

FAITH TECHNOLOGIES INC
GROUND MOUNT SOLAR PV +
ENERGY STORAGE SYSTEM

O'FALLON, MO
PARCEL ID 4-069B-9780-00-000A. 1000000

Utility Contacts

Sanitary Sewers

Duckett Creek Sanitary District
3550 Highway K
O'Fallon, MO, 63368
636-441-1244

Water

Public Water Supply District No. 2
P.O. Box 967
O'Fallon, MO, 63366
636-561-3737

Telephone

CenturyLink
1151 Century Tel Dr.
Wentzville, MO, 63385
636-332-7261

Storm Sewer

City of O'Fallon
100 N. Main St.
O'Fallon, MO, 63366
636-240-2000

Electric

Ameren Missouri
200 Callahan Road
Wentzville, MO, 63385
636-639-8312

Fire District

Wentzville Fire District
209 West Pearce Blvd.
Wentzville, MO, 63385

Gas

Spire Gas
6400 Graham Road
St. Louis, MO, 63134
314-522-2297

NOTE: UTILITIES MARKED AS PRIVATE, ARE
OWNED BY THE PROPERTY OWNER

INDEX OF DRAWINGS

- C001 – COVER SHEET
- C002 – GENERAL NOTES
- C101 – EXISTING CONDITIONS AND DEMOLITION PLAN
- C102 – HARDSCAPE PLAN
- C103 – EROSION CONTROL PLAN
- C104 – SITE LAYOUT PLAN
- C201 – EXISTING GRADES
- C202 – PROPOSED GRADING PLAN
- C203 – PROPOSED ACCESS ROADS PROFILES
- C301 – DRAINAGE UTILITY PLAN
- C302 – DRAINAGE UTILITY PROFILES
- C401 – ROAD & UTILITY DETAILS
- C402 – BMP DETAILS
- C403 – SWPPP & TREE DETAILS
- C404 – UTILITY TRENCH & FENCE DETAIL
- DA1 – EXISTING DRAINAGE AREA
- DA2 – PROPOSED DRAINAGE AREA PLAN

LOCATION MAP



APPLICABLE CODES

- SECTION 400
- SECTION 402
- SECTION 405
- SECTION 415

The approval is conditional upon the following Staff recommendations being met:
1. This approval is conditional upon all applicable requirements provided within Title IV of the City's Municipal Code being addressed on the Construction Site Plan.
2. The proposed chain link fence is not permitted in the HTCD, Zoning District. A variance will need to be approved before construction plan approval.
3. Provide cut sheets for the solar panels, batteries, inverters, etc.
4. Remove the City of O'Fallon as the contact for water.
5. Provide a detail of the cage structure shown in the renderings.
6. Provide clarification on how the differential run off calculations for the post development are lower than pre development.
7. Provide a discharge swale at FES.
8. Provide Fire District, Corps of Engineers, MDNR, Sanitary and Water District approval.
9. Provide water quality (Permanent Storm Water BMP). The preserved trees and creek bank setbacks do not meet this requirement.
10. Roadway detail needs to be 5" rock over 7" Concrete.
11. The developer shall contact the Kingsgate Home Owners Association to discuss the proposed construction of the solar panels. The permits for this development shall not be issued until it has been confirmed that a meeting has taken place.

* City of O'Fallon Construction work hours per City Ordinance 3429 as shown in Section 500.420 of the Municipal Code of the City of O'Fallon are as follows:

October 1 through May 31
7:00 A.M. To 7:00 P.M. Monday Through Sunday
June 1 Through September 30
6:00 A.M. To 8:00 P.M. Monday Through Friday
7:00 A.M. to 8:00 P.M. Saturday and Sunday

CITY OF O'FALLON
ENGINEERING DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: Ryan Rockwell DATE: 11/04/2025
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN

* The area of this phase of development is 43.4 AC
The area of land disturbance is 27.2 AC
Number of proposed lots is 1
Building setback information. SEE SHEET C1.1

* The estimated sanitary flow in gallons per day is 0
* Tree preservation calculations SEE SHEET C1.2

PROFESSIONAL REGISTRATIONS



STEPHEN STUMPF, PE, CFM
PROFESSIONAL ENGINEER
LICENSE NUMBER: 2020000089
EXPIRATION DATE: 12/31/2026

PROJECT NO.: 0240497.00

DATE: 10/20/2025

20 Allen Avenue, Suite 200 - St. Louis, Missouri 63119 - Phone: (314) 962-7900 / info@f-w.com PLANNING AND DEVELOPMENT DIVISION FILE NUMBER AND DATE: 24-012184, JANUARY 2, 2025

GENERAL NOTES

1. DRIVEWAY LOCATIONS SHALL NOT INTERFERE WITH THE SIDEWALK HANDICAP RAMPS OR CURB INLET SUMPS.
2. SIDEWALKS, CURB RAMPS, RAMPS, AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAG), ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS, AND SIGNAGE. IF ANY CONFLICT OCCURS BETWEEN THE ABOVE INFORMATION AND THE PLANS, THE ADAAG GUIDELINES SHALL TAKE PRECEDENCE, AND THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER PRIOR TO ANY CONSTRUCTION.
- 2.1. TRUNCATED DOMES FOR CURB RAMPS LOCATED IN PUBLIC RIGHT OF WAY SHALL MEET PROWING REQUIREMENTS AND SHALL BE CONSTRUCTED USING REB PRE-CAST TRUNCATED DOMES PER PAVEMENT DETAILS.
3. ANY PROPOSED PAVILIONS OR PAVEMENT AREAS WILL REQUIRE A SEPARATE PERMIT FROM THE BUILDING DIVISION.
4. THE CONTRACTOR IS RESPONSIBLE FOR CALLING MISSOURI ONE CALL AND THE CITY OF O'FALLON FOR THE LOCATION OF UTILITIES. CONTACT THE CITY OF O'FALLON AT (636) 379-3814 FOR THE LOCATION OF CITY-MAINTAINED CABLE FOR STREET LIGHTS AND TRAFFIC SIGNALS. ALL OTHER UTILITIES SHALL BE LOCATED BY CALLING MISSOURI ONE CALL AT 1-800-DIG-RITE (1-800-344-7485).
5. ALL PROPOSED UTILITIES AND/OR UTILITY RELOCATIONS SHALL BE LOCATED UNDERGROUND.
6. ALL PROPOSED FENCING REQUIRES A SEPARATE PERMIT THROUGH THE BUILDING SAFETY DIVISION.
7. ALL CONSTRUCTION OPERATIONS AND WORK ZONE TRAFFIC CONTROL WITHIN THE RIGHT OF WAY SHALL FOLLOW MODOOT OR M.U.T.C.D. STANDARDS, WHICHEVER IS MORE STRINGENT.
8. (INTENTIONALLY OMITTED)
9. ALL SUBDIVISION IDENTIFICATION OR DIRECTIONAL SIGNS MUST HAVE THEIR LOCATIONS AND SIZES APPROVED AND PERMITTED SEPARATELY THROUGH THE PLANNING AND DEVELOPMENT DIVISION.
10. MATERIALS SUCH AS TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS, AND OTHER DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IF THE MATERIALS LISTED PREVIOUSLY ARE REUSED, A LETTER FROM A SOILS ENGINEER MUST CLARIFY THE AMOUNT, LOCATION, AND DEPTH, AND BE APPROVED WITH THE CONSTRUCTION PLANS. LANDFILL TICKETS FOR SUCH DISPOSAL SHALL BE MAINTAINED ON FILE BY THE DEVELOPER. BURNING ON SITE SHALL BE ALLOWED ONLY BY PERMIT FROM THE LOCAL FIRE DISTRICT. IF A BURN PIT IS PROPOSED, THE LOCATION AND MITIGATION SHALL BE SHOWN ON THE GRADING PLAN AND DOCUMENTED BY THE SOILS ENGINEER.
11. TWENTY-FOUR (24) HOURS PRIOR TO STARTING ANY OF THE WORK COVERED BY THE ABOVE PLANS, AND AFTER APPROVAL THEREOF, THE DEVELOPER SHALL MAKE ARRANGEMENTS WITH THE CONSTRUCTION INSPECTION OFFICE TO PROVIDE FOR INSPECTION OF THE WORK, SUFFICIENT IN THE OPINION OF THE CITY ENGINEER, TO ASSURE COMPLIANCE WITH THE PLANS AND SPECIFICATIONS AS APPROVED.
12. THE CITY ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL MAKE ALL NECESSARY INSPECTIONS OF CITY INFRASTRUCTURE, ESCROW ITEMS, OR INFRASTRUCTURE LOCATED ON THE APPROVED PLANS.
13. ALL INSTALLATIONS AND CONSTRUCTION SHALL CONFORM TO THE APPROVED ENGINEERING DRAWINGS. HOWEVER, IF THE DEVELOPER CHOOSES TO MAKE MINOR MODIFICATIONS IN DESIGN AND/OR SPECIFICATIONS DURING CONSTRUCTION, SUCH CHANGES SHALL BE MADE AT THE DEVELOPER'S OWN RISK, WITHOUT ANY ASSURANCE THAT THE CITY ENGINEER WILL APPROVE THE COMPLETED INSTALLATION OR CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO NOTIFY THE CITY ENGINEER OF ANY CHANGES FROM THE APPROVED DRAWINGS. THE DEVELOPER MAY BE REQUIRED TO CORRECT THE INSTALLED IMPROVEMENTS TO CONFORM TO THE APPROVED ENGINEERING DRAWINGS. THE DEVELOPER MAY REQUEST A LETTER FROM THE CONSTRUCTION INSPECTION DIVISION REGARDING ANY FIELD CHANGES APPROVED BY THE CITY INSPECTORS.
14. CITY APPROVAL OF THE CONSTRUCTION SITE PLANS DOES NOT MEAN THAT ANY BUILDING CAN BE CONSTRUCTED ON THE LOTS WITHOUT MEETING THE BUILDING SETBACKS AS REQUIRED BY THE ZONING CODE.
15. ALL PAVING SHALL BE IN ACCORDANCE WITH ST. LOUIS COUNTY STANDARDS AND SPECIFICATIONS, EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.
16. ALL CONSTRUCTION OPERATIONS MUST COMPLY WITH CITY OF O'FALLON ARTICLE XIII PERFORMANCE STANDARDS.
17. ALL CONSTRUCTION OPERATIONS MUST COMPLY WITH THE COMPREHENSIVE PLAN.

Grading Notes

1. DEVELOPER MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH AN ENGINEER'S SOIL REPORT PRIOR TO AND DURING SITE GRADING. THE SOIL REPORT SHALL CONTAIN THE FOLLOWING INFORMATION ON SOIL TEST CURVES (PROCTOR REPORTS) FOR PROJECTS WITHIN THE CITY:

- 1.1. MAXIMUM DRY DENSITY
- 1.2. OPTIMUM MOISTURE CONTENT
- 1.3. MAXIMUM AND MINIMUM ALLOWABLE MOISTURE CONTENT.
- 1.4. CURVE MUST BE PLOTTED TO SHOW DENSITY FROM A MINIMUM OF 90% COMPACTION AND ABOVE AS DETERMINED BY THE "MODIFIED AASHTO T-180 COMPACTION TEST" (A.S.T.M.-D-1157) OR FROM A MINIMUM OF 95% AS DETERMINED BY THE "STANDARD PROCTOR TEST AASHTO T-99, METHOD C" (A.S.T.M.-D-698). PROCTOR TYPE MUST BE DESIGNATED ON DOCUMENT.
- 1.5. CURVE MUST HAVE AT LEAST FIVE (5) DENSITY POINTS WITH MOISTURE CONTENT AND SAMPLE LOCATIONS LISTED ON DOCUMENT.
- 1.6. SPECIFIC GRAVITY
- 1.7. NATURAL MOISTURE CONTENT
- 1.8. LIQUID LIMIT
- 1.9. PLASTIC LIMIT

- BE ADVISED THAT IF THIS INFORMATION IS NOT PROVIDED TO THE CITY'S CONSTRUCTION INSPECTOR, THE CITY WILL NOT ALLOW GRADING OR CONSTRUCTION ACTIVITIES TO PROCEED ON ANY PROJECT SITE.
2. ALL FILL PLACED IN AREAS OTHER THAN PROPOSED STORM SEWERS, SANITARY SEWERS, PROPOSED ROADS, AND PAVED AREAS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP IN EIGHT (8) INCH LIFTS AND COMPACTED TO 90% MAXIMUM DENSITY AS DETERMINED BY MODIFIED AASHTO T-180 COMPACTION TEST OR 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ENSURE THE MOISTURE CONTENT OF THE SOIL IN FILL AREAS CORRESPONDS TO THE COMPACTIVE EFFORT AS DEFINED BY THE STANDARD OR MODIFIED PROCTOR TEST. OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED USING THE SAME TEST THAT WAS USED FOR COMPACTION. SOIL COMPACTION CURVES SHALL BE SUBMITTED TO THE CITY OF O'FALLON PRIOR TO THE PLACEMENT OF FILL.
 3. THE SURFACE OF THE FILL SHALL BE FINISHED SO IT WILL NOT IMPOUND WATER. IF AT THE END OF A DAYS WORK IT WOULD APPEAR THAT THERE MAY BE RAIN PRIOR TO THE NEXT WORKING DAY, THE SURFACE SHALL BE FINISHED SMOOTH. IF THE SURFACE HAS BEEN FINISHED SMOOTH FOR ANY REASON, IT SHALL BE SCARIFIED BEFORE PROCEEDING WITH THE PLACEMENT OF SUCCEEDING LIFTS. FILL SHALL NOT BE PLACED ON FROZEN GROUND, NOR SHALL FILLING OPERATIONS CONTINUE WHEN THE TEMPERATURE IS SUCH AS TO PERMIT THE LAYER UNDER PLACEMENT TO FREEZE.
 4. ALL SEDIMENT AND DETENTION BASINS ARE TO BE CONSTRUCTED DURING THE INITIAL PHASE OF THE GRADING OPERATION OR IN ACCORDANCE WITH THE APPROVED SWPPP.
 5. WHEN GRADING OPERATIONS ARE COMPLETE OR SUSPENDED FOR MORE THAN 14 DAYS, PERMANENT GRASS MUST BE ESTABLISHED AT SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO MISSOURI DEPARTMENT OF NATURAL RESOURCES PROTECTING WATER QUALITY - A FIELD GUIDE TO EROSION, SEDIMENT AND STORMWATER BEST MANAGEMENT PRACTICES FOR DEVELOPMENT SITES IN MISSOURI AND KANSAS. ALL FINISHED GRASSES (AREAS NOT TO BE DISTURBED BY IMPROVEMENTS) IN EXCESS OF 20% SLOPES (6:1) SHALL BE MULCHED AND TACKED AT A RATE OF 100 POUNDS PER 1000 SQUARE FEET WHEN SEEDED.
 6. NO SLOPES SHALL EXCEED 3 (HORIZONTAL) : 1 (VERTICAL) UNLESS OTHERWISE APPROVED BY THE SOILS REPORT AND SPECIFICALLY LOCATED ON THE PLANS AND APPROVED BY THE CITY ENGINEER.
 7. ALL LOW PLACES WHETHER ON SITE OR OFF SHALL BE GRADED TO PROVIDE DRAINAGE WITH TEMPORARY DITCHES.
 8. ANY EXISTING WELLS AND/OR SPRINGS WHICH MAY EXIST ON THE PROPERTY MUST BE SEALED IN A MANNER ACCEPTABLE TO THE CITY OF O'FALLON CONSTRUCTION INSPECTION DEPARTMENT AND FOLLOWING MISSOURI DEPARTMENT OF NATURAL RESOURCES STANDARDS AND SPECIFICATIONS.
 9. (INTENTIONALLY OMITTED)
 10. ALL TRENCH BACK FILLS UNDER PAVED AREAS SHALL BE GRANULAR BACK FILL, AND COMPACTED MECHANICALLY. ALL OTHER TRENCH BACK FILLS MAY BE EARTH MATERIAL (FREE OF LARGE CLUMPS OR STONES) AND COMPACTED USING EITHER MECHANICAL TAMPING OR WATER JETTING. GRANULAR MATERIAL AND EARTH MATERIAL ASSOCIATED WITH NEW CONSTRUCTION OUTSIDE OF PAVEMENTS MAY BE JETTED, TAKING CARE TO AVOID DAMAGE TO NEWLY Laid SEWERS. THE JETTING SHALL BE PERFORMED WITH A PROBE ROUTE ON NOT GREATER THAN 7.5 FOOT CENTERS WITH THE JETTING PROBE CENTERED OVER AND PARALLEL WITH THE DIRECTION OF THE PIPE. TRENCH WIDTHS GREATER THAN 10 FEET WILL REQUIRE MULTIPLE PROBES EVERY 7.5 FOOT CENTERS.
 - 10.1. DEPTH. TRENCH BACK FILLS LESS THAN 8 FEET DEEP SHALL BE PROBED TO A DEPTH EXTENDING HALF THE DEPTH OF THE TRENCH BACK FILL, BUT NOT LESS THAN 3 FEET. TRENCH BACK FILL GREATER THAN 8 FEET IN DEPTH SHALL BE PROBED TO HALF THE DEPTH OF THE TRENCH BACK FILL BUT NOT GREATER THAN 3 FEET.
 - 10.2. EQUIPMENT. THE JETTING PROBE SHALL BE A METAL PIPE WITH AN INTERIOR DIAMETER OF 1.5 TO 2 INCHES.
 - 10.3. METHOD. JETTING SHALL BE PERFORMED IN A MANNER THAT COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS. THE JETTING PROBE SHALL BE DIRECTED TOWARD THE HIGHEST POINT, AND FROM THE BOTTOM OF THE TRENCH BACK FILL TOWARD THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE TRENCH WITHOUT FIRST SATURATING THE TRENCH.
 - 10.4. SURFACE BRIDGING. THE CONTRACTOR SHALL IDENTIFY THE LOCATIONS OF THE SURFACE BRIDGING THE TENDENCY FOR THE UPPER SURFACE TO CRUST AND ARCH OVER THE TRENCH BACK FILL. THE CONTRACTOR SHALL BRIDGE THE TRENCH BACK FILL WITH A METHOD OF BRIDGING THAT COLLAPSE AND CONSOLIDATE DURING THE JETTING PROCESS. THE JETTING PROBE SHALL BE DIRECTED TOWARD THE HIGHEST POINT, AND FROM THE BOTTOM OF THE TRENCH BACK FILL TOWARD THE SURFACE. THE FLOODING OF EACH JETTING PROBE SHALL BE STARTED SLOWLY ALLOWING SLOW SATURATION OF THE SOIL. WATER IS NOT ALLOWED TO FLOW AWAY FROM THE TRENCH WITHOUT FIRST SATURATING THE TRENCH.
 11. SITE GRADING.
 - 11.1. WITHIN CITY RIGHT-OF-WAY. MATERIAL IS TO BE PLACED IN EIGHT (8) INCH TO TWELVE (12) INCH LOOSE LIFTS AND COMPACTED PER THE APPROVED COMPACTION REQUIREMENTS. ONE (1) COMPACTION TEST WILL BE PERFORMED EVERY TWO HUNDRED FIFTY (250) FEET ALONG THE CENTERLINE FOR EACH LIFT.
 - 11.2. OUTSIDE OF CITY RIGHT-OF-WAY. MATERIAL IS TO BE PLACED IN EIGHT (8) INCH TO TWELVE (12) INCH LOOSE LIFTS AND COMPACTED PER THE APPROVED COMPACTION REQUIREMENTS. ONE (1) COMPACTION TEST WILL BE PERFORMED AT TWO (2) FOOT VERTICAL INTERVALS AND APPROXIMATELY EVERY ONE THOUSAND (1,000) CUBIC YARDS.
 12. ACCESS TO THE SITE FROM ANY OTHER LOCATION OTHER THAN THE PROPOSED CONSTRUCTION ENTRANCE IS STRICTLY PROHIBITED!
 13. IF MATERIALS SUCH AS TREES, ORGANIC DEBRIS, RUBBLE, FOUNDATIONS AND OTHER DELETERIOUS MATERIAL ARE NOT TO BE REUSED, THEY SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
 14. PROPOSED FILL MATERIALS SHOULD BE FREE OF ORGANICS, DELETERIOUS DEBRIS, OR ROCKS LARGER THAN 3 IN DIAMETER. SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS.

Erosion Control Notes

1. THE PERMITTEE SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE PERMITTEE SHALL USE WHATEVER MEANS NECESSARY TO CONTROL EROSION AND SILTATION INCLUDING, BUT NOT LIMITED TO, STAKED OR SITUATION FABRIC FENCES (POSITIVE METHODS OF CONTROL) ARE DETAIL IN THE EROSION CONTROL SHALL COMMENCE WITH THE CLEARING OPERATIONS AND BE MAINTAINED THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY CITY OF O'FALLON AND AS NEEDED BY MODOOT. THE PERMITTEE'S RESPONSIBILITIES INCLUDE ALL DESIGN AND IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE CITY OF O'FALLON AND AS REQUIRED BY MODOOT MAY AT THEIR OPTION DIRECT THE PERMITTEE IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT SHALL BE REMOVED IMMEDIATELY. ANY DEPOSITING OF SILTS OR MUD IN NEW OR EXISTING STORM SEWERS AND/OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND AFFECTED AREAS CLEARED TO THE SATISFACTION OF THE CITY OF O'FALLON AND AS REQUIRED BY MODOOT.
2. ALL EROSION CONTROL SYSTEMS ARE TO BE INSPECTED AND CORRECTED WEEKLY, ESPECIALLY WITHIN 48 HOURS OF ANY RAIN STORM RESULTING IN ONE-QUARTER INCH OF RAIN OR MORE. ANY SILT OR DEBRIS LEAVING THE SITE AND AFFECTING PUBLIC RIGHT OF WAY OR STORM WATER DRAINAGE FACILITIES SHALL BE CLEARED UP WITHIN 24 HOURS AFTER THE END OF THE STORM.
3. EROSION CONTROL DEVICES (SILT FENCE, SEDIMENT BASIN, ETC.) SHALL BE IN ACCORDANCE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES PROTECTING WATER QUALITY - A FIELD GUIDE TO EROSION, SEDIMENT AND STORMWATER BEST MANAGEMENT PRACTICES FOR DEVELOPMENT SITES IN MISSOURI AND KANSAS.
4. THIS DEVELOPMENT IS REQUIRED TO PROVIDE LONG TERM POST CONSTRUCTION BMP'S SUCH AS: LOW IMPACT DESIGN, SOURCE CONTROL, TREATMENT CONTROLS THAT PROTECT WATER QUALITY AND CONTROL RUNOFF TO MAXIMUM EXTENT PRACTICAL IN COMPLIANCE WITH PHASE II ILLINOIS STORM WATER DISCHARGE GUIDELINES. (ORD. 5082, SECTION 405.245)
5. GRADED AREAS SHALL BE SEEDED AND MULCHED (STRAWED) WITHIN 14 DAYS OF STOPPING LAND DISTURBANCE ACTIVITIES. UNLESS IT CAN BE SHOWN TO THE CITY ENGINEER THAT WEATHER CONDITIONS ARE NOT FAVORABLE, VEGETATIVE GROWTH IS TO BE ESTABLISHED WITHIN 6 WEEKS OF STOPPING GRADING WORK ON THE PROJECT. THE VEGETATIVE GROWTH ESTABLISHED SHALL BE SUFFICIENT TO PREVENT EROSION AND THE STANDARD SHALL BE AS REQUIRED BY EPA AND DNR. (70% COVERAGE PER SQUARE FOOT) ORD. 6496, SECTION 405.095.
6. SEEDING/STABILIZATION EFFORTS SHALL OCCUR PRIOR TO THE INSTALLATION OF PILES TO HELP ESTABLISH A ROOT ZONE AND PREVENT EROSION.
7. STRAW MATS SHALL BE INSTALLED PRIOR TO CONSTRUCTION. THEY MAY BE REMOVED DURING CONSTRUCTION IF IN THE WAY BUT SHALL BE REINSTALLED WHILE STABILIZATION IS OCCURRING.
8. ALL EROSION CONTROL PRACTICES (VEGETATIVE, STRUCTURAL, PERMANENT AND TEMPORARY) SHOWN ON THE PLANS SHALL BE CONSIDERED THE MINIMUM REQUIRED. ADDITIONAL EROSION CONTROL INSTALLATION MAY BE REQUIRED TO REDUCE EROSION AND SILT RUN OFF IN ACCORDANCE WITH MISSOURI LAND DISTURBANCE PERMIT.
9. ALL VEGETATIVE AND STRUCTURAL EROSION CONTROLS SHALL BE CONSTRUCTED AND INSTALLED PER TYPICALS IN THIS PLAN AND IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT.
10. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL FACILITIES UNTIL FINAL STABILIZATION OF ALL AREAS DISTURBED BY CONSTRUCTION OCCURS. MAINTENANCE, REPLACEMENT AND ADDITION OF EROSION CONTROL ITEMS SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.
11. DURING CONSTRUCTION, THE CONTRACTOR SHALL: CLEAN UP AND GRADE THE WORK AREA TO ELIMINATE CONCENTRATED AREAS OF RUNOFF; MAINTAIN OR REPLACE EROSION CONTROL AND SEDIMENT CONTROL MEASURES. PRIOR TO ANY LANDSCAPING/RESTORATION WORK, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT RETAINED BY TEMPORARY DITCH CHECKS AND REINSTALL TEMPORARY DITCH CHECKS AFTER CLEANING AND REMOVE AND REPLACE PLUGGED BMP'S.
12. SEDIMENT MAY NOT BE REMOVED FROM IMPERVIOUS SURFACES DIRECTLY INTO A STORM SEWER SYSTEM WITHOUT BEING PASSED THROUGH AN APPROVED FILTER BMP.
13. SILT FENCE MAINTENANCE WILL INCLUDE REPAIRING OR REPLACING SILT FENCE IF DAMAGED AND THE REMOVAL OF SEDIMENT WHEN THE SEDIMENT REACHES HALF THE HEIGHT OF THE SILT FENCE.
14. MULCH MUST BE REPLACED IF DISPLACED PRIOR TO FINAL STABILIZATION.
15. ALL NON-PAVED AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED, SMOOTHED TO DRAIN AND SEEDED. ANY ROCK OR SOIL CLUMPS GREATER THAN 4-INCHES SHALL BE REMOVED. TEMPORARY AND PERMANENT SEEDING AREAS MUST BE WATERED, FERTILIZED, AND RESEEDED AS NEEDED TO MAINTAIN A MINIMUM OF 70% VEGETATIVE DENSITY IN ACCORDANCE WITH OHIO ENVIRONMENTAL PROTECTION AGENCY.
16. THE SITE WILL BE MONITORED DAILY FOR SEDIMENT TRACK-OUT AND ANY TRACK-OUT WILL BE REMOVED FROM ROAD SURFACES AND PLACED BACK ONTO THE SITE WITHIN PERIMETER CONTROLS BY THE END OF THE WORKDAY. TRACK-OUT SHALL NOT BE SWEEPED INTO ROADSIDE DITCHES.
17. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE. ALL TRASH AND CONSTRUCTION DEBRIS SHALL BE HAULED TO THE LOCAL MUNICIPAL DUMP AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL SOLID WASTE MANAGEMENT REGULATIONS.
18. THE CONTRACTOR SHALL PROVIDE SOLID WASTE COLLECTION DURING CONSTRUCTION TO MINIMIZE POLLUTION. ALL FIELD LITE ENCOUNTERED DURING CONSTRUCTION SHALL BE MAINTAINED IN SERVICE AND BE REPLACED WITH HDPE OR PVC PIPE STORM SEWER OF APPROPRIATE SIZE AND SLOPE.
19. ALL FIELD LITE ENCOUNTERED DURING CONSTRUCTION SHALL BE MAINTAINED IN SERVICE AND BE REPLACED WITH HDPE OR PVC PIPE STORM SEWER OF APPROPRIATE SIZE AND SLOPE.
20. EROSION CONTROL BLANKET SHALL BE INSTALLED AS SHOWN ON THIS PLAN AND AT ANY SLOPE OVER 3:1.
21. ALL SLOPE CONTROLS SHALL BE INSTALLED AND SEEDED IMMEDIATELY AFTER GRADING IS COMPLETE ON THE SLOPE.
22. ALL DITCH SIDES AND FLOW LINES SHALL BE LINED WITH EROSION CONTROL FABRIC TO WITHSTAND A MINIMUM SHEAR VELOCITY OF 10FT/S. LAY FABRIC IN THE DIRECTION OF WATER FLOW WITH LONGITUDINAL SEAMS BURIED AND 2-3 FEET ABOVE THE CREST OF THE CHANNEL SIDE WHEREVER POSSIBLE. OVERLAP ENDS AND EDGES A MINIMUM OF 3 INCHES.
23. EXTRA EROSION CONTROLS SHALL BE REQUIRED WHERE DISCHARGING DIRECTLY INTO THE WATERWAY. ALL CONSTRUCTION ACCESS PATHS TO THE WATER WAY SHALL BE PROTECTED WITH TEMPORARY BMP'S AND IMMEDIATELY STABILIZED ONCE NO LONGER IN USE.

EARTHWORK/ GEOTECHNICAL REPORT NOTES

1. CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT REGARDING EXCAVATION, COMPACTION, CLASSIFICATION OF SUITABLE SOIL MATERIALS, UNSUITABLE/UNSATISFACTORY SOIL MATERIALS, AND SOIL REMEDIATION.
2. AGGREGATE BASE OF NEW PAVEMENTS SHALL BE CONSTRUCTED DIRECTLY ON TOP OF IN-SITU HIGH PLASTIC CLAY MATERIALS. IF THIS SITUATION OCCURS, CONTRACTOR SHALL REMOVE A MINIMUM OF 12 INCHES OF THE HIGH PLASTIC CLAY AND REPLACE WITH COMPACTED SATISFACTORY SOIL MATERIALS, AS OUTLINED IN THE SPECIFICATIONS, AND UNDER THE DIRECTION OF THE ENGINEER.
3. HIGH PLASTIC CLAY MATERIALS CAN BE COMPACTED AS FILL IN AREAS OF DEEP FILL (GREATER THAN 3 FEET BELOW ANY BUILDING FOOT AND/OR SLAB)

Flood Plain Information

1. REFER TO SECTION 415 FOR FLOODPLAIN DEVELOPMENT INFORMATION
2. FLOODPLAIN DEVELOPMENT PERMIT MUST BE OBTAINED BEFORE ANY WORK COMMENCES WITHIN THE 100-YR FLOODPLAIN.
3. FEMA INSURANCE RATE MAPS:
 - A. 29183C02040G; EFFECTIVE 1/20/2016
 - B. 29183C04300G; EFFECTIVE 1/20/2016

Storm Sewer Notes

1. ALL STORM SEWER INSTALLATION IS TO BE IN ACCORDANCE WITH M.S.D. STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O'FALLON ORDINANCES.
2. BRICK SHALL NOT BE USED IN THE CONSTRUCTION OF STORM SEWER STRUCTURES. PRE-CAST CONCRETE STRUCTURES ARE TO BE USED UNLESS OTHERWISE APPROVED BY THE CITY OF O'FALLON.
3. A 58" TRASH BAR SHALL BE INSTALLED HORIZONTALLY IN THE CENTER OF THE OPENING(S) IN ALL CURB INLETS AND AREA INLETS.
4. (INTENTIONALLY OMITTED)
5. ENCASE WITH CONCRETE BOTH SANITARY AND STORM SEWER AT CROSSING WHEN STORM SEWER IS WITHIN 18 INCHES ABOVE SANITARY SEWER. ADD CONCRETE CRADLE TO ONLY RCP STORM SEWER AND ENCASE FLEXIBLE STORM SEWER WHEN IT IS MORE THAN 18 INCHES ABOVE SANITARY LINE. SHOW ON PROFILE SHEET.
6. THE STORM SEWERS SHOULD RUN DIAGONALLY THROUGH THE SIDE YARDS TO MINIMIZE ANY ADDITIONAL UTILITY EASEMENTS REQUIRED.
7. ALL CONCRETE PIPES WILL BE INSTALLED WITH O-RING RUBBER TYPE GASKETS.
8. CONNECTIONS AT ALL STORM STRUCTURES ARE TO BE MADE WITH A-LOCK JOINT OR EQUAL.
9. PRE-CAST CONCRETE INLET COVERS ARE NOT TO BE USED.
10. THE SWALE IN THE DETENTION BASINS SHALL HAVE A MINIMUM 2% LONGITUDINAL SLOPE AND BE LINED WITH A PERMANENT EROSION CONTROL BLANKET THAT WILL ALLOW INFILTRATION OF STORM WATER.
11. ALL STRUCTURES AND FUR RECD END SECTIONS MUST BE CONCRETE. H.D.P.E. PIPE WILL NOT BE ALLOWED FOR DETENTION BASIN OUTFLOWS. FINAL PIPE RUN TO DETENTION BASINS, CREEK DISCHARGE OR OTHER APPROVED MEANS.
12. (INTENTIONALLY OMITTED)
13. TEST ROLLING OF BASE COURSE AND END SECTIONS WILL BE EVALUATED IN THE FIELD BY THE ENGINEER, CONTRACTOR, AND CITY INSPECTORS AFTER INSTALLATION FOR EFFECTIVENESS AND FIELD MODIFIED, IF NECESSARY TO REDUCE EROSION ON AND OFF SITE.
14. ADD 1" MINUS ROCK BACK FILL TO ALL STORM SEWER THAT LIE WITHIN THE 1:1 SHEAR PLANE OF THE ROAD.
15. (INTENTIONALLY OMITTED)
16. ALL SANITARY LATERALS AND SANITARY MAINS CROSSING UNDER PAVEMENT MUST HAVE PROPER ROCK BACKFILL AND REQUIRED COMPACTION.
17. HDPE PIPE IS TO BE N-12W OR EQUAL AND TO MEET ASTM F1417 WATER TIGHT TEST.
18. A 58" TRASH BAR SHALL BE CENTERED WITHIN THE OPENING(S) OF ALL CURB INLETS AND AREA INLETS.

ASPHALT PAVING NOTES

- PART 1 GENERAL
- 1.1 SECTION INCLUDES
 - A. DOUBLE COURSE BITUMINOUS CONCRETE PAVING.
 - B. SURFACE SEALER.
 - 1.2 REFERENCE STANDARDS
 - A. ALL PAVING SHALL BE IN ACCORDANCE WITH ST. LOUIS COUNTY STANDARDS AND SPECIFICATIONS EXCEPT AS MODIFIED BY THE CITY OF O' FALLON AND THIS SPECIFICATION

- PART 2 PRODUCTS
- 2.1 MATERIALS
 - A. BITUMINOUS MATERIAL (PRIME COAT) MC-30
 - B. HOT-MIX ASPHALT BINDER COURSE
 - 1. MODOOT TYPE X BITUMINOUS BASE COURSE.
 - C. HOT-MIX ASPHALT SURFACE COURSE
 - 1. MODOOT TYPE C BITUMINOUS WEARING SURFACE. NO RAP MATERIAL WILL BE ALLOWED IN HMA SURFACE COURSE.
 - D. SEAL COAT: PHOENIX GRAY SEAL/SEAL BY GUARDTOP OR APPROVED EQUAL BY OWNER.

- PART 3 EXECUTION
- 3.1 CONSTRUCTION REQUIREMENTS
 - A. CONSTRUCTION SHALL CONFORM TO THE PLANS AND THE ABOVE REFERENCED SPECIFICATIONS.
 - 3.2 PREPARATION
 - A. TEST ROLLING OF BASE COURSE FOR PARKING LOTS, ROADS AND STREETS.
 - 1. THE CONTRACTOR WILL PROVIDE AT HIS OWN EXPENSE A LOADED TRUCK AND TEST ROLL. THE AGGREGATE BASE COURSE IN THE PRESENCE OF THE ENGINEER BEFORE ANY BINDER COURSE OR SURFACE MATERIAL IS PLACED. THE TRUCK SHALL BE LOADED AS FOLLOWS: 27,000 POUNDS (12,250 KILOGRAMS) ON TWO AXLES AND 45,000 POUNDS (20,400 KILOGRAMS) ON THREE AXLES. WITH A TOLERANCE NOT TO EXCEED 10 PERCENT LESS.
 - 2. THE TRUCK SHALL MAKE ONE PASS OVER THE LENGTH OF EACH TRAFFIC LANE TO BE CONSTRUCTED. ANY AREAS WHICH SHOW RUTTING, CRACKING, OR ROLLING OF THE COMPACTED AGGREGATE BASE COURSE UPON TEST ROLLING WILL NOT BE ACCEPTED. THE CONTRACTOR WILL RE-COMPACT THE SECTION THAT FAILS AND TEST ROLL AGAIN PRIOR TO ACCEPTANCE.
 - 3. CONTRACTOR SHALL GIVE THE ENGINEER 48 HOURS NOTICE PRIOR TO TEST ROLLING.
 - B. BITUMINOUS MATERIAL (PRIME COAT) MC-30 SHALL BE APPLIED AT THE RATE OF 0.40 GALLONS PER SQUARE YARD ON AGGREGATE SURFACES.
 - C. BITUMINOUS MATERIAL (PRIME COAT) RC-70 SHALL BE APPLIED AT THE RATE OF 0.10 GALLONS PER SQUARE YARD ON HARD PAVEMENT SURFACES.
 - D. FIELD QUALITY CONTROL
 - A. CONTRACTOR SHALL PROVIDE QUALITY CONTROL OF HOT-MIX ASPHALT MIXTURES ACCORDING TO THE STANDARD SPECIFICATIONS, EXCEPT AS MODIFIED HEREIN.
 - B. THE QUALITY CONTROL REQUIREMENT IS FOR THE OWNERS INFORMATION ONLY. AN MODOOT CERTIFIED LABORATORY WILL NOT BE REQUIRED. QUALITY CONTROL/QUALITY ASSURANCE TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. FOR HOT-MIX ASPHALT MIXTURES, THE CONTRACTOR SHALL SUBMIT A MIX DESIGN FOR EACH MIX CERTIFIED BY A TECHNICIAN WITH HOT MIX ASPHALT LEVEL III CERTIFICATION. TESTING SHALL BE THE MINIMUM TESTINGS PER THE NON-QC/QA BITUMINOUS CONCRETE SAMPLING SCHEDULE IN THE MODOOT CONSTRUCTION MANUAL. SHALL INCLUDE THE FOLLOWING:
 - 1. GRADATION TESTING OF AGGREGATES ONCE PER WEEK PER MIXTURE OR WHENEVER A STOCKPILE SOURCE IS CHANGED, WHICHEVER IS THE MORE FREQUENT.
 - 2. P.G. ASPHALT BINDER TESTS ONCE EVERY TWO WEEKS PER MIXTURE OR WHENEVER MATERIAL SUPPLIER IS CHANGED, WHICHEVER IS THE MORE FREQUENT.
 - 3. VOIDS, BIG "D" AND LITTLE "D" ONCE A WEEK PER MIXTURE OR WHENEVER MATERIAL SOURCES ARE CHANGED, WHICHEVER IS MORE FREQUENT.
 - 4. MIXTURE GRADATION ONCE PER WEEK PER MIXTURE OR WHENEVER MATERIAL SOURCES ARE CHANGED, WHICHEVER IS MORE FREQUENT.
 - 5. P.G. ASPHALT BINDER CONTENT TESTS ONCE PER WEEK PER MIXTURE OR WHENEVER BINDER SOURCE IS CHANGED, WHICHEVER IS MORE FREQUENT.
 - 6. DENSITY FIELD TESTS SHALL BE A MINIMUM OF ONE RANDOM FIELD TEST PER DAY PER EVERY 800 TON OF MIXTURE PLACED IN THE FIELD. ADDITIONALLY, THE CONTRACTOR SHALL TAKE THREE CORES PER LIFT FOR LABORATORY TESTING. THE CONTRACTOR SHALL SUBMIT DAILY PLANT REPORTS TO VERIFY THAT THE PLANT PROPORTIONING SETTINGS ARE CONSISTENT WITH THE INITIAL MIX DESIGN AND THAT SUPPLY SOURCES HAVE NOT CHANGED. THE TESTS MAY BE PERFORMED BY A CERTIFIED HOT MIX ASPHALT LEVEL I TECHNICIAN BUT MUST BE VERIFIED BY A CERTIFIED HOT MIX ASPHALT LEVEL I TECHNICIAN. ALL TEST RESULTS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW.
 - E. TESTING AND INSPECTION. THE CONTRACTOR SHALL PROVIDE TESTING SERVICES AND WARRANT SAME. THE CONTRACTOR SHALL SUBMIT COPIES OF ALL TEST RESULTS TO THE OWNER. THE OWNER WILL PROVIDE ENGINEERING AND INSPECTION SERVICES ON AN INTERMITTENT BASIS AS OWNER FEELS NECESSARY.
 - 3.4 SEAL COAT
 - A. APPLY SEAL COAT TO ASPHALT SURFACE COURSE IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS. CONTRACTOR TO PROVIDE MANUFACTURER INSTRUCTIONS PRIOR TO SEAL COAT APPLICATION.

ZONING

CITY OF O' FALLON, MISSOURI
HIGH TECH CORRIDOR

BENCHMARKS

POINT #	NORTHING	EASTING	ELEVATION
299	1061993.82	750660.06	565.28

CONTROL POINTS

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP #200	1061895.16	749910.55	545.42	REBAR ~ SET FGI CTRL CAP
CP #201	1062139.70	750222.88	520.59	CP - FOUND- PINK PC-CONTROL-103 CONTROL IRC
CP# 298	1062214.08	749701.49	539.98	CHIS X - ON CURB

BOUNDARY & TOPO SURVEY

FARNSWORTH GROUP
20 ALLEN AVE, SUITE 200
314-962-7900

Utility Contacts

Sanitary Sewers

Duckett Creek Sanitary District
3550 Highway K
O'Fallon, MO. 63368
636-441-1244

Water

Public Water Supply District No. 2
P.O. Box 967
O'Fallon, MO. 63366
636-561-3737

Storm Sewer

City of O'Fallon
100 N. Main St.
O'Fallon, MO. 63366
636-240-2000

Electric

Ameren Missouri
200 Callahan Road
Wentzville, MO. 63385
636-639-8312

Fire District

Wentzville Fire District
209 West Pearce Blvd.
Wentzville, MO. 63385

Gas

Spire Gas
6400 Graham Road
St. Louis, MO. 63134
314-522-2297

Telephone

CenturyLink
111 Century Tel Dr.
Wentzville, MO. 63385
636-332-7261

Land Disturbance

- * The area of this phase of development is 43.4 AC
- The area of land disturbance is 27 AC
- Number of proposed lots is 1
- Building setback information. SEE SHEET C101
- * The estimated sanitary flow in gallons per day is 0
- * Tree preservation calculations SEE SHEET C102

Construction work shall only be allowed during the following hours:

October 1 - May 31 7:00 A.M. to 7:00 P.M.
June 1 - September 30 6:00 A.M. to 8:00 P.M. Monday - Friday
7:00 A.M. to 8:00 P.M. Saturday and Sunday

Construction work to be done outside of these hours requires prior written approval from the City Administrator or City Engineer.

LEGEND

EXISTING SYMBOLS LEGEND

- EXISTING BUSH
- EXISTING TREE
- EXISTING BORE HOLE
- BENCHMARK
- EXISTING LIGHT
- EXISTING SIGN
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING CISTERN/WELL
- EXISTING GAS MARKER
- UTILITY POT HOLE
- EXISTING GUY WIRE
- EXISTING POWER POLE
- EXISTING TELEPHONE VAULT/MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING GRADE SPOT ELEVATION

PROPOSED SYMBOLS LEGEND

- PROPOSED FINISH SPOT ELEVATION
- DEMOLITION KEYED NOTE DESIGNATOR
- HARDSCAPE KEYED NOTE
- UTILITY KEYED NOTE

HATCH PATTERN LEGEND

- HARD PAVED ACCESS ROAD PAVEMENT
- NATIVE SEED MIX
- LAYDOWN AREA PAVEMENT
- CLEARANCE AREAS

EXISTING LINE LEGEND

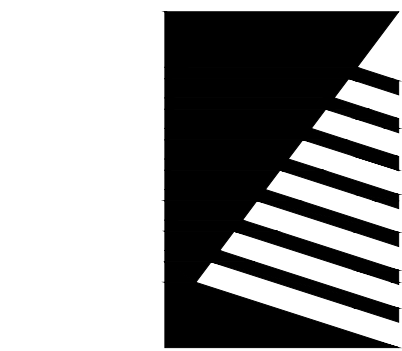
- EXISTING FENCE
- EXISTING STORM SEWER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING TREE MASS/SHRUBS
- EXISTING EASEMENT

PROPOSED LINE LEGEND

- PROPOSED STORM SEWER LINE
- PROPOSED SECURITY FENCING
- PROPOSED LAYDOWN AREA
- TEMPORARY EROSION CONTROL BARRIER
- LIMITS OF GRADING DISTURBANCE
- LIMITS OF DISTURBANCE
- PROPOSED EASEMENT

ABBREVIATIONS

- EX EXISTING
- TYP TYPICAL
- TBR TO BE REMOVED
- TR TO REMAIN
- TBR&REL TO BE REMOVED AND RELOCATED
- TBR&R TO BE REMOVED AND REPLACED
- BM BENCHMARK
- PB PLAT BOOK
- DB DEED BOOK
- PG PAGE
- N NORTH
- E EAST
- S SOUTH
- W WEST
- S.F. SQUARE FEET
- CONC CONCRETE
- MH MANHOLE
- ST STORM
- FL FLOW LINE
- PVC POLYVINYLCHLORIDE
- RCP REINFORCED CONCRETE PIPE
- HDPE HIGH DENSITY POLYETHYLENE PIPE
- UG UNDERGROUND
- R RADIUS OR RIGHT
- STA STATION
- ME MATCH EXISTING
- P PAVEMENT
- GRD GROUND
- TC TOP OF CONCRETE



Farnsworth GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

#	DATE:	DESCRIPTION:
0	10/20/2025	100% IFC SET

10/27/2025 9:21 AM

10/27/2025 9:21 AM

10/27/2025 9:21 AM

10/27/2025 9:21 AM

10/27/2025 9:21 AM

10/27/2025 9:21 AM

10/27/2025 9:21 AM

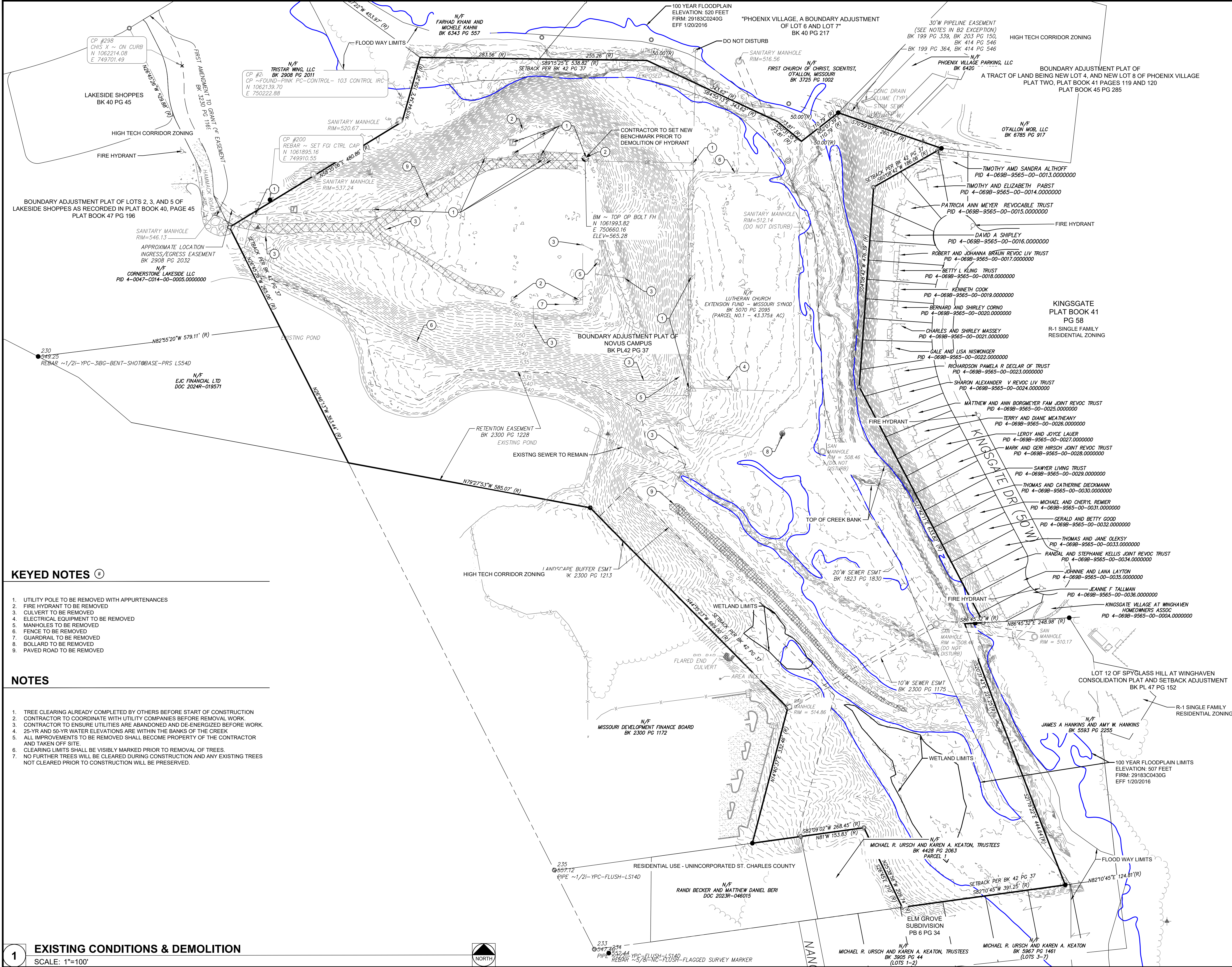
10/27/2025 9:21 AM

10/27/2025 9:21 AM

10/27/2025 9:21 AM

10/27/2025 9:21 AM

10/27/2025 9:21 AM



KEYED NOTES

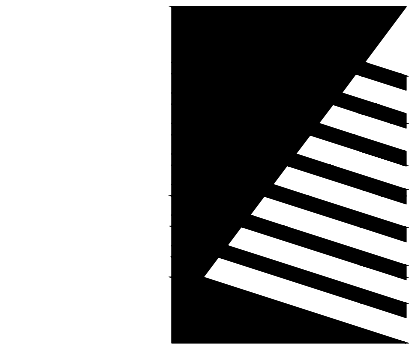
- UTILITY POLE TO BE REMOVED WITH APPURTENANCES
- FIRE HYDRANT TO BE REMOVED
- CULVERT TO BE REMOVED
- ELECTRICAL EQUIPMENT TO BE REMOVED
- MANHOLES TO BE REMOVED
- FENCE TO BE REMOVED
- GUARDRAIL TO BE REMOVED
- BOLLARD TO BE REMOVED
- PAVED ROAD TO BE REMOVED

NOTES

- TREE CLEARING ALREADY COMPLETED BY OTHERS BEFORE START OF CONSTRUCTION
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES BEFORE REMOVAL WORK
- CONTRACTOR TO ENSURE UTILITIES ARE ABANDONED AND DE-ENERGIZED BEFORE WORK
- 25-YR AND 50-YR WATER ELEVATIONS ARE WITHIN THE BANKS OF THE CREEK
- ALL IMPROVEMENTS TO BE REMOVED SHALL BECOME PROPERTY OF THE CONTRACTOR AND TAKEN OFF SITE
- CLEARING LIMITS SHALL BE VISIBLY MARKED PRIOR TO REMOVAL OF TREES
- NO FURTHER TREES WILL BE CLEARED DURING CONSTRUCTION AND ANY EXISTING TREES NOT CLEARED PRIOR TO CONSTRUCTION WILL BE PRESERVED

EXISTING CONDITIONS & DEMOLITION

SCALE: 1"=100'

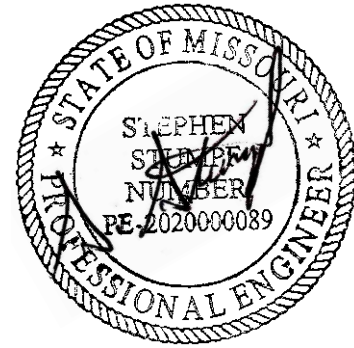


Farnsworth
GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:
0 10/20/2025 100% IFC SET



IFC SET

PROJECT:
FTI

**GROUND MOUNT
SOLAR PV + ENERGY
STORAGE SYSTEM**

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

SHEET TITLE:

**EXISTING
CONDITIONS &
DEMOLITION**

SHEET NUMBER:

C101

PROJECT NO.: 0240497.00

I:\turnup\1.0\2024\0240497.00 - FT1 MasterCard Solar Array\04_Drawings\DWG\C10 Site Layout And Hardscape - 0240497.00.dwg | 10/24/2025 12:15 PM |

1 HARDSCAPE PLAN
SCALE: 1"=100'

BENCHMARKS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM #299	1061993.82	750660.16	565.28	BM ~ TOP OP BOLT FH

CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP #200	1061895.16	749910.55	545.42	REBAR ~ SET FGI CTRL CAP
CP #201	1062139.70	750222.88	520.59	CP ~FOUND-PINK PC-CONTROL- 103 CONTROL IRC
CP #298	1062214.08	749701.49	539.98	CHIS X ~ ON CURB

NOTE:
TOTAL SITE AREA = 1,889,333 SQUARE FEET
OPEN GREEN SPACE = 1,362,992 SQUARE FEET

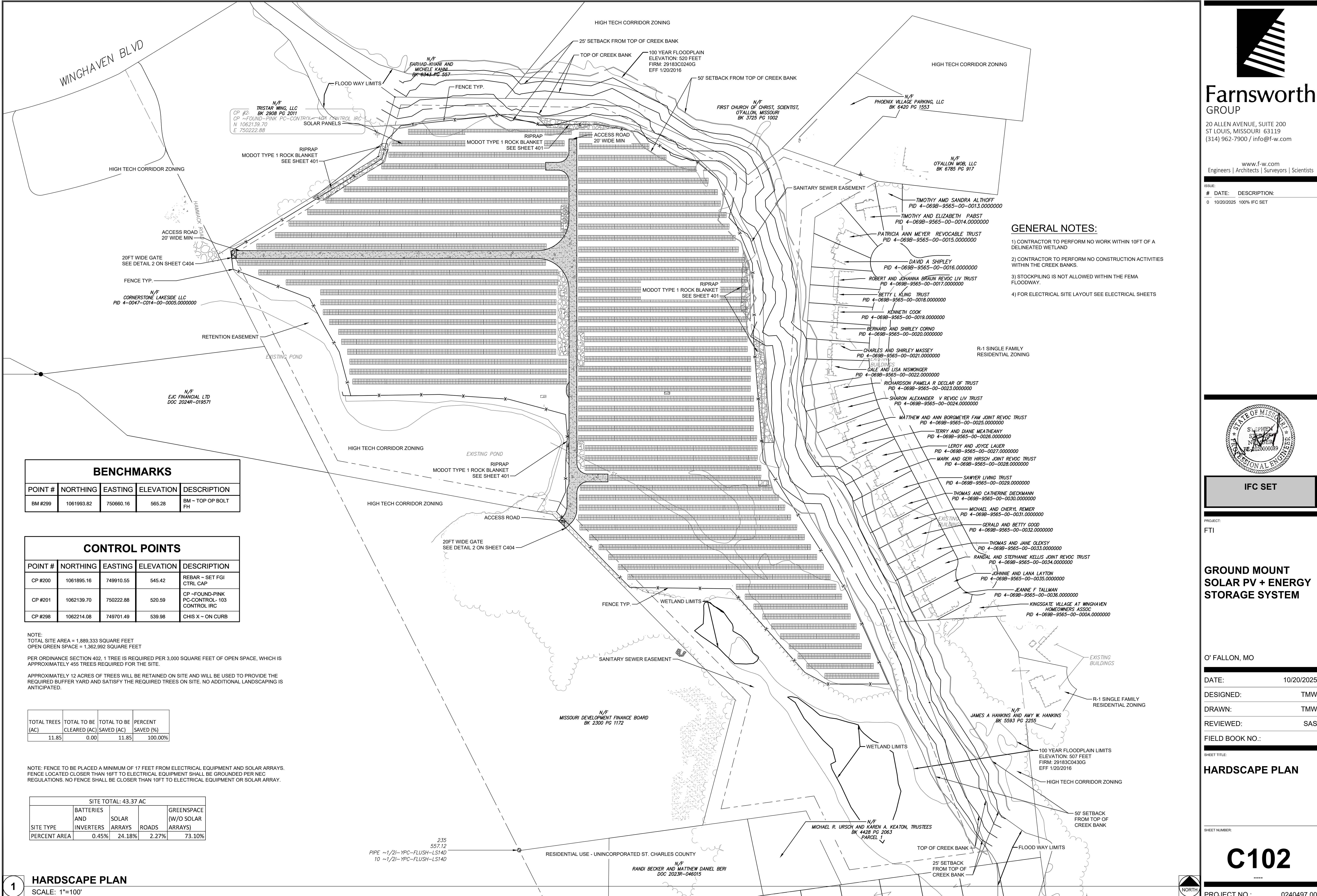
PER ORDINANCE SECTION 402, 1 TREE IS REQUIRED PER 3,000 SQUARE FEET OF OPEN SPACE, WHICH IS APPROXIMATELY 455 TREES REQUIRED FOR THE SITE.

APPROXIMATELY 12 ACRES OF TREES WILL BE RETAINED ON SITE AND WILL BE USED TO PROVIDE THE REQUIRED BUFFER YARD AND SATISFY THE REQUIRED TREES ON SITE. NO ADDITIONAL LANDSCAPING IS ANTICIPATED.

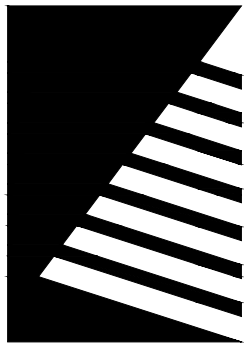
TOTAL TREES (AC)	TOTAL TO BE CLEARED (AC)	TOTAL TO BE SAVED (AC)	PERCENT SAVED (%)
11.85	0.00	11.85	100.00%

NOTE: FENCE TO BE PLACED A MINIMUM OF 17 FEET FROM ELECTRICAL EQUIPMENT AND SOLAR ARRAYS. FENCE LOCATED CLOSER THAN 16FT TO ELECTRICAL EQUIPMENT SHALL BE GROUNDED PER NEC REGULATIONS. NO FENCE SHALL BE CLOSER THAN 10FT TO ELECTRICAL EQUIPMENT OR SOLAR ARRAY.

SITE TOTAL: 43.37 AC				
SITE TYPE	BATTERIES AND INVERTERS	SOLAR ARRAYS	ROADS	GREENSPACE (W/O SOLAR ARRAYS)
PERCENT AREA	0.45%	24.18%	2.27%	73.10%



- GENERAL NOTES:**
- 1) CONTRACTOR TO PERFORM NO WORK WITHIN 10FT OF A DELINEATED WETLAND
 - 2) CONTRACTOR TO PERFORM NO CONSTRUCTION ACTIVITIES WITHIN THE CREEK BANKS.
 - 3) STOCKPILING IS NOT ALLOWED WITHIN THE FEMA FLOODWAY.
 - 4) FOR ELECTRICAL SITE LAYOUT SEE ELECTRICAL SHEETS



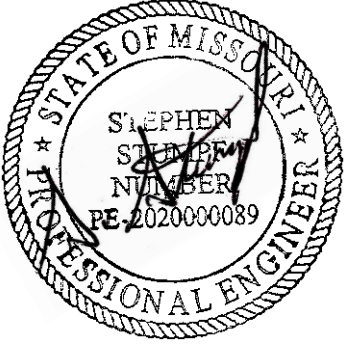
Farnsworth GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:

#	DATE:	DESCRIPTION:
0	10/20/2025	100% IFC SET



IFC SET

PROJECT:
FTI

GROUND MOUNT SOLAR PV + ENERGY STORAGE SYSTEM

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

SHEET TITLE:
HARDSCAPE PLAN

SHEET NUMBER:

C102

PROJECT NO.: 0240497.00

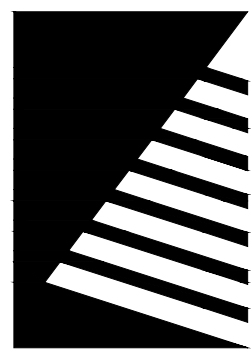


LEGEND

- SILT FENCE
SEE SHEET C402 DETAIL 7
- STRAWBALE CHECK DAM
SEE SHEET C403 DETAIL 3
- ROCK CHECK DAM
SEE SHEET C402 DETAIL 6

NOTE

- IF WATER IS NOT AVAILABLE, A WATER TRUCK WILL BE PROVIDED
- SEEDING/STABILIZATION EFFORTS SHALL OCCUR PRIOR TO THE INSTALLATION OF PILES TO HELP ESTABLISH A ROOT ZONE AND PREVENT EROSION.
- FOR SLOPES GREATER THAN 5%, CONTRACTOR SHALL PLACE EROSION CONTROL MEASURES TO PREVENT SEDIMENT FROM RUNNING OFF SITE. CONTRACTOR MAY USE HYDROSEEDING, EROSION CONTROL BLANKETS, PHYSICAL BARRIERS SUCH AS STRAW WATTLES, OR ANY COMBINATION THEREOF TO HOLD SOIL IN PLACE. STRAW BALE WATTLES ARE SHOWN FOR ILLUSTRATIVE PURPOSES OF A POSSIBLE SOLUTION.
- CONTRACTOR TO PREVENT SEDIMENT FROM MIGRATION BEYOND THE PROJECT LIMITS. THE USE OF DOUBLE ROW OF SILT FENCE, OR SIMILAR, MAY BE REQUIRED.

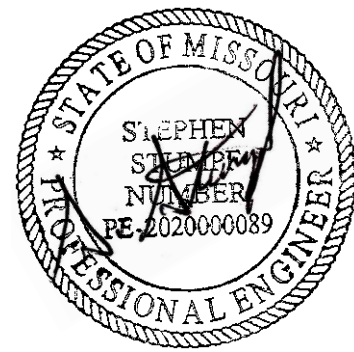


Farnsworth
GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:
0 10/20/2025 100% IFC SET



IFC SET

PROJECT:
FTI

**GROUND MOUNT
SOLAR PV + ENERGY
STORAGE SYSTEM**

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

SHEET TITLE:

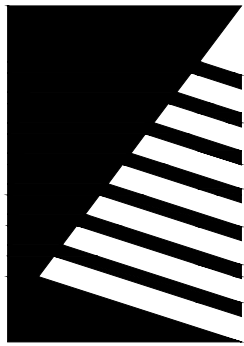
**EROSION CONTROL
PLAN**

SHEET NUMBER:

C103

PROJECT NO.: 0240497.00



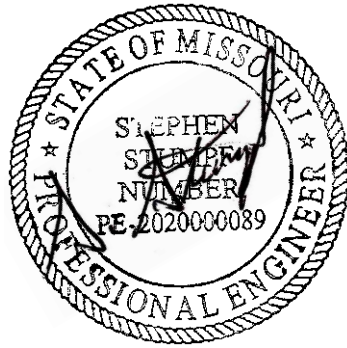


Farnsworth GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:	
#	DATE: DESCRIPTION:
0	10/20/2025 100% IFC SET



IFC SET

PROJECT:
FTI

GROUND MOUNT
SOLAR PV + ENERGY
STORAGE SYSTEM

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

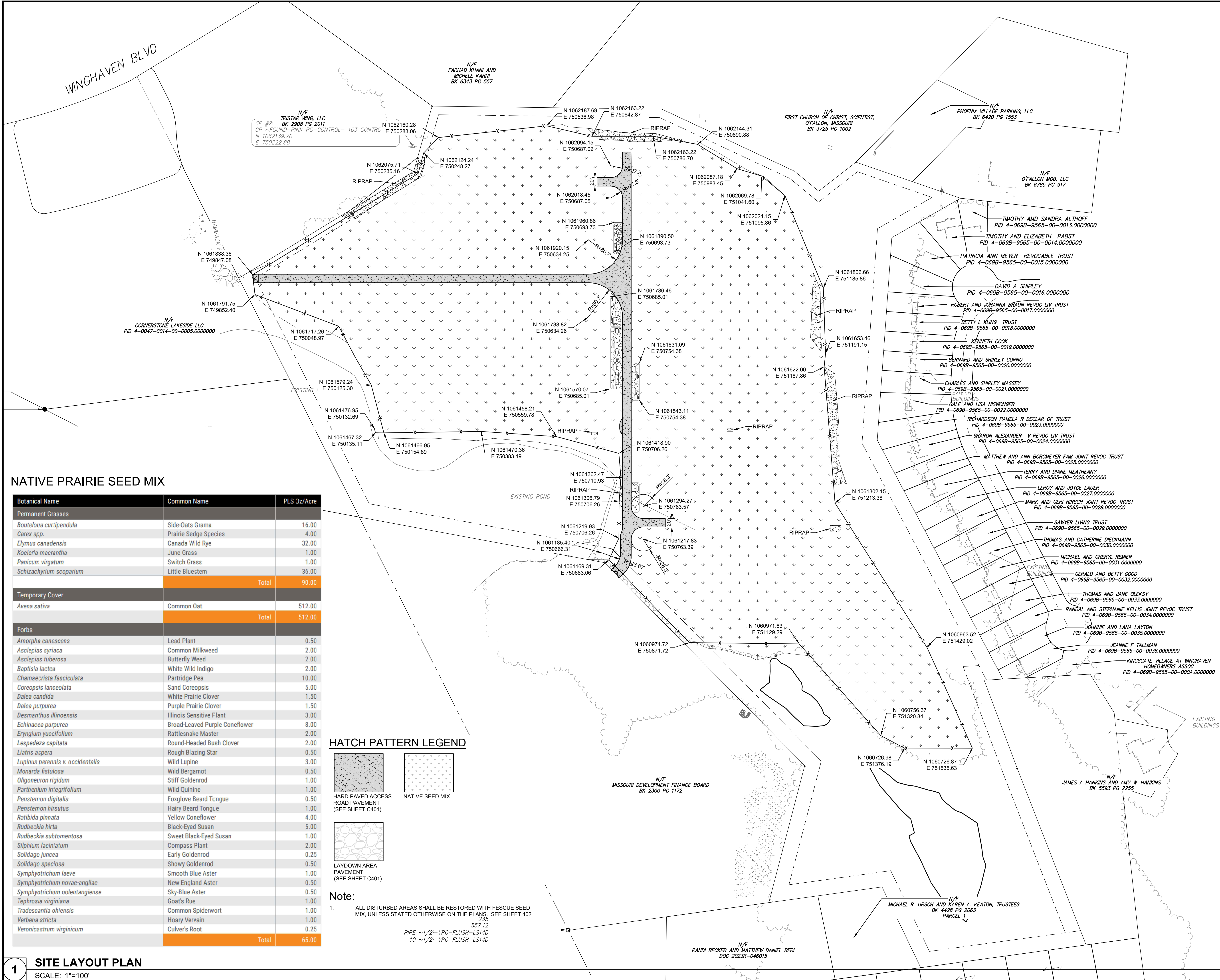
SHEET TITLE:

SITE LAYOUT PLAN

SHEET NUMBER:

C104

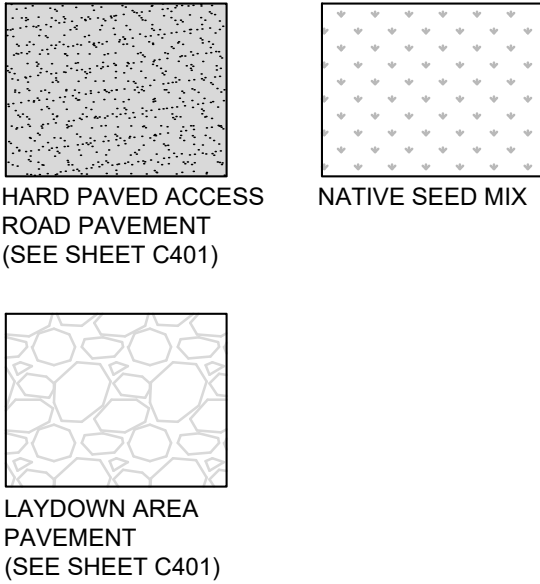
PROJECT NO.: 0240497.00



NATIVE PRAIRIE SEED MIX

Botanical Name	Common Name	PLS Oz/Acre
Permanent Grasses		
<i>Bouteloua curtipendula</i>	Side-Oats Grama	16.00
<i>Carex spp.</i>	Prairie Sedge Species	4.00
<i>Elymus canadensis</i>	Canada Wild Rye	32.00
<i>Koeleria macrantha</i>	June Grass	1.00
<i>Panicum virgatum</i>	Switch Grass	1.00
<i>Schizachyrium scoparium</i>	Little Bluestem	36.00
Total		90.00
Temporary Cover		
<i>Avena sativa</i>	Common Oat	\$12.00
Total		\$12.00
Forbs		
<i>Amorpha canescens</i>	Lead Plant	0.50
<i>Asclepias syriaca</i>	Common Milkweed	2.00
<i>Asclepias tuberosa</i>	Butterfly Weed	2.00
<i>Baptisia lactea</i>	White Wild Indigo	2.00
<i>Chamaecrista fasciculata</i>	Partridge Pea	10.00
<i>Coreopsis lanceolata</i>	Sand Coreopsis	5.00
<i>Dalea candida</i>	White Prairie Clover	1.50
<i>Dalea purpurea</i>	Purple Prairie Clover	1.50
<i>Desmanthus illinoensis</i>	Illinois Sensitive Plant	3.00
<i>Echinacea purpurea</i>	Broad-Leaved Purple Coneflower	8.00
<i>Eryngium yuccifolium</i>	Rattlesnake Master	2.00
<i>Lespedeza capitata</i>	Round-Headed Bush Clover	2.00
<i>Liatris aspera</i>	Rough Blazing Star	0.50
<i>Lupinus perennis v. occidentalis</i>	Wild Lupine	3.00
<i>Monarda fistulosa</i>	Wild Bergamot	0.50
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	1.00
<i>Parthenium integrifolium</i>	Wild Quinine	1.00
<i>Penstemon digitalis</i>	Foxglove Beard Tongue	0.50
<i>Penstemon hirsutus</i>	Hairy Beard Tongue	1.00
<i>Ratibida pinnata</i>	Yellow Coneflower	4.00
<i>Rudbeckia hirta</i>	Black-Eyed Susan	5.00
<i>Rudbeckia subtomentosa</i>	Sweet Black-Eyed Susan	1.00
<i>Silphium laciniatum</i>	Compass Plant	2.00
<i>Solidago juncea</i>	Early Goldenrod	0.25
<i>Solidago speciosa</i>	Showy Goldenrod	0.50
<i>Symphytichum laeve</i>	Smooth Blue Aster	1.00
<i>Symphytichum novae-angliae</i>	New England Aster	0.50
<i>Symphytichum oolentangiense</i>	Sky-Blue Aster	0.50
<i>Tephrosia virginiana</i>	Goat's Rue	1.00
<i>Tradescantia ohniensis</i>	Common Spiderwort	1.00
<i>Verbena stricta</i>	Hoary Vervain	1.00
<i>Veronicastrum virginicum</i>	Culver's Root	0.25
Total		65.00

HATCH PATTERN LEGEND



Note:

- ALL DISTURBED AREAS SHALL BE RESTORED WITH FESCUE SEED MIX, UNLESS STATED OTHERWISE ON THE PLANS. SEE SHEET 402



www.f-w.com
Engineers | Architects | Surveyors | Scientists



GROUND MOUNT SOLAR PV + ENERGY STORAGE SYSTEM

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

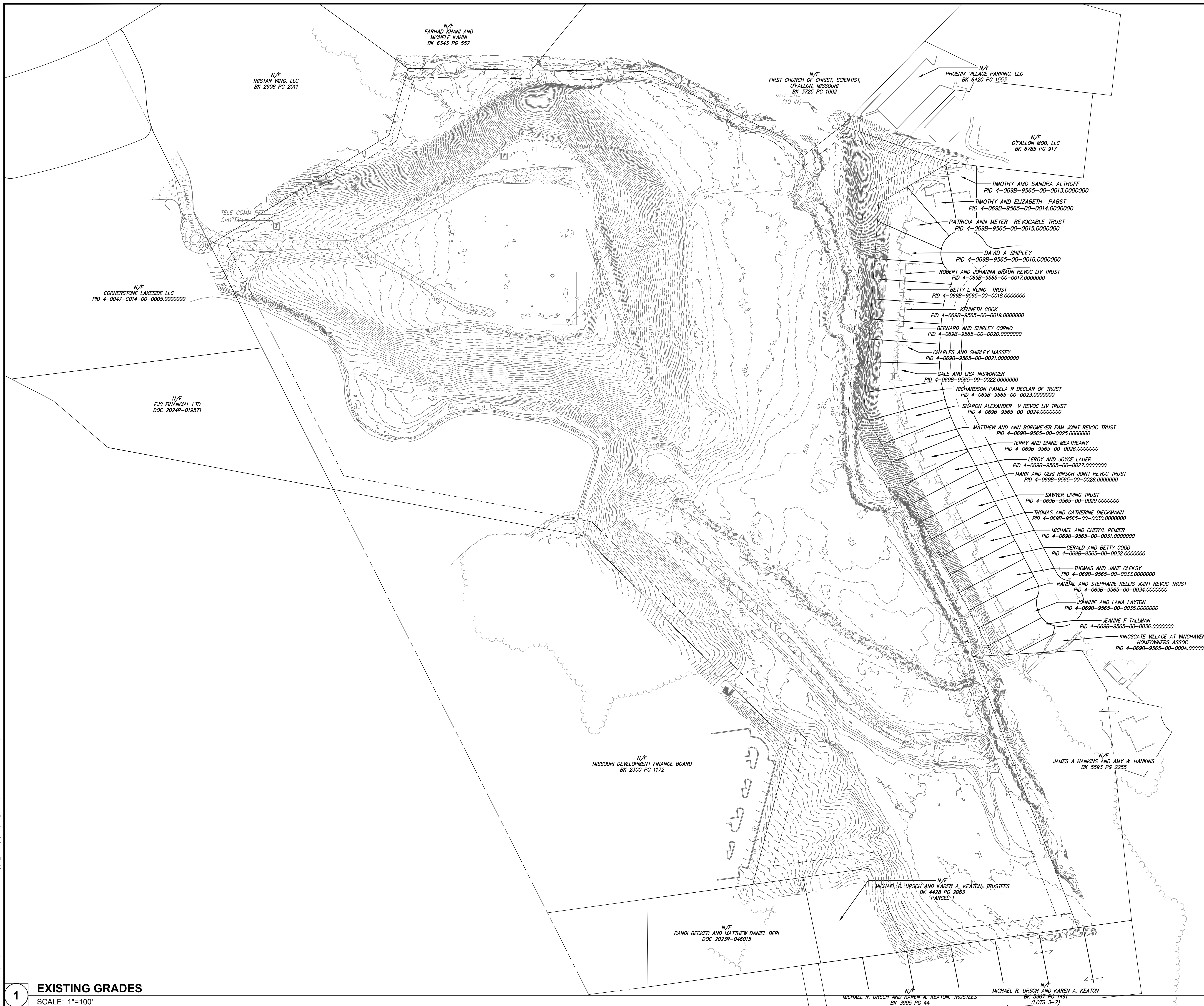
SHEET TITLE:

EXISTING GRADES

SHEET NUMBER:

C201

PROJECT NO.: 0240497.00

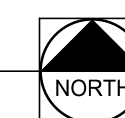


|| twoether || J:\2024\0240497.00 - FTI MasterCard Solar Array\04_Drawings\DWG\C2.0_ Grading - 0240497.00.dwg || 10/27/2025 11:51 AM ||

1

EXISTING GRADES

SCALE: 1"=100'





20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

#	DATE:	DESCRIPTION:
0	10/20/2025	100% IFC SET



PROJECT: FTI

GROUND MOUNT SOLAR PV + ENERGY STORAGE SYSTEM

D' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

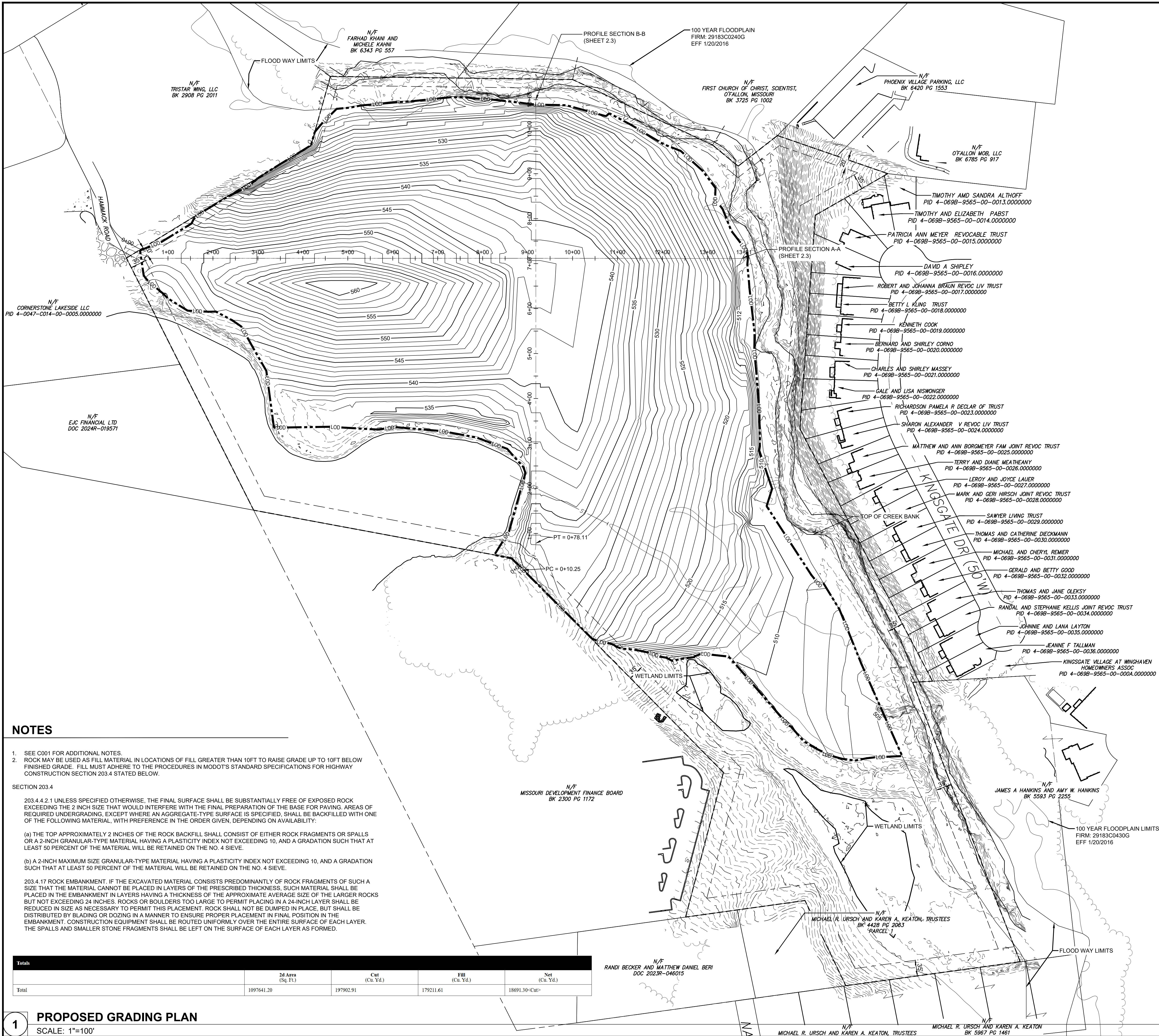
HEET TITLE:

PROPOSED GRADING PLAN

HEET NUMBER:

C202

PROJECT NO.: 0240497.00



NOTES

1. SEE C001 FOR ADDITIONAL NOTES.
2. ROCK MAY BE USED AS FILL MATERIAL IN LOCATIONS OF FILL GREATER THAN 10FT TO RAISE GRADE UP TO 10FT BELOW FINISHED GRADE. FILL MUST ADHERE TO THE PROCEDURES IN MODOT'S STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION SECTION 203.4 STATED BELOW.

SECTION 203.4

203.4.4.2.1 UNLESS SPECIFIED OTHERWISE, THE FINAL SURFACE SHALL BE SUBSTANTIALLY FREE OF EXPOSED ROCK EXCEEDING THE 2 INCH SIZE THAT WOULD INTERFERE WITH THE FINAL PREPARATION OF THE BASE FOR PAVING. AREAS OF REQUIRED UNDERGRADING, EXCEPT WHERE AN AGGREGATE-TYPE SURFACE IS SPECIFIED, SHALL BE BACKFILLED WITH ONE OF THE FOLLOWING MATERIAL, WITH PREFERENCE IN THE ORDER GIVEN, DEPENDING ON AVAILABILITY:

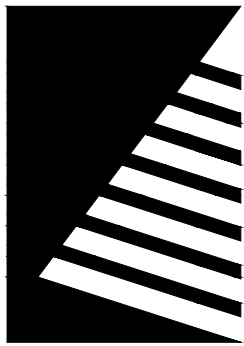
- (a) the TOP APPROXIMATELY TWO INCHES OF THE ROCK BACKFILL SHALL CONSIST OF EITHER ROCK FRAGMENTS OR SPALLS OR A 2-INCH GRANULAR-TYPE MATERIAL HAVING A PLASTICITY INDEX NOT EXCEEDING 10, AND A GRADATION SUCH THAT AT LEAST 50 PERCENT OF THE MATERIAL WILL BE RETAINED ON THE NO. 4 SIEVE.
- (b) A 2-INCH MAXIMUM SIZE GRANULAR-TYPE MATERIAL HAVING A PLASTICITY INDEX NOT EXCEEDING 10, AND A GRADATION SUCH THAT AT LEAST 50 PERCENT OF THE MATERIAL WILL BE RETAINED ON THE NO. 4 SIEVE.

203.4.17 ROCK EMBANKMENT. IF THE EXCAVATED MATERIAL CONSISTS PREDOMINANTLY OF ROCK FRAGMENTS OF SUCH A SIZE THAT THE MATERIAL CANNOT BE PLACED IN LAYERS OF THE PRESCRIBED THICKNESS, SUCH MATERIAL SHALL BE PLACED IN THE EMBANKMENT IN LAYERS HAVING A THICKNESS OF THE APPROXIMATE AVERAGE SIZE OF THE LARGER ROCKS, BUT NOT EXCEEDING 24 INCHES. ROCKS OR BouldERS TOO LARGE TO PERMIT PLACING IN A 24-INCH LAYER SHALL BE REDUCED IN SIZE AS NECESSARY TO PERMIT THIS PLACEMENT. ROCK SHALL NOT BE DUMPED IN PLACE, BUT SHALL BE DISTRIBUTED BY BLADING OR DOZING IN A MANNER TO ENSURE PROPER PLACEMENT IN FINAL POSITION IN THE EMBANKMENT. CONSTRUCTION EQUIPMENT SHALL BE ROUTED UNIFORMLY OVER THE ENTIRE SURFACE OF EACH LAYER. THE SPALLS AND SMALLER STONE FRAGMENTS SHALL BE LEFT ON THE SURFACE OF EACH LAYER AS FORMED.

Totals				
	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	FILL (Cu. Yd.)	Net (Cu. Yd.)
Total	1097641.20	197902.91	179211.61	1869130<Cut>

1 **PROPOSED GRADING PLAN**
SCALE: 1"=100'



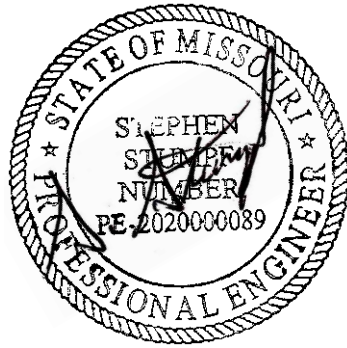


Farnsworth GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:
0 10/20/2025 100% IFC SET



IFC SET

PROJECT:
FTI

GROUND MOUNT
SOLAR PV + ENERGY
STORAGE SYSTEM

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

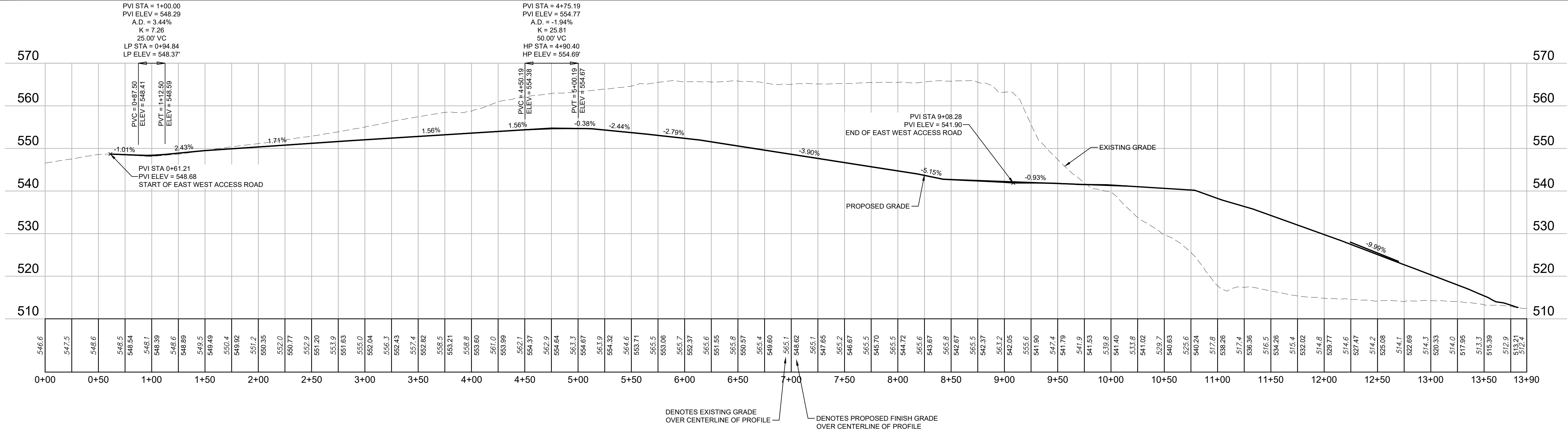
SHEET TITLE:

PROPOSED ACCESS
ROAD PROFILES

SHEET NUMBER:

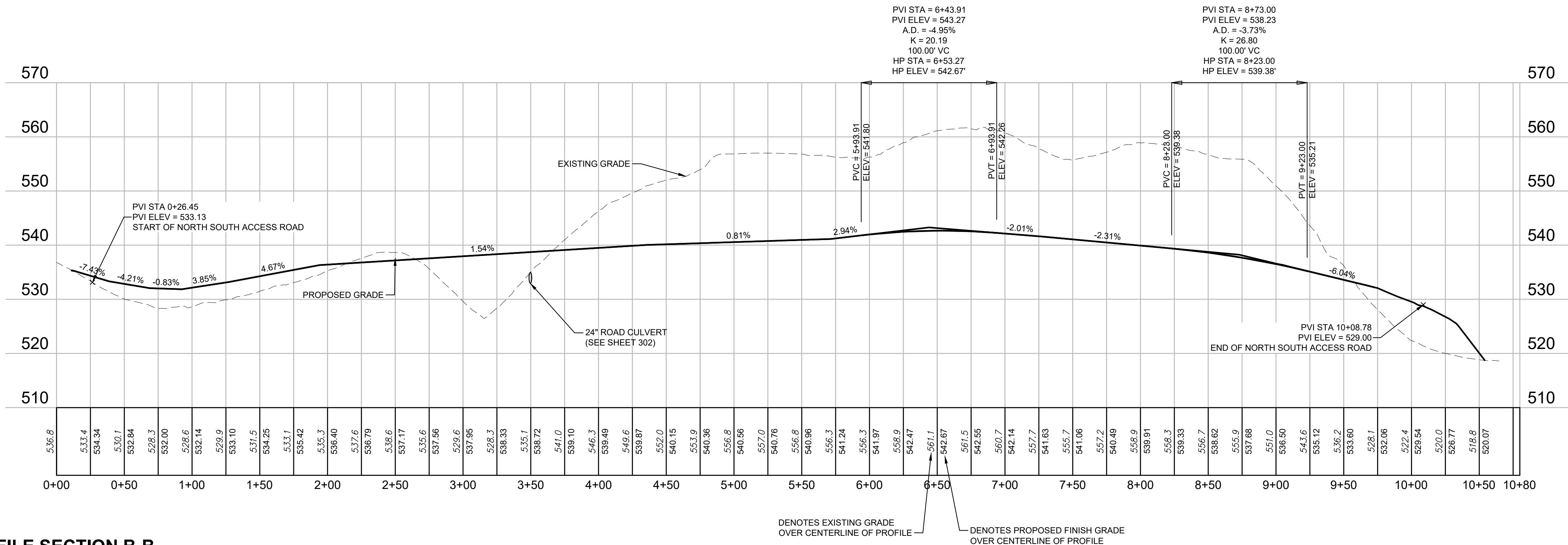
C203

PROJECT NO.: 0240497.00



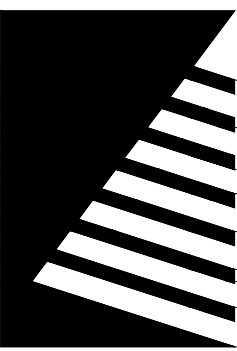
1 PROFILE SECTION A-A

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



2 PROFILE SECTION B-B

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

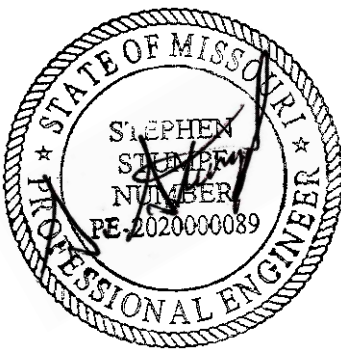


Farnsworth
GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

#	DATE:	DESCRIPTION:
0	10/20/2025	100% IFC SET



IFC SET

PROJECT:
FTI

GROUND MOUNT SOLAR PV + ENERGY STORAGE SYSTEM

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

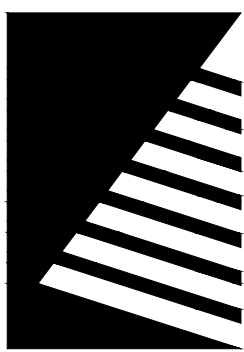
FIELD BOOK NO.:

DRAINAGE UTILITY PLAN

SHEET NUMBER:

C301

PROJECT NO.: 0240497.00

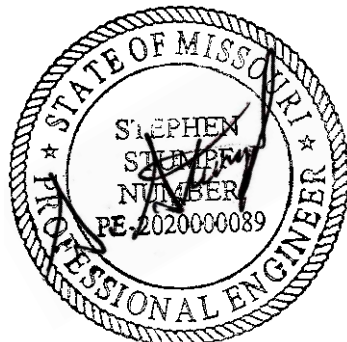


Farnsworth
GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:	
#	DATE: DESCRIPTION:
0	10/20/2025 100% IFC SET



IFC SET

PROJECT:
FTI

GROUND MOUNT
SOLAR PV + ENERGY
STORAGE SYSTEM

O' FALLON, MO

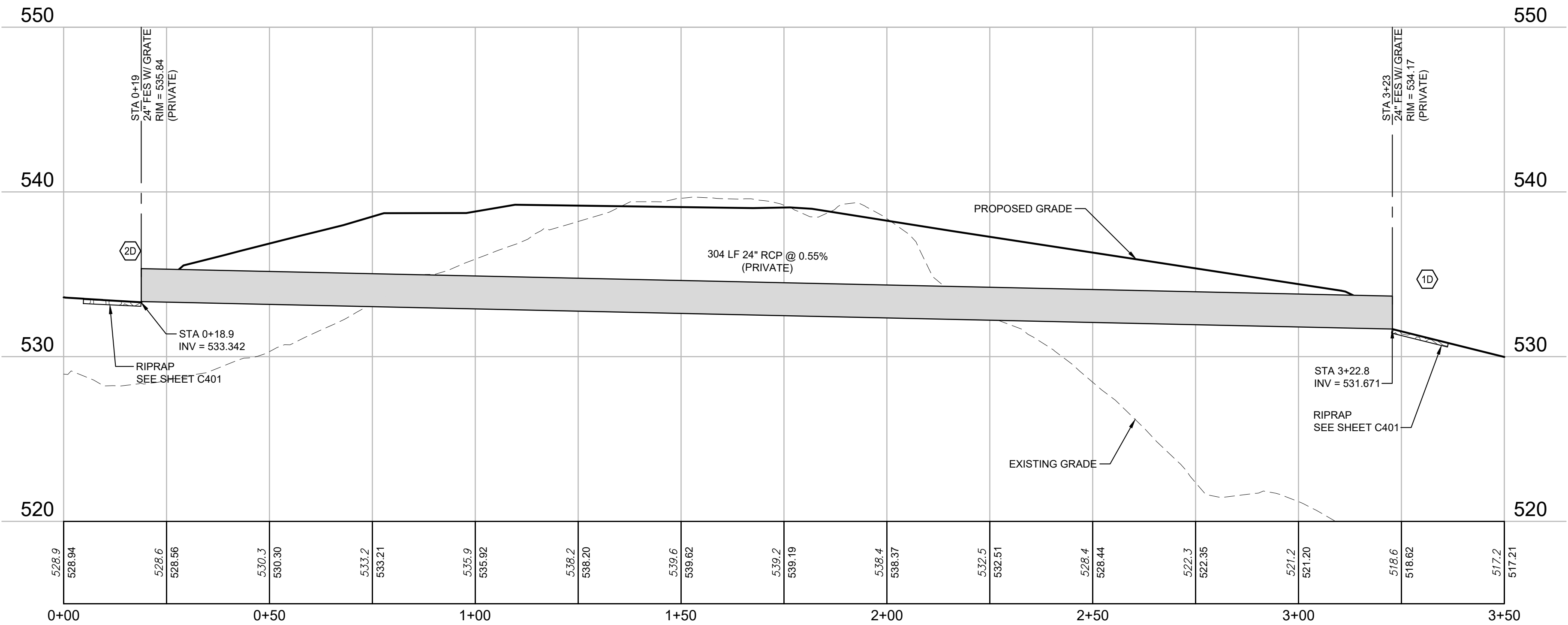
DATE:	10/20/2025
DESIGNED:	TMW
DRAWN:	TMW
REVIEWED:	SAS
FIELD BOOK NO.:	-

SHEET TITLE:
DRAINAGE PROFILES

SHEET NUMBER:

C302

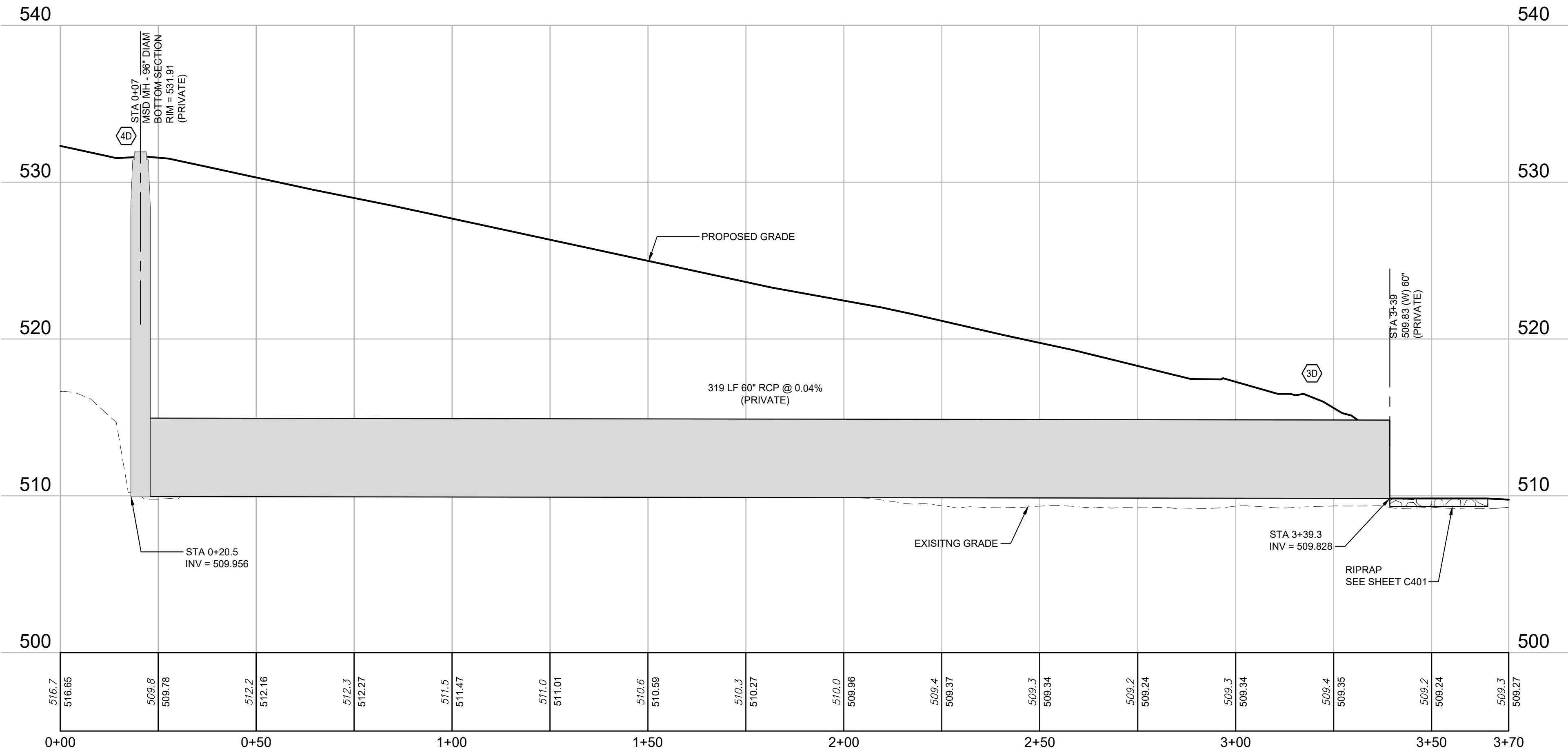
PROJECT NO.: 0240497.00



1

PROFILE SECTION 1D-2D

SCALE: 1"=5' V
1"=20' H

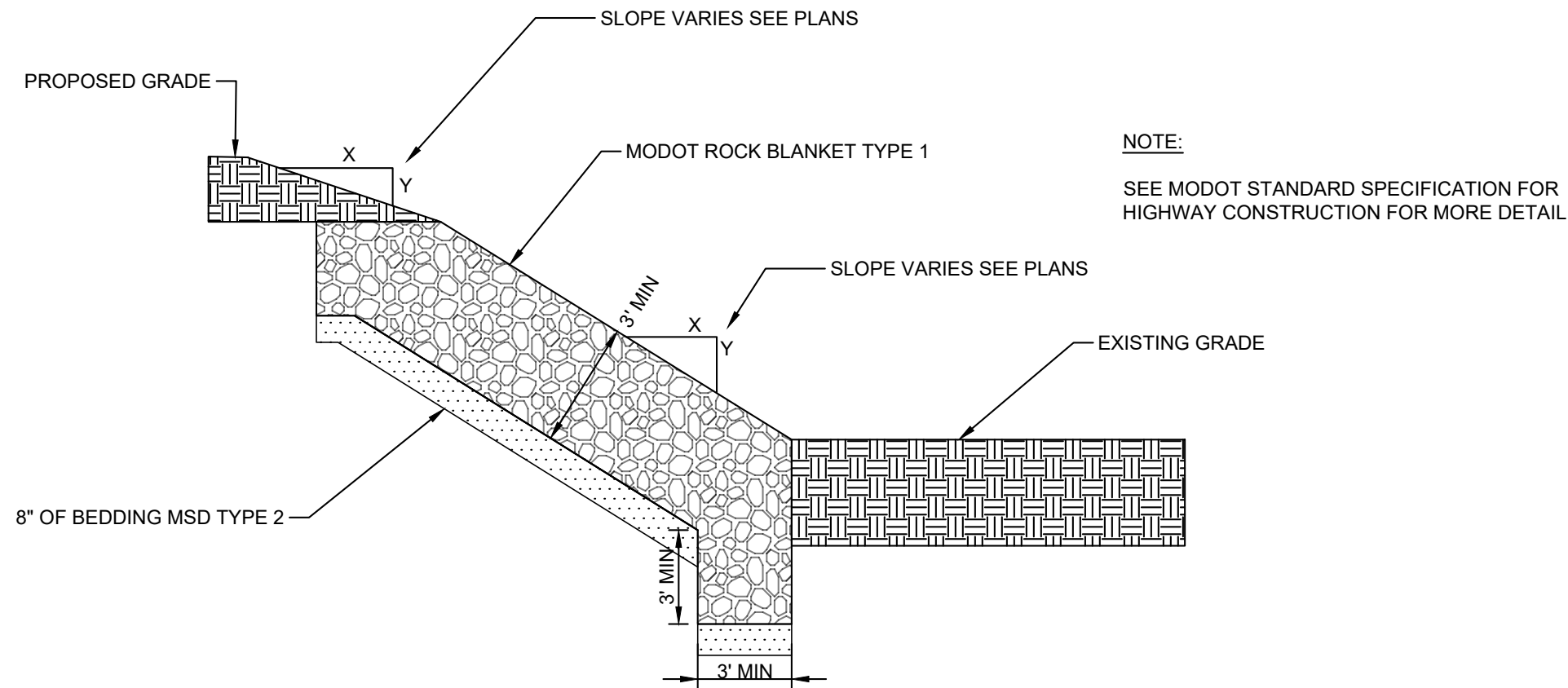
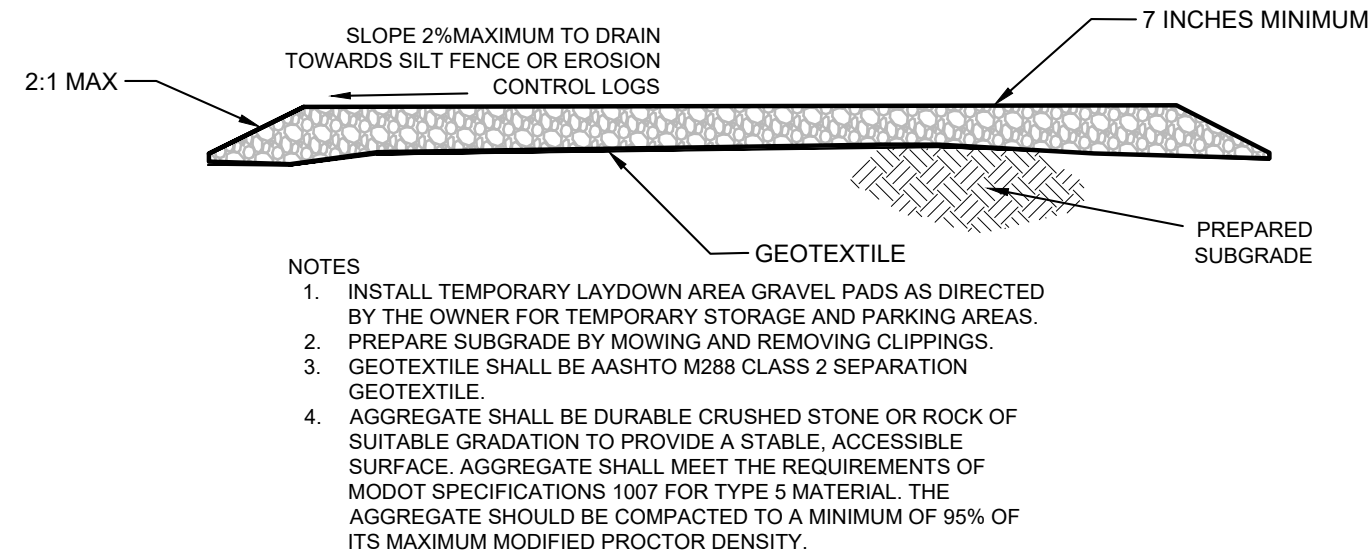
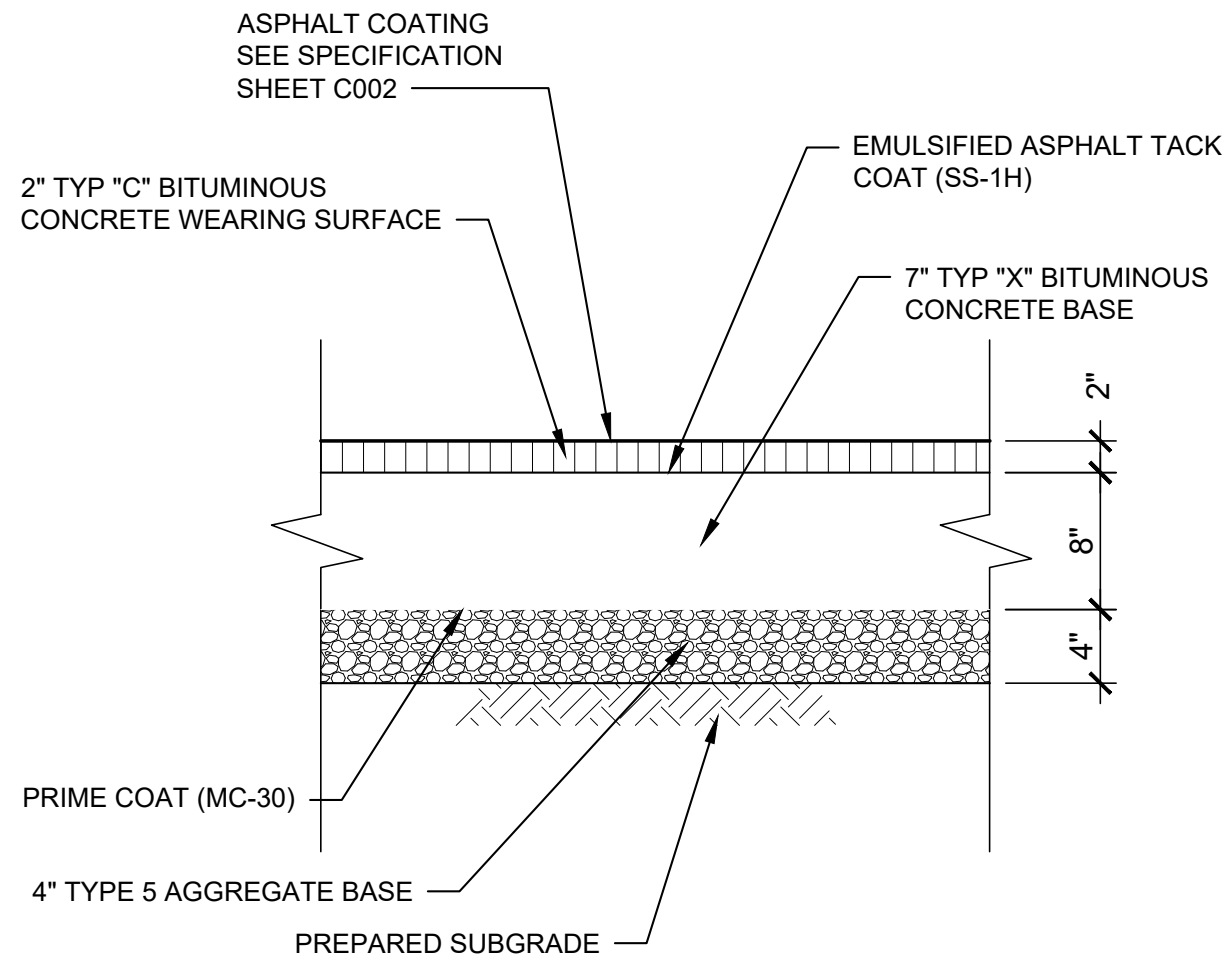


2

PROFILE SECTION 3D-4D

SCALE: 1"=5' V
1"=20' H

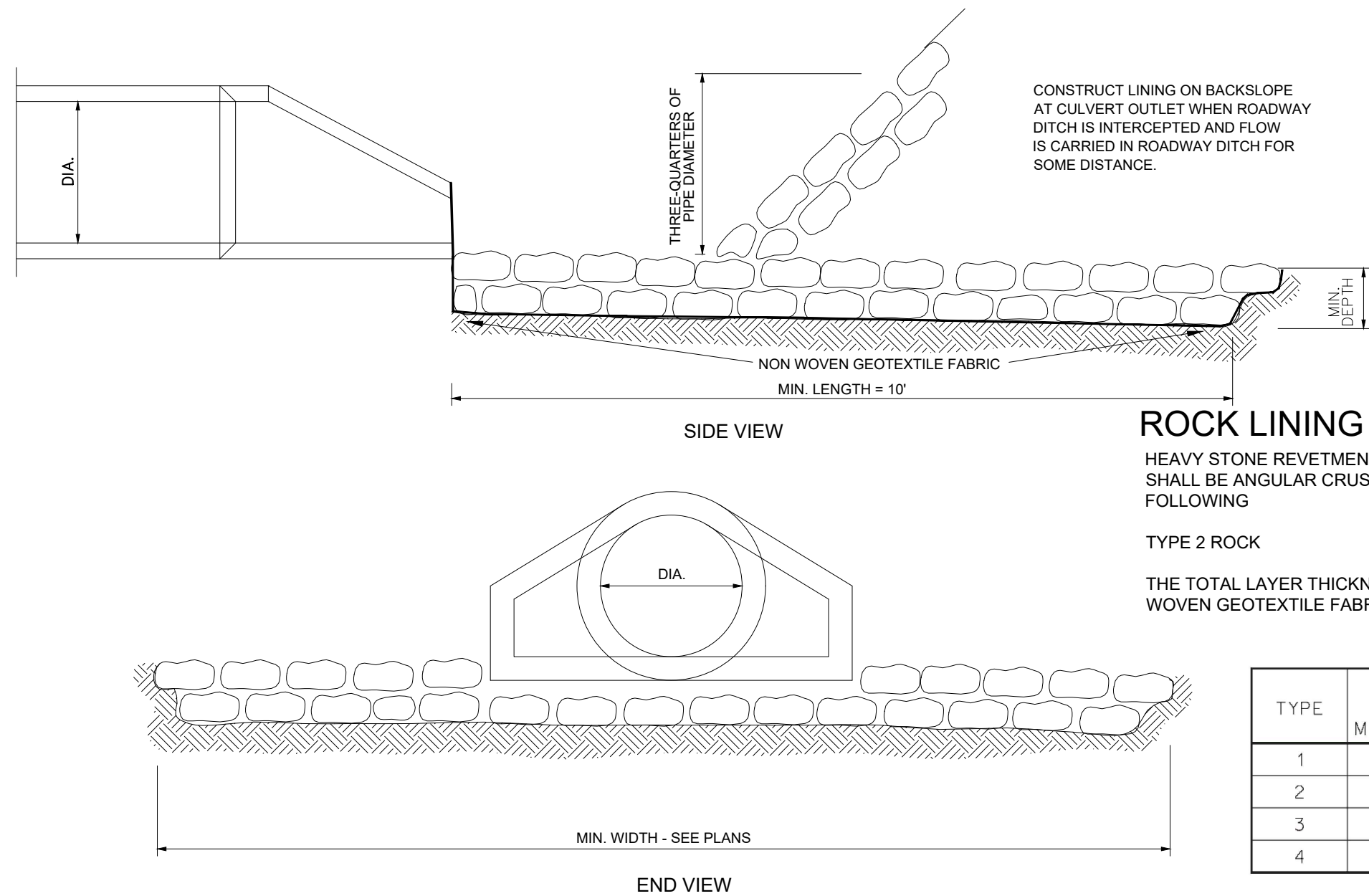
I:\weather\1_024\0240497.00 - FTI MasterCard Solar Array\04_Drawings\DWG\C302.dwg | 10/27/2025 1:13 PM |



1 **TYPICAL ACCESS ROAD SECTION**
Scale: Not To Scale

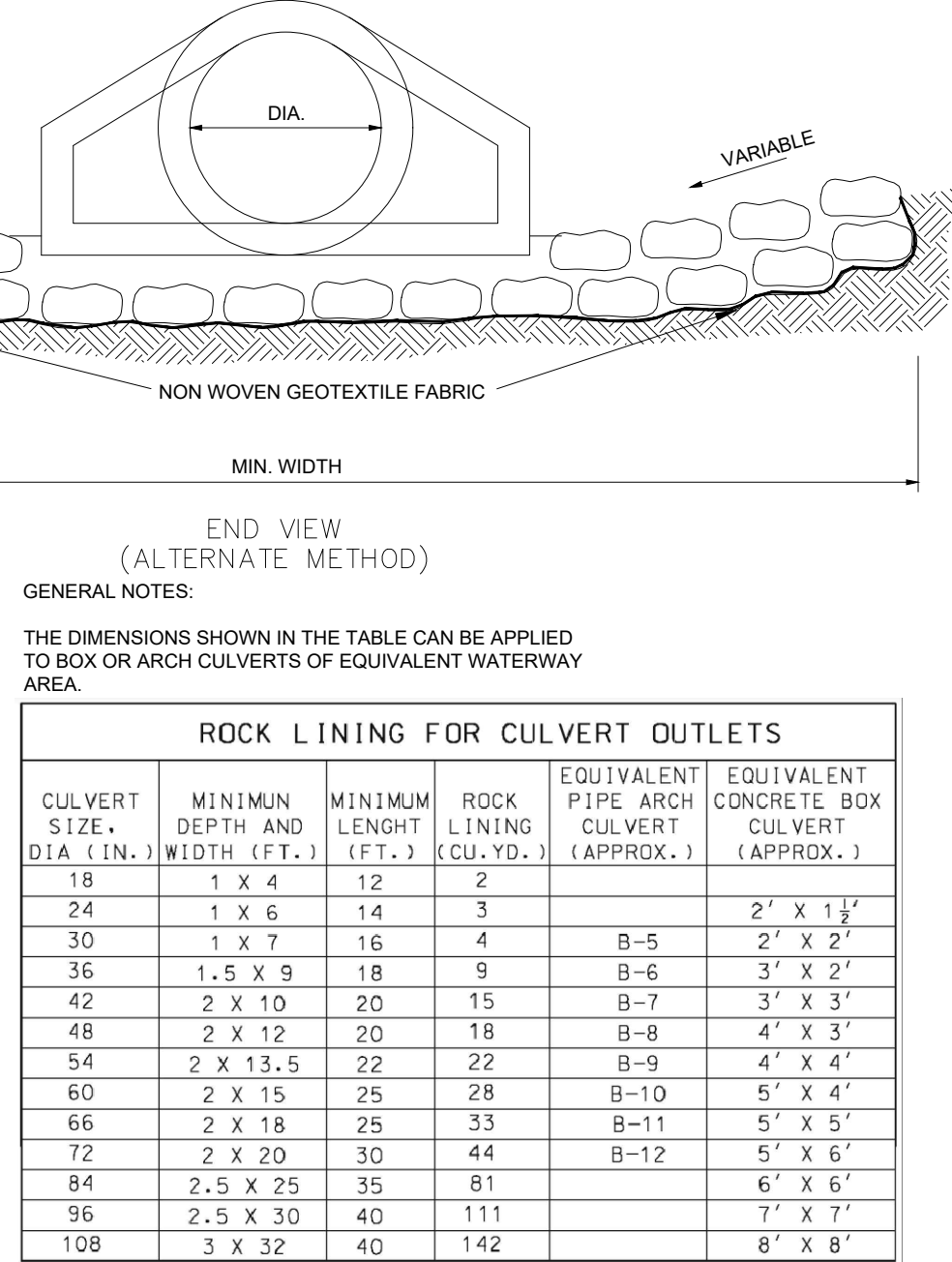
2 **TEMPORARY LAYDOWN AREA GRAVEL PAD**
Scale: Not To Scale

7 **RIP RAP - MODOT ROCK BLANKET TYPE 1**
Scale: NOT TO SCALE



ROCK LINING FOR CULVERT OUTLETS
HEAVY STONE REVETMENT SHALL BE ANGULAR CRUSHED LIMESTONE OR SHOT ROCK MEETING THE FOLLOWING
TYPE 2 ROCK
THE TOTAL LAYER THICKNESS SHALL BE A MINIMUM OF 12" WITH A NON WOVEN GEOTEXTILE FABRIC LINER ON BOTTOM AND SIDES.

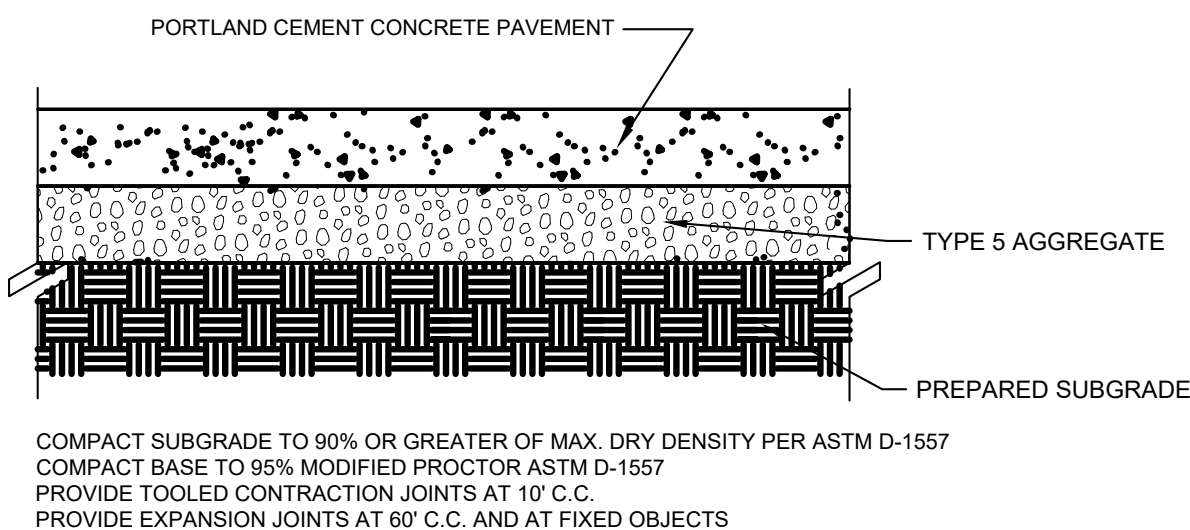
TYPE	ROCK DITCH LINER MIN. THICKNESS	BEDDING MATERIAL MIN. THICKNESS
1	8"	---
2	12"	---
3	22"	8"
4	30"	12"



ROCK LINING FOR CULVERT OUTLETS					
CULVERT SIZE, DIA. (IN.)	MINIMUM DEPTH AND WIDTH (FT.)	MINIMUM LENGTH (CU. YD.)	ROCK LINING (CU. YD.)	EQUIVALENT PIPE ARCH CULVERT (APPROX.)	EQUIVALENT CONCRETE BOX CULVERT (APPROX.)
18	1 X 4	12	2		
24	1 X 6	14	3		2' X 1 1/2'
30	1 X 7	16	4	B-5	2' X 2'
36	1.5 X 9	18	9	B-6	3' X 2'
42	2 X 10	20	15	B-7	3' X 3'
48	2 X 12	20	18	B-8	4' X 3'
54	2 X 13.5	22	22	B-9	4' X 4'
60	2 X 15	25	28	B-10	5' X 4'
66	2 X 18	25	33	B-11	5' X 5'
72	2 X 20	30	44	B-12	5' X 6'
84	2.5 X 25	35	81		6' X 6'
96	2.5 X 30	40	111		7' X 7'
108	3 X 32	40	142		8' X 8'

3 **ROCK LINING FOR CULVERT OUTLETS DETAIL**
Scale: None

	MEDIUM DUTY
CONCRETE PAVEMENT	7"
MINIMUM 28 DAY STRENGTH	4000 PSI
TYPE 5 AGGREGATE	5"



4 **CONCRETE PAVEMENT DETAIL**
Scale: Not To Scale

On Interior (plant side) of manual man gates and vehicle gates:



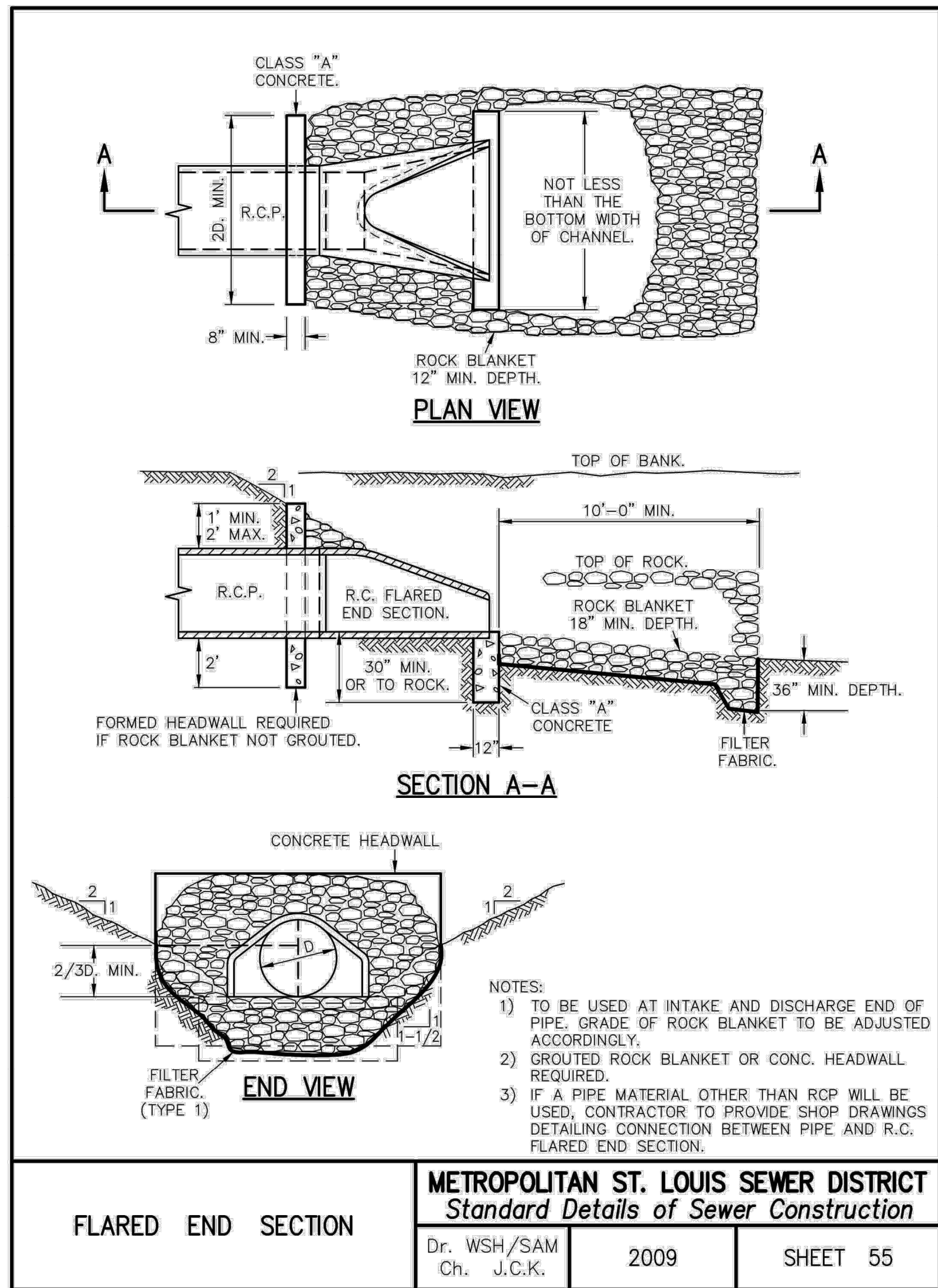
10" x 14" 1 sided Metal .40 Aluminum

No Weapons signs to be posted at plant entrance gates (employee & contractor) and at turnstiles

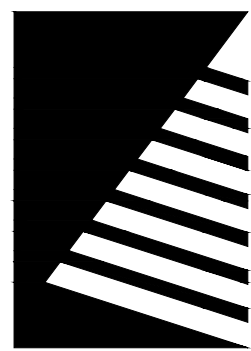


18"x24" 1 sided .080 Aluminum

5 **TYPICAL SIGNAGE DETAILS**
Scale: Not To Scale



3a **FLARED END SECTION DETAIL**
Scale: NOT TO SCALE

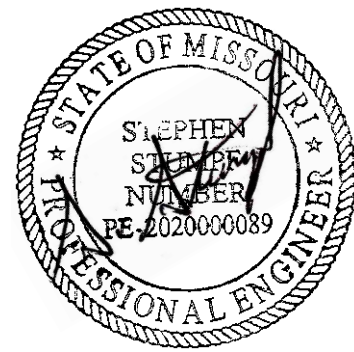


Farnsworth GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:
0 10/20/2025 100% IFC SET



IFC SET

PROJECT:

FTI

**GROUND MOUNT
SOLAR PV + ENERGY
STORAGE SYSTEM**

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

SHEET TITLE:

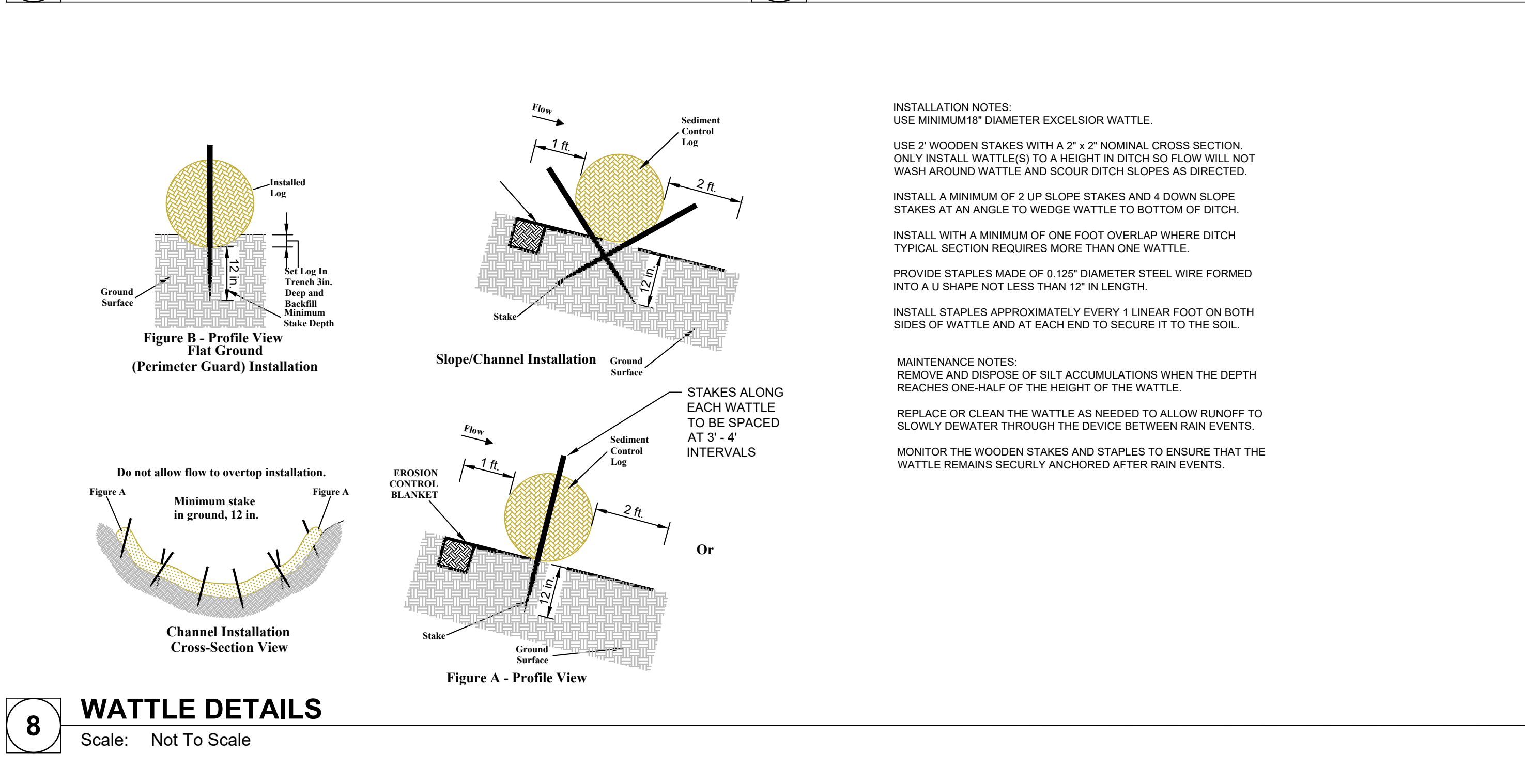
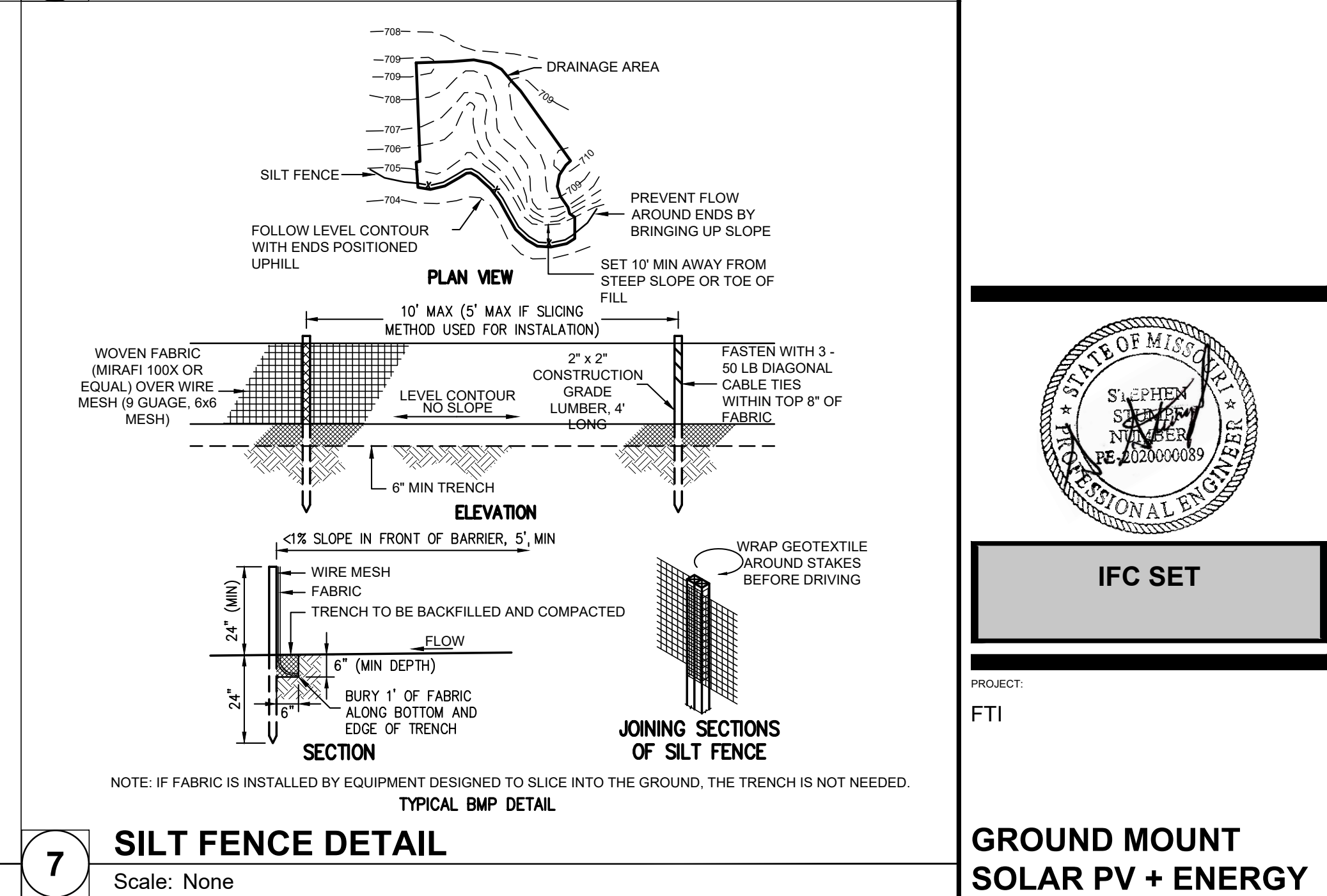
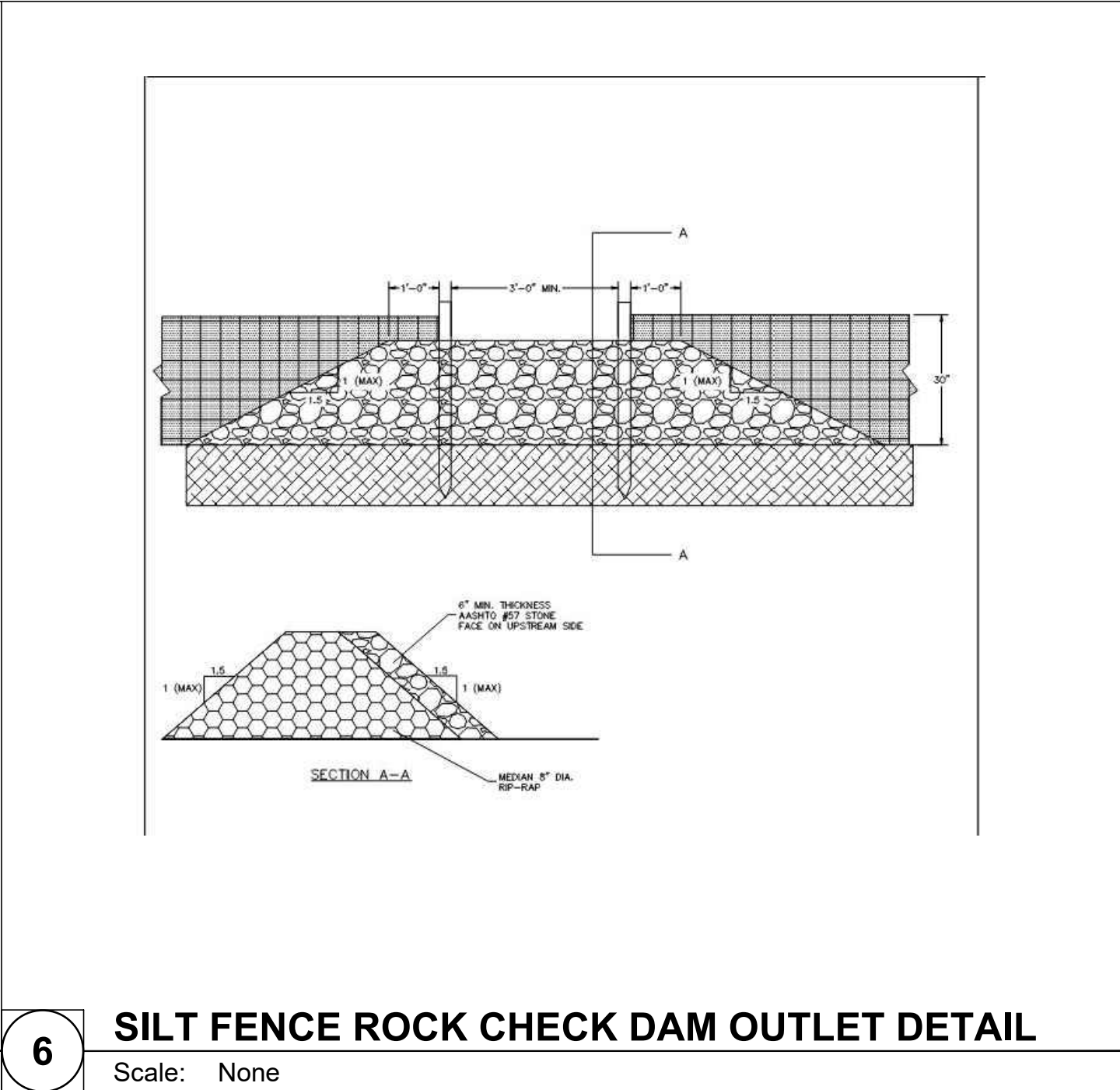
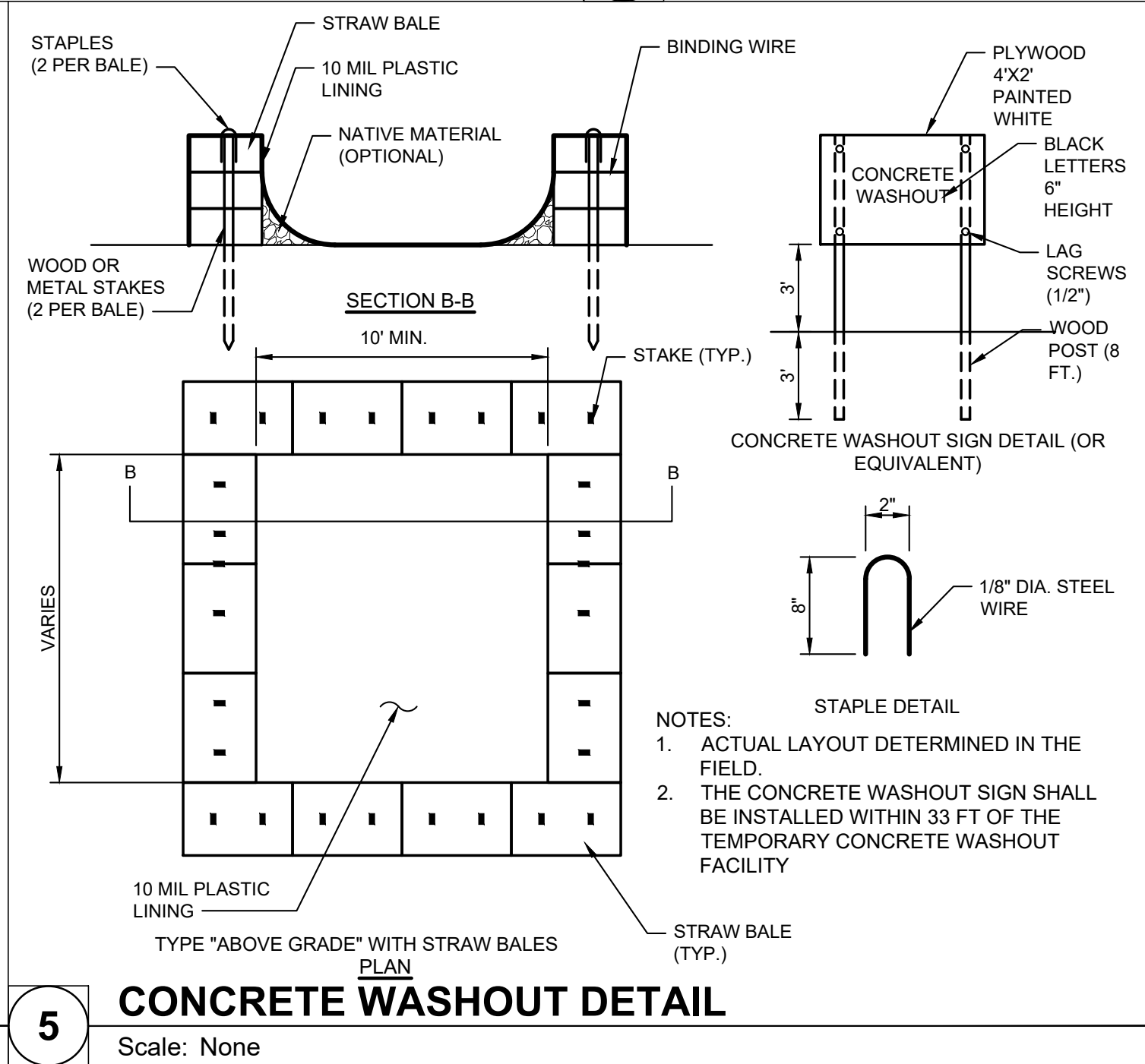
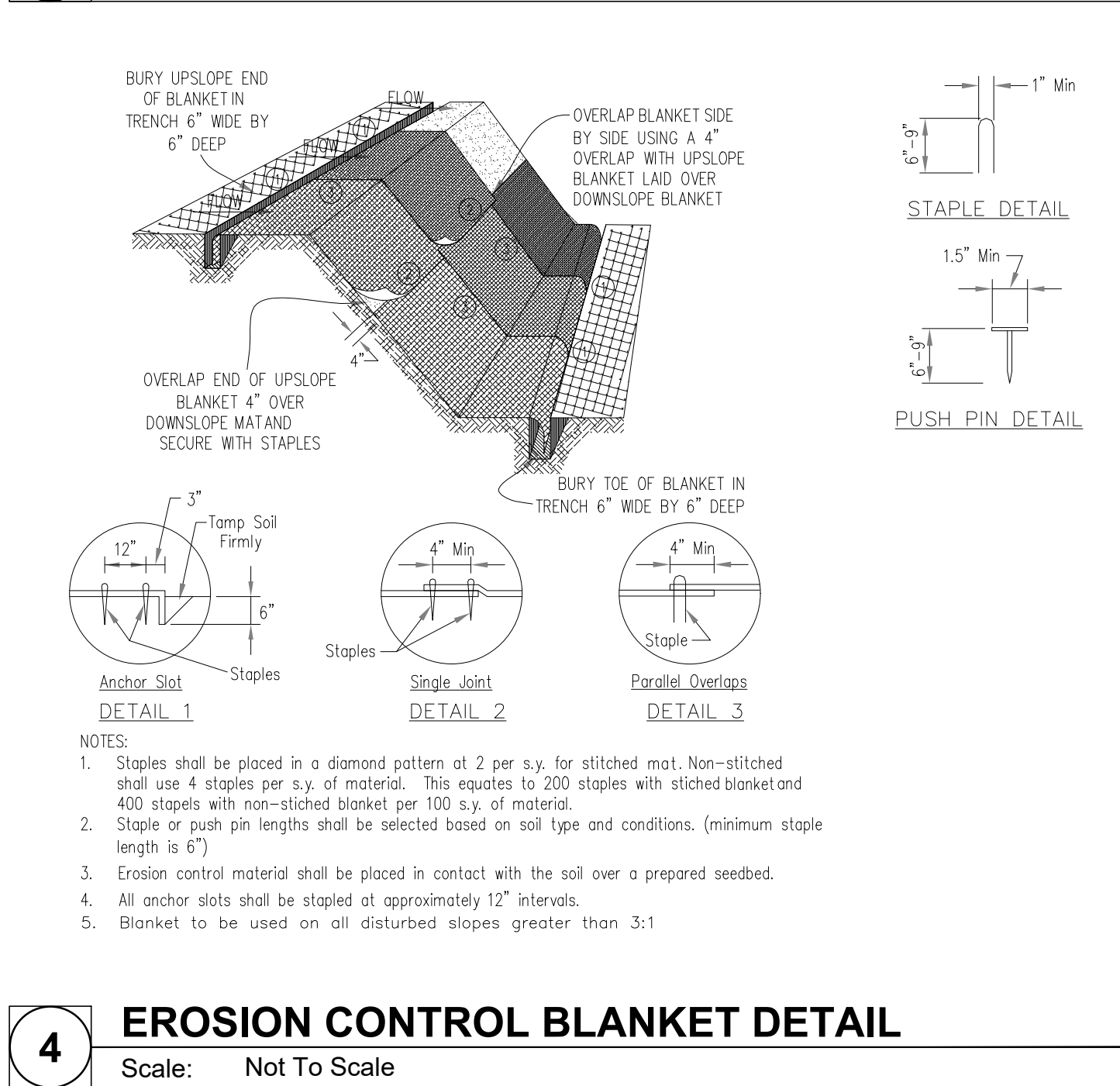
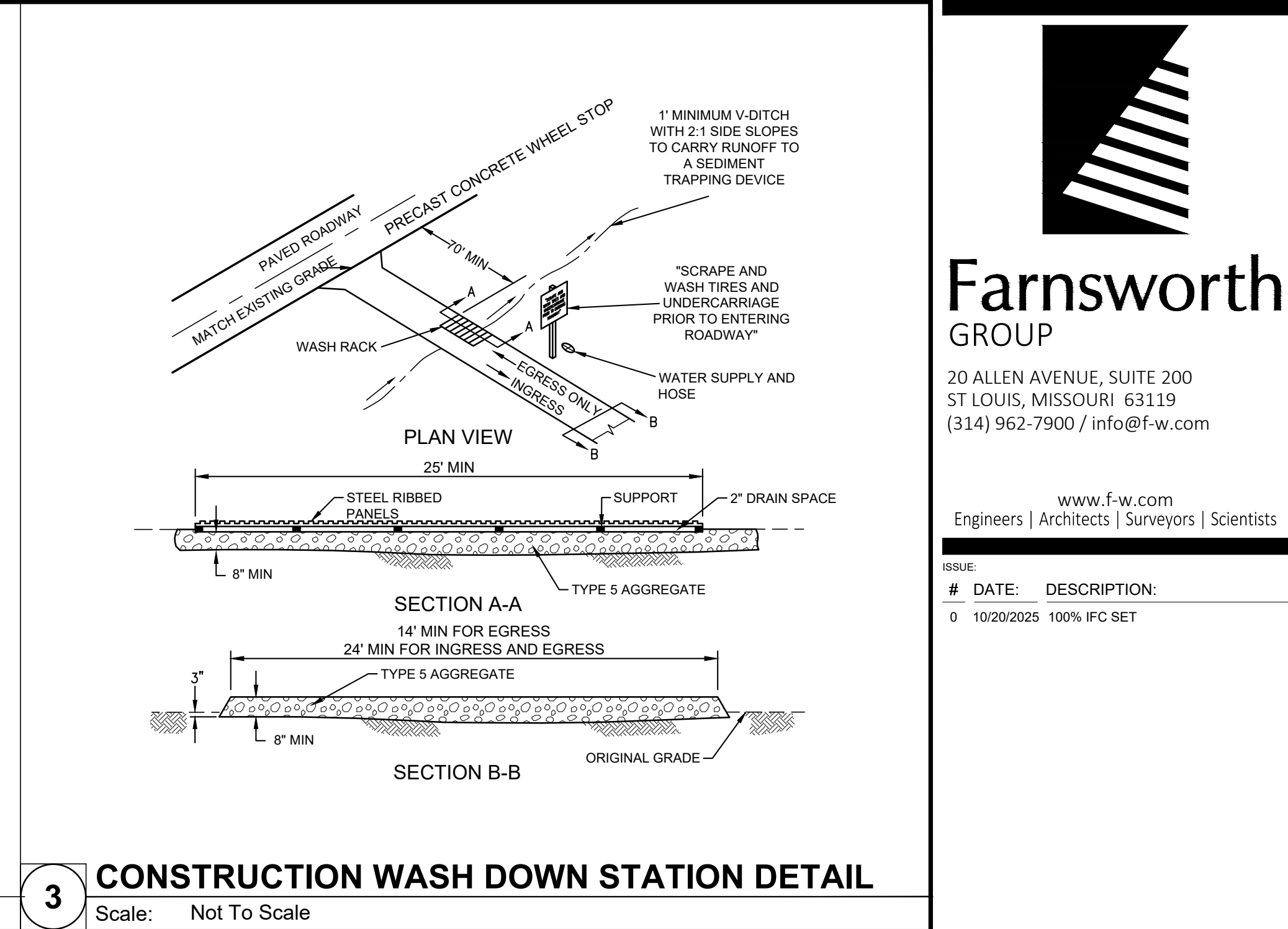
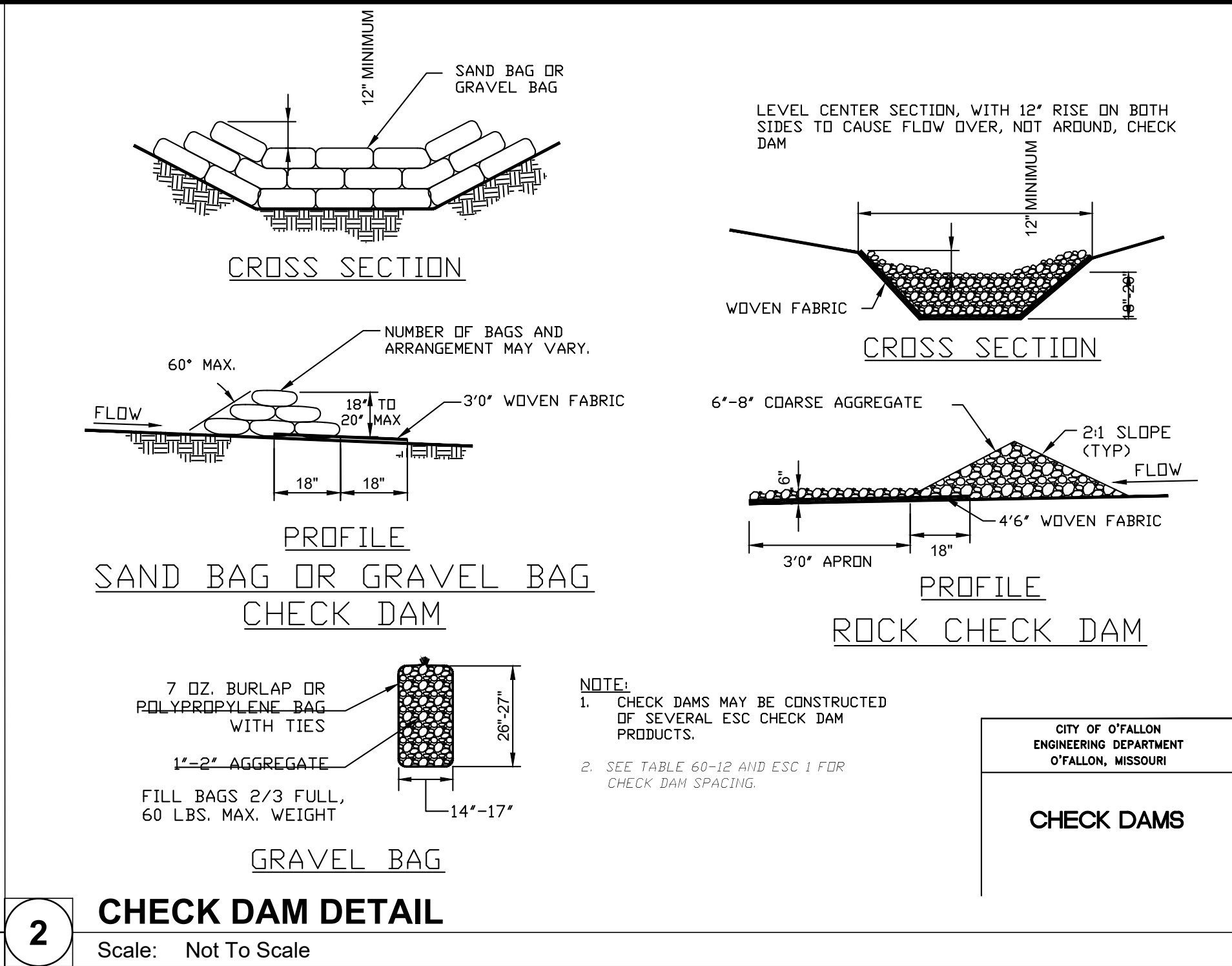
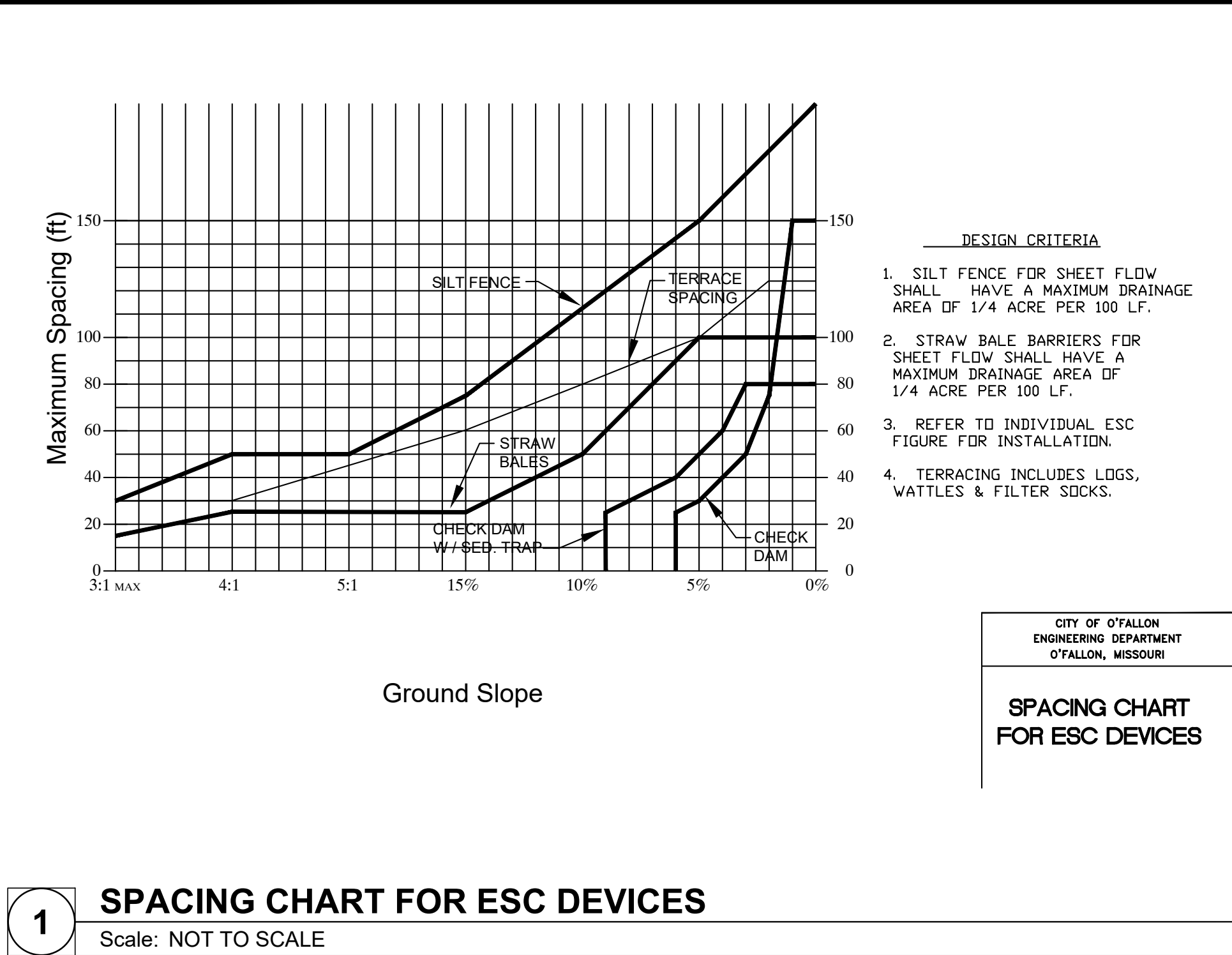
**ROAD & UTILITY
DETAILS**

SHEET NUMBER:

C401

PROJECT NO.: 0240497.00

[I:\weather | J:\2024\0240497.00 - FTI MasterCard Solar Array\04_Drawings\DWG\C402 - Details - 0240497.00.dwg | 10/10/2025 1:40 PM]



FESCUE SEED MIX MATERIALS						
KEY	BOTANICAL/COMMON NAME	METHOD	HATCH	HEIGHT	BLOOM PERIOD	REMARKS
FES-SEED	FESCUE SEED MIX	SEED				SEED AREAS INDICA" ON THE PLANS
SEED MIX	ANTENNARIA PLANTAGINIFOLIA PUSSYTOES			0.5-1.0'	APR-JUN	7.84 PLS LBS/ACRE
	BOUTELOUA CURTIPENDULA'SIDEOUTS GRAMA			1.5-2.5'	JUL-AUG	9.45 PLS LBS/ACRE
	BROMUS INERMIS SMOOTH BROMEGRASS			1.5-2.0'	MAY-FRS	8.71 PLS LBS/ACRE
	FESTUCA BREVIPLA 'BEACON' BECON HARD FESCUE			1.5-2.0'	MAY-JUN	26.14 PLS LBS/ACRE
	FESTUCA OVINA VAR DURIUSCULA 'JETT' JETTY HARD FESCUE			1.5-2.0'	MAY-AUG	26.14 PLS LBS/ACRE
	FESTUCA RUBRA CREEPING RED FESCUE			1.0-2.0	MAY-JUL	79.28 PLS LBS/ACRE
	KOeleria MACRANTHIA JUNE GRASS			2.0'	JUN-JUL	4.00 PLS LBS/ACRE

Farnsworth GROUP
20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:
0 10/20/2025 100% IFC SET

IFC SET

PROJECT:
FTI

GROUND MOUNT SOLAR PV + ENERGY STORAGE SYSTEM

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

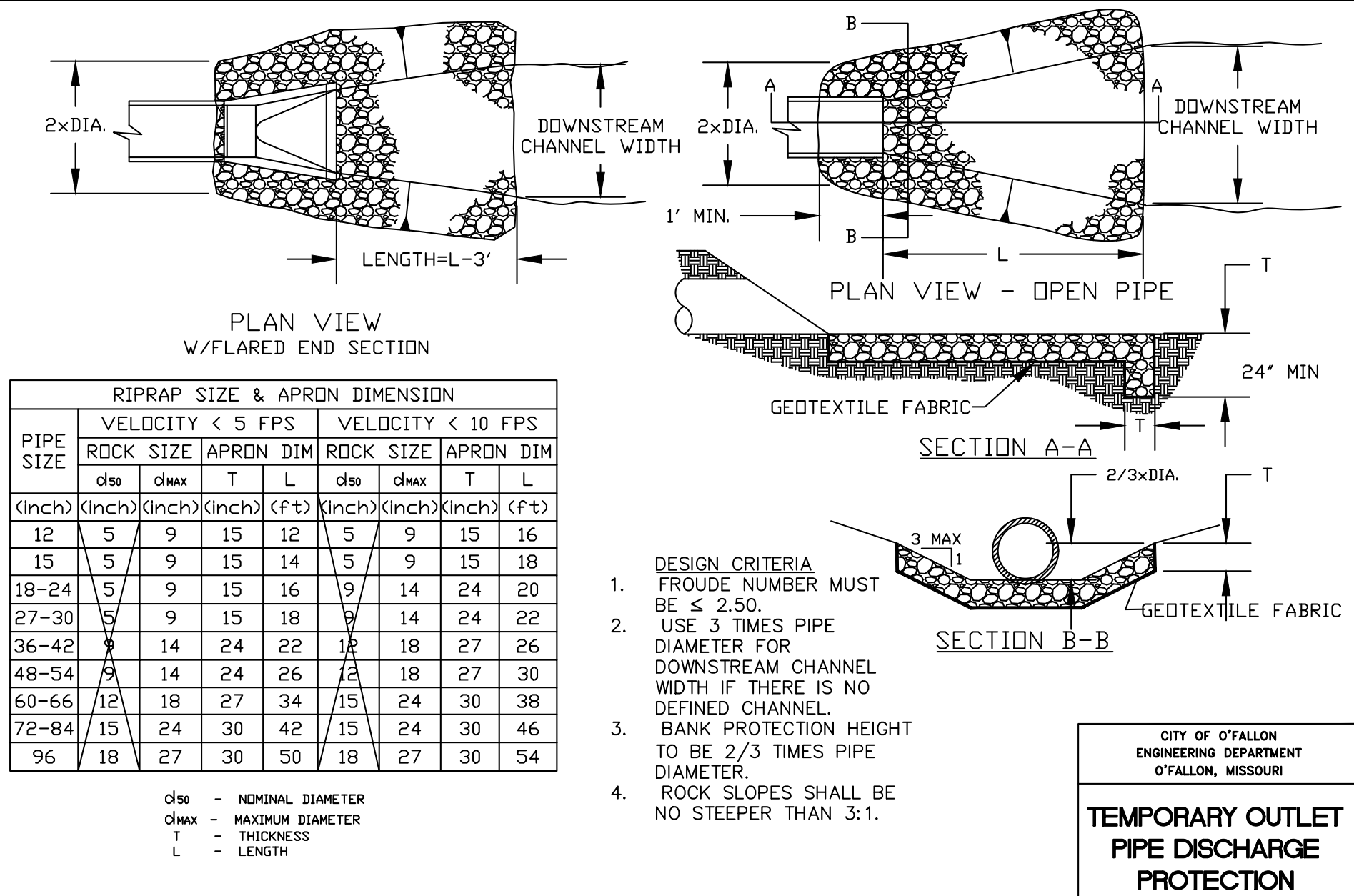
FIELD BOOK NO.:

SHEET TITLE:
BMP DETAILS

SHEET NUMBER:
C402

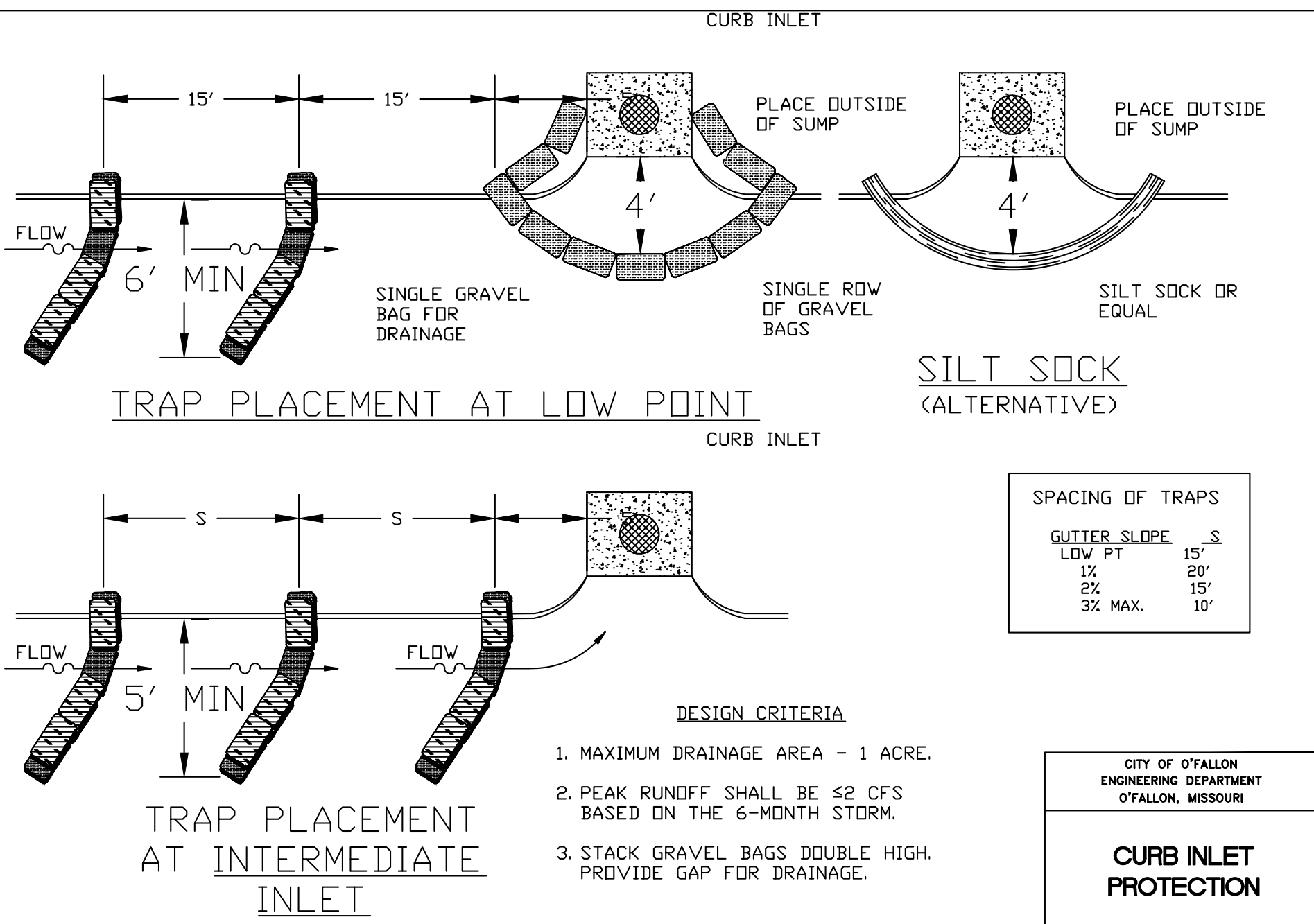
PROJECT NO.: 0240497.00

I:\lowerher\1_2\2024\0240497.00 - FTI MasterCard Solar Array\04_Drawings\DWG\C403_Details - 0240497.00.dwg | 10/10/2025 1:40 PM |



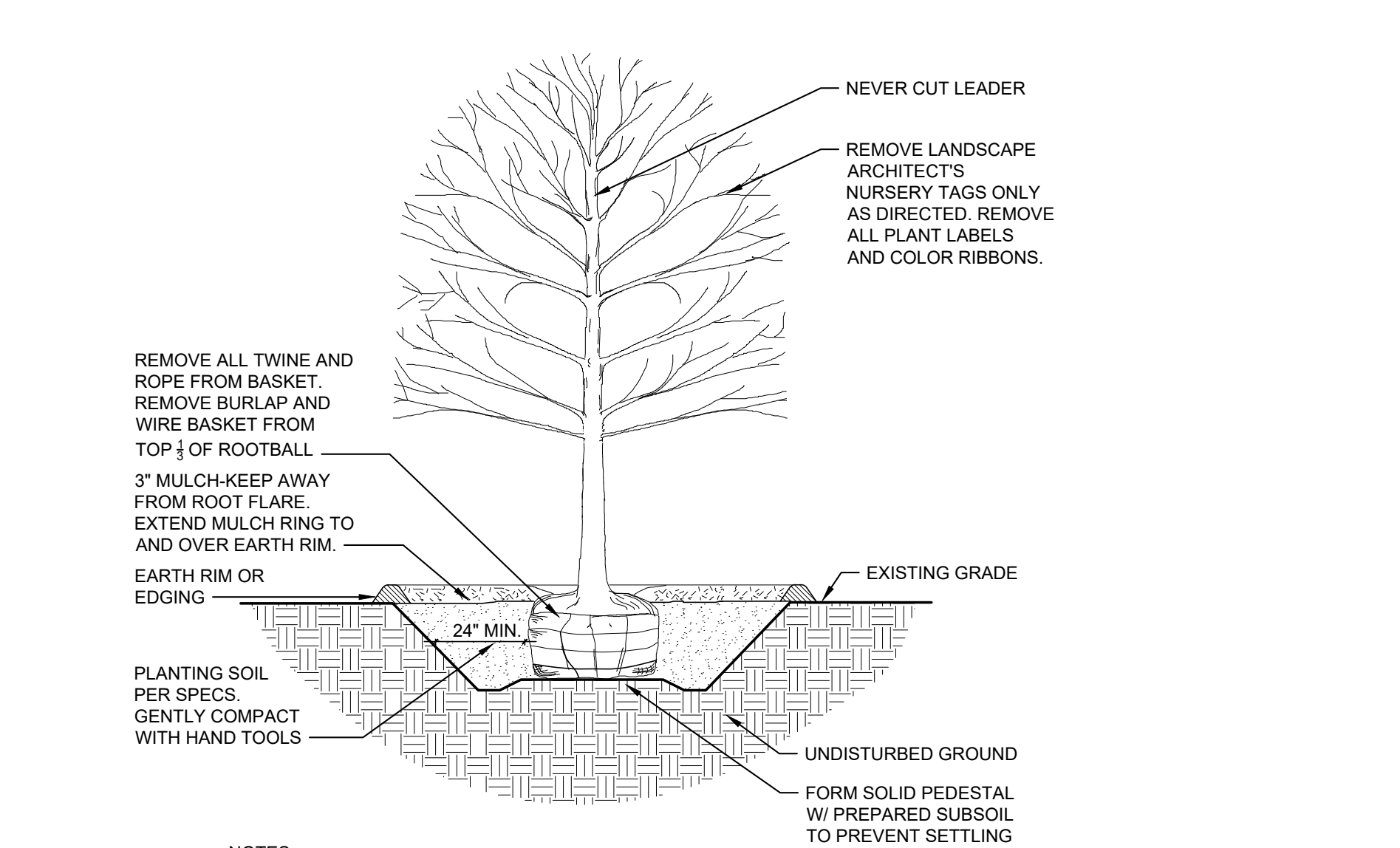
1 TEMPORARY OUTLET PIPE DISCHARGE PROTECTION

Scale: NOT TO SCALE



2 DIVERSION BERMS & DIKES

Scale: NOT TO SCALE

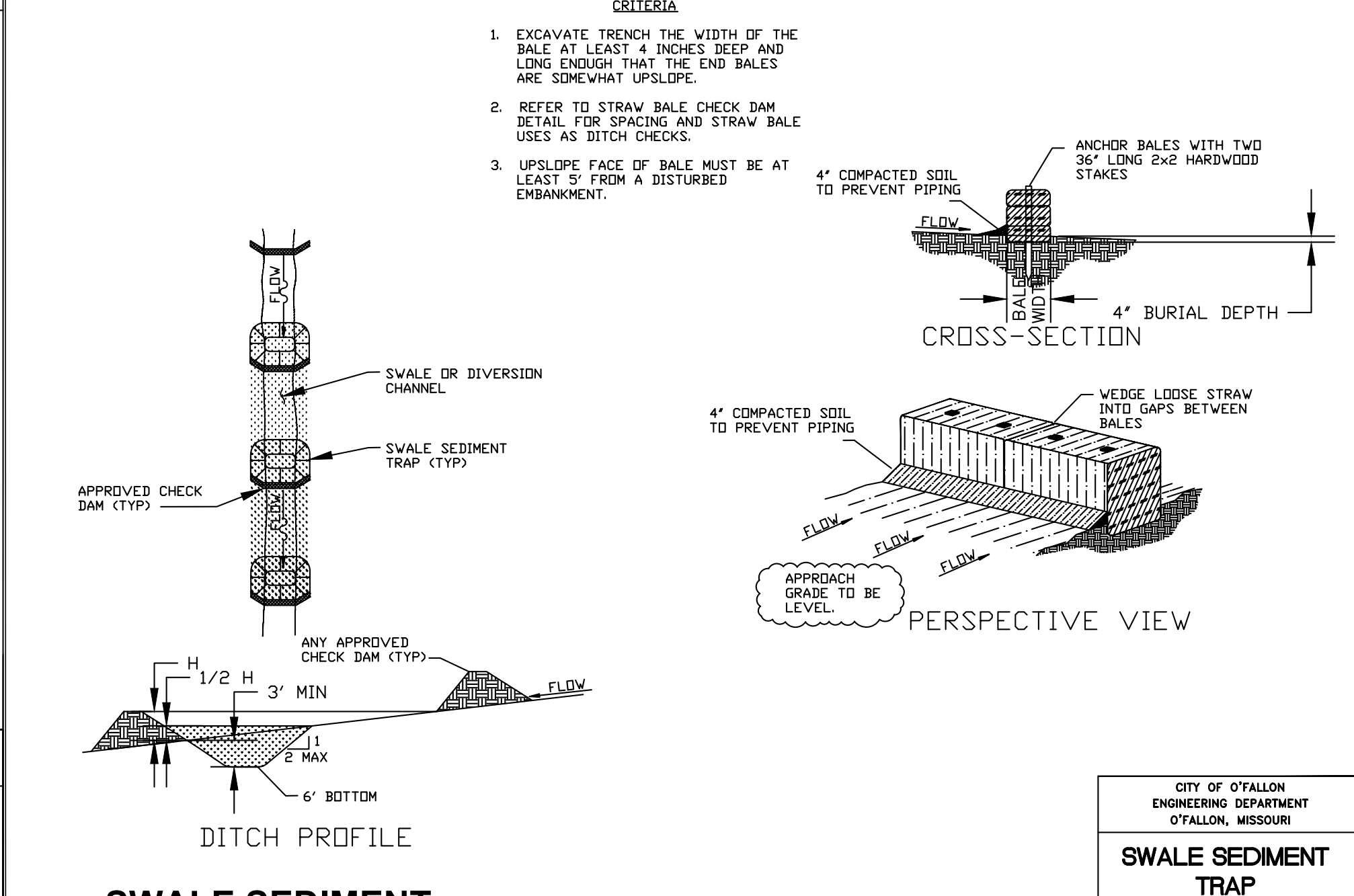


3 STRAW BALE CHECK DAM

Scale: NOT TO SCALE

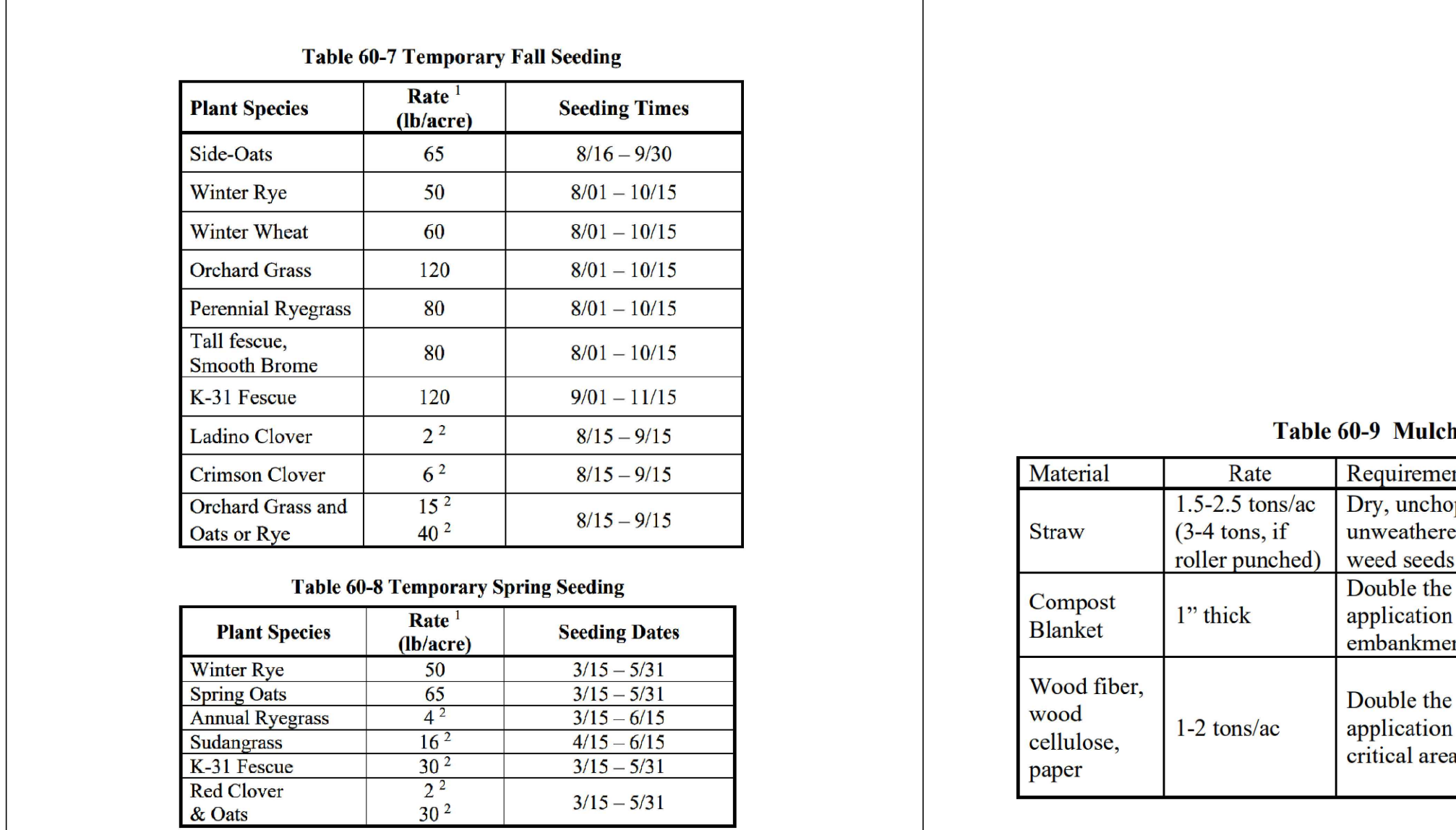
4 CURB INLET PROTECTION

Scale: NOT TO SCALE



5 SWALE SEDIMENT TRAP & STRAW BALE BARRIER INSTALLATION

Scale: NOT TO SCALE

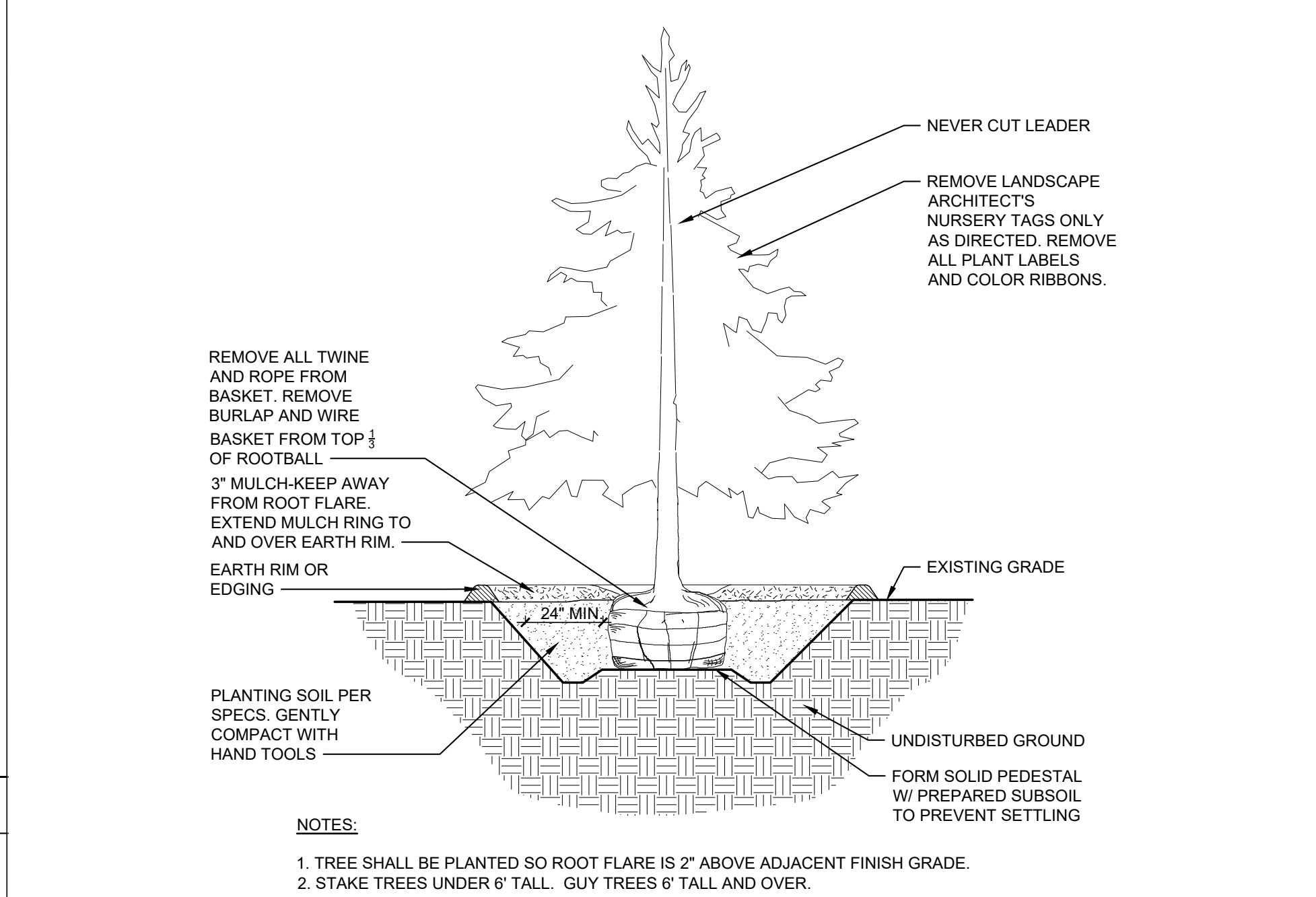
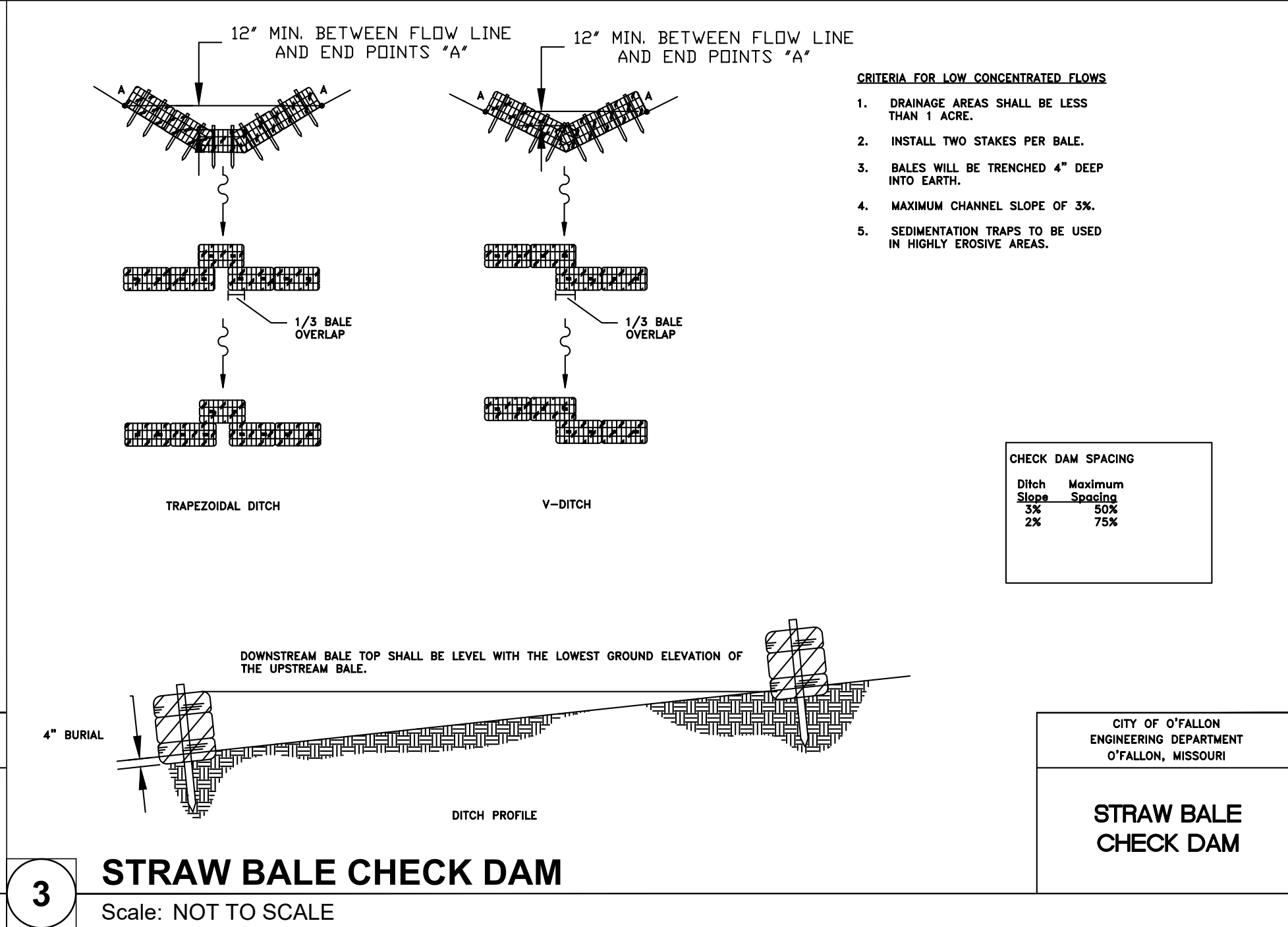


6 EVERGREEN TREE PLANTING WITHOUT STAKES

Scale: NOT TO SCALE

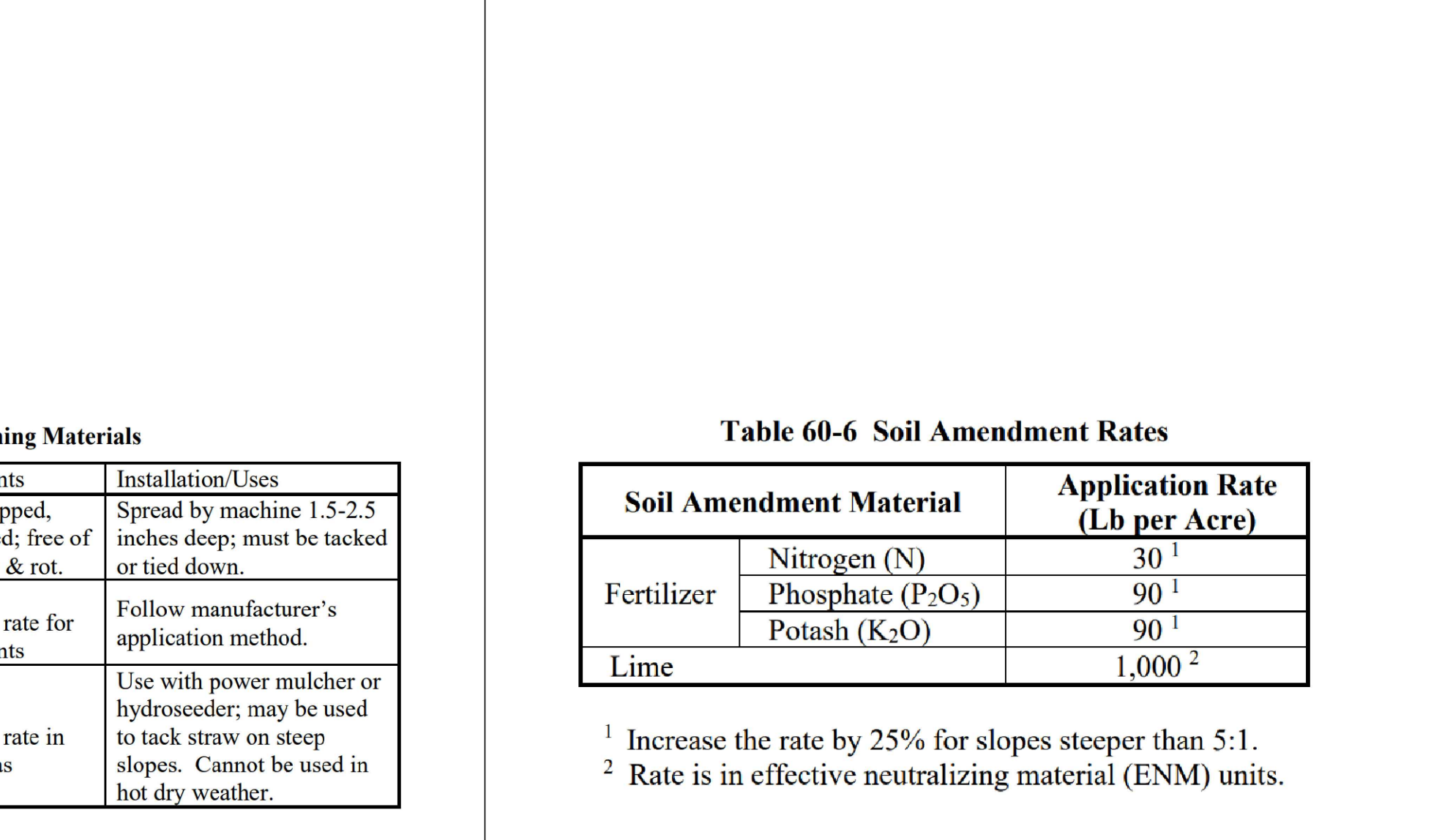
7 DECIDUOUS TREE PLANTING WITHOUT STAKES

Scale: NOT TO SCALE



8 TEMPORARY SEEDING TABLES

Scale: NOT TO SCALE



9 MULCHING MATERIAL TABLE

Scale: NOT TO SCALE

10 SOIL AMENDMENT RATES TABLE

Scale: NOT TO SCALE

Farnsworth GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:
0 10/20/2025 100% IFC SET

PROJECT:
FTI

GROUND MOUNT SOLAR PV + ENERGY STORAGE SYSTEM

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

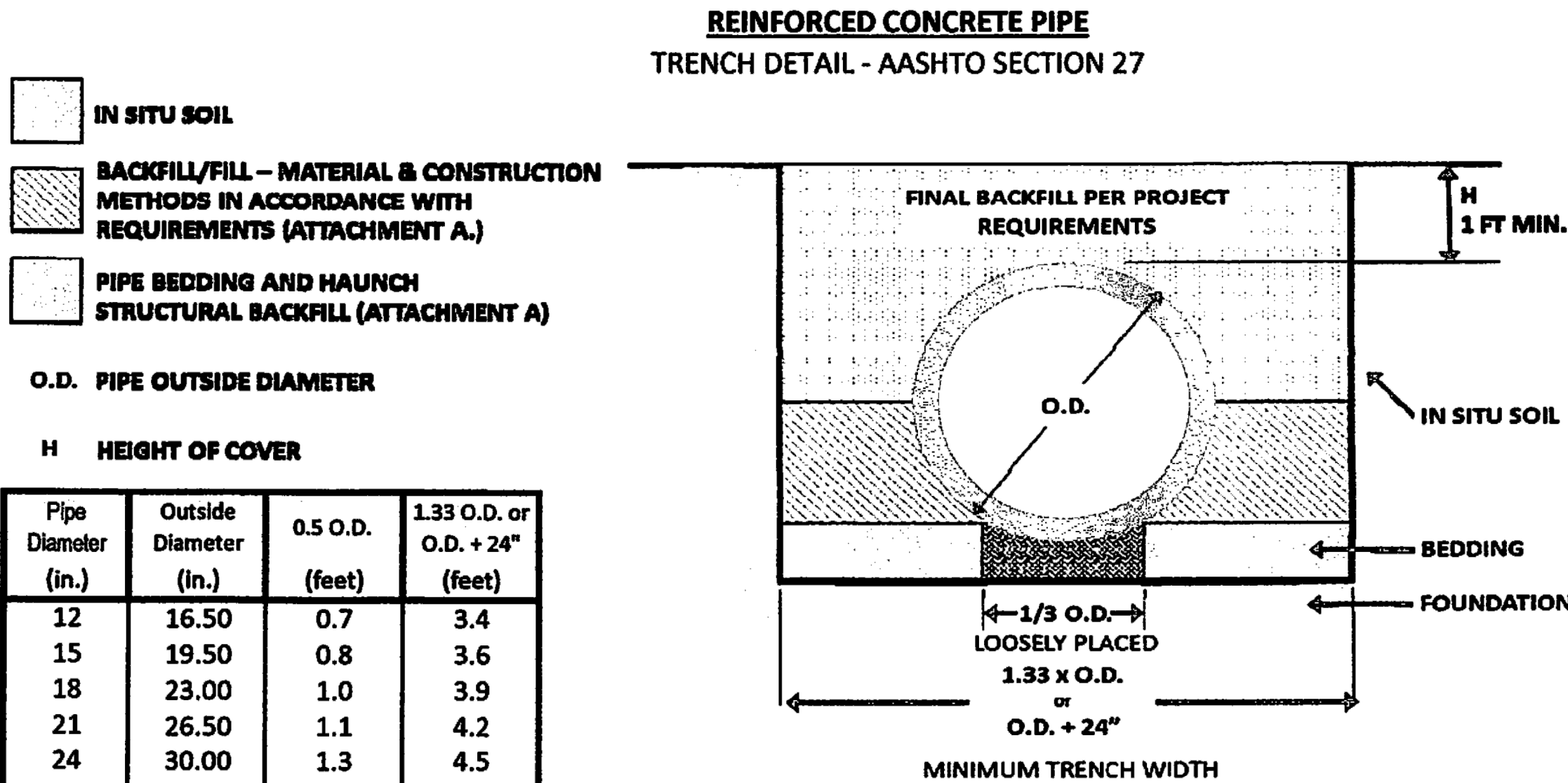
FIELD BOOK NO.:

SHEET TITLE:
SWPPP & TREE DETAILS

SHEET NUMBER:

C403

PROJECT NO.: 0240497.00



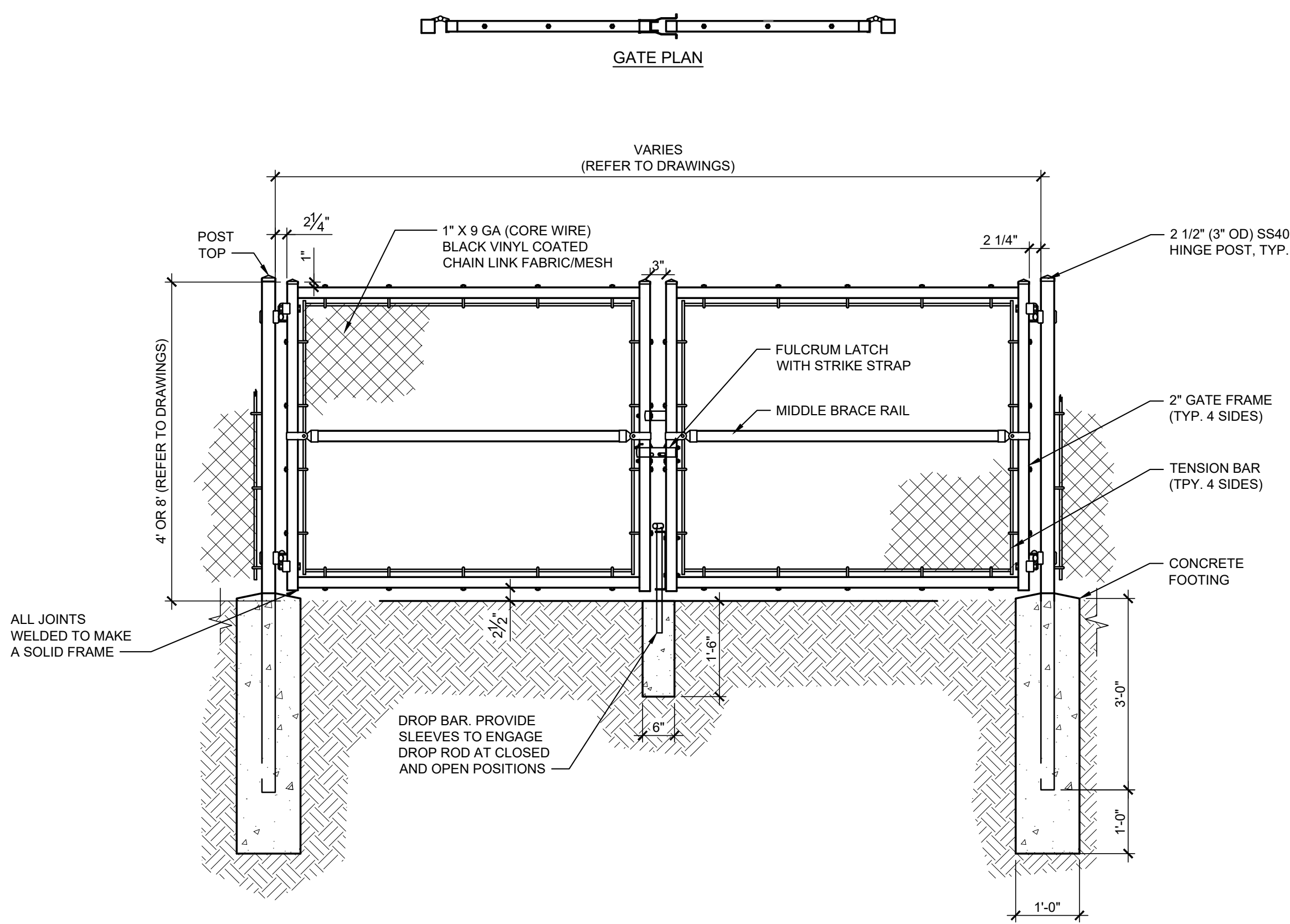
Pipe Diameter (in.)	Outside Diameter (in.)	0.5 O.D. (feet)	1.33 O.D. or O.D. + 24" (feet)
12	16.50	0.7	3.4
15	19.50	0.8	3.6
18	23.00	1.0	3.9
21	26.50	1.1	4.2
24	30.00	1.3	4.5
27	33.50	1.4	4.8
30	37.00	1.5	5.1
36	44.00	1.8	5.7
42	51.00	2.1	6.3
48	58.00	2.4	6.8
54	65.00	2.7	7.4
60	72.00	3.0	8.0
66	79.00	3.3	8.8
72	86.00	3.6	9.5
78	93.00	3.9	10.3
84	100.00	4.2	11.1
90	107.00	4.5	11.9
96	114.00	4.8	12.6
102	121.00	5.0	13.4
108	128.00	5.3	14.2
114	135.00	5.6	15.0
120	142.00	5.9	15.7

STANDARD INSTALLATION SOILS AND MINIMUM COMPACTION TEQUIREMENTS

A	Bedding thickness	Bedding and Haunch	Lower Side	Backfill/Fill
T	O.D./24 minimum, not less then 3". If rock foundation O.D./12	90% Category I or 95% Category II	85% Category I, 90% Category II, or 95% Category III	Material and construction methods in accordance with project specification.
C				

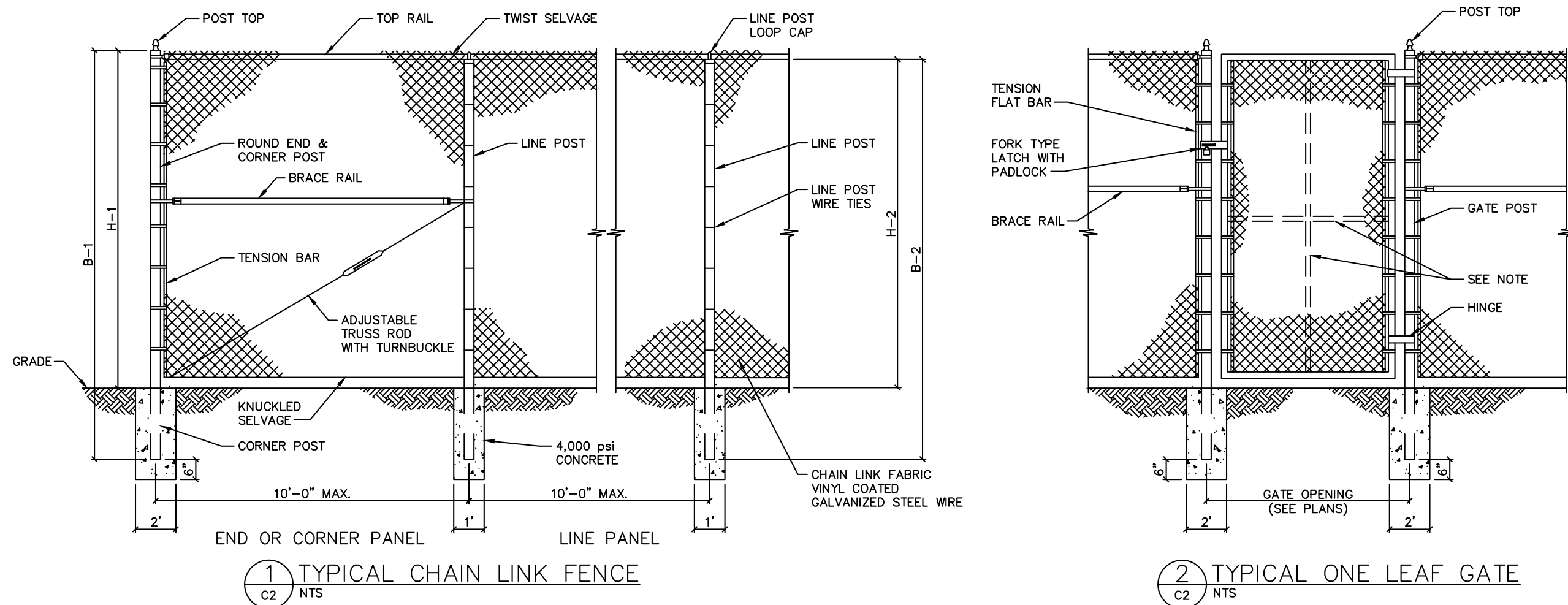
*Material placement shall be in 8 Inch lifts and compacted in accordance with AASHTO T 99.

M	SIDD	USCS	AASHTO
E	Category I - Gravely Sand	SW,SP,G,GP	A1, A3
N	Category II - Sandy Silt	GM,SM,ML	A2, A4
T		CG, SC with < than 20% passing #200 Sieve	
A	Category III - Silty Clay	CL,MH,GC, SC	A5, A6



1 Utility Trench Detail

Scale: Not To Scale



FENCE HEIGHT	END & CORNER POSTS			LINE POSTS		
NOMINAL HEIGHT	B-1 BAR LENGTH	H-1 HEIGHT ABOVE GRADE		B-2 BAR LENGTH	H-2 HEIGHT ABOVE GRADE	
5'-0"	8'-6"	5'-0 5/8"		8'-2"	4'-8 7/8"	
6'-0"	9'-6"	6'-0 5/8"		9'-2"	5'-8 7/8"	
7'-0"	10'-6"	7'-0 5/8"		10'-2"	6'-8 7/8"	
8'-0"	11'-6"	8'-0 5/8"		11'-2"	7'-8 7/8"	
9'-0"	12'-6"	9'-0 5/8"		12'-2"	8'-8 7/8"	
10'-0"	13'-6"	10'-0 5/8"		13'-2"	9'-8 7/8"	
11'-0"	14'-6"	11'-0 5/8"		14'-2"	10'-8 7/8"	
12'-0"	15'-6"	12'-0 5/8"		15'-2"	11'-8 7/8"	

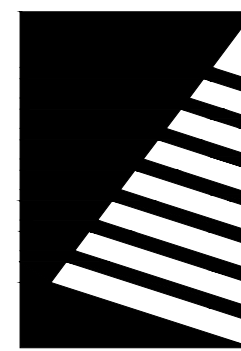
NOTE: FOR GATES OVER 8' HIGH OR 15' WIDE, PROVIDE HORIZONTAL OR VERTICAL INTERIOR BRACE.

3 BLACK VINYL CHAIN LINK FENCE

Scale: NOT TO SCALE

2 Black Vinyl Chain Link Fence Gate

Scale: Not To Scale



Farnsworth GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:
0 10/20/2025 100% IFC SET



IFC SET

PROJECT:
FTI

GROUND MOUNT
SOLAR PV + ENERGY
STORAGE SYSTEM

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

SHEET TITLE:

UTILITY TRENCH &
FENCE DETAILS

SHEET NUMBER:

C404

PROJECT NO.: 0240497.00



www.f-w.com
Engineers | Architects | Surveyors | Scientists

PROJECT:
FTI

O' FALLON, MO

DESIGNED: TMW

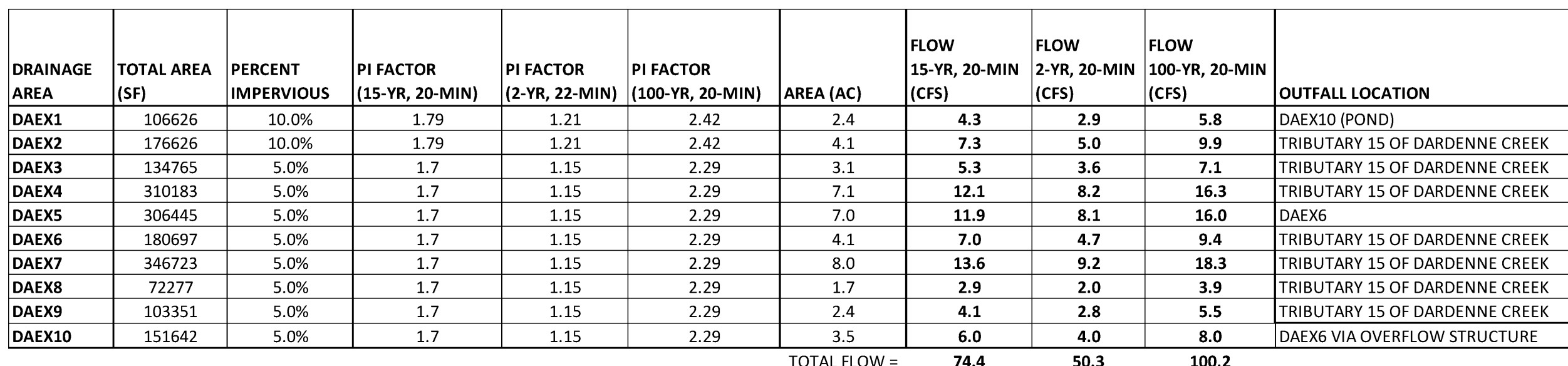
REVIEWED: SAS

SHEET TITLE:

SHEET NUMBER: _____



PROJECT NO.: 0240497.00



1

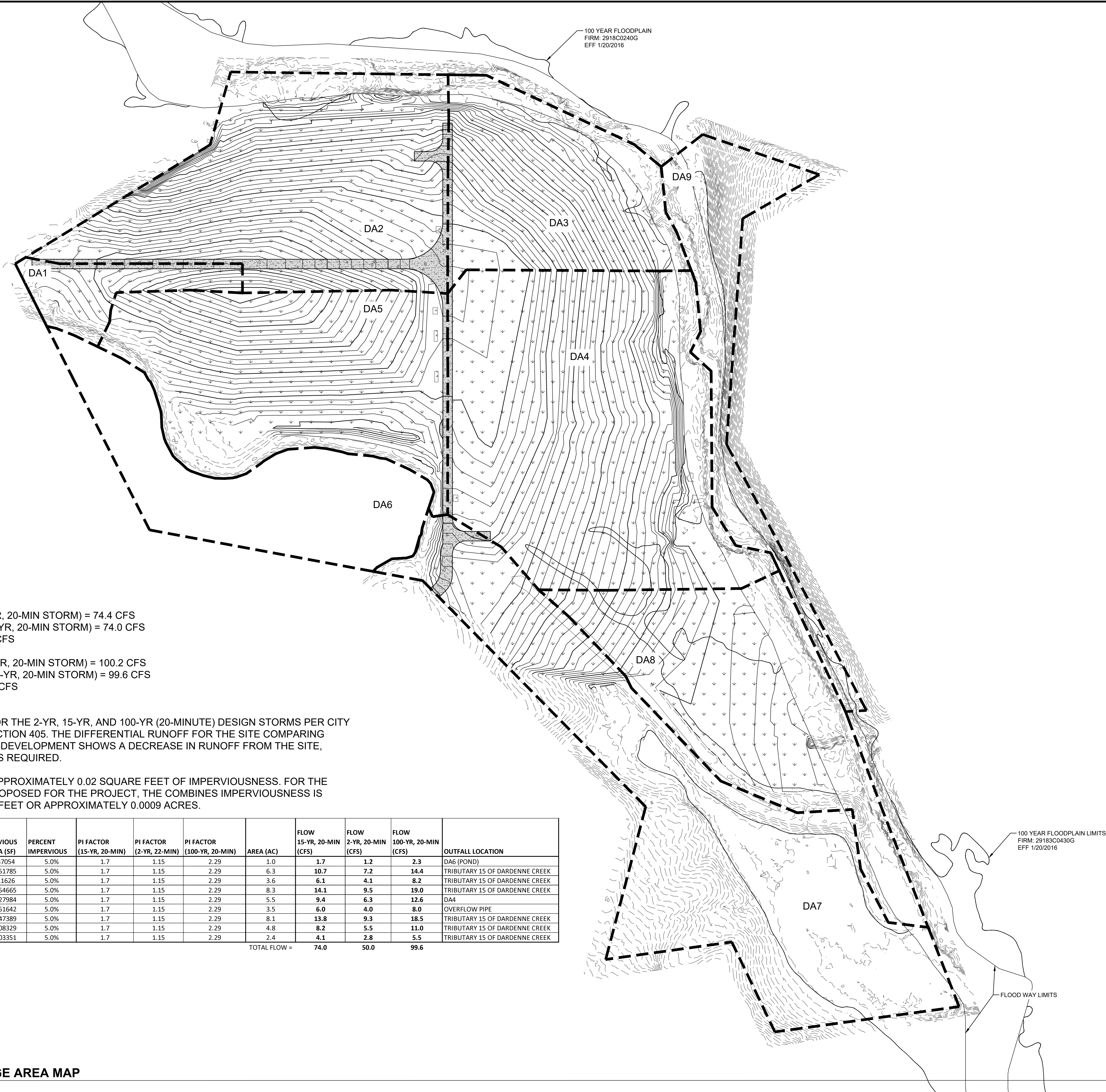
EXISTING DRAINAGE AREA MAP

SCALE: 1" = 100'

J:\weather\1_8_2024\0240497.00 - FTI MasterCord Solar Array\04_Drainage\DWG\Civil_Drainage - 0240497.00.dwg | 10/13/2025 3:46 PM |

1

PROPOSED DRAINAGE AREA MAP
SCALE: 1" = 100'



DETENTION CALCULATIONS:
EXISTING SITE RUNOFF (15-YR, 20-MIN STORM) = 74.4 CFS
PROPOSED SITE RUNOFF (15-YR, 20-MIN STORM) = 74.0 CFS
DIFFERENTIAL RUNOFF = 0.1 CFS

EXISTING SITE RUNOFF (100-YR, 20-MIN STORM) = 100.2 CFS
PROPOSED SITE RUNOFF (100-YR, 20-MIN STORM) = 99.6 CFS
DIFFERENTIAL RUNOFF = -0.6 CFS

THE SITE WAS EVALUATED FOR THE 2-YR, 15-YR, AND 100-YR (20-MINUTE) DESIGN STORMS PER CITY OF O'FALLON ORDINANCE SECTION 405. THE DIFFERENTIAL RUNOFF FOR THE SITE COMPARING PRE-DEVELOPMENT TO POST-DEVELOPMENT SHOWS A DECREASE IN RUNOFF FROM THE SITE, THEREFORE NO DETENTION IS REQUIRED.

SOLAR PANELS POSTS ARE APPROXIMATELY 0.02 SQUARE FEET OF IMPERVIOUSNESS. FOR THE APPROXIMATE 1,944 POST PROPOSED FOR THE PROJECT, THE COMBINES IMPERVIOUSNESS IS APPROXIMATELY 40 SQUARE FEET OR APPROXIMATELY 0.0009 ACRES.

DRAINAGE AREA	TOTAL AREA (SF)	IMPERVIOUS AREA (SF)	PERVIOUS AREA (SF)	PERCENT IMPERVIOUS	PI FACTOR (15-YR, 20-MIN)	PI FACTOR (2-YR, 22-MIN)	PI FACTOR (100-YR, 20-MIN)	AREA (AC)	FLOW 15-YR, 20-MIN (CFS)	FLOW 2-YR, 20-MIN (CFS)	FLOW 100-YR, 20-MIN (CFS)	OUTFALL LOCATION
DA1	41663	4609	37054	5.0%	1.7	1.15	2.29	1.0	1.7	1.2	2.3	DA6 (POND)
DA2	274044	22259	251785	5.0%	1.7	1.15	2.29	6.3	10.7	7.2	14.4	TRIBUTARY 15 OF DARDENNE CREEK
DA3	158452	3201	11626	5.0%	1.7	1.15	2.29	3.6	6.1	4.1	8.2	TRIBUTARY 15 OF DARDENNE CREEK
DA4	361580	6915	354665	5.0%	1.7	1.15	2.29	8.3	14.1	9.5	19.0	TRIBUTARY 15 OF DARDENNE CREEK
DA5	238648	10664	227984	5.0%	1.7	1.15	2.29	5.5	9.4	6.3	12.6	DA4
DA6	151642	0	151642	5.0%	1.7	1.15	2.29	3.5	6.0	4.0	8.0	OVERFLOW PIPE
DA7	351692	4303	347389	5.0%	1.7	1.15	2.29	8.1	13.8	9.3	18.5	TRIBUTARY 15 OF DARDENNE CREEK
DA8	208329	0	208329	5.0%	1.7	1.15	2.29	4.8	8.2	5.5	11.0	TRIBUTARY 15 OF DARDENNE CREEK
DA9	103351	0	103351	5.0%	1.7	1.15	2.29	2.4	4.1	2.8	5.5	TRIBUTARY 15 OF DARDENNE CREEK
TOTAL FLOW =									74.0	50.0	99.6	

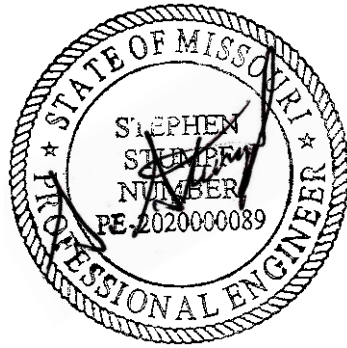


Farnsworth
GROUP

20 ALLEN AVENUE, SUITE 200
ST LOUIS, MISSOURI 63119
(314) 962-7900 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:
DATE: DESCRIPTION:
0 10/20/2025 100% IFC SET



IFC SET

PROJECT:

FTI

GROUND MOUNT
SOLAR PV + ENERGY
STORAGE SYSTEM

O' FALLON, MO

DATE: 10/20/2025

DESIGNED: TMW

DRAWN: TMW

REVIEWED: SAS

FIELD BOOK NO.:

SHEET TITLE:

PROPOSED
DRAINAGE AREA
PLAN

SHEET NUMBER:

DA2



PROJECT NO.: 0240497.00