TO SUPPORT INFREQUENT TRAFFIC BY RELATIVELY LARGE AND HEAVY VEHICLES, WHICH MAY BE NEEDED FOR DELIVERIES, REPAIRS, AND GENERAL OPERATIONS AND MAINTENANCE (O&M), OF SUBSTATIONS, SWITCHYARDS, LAYDOWN YARDS, AND THE PV ARRAY FIELD. THIS ROAD SHALL APPLY TO DRIVEWAYS AND SEGMENTS OF ROAD BETWEEN PUBLIC ROADS IMPROVED TO SUPPORT ADEQUATE ALLEYSIDE ACCESS TO AND SUBSTATIONS, SWITCHYARDS, LAYDOWN YARDS, AND PV ARRAY FIELD ENTRANCE GATES AND AS OTHERWISE DICTATED BY SR EPC DURING DESIGN REVIEW.
- 1.3 SUBMITTALS
- A. SPECIFICATIONS FOR GEOTEXTILES, GEODIR, OR OTHER MANUFACTURED ROADWAY STABILIZATION MATERIALS.
- B. SPECIFICATIONS AND/OR OUT SHEETS FOR ALL PRE-FABRICATED CULVERTS, HEADWALLS, INLETS, OUTLETS, OR OTHER DRAINAGE FEATURES WITHIN THE ROADWAYS.
- C. GRADATION / SIEVE ANALYSIS FOR ROADWAY SURFACING AND/OR SUBGRADE MATERIAL.
- PART 2 – PRODUCTS
- 2.1 PRODUCTS TO BE USED ON ROADWAYS SHALL BE SUBMITTED BY THE CONTRACTOR TO SR EPC FOR REVIEW SHOULD NOT BE PROCURED UNTIL SR EPC ISSUES WRITTEN APPROVAL.
- 2.2 PRODUCT SUBSTITUTIONS SHALL NOT BE IMPLEMENTED WITHOUT WRITTEN APPROVAL BY SR EPC AND SEALED WRITTEN APPROVAL THE CIVIL ENGINEER OF RECORD.
- PART 3 – EXECUTION
- 3.1 DESIGN
- A. SECTION
1. ROAD SURFACE MATERIAL:
 - a. THE DEFAULT ROAD SURFACE MATERIAL SHALL BE AN SR EPC-APPROVED AGGREGATE BASE COURSE FOLLOWING A SEALED DESIGN RECOMMENDATION BY THE GEOTECHNICAL ENGINEER OF RECORD, UNLESS A MORE ROBUST ROAD SECTION IS OTHERWISE REQUIRED (SUCH AS ASPHALT CONCRETE, PORTLAND CEMENT CONCRETE, OR CEMENT-TREATED BASE).
 - b. THE USE OF CRUSHED LIME ROCK AS A ROAD SURFACE MATERIAL MUST BE APPROVED IN WRITING BY SR EPC IN ADVANCE OF PROCUREMENT DUE TO EXPERIENCE WITH DUST/EROSION/MUD ISSUES ON SITES WHERE IT WAS USED AND CARE MUST BE TAKEN IN DESIGN TO MINIMIZE EXPOSURE TO STORMWATER FLOWS.
 2. DESIGN LOADING CONDITIONS:
 - a. ROAD SECTIONS SHALL BE DESIGNED TO SATISFY THE FOLLOWING PERFORMANCE SPECIFICATION UNLESS IT IS DEMONSTRATED THAT A REDUCED VEHICLE SIZE, WEIGHT, AND/OR LOADING FREQUENCY IS REASONABLE FOR O&M ACCESS TO THE FACILITY(ES) IN QUESTION AND APPROVED IN WRITING BY SR EPC:
 - 1) "LIGHT DUTY ROADS"
 - a. SHALL BE DESIGNED TO ACCOMMODATE A MINIMUM OF 7 TRIPS PER DAY BY A FULLY LOADED 4-WHEEL DRIVE HEAVY DUTY PICK-UP TRUCK FOR THE FULL LIFE OF THE FACILITY WITH MINIMAL REGULAR MAINTENANCE REQUIRED.
 - 2) "HEAVY DUTY ROADS"
 - a. SHALL BE DESIGNED TO ACCOMMODATE A MINIMUM OF 7 TRIPS PER DAY BY A FULLY LOADED 4-WHEEL DRIVE HEAVY DUTY PICK-UP TRUCK FOR THE FULL LIFE OF THE FACILITY WITH MINIMAL REGULAR MAINTENANCE REQUIRED.
 - b. IN ADDITION, HEAVY DUTY ROADS SHALL BE DESIGNED TO ACCOMMODATE A MINIMUM OF 1 TRIP PER MONTH, ASSUMING AASHTO HS-20 LOADING.
 3. DUST CONTROL:
 - a. ROAD DESIGN SHALL SEEK TO MINIMIZE DUST/MUD KICKED UP BY TRAVELING VEHICLES ON SITE, THIS MAY BE ACHIEVED BY SOME COMBINATION OF THE FOLLOWING:
 - 1) ROAD MATERIAL SELECTION
 - 2) SEPARATION BETWEEN AGGREGATE AND SUBGRADE SOIL SECTIONS VIA GEOTEXTILE FABRIC
 - 3) AVOIDANCE OF ISOLATED LOW SPOTS IN THE ROADWAY (ACHIEVED THROUGH GRADING DESIGN) WHERE ERODED FINES MAY ACCUMULATE
 - 4) APPLICATION OF DUST PALLIATIVES
 - a. MAY NOT BE USED WITHOUT WRITTEN SR EPC APPROVAL
 - a. IF DUST PALLIATIVES ARE USED, THEIR SPECIFICATIONS, COST, AND APPLICATION FREQUENCY SHALL BE COMMUNICATED TO O&M.
 4. GEOTEXTILES:
 - a. GEOTEXTILES ARE REQUIRED UNLESS SPECIFICALLY DEEMED OTHERWISE BY SRC, IN WRITING.
 5. ROAD MAINTENANCE DURING CONSTRUCTION
 - a. ALL TEMPORARY ACCESS ROADWAYS USED BY CONTRACTOR SHALL BE MAINTAINED BY CONTRACTOR IN SERVICEABLE CONDITION UNTIL SUBSTANTIAL COMPLETION.
 - b. ROAD CONDITION AT FINAL COMPLETION SHALL MEET THE MINIMUM STANDARDS SHOWN IN THE IFC DRAWINGS.
 - c. IF MORE ROBUST ROAD SECTIONS ARE REQUIRED FOR INCREASED CONSTRUCTION VEHICLE SIZES, LOADING WEIGHTS OR FREQUENCIES, AND/OR MAINTENANCE PRACTICES AND FREQUENCIES, THE CONTRACTOR SHALL PROVIDE SR EPC WITH COST INFORMATION ABOUT THE RELATIVE INCREASE IN COST FROM THE BASIC ROAD DESIGN REQUIRED FOR O&M SO THAT SR EPC MAY EVALUATE PAYMENT.
 6. HORIZONTAL AND VERTICAL ROAD GEOMETRY:
 1. SITE SECTIONS SHALL PROVIDE SUFFICIENT ACCESS FOR THE REPLACEMENT OF MAJOR EQUIPMENT SUCH AS INVERTERS & TRANSFORMERS AS APPLICABLE AS WELL AS SUFFICIENT ACCESS FOR THE O&M OF THE FACILITY.
 - a. THIS SHALL INCLUDE LOOPED ROADWAYS OR TURN AROUNDS TO ALLOW FOR CIRCULATION OF O&M VEHICLES.
 2. ROADS SHALL BE DESIGNED AS TO MAXIMIZE ACCESS TO AUXILIARY EQUIPMENT SUCH AS COMBNER BOXES.
 3. CONTRACTOR SHALL PROVIDE STABILIZED ACCESS ROADS WITHIN THE FACILITY THAT ALLOW ACCESS TO EACH INVERTER, TRANSFORMER, AND ALL OTHER AC EQUIPMENT.
 4. A MINIMUM OF 25' CLEAR SPACE SHALL BE PROVIDED ADJACENT TO THE OUTLETS OF ANY MODULE AISLES (NORTH AND SOUTH ENDS OF TRACKERS OR EAST AND WEST ENDS OF FIXED-TILT) AND ANY OTHER VERTICAL OBSTRUCTION ABOVE GRADE, A MINIMUM OF 15' CLEAR SPACE SHALL BE PROVIDED.
 5. BETWEEN ANY TWO VERTICAL OBSTRUCTIONS ABOVE GRADE (FOR EXAMPLE MODULE AND FENCE), A MINIMUM OF 10' SHALL BE PROVIDED BETWEEN ANY SINGLE VERTICAL OBSTRUCTION ABOVE GRADE AND POTENTIAL DRIVING HAZARD (FOR EXAMPLE A 3:1 SLOPE OF A BASIN). THESE REPRESENT THE MINIMUM VALUES, ADDITIONAL SPACE IS PREFERRED.
 6. DESIGN VEHICLES SHALL BE CONSIDERED AS FOLLOWS UNLESS IT IS DEMONSTRATED THAT A REDUCED VEHICLE SIZE IS REASONABLE FOR O&M ACCESS TO THE FACILITY(ES) IN QUESTION AND APPROVED IN WRITING BY SR EPC:
 - 1) "HEAVY DUTY ROAD" SHALL ACCOMMODATE A 40-FOOT-LONG FLATBED TRAILER (53- FEET TOTAL WITH CAB) WITH 12-INCHES OF GROUND CLEARANCE.
 - 1) THESE ROADS SHALL BE AT LEAST 20- FEET OF IMPROVED, CLEAR WIDTH
 - 2) THESE ROADS SHALL FEATURE INNER RADIi NOT LESS THAN 70- FEET FOR A 90- DEGREE TURN AND SHOULD BE INCREASED AS NEEDED TO SUPPORT GREATER TURNING ANGLES.
 7. "LIGHT DUTY ROAD" SHALL ACCOMMODATE A FULL-SIZE PICK-UP TRUCK WITH SKID STEER TRAILER.
 - 1) THESE ROADS SHALL BE AT LEAST 12- FEET OF IMPROVED WIDTH
 - 2) PROVIDE 4- FEET OF ADDITIONAL CLEARANCE BEYOND EACH EDGE OF THE ROADWAY TO THE NEAREST OBSTRUCTION, TO PROVIDE A TOTAL CLEAR WIDTH OF AT LEAST 20- FEET
 - 3) THESE ROADS SHALL FEATURE INNER RADIi NOT LESS THAN 45- FEET FOR A 90- DEGREE TURN AND SHOULD BE INCREASED AS NEEDED TO SUPPORT GREATER TURNING ANGLES.
 7. ROAD GEOMETRY SHALL BE VALIDATED WITH HORIZONTAL TRUCK TURN AND VERTICAL TRUCK CLEARANCE TEMPLATES, AUTOTURN, DEPICTIONS, OR SIMILAR METHODOLOGY AND SAID VALIDATION SHALL BE MADE AVAILABLE TO SR EPC UPON REQUEST TO DEMONSTRATE COMPLIANCE WITH DESIGN VEHICLE REQUIREMENTS.
 8. MAX LONGITUDINAL SLOPE OF 10% AND MAX CROSS SLOPE OF 5% IF ROAD IS CROWNED, MAX 2% CROSS SLOPE.

C. DRAINAGE

 1. ROAD SHALL PROVIDE A LOW MAINTENANCE DRIVING SURFACE, WITHOUT REGULAR WASHOUT, PONDING, OR SURFACE EROSION, AND THIS SHOULD BE REFLECTED IN BOTH ROAD SECTION DESIGN AND THE DESIGN OF SITE HYDRAULICS.
 2. IF ROADSIDE DITCHES ARE USED, SET FLOWLINES AWAY AND BELOW THE IMPROVE EDGE OF THE ROAD SECTION AND ENGINEER THEM TO AVOID INUNDATION AND DAMAGE FROM STORMWATER RUNOFF.
 3. IF CRUSHED LIME ROCK OR A SIMILAR MATERIAL THAT IS SUBJECT TO ACCELERATED DEGRADATION WHEN WET IS USED AS THE ROAD SURFACE MATERIAL, EXTRA CARE SHALL BE TAKEN TO DESIGN CONVEYANCE OF STORMWATER RUNOFF AWAY FROM THE EDGES AND SURFACE OF THE ROAD WITH EXTRA REINFORCEMENT PROVIDED WHERE WATER CROSSES THE ROAD.
 3. STORMWATER THAT MUST CROSS THE ROAD SHALL BE CONVEYED WITH THE FOLLOWING CRITERIA
 - a. STORMWATER CONVEYANCE METHOD:
 - 1) PRIMARY (PREFERRED) CONVEYANCE METHOD SHALL BE BY CULVERT UNDER THE ROAD, UNLESS PROVEN TO BE IMPRACTICAL OR EXCESSIVE
 - 2) SECONDARY (ALTERNATE) CONVEYANCE METHOD SHALL BE BY LOW WATER CROSSING COMPRISED OF AN APPROVED MATERIAL FROM THE FOLLOWING LIST:
 - a. PRIMARY (PREFERRED) MATERIAL IS CONCRETE
 - a. SECONDARY (ALTERNATE) MATERIAL IS PROPRIETARY PRODUCTS SUCH AS ARTICULATED CONCRETE BLOCK
 - b. IMPROVEMENTS SHALL CONVEY THE 25-YEAR STORM 24 HR. AND SHALL WITHSTAND THE 100-YEAR 24 HR STORM WITH MINIMAL MAINTENANCE REQUIRED BASED ON THE NOAA PRECIPITATION TABLE AT CLOSEST REPORTING STATION.
 4. DRIVEWAYS AND EXISTING APPROACH ROADS
 5. PRODUCT EXISTINGS CONNECTING TO EXISTING PUBLIC & PRIVATE ROADWAYS SHALL BE DOCUMENTED IN SUFFICIENT DETAIL TO INDICATE PRE- AND POST-DEVELOPMENT CONDITION.
 6. DRIVEWAYS SHALL BE SURFACED AND GIVEN DRAINAGE CONVEYANCE IMPROVEMENTS AS REQUIRED BY THE AHJ
 7. EXISTING PUBLIC AND PRIVATE ROADWAYS SHALL BE RESTORED TO MEET OR EXCEED PREDEVELOPMENT CONDITION.
 8. IMPROVEMENTS TO EXISTING OR PROPOSED PUBLIC OR SHARED PRIVATE ROADS MAY BE HELD TO HIGHER STANDARDS THAN THOSE ENUMERATED HEREIN AND SHALL COMPLY WITH STANDARDS SET FORTH BY CORRESPONDING STAKEHOLDERS.

32 31 13 AGRIVOLTAIC FENCE AND GATES SPECS


- PART 1 – GENERAL
- 1.1 SUMMARY
- A. SECTION INCLUDES:
1. CHAIN LINK FENCING AND GATES.
 2. AGRIVOLTAIC FENCE.
- B. RELATED SPECIFICATION SECTIONS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO:
1. SECTION 31 23 00 – EARTHWORK AND WATER SYSTEMS
 2. SECTION 26 05 26 – GROUNDING AND BONDING
 3. SECTION 26 05 73 – POWER SYSTEMS ANALYSIS
- 1.2 QUALITY ASSURANCE
- A. REFERENCED STANDARDS:
1. ASTM INTERNATIONAL (ASTM):
 - a. A153/A153M, STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE.
 - a. A392, STANDARD SPECIFICATION FOR ZINC-COATED STEEL CHAIN-LINK FENCE WIRE.
 - a. A424, STANDARD SPECIFICATION FOR METALLOID-COATED STEEL MARCELLED TENSION WIRE FOR USE WITH CHAIN-LINK FENCE.
 - a. F552, STANDARD TERMINOLOGY RELATING TO CHAIN LINK FENCE.
 - a. F567, STANDARD PRACTICE FOR INSTALLATION OF CHAIN-LINK FENCE.
 1. F626, STANDARD SPECIFICATION FOR FENCE FITTINGS.
 1. F900, STANDARD SPECIFICATION FOR INDUSTRIAL AND COMMERCIAL STEEL SWING GATES.
 1. F1043, STANDARD SPECIFICATION FOR STRENGTH AND PROTECTIVE COATINGS ON STEEL INDUSTRIAL FENCE FRAMEWORK.
 1. F1083, STANDARD SPECIFICATION FOR PIPE, STEEL, HOT-DIPPED ZINC-COATED (GALVANIZED) WELDED, FOR FENCE STRUCTURES.
 2. AMERICAN WELDING SOCIETY (AWS).
 3. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA):
 - a. NFPA 70, NATIONAL ELECTRICAL CODE (NEC).
 4. UNDERWATERS LABORATORIES, INC. (UL).
- B. QUALIFICATIONS:
1. INSTALLER BONDED AND LICENSED IN THE PROJECT STATE.
 2. INSTALLER SHALL HAVE A MINIMUM TWO (2) YEARS OF EXPERIENCE INSTALLING SIMILAR FENCING.
 3. UTILITIES ONLY ARE CERTIFIED WELDERS
 4. GROUNDING BY AN ELECTRICIAN LICENSED IN PROJECT STATE.
- 1.3 DEFINITIONS
- A. SEE ASTM F552.
- B. NPS: NOMINAL PIPE SIZE, IN INCHES.
- C. INSTALLER OR APPLICATOR:
1. INSTALLER OR APPLICATOR IS THE PERSON ACTUALLY INSTALLING OR APPLYING THE PRODUCT IN THE FIELD AT THE PROJECT SITE.
 2. INSTALLER AND APPLICATOR ARE SYNONYMOUS.
- 1.4 SUBMITTALS
- A. SHOP DRAWINGS:
1. PRODUCT TECHNICAL DATA INCLUDING:
 - a. ACKNOWLEDGEMENT THAT PRODUCTS SUBMITTED MEET REQUIREMENTS OF STANDARDS REFERENCED.
 - a. MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 2. SCALED PLAN LAYOUT SHOWING SPACING OF COMPONENTS, ACCESSORIES, FITTINGS, AND POST ANCHORAGE.
 3. MILL CERTIFICATES.
 4. SOURCE QUALITY CONTROL TEST RESULTS.

- PART 2 – PRODUCTS
- 2.1 COMPONENTS
- A. ALL STEEL FENCING COMPONENTS SHALL BE HOT-DIPPED GALVANIZED.
- B. ALL PAVE, WIRE, AND GATES SHALL BE GALVANIZED.
- C. AGRIVOLTAIC FENCE FABRIC:
- a. FABRIC TYPE:
 1. SOLID LOCK FOR CAME 2006-6 OR SR EPC-APPROVED EQUAL
 2. CONTRACTOR MAY EVALUATE AN OFF-THE-SHELF PRODUCT OR A CUSTOM FABRICATED PRODUCT, IF LOCALLY AVAILABLE AND APPROVED BY SR EPC.
 2. 7 FT. TALL FROM BOTTOM OF FABRIC TO TOP OF FABRIC, OR BARBED WIRE, IF APPROVED BY SR EPC.
 3. BOTTOM OF FABRIC SHALL BE NO MORE THAN 2 INCHES CLEAR ABOVE THE FINISH GRADE.
- D. CHAIN LINK FABRIC (IF APPROVED BY SR EPC FOR USE AS AN ALTERNATIVE TO AGRIVOLTAIC FENCE FABRIC):
- a. FABRIC TYPE:
 - 1) COATED BEFORE WEAVING, 2.0 OZ./SF.
 2. WIRE GAUGE: 9
 3. WESH SIZE: 2 INCHES.
 4. 7 FT. TALL FROM BOTTOM OF FABRIC TO TOP OF FABRIC, OR BARBED WIRE, IF APPROVED BY SR EPC.
 5. SELVAGE TREATMENT:
 - a. TOP: TWISTED
 - b. BOTTOM: KNUCKLED
 6. BOTTOM OF FABRIC SHALL BE NO MORE THAN 2 INCHES CLEAR ABOVE THE FINISH GRADE.
- E. LINE POSTS:
1. ASTM F1083 PIPE:
 - a. SCHEDULE 40, NPS 2.
 2. SCHEDULE 40, NPS 1-1/4.
- F. CORNER OR TERMINAL POSTS:
1. ASTM F1083 PIPE:
 - a. SCHEDULE 40, NPS 2-1/2.
 2. BRACE AND RAELS:
 1. ASTM F1083 PIPE:
 - a. SCHEDULE 40, NPS 1-1/4.
- H. TENSION WIRE:
1. TOP AND BOTTOM OF FABRIC:
 - a. ASTM A392, GALVANIZED STEEL, CLASS 3.
- I. FENCE FITTINGS (POST AND LINE CAPS, RAIL AND BRACE ENDS, SLEEVES-TOP RAIL, THE WIRES AND CLIPS, TENSION AND BRACE BANDS, TENSION BARS, TRIGGS RODS):
1. ASTM F626.
- J. SWING GATE:
1. ASTM F900.
 2. MATERIALS AS SPECIFIED FOR FENCE FRAMEWORK AND FABRIC.
- K. HARDWARE:
- a. GALVANIZED PER ASTM A153.
 - b. HINGES TO PERMIT 180-DEGREE INWARD AND OUTWARD GATE OPENING.
 - c. PROVIDE HEAVY DUTY PADLOCK OR SPECIFIC LOCK HARDWARE AS REQUIRED BY THE AHJ.
 - d. THERE SHOULD BE A MINIMUM OF 2 ACCESS GATES PER FENCED AREA.
 5. GATES SHALL BE ABLE TO BE SWUNG 360 DEGREES AND LOCKED WITH A CHAIN AND OUTDOOR RATED LOCK.
- K. WHEN FENCE SCREENING (PRIVACY SLATS FOR INSTANCES) IS REQUIRED THEN THE FENCE POSTS MUST BE RE-ENGINEERED APPROPRIATELY TO WITHSTAND WIND LOADS.
- L. FENCE GRADING REQUIREMENTS PER SECTION 26 05 26 GROUNDING AND BONDAGE AND SECTION 26 05 73 POWER SYSTEMS ANALYSIS
- 2.2 SOURCE QUALITY CONTROL
- A. TEST RELATED FENCE CONSTRUCTION MATERIALS TO MEET THE FOLLOWING STANDARDS:
1. POSTS AND RAELS:
 - a. ASTM F1043, HEAVY INDUSTRIAL.

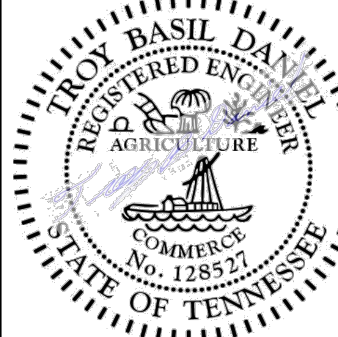
- PART 3 – EXECUTION
- 3.1 INSTALLATION
- A. INSTALL IN ACCORDANCE WITH:
1. MANUFACTURER'S INSTRUCTIONS.
 2. HORIZONTAL LOCATIONS AND ELEVATIONS SHOWN ON DRAWINGS.
 3. ASTM F567.
 4. AREAS IN WHICH FENCING IS TO BE INSTALLED SHALL BE BROUGHT TO DESIGN GRADE PRIOR TO FENCE INSTALLATION.
 5. DRILL HOLES IN FIRM, UNDISTURBED OR COMPACTED SOIL.
 6. FENCING FABRIC SHALL BE INSTALLED SUCH THAT THE BOTTOM CLEARANCE IS THREE (3) INCHES OR LESS.
 1. CORRECT MINOR IRREGULARITIES IN EARTH TO MAINTAIN CLEARANCE TOLERANCES.
- E. SPACE LINE POSTS AT EQUAL INTERVALS NOT EXCEEDING 10 FT. OC.
1. OVERD ALL CORNER POST, GATE POSTS AND DEAD-END POST IN CONCRETE.
 2. WHERE SLATS ARE REQUIRED BY LOCAL CODE, ALL POST MUST BE IN CONCRETE.
 3. WHERE EXTREMELY LONG, GREATER THAN 300', RUNS EXIST A STRETCHING STRUCTURE FOR PROPER FABRIC STRETCHING WILL BE IN CONCRETE.
- F. PROVIDE POST BRACES FOR EACH GATE, CORNER, PULL AND TERMINAL POST AND FIRST ADJACENT LINE POST.
- G. INSTALL TENSION BARS FULL HEIGHT OF FABRIC.
- H. RAELS:
1. CORN RAELS WITH EXPANSION COUPLINGS OF OUTSIDE SLEEVE TYPE.
 2. RAELS CONTINUOUS FOR OUTSIDE SLEEVE TYPE FOR FULL LENGTH OF FENCE.
- I. PROVIDE EXPANSION COUPLINGS IN TOP RAELS AT NOT MORE THAN 20 FT INTERVALS.
- J. ANCHOR TOP RAELS TO MAIN POSTS WITH APPROPRIATE WROUGHT OR MALLEABLE FITTINGS.
- K. INSTALL BRACING ASSEMBLIES AT ALL END AND GATE POSTS, AS WELL AS SIDE, CORNER, AND PULL POSTS.
1. LOCATE COMPRESSION MEMBERS AT MID-HEIGHT OF FABRIC.
 2. EXTEND DIAGONAL TENSION MEMBERS FROM COMPRESSION MEMBERS TO BASES OF POSTS.
- L. PULL FABRIC TAUT AND SECURE TO POSTS AND RAELS.
1. SECURE SO THAT FABRIC REMAINS IN TENSION AFTER PULLING FORCE IS RELEASED.
 2. SECURE TO POSTS AT NOT OVER 15 IN OC, AND TO RAELS AT NOT OVER 24 IN OC, AND TO TENSION WIRE AT NOT OVER 24 IN OC.
 3. USE U-SHAPED WIRE CONFORMING TO DIAMETER OF PIPE TO WHICH ATTACHED, CLASPING PIPE AND FABRIC FIRMLY WITH ENDS TWISTED AT LEAST TWO (2) FULL TURNS.
 4. END ENDS OF WIRE TO MINIMIZE HAZARDS TO PERSONS OR CLOTHING.
- M. INSTALL POST TOP AT EACH POST.
- N. GATES:
1. CONSTRUCT WITH FITTINGS OR BY WELDING.
 2. PROVIDE RIGID, WEATHERPROOF JOINTS.
 3. ASSURE RIGID, NON-SAGGING, NON-TWISTING GATE.
 4. COAT WELDS WITH RUST PREVENTIVE PAINT, COLOR TO MATCH PIPE.
 5. FENCE STREAM CROSSINGS SHALL ACCOUNT FOR ANTICIPATED STORMWATER FLOWS AND POTENTIAL DEBRIS. ALLOWING FLOWS AND DEBRIS TO PASS THROUGH WITHOUT DAMAGE TO FENCING.
 6. PROVIDE 20' CLEARANCE BETWEEN FENCE AND ANY NEW PLANTING THAT WOULD BE AN OBSTACLE TO MAINTENANCE. PROVIDE 20' CLEARANCE BETWEEN FENCE AND EXISTING UNCLEARED AREA, INCLUDING ANY LARGE ROCKS, TREE STUMPS, OR OTHER MAINTENANCE OBSTRUCTIONS, UNLESS APPROVED BY SR EPC.

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3200 West End Avenue
Suite 500
Nashville, TN 37203
(615) 703-2637



SR MARYVILLE PV
3121 MINT ROAD, BLOUNT COUNTY
MARYVILLE, TN 37803

DESIGNED RDT
DRAWN RDT
REVIEWED RMB
SCALE N/A
PROJECT NO. 230304
DATE 2/6/2025
CAD FILE: G2300034-01
TITLE
CIVIL NOTES AND SPECS
Sheet No.

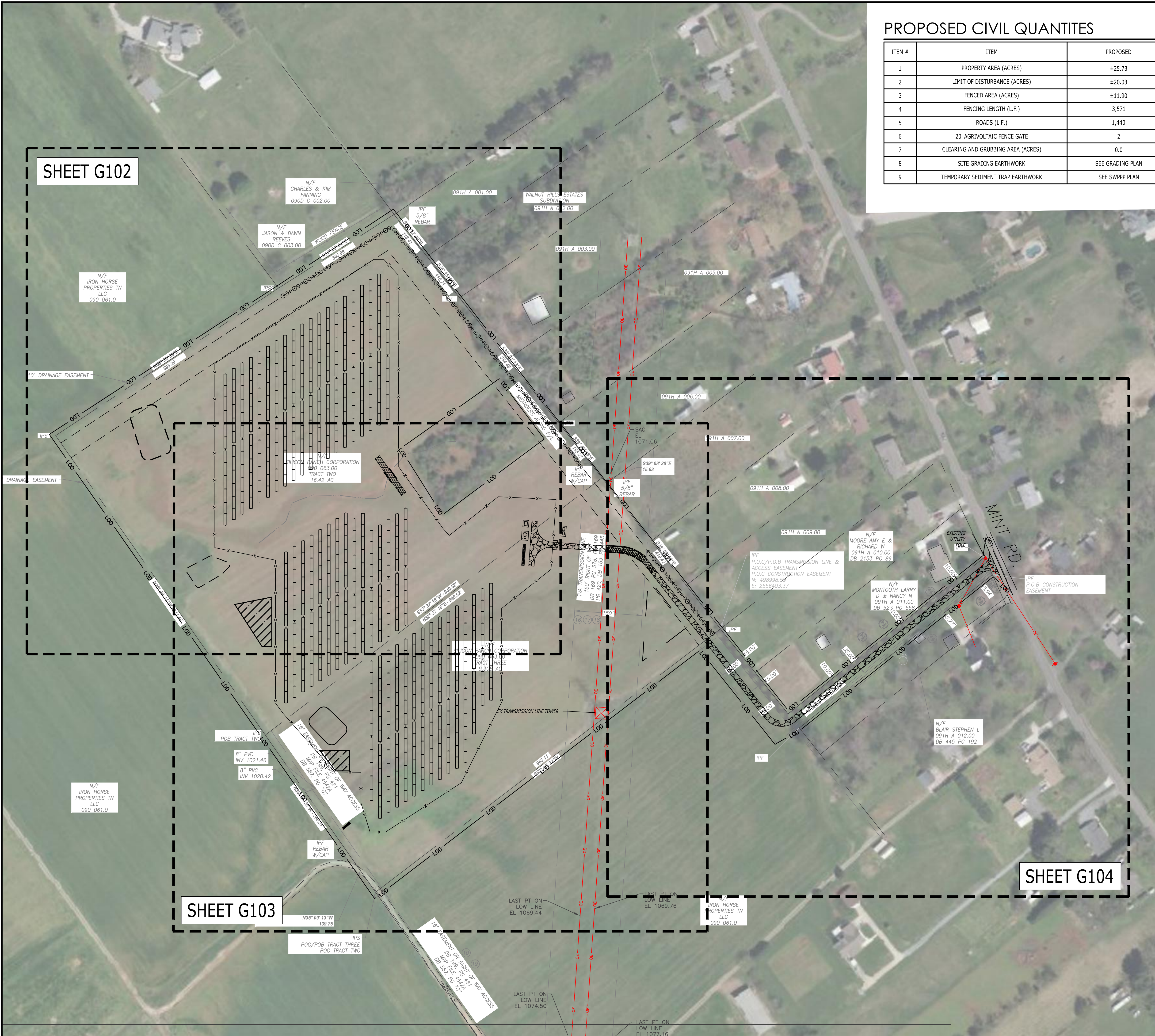
C002

REVISIONS

No.	Date	Desc.
0	01/09/2025	30% SUBMISSION
1	02/06/2025	60% SUBMISSION
2	03/06/2025	90% SUBMISSION
4	03/31/2025	SITE RAIN SUBMISSION

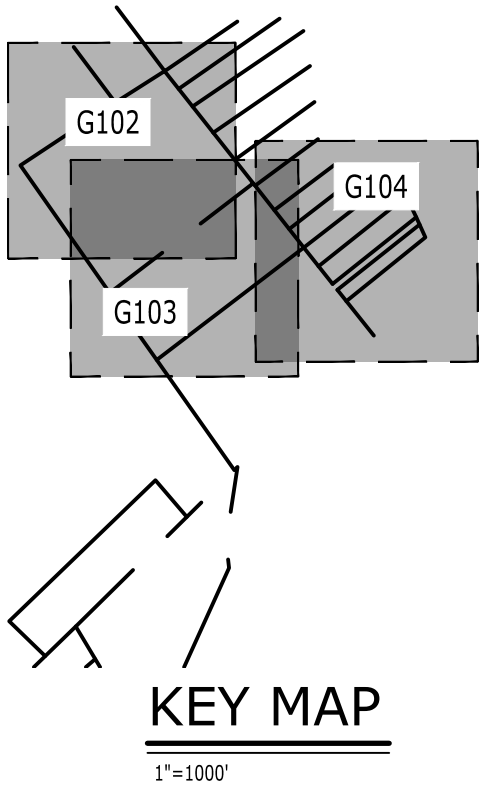
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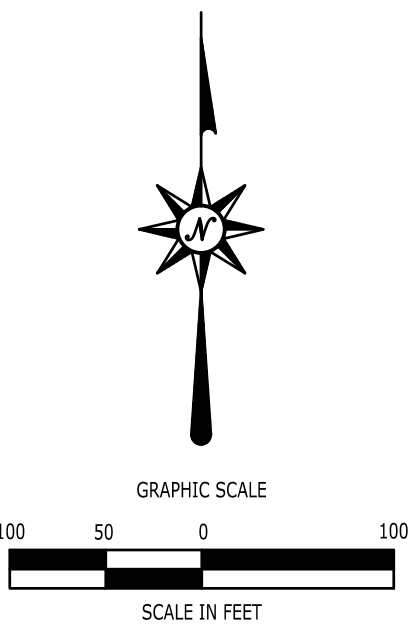
PROPOSED CIVIL QUANTITES

ITEM #	ITEM	PROPOSED
1	PROPERTY AREA (ACRES)	±25.73
2	LIMIT OF DISTURBANCE (ACRES)	±20.03
3	FENCED AREA (ACRES)	±11.90
4	FENCING LENGTH (L.F.)	3,571
5	ROADS (L.F.)	1,440
6	20' AGRIVOLTAIC FENCE GATE	2
7	CLEARING AND GRUBBING AREA (ACRES)	0.0
8	SITE GRADING EARTHWORK	SEE GRADING PLAN
9	TEMPORARY SEDIMENT TRAP EARTHWORK	SEE SWPPP PLAN



SITE PLAN LEGEND

---	PROPERTY LINE
---	LIMIT OF DISTURBANCE AND SITE WORK CONTRACT LIMIT LINE
---	SOLAR SETBACK LINE
---	VEGETATIVE SETBACK
---	EXISTING NON JURISDICTIONAL WET WEATHER CONVEYANCES
---	EXISTING TREELINE
---	EXISTING OVERHEAD ELECTRICAL LINES
---	PROPOSED TREELINE
---	PROPOSED FENCE OR APPROVED ALTERNATE
---	PROPOSED CONSTRUCTION LAYDOWN AREA
---	PERMANENT DETENTION BASIN
---	TEMPORARY SEDIMENT TRAP/BASIN
---	EXISTING UTILITY POLE
---	PROPOSED INVERTER PAD LOCATION
---	PROPOSED TRANSFORMER PAD LOCATION
---	PROPOSED SWITCHGEAR PAD LOCATION
---	SOLAR PANELS
---	PROPOSED GRAVEL ACCESS DRIVE
---	PROPOSED MATERIAL STOCKPILE AREA
---	PROPOSED LOW WATER CROSSING
---	PROPOSED LANDSCAPING



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DESIGN:
30% SUBMISSION
01/09/2025
60% SUBMISSION
02/06/2025
SITE PLAN SUBMISSION
02/27/2025
80% SUBMISSION
03/06/2025
SITE PLAN SUBMISSION
03/31/2025

Revisions

No.	0	1	2	3	4
Date	01/09/2025	02/06/2025	02/27/2025	03/06/2025	03/31/2025

Designed
Drawn
Reviewed
Scale
Project No.
Date
CAD File:
Title

RD
RD
RMR
1"=100'
2300034
2/6/2025
C2300034-10
OVERALL SITE PLAN

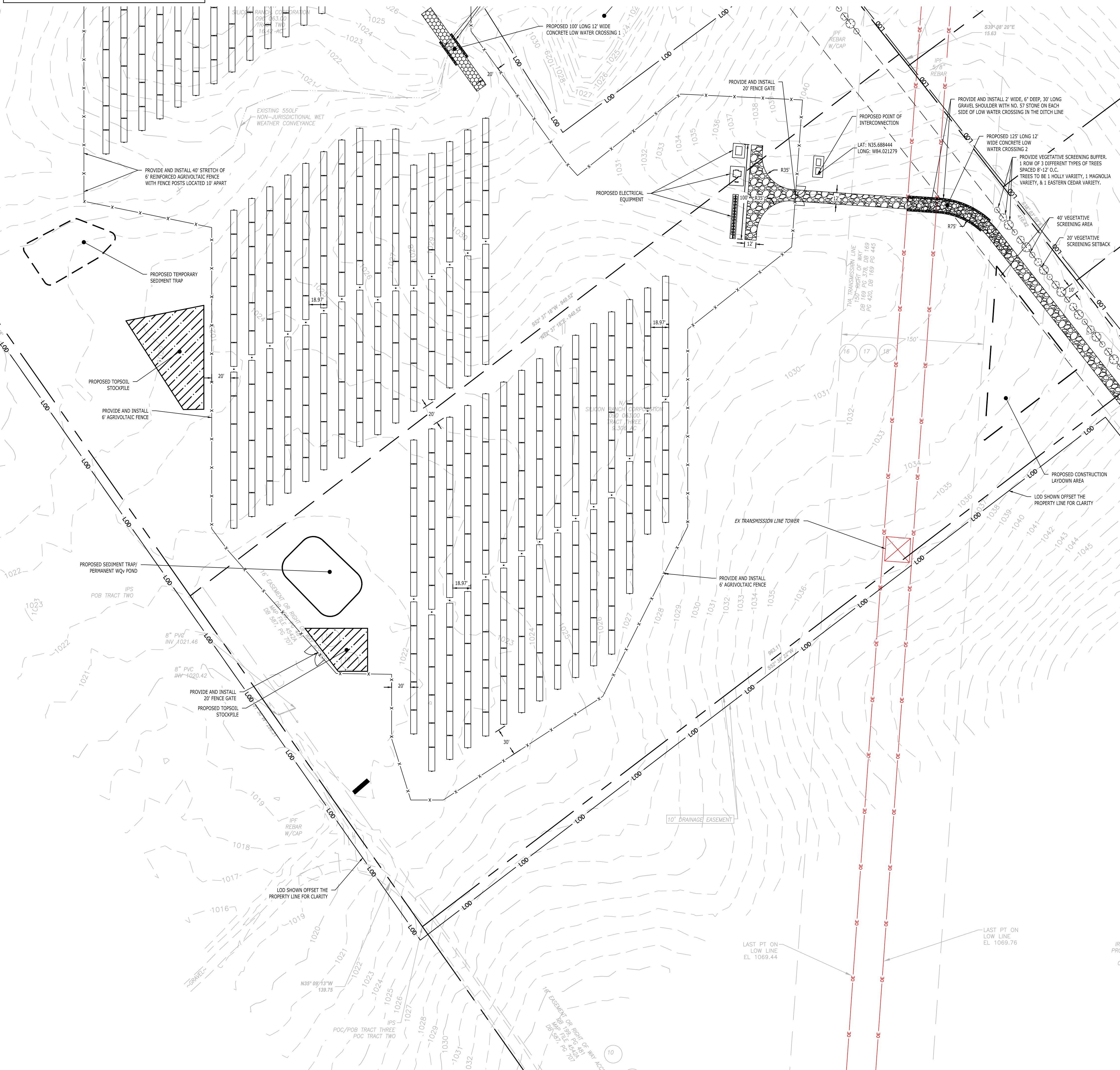
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G101

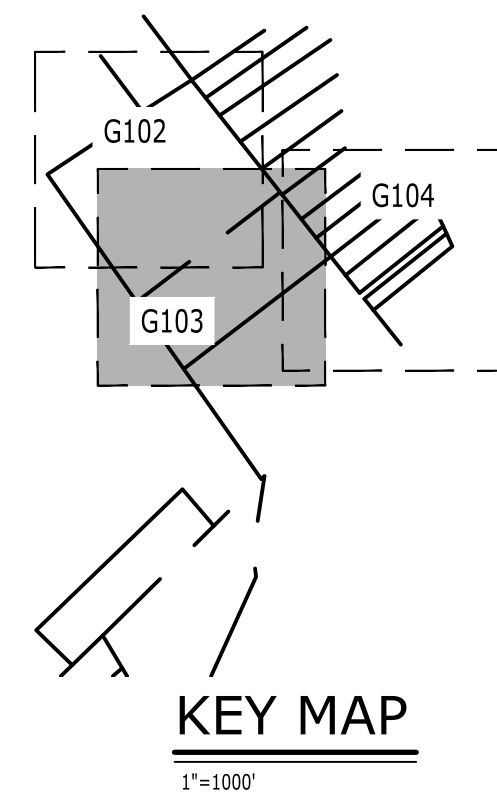
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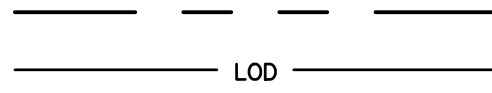














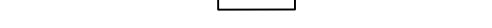


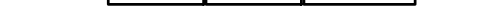

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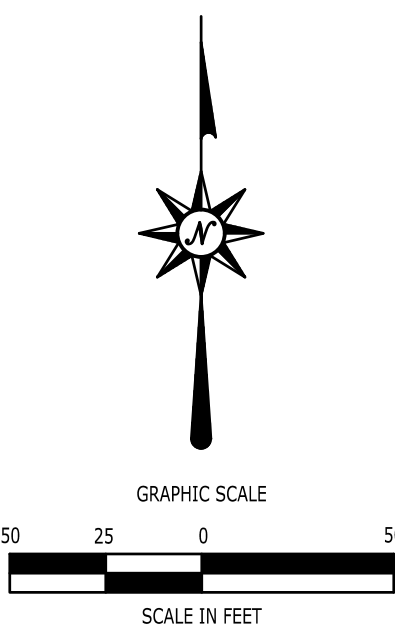


SEE SHEET G104 FOR CONTINUATION

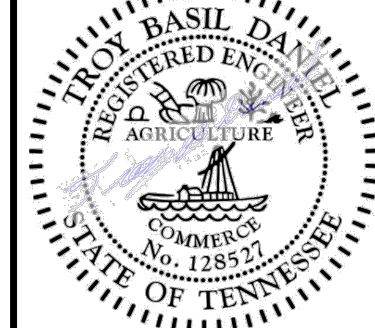


SITE PLAN LEGEND

	PROPERTY LINE
	LIMIT OF DISTURBANCE AND SITE WORK CONTRACT LIMIT LINE
	SOLAR SETBACK LINE
	VEGETATIVE SETBACK
	EXISTING TREELINE
	EXISTING NON JURISDICTIONAL WET WEATHER CONVEYANCES
	EXISTING OVERHEAD ELECTRICAL LINES
	PROPOSED FENCE OR APPROVED ALTERNATE
	PROPOSED CONSTRUCTION LAYDOWN AREA
	PERMANENT DETENTION BASIN
	TEMPORARY SEDIMENT TRAP/BASIN
	EXISTING UTILITY POLE
	PROPOSED INVERTER PAD LOCATION
	PROPOSED TRANSFORMER PAD LOCATION
	PROPOSED SWITCHGEAR PAD LOCATION
	SOLAR PANELS
	PROPOSED GRAVEL ACCESS DRIVE
	PROPOSED MATERIAL STOCKPILE AREA
	PROPOSED LOW WATER CROSSING
	PROPOSED LANDSCAPING



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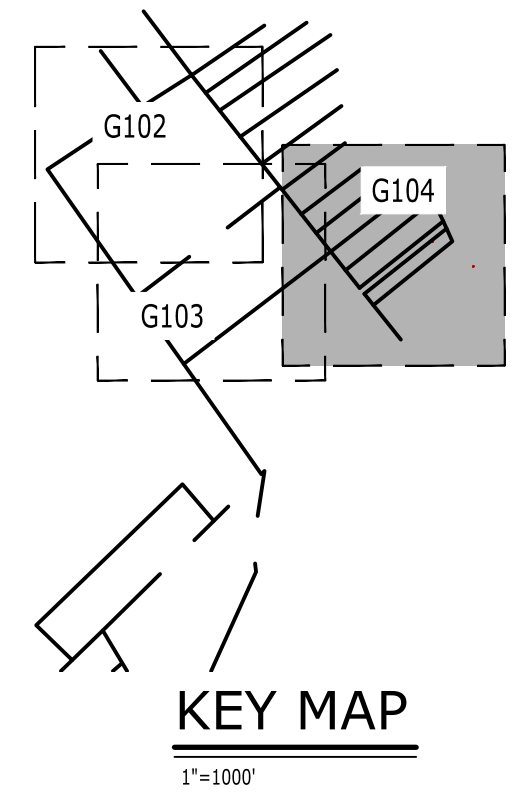
REVISIONS		Des.
No.	Date	
0	01/09/2025	30% SUBMISSION
1	03/06/2025	60% SUBMISSION
2	02/07/2025	SITE PLAN SUBMISSION
3	03/08/2025	90% SUBMISSION
4	03/31/2025	SITE PLAN SUBMISSION

Designed	ROT
Drawn	ROT
Reviewed	RMR
Scale	1"=50'
Project No.	23000034
Date	2/6/2025
CAD FILE:	C2300034-10

















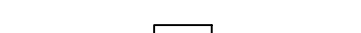
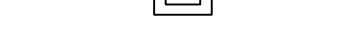


Title
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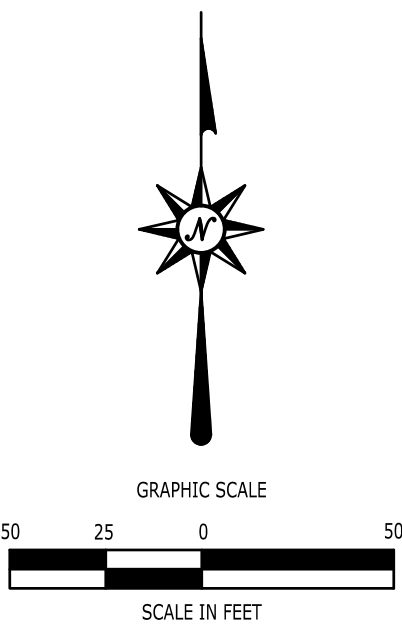
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G103

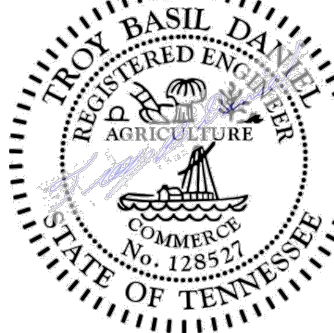


SITE PLAN LEGEND

	PROPERTY LINE
	LIMIT OF DISTURBANCE AND SITE WORK CONTRACT LIMIT LINE
	SOLAR SETBACK LINE
	VEGETATIVE SETBACK
	EXISTING TREELINE
	EXISTING NON JURISDICTIONAL WET WEATHER CONVEYANCES
	EXISTING OVERHEAD ELECTRICAL LINES
	PROPOSED FENCE OR APPROVED ALTERNATE
	PROPOSED CONSTRUCTION LAYDOWN AREA
	PERMANENT DETENTION BASIN
	TEMPORARY SEDIMENT TRAP/BASIN
	EXISTING UTILITY POLE
	PROPOSED INVERTER PAD LOCATION
	PROPOSED TRANSFORMER PAD LOCATION
	PROPOSED SWITCHGEAR PAD LOCATION
	SOLAR PANELS
	PROPOSED GRAVEL ACCESS DRIVE
	PROPOSED MATERIAL STOCKPILE AREA
	PROPOSED LOW WATER CROSSING
	PROPOSED LANDSCAPING



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MARYVILLE, TN 37803

REVISIONS		
No.	Date	Desc.
0	01/09/2025	30% SUBMISSION
1	02/06/2025	60% SUBMISSION
2	02/27/2025	SITE PLAN SUBMISSION
3	03/06/2025	90% SUBMISSION
4	03/31/2025	SITE PLAN SUBMISSION

Designed	RD
Drawn	RD
Reviewed	RM
Scale	1"=50'
Project No.	230003
Date	2/6/2022
CAD File: C2300034-10	

Title
SITE PLAN

Sheet No.

G104

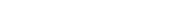
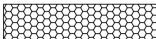


1. LOD SHOWN 5' OFF THE PROPERTY LINE FOR CLARITY ONLY. NO WORK SHALL BE PERFORMED ON THE NEIGHBORING PROPERTIES.

CALL TABLE		
Line #	Length	Direction
L1	241.00	S38° 32' 07"E
L2	557.45	N51° 27' 19"E
L3	36.11	S24° 18' 01"E
L4	608.57	S51° 27' 19"W
L5	277.24	N38° 32' 07"W
L6	60.01	N52° 38' 22"E
L7	10.32	S24° 18' 01"E
L8	569.91	S51° 27' 19"W
L9	251.31	N38° 32' 07"W
L10	15.00	N52° 38' 22"E
L11	150.00	S51° 33' 02"W
L12	5.75	N38° 32' 41"W
L13	151.52	N51° 27' 19"E
L14	6.19	S24° 18' 01"E

KEY MAP

1"=1000'

	PROPERTY LINE
	LIMIT OF DISTURBANCE AND SITE WORK CONTRACT LIMIT LINE
	SOLAR SETBACK LINE
	VEGETATIVE SETBACK
	EXISTING TREE LINE
	EXISTING NON JURISDICTIONAL WET WEATHER CONVEYANCES
	EXISTING OVERHEAD ELECTRICAL LINES
	PROPOSED FENCE OR APPROVED ALTERNATE
	PROPOSED CONSTRUCTION LAYDOWN AREA
	PERMANENT DETENTION BASIN
	TEMPORARY SEDIMENT TRAP/BASIN
	EXISTING UTILITY POLE
	PROPOSED INVERTER PAD LOCATION
	PROPOSED TRANSFORMER PAD LOCATION
	PROPOSED SWITCHGEAR PAD LOCATION
	SOLAR PANELS
	PROPOSED GRAVEL ACCESS DRIVE
	PROPOSED MATERIAL STOCKPILE AREA
	PROPOSED LOW WATER CROSSING
	PROPOSED LANDSCAPING

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NOT RELEASED FOR CONSTRUCTION

3/31/2025, RTUCKER, G:\JOBS\23\0012300034\DWG\C2300034-10.DWG, G105 24X36 20SC,

1043
1044
1045
1046
1047
1048
1049

P.O.C/P.O.B TRANSMISSION LINE &
ACCESS EASEMENT
P.O.C CONSTRUCTION EASEMENT
N: 498998.59
E: 2556403.37

TRANSMISSION LINE EASEMENT
0.214 ACRES OR 9,329 SQFT.

PROPOSED ACCESS EASEMENT
0.825 ACRES OR 35,952 SQFT.

10" DRAINAGE EASEMENT

SEE ABOVE FOR CONTINUATION

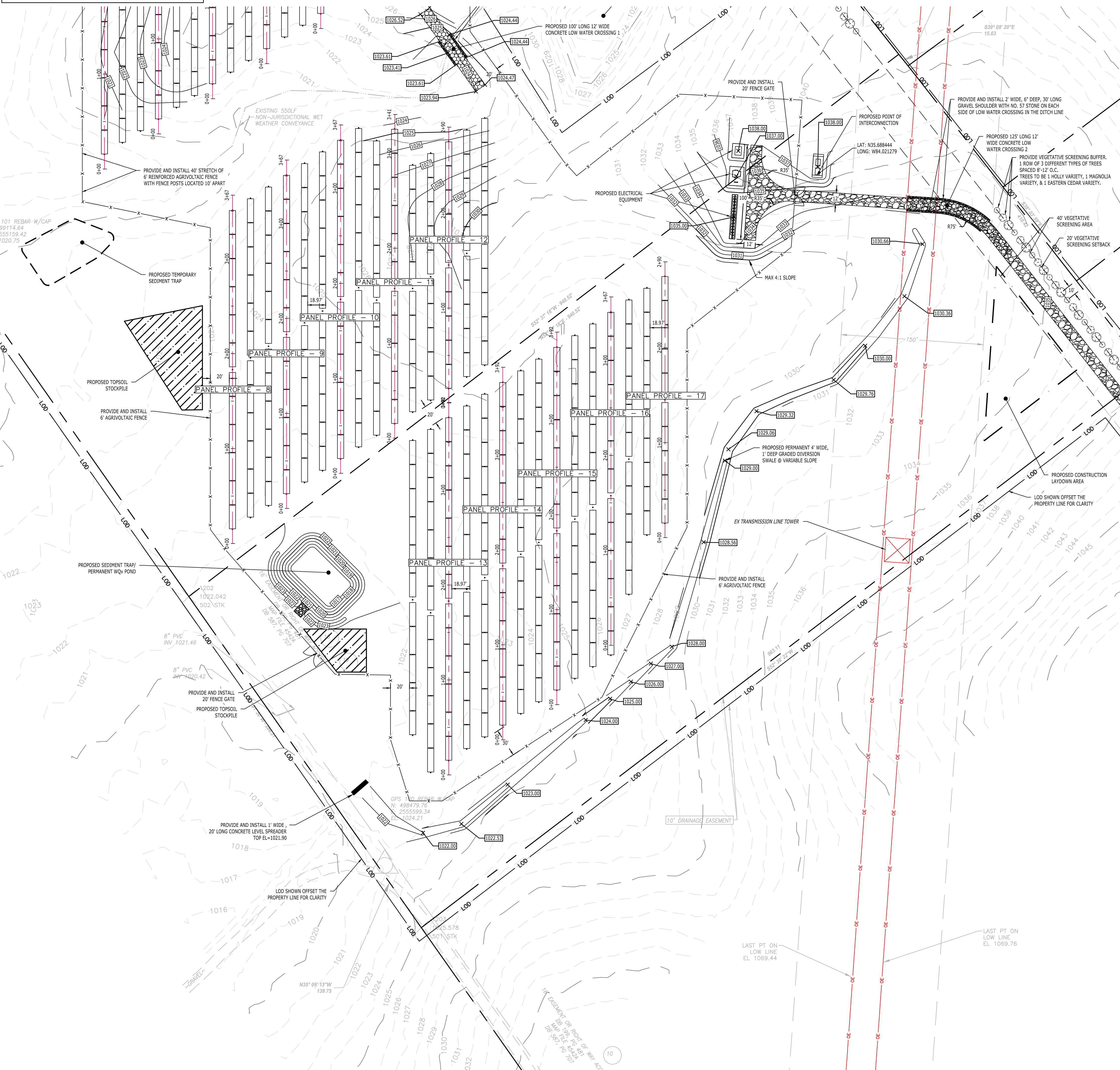
CALL TABLE		
Line #	Length	Direction
L1	241.00	S38° 32' 07"E
L2	557.45	N51° 27' 19"E
L3	36.11	S24° 18' 01"E
L4	608.57	S51° 27' 19"W
L5	277.24	N38° 32' 07"W
L6	60.01	N52° 38' 22"E
L7	10.32	S24° 18' 01"E
L8	569.91	S51° 27' 19"W
L9	251.31	N38° 32' 07"W
L10	15.00	N52° 38' 22"E
L11	150.00	S51° 33' 02"W
L12	5.75	N38° 32' 41"W
L13	151.52	N51° 27' 19"E
L14	6.19	S24° 18' 01"E

PROPOSED ACCESS EASEMENT
0.825 ACRES OR 35,952 SQFT.

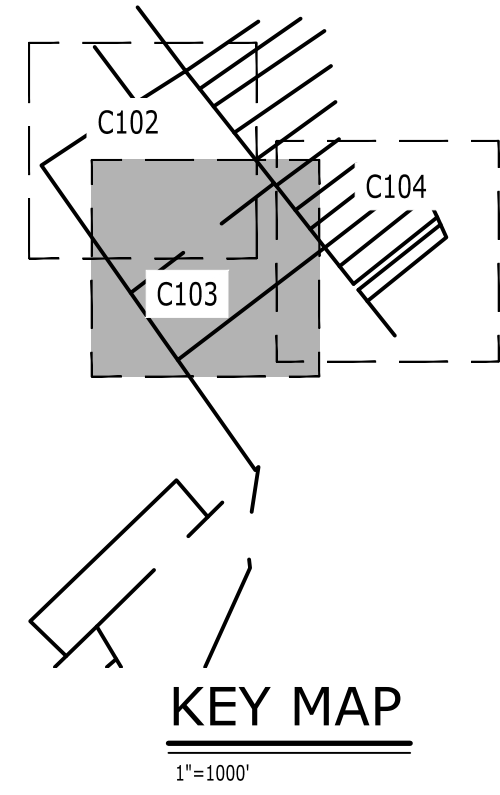
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Xref(s): ; XC2300034-10 ; XB2300034-01 ; XC2300234-00 ; X12300034-01 ; XC2300034-01 ; 1676382_Silicon Ranch_Maryville_Site Plan

SEE SHEET C102 FOR CONTINUATION



SEE SHEET C104 FOR CONTINUATION

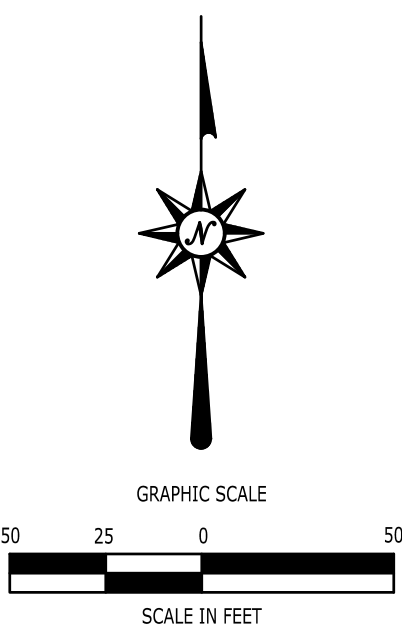


GRADING PLAN LEGEND

	PROPERTY LINE
	LIMIT OF DISTURBANCE AND SITE WORK CONTRACT LIMIT LINE
	SOLAR SETBACK LINE
	VEGETATIVE SETBACK
	EXISTING ELEVATION CONTOURS
	EXISTING NON JURISDICTIONAL WET WEATHER CONVEYANCES
	EXISTING TREELINE
	EXISTING OVERHEAD ELECTRICAL LINES
	PROPOSED TREELINE
	PROPOSED FENCE OR APPROVED ALTERNATE
	PROPOSED CONSTRUCTION LAYDOWN AREA
	PERMANENT DETENTION BASIN
	TEMPORARY SEDIMENT TRAP/BASIN
	EXISTING UTILITY POLE
	PROPOSED INVERTER PAD LOCATION
	PROPOSED TRANSFORMER PAD LOCATION
	PROPOSED SWITCHGEAR PAD LOCATION
	SOLAR PANELS
	PROPOSED GRAVEL ACCESS DRIVE
	PROPOSED MATERIAL STOCKPILE AREA
	PROPOSED CONTOURS
	PROPOSED SPOT GRADE

ABBREVIATIONS:

TS	TOP OF SLAB
PAD	GROUND IMMEDIATELY AROUND AREA
FG	FINAL GRADE
INV	INVERT
TF	TOP OF FRAME



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TS	TOP OF SLAB
PAD	GROUND IMMEDIATELY AROUND AREA
FG	FINAL GRADE
INV	INVERT
TF	TOP OF FRAME

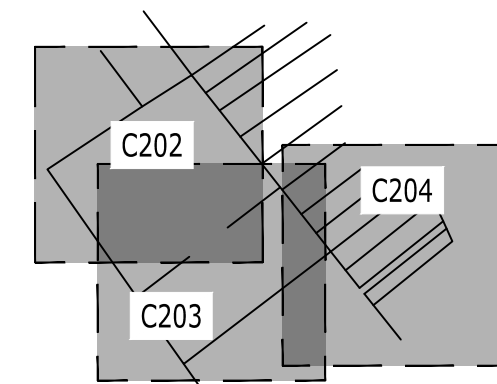


C104

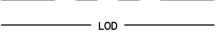
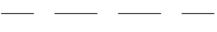
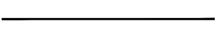
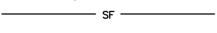
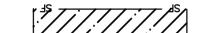
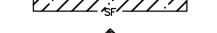
	CUT VOLUME (CY)	FILL VOLUME (CY)	TOTAL (CY)	
TEMP SED TRAP 1	594	23	571	CUT
TEMP SED TRAP 2	284	45	239	CUT
PERMANENT SED TRAP 3	530	19	511	CUT
TOTAL EARTHWORK	1408	87	1321	CUT

**A SHRINKAGE FACTOR OF 10% WAS ASSUMED FOR CUT/FILL VOLUME CALCULATIONS

MATERIAL	QUANTITY
SILT FENCE (L.F.)	2764
SILT FENCE WITH WIRE BACKING (L.F.)	409
FILTER SOCK (L.F.)	1518
ROCK CONSTRUCTION ENTRANCE (RCE) (S.F.)	1671
POROUS BAFFLES (L.F.)	561



1°=1000'

	PROPERTY LINE
	LIMIT OF DISTURBANCE AND SITE WORK CONTRACT LIMIT LINE
	SOLAR SETBACK LINE
	VEGETATIVE SETBACK
	EXISTING ELEVATION CONTOURS
	EXISTING NON JURISDICTIONAL WET WEATHER CONVEYANCES
	EXISTING TREELINE
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	SOLAR PANELS
	PROPOSED GRAVEL ACCESS DRIVE
	PROPOSED MATERIAL STOCKPILE AREA
	PROPOSED CONTOURS
	PROPOSED SPOT GRADE
	PROPOSED SILT FENCE
	PROPOSED REINFORCED SILT FENCE
	PROPOSED SILT SOCK DIVERSION
	PROPOSED POROUS BAFFLE
	SEDIMENT CONTROL DRAINAGE AREA
	PROPOSED CONSTRUCTION EXIT
	PROPOSED MATERIAL STOCKPILE AREA
	PROPOSED RIP RAP OUTLET PROTECTION
	PROPOSED CONCRETE WASHPIT

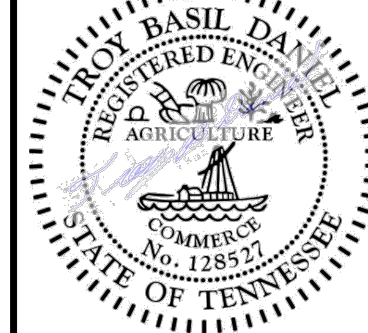


GRAPHIC SCALE

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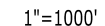
SCALE IN FEET

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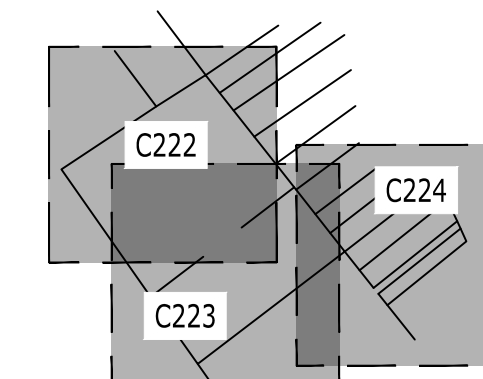
REVISIONS		
No.	Date	Desc.
0	01/09/2025	30% SUBMISSION
1	02/06/2025	60% SUBMISSION
2	02/27/2025	SITE PLAN SUBMISSION
3	03/06/2025	90% SUBMISSION
4	03/31/2025	SITE PLAN SUBMISSION

Designed	RDT
Drawn	RDT
Reviewed	RMR
Scale	1"=100'
Project No.	2300034
Date	2/6/2025
CAD File: C2300034-40	



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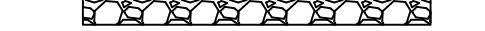

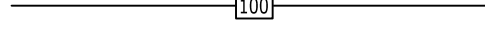





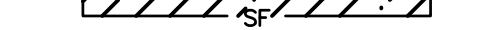














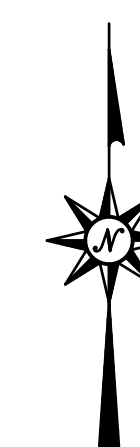


KEY MAP

$$1^{\circ}=100$$

SWPPP PLAN LEGEND

	PROPERTY LINE
	LIMIT OF DISTURBANCE AND SITE WORK CONTRACT LIMIT LINE
	SOLAR SETBACK LINE
	VEGETATIVE SETBACK
	EXISTING ELEVATION CONTOURS
	EXISTING NON JURISDICTIONAL WET WEATHER CONVEYANCES
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	SOLAR PANELS
	PROPOSED GRAVEL ACCESS DRIVE
	PROPOSED MATERIAL STOCKPILE AREA
	PROPOSED CONTOURS
	PROPOSED SPOT GRADE
	PROPOSED SILT FENCE
	PROPOSED REINFORCED SILT FENCE
	PROPOSED SILT SOCK DIVERSION
	PROPOSED POROUS BAFFLE
	SEDIMENT CONTROL DRAINAGE AREA
	PROPOSED CONSTRUCTION EXIT
	PROPOSED MATERIAL STOCKPILE AREA
	PROPOSED RIP RAP OUTLET PROTECTION
	PROPOSED CONCRETE WASHPIT

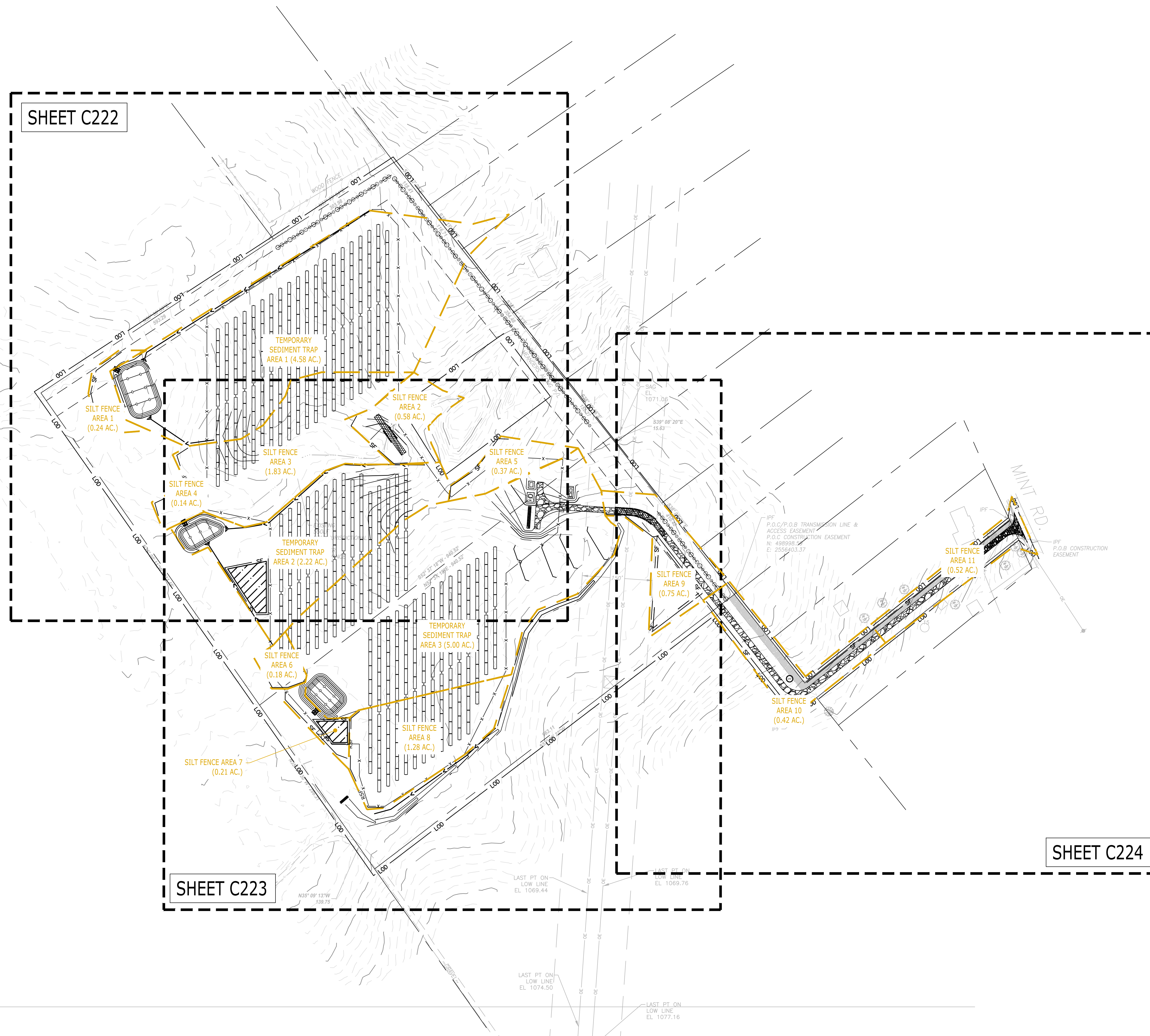


GRAPHIC SOURCE

100 50 0

SCALE IN FEET

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3/31/2025, 11:00:34 AM, G:\WORKS\21003\210034\DWG\G2300034-01.DWG, C231, 24x36

SEDIMENT TRAP CONSTRUCTION SPECIFICATIONS

- CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER, AND STOCKPILE IT OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA.
- ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 8 INCHES, AND MACHINE COMPACT IT OVERFILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
- CONSTRUCT THE OUTLET SECTION IN THE EMBANKMENT. PROTECT THE CONNECTION BETWEEN THE RIPRAP AND THE SOIL FROM PIPING BY USING GEOTEXTILE FABRIC BETWEEN THE RIP RAP AND SOIL. PLACE THE FILTER FABRIC BETWEEN THE SOIL AND RIP RAP. EXTEND THE FABRIC ACROSS THE SPILLWAY FOUNDATION AND SIDES TO THE TOP OF THE DAM.
- CLEAR THE SEDIMENT TRAP STORAGE ZONE AREA BELOW THE ELEVATION OF THE CREST OF THE SPILLWAY TO FACILITATE CLEANOUT.
- ALL CUT AND FILL SLOPES MUST BE 2:1 OR FLATTER.
- ENSURE THAT THE STONE SECTION OF THE EMBANKMENT HAS A MINIMUM BOTTOM WIDTH OF 3 FEET AND MAXIMUM SIDE SLOPES OF 1:1 THAT EXTEND TO THE BOTTOM OF THE SPILLWAY SECTION.
- CONSTRUCT THE MINIMUM FINISHED STONE SPILLWAY BOTTOM WIDTH, AS SHOWN ON THE PLANS, WITH 2:1 SIDE SLOPES EXTENDING TO THE TOP OF THE OVER FILLED EMBANKMENT. THE WEIR MUST BE LEVEL AND CONSTRUCTED TO THE WIDTH NOTED ON THE PLANS.
- MATERIAL USED IN THE STONE SECTION SHOULD BE A WELL GRADED MIXTURE OF STONE WITH A D50 SIZE OF 9 INCHES (CLASS A-1). THE STONE CAN BE MACHINE PLACED AND THE SMALLER STONES WORKED INTO THE VOIDS OF THE LARGER STONES.
- RUNOFF SHOULD BE DISCHARGED INTO THE TRAP IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT RUNOFF TO THE UPPER END OF THE STORAGE AREA TO IMPROVE TRAP EFFICIENCY. AVOID DISCHARGING RUNOFF OVER UNPROTECTED STEEP SIDE SLOPES.
- ENSURE THAT THE STONE SPILLWAY OUTLET SECTION EXTENDS DOWNSTREAM PAST THE TOE OF THE EMBANKMENT UNTIL STABLE CONDITIONS ARE REACHED AND OUTLET VELOCITY IS ACCEPTABLE FOR THE RECEIVING SYSTEM. KEEP THE EDGES OF THE STONE SECTION FLUSH WITH THE SURROUNDING GROUND.
- STABILIZE THE EMBANKMENT AND ALL DISTURBED AREAS ABOVE THE SEDIMENT POOL AND DOWNSTREAM FROM THE TRAP IMMEDIATELY AFTER CONSTRUCTION.

STANDARD E&S NOTES

- ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED SWPPP PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THESE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE SWPPP PLAN PREPARER, AND A REPRESENTATIVE FROM THE LOCAL SOILS CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE TENNESSEE ONE CALL SYSTEM INC SHALL BE NOTIFIED FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL SOILS CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
- AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE SWPPP BMPs SPECIFIED BY THE BMP SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS SWPPP PLAN.
- AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35 FEET. STOCKPILE SLOPES SHALL BE 2H:1V OR FLATTER.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL OFFICE OF THE DEPARTMENT.
- ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH TDEC REGULATIONS.
- OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN SWPPP PLAN APPROVED BY THE LOCAL SOIL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- UNTIL THE SITE IS STABILIZED, ALL SWPPP BMPs SHALL BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRAVING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF THE SWPPP BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- A LOG SHOWING DATES THAT THE BMPs WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEEP INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- ALL SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES – 6 TO 12 INCHES ON COMPACTED SOILS – PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2 INCHES OF TOPSOIL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SUPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS, PER THE GEOTECH REPORT.
- FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOO, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- THE INTERCEPTION OF SPRINGS AND/OR GROUNDWATER IS NOT ANTICIPATED FOR THIS PROJECT. HOWEVER, SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD. TDEC SHOULD BE CONTACTED AND ADDITIONAL PERMITTING FOR AN AQUATIC RESOURCE ALTERATION PERMIT WILL BE REQUIRED.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- E&S BMPs SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL SOIL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE SWPPP BMPs.
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs SHALL BE STABILIZED IMMEDIATELY, IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS ARE TO BE DONE ONLY DURING THE GERMINATING SEASON.
- UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL SOIL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
- FAILURE TO CORRECTLY INSTALL BMPs, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF BMPs MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE TDEC.
- SITES WITH OVER 50 ACRES OF DISTURBANCE REQUIRE QUARTERLY SITE ASSESSMENTS.

SEQUENCE OF CONSTRUCTION

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

- CONTACT TENNESSEEB11 SEVENTY-TWO (72) HOURS BEFORE COMMENCEMENT OF WORK AT (800)-351-1111 OR AT 811 AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
- CONTACT COUNTY SOILS CONSERVATION DISTRICT AGENT AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT.
- CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE COUNTY SOILS CONSERVATION DISTRICT AGENT PRIOR TO THE START OF WORK ON THE SITE. INSTALL TREE PROTECTION AND PERIMETER SILT FENCE.

PHASE 1 (INITIAL PHASE) – EROSION & SEDIMENT CONTROL SCHEDULE

- STAKE OUT CLEARING LIMITS, BUFFERS, ETC.
- CONDUCT PRE-CONSTRUCTION MEETING WITH EROSION CONTROL INSPECTOR.
- INSTALL CONSTRUCTION EXITS AND PERIMETER SILT FENCE.
- INSTALL SEDIMENT TRAPS/BASINS VOLUMES AND OUTLET WITH DIVERSION SWALE AND WATTLES BEFORE CLEARING OR GRADING OCCURS.
- PROVIDE TEMPORARY GRASSING/MULCHING @ 14-DAY INTERVALS

PHASE 2 (INTERIM PHASE) – EROSION & SEDIMENT CONTROL SCHEDULE

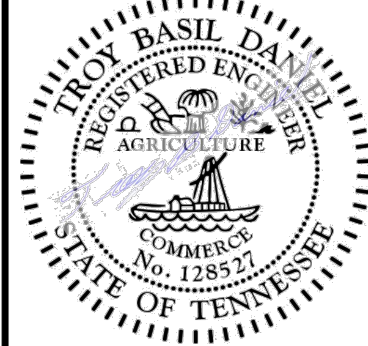
- BEGIN SITE GRADING AND CONSTRUCTION FOR DRIVES AND SOLAR RACKS.
- INSTALL UTILITIES (STORM, ELECTRIC AND TELECOMMUNICATIONS) AND ALL APPROPRIATE TEMPORARY INLET/OUTLET PROTECTION.
- REMOVE SEDIMENTS ACCUMULATING IN TRAPS WHEN THEY REACH ELEVATION OF CLEANOUT MARKER.
- MAINTAIN SILT FENCE AND INLET PROTECTION PER THIS PLAN AND NOTE 13 ABOVE AS THE PROJECT PROGRESSES.
- CLEAN ALL STORM AND TEMPORARY SEDIMENT TRAPS.
- INSTALL TEMPORARY STABILIZATION AND SEEDING NECESSARY IMMEDIATELY WHEN SITE (OR PORTIONS OF SITE) IS DORMANT.

PHASE 3 (FINAL PHASE) – EROSION & SEDIMENT CONTROL SCHEDULE

- FINISH SITE GRADING AND SITE CONSTRUCTION FOR DRIVES, SOLAR RACKS, AND FENCING.
- INSTALL UTILITIES (STORM, ELECTRIC AND TELECOMMUNICATIONS) AND ALL APPROPRIATE TEMPORARY INLET/OUTLET PROTECTION.
- REMOVE SEDIMENTS ACCUMULATING IN TRAPS WHEN THEY REACH ELEVATION OF CLEANOUT MARKER.
- MAINTAIN SILT FENCE AND INLET PROTECTION PER THIS PLAN AS THE PROJECT PROGRESSES.
- CLEAN ALL STORM AND TEMPORARY SEDIMENT TRAPS.
- INSTALL FINAL STABILIZATION AND LANDSCAPING.
- REMOVAL OF ALL TEMPORARY BMPs (INCLUDING SEDIMENT BASINS AND SEDIMENT TRAPS) AS SHOWN ON PLANS ONCE SITE IS PERMANENTLY STABILIZED.



3200 West End Avenue
Suite 500
Nashville, TN 37203
(615) 703-2637



SR MARYVILLE PV
3121 MINT ROAD, BLOUNT COUNTY
MARYVILLE, TN 37803

Desc.
30% SUBMISSION
60% SUBMISSION
70% SUBMISSION
90% SUBMISSION
SITE PLAN SUBMISSION

REVISIONS	
No.	Date
0	01/09/2025
1	02/06/2025
2	02/27/2025
3	03/06/2025
4	03/31/2025

Designed RDT
Drawn RDT
Reviewed RMR
Scale N/A
Project No. 2300034
Date 2/6/2025

CAD File: G2300034-01

Title
SWPPP NOTES

Sheet No.

FOR PERMITTING PURPOSES ONLY
NOT RELEASED FOR CONSTRUCTION

Vel (6) : 143200004-01

C231

TYPE	YEAR	PROJECT NO.	SHE NI
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REV. --

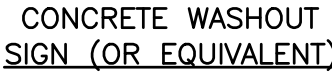
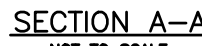
REV. —

TENNESSEE DEPARTMENT OF
 ENVIRONMENT & CONSERVATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
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—	—	—	—
—	—	—	—
—	—	—	—

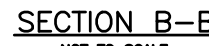
REV. —

REV. —



NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. SIGNAGE IDENTIFYING THE CONCRETE WASHOUT AREA SHALL BE INSTALLED WITHIN 5FT.OF THE WASHOUT FACILITY.



PLAN VIEW
NOT TO SCALE

TYPE "ABOVE GRADE"
WITH EATHERN BERMS

NOT TO SCALE

7.16



SILT FENCE TIEBACK
FOR STEEL POSTS OR WOOD POSTS

(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS
COST TO BE INCLUDED IN THE ITEMS FOR SILT FENCE)

SILT FENCE

NOT TO SCALE

7.34



N.T.S



JOINING FENCE SECTIONS

*STAKES SPACED @8' MAX.
USE 2" X 2" X 48" (+/-
3/8") WOOD OR EQUIVALENT
STEEL (U OR T) STAKES

SILT FENCE SHALL INCLUDE METAL BACKING.

FABRIC WIDTH SHALL BE 42" MINIMUM. STAKES SHALL BE HARDWOOD OR EQUIVALENT STEEL/METAL (U OR T) STAKES. AN 18" SUPPORT STAKE SHALL BE DRIVEN 12" MINIMUM INTO UNDISTURBED GROUND.

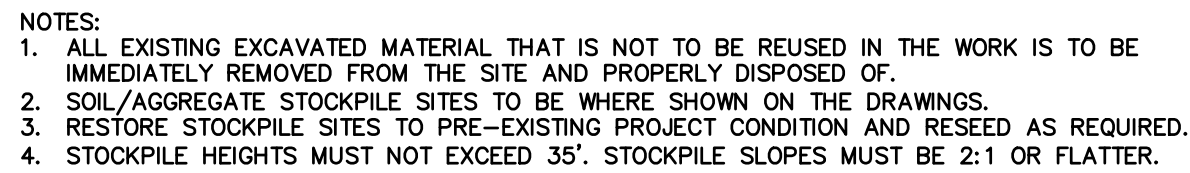
SILT FENCE SHALL BE INSTALLED AT EXISTING LEVEL GRADE. BOTH ENDS OF EACH FENCE SECTION SHALL BE EXTENDED AT LEAST 8 FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT.

SEDIMENT SHALL BE REMOVED WHERE ACCUMULATIONS REACH HALF THE ABOVEGROUND HEIGHT OF THE FENCE.

ANY SECTION OF SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET.

FENCE SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN TRIBUTARY AREA IS PERMANENTLY STABILIZED.

N.T.S

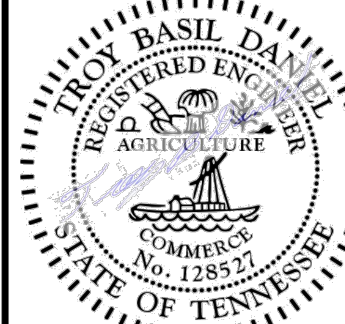


N.T.S

Architecture
Engineering
Environmental
Land Surveying

Architecture
Engineering
Environmental
Land Surveying

3200 West End Avenue
Suite 500
Nashville, TN 37203
(615) 703-2637



SR MARYVILLE PV
3121 MINT ROAD, BLOUNT COUNTY
MARYVILLE, TN 37803

REVISIONS		
No.	Date	Desc.
0	01/09/2025	30% SUBMISSION
1	02/06/2025	60% SUBMISSION
2	02/27/2025	SITE PLAN SUBMISSION
3	03/06/2025	90% SUBMISSION
4	03/31/2025	SITE PLAN SUBMISSION

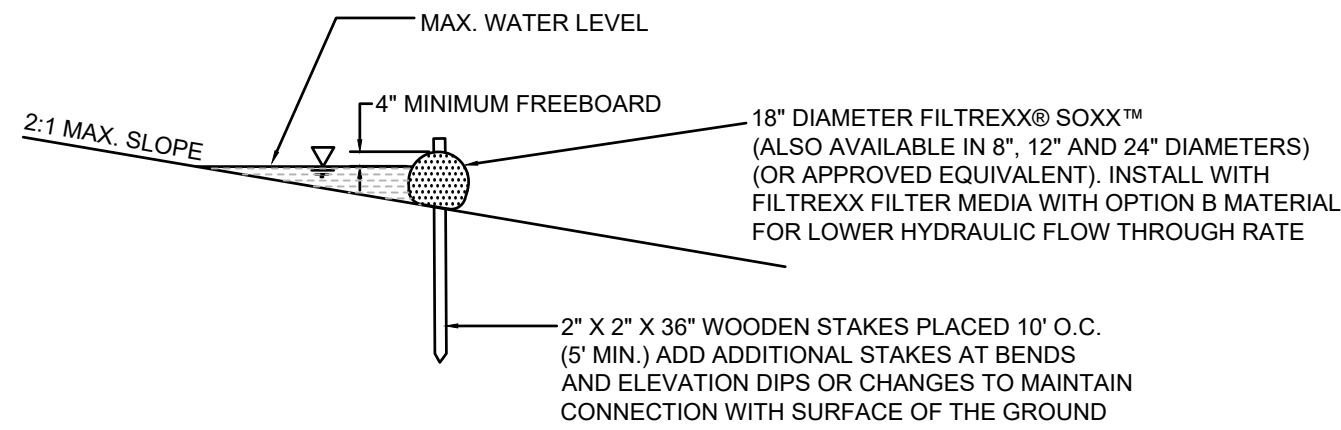
Designed	RD
Drawn	RD
Reviewed	RM
Scale	N/A
Project No.	230003
Date	2/6/202

Title
SWPPP DETAILS

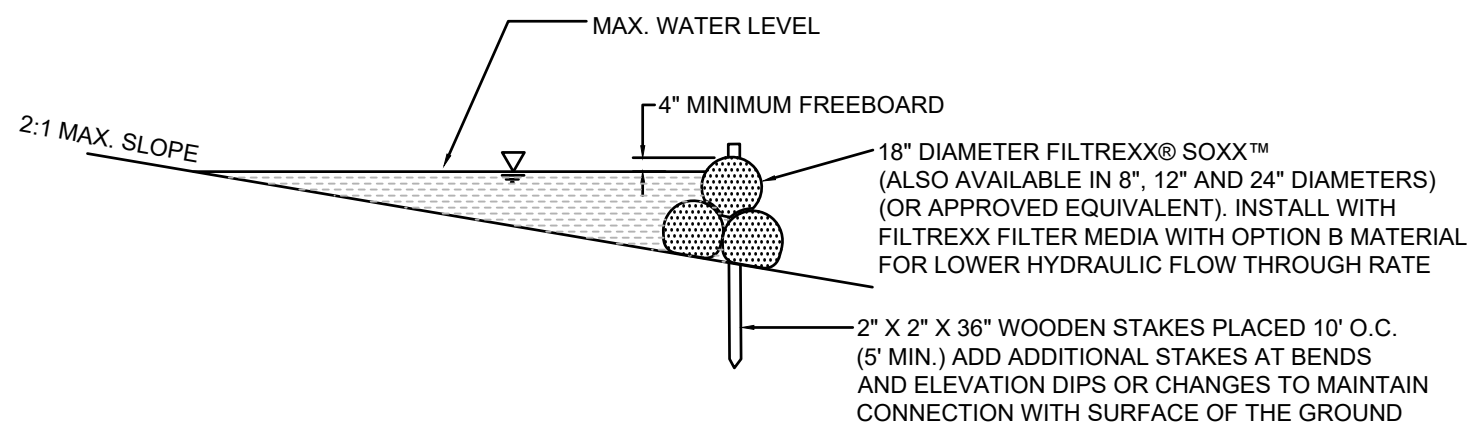
Sheet No. _____

C232

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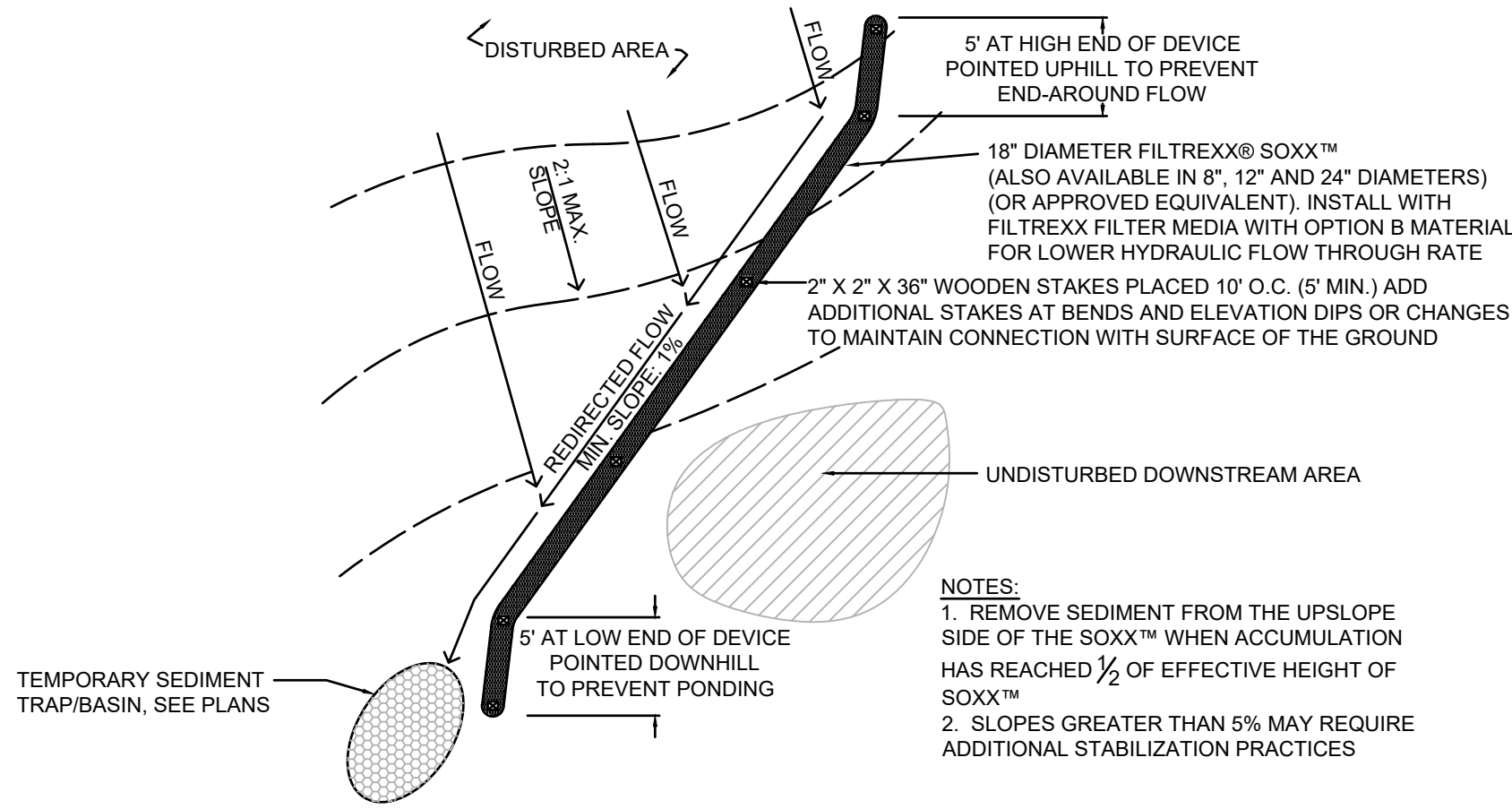
SINGLE INSTALLATION SECTION
NTS



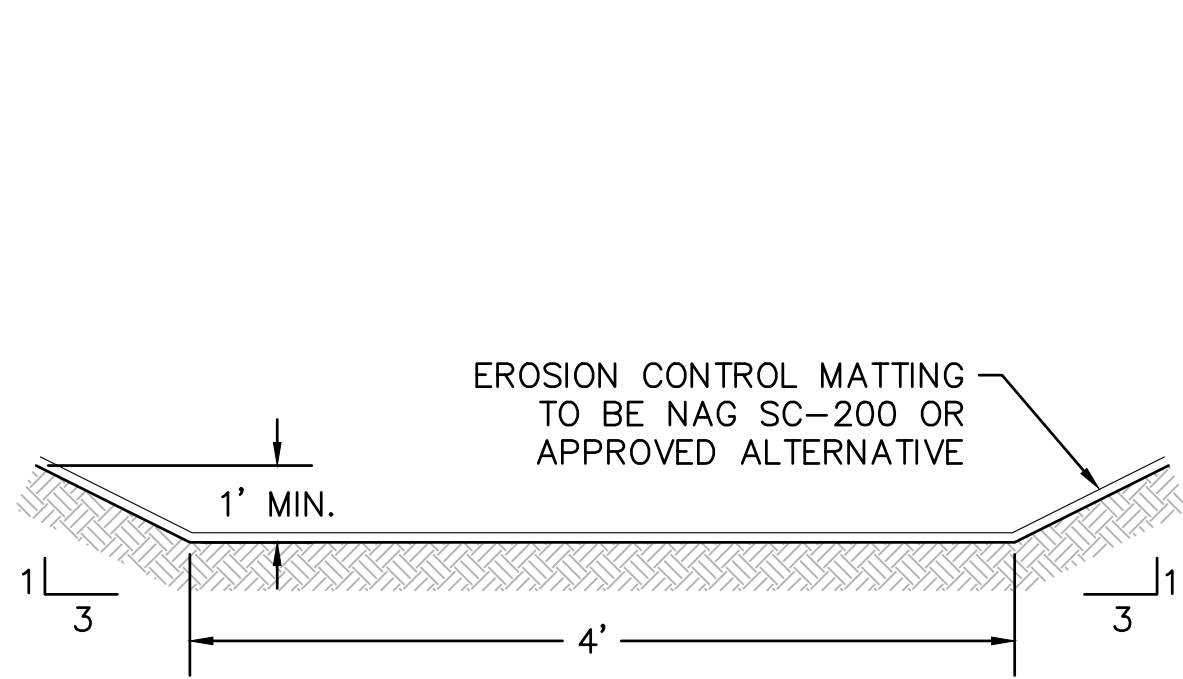
PYRAMID INSTALLATION SECTION
NTS

FILTREXX® RUNOFF DIVERSION SECTIONS (SILT SOCK DIVERSION)

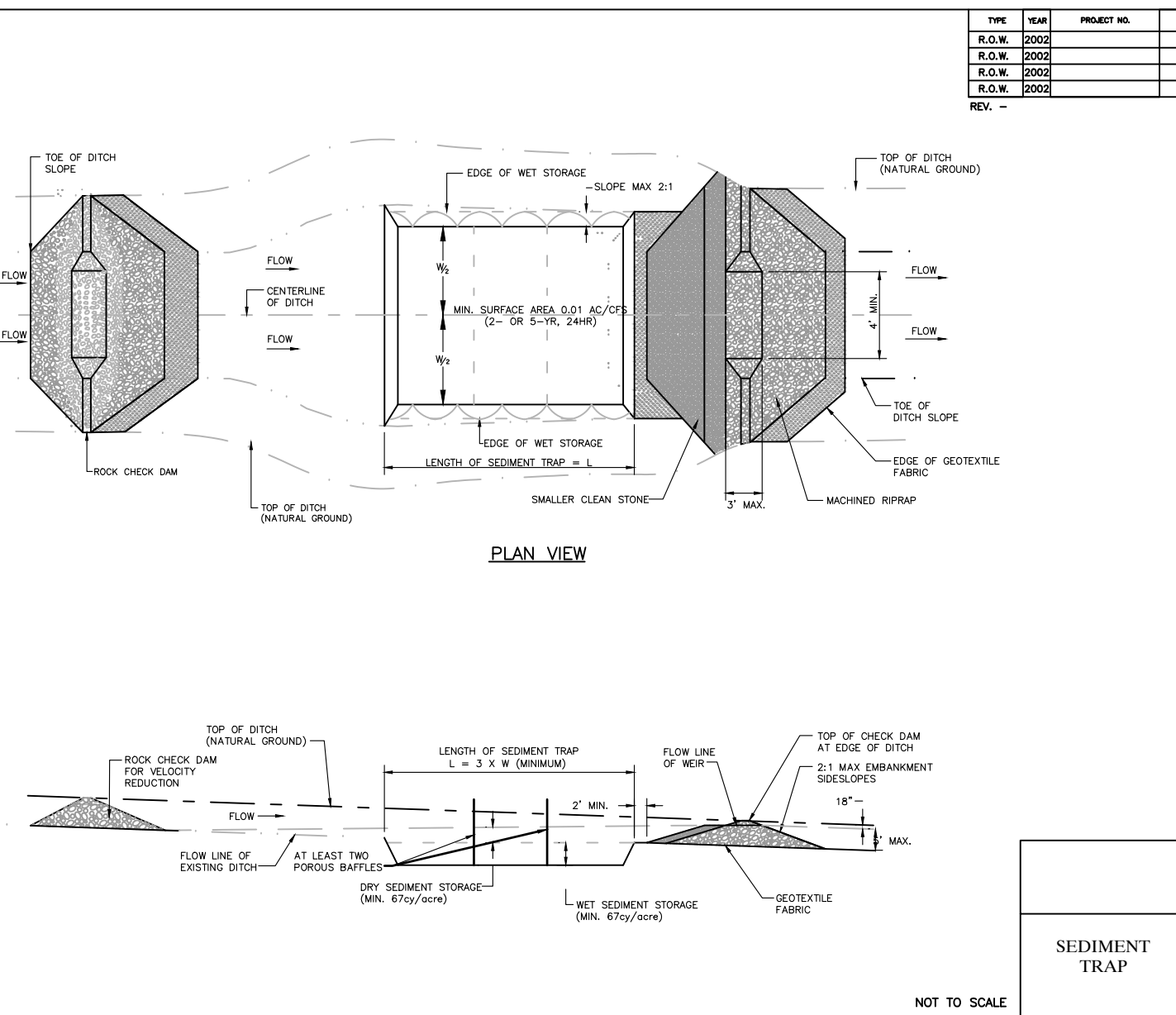
NTS



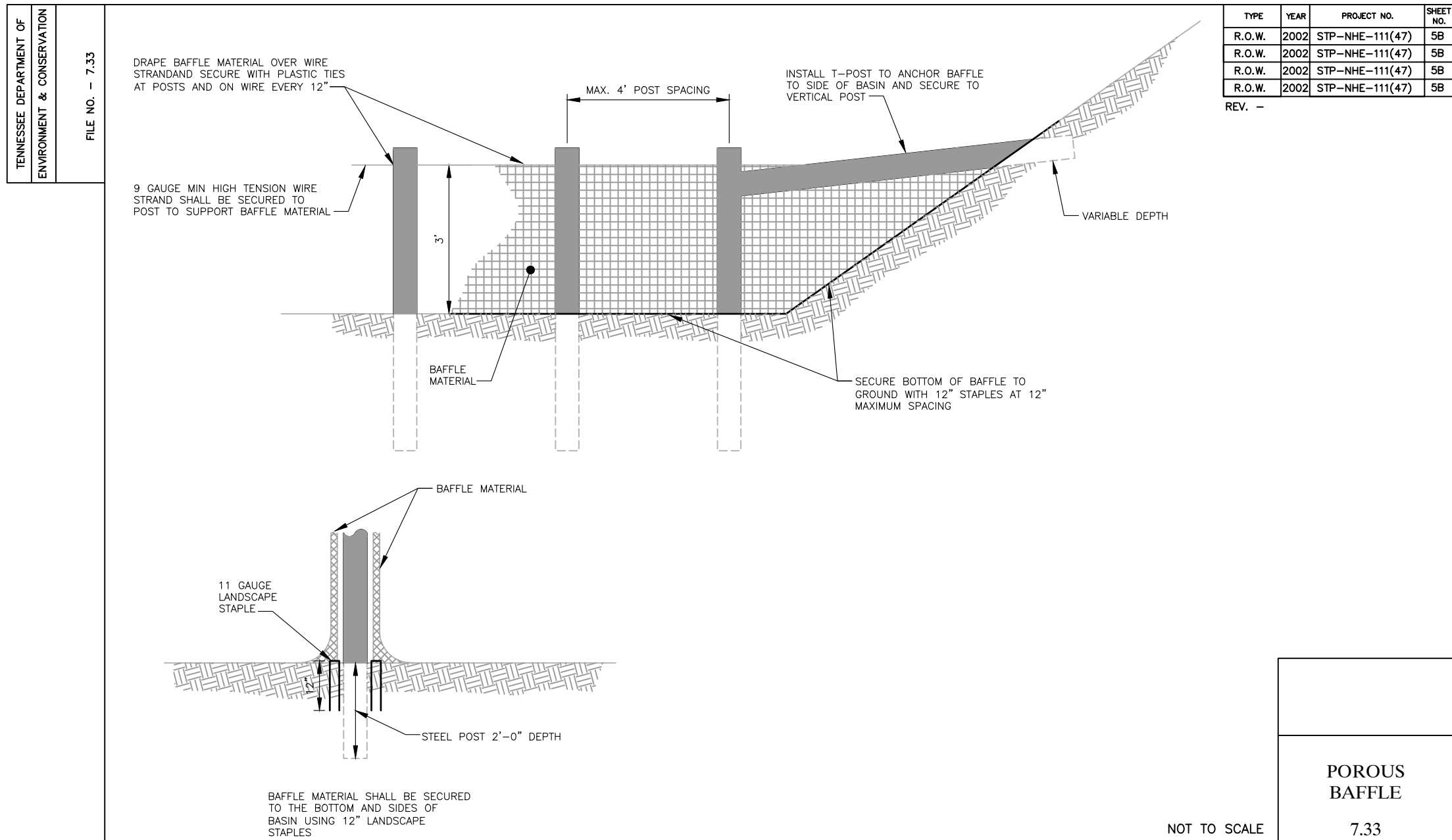
FILTREXX® RUNOFF DIVERSION (SILT SOCK DIVERSION)



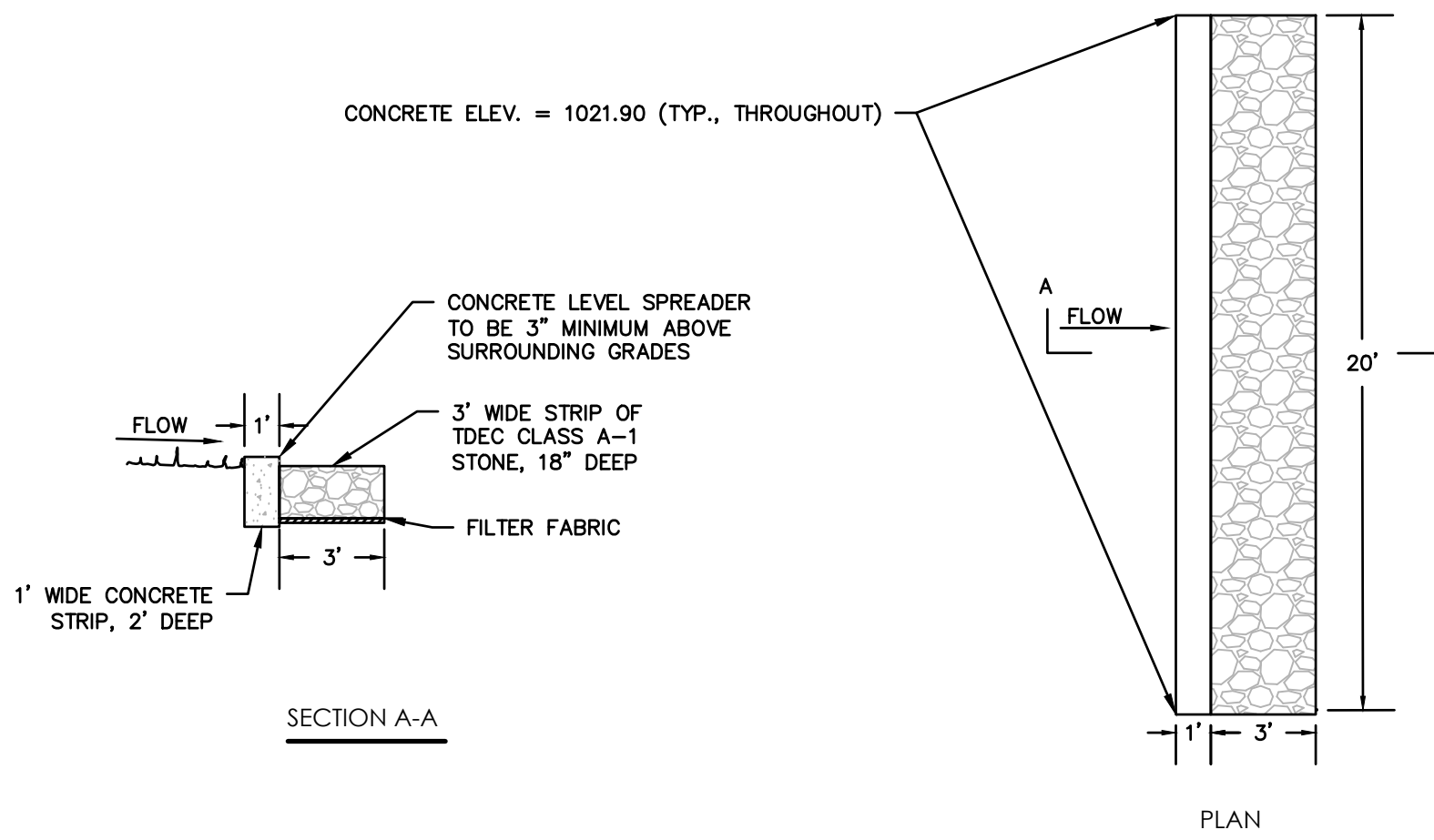
PERMANENT DIVERSION SWALE DETAIL
N.T.S.



SEDIMENT TRAP



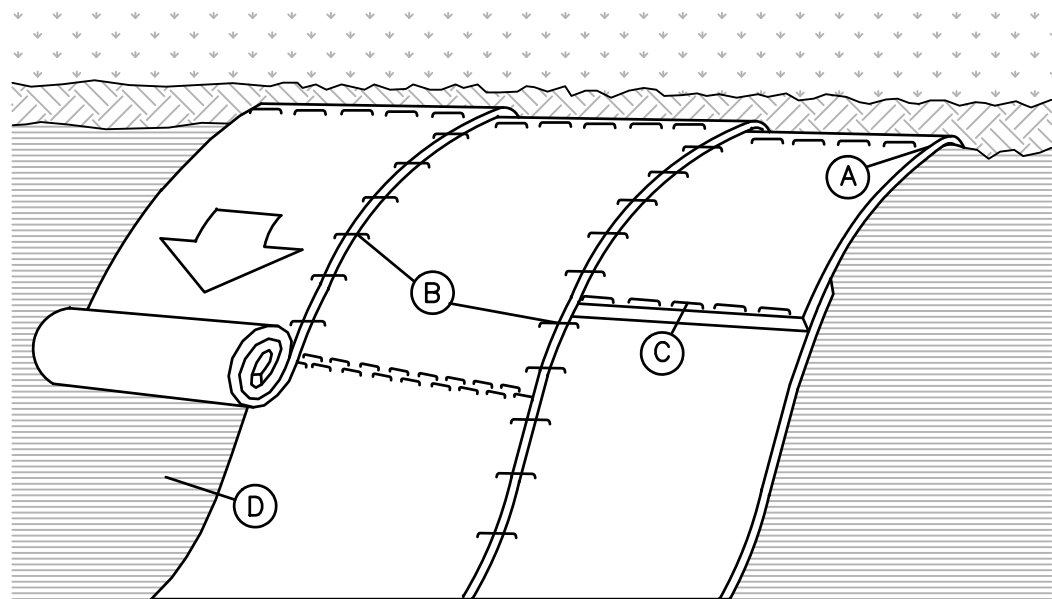
POROUS BAFFLE



SECTION A-A

PROPOSED LEVEL SPREADER

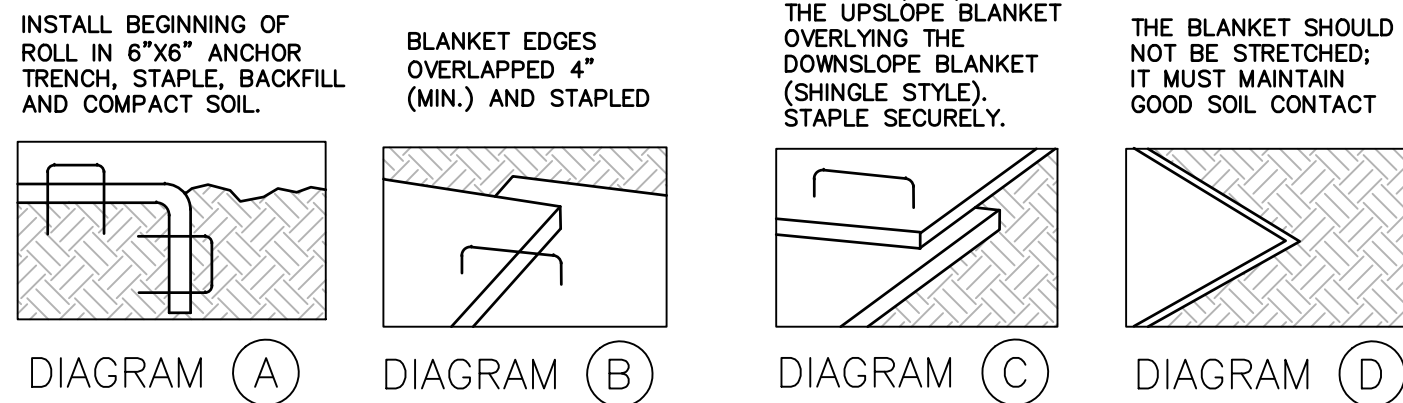
N.T.S.



STARTING AT TOP OF SLOPE, ROLL BLANKETS IN DIRECTION OF WATER FLOW

PREPARE SEED BED (INCLUDING APPLICATION OF LIME, FERTILIZER, & SEED) PRIOR TO INSTALLATION OF BLANKET.

REFER TO MANUFACTURER'S RECOMMENDED STAPLING PATTERN FOR STEEPNESS AND LENGTH OF SLOPE BEING BLANKETED.



SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.

PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.

SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.

BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DON NOT STRETCH BLANKET.

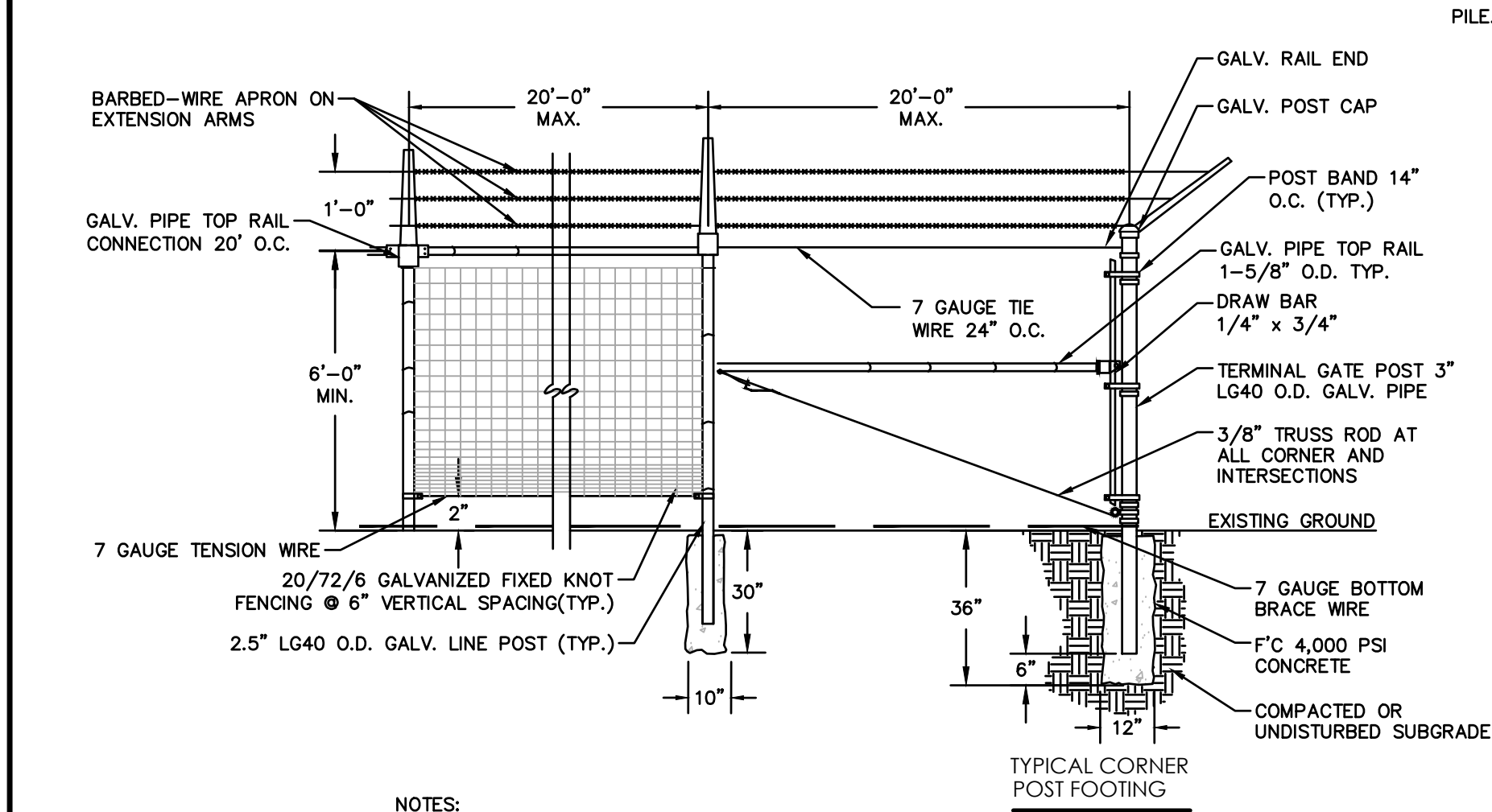
THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

EROSION CONTROL BLANKET INSTALLATION DETAIL

N.T.S.

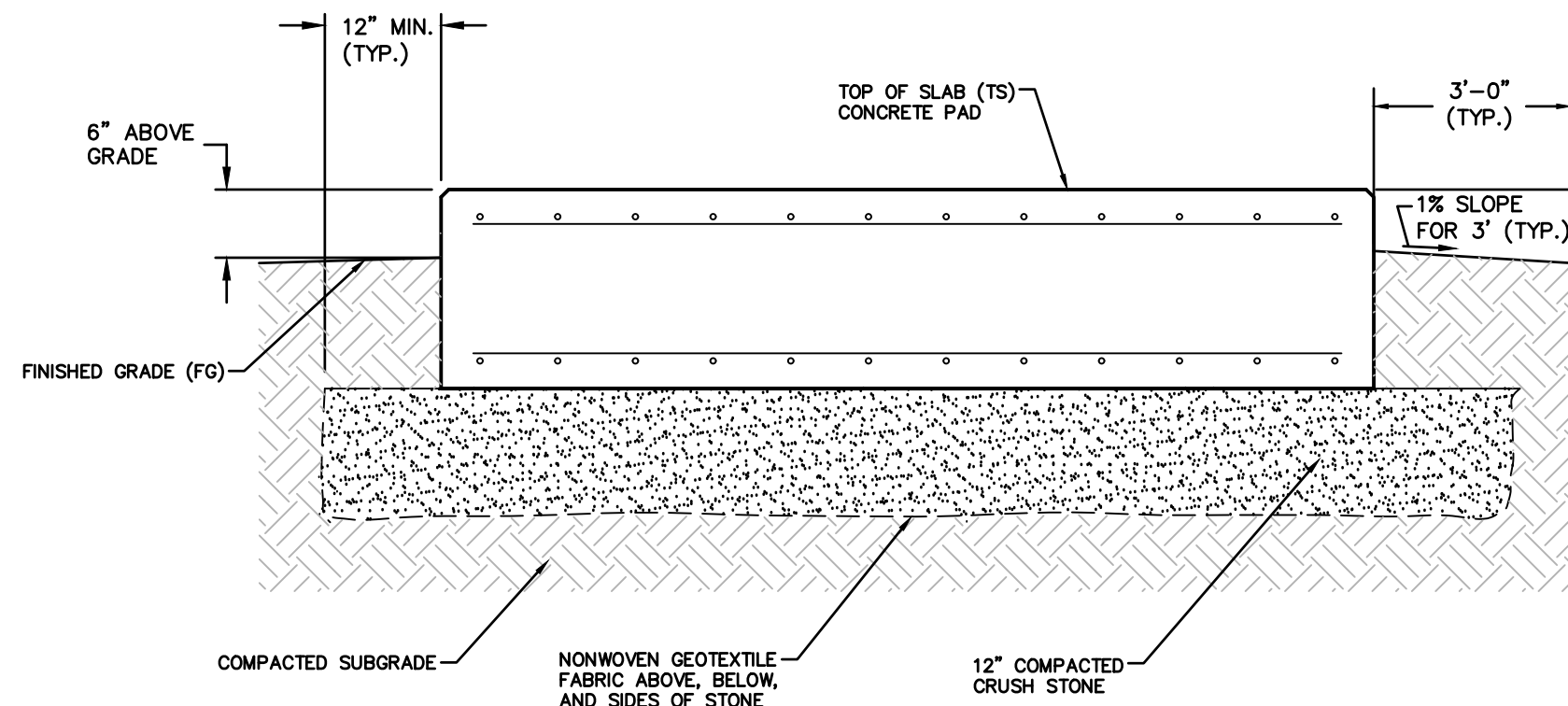
3/31/2025, 11:00AM, C:\WORK\2025\200034\DWG\C2300034-110.DWG CHG - SITE DETAILS.



- NOTES:
1. STRAIGHT RUNS BETWEEN BRACED POSTS SHALL NOT EXCEED 20 FT.
 2. FENCE DETAILS ARE INTENDED AS A GUIDE ONLY. ALL FENCE MATERIALS AND CONSTRUCTION METHODS SHALL BE APPROVED BY THE ENGINEER AND FENCE MANUFACTURER.
 3. ALL POSTS, RAILS, AND FABRIC HARDWARE TO BE GALV. 2.0 OZ. PER SQ. FT.
 4. MAXIMUM OPENING SIZE OF LOWER 4' OF FENCE FABRIC MAY BE NO LARGER THAN 6"x6".

6' HIGH AGRIVOLTAIC FENCE

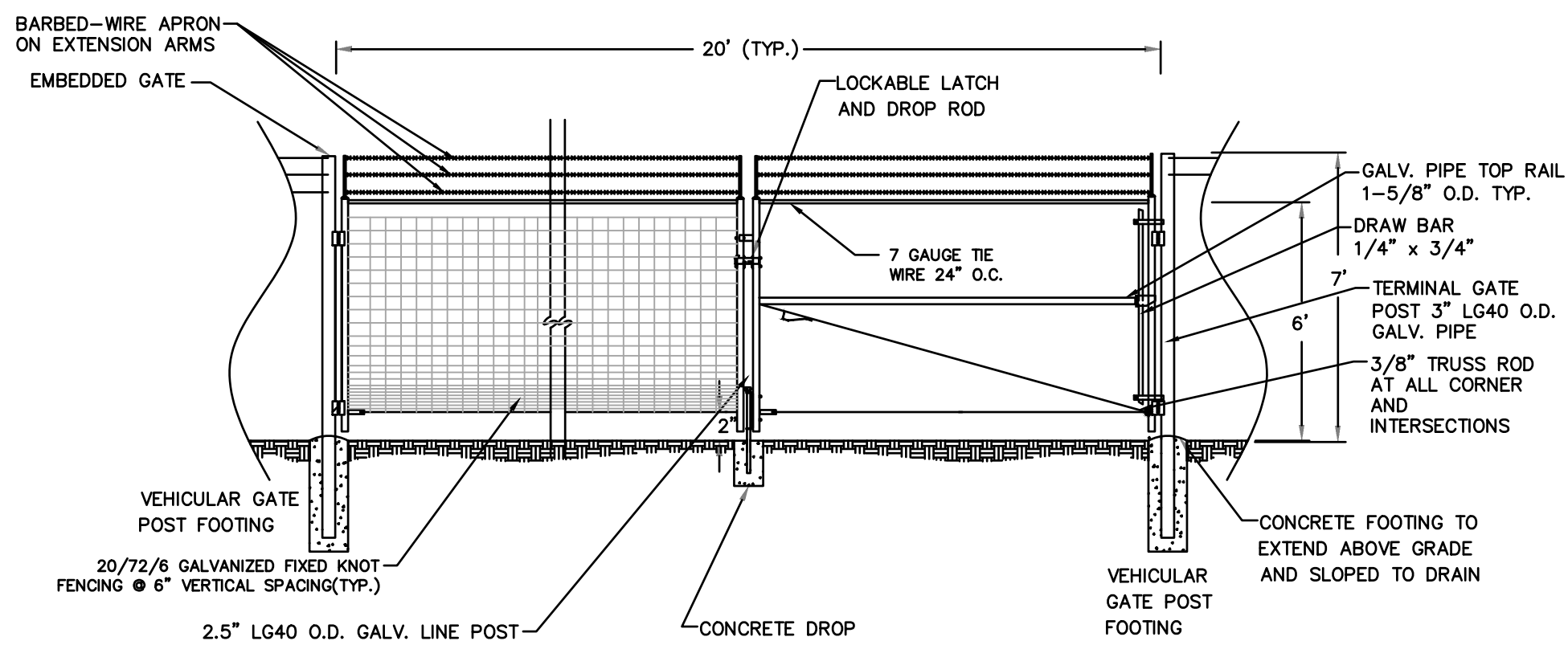
N.T.S.



- NOTES:
1. SEE STRUCTURAL PLANS FOR CONCRETE AND REBAR SPECIFICATIONS.
 2. PER THE GEOTECHNICAL REPORT, COMPACTED SUBGRADE SHALL MEET $\geq 95\%$ OF MAXIMUM DENSITY.
 3. THE EQUIPMENT PAD SHOULD BE TYPICALLY 18" ABOVE EXISTING GRADE OR 1 FT ABOVE THE 100 YEAR FLOOD INUNDATIONS LEVEL, WHICHEVER IS GREATER. SEE PLANS FOR SPOT ELEVATIONS.

EQUIPMENT CONCRETE PAD (TYPICAL)

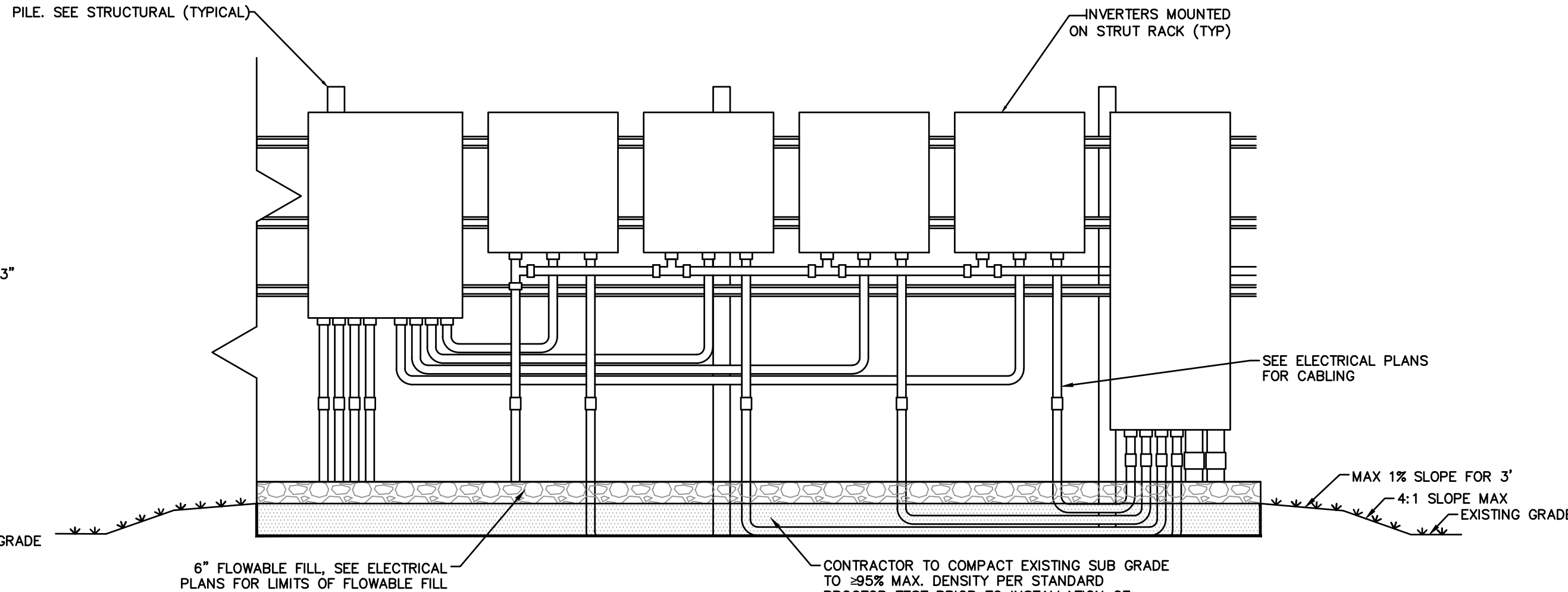
N.T.S.



- NOTES:
1. FENCE AND GATE TYPE TO BE APPROVED BY OWNER PRIOR TO CONSTRUCTION.
 2. ALL POSTS, RAILS, AND FABRIC HARDWARE TO BE GALV. 2.0 OZ. PER SQ. FT.
 3. STRUCTURAL DESIGN AND CONCRETE FOOTING EMBEDMENT/DIMENSION TO BE PROVIDED BY FENCE SUPPLIER.
 4. MAXIMUM OPENING SIZE OF LOWER 4' OF FENCE FABRIC MAY BE NO LARGER THAN 6"x6".
 5. DIMENSIONS AND INFORMATION SHOWN ABOVE ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS AND INFORMATION TO BE PROVIDED BY MANUFACTURER/SUPPLIER
 6. A KNOX PAD LOCK WILL BE PLACE ON CHAINED GATES OR KNOX BOX WITH GATE ACCESS KEYS WILL BE MOUNTED AT THE MAIN ENTRANCE FOR FIRE DEPARTMENT ACCESS.

20' AGRIVOLTAIC SECURITY SWING GATE

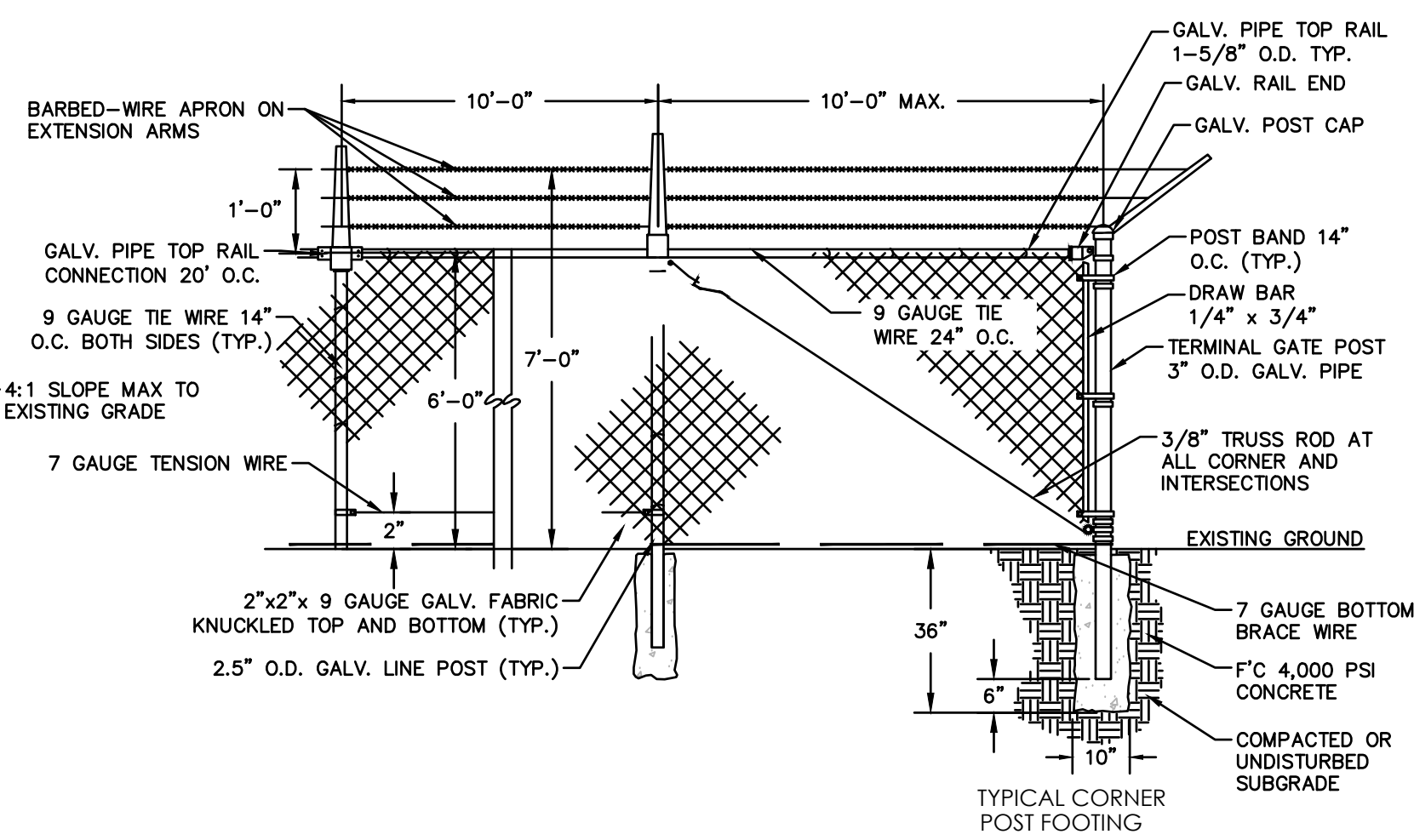
N.T.S.



- NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT AND EQUIPMENT DETAILS.
 2. REFER TO STRUCTURAL DRAWINGS FOR PILE FOUNDATION DETAILS.
 3. SEE PLANS FOR PAD DIMENSIONS.
 4. THE EQUIPMENT PAD SHOULD BE TYPICALLY 18" ABOVE EXISTING GRADE OR 1 FT ABOVE THE 100 YEAR INUNDATION LEVEL, WHICH EVER IS GREATER. SEE PLANS FOR SPOT ELEVATIONS.

INVERTER PAD DETAIL

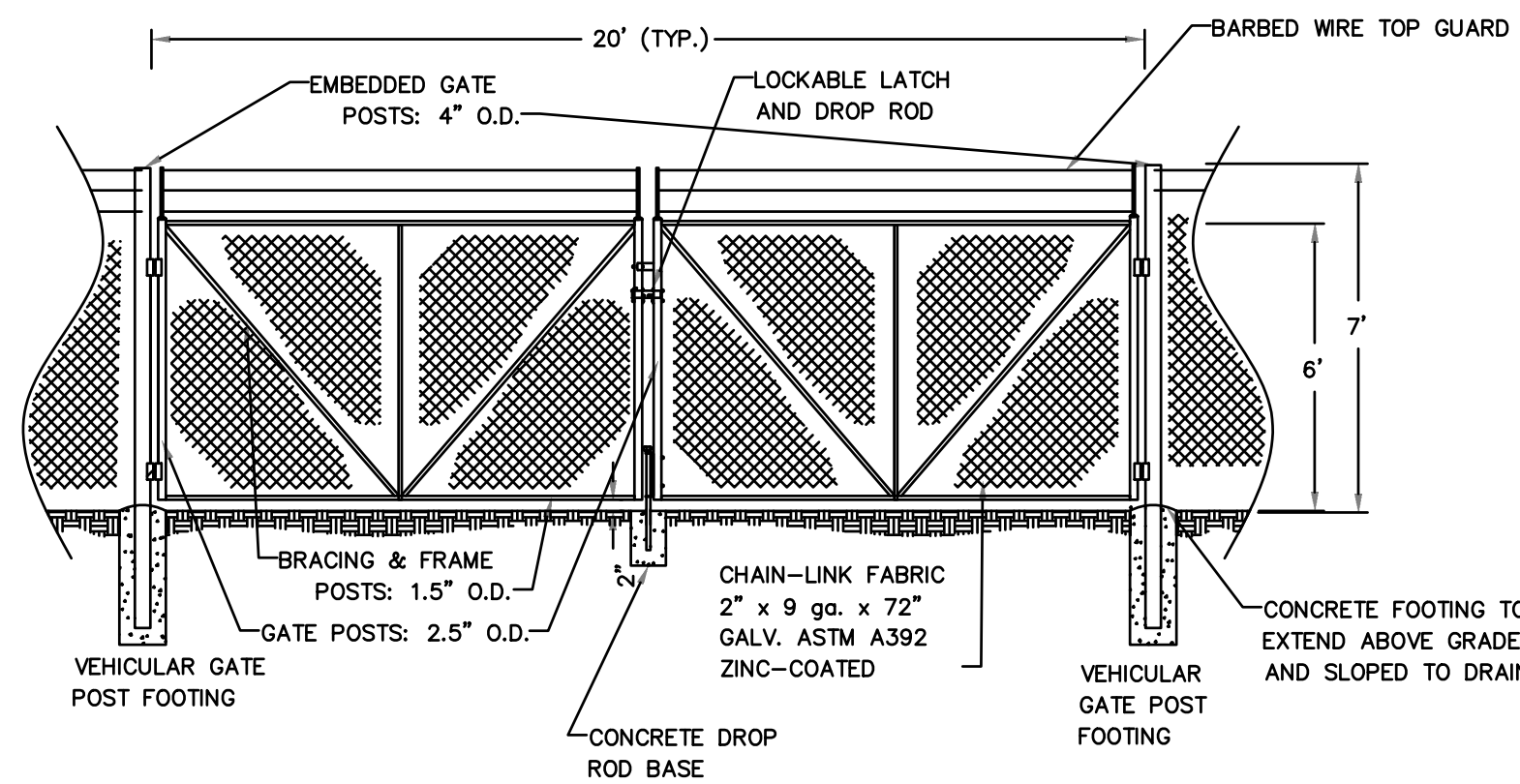
N.T.S.



- NOTES:
1. FOOTING DESIGN TO BE CHECKED BY AN ENGINEER FOR WIND LOADS IF SLATS ARE USED.
 2. STRAIGHT RUNS BETWEEN BRACED POSTS SHALL NOT EXCEED 500 FT.
 3. FENCE DETAILS ARE INTENDED AS A GUIDE ONLY. ALL FENCE MATERIALS AND CONSTRUCTION METHODS SHALL BE APPROVED BY THE ENGINEER AND FENCE MANUFACTURER.
 4. ALL POSTS, RAILS, AND FABRIC HARDWARE TO BE GALV. 2.0 OZ. PER SQ. FT.

6' HIGH CHAIN LINK FENCE (ALTERNATIVE)

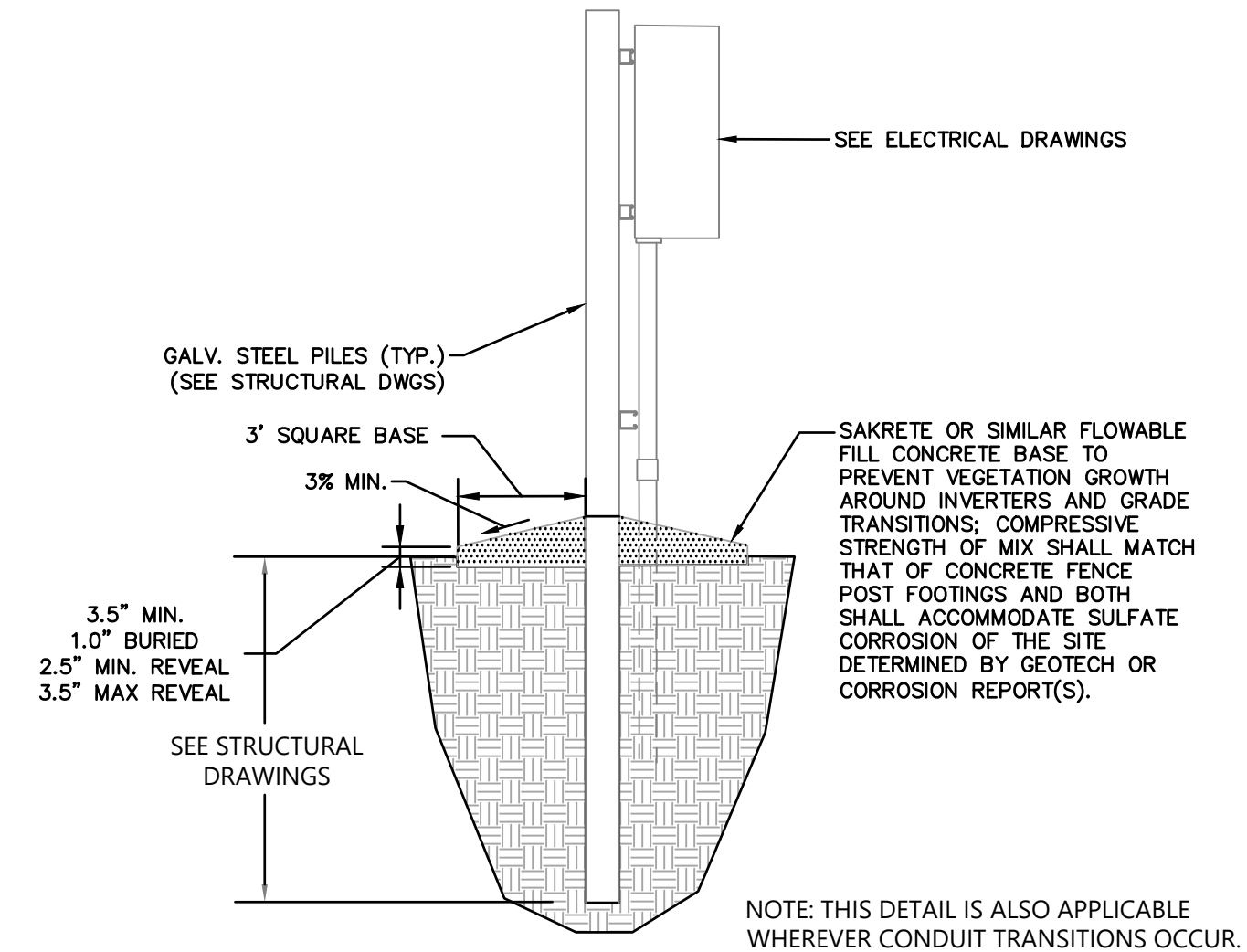
N.T.S.



- NOTES:
1. FENCE AND GATE TYPE TO BE APPROVED BY OWNER PRIOR TO CONSTRUCTION.
 2. HARDWARE SHALL BE GALVANIZED PER ASTM A153 AND HINGES SHALL PERMIT 180-DEG INWARD AND OUTWARD GATE OPENING.
 3. STRUCTURAL DESIGN AND CONCRETE FOOTING EMBEDMENT/DIMENSION TO BE PROVIDED BY FENCE SUPPLIER.
 4. DIMENSIONS AND INFORMATION SHOWN ABOVE ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS AND INFORMATION TO BE PROVIDED BY MANUFACTURER/SUPPLIER
 5. A KNOX PAD LOCK WILL BE PLACE ON CHAINED GATES OR KNOX BOX WITH GATE ACCESS KEYS WILL BE MOUNTED AT THE MAIN ENTRANCE FOR FIRE DEPARTMENT ACCESS.

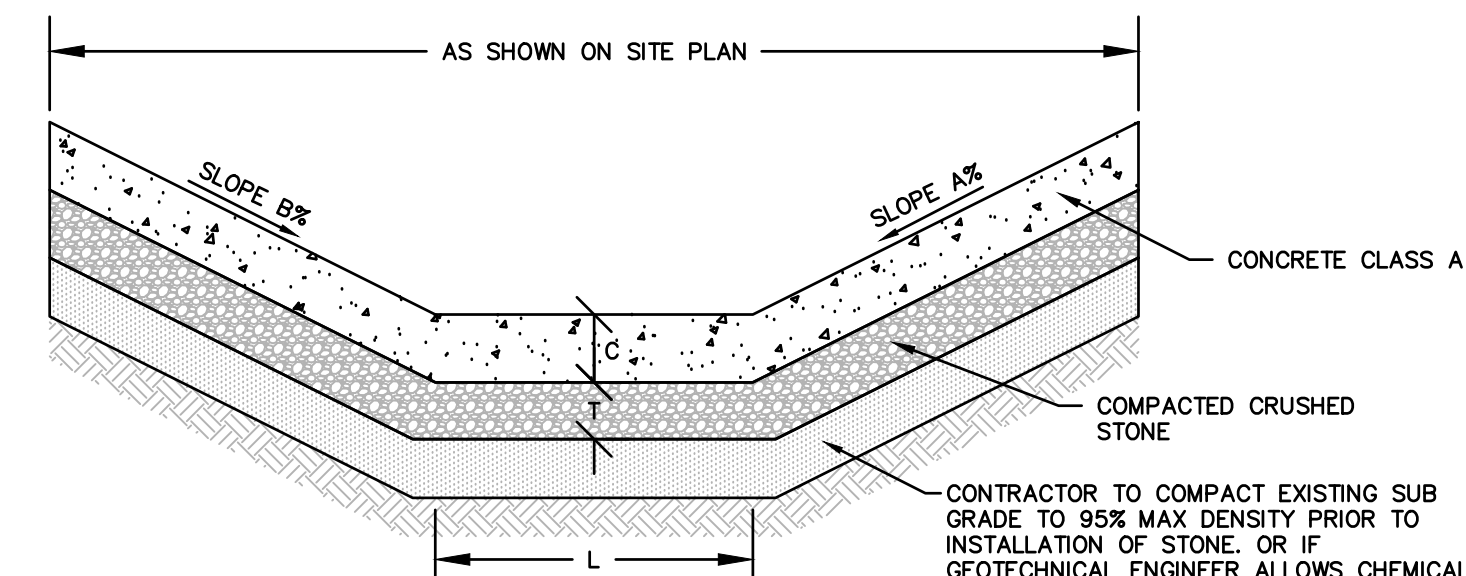
20' CHAIN LINK SECURITY SWING GATE (ALTERNATIVE)

N.T.S.



DC COMBINER BASE DETAIL

N.T.S.

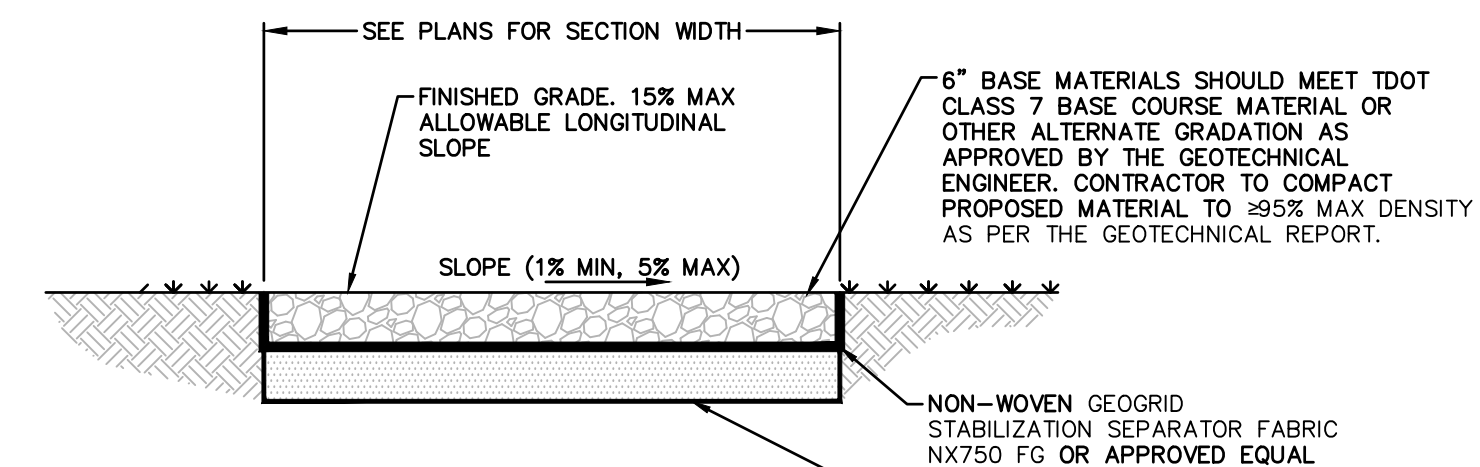


LOW WATER CROSSING #	L (FT)	A (%)	B (%)	C (IN)	T (IN)	COMMENT
1	30.0	0.88	8.48	6.0	6.0	10-YR STORM Q APPROX. 28 CFS
2	30.0	1.76	0.46	6.0	6.0	10-YR STORM Q APPROX. 20 CFS

CONCRETE LOW WATER CROSSING

N.T.S.

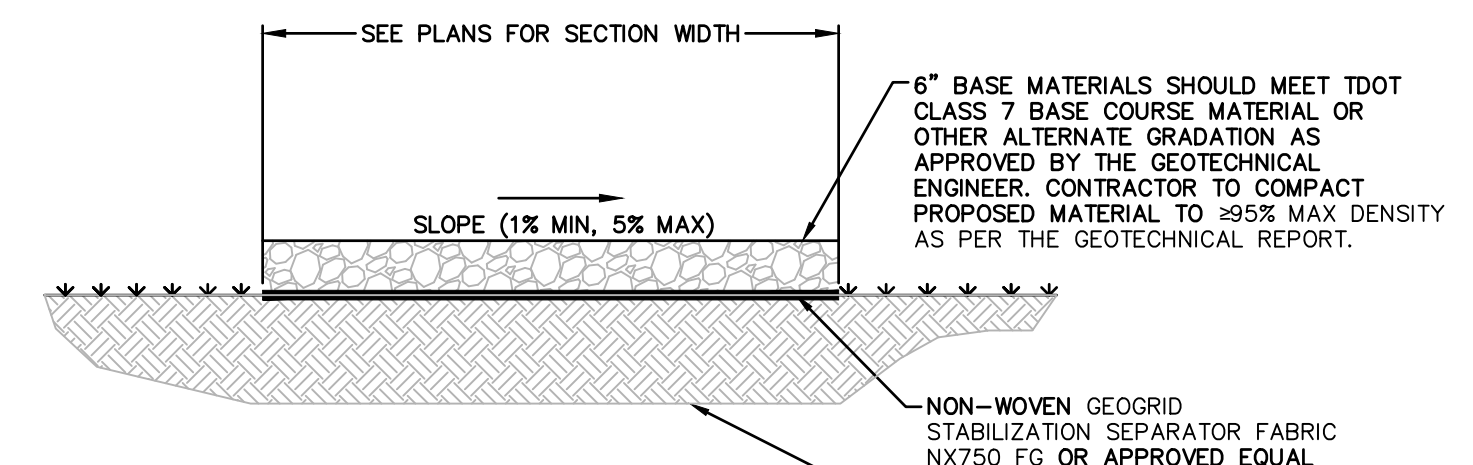
- NOTE:
1. CONCRETE SHALL BE AIR ENTRAINED 5-7%, $f'c=3000$ PSI @ 28 DAYS.



GRAVEL DRIVE SECTION

N.T.S.

- NOTE: THE USE OF CRUSHED LIMESTONE FOR THE GRAVEL DRIVES IS PROHIBITED UNLESS APPROVED BY GEOR, CEOR, AND OWNER.



TEMPORARY LAYDOWN AREA PAD

N.T.S.

- NOTE: THE USE OF CRUSHED LIMESTONE FOR THE GRAVEL DRIVES IS PROHIBITED UNLESS APPROVED BY GEOR, CEOR, AND OWNER.