

REPLACE 29 BASIC SITES WITH 25 NEW PREMIUM SITES

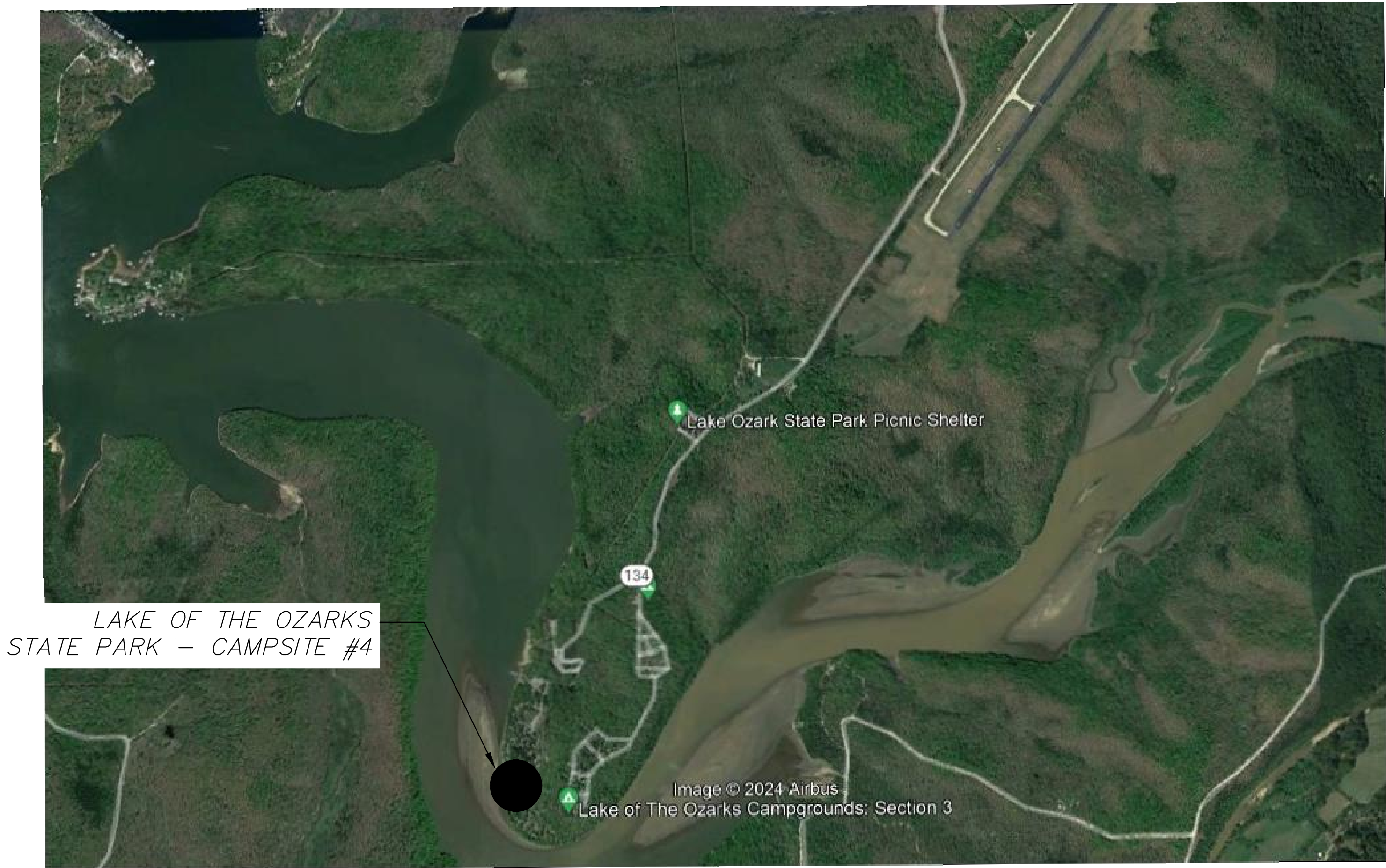
LAKE OF THE OZARKS STATE PARK,

KAISER, MISSOURI

SURVEY CONTROL POINTS				
MODIFIED STATE PLANE COORDINATES				
NAD 83, MISSOURI CENTRAL ZONE, NAVD 88, U.S. SURVEY FEET				
POINT #	NORTH	EAST	ELEVATION	DESCRIPTION
CP2	814536.03	1618396.65	665.76	IRON
CP4	814254.39	1618403.98	671.27	IRON
CP5	814677.50	1618704.54	684.39	IRON
CP6	814861.03	1618303.86	664.57	IRON
CP7	813993.55	1618512.81	674.22	IRON
CP8	814035.43	1618743.52	693.49	IRON
CP9	814252.47	1618627.77	687.47	IRON
CP10	814374.05	1618741.71	695.19	IRON
CP12	814835.21	1618699.05	692.84	IRON

BENCH MARK	
BM	MISSOURI DEPARTMENT OF TRANSPORTATION VRS NETWORK.

FLOODPLAIN NOTE	
PORTIONS OF THIS PROPERTY ARE LOCATED IN ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AND SPECIAL FLOOD HAZARD AREAS, AS SHOWN BY FLOOD INSURANCE RATE MAP NUMBER 29029C02550, DATED APRIL 18, 2018.	



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OWNER:

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

PROJECT
MANAGEMENT:

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES,
DIVISION OF STATE PARKS

DESIGNER:

ENGINEERING SURVEYS & SERVICES

PROJECT NUMBER:

X2316-01

SITE NUMBER:

5306

ASSET NUMBER:

7815306134



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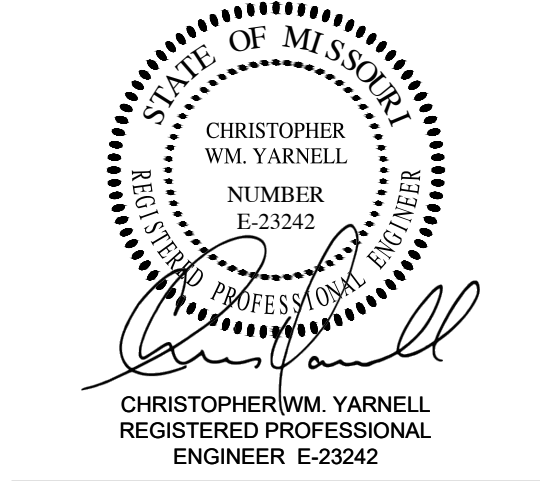
A Custom Engineering Company

912 Oak 63 South Columbia, MO 65201
ph: 573.875.4385

SHEET NUMBER:

G-001

1 OF 17 SHEETS
FEBRUARY 22, 2024



OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES,
DIVISION OF STATE PARKS

LAKE OF THE OZARKS
STATE PARK
REPLACE 29 BASIC SITES WITH 25
NEW PREMIUM SITES

LAKE OF THE OZARKS
STATE PARK
CAMPGROUND #4
MO ROUTE 134
KAISER, MISSOURI 65047
CAMDEN COUNTY

PROJECT # X2316-01
SITE # 5306
ASSET # 7815306134

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 02/22/2024

CAD DWG FILE: XXX
DRAWN BY: CTR
CHECKED BY: CWY
DESIGNED BY: CWY

SHEET TITLE:
GENERAL
NOTES

SHEET NUMBER:

G-002
2 OF 17 SHEETS
02/22/2024

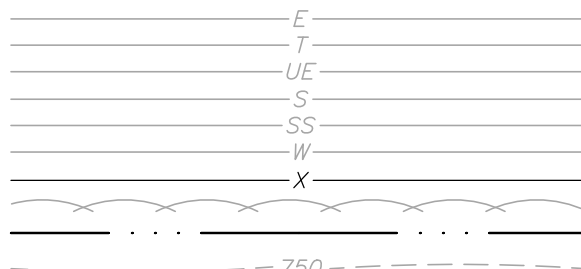
SEQUENCE OF EVENTS

1. PRIOR TO CONSTRUCTION, COORDINATE AND HAVE A PRE-CONSTRUCTION MEETING REGARDING SWPPP TRAINING WITH CONSTRUCTION PERSONNEL.
2. DETERMINE ALL UTILITY FIELD LOCATES AS NECESSARY WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF STATE PARKS STAFF.
3. INSTALL ALL PERIMETER EROSION AND SEDIMENT CONTROL PER PLAN. DISTURB ONLY THE AREAS NECESSARY FOR INSTALLATION.
4. COMMENCE ALL CLEARING AND GRUBBING PER PLAN. THE CONTRACTOR SHALL REMOVE ALL STUMPS BY EXCAVATING TO INCLUDE REMOVAL OF ASSOCIATED ROOT SYSTEM. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS.
5. THE CONTRACTOR SHALL PERFORM A SITE SURVEY AFTER CLEARING AND GRUBBING IN ORDER TO CONFIRM TOPOGRAPHY ON THE PLANS IS ACCURATE PRIOR TO MASS GRADING.
6. STRIP TOPSOIL IN GRADING AREAS AND STOCKPILE AS SHOWN ON THE PLANS.
7. COMMENCE SITE GRADING.
8. INSTALL STORM SEWERS PER PLAN. INSTALL INLET PROTECTION IMMEDIATELY UPON THE COMPLETION OF EACH STORM STRUCTURE.
9. INSTALL SITE UTILITIES AS GRADING ALLOWS.
10. FINALIZE CAMPER SITE PAD SUBGRADE PREPARATION AND COMMENCE CAMPER SITE CONSTRUCTION.
11. FINALIZE PAVEMENT SUBGRADE PREPARATION. INSTALL BASE MATERIAL AS REQUIRED FOR PAVED AREAS.
12. COMMENCE PAVEMENT AND SIDEWALK CONSTRUCTION.
13. COMPLETE FINISH GRADING, TOPSOIL PLACEMENT, SEED/SOD, AND MULCH ALL DISTURBED AREAS. EXCESS TOPSOIL SHALL BE DISPOSED OF ONSITE PER OWNERS DISCRETION.
14. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED.

HAZARDOUS SUBSTANCE NOTE

1. SUBSTANCES REGULATED BY FEDERAL LAW UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) OR THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA) WHICH ARE TRANSPORTED, STORED OR USED FOR MAINTENANCE, CLEANING OR REPAIRS SHALL BE MANAGED ACCORDING TO THE PROVISIONS OF RCRA AND CERCLA.
2. ALL PAINTS, SOLVENTS, PETROLEUM PRODUCTS AND PETROLEUM WASTE PRODUCTS (EXCEPT FUELS) AND STORAGE CONTAINERS (SUCH AS DRUMS, CANS OR CARTONS) SHALL BE STORED SUCH THAT THESE MATERIALS ARE NOT EXPOSED TO STORM WATER. SUFFICIENT PRACTICES OF SPILL PREVENTION, CONTROL AND/OR MANAGEMENT SHALL BE PROVIDED TO PREVENT ANY SPILLS OF THESE POLLUTANTS FROM ENTERING A WATER OF THE STATE. ANY CONTAINMENT SYSTEM USED TO IMPLEMENT THIS REQUIREMENT SHALL BE CONSTRUCTED OF MATERIALS COMPATIBLE WITH THE SUBSTANCES CONTAINED AND SHALL ALSO PREVENT THE CONTAMINATION OF GROUNDWATER.
3. THE APPLICANT SHALL NOTIFY BY TELEPHONE AND IN WRITING THE DEPARTMENT OF NATURAL RESOURCES, WATER POLLUTION CONTROL PROGRAM, POST OFFICE BOX 176, JEFFERSON CITY, MO 65102, 1-800-361-4827, OF ANY OIL SPILLS OR IF HAZARDOUS SUBSTANCES ARE FOUND DURING THE PROSECUTION OF WORK UNDER THIS PERMIT.

LEGEND



ELECTRIC LINE
TELECOMMUNICATIONS LINE
UNDERGROUND ELECTRIC LINE
SANITARY SEWER LINE
STORM SEWER LINE
WATER LINE
FENCE
TREE & BRUSH LINE
DRAINAGE SWALE
EXISTING CONTOUR
ANCHOR
IRON
R/W MARKER
CONTROL POINT
CORRUGATED METAL PIPE
CLEANOUT
ELECTRIC PEDESTAL
FLARED END SECTION
FLOW LINE
FIRE PIT (SIZES VARY)
UTILITY POLE
TRASH POST
WATER HYDRANT
WATER METER
WATER VALVE
ROCK DITCH CHECK
SEDIMENT TRAP
SILT FENCE
TEMPORARY DIVERSION DIKE
TREE PRESERVATION BARRIER
FINISH CONTOUR

FINISH GRADE ELEVATION

PROPOSED SANITARY SEWER LINE
PROPOSED WATER LINE
PROPOSED UNDERGROUND ELECTRIC
PROPOSED STORM SEWER
PROPOSED WATER VALVE
THRUST BLOCK
THRUST COLLAR

ASPHALT PAVEMENT

HEAVY DUTY CONCRETE

PAVEMENT REMOVAL

TO BE REMOVED

GRADING AND STORM SEWER CONSTRUCTION NOTES

1. ALL STORM SEWER PIPES AND INLETS SHALL MEET HEAVY DUTY TRAFFIC (HS20) LOADING AND BE INSTALLED ACCORDINGLY.
2. REINFORCED CONCRETE PIPE (RCP) SHALL BE INSTALLED PER THE "EMBEDMENT OF RCP STORM SEWER PIPE" DETAIL. PIPE CLASS SHALL BE APPROPRIATE TO DEPTH AND BEDDING MATERIAL AS SHOWN IN SCHEDULE.
3. ALL RCP PIPE JOINTS SHALL BE SOIL TIGHT PER CURRENT MDDT SPECIFICATIONS SECTION 726.3.1.
4. CONTRACTOR SHALL ADJUST ALL GRATES, MANHOLES, VALVE BOXES, ETC. TO MATCH FINISH GRADES, AS REQUIRED.
5. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE FLUSH WITH FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER". TOP OF BOXES SHALL BE SLOPED TO MATCH PAVEMENT GRADE.
6. PIPE LENGTHS ARE GIVEN FROM CENTER OF STRUCTURE OR DOWNSTREAM END OF FLARED END SECTIONS.
7. ALL FLARED END SECTIONS FOR CONCRETE PIPE SHALL BE REINFORCED PRECAST CONCRETE.
8. ALL SITES USED FOR IMPORTING OR EXPORTING OF FILL MATERIAL SHALL HAVE AN ACTIVE MISSOURI DEPARTMENT OF NATURAL RESOURCES LAND DISTURBANCE PERMIT, AS REQUIRED.
9. CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS, TREES AND BRUSH, AND OTHER MATERIAL CREATED AS A RESULT OF CONSTRUCTION. MATERIAL SHALL BE DISPOSED OF IN COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. NO BURNING ON SITE WILL BE ALLOWED.
10. CONTRACTOR SHALL REMOVE ALL STUMPS BY EXCAVATING TO INCLUDE REMOVAL OF ASSOCIATED ROOT SYSTEM.
11. CONTRACTOR SHALL NOT ADVANCE TRENCH EXCAVATION BEYOND AMOUNT THAT CAN ACCOMMODATE PIPE INSTALLATION AND BACKFILLING AT THE END OF EACH DAY.
12. ENGINEERED FILL SHOULD BE FREE OF FROZEN SOIL, ORGANICS, RUBBISH, LARGE ROCKS, WOOD, OR OTHER DELETERIOUS MATERIAL. COHESIVE FILLS SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95 PERCENT OF THE "STANDARD" MAXIMUM DRY DENSITY AND BE WITHIN -2 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT AS DESCRIBED BY ASTM D698. GRANULAR FILLS SHOULD BE UNIFORMLY COMPACTED TO AT LEAST 95 PERCENT OF THE "STANDARD" MAXIMUM DRY DENSITY. THE MOISTURE CONTENT SHOULD BE HIGH ENOUGH TO PROVIDE FOR PROPER COMPACTION BUT LOW ENOUGH TO PREVENT UNDUE PUMPING. PLACE FILL MATERIAL IN LOOSE LIFTS NOT TO EXCEED 8 INCHES IN THICKNESS.
13. ROCKS AND STONES THAT EXCEED THE THICKNESS OF THE LOOSE LIFT FILL LAYER SHOULD BE REMOVED AND DISPOSED OF OFF THE IMMEDIATE CONSTRUCTION AREA.
14. IMPORTED SOILS PROPOSED FOR USE AS FILL OR BACKFILL SHOULD BE REVIEWED AND ANALYZED BY THE GEOTECHNICAL ENGINEER PRIOR TO USE ON SITE. SOIL CLASSIFIED AS MH, OH, OL, OR PT (HIGH PLASTICITY SOILS AND ORGANIC SOILS) BY THE UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487) SHOULD NOT BE IMPORTED FOR USE AS ENGINEERED FILL. SUITABLE IMPORTED MATERIALS FOR GENERAL SITE FILL ARE THOSE THAT CLASSIFY AS GW, GM, GC, SC, AND CL IN ACCORDANCE WITH ASTM D 2487. MATERIALS CLASSIFIED AS CH SHOULD BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO THEIR IMPORTATION AND ONLY USED OUTSIDE THE BUILDING PAD AT DEPTHS BELOW THE UPPER 2 FEET OF SUBGRADE. SUBJECT TO FINAL DESIGN REQUIREMENTS FOR WALL BACKFILL, SUITABLE IMPORTED MATERIALS FOR WALL AND TRENCH BACKFILL ARE THOSE THAT CLASSIFY AS GW, GP, GM, GC, SM, SW, SP, SC, AND CL IN ACCORDANCE WITH ASTM D2487.
15. FILLS PLACED IN AREAS WHERE THE NATURAL SLOPE IS GREATER THAN 5H:1V (HORIZONTAL TO VERTICAL) SHOULD BE BENCHED INTO THE EXISTING GRADE TO REDUCE THE POTENTIAL FOR SLIPPAGE BETWEEN EXISTING SLOPES AND ENGINEERED FILL. BENCHES SHOULD BE LEVEL AND WIDE ENOUGH TO ACCOMMODATE COMPACTION AND EARTH MOVING EQUIPMENT.
16. FILL AND SUBGRADE CONSTRUCTION SHOULD NOT BE STARTED ON FOUNDATION SOIL, PARTIALLY COMPLETED FILL, OR SUBGRADES THAT CONTAIN FROST OR ICE. FILL SHOULD NOT BE CONSTRUCTED USING FROZEN SOIL. FROZEN SOIL SHOULD BE REMOVED PRIOR TO PLACING FILL MATERIAL.
17. AFTER STRIPPING AND GRUBBING OPERATIONS ARE COMPLETED AND PRIOR TO FILL PLACEMENT, AREAS TO BE FILLED SHALL BE PROOF ROLLED USING A LOADED TANDEM AXLE DUMP TRUCK TO IDENTIFY SOFT AND UNSUITABLE AREAS. SOFT MATERIAL MAY BE MOISTURE CONDITIONED AND REUSED AS ENGINEERED FILL, UNSUITABLE AND DELETERIOUS MATERIAL SHALL BE REMOVED FROM SITE.
18. ALL NEW UTILITY TRENCHES SHOULD BE BACKFILLED IN ACCORDANCE WITH APPROPRIATE CONTROLLED ENGINEERED FILL SPECIFICATIONS.
19. FIELD DENSITY TESTS SHOULD BE CONDUCTED IN ACCORDANCE WITH ASTM D6938 (NUCLEAR METHODS) OR ASTM D 1558 (SAND CONE METHOD). FIELD DENSITY TESTS SHOULD BE PERFORMED AT THE RATE OF ONE TEST PER 2,500 SQUARE FEET PER LIFT WITHIN THE BUILDING AND 10,000 SQUARE FEET PER LIFT BENEATH PAVEMENTS, SIDEWALKS, AND OTHER POTENTIAL STRUCTURAL AREAS WITH A MINIMUM OF 3 TESTS PER LIFT AND ONE TEST PER 150 LINEAL FEET PER LIFT FOR FOUNDATION, TRENCH AND WALL BACKFILL.
20. BUILDING PAD AND PARKING AREAS SHALL BE PROOF-ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK TO IDENTIFY ANY SOFT OR UNSUITABLE AREAS, PRIOR TO BASE ROCK PLACEMENT. THE PROOF-ROLL SHALL BE OBSERVED BY THE PROJECT GEOTECHNICAL ENGINEER. AREAS IDENTIFIED AS UNSUITABLE SHALL BE OVER EXCAVATED AND RECONSTRUCTED WITH ENGINEERED FILL.
21. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS FOR ALL LANDSCAPED AND PAVED AREAS.
22. CONTRACTOR SHALL PLACE STOCKPILED TOPSOIL FROM SITE IN ALL LANDSCAPE AREAS TO A MINIMUM DEPTH OF OR 6", UNLESS NOTED OTHERWISE IN PROJECT SPECIFICATIONS. ANY EXCESS TOPSOIL SHALL BE DISPOSED OF ONSITE PER OWNER.

CONSTRUCTION NOTES

1. ALL TREES AND BRUSH GENERATED FROM CLEARING AND GRUBBING OPERATIONS SHALL BE HAULED OFF SITE BY THE CONTRACTOR. OPEN BURNING WILL NOT BE ALLOWED WITHIN THE PROJECT LIMITS.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL IDENTIFIED PROPERTY CORNERS, LAND SURVEY CORNERS, AND ACCESSORIES. THE CONTRACTOR SHALL CAUSE THE CORNERS AND ACCESSORIES TO BE REFERENCED BY A LICENSED LAND SURVEYOR, AND ANY SUCH CORNER OR ACCESSORIES DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE RESET BY THE SURVEYOR AT THE ORIGINAL LOCATION, AND FILE THE RESTORATIONS AND MONUMENT DOCUMENTS AS THE LAW REQUIRES.
5. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEERING SURVEYS AND SERVICES FOR REVIEW AND APPROVAL FOR ALL MATERIALS BEFORE ORDERING.
6. ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF SIDEWALK, OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
7. ALL STRIPING SHALL BE 4" WIDE WHITE LINES, ACCESSIBLE SPACES SHALL BE 4" WIDE BLUE LINES AND ALL STRIPING SHALL BE A MINIMUM OF 2 COATS.
8. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
9. STANDARD DUTY AND HEAVY DUTY PAVEMENT MAY BE CONCRETE OR ASPHALT UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNERS IN WRITING 30 DAYS PRIOR TO CONSTRUCTION.
11. IF A CONFLICT EXISTS BETWEEN THE CIVIL PLANS AND CIVIL SPECIFICATIONS, THE CIVIL PLANS SHALL GOVERN.
12. ALL INCIDENTAL ITEMS INCLUDING BUT NOT LIMITED TO SIGNS, PAVEMENT MARKING, PAVEMENT, CURBS, TRUNCATED DOMES, FENCING, LANDSCAPING, IRRIGATION, ETC. EITHER DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE RETURNED TO ORIGINAL CONDITIONS BY THE CONTRACTOR.

STORM WATER POLLUTION PREVENTION PLAN NOTES

1. CONTRACTOR SHALL FOLLOW THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES. A COPY OF THIS PLAN, SWPPP, AND ALL PERMITS SHALL REMAIN ON SITE THROUGHOUT CONSTRUCTION.
2. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND APPROVAL HAS BEEN RECEIVED FROM AUTHORITIES.
3. IMMEDIATELY UPON COMPLETION OF FINISH GRADING IN EACH AREA, ALL LANDSCAPING AREAS SHALL BE STABILIZED PER PLANS AND/OR SPECIFICATIONS.
4. SHOULD CONSTRUCTION STOP FOR LONGER THAN 14 DAYS, THE SITE SHALL BE SEEDDED AS SPECIFIED IN THE SWPPP.
5. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
6. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
7. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
8. CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
9. CONTRACTOR SHALL REMOVE ALL TRASH, DEBRIS, TREES & BRUSH AND OTHER MATERIAL CREATED AS A RESULT OF THE CONSTRUCTION WORK AND THE SITE SHALL BE RETURNED TO ITS ORIGINAL CONDITION.
10. ALL PERIMETER LANDSCAPED AREAS SHALL BE GRASS COVERED.
11. THE SITE CONTRACTOR SHALL INCLUDE MAINTENANCE OF ALL BMP'S AS PART OF THEIR CONTRACT AND SHALL BE RESPONSIBLE FOR THE PROJECT UNTIL THE SITE HAS OBTAINED FINAL STABILIZATION IN ACCORDANCE WITH THE NPDES PERMIT AND SWPPP.

UTILITY CONSTRUCTION NOTES

1. SITE CONTRACTOR SHALL COORDINATE WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF STATE PARKS STAFF WHEN LOCATING UTILITIES WITHIN THE PARK.
2. LOCATION OF SITE UTILITIES SHALL BE VERIFIED BY CONTRACTOR WITH MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF STATE PARKS STAFF AND THE PROPER UTILITY COMPANY PROVIDING SERVICE PRIOR TO THE START OF CONSTRUCTION.
3. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
4. UTILITY TIE-INS ARE SHOWN IN APPROXIMATE LOCATIONS. REFER TO MEP PLANS FOR EXACT TIE-IN OF ALL UTILITIES.
5. SITE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES AND MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF STATE PARKS STAFF FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF CITY OF OSAGE BEACH WITH REGARDS TO MATERIALS AND INSTALLATION OF THE SEWER LINES AND MISSOURI DEPARTMENT OF NATURAL RESOURCES FOR WATER LINES.
6. SITE CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
7. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS, BACKFILL OF TRENCHES THROUGH ANY IMPROVED AREAS, SUCH AS STREET, DRIVES OR PARKING LOTS SHALL BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR DENSITY (ASTM D-698).
8. PROPOSED ELECTRIC LINES ARE SHOWN FOR COORDINATION PURPOSES ONLY. SYSTEM DESIGN PREPARED BY EACH RESPECTIVE AGENCY. REFER TO MEP PLANS FOR CONDUIT REQUIREMENTS.
9. ALL UNDERGROUND UTILITY CONDUITS SHALL BE PLACED 48" BELOW FINISH GRADE UNLESS NOTED OTHERWISE.
10. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY, MEASURED EDGE TO EDGE, FROM ANY EXISTING OR PROPOSED SANITARY SEWER. WATER MAINS CROSSING SANITARY SEWERS SHALL BE LAID TO PROVIDE MINIMUM VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SANITARY SEWER. CENTER A FULL LENGTH OF WATER MAIN OVER OR UNDER THE SEWER SO BOTH WATER MAIN JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. AT SANITARY SEWER CROSSINGS, PLACE COMPACTED CLAY SOIL BACKFILL 18 INCHES ABOVE OR BELOW THE WATER MAIN FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE SANITARY SEWER. CONTRACTOR SHALL NOTIFY ENGINEER IF HORIZONTAL AND VERTICAL SEPARATION CANNOT BE PROVIDED.
11. ALL UNDERGROUND LINES SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
12. TOPS OF EXISTING ELECTRIC, SANITARY, STORM, WATER, TELECOMMUNICATION, GAS, IRRIGATION, CHILLED WATER, AND STEAM STRUCTURES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED FINISHED ELEVATIONS.
13. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH OF 3000 P.S.I.
14. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODE AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
15. PVC CONDUIT SHALL BE SCHEDULE 40 PVC WITH LONG SWEEPS ONLY (36" MINIMUM RADIUS) AND CONTAIN PULLTAPE, UNLESS OTHERWISE NOTED.
16. A MINIMUM 18" OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF THE ELECTRIC CONDUIT AND THE OUTSIDE OF THE WATER, STORM SEWER, SANITARY SEWER, OR GAS PIPE AT ALL CROSSINGS.
17. STUBS FOR FUTURE UTILITIES SHOULD BE CLEARLY MARKED AND ES&S CONTACTED FOR DATA COLLECTION.

UTILITY NOTES

THE LOCATIONS, SIZES, AND MATERIAL TYPES OF UNDERGROUND UTILITIES INDICATED ON THE PLAT, NOT VISIBLE OR APPARENT FROM THE SURFACE, ARE SHOWN IN THEIR APPROXIMATE LOCATIONS FROM A MISSOURI ONE CALL SYSTEM LOCATE, OR UTILITY COMPANY RECORDS AND WERE NOT VERIFIED IN THE FIELD. UNDERGROUND UTILITY SERVICES TO BUILDINGS WERE NOT LOCATED.

WATER

ELECTRIC

AMEREN MISSOURI
WILMORE LANE
LAKE OZARK, MISSOURI 65049
CONTACT: 800-552-7583

GAS

TELECOMMUNICATIONS

AT&T
ADDRESS
CITY
CONTACT:

SANITARY SEWER

STORM SEWER

ELECTRIC NOTES

SITE CONTRACTOR SHALL CONTACT AMEREN-MISSOURI TO COORDINATE INSTALLATION OF ELECTRIC SERVICES. RESPONSIBILITY OF INSTALLATION SHALL BE AS FOLLOWS.

SUPPLIED BY:	INSTALLED BY:
SECONDARY CONDUIT CONDUCTOR METER CONNECTIONS	CONTRACTOR CONTRACTOR CONTRACTOR UTILITY UTILITY
TRANSFORMER TRANSFORMER PAD	UTILITY CONTRACTOR CONTRACTOR
PRIMARY CONDUIT, CONNECTORS, ETC. CONDUCTOR CONNECTIONS	CONTRACTOR UTILITY UTILITY UTILITY



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**DEPARTMENT OF
NATURAL RESOURCES,
DIVISION OF STATE PARKS**

LAKE OF THE OZARKS
STATE PARK
CAMPGROUND #4
MO ROUTE 134
KAISER, MISSOURI 65047
CAMDEN COUNTY

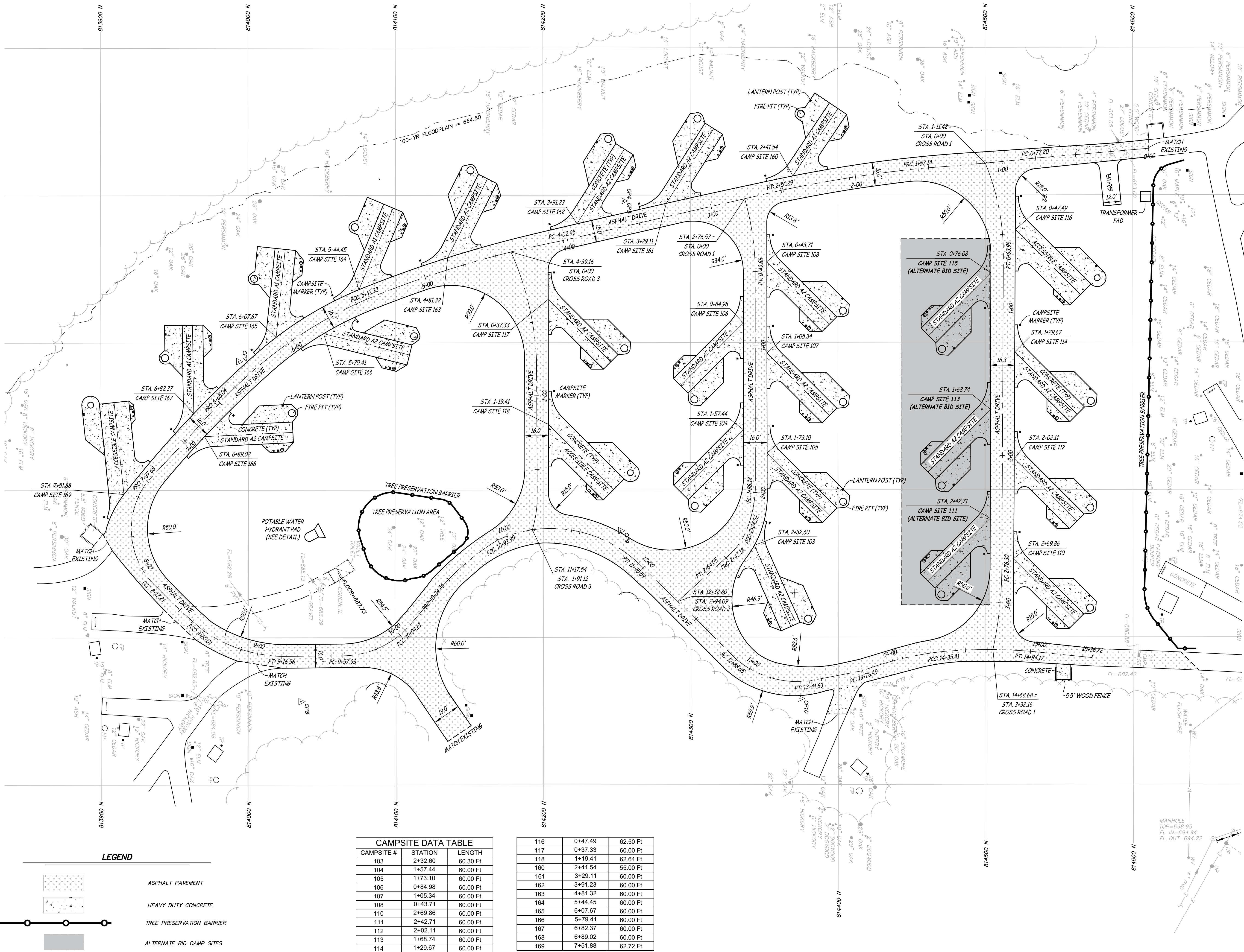
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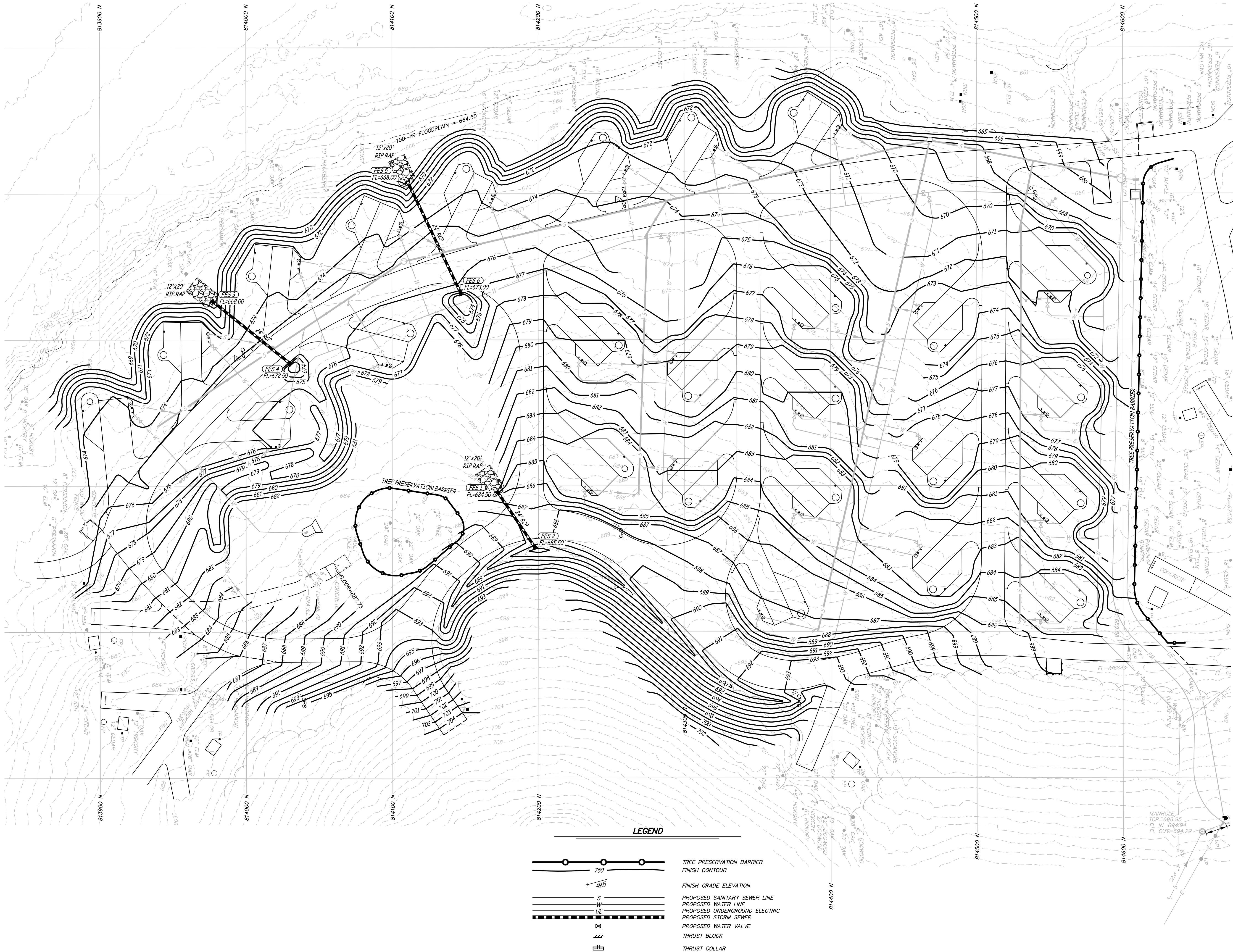
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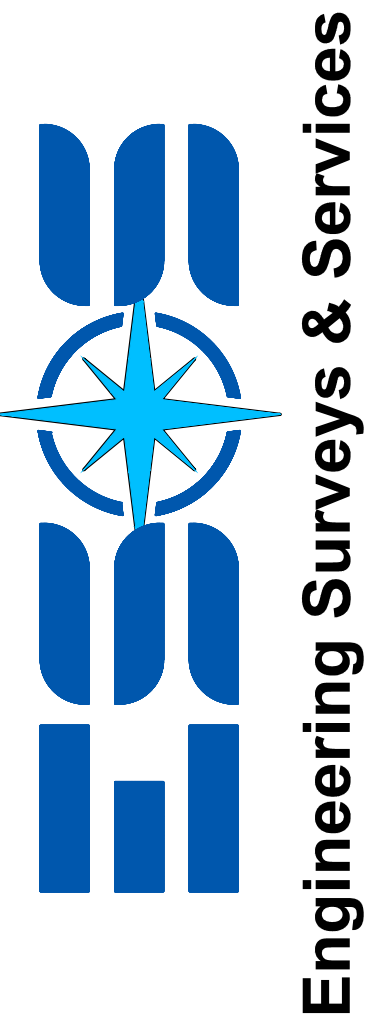
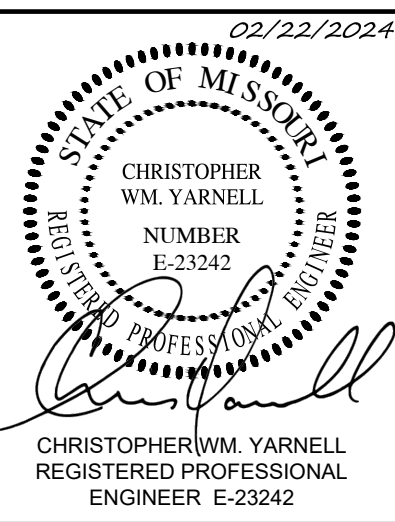
C-101
3 OF 17 SHEETS
02/22/2024







STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES
DIVISION OF STATE PARKS

LAKE OF THE OZARKS
STATE PARK
REPLACE 29 BASIC SITES WITH 25
NEW PREMIUM SITES

LAKE OF THE OZARKS
STATE PARK
CAMPGROUND #4
MO ROUTE 134
KAISER, MISSOURI 65047
CAMDEN COUNTY

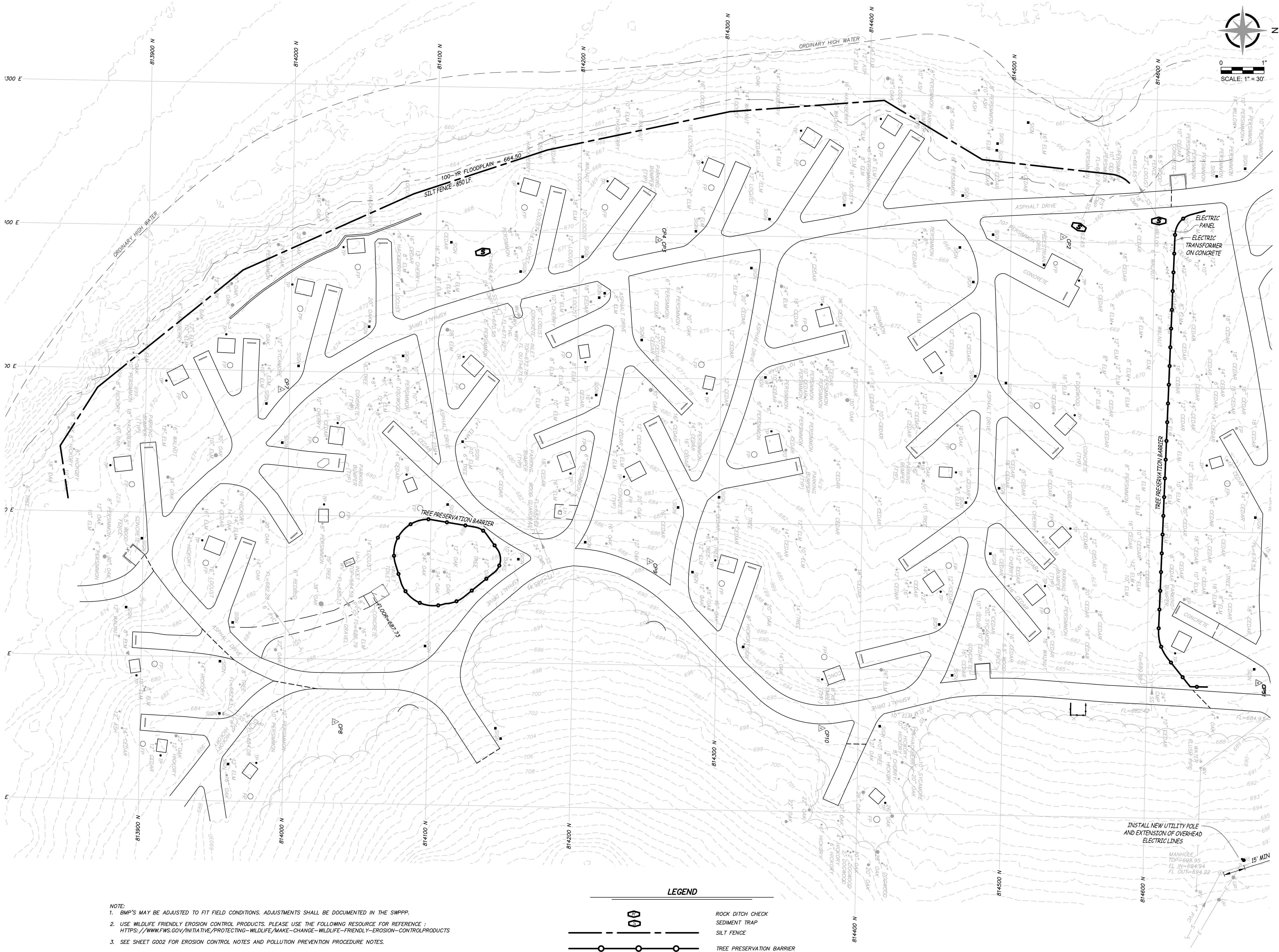
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SITE # 5306
ASSET # 7815306134

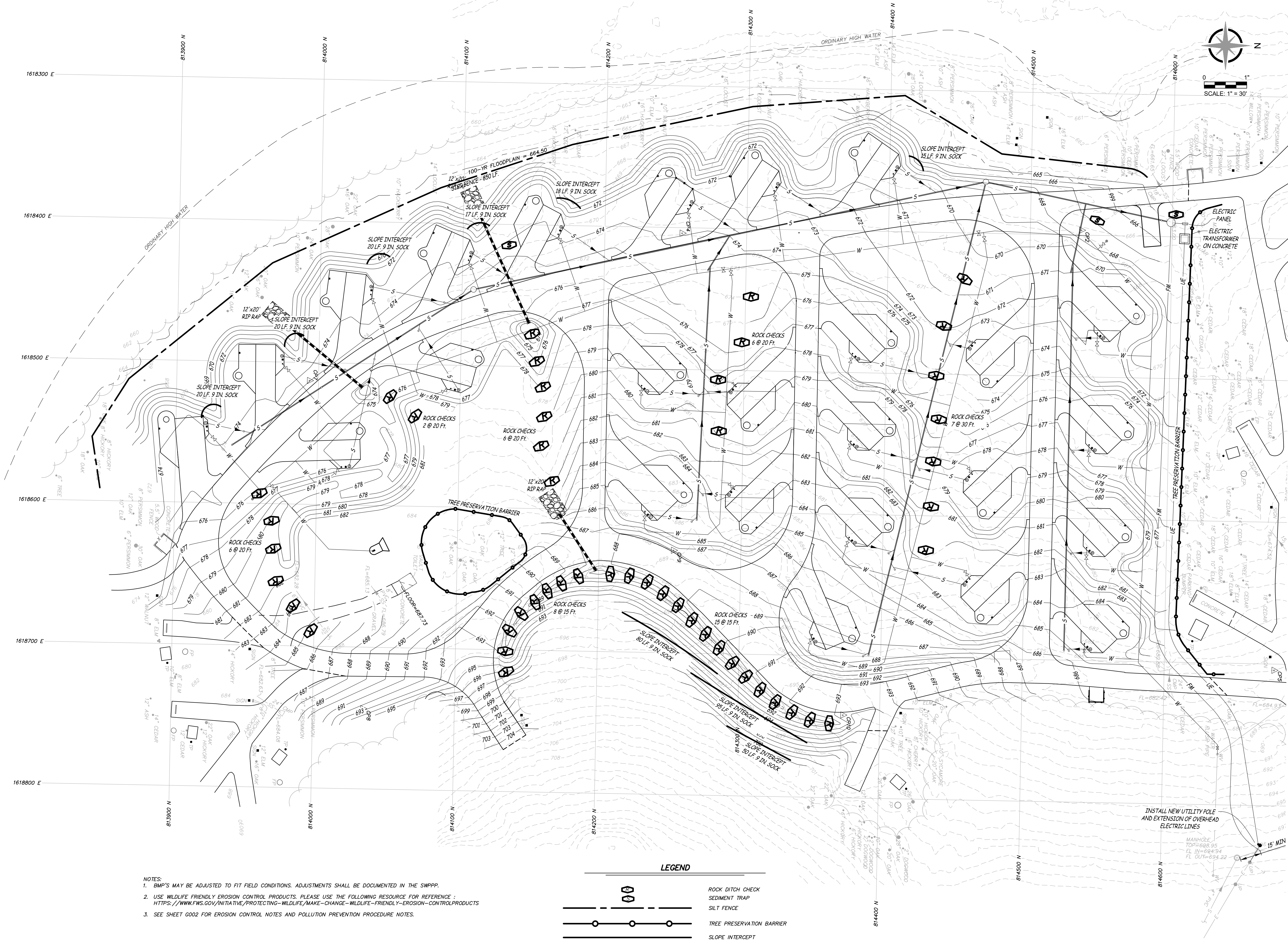
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DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 02/22/2024

CAD DWG FILE: XXX
DRAWN BY: CTR
CHECKED BY: CWY
DESIGNED BY: CWY

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C-103
5 OF 17 SHEETS
02/22/2024



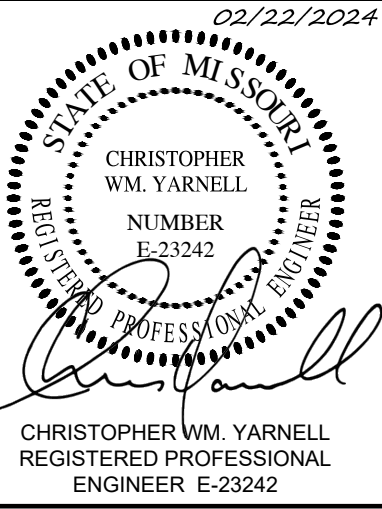


NOTES:
1. BMP'S MAY BE ADJUSTED TO FIT FIELD CONDITIONS. ADJUSTMENTS SHALL BE DOCUMENTED IN THE SWPPP.
2. USE WILDLIFE FRIENDLY EROSION CONTROL PRODUCTS. PLEASE USE THE FOLLOWING RESOURCE FOR REFERENCE :
[HTTPS://WWW.FWS.GOV/INITIATIVE/PROTECTING-WILDLIFE/MAKE-CHANGE-WILDLIFE-FRIENDLY-EROSION-CONTROLPRODUCTS](https://www.fws.gov/initiative/protecting-wildlife/make-change-wildlife-friendly-erosion-controlproducts)
3. SEE SHEET G002 FOR EROSION CONTROL NOTES AND POLLUTION PREVENTION PROCEDURE NOTES.

LEGEND

ROCK DITCH CHECK
SEDIMENT TRAP
SILT FENCE
TREE PRESERVATION BARRIER
SLOPE INTERCEPT

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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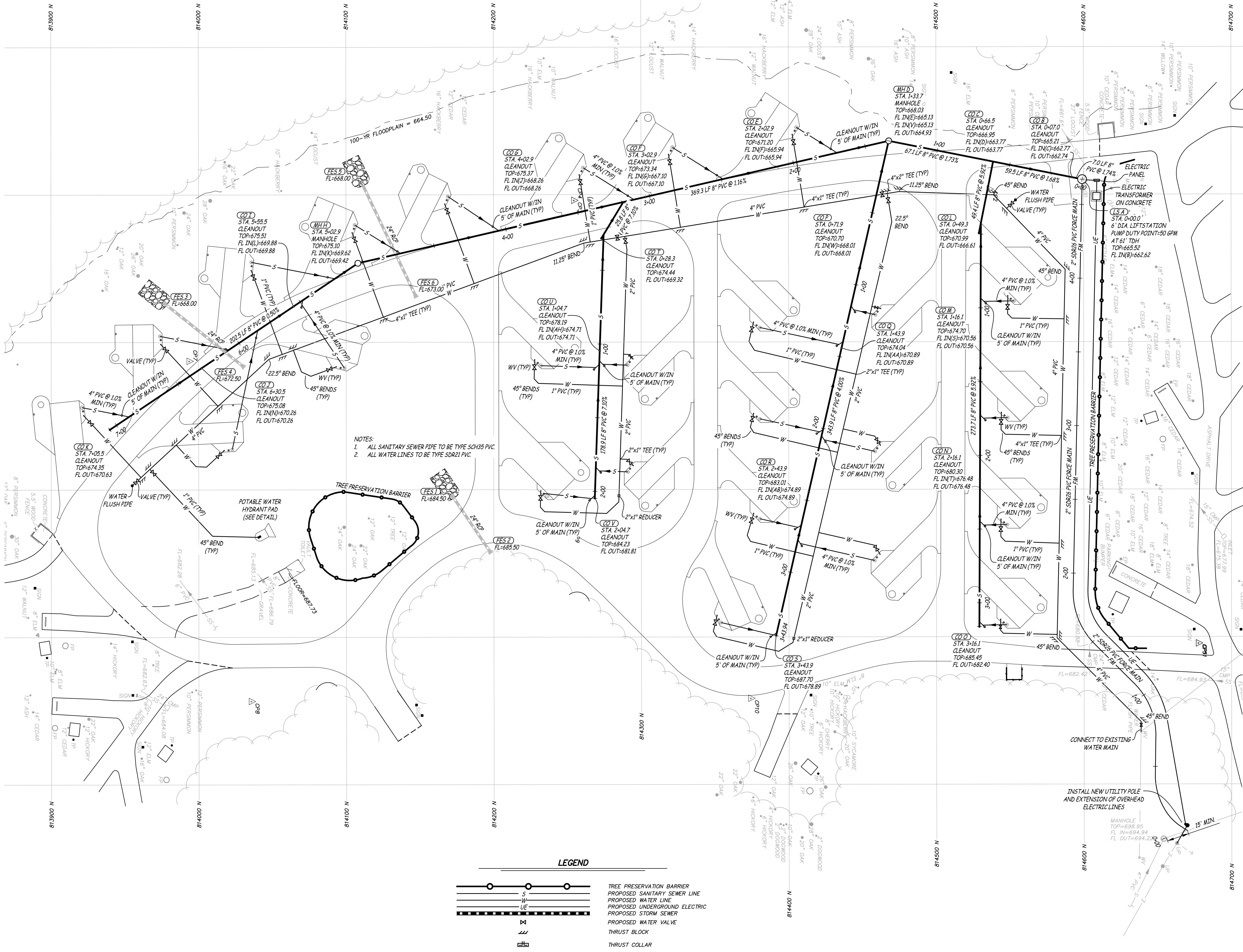
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SITE # 5306
ASSET # 7815306134

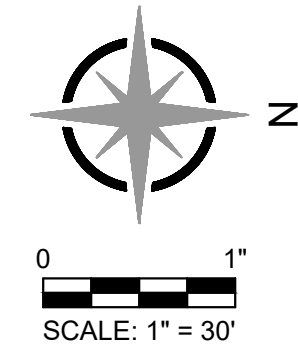
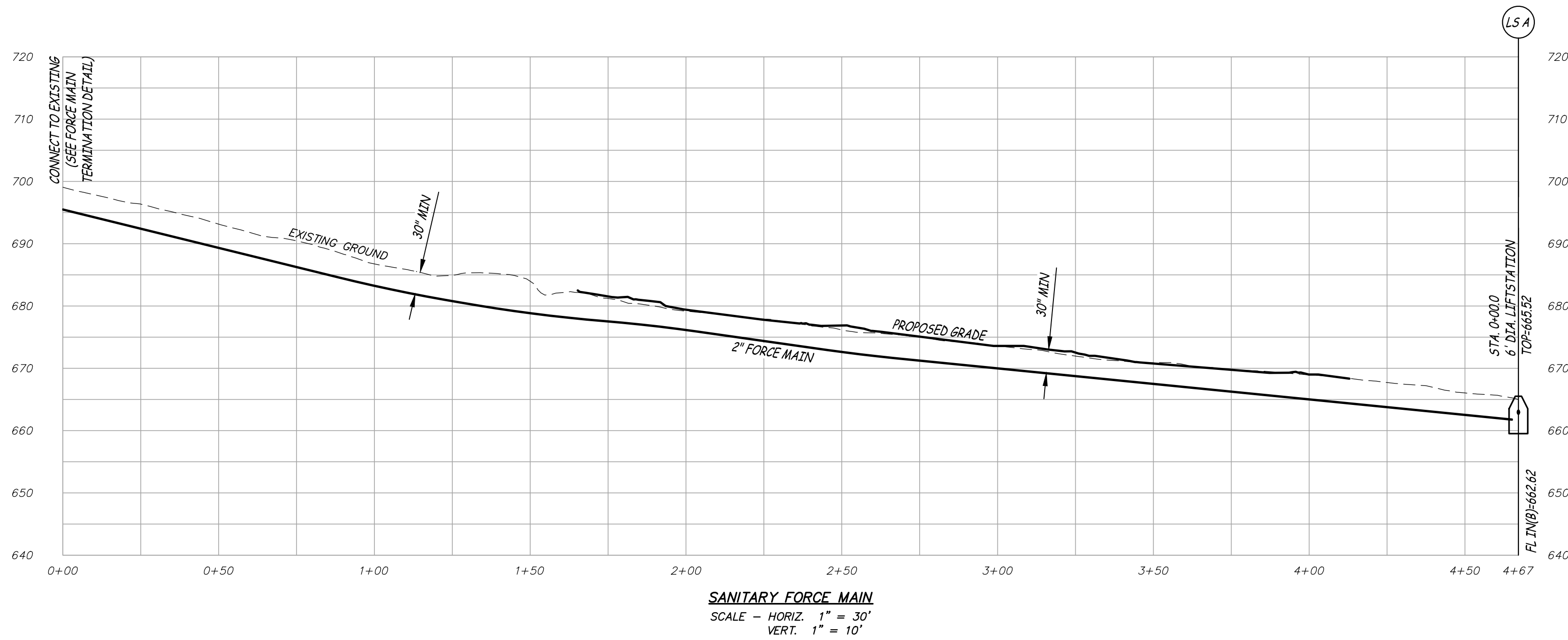
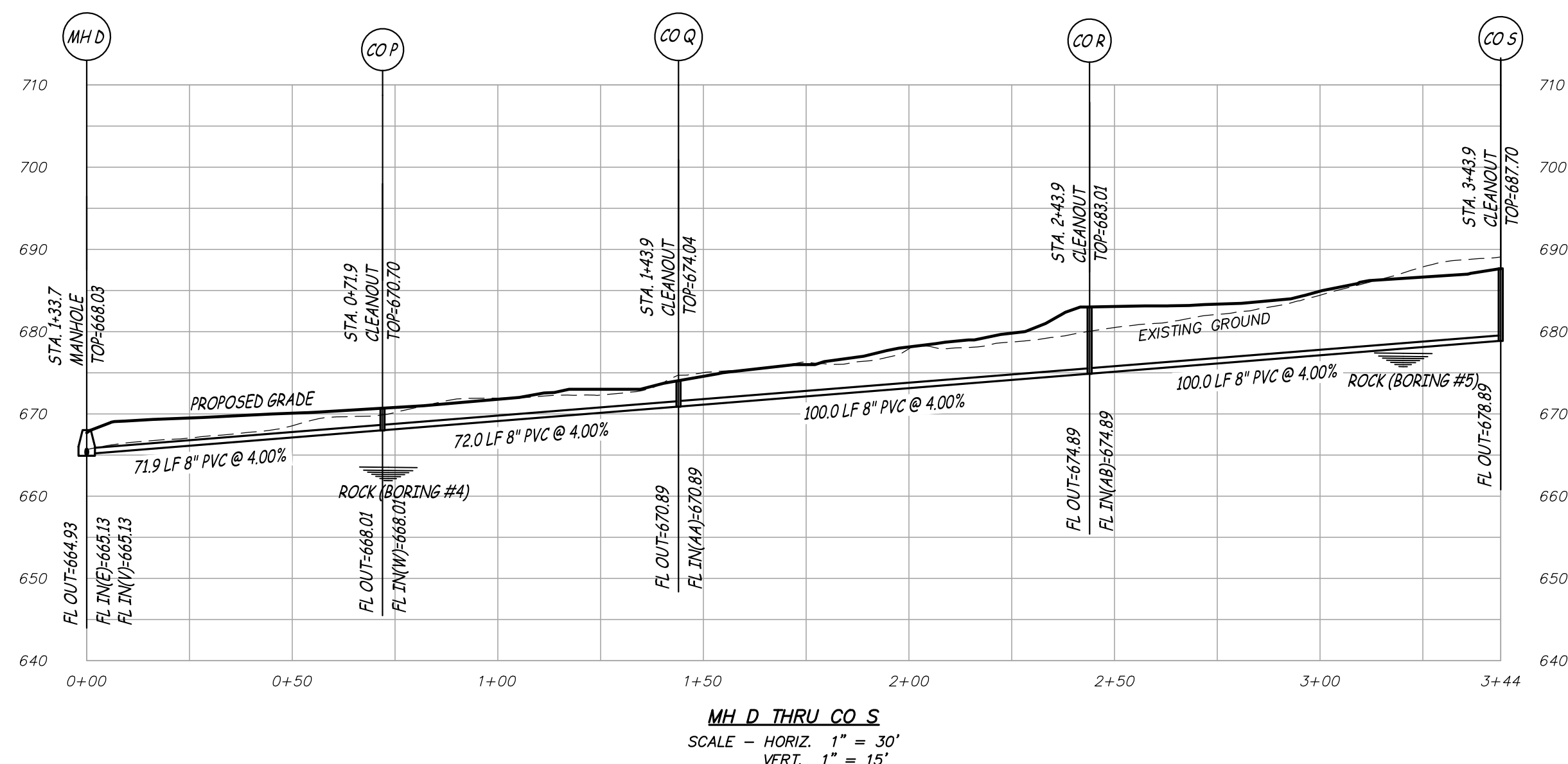
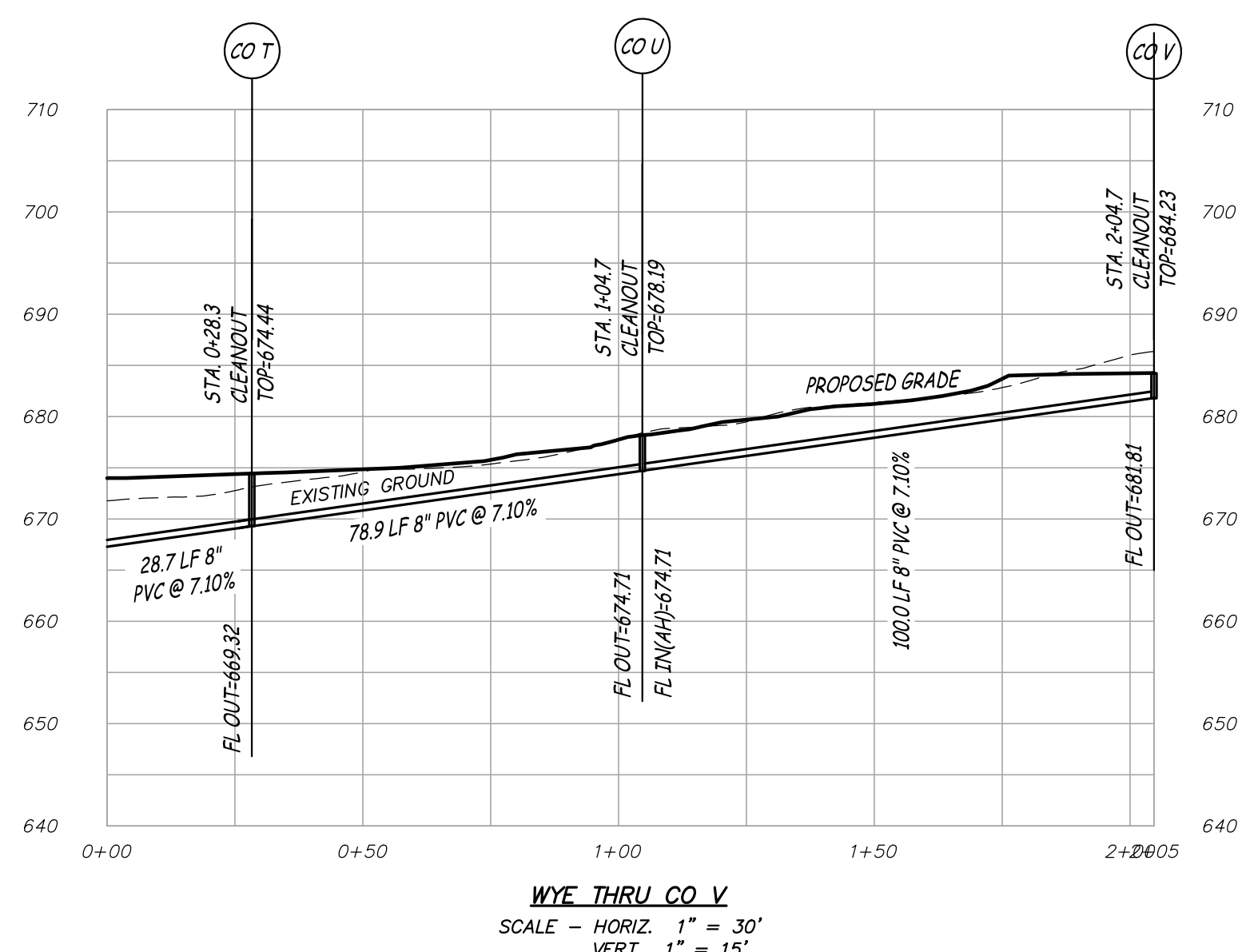
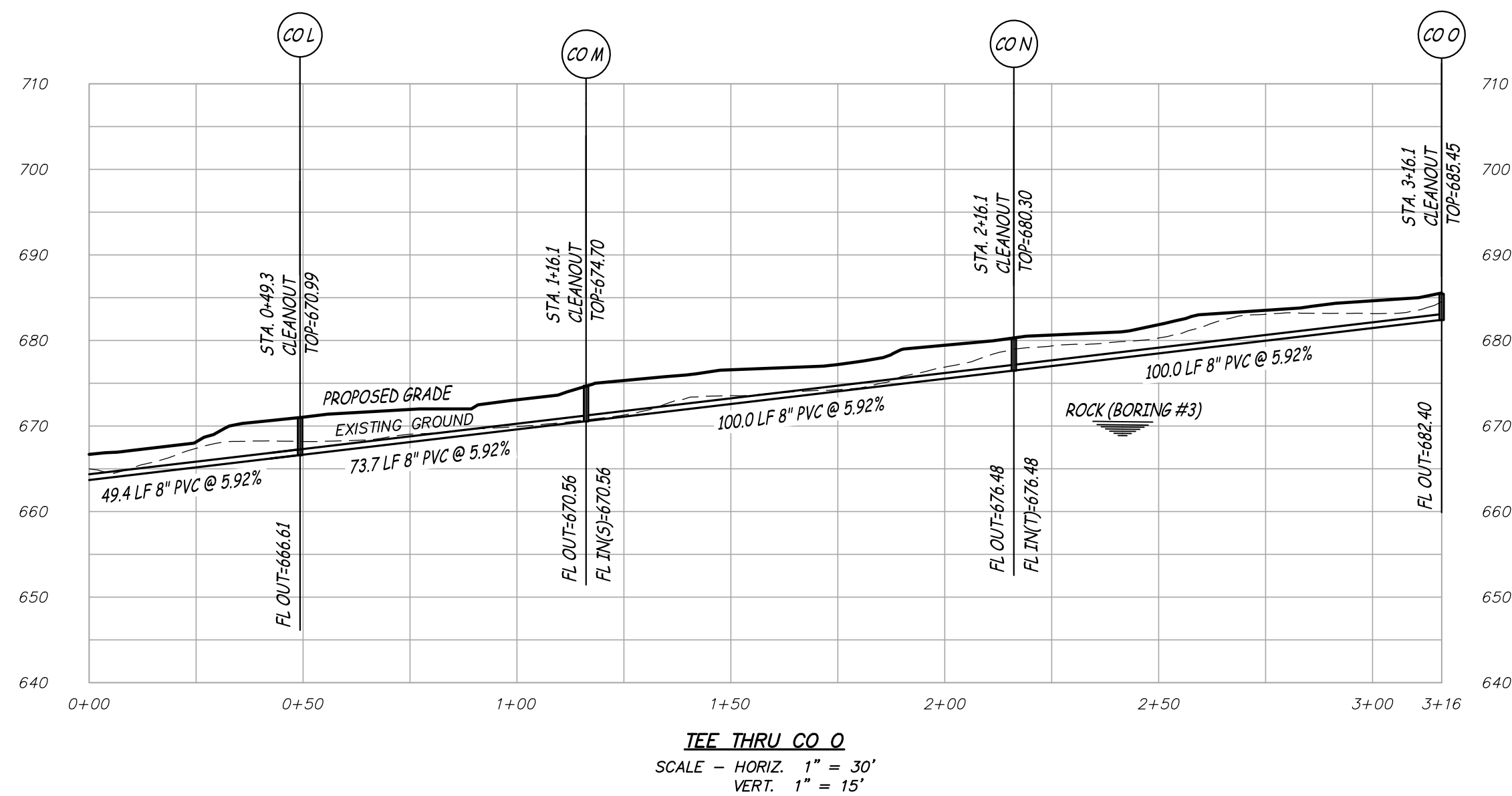
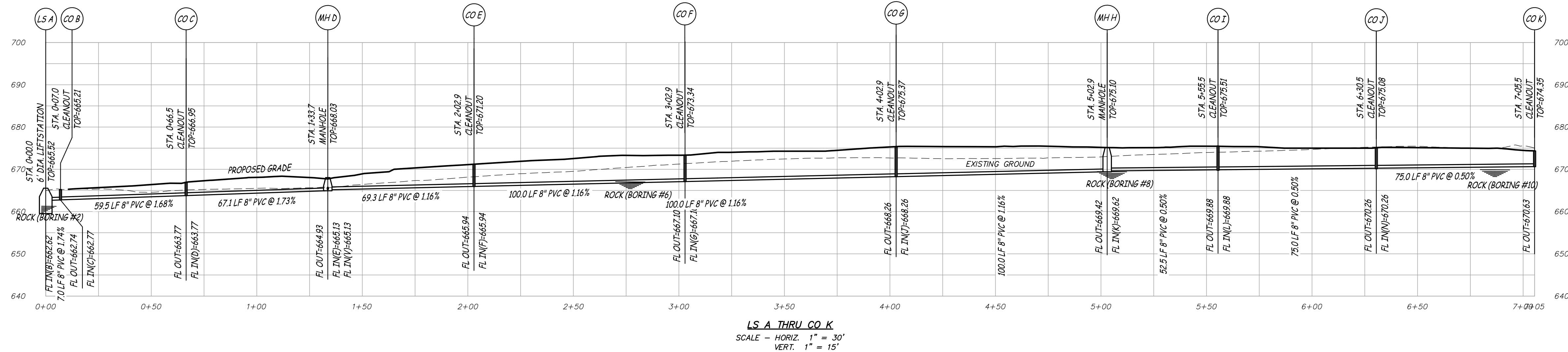
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DATE: _____
ISSUE DATE: 02/22/2024

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DRAWN BY: CTR
CHECKED BY: JCB
DESIGNED BY: CWY

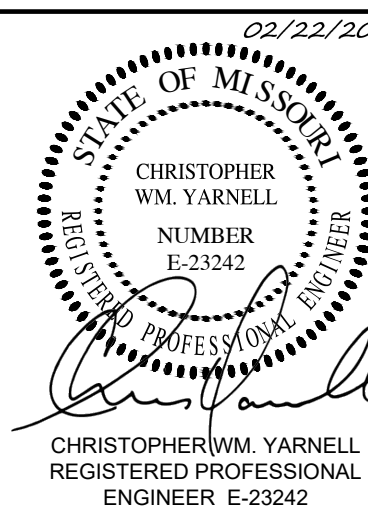
SHEET TITLE:
**FINAL EROSION
CONTROL PLAN**

SHEET NUMBER:
C-105
7 OF 17 SHEETS
02/22/2024





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CAMDEN COUNTY

PROJECT # X2316-01
SITE # 5306
ASSET # 7815306134

REVISION: _____
DATE: _____
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REVISION: _____
DATE: _____
ISSUE DATE: 02/22/2024

CAD DWG FILE: XXX
DRAWN BY: CTR
CHECKED BY: CWY
DESIGNED BY: CWY

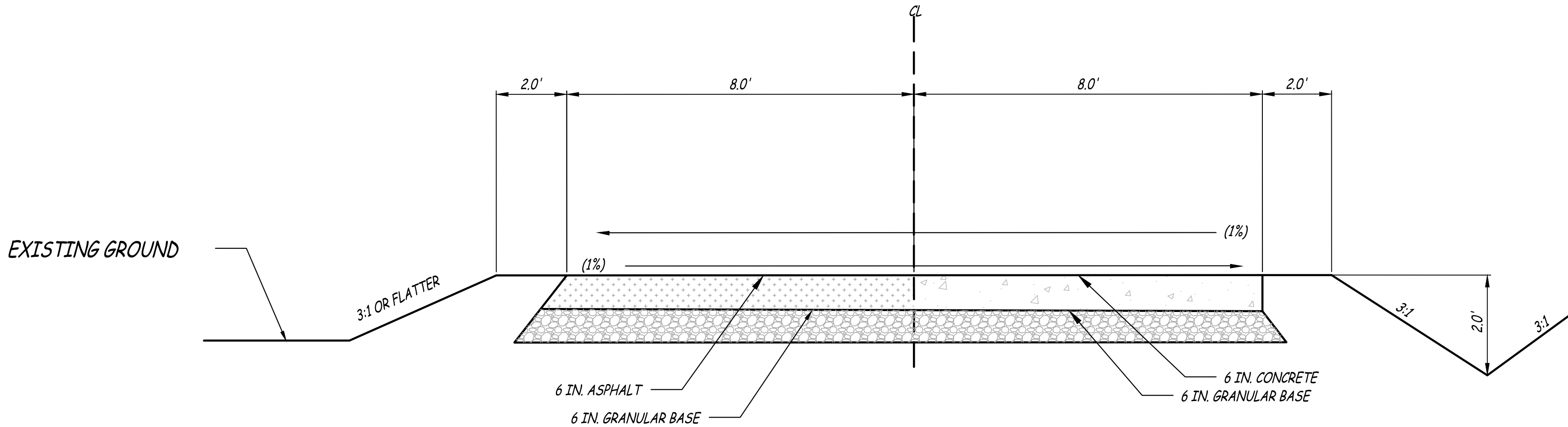
SHEET TITLE:
**SANITARY SEWER
PROFILES**

SHEET NUMBER:

C-201

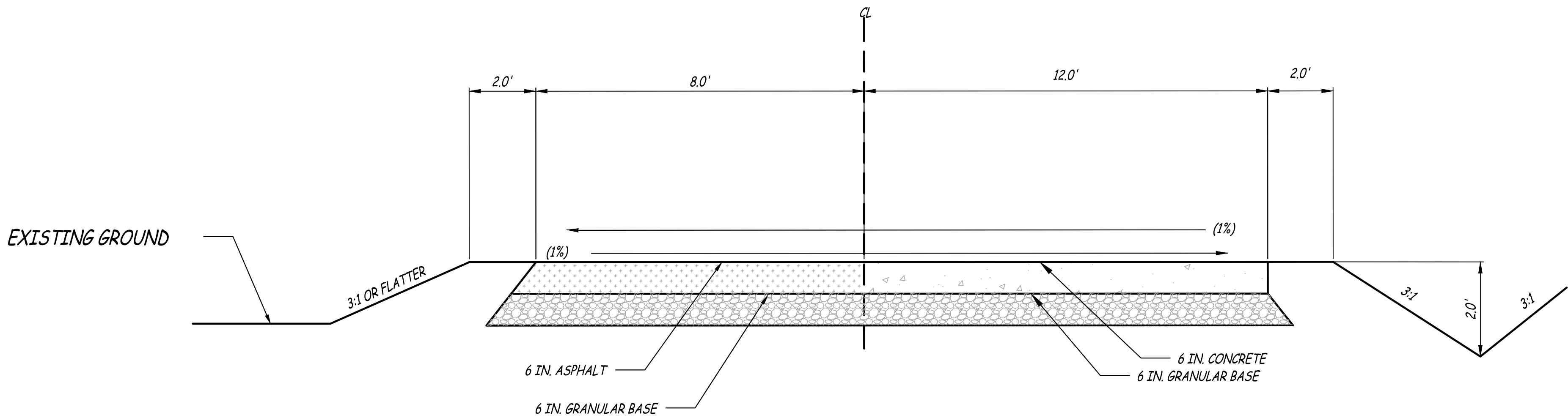
9 OF 17 SHEETS
02/22/2024





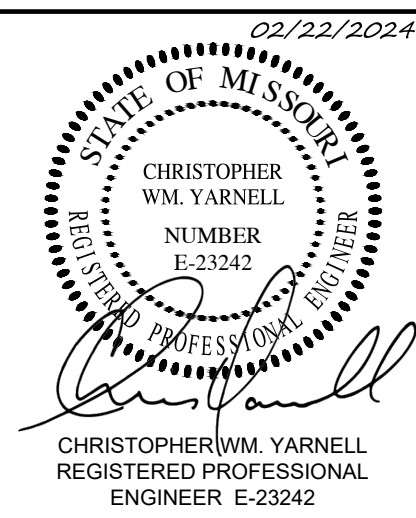
OPTIONAL PAVEMENT
PROPOSED HALF TYPICAL SECTION ON TANGENT
MAIN LINE - STATION 0+00 TO STATION 10+00
MAIN LINE - STATION 13+51.87 TO STATION 19+36.22
CROSS ROAD 1 - STATION 0+00 TO STATION 3+32.16
CROSS ROAD 2 - STATION 0+00 TO STATION 2+94.09
CROSS ROAD 3 - STATION 0+00 TO STATION 1+91.12

OPTIONAL PAVEMENT
2 INCHES OF BITUMINOUS PAVEMENT OVER 4 INCHES
OF BITUMINOUS BASE
OR
6 INCHES OF CONCRETE PAVEMENT WITH 15' JOINTS



OPTIONAL PAVEMENT
PROPOSED HALF TYPICAL SECTION ON TANGENT
MAIN LINE - STATION 10+00 TO STATION 13+51.87

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PROJECT # X2316-01
SITE # 5306
ASSET # 7815306134

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 02/22/2024

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DRAWN BY: CLR
CHECKED BY: CWY
DESIGNED BY: CWY

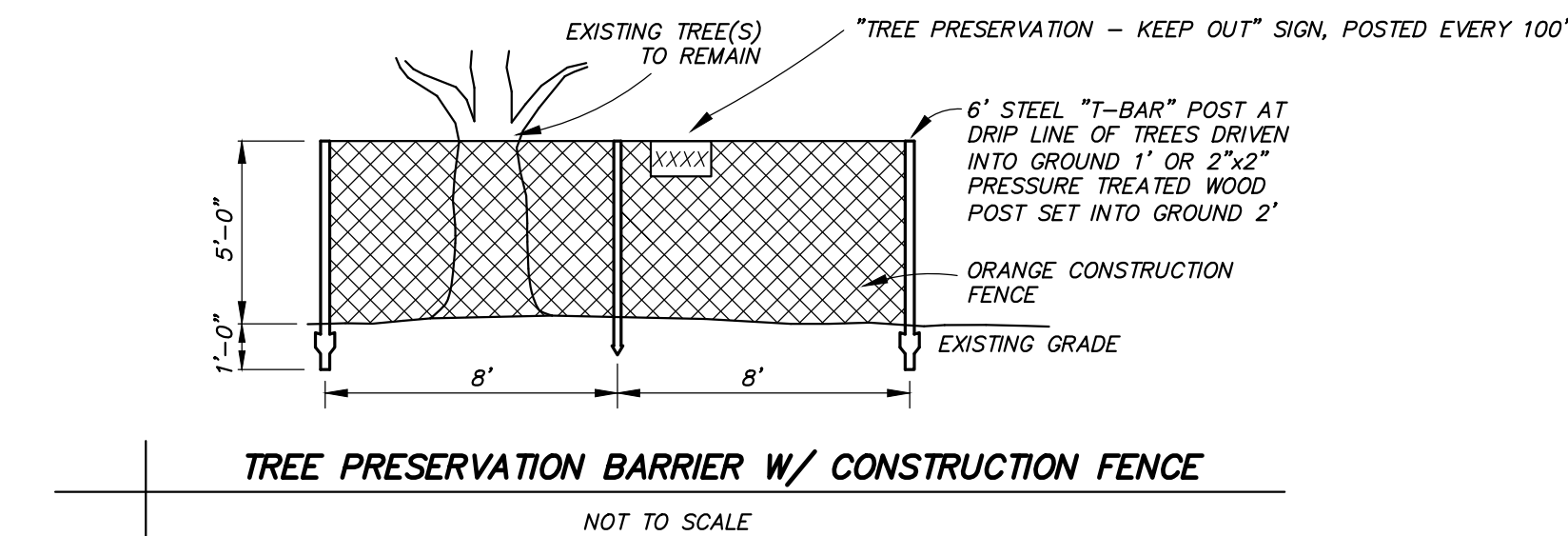
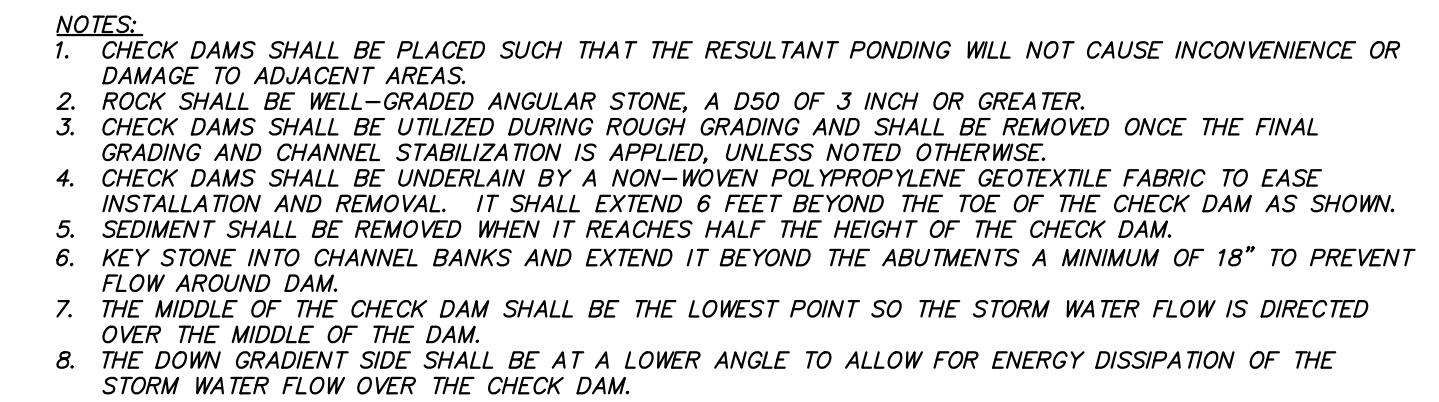
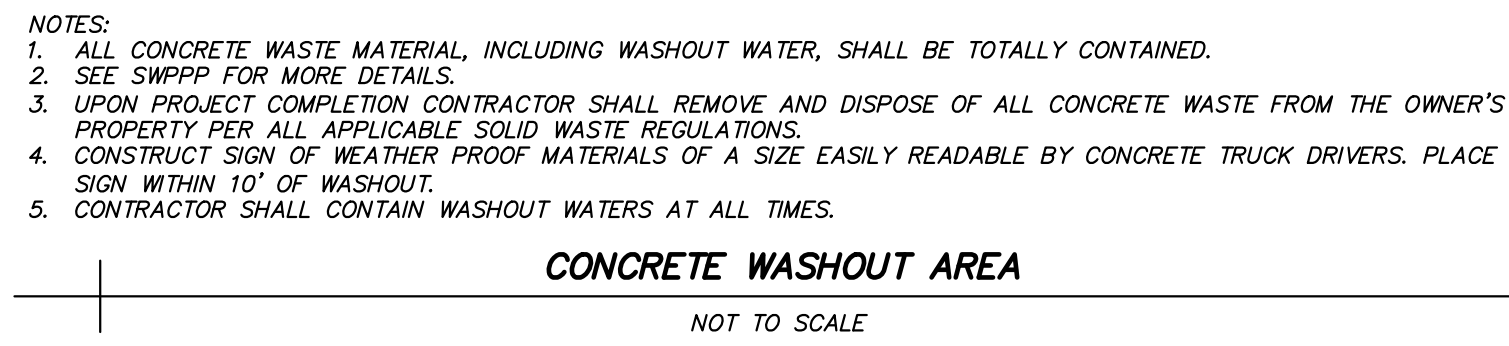
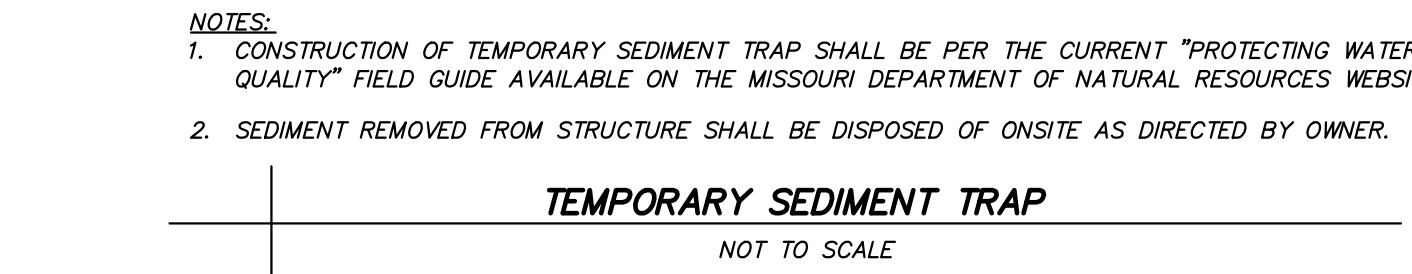
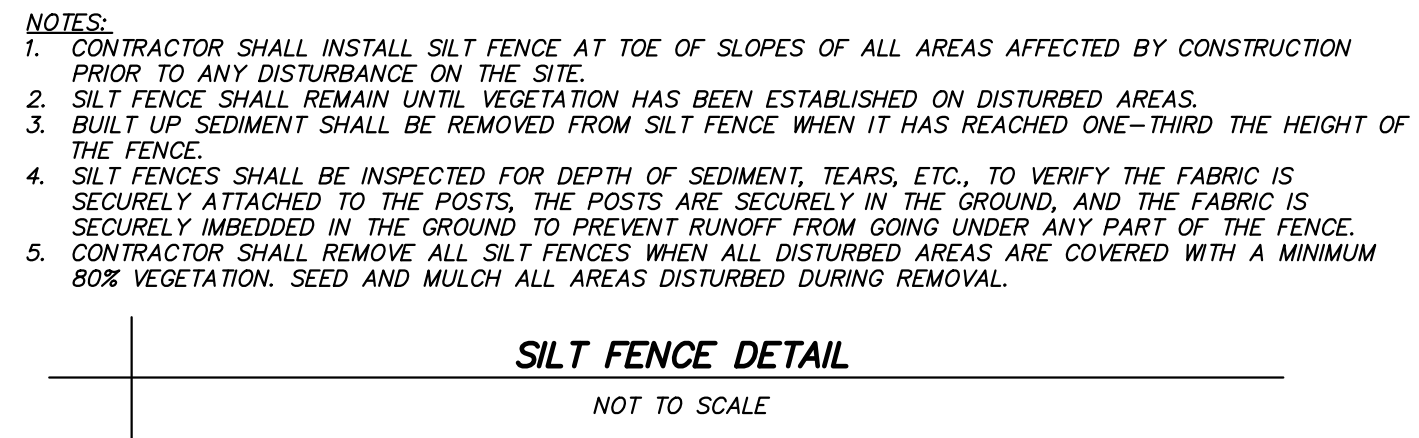
SHEET TITLE:

SITE DETAILS

SHEET NUMBER:

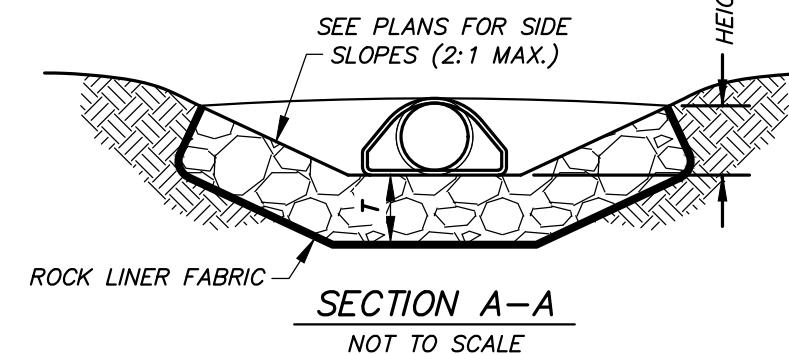
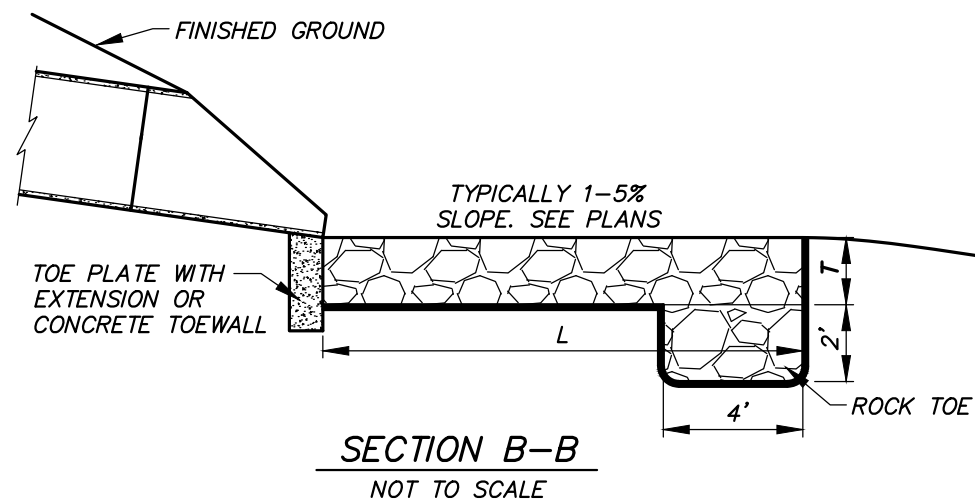
C-502

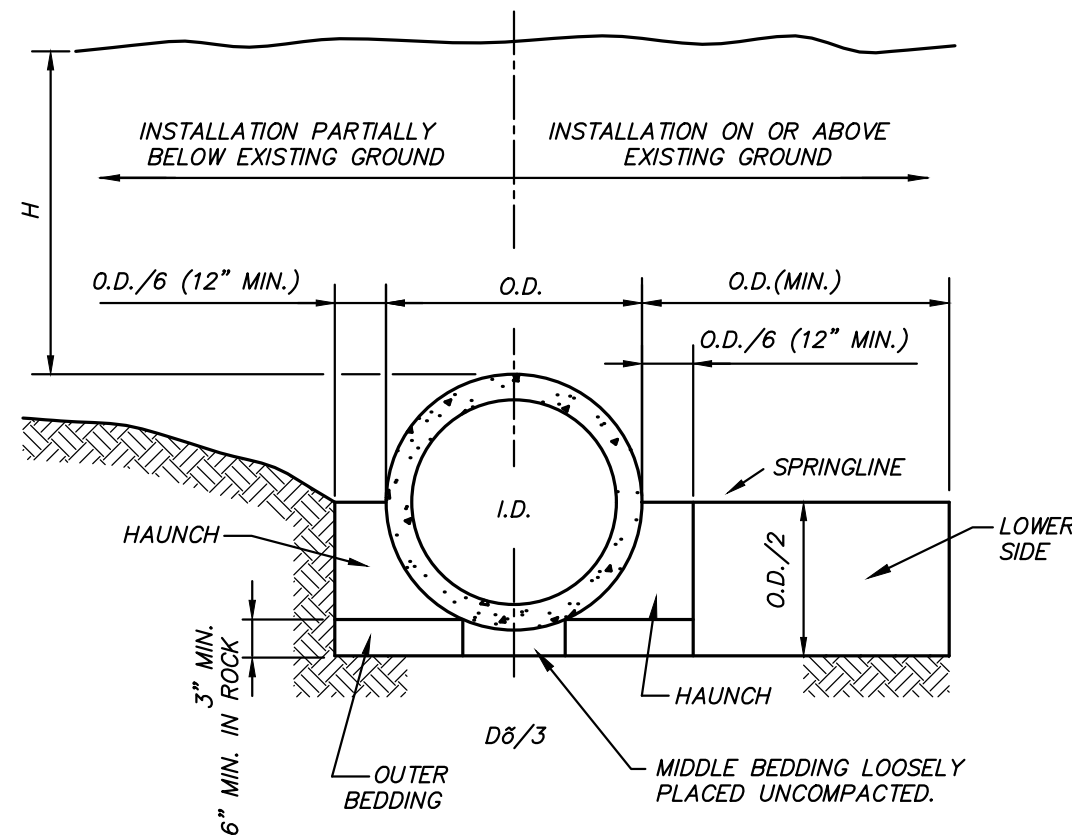
11 OF 17 SHEETS
02/22/2024



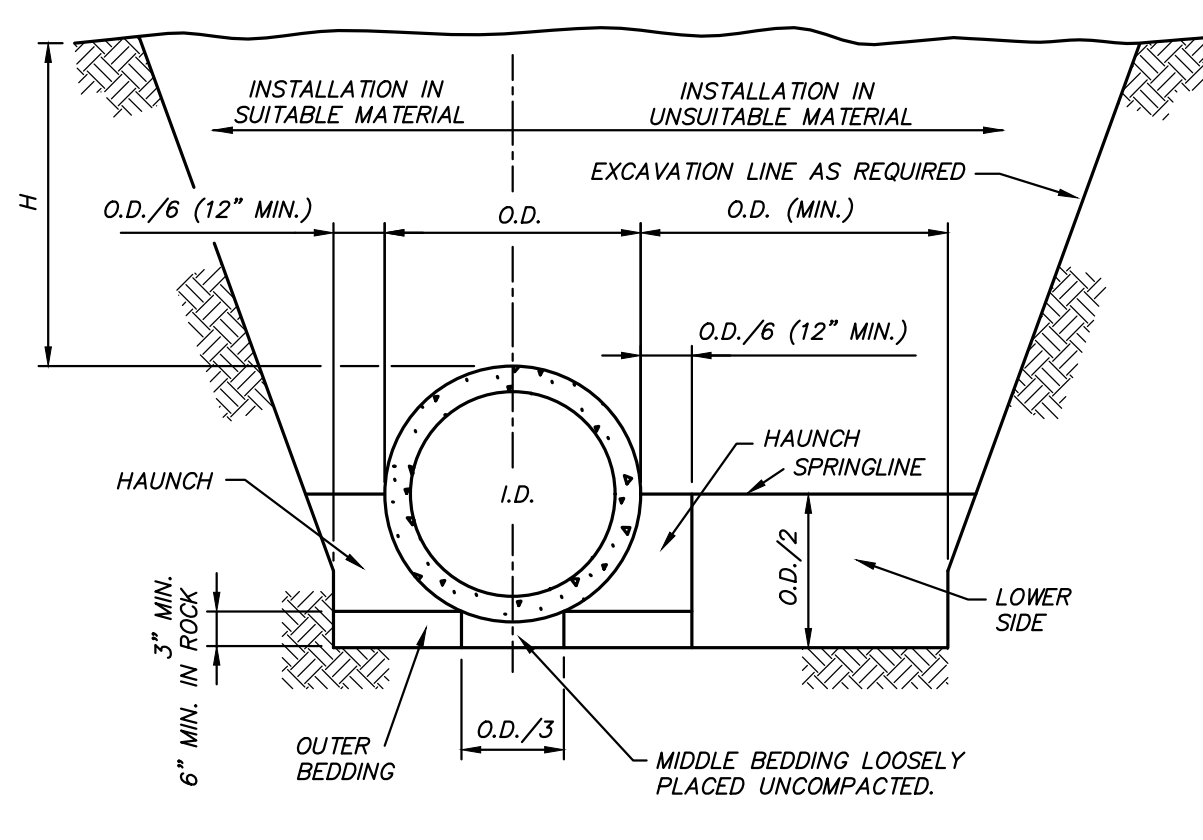
NOTES:

1. RIP RAP SHALL BE MODOT TYPE 1 ROCK BLANKET: 40% OF THE MASS SHALL BE PIECES HAVING A VOLUME OF ONE CUBIC FOOT OR MORE. ROCK MUST BE ANGULAR, HARD, AND DURABLE,
2. ROCK LINER FABRIC SHALL CONSIST OF A NON-WOVEN POLYPROPYLENE TYPE FABRIC: TENCATE MIRAFI 180N OR GEOTEX 801 OR APPROVED EQUAL.





EMBANKMENT INSTALLATIONS



TRENCH INSTALLATION

MAXIMUM HEIGHT OF FILL OVER RCP CULVERTS					
PIPE CLASS (FEET)					
INSTALLATION TYPE	CLASS I	CLASS II	CLASS III	CLASS IV	CLASS V
TYPE 1	14	18	21	33	50
TYPE 2	9	12	16	25	38
TYPE 3	7	10	12	19	30
TYPE 4	5	7	8	13	19

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

- CONSTRUCTION SEQUENCE:
1. PLACE BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
 2. INSTALL PIPE TO GRADE.
 3. COMPACT BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
 4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE SPRINGLINE.
 5. COMPLETE BACKFILL ACCORDING TO SPECIFICATIONS.

- GENERAL NOTES:
1. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE BETWEEN PIPES OF 1/2 O.D. OR 12", WHICHEVER IS GREATER, BUT NOT TO EXCEED 36".
 2. USE MINIMUM CLASS III PIPE UNLESS NOTED OTHERWISE. CLASS IV & V SHALL BE USED AS REQUIRED BY BACKFILL DEPTH. CLASS I AND CLASS II REINFORCED CONCRETE PIPE SHALL ONLY BE USED FOR SEWERS IN TRENCHES OUTSIDE ROADBEDS, STREET LIMITS, PARKING LOTS AND INFLUENCE OF ANY STRUCTURE.

LEGEND

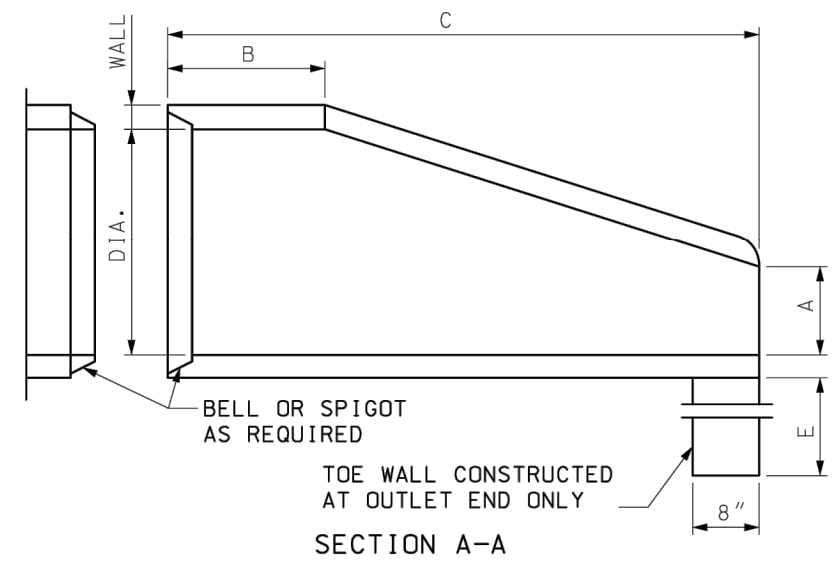
I.D. = NORMAL INSIDE DIAMETER OF PIPE.
O.D. = OUTSIDE DIAMETER OF PIPE.
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

BEDDING AND COMPACTION REQUIREMENTS (% MAX. DRY DENSITY PER ASTM D698)						
INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH AND OUTER BEDDING			LOWER SIDE BEDDING	
		CATEGORY 1 SOIL (A)	CATEGORY 2 SOIL (B)	CATEGORY 3 SOIL (C)	CATEGORY 1 SOIL (A)	CATEGORY 2 SOIL (B)
1	O.D./24 MINIMUM, NOT LESS THAN 3". IF ROCK FOUNDATION, USE O.D./12 MINIMUM, NOT LESS THAN 6".	95	N/A	N/A	90	95
2	O.D./24 MINIMUM, NOT LESS THAN 3". IF ROCK FOUNDATION, USE O.D./12 MINIMUM, NOT LESS THAN 6".	90	95	N/A	85	90
3	O.D./24 MINIMUM, NOT LESS THAN 3". IF ROCK FOUNDATION, USE O.D./12 MINIMUM, NOT LESS THAN 6".	85	90	95	85	90
4	O.D./24 MINIMUM, NOT LESS THAN 3". IF ROCK FOUNDATION, USE O.D./12 MINIMUM, NOT LESS THAN 6".	NO COMPACTION REQUIRED	NO COMPACTION REQUIRED	85	NO COMPACTION REQUIRED	NO COMPACTION REQUIRED

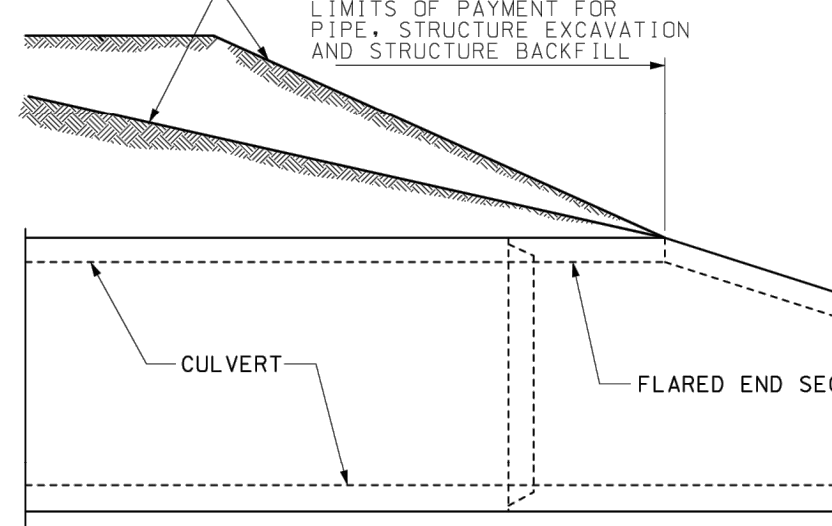
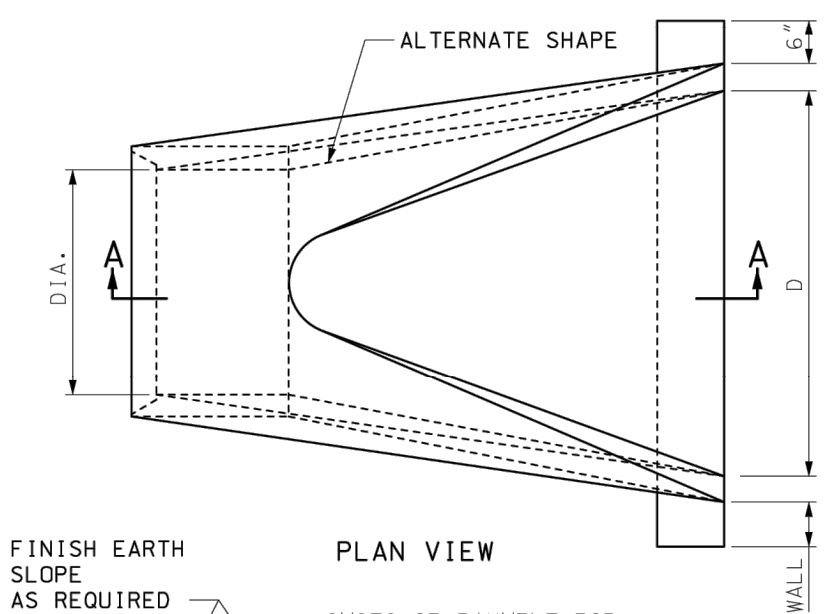
- (A) WELL GRADED MIXTURE OF STONE FRAGMENTS, GRAVEL AND SAND IN ACCORANCE W/ AASHTO M 145 GROUP A-1 OR A-3
(B) LOW PLASTIC GRANULAR MATERIAL IN ACCORDANCE W/ AASHTO M145 GROUP A-2 OR A-4
(C) SILTY CLAYS IN ACCORDANCE W/ AASHTO M145 GROUP A-5, A-6, OR A-7

EMBEDMENT OF RCP STORM SEWER PIPE

NOT TO SCALE

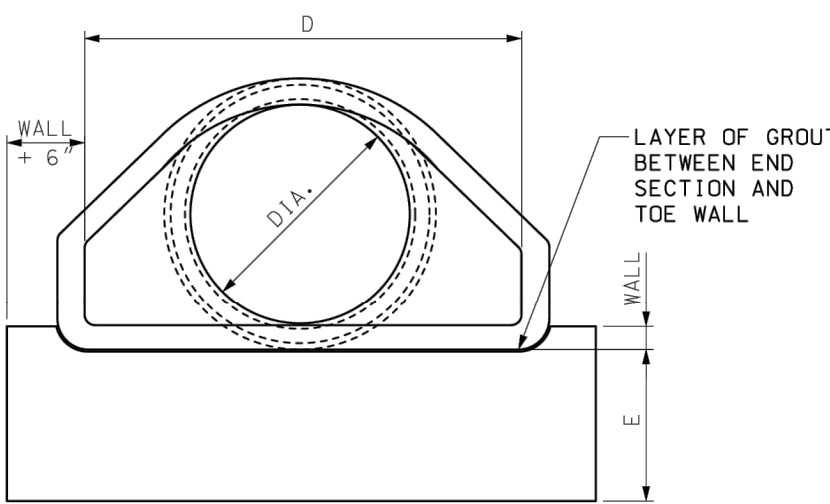


SECTION A-A



INSTALLATION DETAILS

DIMENSIONS						
DIA.	WALL	A	B MIN.	C MIN.	D	E
12"	2"	4"	4'-0"	6'	2'-0"	18"
15"	2 1/2"	6"	3'-10"	6'	2'-6"	18"
18"	2 1/2"	9"	3'-10"	6'	3'-0"	18"
21"	2 1/2"	9"	3'-2"	6'	3'-6"	18"
24"	3"	9 1/2"	2'-6"	6'	4'-0"	24"
27"	3 1/2"	10 1/2"	2'-1"	6'	4'-6"	24"
30"	3 1/2"	1'-0"	1'-7"	6'	5'-0"	24"
33"	3 1/2"	1'-2"	1'-7"	6'	5'-6"	24"
36"	4"	1'-3"	2'-10"	8'	6'-0"	24"
42"	4 1/2"	1'-9"	2'-11"	8'	6'-6"	24"
48"	5"	2'-0"	2'-2"	8'	7'-0"	24"
54"	5 1/2"	2'-3"	2'-11"	8'	7'-6"	36"
60"	6"	2'-6"	3'-3"	8'	8'-0"	36"
66"	6 1/2"	2'-0"	1'-9"	8'	8'-6"	36"
72"	7"	2'-0"	2'-9"	10'	9'-0"	36"
78"	7 1/2"	2'-3"	2'-3"	10'	9'-6"	36"
84"	8"	2'-6"	2'-0"	10'	10'-0"	36"



END VIEW

REINFORCEMENT					
ADJOINING PIPE DIA.	BARREL SECTION REINFORCEMENT		FLARE SECTION REINFORCEMENT (ONE LAYER ONLY IN CENTER OF WALL)		
	CIRCULAR		ELLIPTICAL		
	INNER CAGE SQ. IN./ LIN. FT.	OUTER CAGE SQ. IN./ LIN. FT.	SO. IN./ LIN. FT.	AREA OF LONGITUDINAL SQ. IN./ LIN. FT.	AREA OF TRANSVERSE SQ. IN./ LIN. FT.
12"	0.07			0.048	0.048
15"	0.07			0.054	0.054
18"	0.07		0.07	0.060	0.060
21"	0.07		0.07	0.066	0.066
24"	0.07		0.07	0.072	0.072
27"	0.13		0.11	0.078	0.078
30"	0.14		0.12	0.084	0.084
33"	0.15		0.13	0.090	0.090
36"	0.12	0.09	0.13	0.096	0.096
42"	0.15	0.12	0.17	0.108	0.108
48"	0.18	0.14	0.20	0.120	0.120
54"	0.22	0.16	0.24	0.132	0.132
60"	0.25	0.19	0.28	0.144	0.144
66"	0.31	0.23	0.34	0.156	0.156
72"	0.35	0.21	0.39	0.170	0.170
78"	0.40	0.24	0.44	0.185	0.185
84"	0.46	0.28	0.51	0.205	0.205

- GENERAL NOTES:
- SLIGHT VARIATIONS IN BOTH SHAPE AND DIMENSIONS FROM THOSE SHOWN MAY BE ACCEPTED IF APPROVED BY THE ENGINEER.
- NOT MORE THAN THREE LIFT HOLES MAY BE DRILLED OR CAST IN THE END SECTION FOR HANDLING AND LAYING.
- LIFT LUGS OR BARS WILL BE PERMITTED IN PRECAST TOE WALLS.
- TOE WALLS MAY BE CAST-IN-PLACE OR PRECAST.
- STEEL FIBERS MAY BE USED IN LIEU OF REBAR OR COLD DRAWN STEEL WIRE AS PER SECTION 1032.3.4.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MDOT (1-888-275-6636)

STATE OF MISSOURI
MICHAEL L. PARSON
GOVERNOR

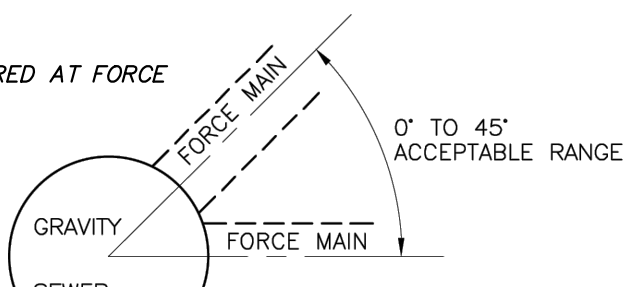
FLARED END SECTION
PRECAST CONCRETE

DATE EFFECTIVE: 04/01/2016
DATE PREPARED: 2/11/2016

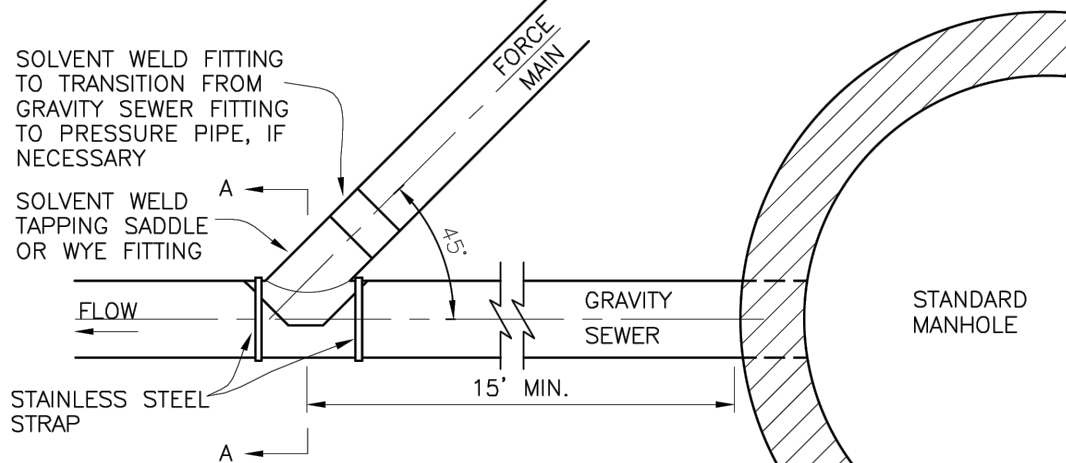
732.00S

SHEET NO.
1 OF 3

NOTES:
1. THRUST BLOCKING REQUIRED AT FORCE MAIN TERMINATION.

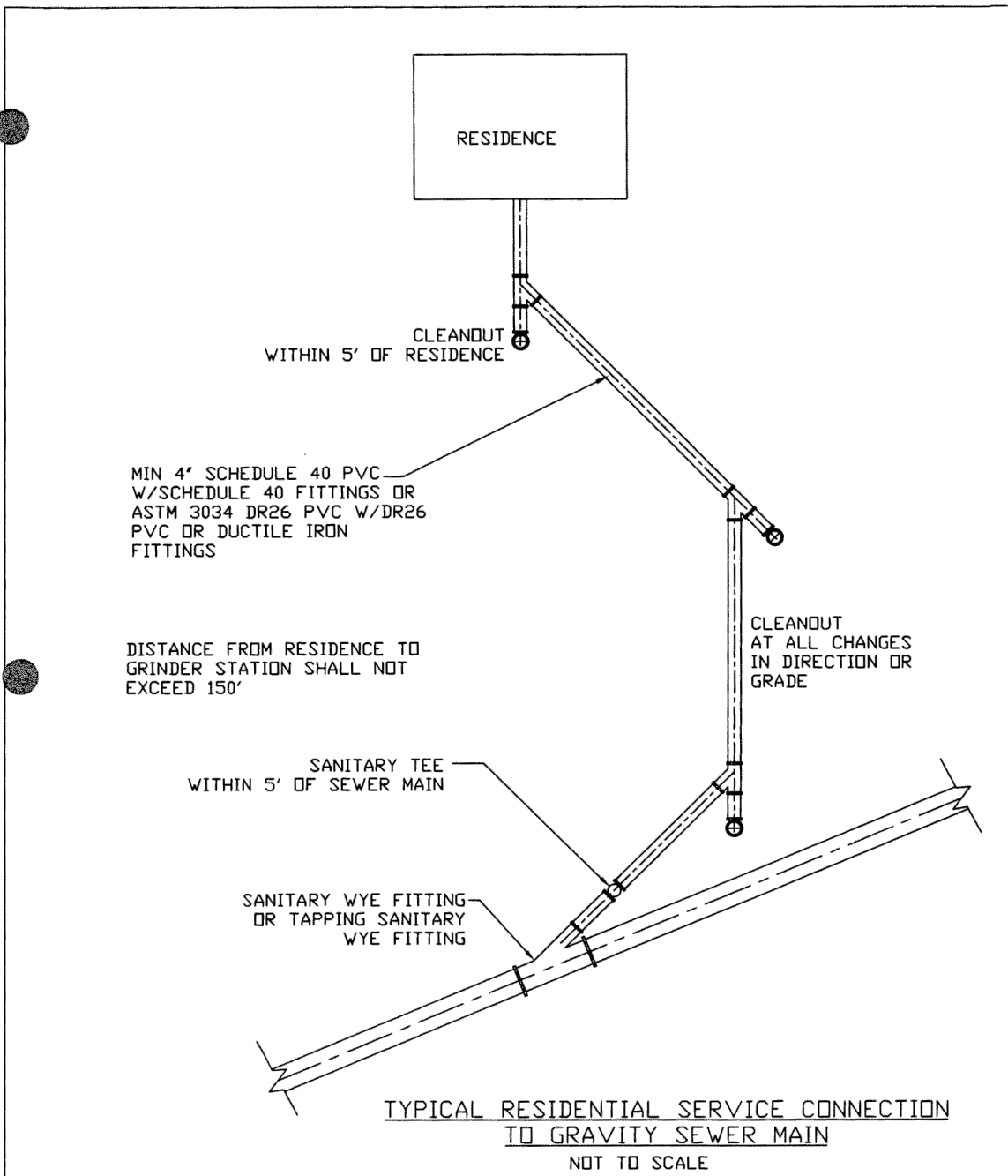


SECTION A-A



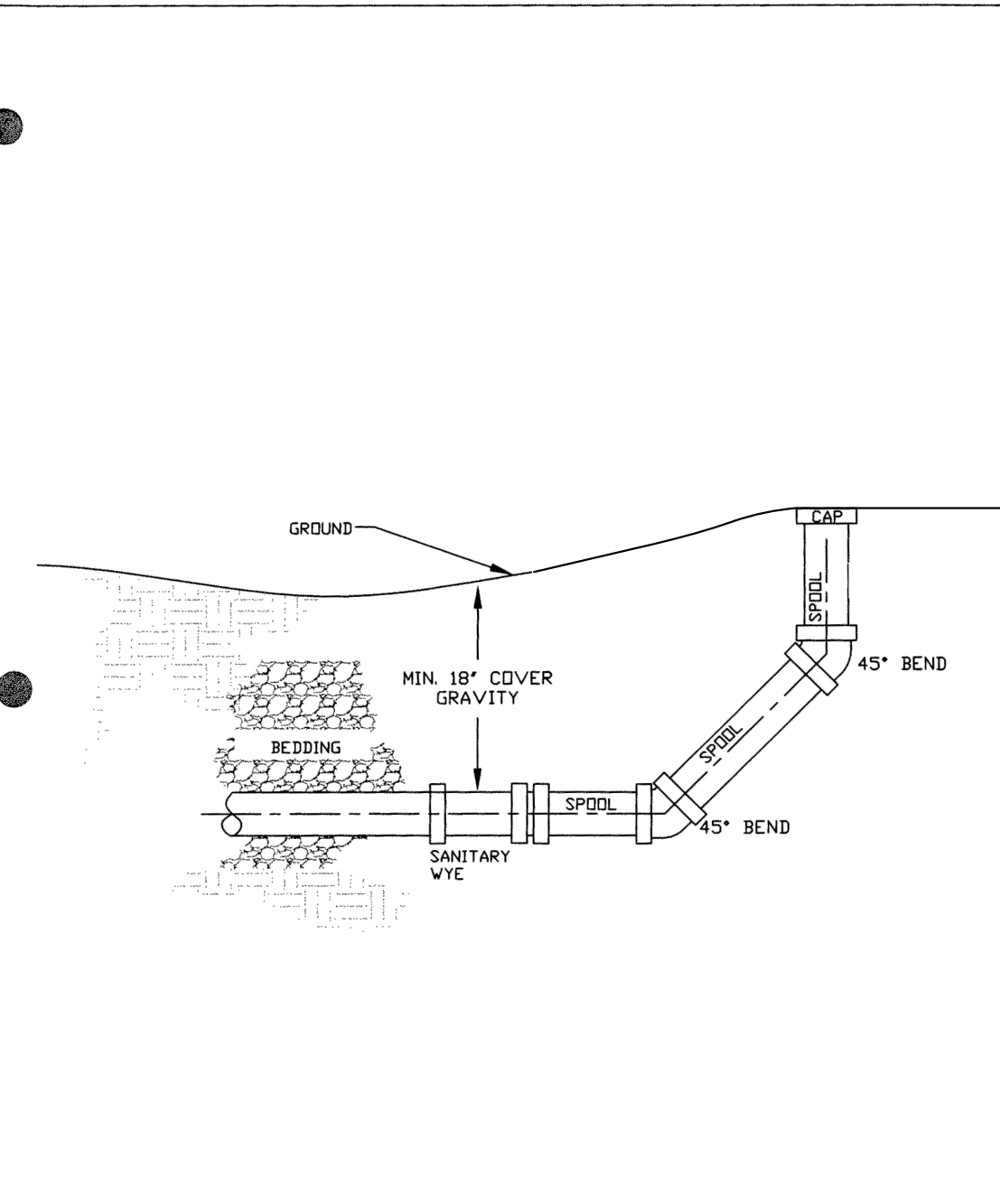
FORCE MAIN TERMINATION

NOT TO SCALE



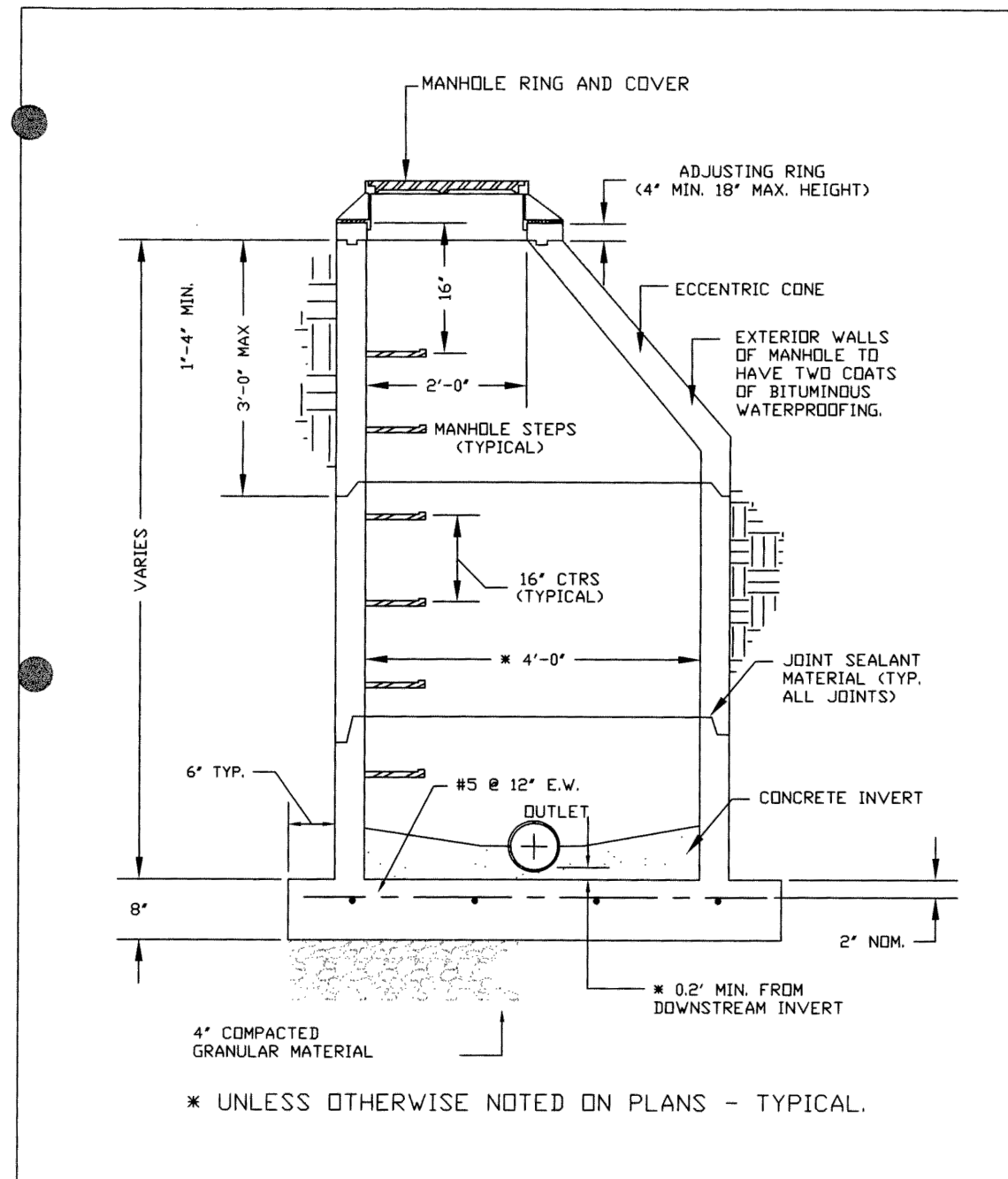
CITY OF OSAGE BEACH
TYPICAL DETAIL
RESIDENTIAL SERVICE CONNECTION

Design Guideline:
SECTION 3
SEWERAGE DESIGN
Drawing No:
III-2



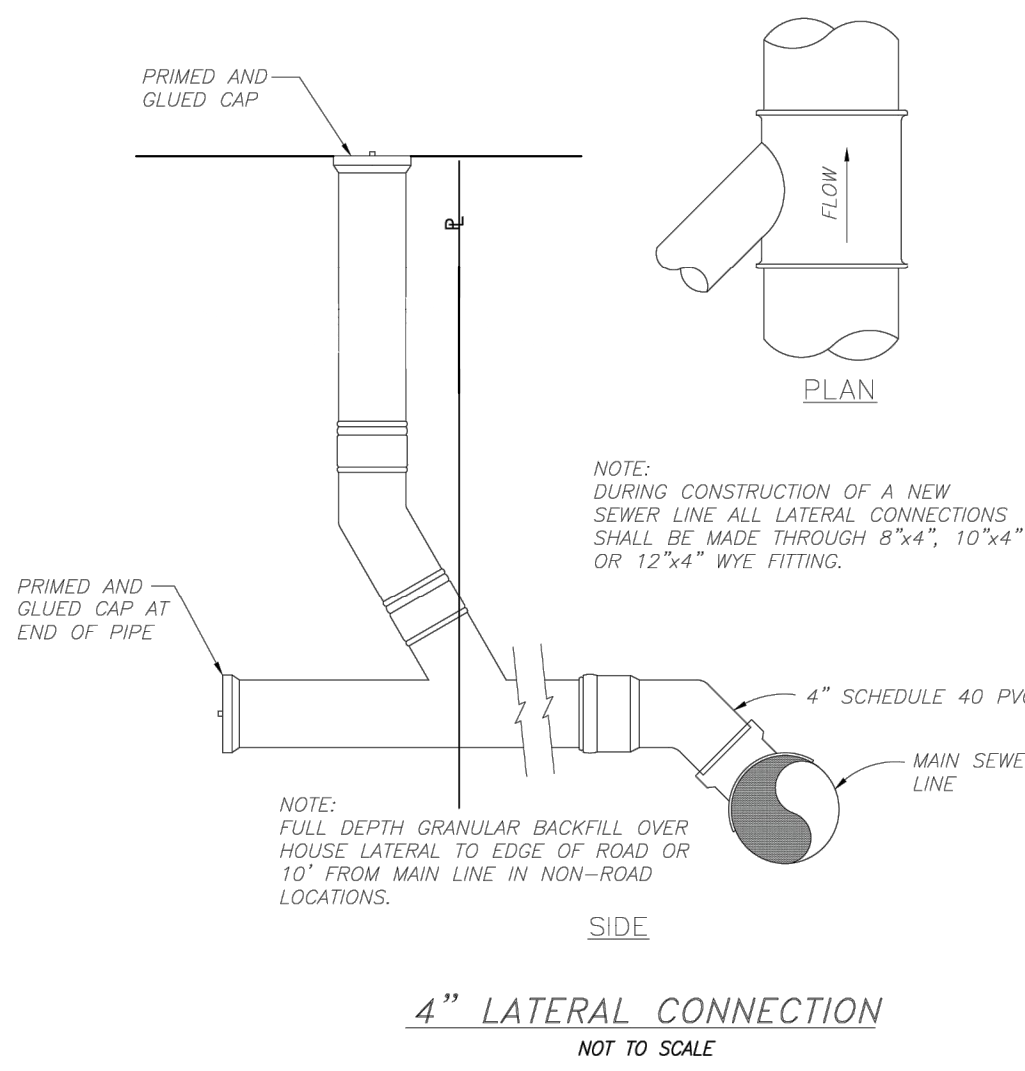
CITY OF OSAGE BEACH
TYPICAL DETAIL
SANITARY SEWER CLEANOUT DETAIL

Design Guideline:
SECTION 3
SEWERAGE DESIGN
Drawing No:
III-3



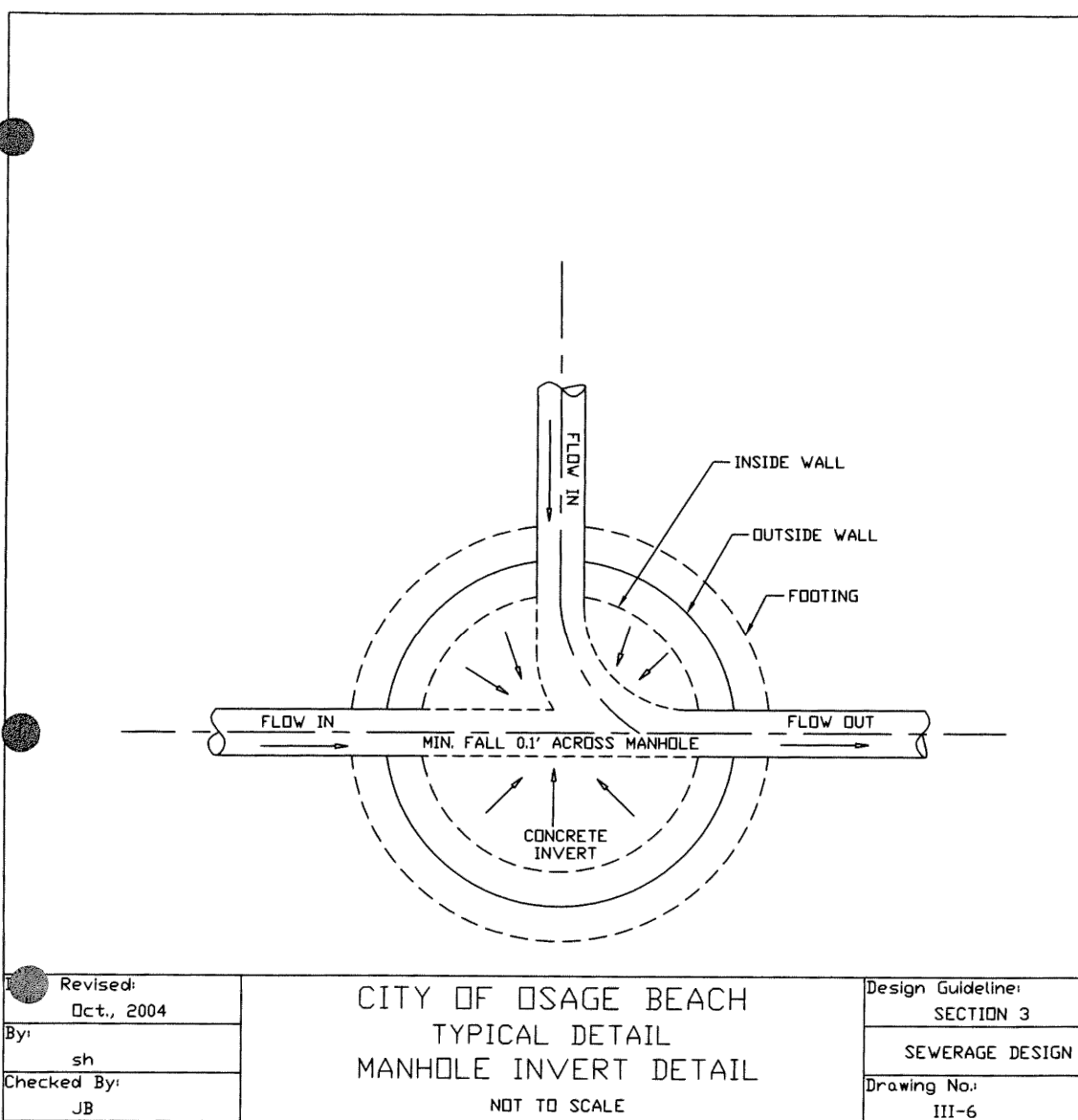
CITY OF OSAGE BEACH
TYPICAL DETAIL
STANDARD PRECAST MANHOLE

Design Guideline:
SECTION 3
SEWERAGE DESIGN
Drawing No:
III-4



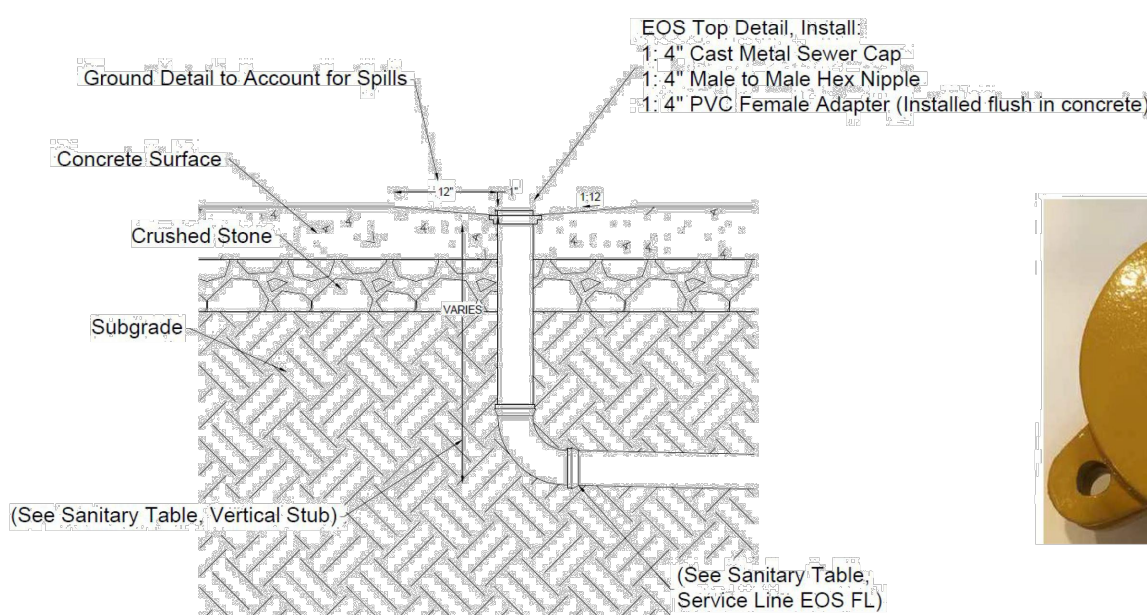
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NOT TO SCALE



CITY OF OSAGE BEACH
TYPICAL DETAIL
MANHOLE INVERT DETAIL

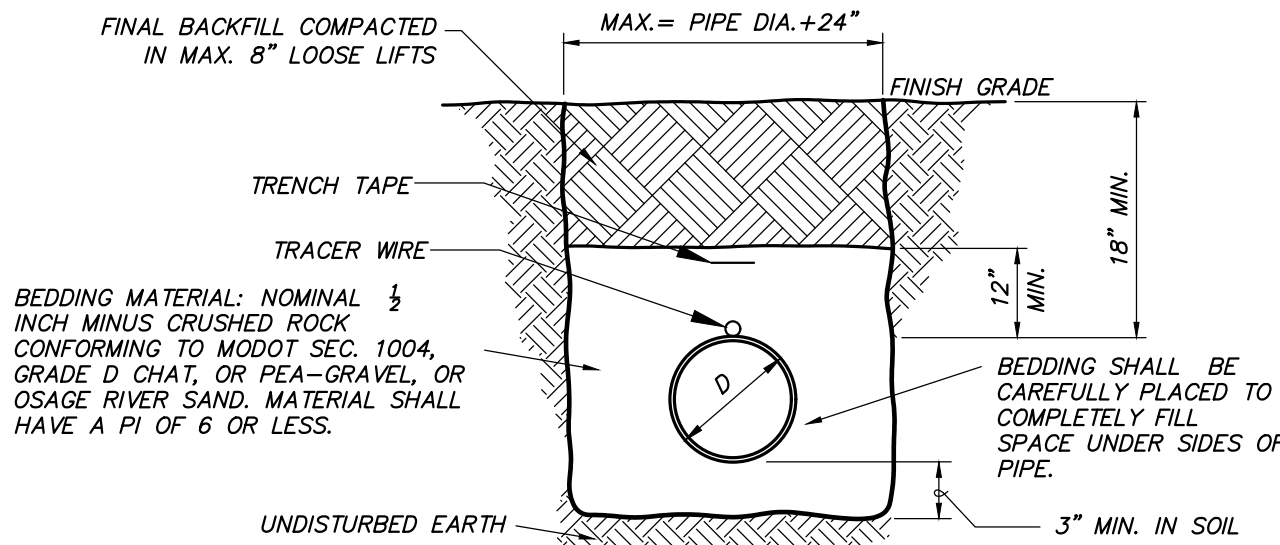
Design Guideline:
SECTION 3
SEWERAGE DESIGN
Drawing No:
III-6



The Tower Company, Inc.
4\"/>

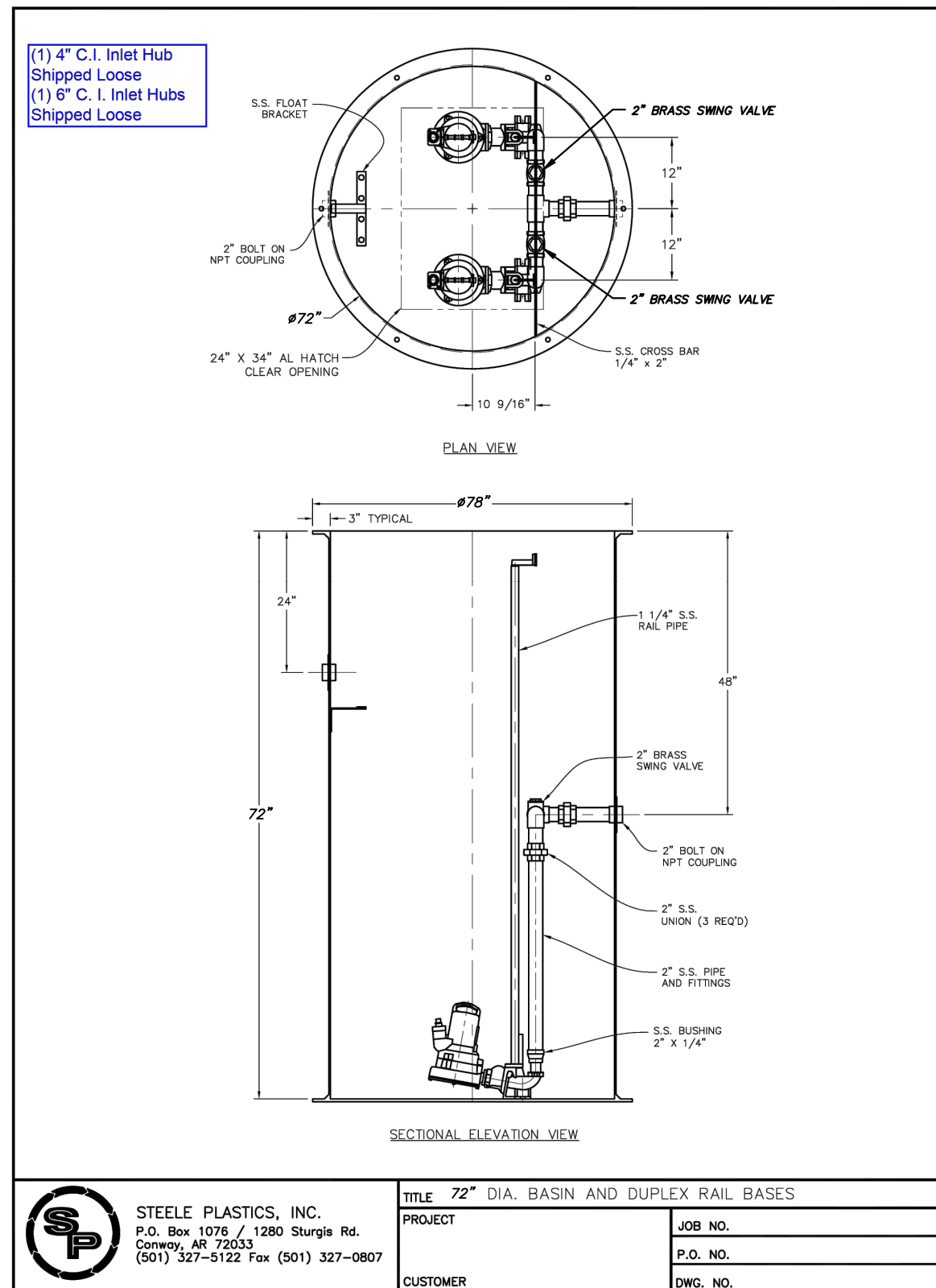


PIPE DIA.	MIN. TRENCH WIDTH
≤ 6"	PIPE DIA. + 18"
8"-10"	PIPE DIA. + 18"
12"-36"	PIPE DIA. + 12"

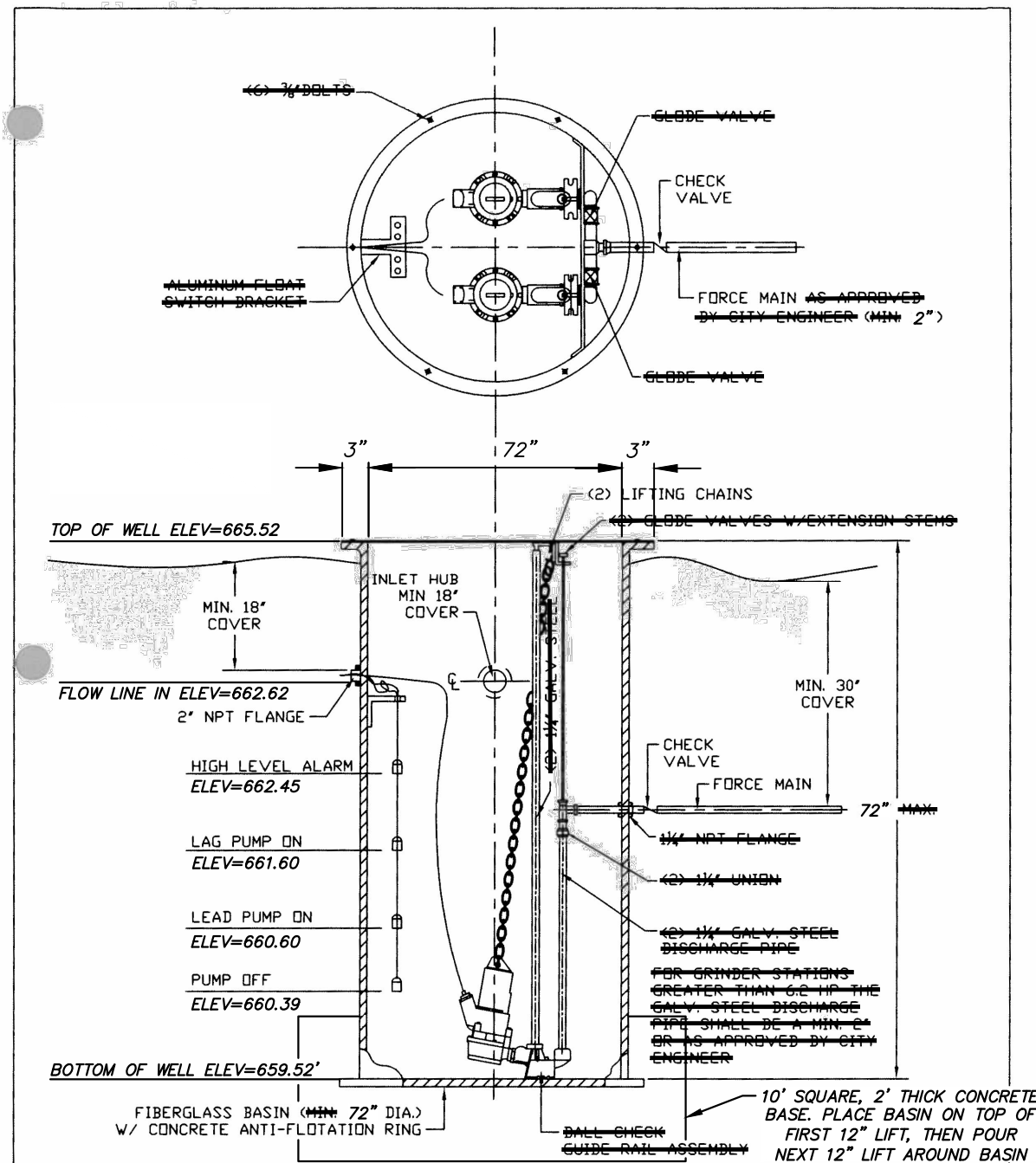


EMBEDMENT OF PVC SANITARY SEWER PIPE - GRAVITY LINE

NOT TO SCALE

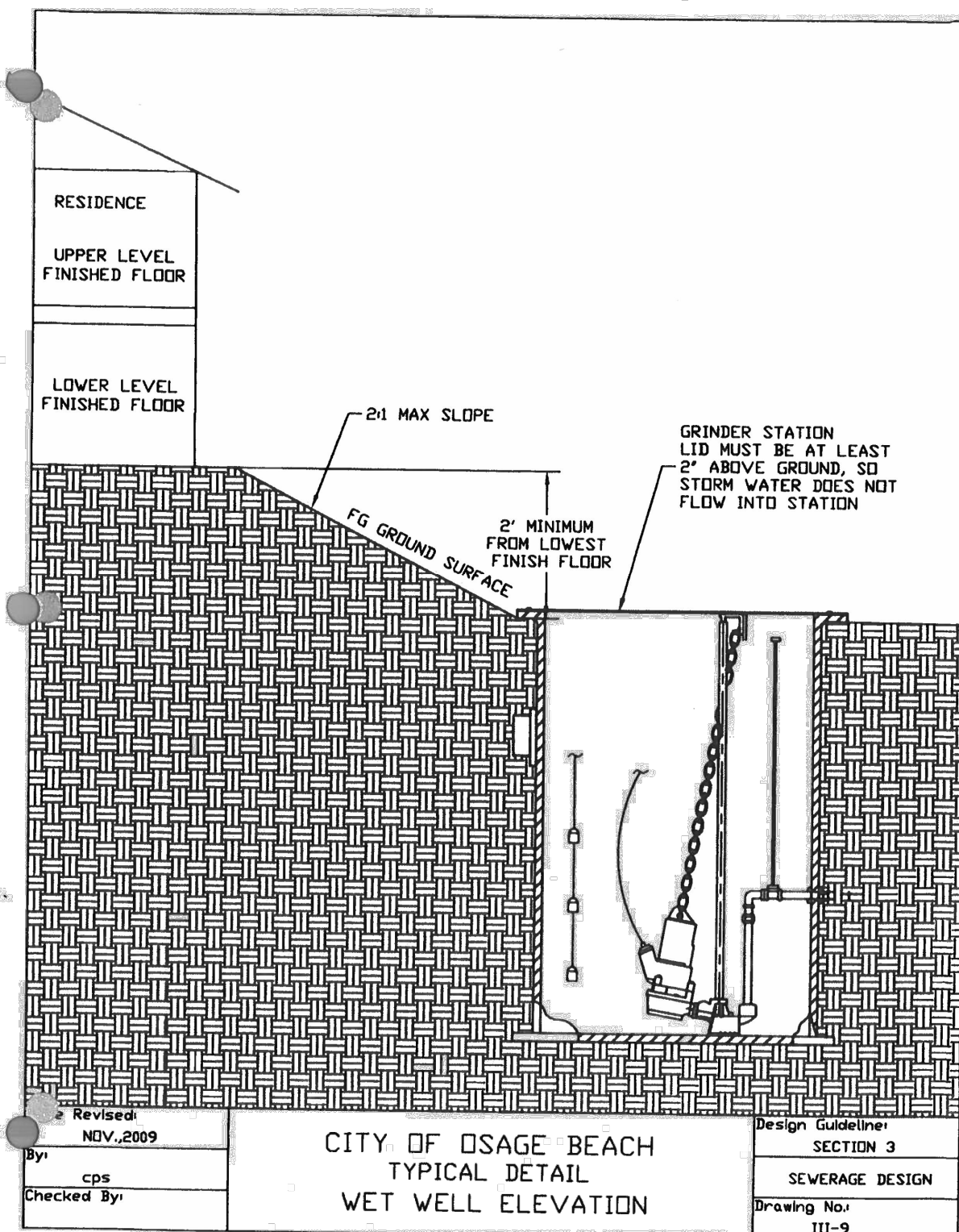


CITY OF OSAGE BEACH
TYPICAL DETAIL
72\"/>



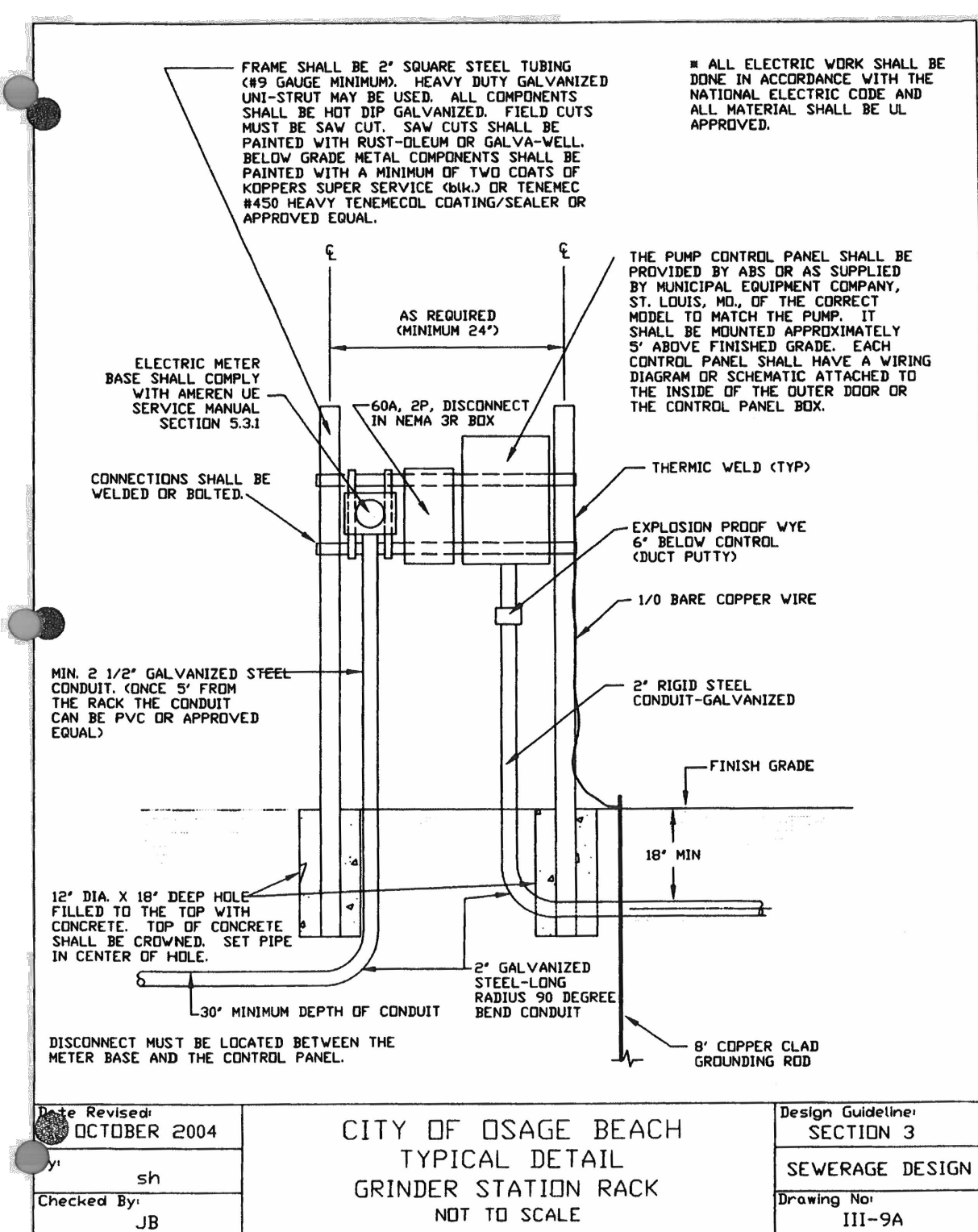
CITY OF OSAGE BEACH
TYPICAL DETAIL
DUPLX PUMP STATION

Design Guideline:
SECTION 3
SEWERAGE DESIGN
Drawing No:
III-8



CITY OF OSAGE BEACH
TYPICAL DETAIL
WET WELL ELEVATION

Design Guideline:
SECTION 3
SEWERAGE DESIGN
Drawing No:
III-9

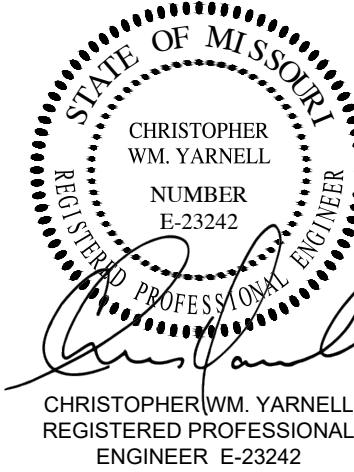


CITY OF OSAGE BEACH
TYPICAL DETAIL
GRINDER STATION RACK

Design Guideline:
SECTION 3
SEWERAGE DESIGN
Drawing No:
III-9A

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

02/22/2024



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REPLACE 29 BASIC SITES WITH 25
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CAMPGROUND #4
MO ROUTE 134
KAISER, MISSOURI 65047
CAMDEN COUNTY

PROJECT # X2316-01
SITE # 5306
ASSET # 7815306134

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 02/22/2024

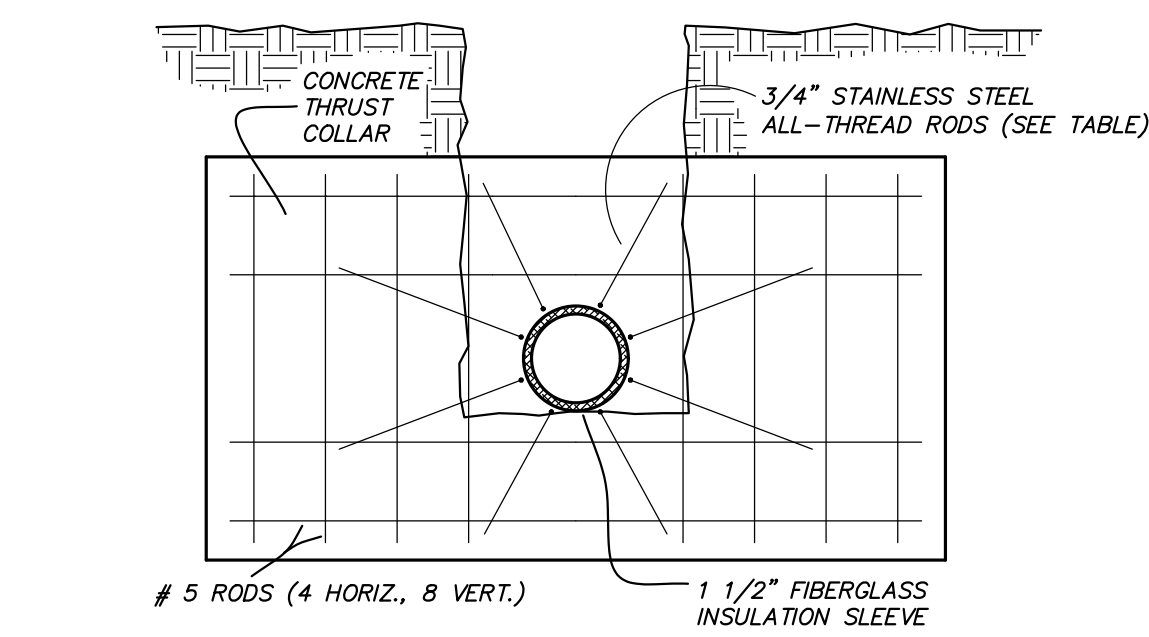
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DRAWN BY: CTR
CHECKED BY: CWY
DESIGNED BY: CWY

SHEET TITLE:
**SANITARY SEWER
DETAILS**

SHEET NUMBER:

C-505

14 OF 17 SHEETS
02/22/2024



MINIMUM BEARING AREA	
PIPE SIZE	AREA SQ. FT.
6"	5
8"	8
12"	18
16"	33

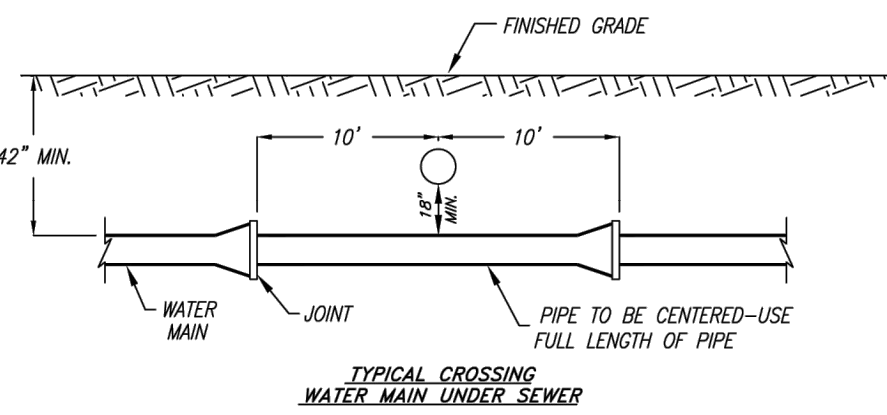
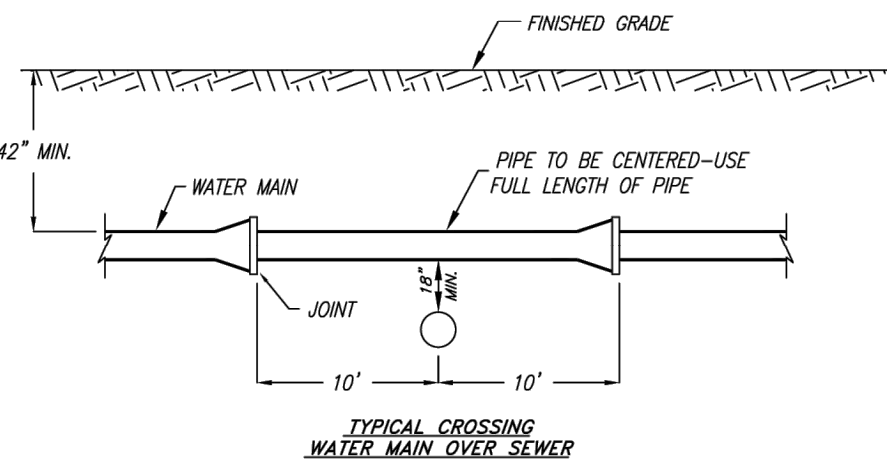
MINIMUM # OF ALL-THREAD RODS REQUIRED	
PIPE SIZE	# RODS
6"	2
8"	2
10"	4
12"	4
16"	8
24"	14

3/4" STAINLESS-STEEL ALL-THREAD RODS

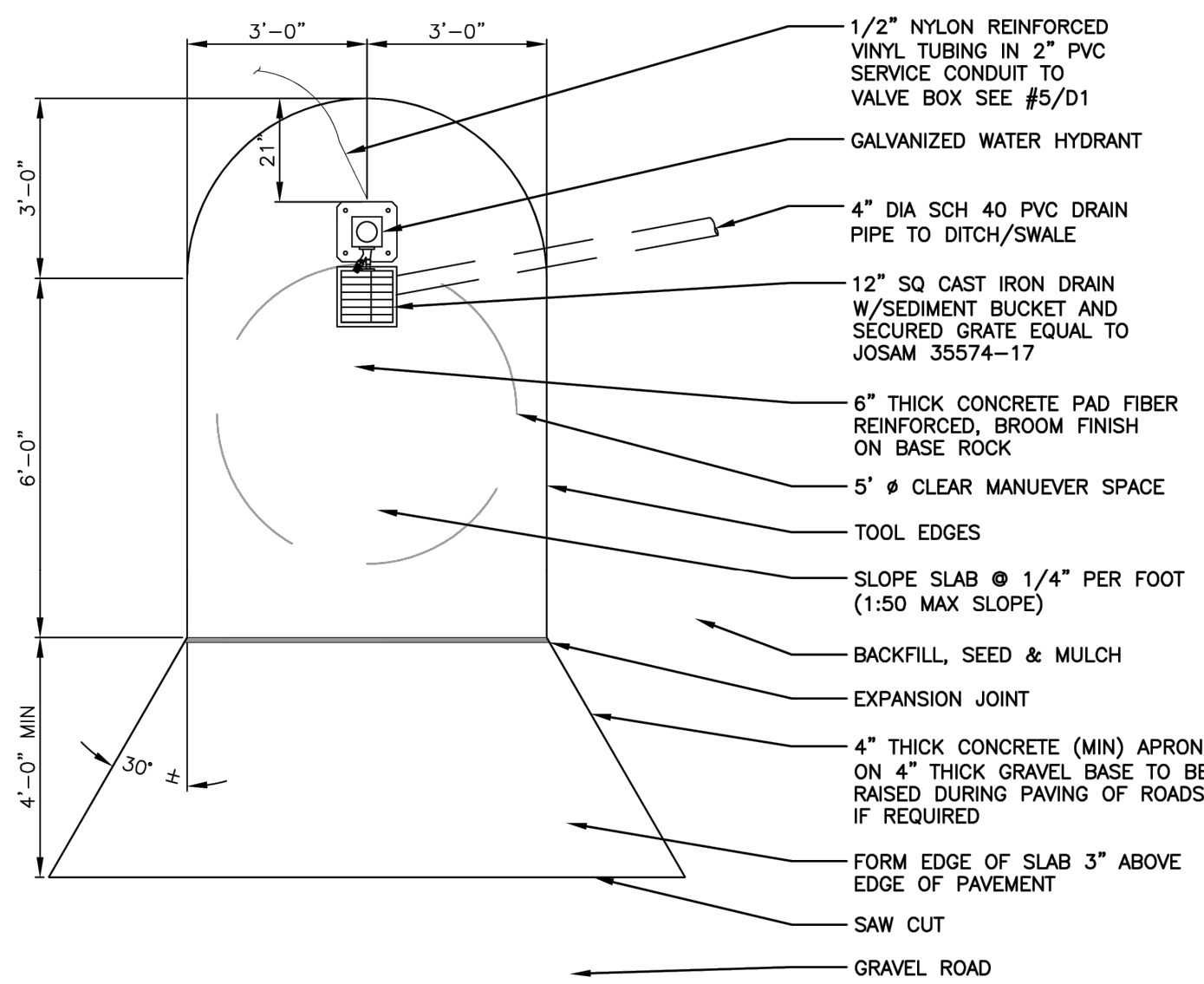
WRAP PIPE WITH 1 1/2" FIBERGLASS INSULATION SLEEVE BEFORE POURING CONCRETE

NOTES:
1. THE #5 REBAR ARE NOT REQUIRED FOR 6" PIPE.

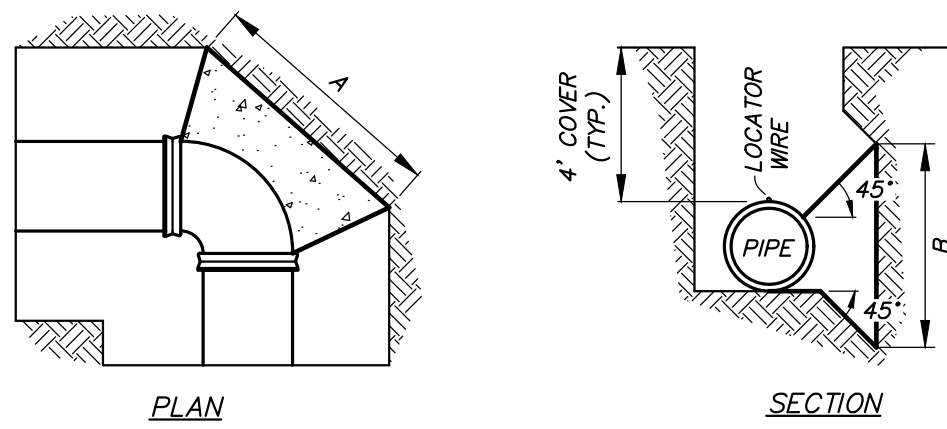
THRUST COLLAR DETAIL
NOT TO SCALE



WATER/SEWER CROSSINGS
NOT TO SCALE



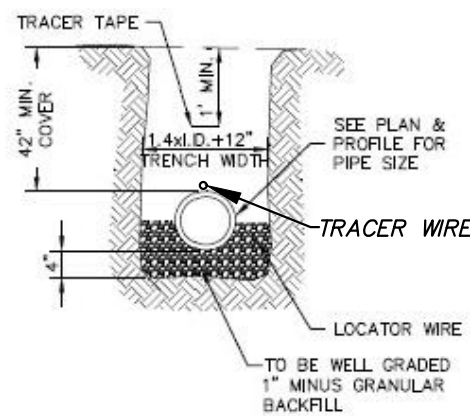
POTABLE WATER HYDRANT PAD W/ DRAIN
NOT TO SCALE



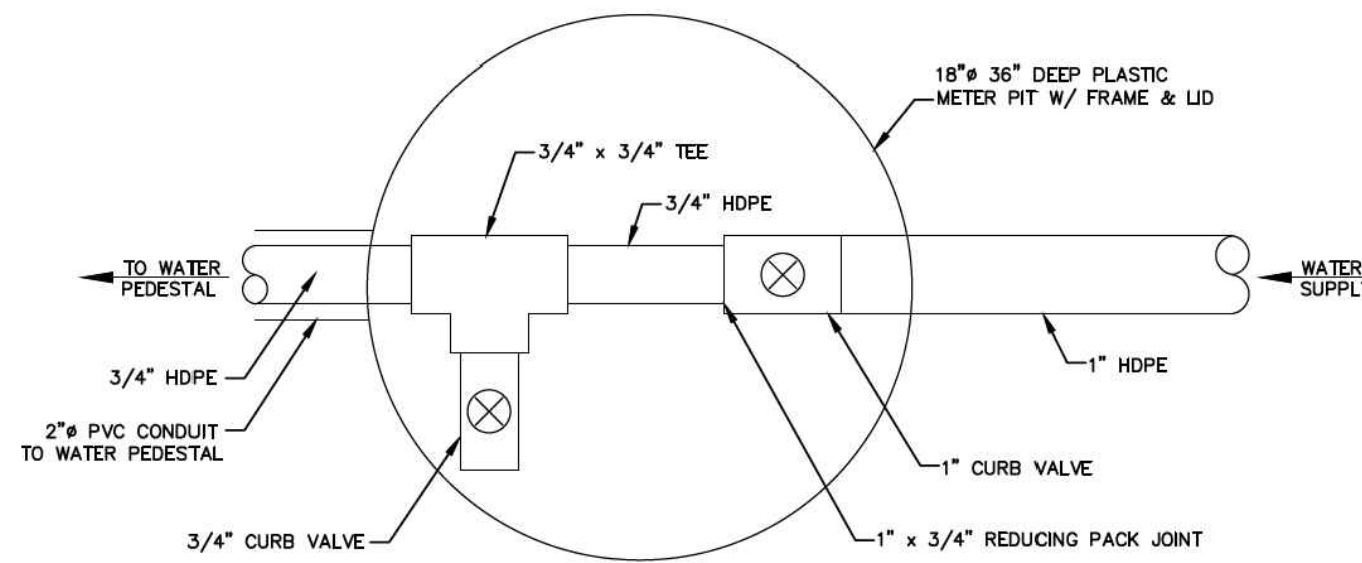
PIPE SIZE	11 1/4" BEND		22 1/2" BEND		45° BEND		90° BEND		TEE	
	A	B	A	B	A	B	A	B	A	B
4" & 6"	1'-0"	0'-6"	1'-3"	0'-9"	1'-6"	1'-0"	2'-0"	1'-6"	2'-6"	1'-9"
8"	1'-0"	0'-9"	1'-6"	1'-0"	2'-0"	1'-6"	2'-9"	2'-0"	3'-3"	2'-3"
12"	1'-6"	1'-0"	2'-3"	1'-6"	3'-0"	2'-0"	4'-0"	2'-9"	5'-0"	3'-3"
16"	2'-0"	1'-6"	3'-0"	2'-0"	4'-0"	2'-9"	5'-6"	3'-9"	6'-0"	4'-0"

THRUST BLOCK DETAIL
NOT TO SCALE

- Backfill material for water main shall be suitable earth, free from large rocks or stones.
- All trenches in areas of unsuitable earth used for water main shall have a bedding of well-graded, 1" minus, granular backfill from 4" below the bottom of the pipe to one-half the diameter of the pipe compacted to 95% of the Modified Proctor Density. (ASTM D-698)
- In areas of clean dirt cuts outside of paved areas, trench may be backfilled with same material and compacted to 95% of the Modified Proctor Density. (ASTM D-698)
- In areas of rock out, the trench shall be backfilled with well-graded granular compacted material to six inches above top of pipe.
- Contractor shall be responsible for trench settlement.
- Well-graded 1" minus granular compacted backfill to be used in all areas to be paved.
- Locator wire shall be #12 solid copper wire, insulated for 600 v. with splice points at valve boxes.
- Tracer tape shall be 3" wide, bonded layer plastic with magnetic foil core. ~~Tracer Tape shall be manufactured by~~ and shall have the words "Caution: WATER MAIN BURIED BELOW"

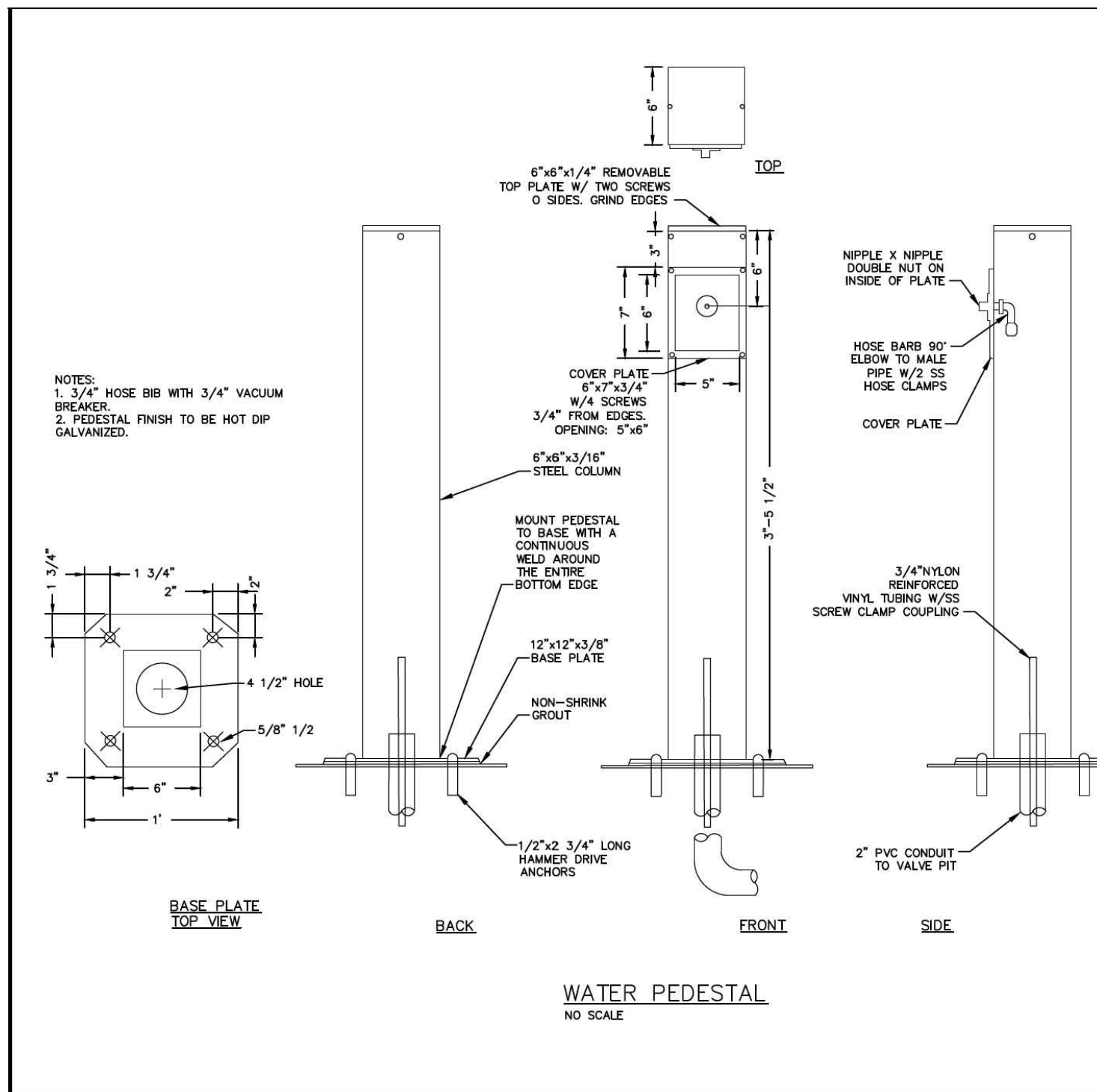


TYPICAL WATER MAIN TRENCHING AND BEDDING DETAIL
NO SCALE

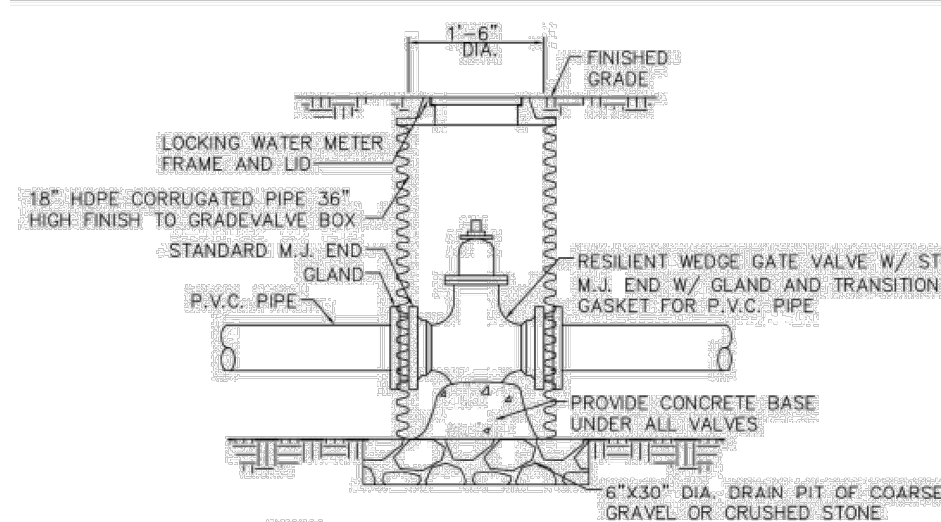


VALVE BOX - CAMPSITE
NO SCALE

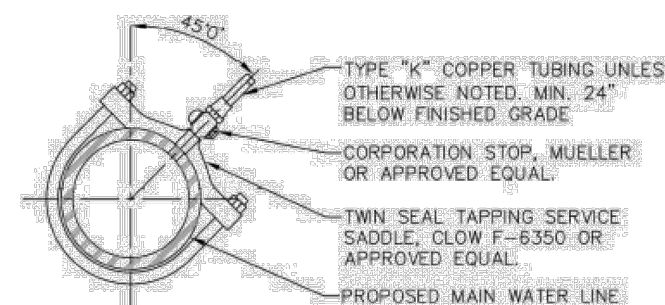
CAMPSITE WATER VALVE BOX
NOT TO SCALE



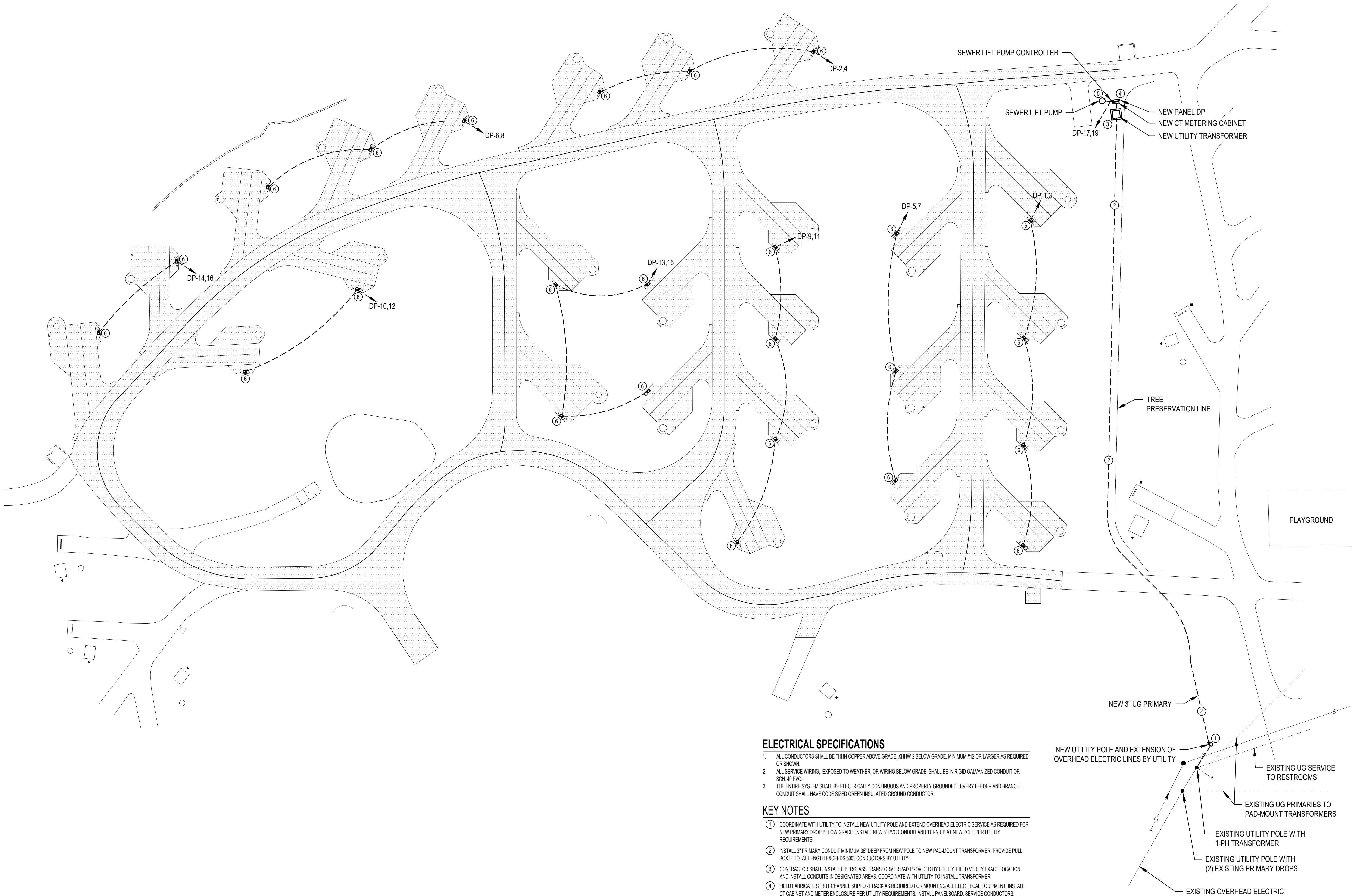
WATER PEDESTAL
NOT TO SCALE



GATE VALVE INSTALLATION
NOT TO SCALE



SERVICE TAP
NOT TO SCALE

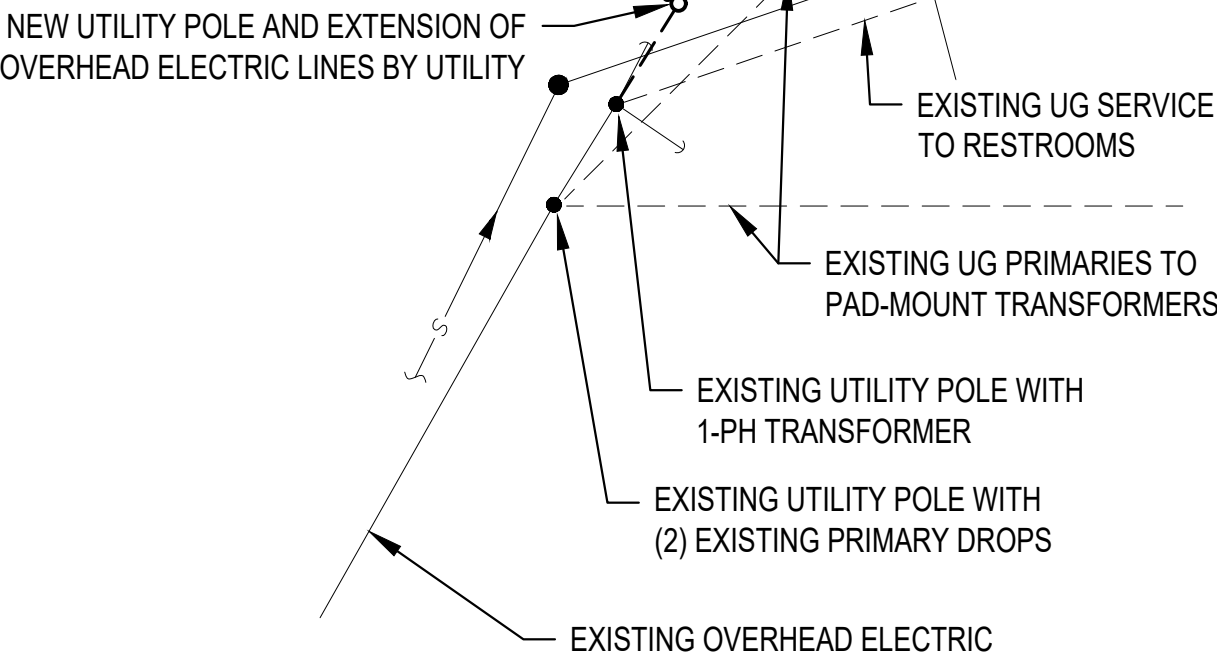


ELECTRICAL SPECIFICATIONS

1. ALL CONDUCTORS SHALL BE THIN COPPER ABOVE GRADE, XHHW-2 BELOW GRADE, MINIMUM #12 OR LARGER AS REQUIRED OR SHOWN.
2. ALL SERVICE WIRING, EXPOSED TO WEATHER, OR WIRING BELOW GRADE, SHALL BE IN RIGID GALVANIZED CONDUIT OR SCH. 40 PVC.
3. THE ENTIRE SYSTEM SHALL BE ELECTRICALLY CONTINUOUS AND PROPERLY GROUNDED. EVERY FEEDER AND BRANCH CONDUIT SHALL HAVE CODE SIZED GREEN INSULATED GROUND CONDUCTOR.

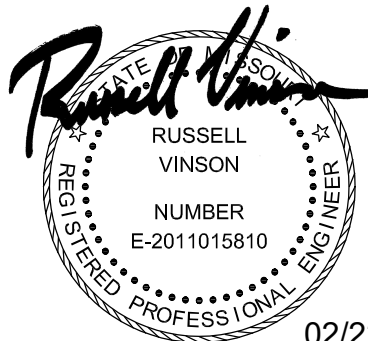
KEY NOTES

1. COORDINATE WITH UTILITY TO INSTALL NEW UTILITY POLE AND EXTEND OVERHEAD ELECTRIC SERVICE AS REQUIRED FOR NEW PRIMARY DROP BELOW GRADE. INSTALL NEW 3" PVC CONDUIT AND TURN UP AT NEW POLE PER UTILITY REQUIREMENTS.
2. INSTALL 3" PRIMARY CONDUIT MINIMUM 36" DEEP FROM NEW POLE TO NEW PAD-MOUNT TRANSFORMER. PROVIDE PULL BOX IF TOTAL LENGTH EXCEEDS 500'. CONDUCTORS BY UTILITY.
3. CONTRACTOR SHALL INSTALL FIBERGLASS TRANSFORMER PAD PROVIDED BY UTILITY. FIELD VERIFY EXACT LOCATION AND INSTALL CONDUITS IN DESIGNATED AREAS. COORDINATE WITH UTILITY TO INSTALL TRANSFORMER.
4. FIELD FABRICATE STRUT CHANNEL SUPPORT RACK AS REQUIRED FOR MOUNTING ALL ELECTRICAL EQUIPMENT. INSTALL CT CABINET AND METER ENCLOSURE PER UTILITY REQUIREMENTS. INSTALL PANELBOARD, SERVICE CONDUCTORS, FEEDERS AND BRANCH CIRCUITS AS REQUIRED.
5. INSTALL SEWER LIFT STATION CONTROL PANEL ON SUPPORT RACK PER CITY OF OSAGE BEACH REQUIREMENTS. INSTALL BRANCH CIRCUIT WIRING TO DUPLEX GRINDER PUMPS (ABS PIRAHNA PE 252W 3.4 HP PUMPS REQUIRED BY CITY OF OSAGE BEACH). PROVIDE EXTERNAL MOTOR STARTER KITS FOR EACH PUMP INSIDE CONTROL PANEL PER MANUFACTURERS REQUIREMENTS. REFER TO CIVIL PLANS FOR DETAILS OF PUMP VAULT.
6. AT EACH CAMPSITE, INSTALL RV POWER PEDESTAL MOUNTED TO CONCRETE PAD. COORDINATE EXACT PLACEMENT WITH OTHER UTILITIES. THROUGH-WIRE FEEDERS TO EACH PEDESTAL AS SHOWN, SIZED FOR THE NUMBER OF PEDESTALS FOR EACH CIRCUIT.

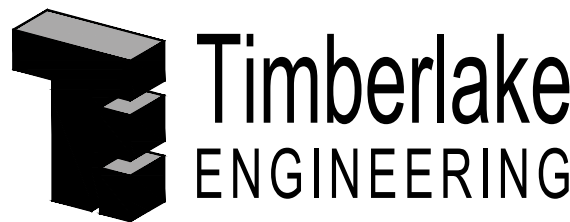


SITE ELECTRICAL PLAN
SCALE: 1" = 30'-0"

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



Russell Vinson, P.E.
2011015810
MO Certificate of Authority #000229



A Custom Engineering Company

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SITE # 5306
ASSET # 7815306134

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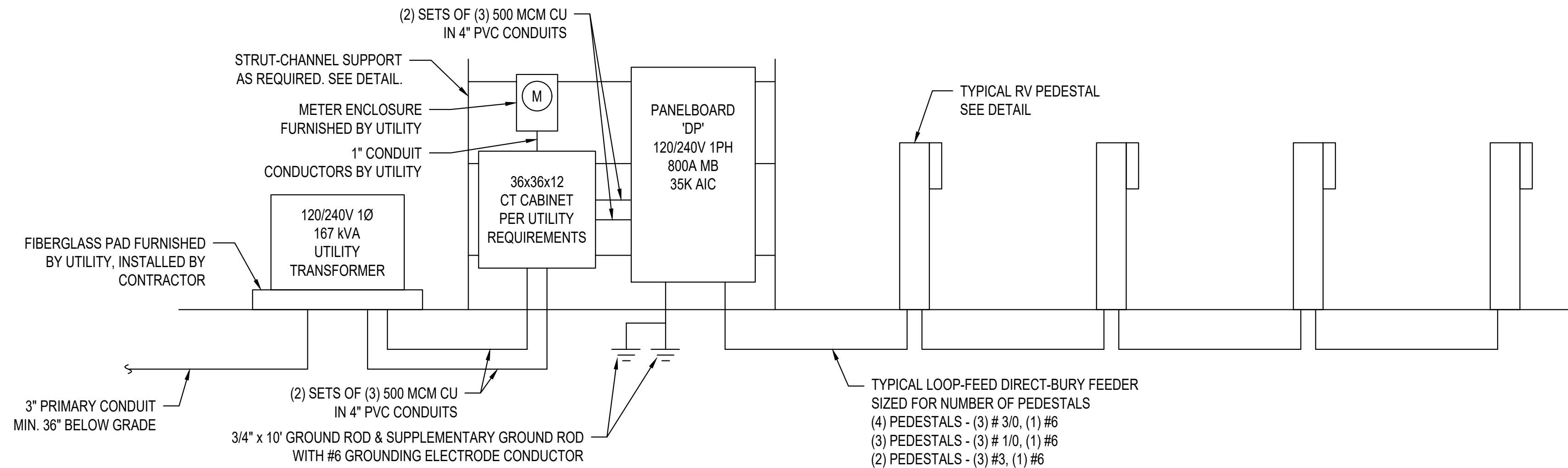
CAD DWG FILE: E-101.DWG
DRAWN BY: RAV
CHECKED BY: SLF
DESIGNED BY: RAV

SHEET TITLE:
**SITE ELECTRICAL
PLAN**

SHEET NUMBER:

E-101

16 OF 17 SHEETS
02/22/2024

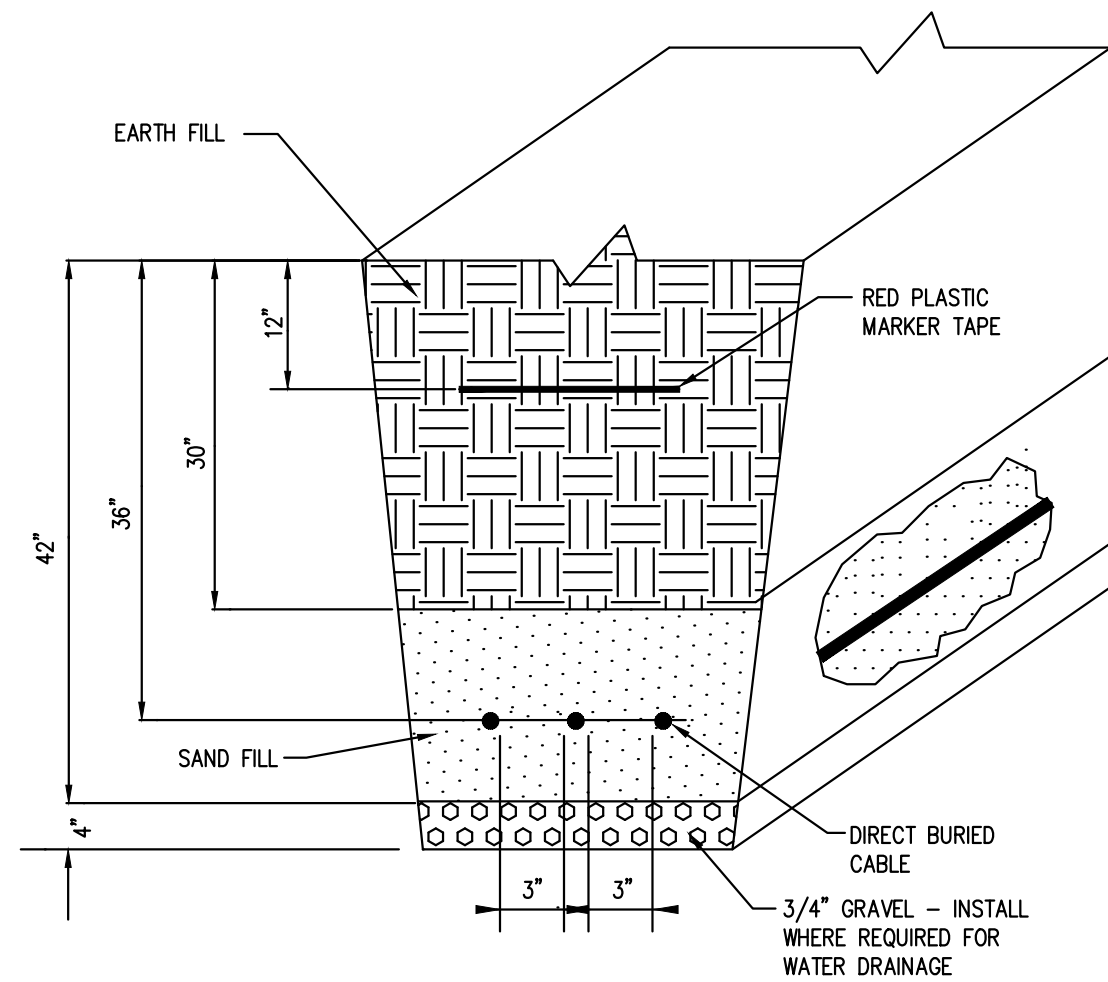


ELECTRICAL RISER DIAGRAM

ELECTRICAL PANEL SCHEDULE						PANEL NO.	DP
VOLTS:	120/240	MAIN CAPACITY:		800A MB		*A* AMPS =	1263.3
PHASE:	1	MOUNTING:		SURFACE		*B* AMPS =	1263.3
WIRE:	(2 SETS) 500 MCM CU	BUSS MATERIAL:		COPPER			
AIR:	35K AIC	SQUARE D MODEL:		I-LINE			
CKT.	LOCATION/DESC.	BREAKER	AMPS	PH.	AMPS	BREAKER	LOCATION/DESC.
1	4 RV SITES	200-2	200	A	150	150-2	3 RV SITES
3	\	\	200	B	150	\	\
5	3 RV SITES	150-2	150	A	150	150-2	3 RV SITES
7	\	\	150	B	150	\	\
9	4 RV SITES	200-2	200	A	100	100-2	2 RV SITES
11	\	\	200	B	100	\	\
13	4 RV SITES	200-2	200	A	100	100-2	2 RV SITES
15	\	\	200	B	100	\	\
17	SEWER LIFT STATION (3.4 HP DUPLEX)	35-2	13.3	A			SPACE
19	\	\	13.3	B			SPACE
21	SPACE			A			SPACE
23	SPACE			B			SPACE
25	SPACE			A			SPACE
27	SPACE			B			SPACE
29	SPACE			A			SPACE
31	SPACE			B			SPACE
33	SPACE			A			SPACE
35	SPACE			B			SPACE
37	SPACE			A			SPACE
39	SPACE			B			SPACE
41	SPACE			A			SPACE

NOTE: ELECTRICIAN TO VERIFY ALL EQUIPMENT POWER REQUIREMENTS PRIOR TO ANY EQUIPMENT & BREAKER PURCHASE OR INSTALLATION. PROVIDE WITH LOCKABLE NEMA 3R CABINET

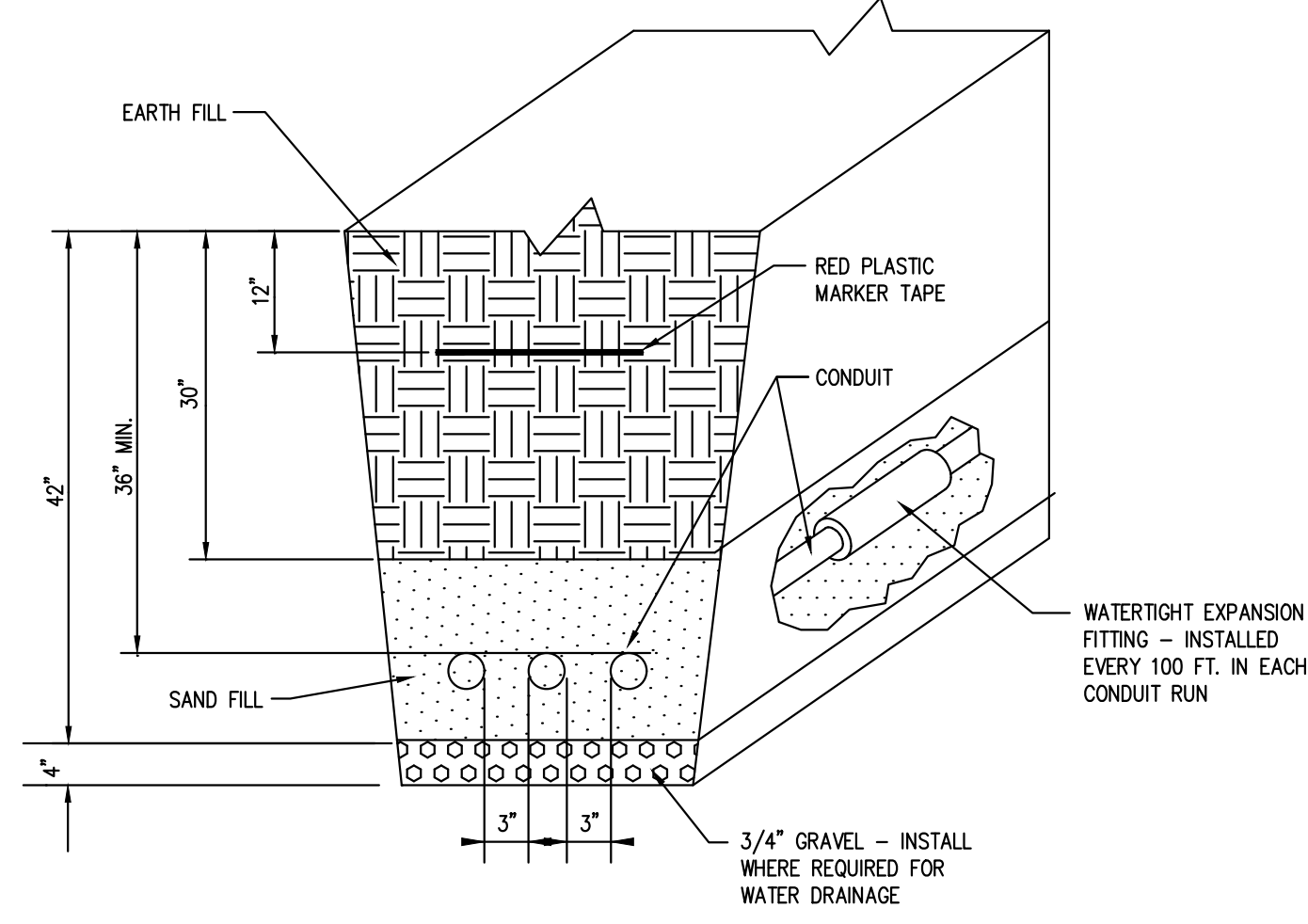
PER NEC TABLE 551.73(A) THE CALCULATED DEMAND FACTOR APPLIED FOR 25 RV SITES IS 42%. THE TOTAL CALCULATED SERVICE DEMAND IS 538.3 AMPS.



INSTALLATION OF DIRECT BURIED

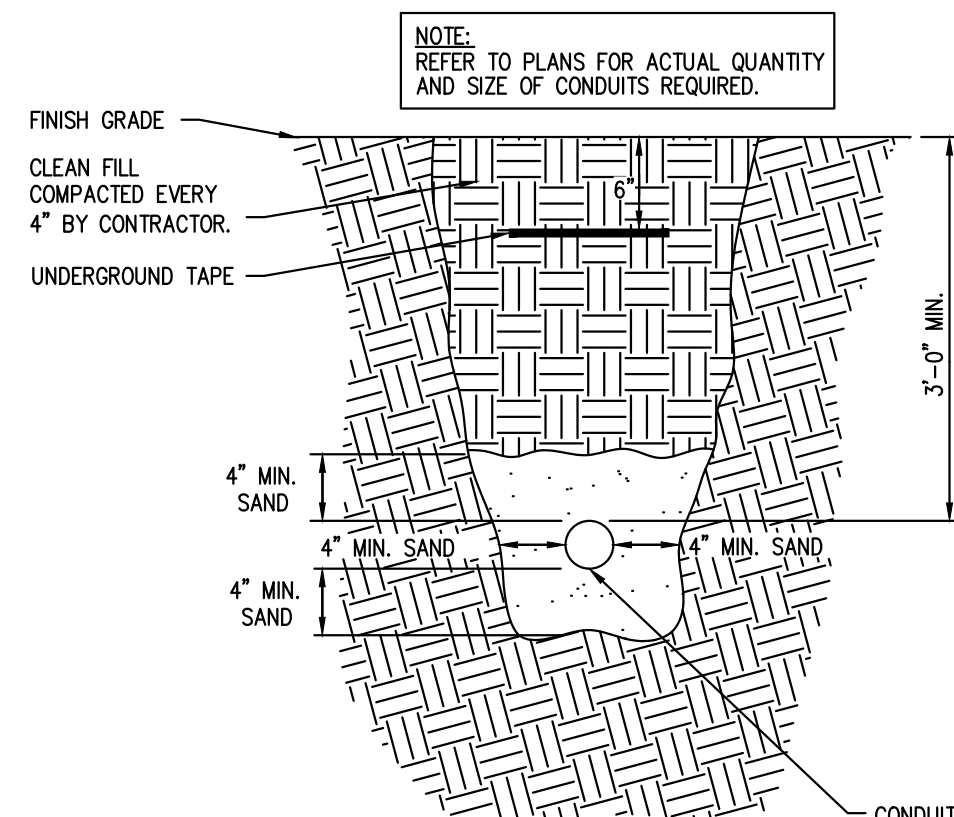
UNDERGROUND CABLES

NOT TO SCALE



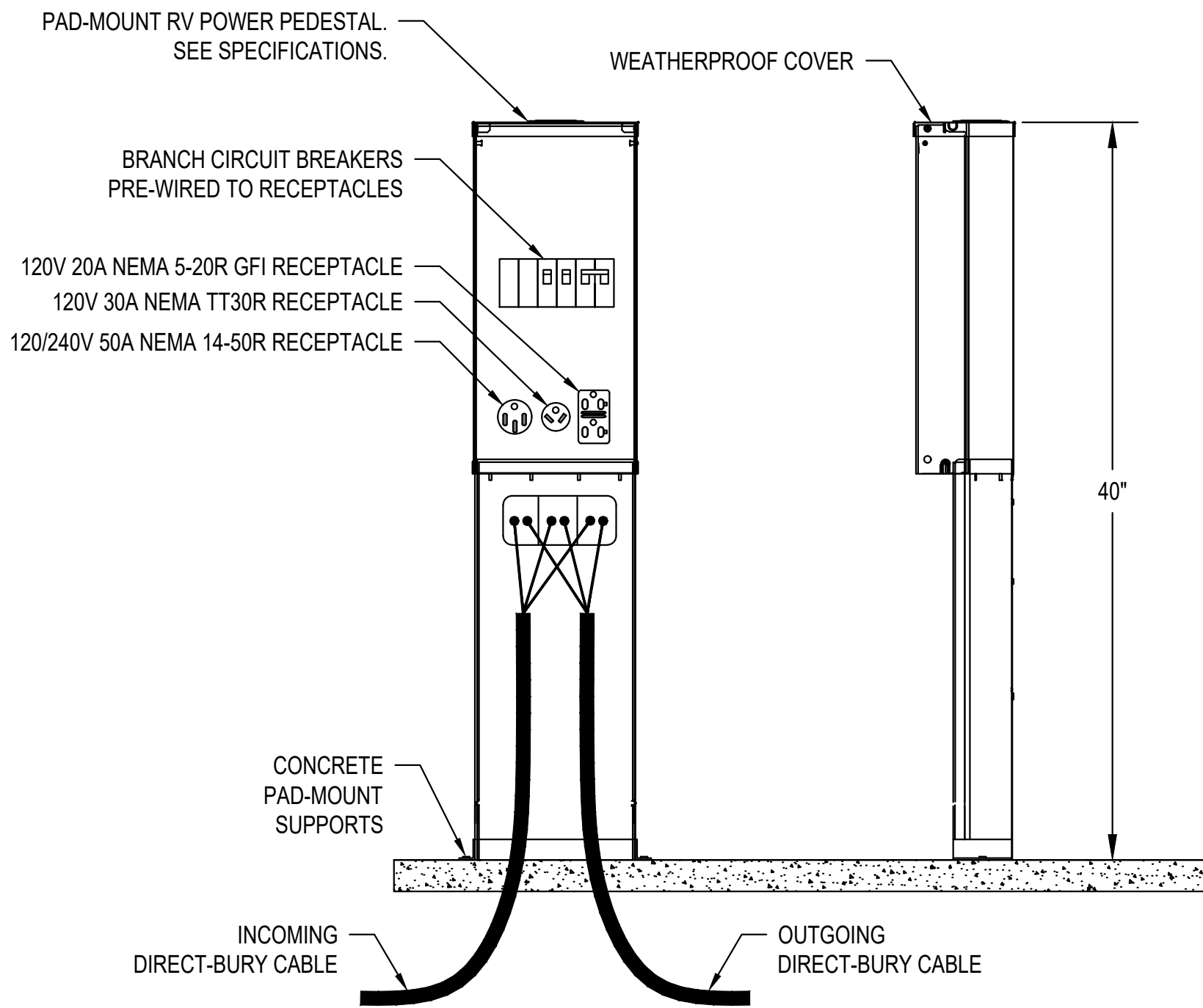
INSTALLATION OF UNDERGROUND PRIMARY CONDUITS

NOT TO SCALE

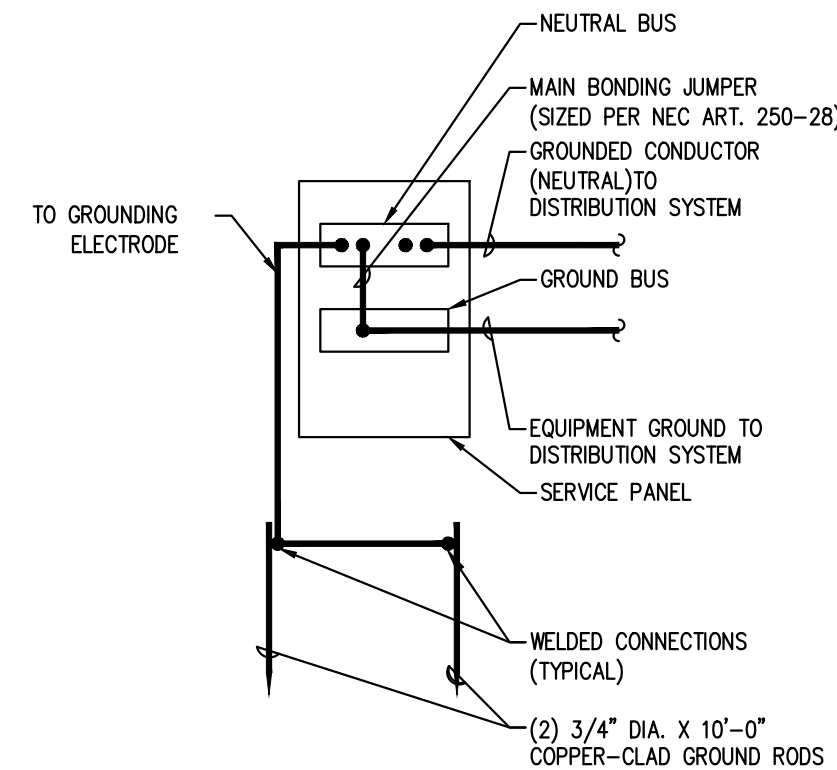


UNDERGROUND PRIMARY CONDUIT TRENCH DETAIL

NOT TO SCALE

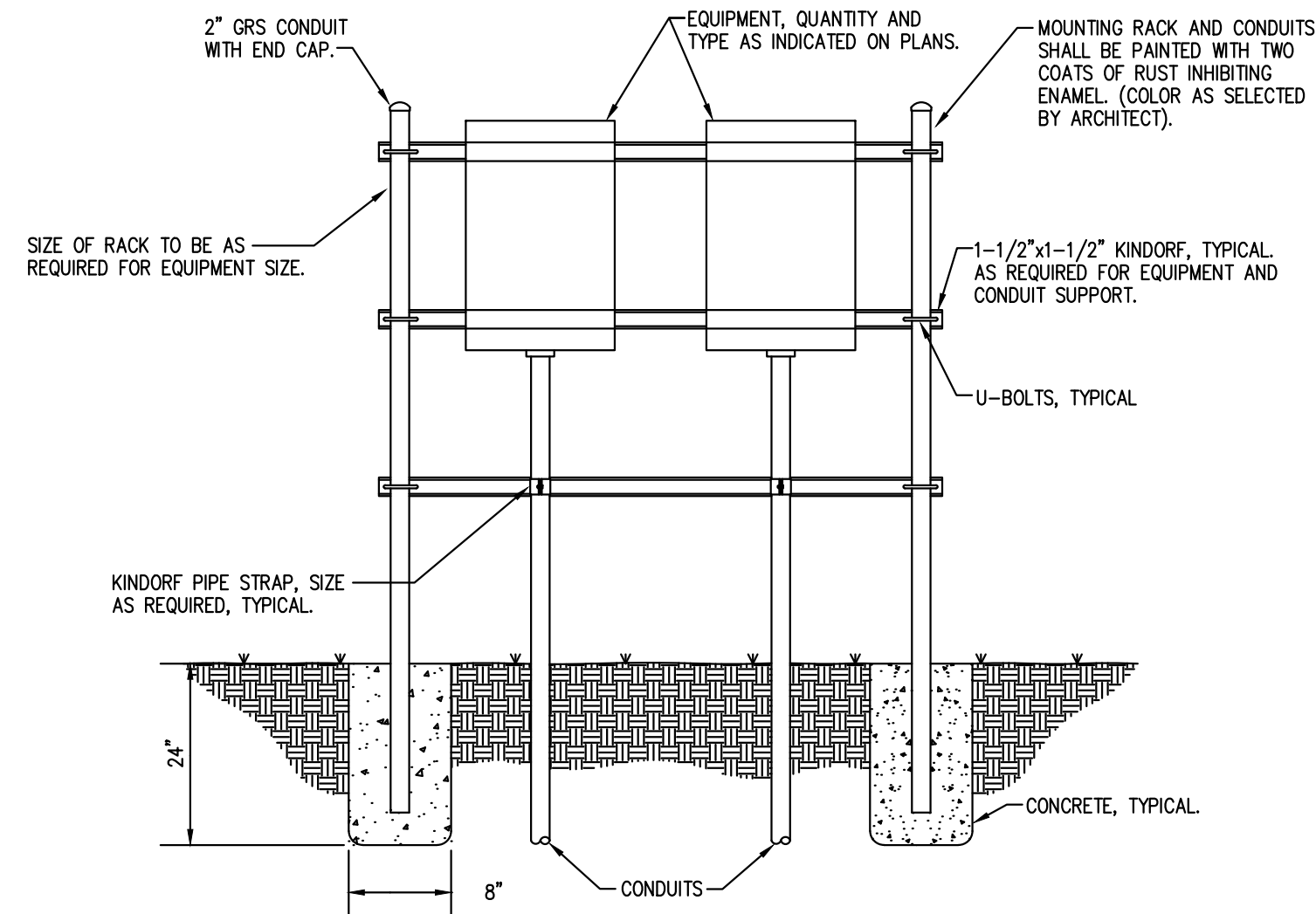


RV CAMPSITE POWER PEDESTAL



SERVICE GROUNDING ELECTRODE CONNECTION DETAIL

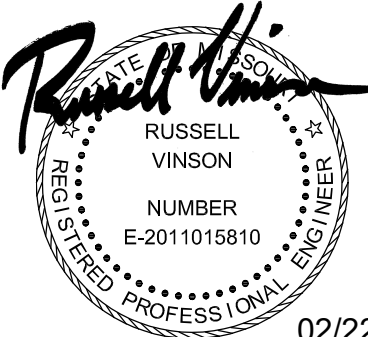
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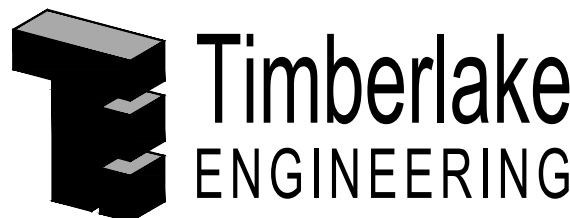
EQUIPMENT RACK MOUNTED AT GRADE DETAIL

NOT TO SCALE

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CAD DWG FILE:E-101.DWG
DRAWN BY: RAV
CHECKED BY: SLF
DESIGNED BY: RAV

SHEET TITLE:

ELECTRIC
SCHEDULES
AND DETAILS

SHEET NUMBER:

E-601

17 OF 17 SHEETS
02/22/2024