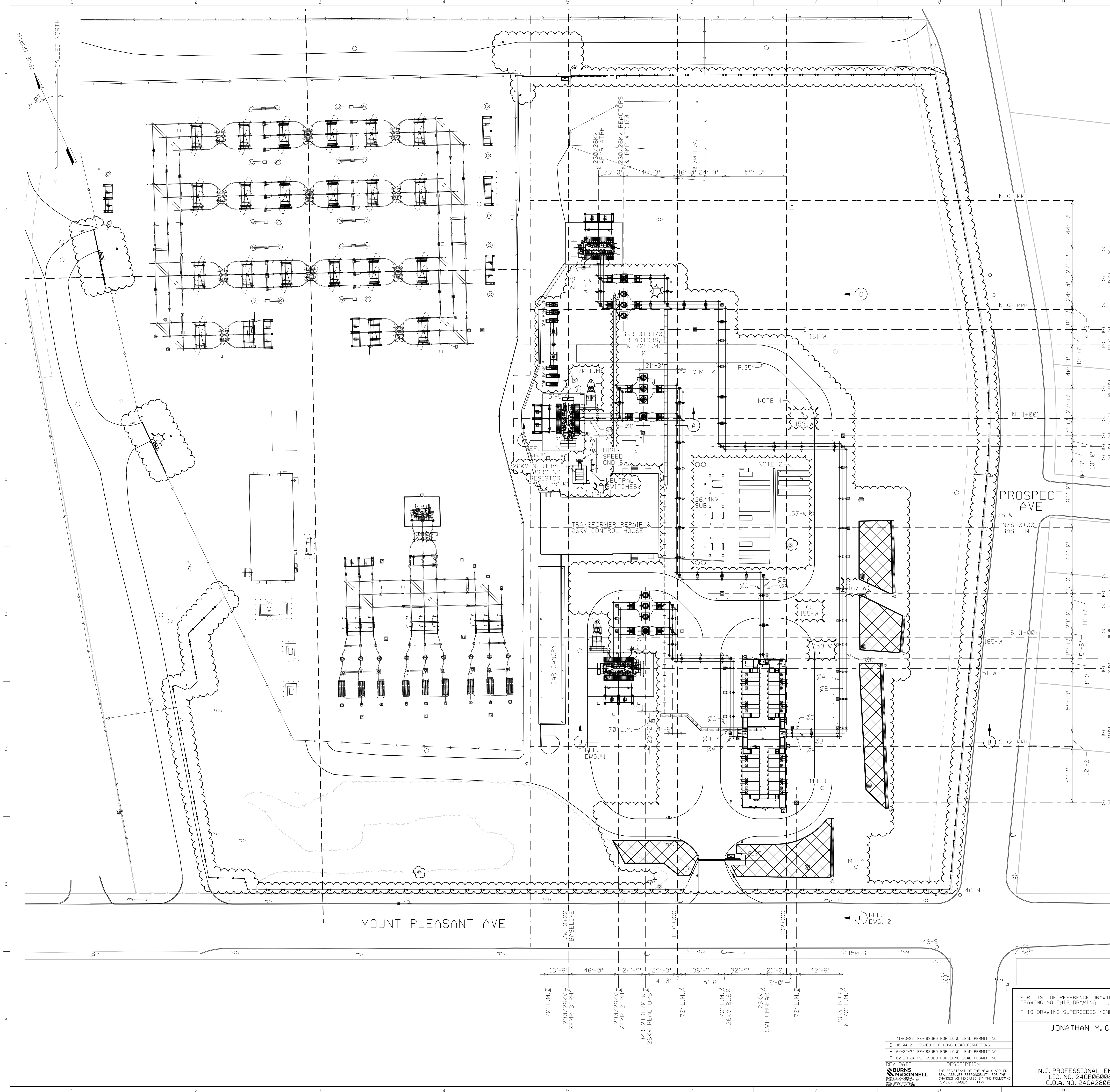




CONSTRUCTION NOTES (REV0):
1. CHANGES TO EXISTING STATION ARE DESIGNATED WITH CLOUDS

- LEGEND:**
- PROPERTY LINE
 - BASELINE
 - CHAINLINK FENCE
 - CHAINLINK FENCE W/ INSULATED FOOTING
 - AMERISTAR FENCE
 - AMERISTAR FENCE W/ INSULATED FOOTING
 - ISOLATION PANEL
 - TREELINE
 - BOLLARD
 - LIGHTNING MAST (L.M.)
 - BIORETENTION BASIN
 - STORMWATER TRENCH
 - CABLE TRENCH
 - CARD READER

- NOTES:**
- TRANSFORMER 2TRH, 3TRH & 4TRH LOCATIONS HAVE BEEN UPDATED TO ACCURATELY REFLECT THE CIVIL FOUNDATION DRAWING (DWG.#331315-A).
 - 4KV ELECTRICAL EQUIPMENT TO BE REMOVED BEFORE INSTALLATION OF 26KV RIGID BUS.
 - PSEG DIVISION ASSISTED AND APPROVED CIRCUIT ROUTING FOR THIS PROJECT. MH #167W TO MH #46N 6 CIRCUITS BE CAPPED AND MODIFIED TO COME FROM NEW MH B.
 - MANHOLES HAVE A 10'X10' APRON AT GRADE.

- REFERENCE DRAWINGS:**
- | | |
|---------------------|---------------|
| 1. BUS PLAN SH. 1 | DWG.#804332-A |
| 2. BUS PLAN SH. 2 | DWG.#804333-A |
| 3. LIGHTING PLAN | DWG.#804348-A |
| 4. LIGHTING DETAILS | DWG.#804365-A |

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD

REVISION
WEST ORANGE SWITCHING STATION
230/26/4KV OUTDOOR SUBSTATION
KEY PLAN

ARRANGEMENT ELECTRICAL

PSEG
PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

FOR LIST OF REFERENCE DRAWINGS SEE
DRAWING NO. THIS DRAWING
THIS DRAWING SUPERSEDES NONE

JONATHAN M. COPA

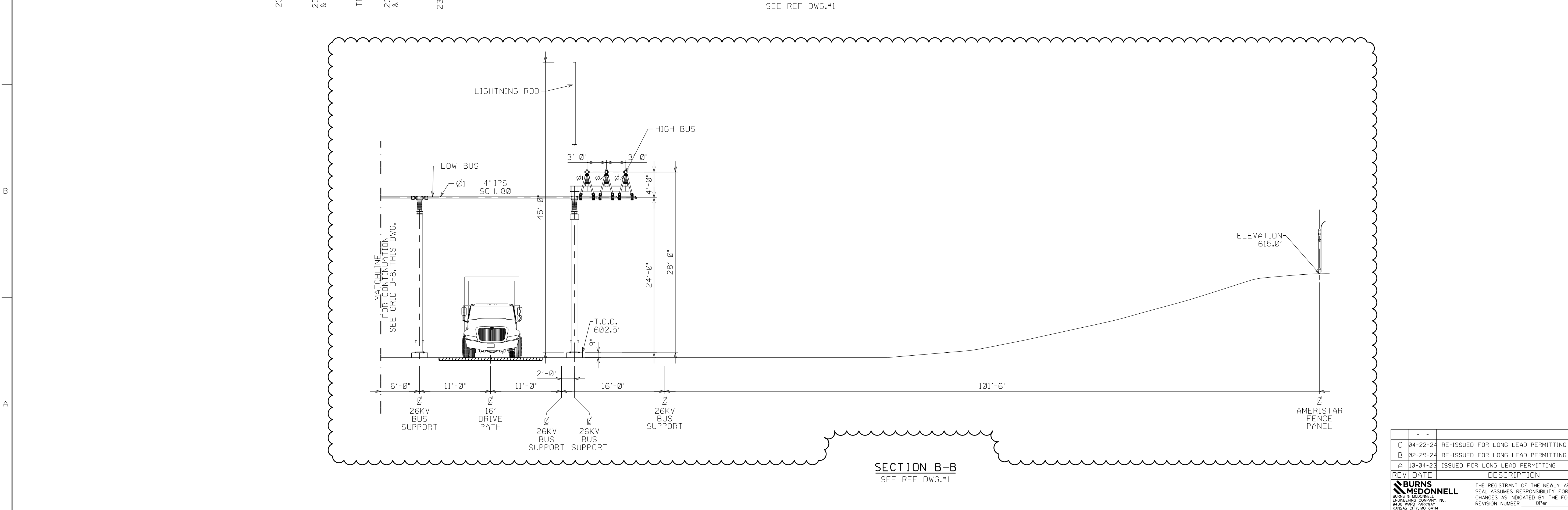
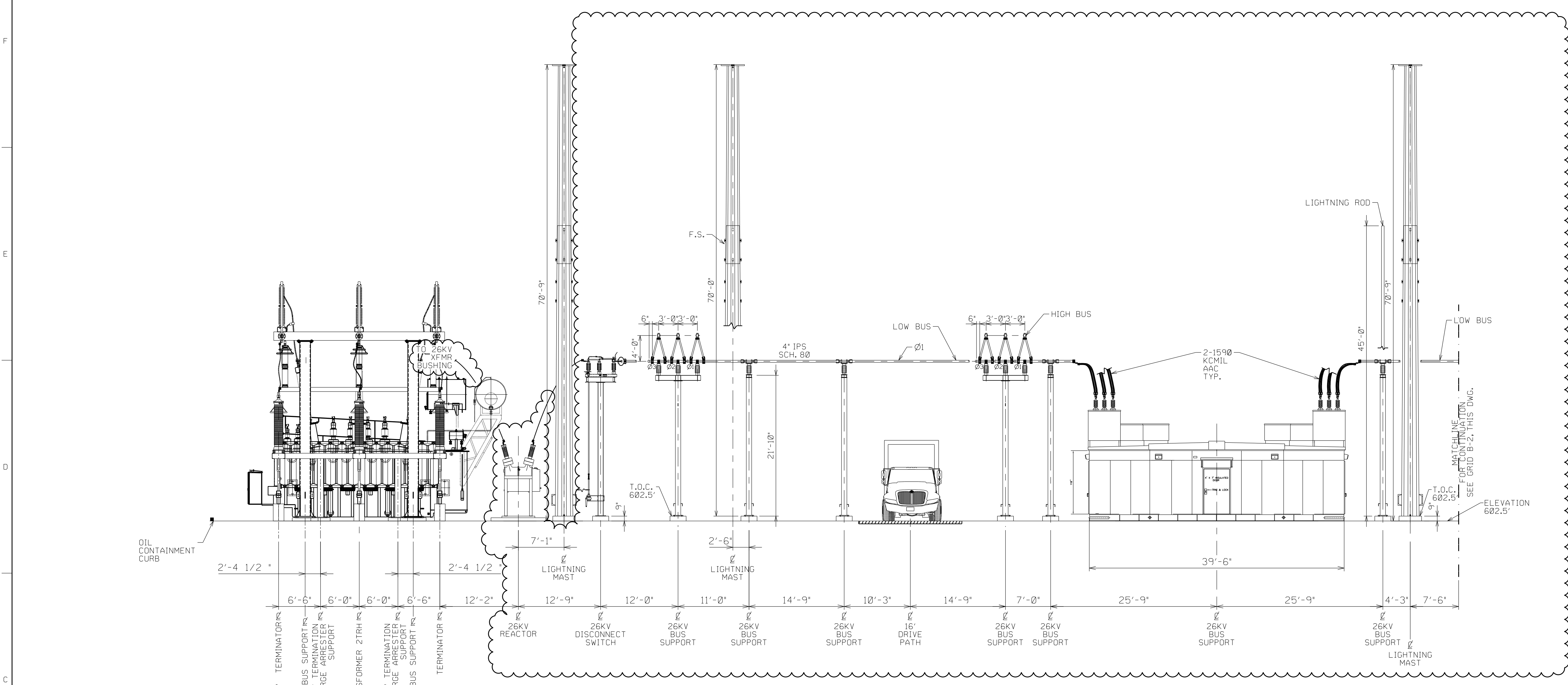
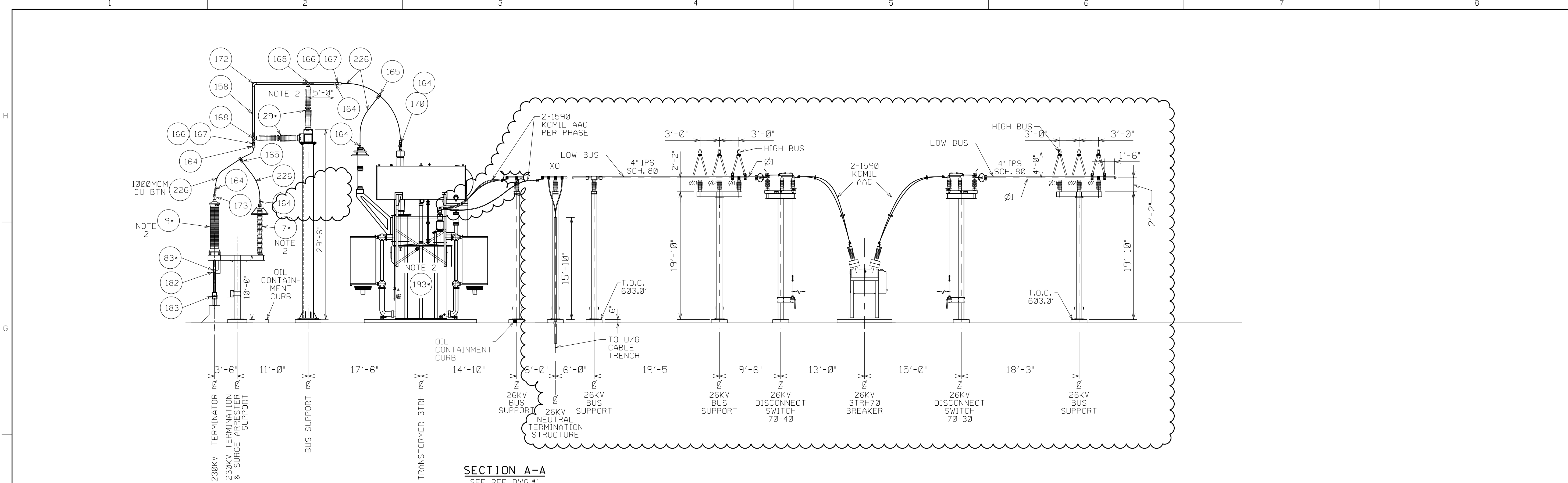
REV	DATE	DESCRIPTION
D	10-03-23	RE-ISSUED FOR LONG LEAD PERMITTING
C	10-04-23	ISSUED FOR LONG LEAD PERMITTING
F	04-22-24	RE-ISSUED FOR LONG LEAD PERMITTING
E	02-29-24	RE-ISSUED FOR LONG LEAD PERMITTING

THE REGISTAR OF THE NEWLY APPLIED
SEAL ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISION NUMBER _____

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24GE06008400
C.O.A. NO. 24GA28066400

DRAWN BY J. HARVATH CHECKED BY A. LITERSKI SCALE 1"=30'-0"
DATE 07/19/2022 EXAMINED
WBS C.82321J-B.1.1.2.2 APPROVED

789277 A -0Per



CONSTRUCTION NOTES (REV0):
1. CHANGES TO EXISTING STATION ARE DESIGNATED WITH CLOUDS

REFERENCE DRAWINGS:
1. 230/26/4KV ULTIMATE KEY PLAN
2. 26KV SECTIONS SH 2
3. 26KV LIGHTING PLAN

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD

REVISION

WEST ORANGE SWITCHING STATION
26KV OUTDOOR SUBSTATION
SECTIONS

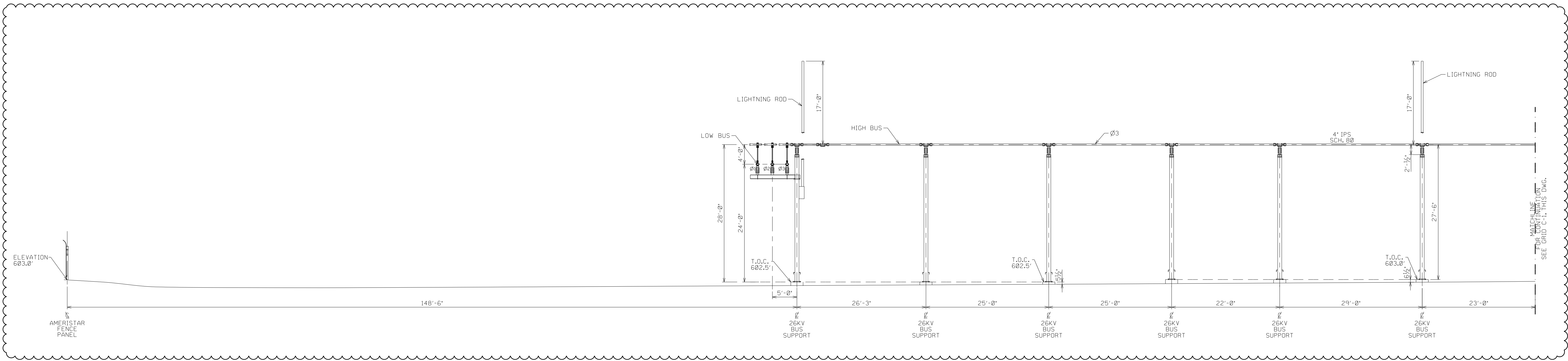
ARRANGEMENT SH 1 ELECTRICAL

PSEG
PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

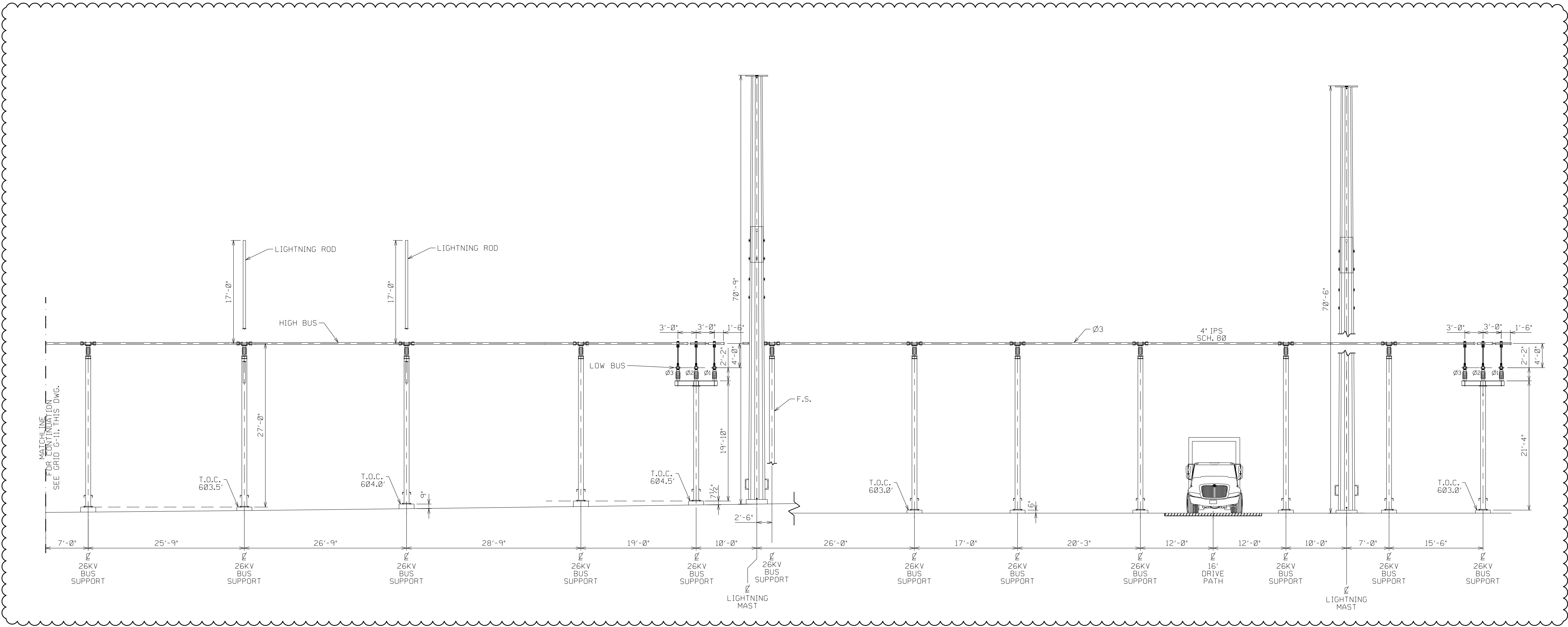
DRAWN - I. CLARK - CHECKED - M. KLEIN - SCALE - 1/8"=1'-0"
DATE - 10/04/2023 - EXAMINED -
WBS - C-823211-B-1.1-2.2 - APPROVED -

JONATHAN M. COPA
N.J. PROFESSIONAL ENGINEER
LIC. NO. 24GE06008400
C.O.A. NO. 24GA28066400

804332 A -0Per



SECTION C-C
SEE REF DWG.#1



SECTION C-C
SEE REF DWG.#1

CONSTRUCTION NOTES (REV0):
1. CHANGES TO EXISTING STATION ARE DESIGNATED WITH CLOUDS

REFERENCE DRAWINGS:
1. 230/26/4KV ULTIMATE KEY PLAN
2. 26KV SECTIONS SH 1
3. 26KV LIGHTING PLAN

DWG.#789277-A
DWG.#804332-A
DWG.#804348-A

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						

REVISION
WEST ORANGE SWITCHING STATION
26KV OUTDOOR SUBSTATION
SECTIONS

ARRANGEMENT SH 2 ELECTRICAL



PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

DRAWN BY I. CLARK CHECKED BY M. KLEIN SCALE 1/8"=1'-0"
DATE 10/04/2023 EXAMINED
WBS C-823211-B-1.1-2.2 APPROVED

FOR LIST OF REFERENCE DRAWINGS SEE
DRAWING NO. THIS DWG.
THIS DRAWING SUPERSEDES NONE

JONATHAN M. COPA

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24DE06008400
C.O.A. NO. 24GA28066400

REV	DATE	DESCRIPTION
C	04-22-24	RE-ISSUED FOR LONG LEAD PERMITTING
B	01-31-24	RE-ISSUED FOR LONG LEAD PERMITTING
A	10-04-23	ISSUED FOR LONG LEAD PERMITTING

BURNS & MCDONNELL
ENGINEERING COMPANY, INC.
1000 WEST 10TH STREET
NEWARK, NJ 07102



NOTES:

- DEMOLITION OF EXISTING FEATURES, OBSOLETE UTILITY EQUIPMENT AND DECORATIVE FENCING SHALL BE COORDINATED WITH CONSTRUCTION OF NEW BUILDINGS AND EQUIPMENT.
- THERE SHALL BE NO ONSITE BURIAL OF CONSTRUCTION DEBRIS. ALL MATERIAL SHALL BE DISPOSED OF IN AN OFFSITE LANDFILL/RECYCLING CENTER IN ACCORDANCE WITH ALL APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.
- ANY PAVEMENT TO BE REMOVED ADJACENT TO PAVEMENT THAT IS TO REMAIN SHALL BE SAW CUT.
- ALL DEMOLITION OF EXISTING UNDERGROUND UTILITIES SHALL OCCUR IN ACCORDANCE WITH PSE&G AND GOVERNMENTAL ENVIRONMENTAL REQUIREMENTS.
- ALL EARTHWORK AND UTILITY REMOVAL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND PSE&G GENERAL SPECIFICATIONS:
A. NO. 21-CIVIL 05-EXCAVATION AND TRENCHING (OCT. 2021)
- THIS DRAWING IS NOT ALL INCLUSIVE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO NEW CONSTRUCTION. INFORM ENGINEER OF DISCREPANCIES.
- ALL CONCRETE FLAT WORK, INCLUDING SIDEWALKS, CURBS, AND DRIVEWAYS, WITHIN THE PUBLIC RIGHT-OF-WAY, SHALL NOT BE REMOVED AND REPLACED UNTIL COMPLETION OF ALL TIE-INS FOR UTILITIES AND DUCTBANKS.
- TREE REMOVAL TO OCCUR UP TO 15' BEYOND PROPOSED TRENCH DRAINS AND/OR RETAINING WALLS. SEE SHEET 792789 FOR TRENCH DRAIN AND RETAINING WALL LOCATIONS.
- PROPOSED TREE REMOVAL NUMBERS AND LOCATIONS ARE APPROXIMATE. REFER TO THE DWG# TR-01 TREE REMOVAL PLAN FOR OFFICIAL COUNT AND LOCATIONS.

HAZARDOUS MATERIALS NOTE:

- HAZARDOUS MATERIALS ARE KNOWN TO EXIST WITHIN THE EXISTING FACILITIES TO BE DEMOLISHED, INCLUDING LEAD PAINT AND ASBESTOS. CONTRACTOR SHALL UTILIZE PERSONNEL CERTIFIED FOR HANDLING SUCH HAZARDOUS MATERIALS. CONTRACTOR SHALL SEGREGATE ALL MATERIALS PER COMPANY SPECIFICATIONS FOR DISPOSAL BY COMPANY.

PROPOSED TREE REMOVAL	
TOTAL TREES REMOVED	157

LEGEND:

- 604--- EXISTING MINOR CONTOURS
- 605--- EXISTING MAJOR CONTOURS
- P--- PROPERTY LINE
- T--- EXISTING TREE LINE
- X--- EXISTING CHAIN LINK FENCE
- SS--- EXISTING SANITARY SEWER
- E--- EXISTING BURIED ELECTRIC LINE
- G--- EXISTING BURIED GAS LINE
- OH--- EXISTING OVERHEAD UTILITY LINE
- W--- EXISTING BURIED WATER LINE
- ST--- EXISTING STORM NETWORK
- X TREES TO BE REMOVED
- [Cross-hatch pattern] DRIVEWAY OR GRAVEL TO BE REMOVED
- [Diagonal lines] BUILDINGS, STRUCTURES & FOUNDATIONS TO BE REMOVED
- [Horizontal lines] FENCE OR UTILITIES TO BE REMOVED
- [Wavy lines] SIDEWALK TO BE REMOVED (LOCATED IN PUBLIC R.O.W.)

REFERENCE DRAWINGS:

1. CIVIL SITE PLAN	DWG.# 792789-A
2. GRADING & DRAINAGE	DWG.# 792790-A
3. STORM SEWER PROFILES	DWG.# 792791-A
4. FENCE & GATE PLAN	DWG.# 792792-A
5. SOIL EROSION & SEDIMENT CONTROL PLAN	DWG.# 792793-A
6. SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH1	DWG.# 792794-A
7. SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH2	DWG.# 792795-A
8. CIVIL DETAILS SH1	DWG.# 792796-A
9. CIVIL DETAILS SH2	DWG.# 792797-A
10. CIVIL DETAILS SH3	DWG.# 792798-A
11. TREE REMOVAL PLAN	DWG.# TR-01
12. TREE REMOVAL NOTES & DETAILS	DWG.# TR-02
13. TREE REMOVAL NOTES & DETAILS	DWG.# TR-03

GENERAL NOTES

USE PRINTS OF LATEST REVISION ONLY.
DO NOT SCALE - USE DIMENSIONS ONLY.
FOR LIST OF REFERENCE DRAWINGS SEE DRAWING NO: THIS DRAWING
THIS DRAWING SUPERSEDES: NONE
THIS DRAWING IS SHEET NO. 1 OF 1 SHEETS.

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD
REVISION						
WEST ORANGE SWITCHING STATION 230/26/4KV OUTDOOR SUBSTATION REMOVAL PLAN						
YARD			CIVIL			
PUBLIC SERVICE ELECTRIC AND GAS COMPANY ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.						
DRAWN: L.POTGIETER CHECKED: S.MACALUSO SCALE: 1"=30'-0"						
DATE: 03/20/23 EXAMINED: _____						
WBS/SO: 90WESTORNGLE APPROVED: _____						
792788 A						

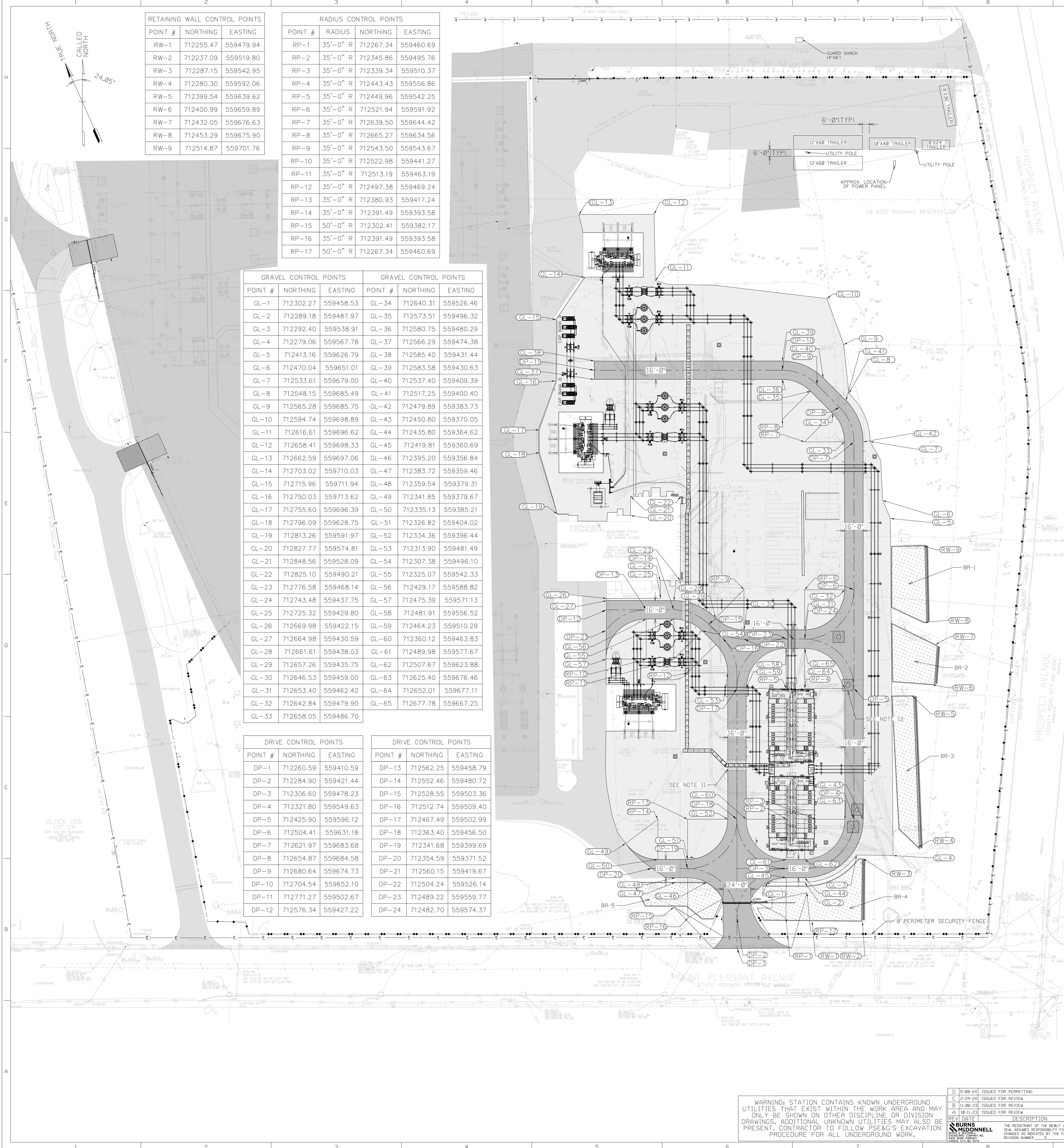
Michael J. Blake

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24CE0521600
C.O.A. NO. 24GA28066400

REV	DATE	DESCRIPTION
D	15-08-24	ISSUED FOR PERMITTING
C	2-29-24	ISSUED FOR REVIEW
B	11-06-23	ISSUED FOR REVIEW
A	10-11-23	ISSUED FOR REVIEW

WARNING: STATION CONTAINS KNOWN UNDERGROUND UTILITIES THAT EXIST WITHIN THE WORK AREA AND MAY ONLY BE SHOWN ON OTHER DISCIPLINE OR DIVISION DRAWINGS. ADDITIONAL UNKNOWN UTILITIES MAY ALSO BE PRESENT. CONTRACTOR TO FOLLOW PSE&G'S EXCAVATION PROCEDURE FOR ALL UNDERGROUND WORK.

THE REGISTRY OF THE NEWLY APPLIED SEAL ASSUMES RESPONSIBILITY FOR THE CHANGES AS INDICATED BY THE FOLLOWING REVISION NUMBER: 0



RETAINING WALL CONTROL POINTS		
POINT #	NORTHING	EASTING
RW-1	712255.47	559479.94
RW-2	712237.09	559519.80
RW-3	712287.15	559542.95
RW-4	712280.30	559592.06
RW-5	712399.54	559639.62
RW-6	712400.99	559659.89
RW-7	712432.05	559676.63
RW-8	712453.29	559675.90
RW-9	712514.87	559701.76

RADIUS CONTROL POINTS				
POINT #	RADIUS	NORTHING	EASTING	
RP-1	35'-0" R	712267.34	559460.69	
RP-2	35'-0" R	712345.86	559495.76	
RP-3	35'-0" R	712339.34	559510.37	
RP-4	35'-0" R	712443.43	559556.86	
RP-5	35'-0" R	712449.96	559542.25	
RP-6	35'-0" R	712521.94	559591.92	
RP-7	35'-0" R	712639.50	559644.42	
RP-8	35'-0" R	712665.27	559634.56	
RP-9	35'-0" R	712543.50	559543.67	
RP-10	35'-0" R	712522.98	559441.27	
RP-11	35'-0" R	712513.19	559463.19	
RP-12	35'-0" R	712497.38	559469.24	
RP-13	35'-0" R	712380.93	559417.24	
RP-14	35'-0" R	712391.49	559393.58	
RP-15	50'-0" R	712302.41	559382.17	
RP-16	35'-0" R	712391.49	559393.58	
RP-17	50'-0" R	712267.34	559460.69	

GRAVEL CONTROL POINTS			GRAVEL CONTROL POINTS		
POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING
GL-1	712302.27	559458.53	GL-34	712640.31	559526.46
GL-2	712289.18	559487.97	GL-35	712573.51	559496.32
GL-3	712292.40	559538.91	GL-36	712580.75	559480.29
GL-4	712279.06	559567.78	GL-37	712566.29	559474.38
GL-5	712413.16	559626.79	GL-38	712585.40	559431.44
GL-6	712470.04	559651.01	GL-39	712583.58	559430.63
GL-7	712533.61	559679.00	GL-40	712537.40	559409.39
GL-8	712548.15	559685.49	GL-41	712517.25	559400.40
GL-9	712565.28	559685.75	GL-42	712479.89	559383.73
GL-10	712594.74	559698.89	GL-43	712450.80	559370.05
GL-11	712616.61	559696.62	GL-44	712435.80	559364.62
GL-12	712658.41	559698.33	GL-45	712419.81	559360.69
GL-13	712662.59	559697.06	GL-46	712395.20	559356.84
GL-14	712703.02	559710.03	GL-47	712383.72	559359.46
GL-15	712715.96	559711.94	GL-48	712359.54	559379.31
GL-16	712750.03	559713.62	GL-49	712341.85	559379.67
GL-17	712755.60	559696.39	GL-50	712335.13	559385.21
GL-18	712796.09	559628.75	GL-51	712326.82	559404.02
GL-19	712813.26	559591.97	GL-52	712334.36	559396.44
GL-20	712827.77	559574.81	GL-53	712313.90	559481.49
GL-21	712848.56	559528.09	GL-54	712307.38	559496.10
GL-22	712825.10	559490.21	GL-55	712325.07	559542.33
GL-23	712776.58	559468.14	GL-56	712429.17	559588.82
GL-24	712743.48	559437.75	GL-57	712475.39	559571.13
GL-25	712725.32	559429.80	GL-58	712481.91	559556.52
GL-26	712669.98	559422.15	GL-59	712464.23	559510.29
GL-27	712664.98	559430.59	GL-60	712360.12	559463.83
GL-28	712661.61	559438.03	GL-61	712489.98	559577.67
GL-29	712657.26	559435.75	GL-62	712507.67	559623.88
GL-30	712646.53	559459.00	GL-63	712625.40	559676.46
GL-31	712653.40	559462.42	GL-64	712652.01	559677.11
GL-32	712642.84	559479.90	GL-65	712677.78	559667.25
GL-33	712658.05	559486.70			

DRIVE CONTROL POINTS			DRIVE CONTROL POINTS		
POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING
DP-1	712260.59	559410.59	DP-13	712562.25	559458.79
DP-2	712284.90	559421.44	DP-14	712552.46	559480.72
DP-3	712306.60	559478.23	DP-15	712528.55	559503.36
DP-4	712321.80	559549.63	DP-16	712512.74	559509.40
DP-5	712425.90	559596.12	DP-17	712467.49	559502.99
DP-6	712504.41	559631.18	DP-18	712363.40	559456.50
DP-7	712621.97	559683.68	DP-19	712341.68	559399.69
DP-8	712654.87	559684.58	DP-20	712354.59	559371.52
DP-9	712680.64	559674.73	DP-21	712560.15	559419.67
DP-10	712704.54	559652.10	DP-22	712504.24	559526.14
DP-11	712771.27	559502.67	DP-23	712489.22	559559.77
DP-12	712576.34	559427.22	DP-24	712482.70	559574.37

- NOTES:
- BOUNDARY & TOPOGRAPHIC SURVEY, BLOCK 155 LOT 26.01, WEST ORANGE TOWNSHIP, ESSEX COUNTY, NEW JERSEY PREPARED BY DRESNER ROBIN, FAIRFIELD NJ, DATED 3/28/16 LAST REVISED 7/11/2023.
 - HORIZONTAL DATUM = NAD-83 (2011). VERTICAL DATUM = NAVD-83 (GEOID 12A) UNITS = U.S. SURVEY FEET
 - CONTRACTOR SHALL ESTABLISH NEW BENCHMARKS FOR HORIZONTAL AND VERTICAL CONTROL NECESSARY FOR CONSTRUCTION.
 - CONTRACTOR SHALL VERIFY EXISTING TOPOGRAPHIC INFORMATION PRIOR TO COMMENCEMENT OF CONSTRUCTION. SHOULD THE FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND RECEIVE WRITTEN RESOLUTION PRIOR TO PROCEEDING WITH WORK.
 - ALL DIMENSIONS ARE IN FEET (FT) UNLESS NOTED OTHERWISE.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LAYOUT AND ELEVATION CONTROL FOR THE PROJECT.
 - DEMOLISH AND REMOVE CURBING AND OTHER EXISTING SITE FEATURES NECESSARY TO CONSTRUCT NEW FEATURES.
 - THE CONTRACTOR SHALL REPAIR ANY CURB, SIDEWALK, OR LANDSCAPING DAMAGED DURING CONSTRUCTION.
 - CONTRACTOR SHALL RESTORE ANY DAMAGES INCURRED TO SURROUNDING PUBLIC OR PRIVATE PROPERTY AS A RESULT OF CONSTRUCTION.
 - CONSTRUCT NEW CONCRETE CURB PER ESSEX COUNTY STANDARD REQUIREMENTS ALONG PROSPECT AVENUE AND MOUNT PLEASANT AVENUE.
 - CONSTRUCT SYNTERTECH DRIVEWAY APRON PER DETAIL ON DWG.#792796.
 - CONSTRUCT DUCT BANK MANHOLE APRON PER DETAIL ON DWG.#792798.

- LEGEND:
- P — PROPERTY LINE
 - (XX-XX) CONTROL POINT
 - PROPOSED PAD GRAVEL
 - PROPOSED MACADAM PAVEMENT DRIVE
 - EXISTING PAD GRAVEL
 - EXISTING MACADAM PAVEMENT DRIVE
 - PROPOSED TRENCH DRAIN
 - PROPOSED DUCT BANK
 - EXISTING DUCT BANK
 - EXISTING TREE LINE
 - EXISTING CHAIN LINK FENCE
 - EXISTING SANITARY SEWER
 - EXISTING BURIED ELECTRIC LINE
 - EXISTING BURIED GAS LINE
 - EXISTING OVERHEAD UTILITY LINE
 - EXISTING BURIED WATER LINE
 - PROPOSED GRAVITY RETAINING WALL
 - 8' HIGH AMERISTAR FENCE (NEW)
 - 8' HIGH AMERISTAR FENCE (NEW) WITH INSULATED FOOTING
 - ISOLATION PANEL (TO MATCH AMERISTAR/CHAINLINK)
 - PROPOSED PAD GRAVEL
 - SYNTERTECH DRIVEWAY APRON
 - ELECTRICAL MANHOLE APRON

- REFERENCE DRAWINGS:
- | | |
|--|----------------|
| 1. REMOVAL PLAN | DWG.# 792788-A |
| 2. GRADING & DRAINAGE | DWG.# 792790-A |
| 3. STORM SEWER PROFILES | DWG.# 792791-A |
| 4. FENCE & GATE PLAN | DWG.# 792792-A |
| 5. SOIL EROSION & SEDIMENT CONTROL PLAN | DWG.# 792793-A |
| 6. SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH1 | DWG.# 792794-A |
| 7. SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH2 | DWG.# 792795-A |
| 8. CIVIL DETAILS SH1 | DWG.# 792796-A |
| 9. CIVIL DETAILS SH2 | DWG.# 792797-A |
| 10. CIVIL DETAILS SH3 | DWG.# 792798-A |
| 11. TREE REMOVAL PLAN | DWG.# TR-01 |
| 12. TREE REMOVAL NOTES & DETAILS | DWG.# TR-02 |
| 13. TREE REMOVAL NOTES & DETAILS | DWG.# TR-03 |

GENERAL NOTES
USE PRINTS OF LATEST REVISION ONLY.
DO NOT SCALE - USE DIMENSIONS ONLY.
FOR LIST OF REFERENCE DRAWINGS SEE
DRAWING NO: THIS DRAWING
THIS DRAWING SUPERSEDES: NONE
THIS DRAWING IS SHEET NO. 1 OF 1 SHEETS.

MICHAEL J. BLAKE

D 15-08-24	ISSUED FOR PERMITTING
C 2-29-24	ISSUED FOR REVIEW
B 11-06-23	ISSUED FOR REVIEW
A 10-11-23	ISSUED FOR REVIEW
REVISION	DESCRIPTION
1	THE REGISTRAR OF THE NEWLY APPLIED SEAL ASSUMES RESPONSIBILITY FOR THE CHANGES AS INDICATED BY THE FOLLOWING REVISION NUMBER

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24CE05521600
C.O.A. NO. 24A28066400

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD

REVISION
WEST ORANGE SWITCHING STATION
230/26/4KV OUTDOOR SUBSTATION
CIVIL SITE PLAN

YARD CIVIL



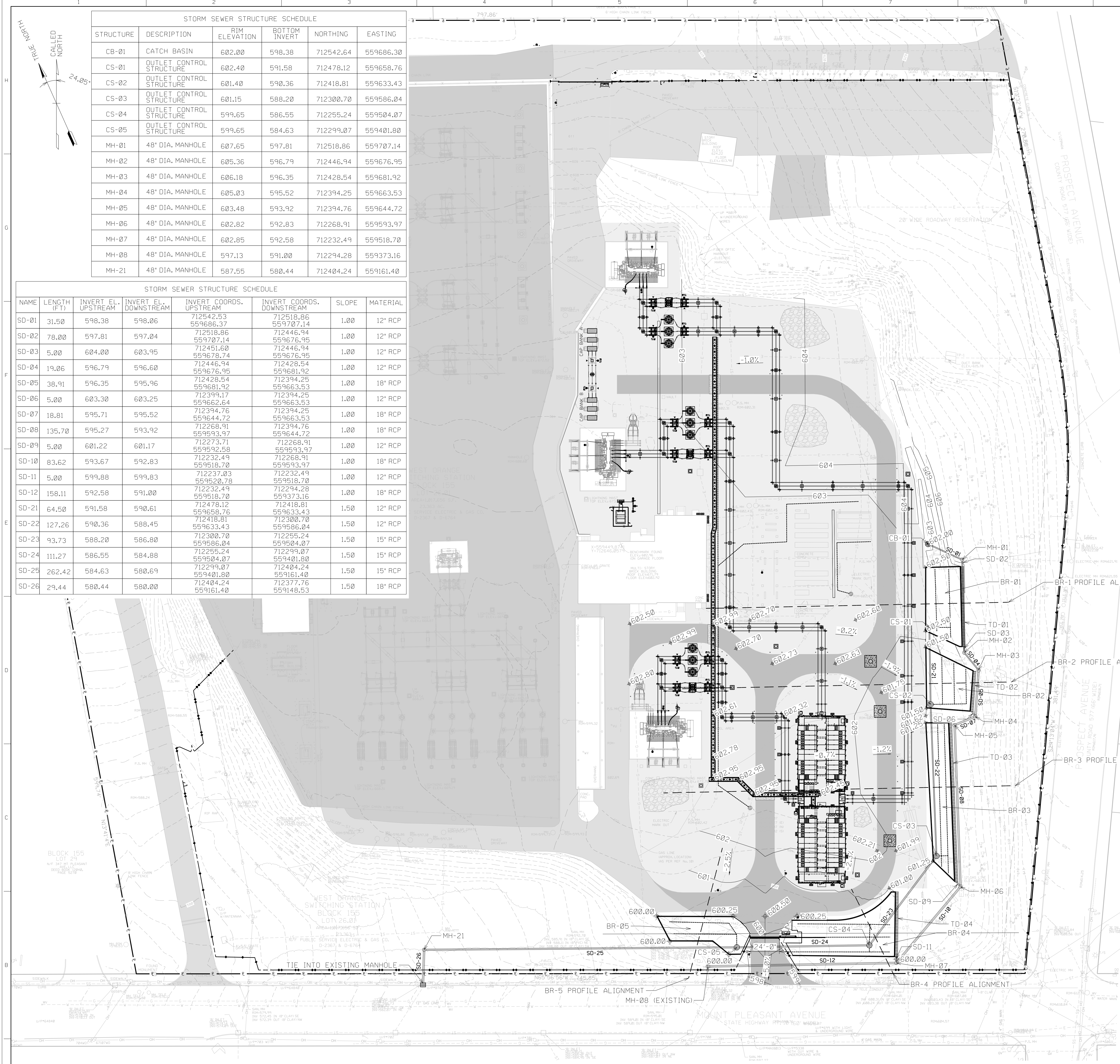
PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

DRAWN L.POTGIETER CHECKED S.MACALUSO SCALE 1"=30'-0"
DATE 03/20/23 EXAMINED
WBS/SO 90WESTORNGLE APPROVED

792789 A

-0Per

WARNING: STATION CONTAINS KNOWN UNDERGROUND UTILITIES THAT EXIST WITHIN THE WORK AREA AND MAY ONLY BE SHOWN ON OTHER DISCIPLINE OR DIVISION DRAWINGS. ADDITIONAL UNKNOWN UTILITIES MAY ALSO BE PRESENT. CONTRACTOR TO FOLLOW PSE&G'S EXCAVATION PROCEDURE FOR ALL UNDERGROUND WORK.



- NOTES:
- ELEVATIONS ARE BASED ON VERTICAL DATUM NAVD-88.
 - EARTHWORK SHALL BE PERFORMED IN CONFORMANCE WITH THE SITE GEOTECHNICAL REPORT AS PREPARED BY GZA GEOENVIRONMENTAL, INC. DATED JANUARY 17, 2023
 - ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND PSE&G GENERAL SPECIFICATIONS:
A: NO. 16-CIVIL 04-PAVING (DEC. 2021)
B: NO. 15-CIVIL 05-EXCAVATION AND TRENCHING (OCT. 2021)
C: NO. 19-CIVIL 18-CIVIL/STRUCTURAL/ENVIRONMENTAL DESIGN AND CONSTRUCTION STANDARDS (JUL. 2019)
D: NO. 17-CIVIL 20-STATION PERIMETER FENCING AND MISCELLANEOUS SITE PROTECTIVE BARRIERS (APR. 2021)
 - ELEVATIONS SHOWN ON THIS DRAWING ARE FINISHED GRADE/TOP OF PAVEMENT ELEVATION.
 - CONTRACTOR TO NOTIFY NEW JERSEY ONE CALL AT 1-800-272-1000 A MINIMUM OF 72 HOURS PRIOR TO ANY EXCAVATION ACTIVITIES.
 - CONTRACTOR SHALL CONFINED GRADING AND CONSTRUCTION ACTIVITIES TO WITHIN THE DISTURBANCE LIMITS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
 - ALL NON-DISTURBED AREAS ON SITE SHALL BE DEMARCATED BY SNOW FENCE DURING CONSTRUCTION AND THE SNOW FENCE SHALL BE INSTALLED ON SITE PRIOR TO ANY CONSTRUCTION ACTIVITY.
 - PROVIDE UNIFORM SLOPE BETWEEN INDICATED ELEVATIONS SO THAT ALL AREAS SLOPE TO DRAIN AND NO STORMWATER IS ALLOWED TO POND ON SITE BOTH DURING AND AFTER CONSTRUCTION.
 - MAXIMUM PROPOSED SLOPES ARE 3:1 UNLESS OTHERWISE NOTED.
 - COORDINATES FOR STORM SEWER STRUCTURES IS AT CENTER OF STRUCTURE. COORDINATES FOR STORM SEWER PIPE IS FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

- LEGEND:
- 604 --- EXISTING MINOR CONTOURS
 - 605 --- EXISTING MAJOR CONTOURS
 - 604 --- PROPOSED MINOR CONTOURS
 - 605 --- PROPOSED MAJOR CONTOURS
 - E --- PROPERTY LINE
 - PROPOSED PAD GRAVEL
 - EXISTING PAD GRAVEL
 - PROPOSED MACADAM PAVEMENT DRIVE
 - EXISTING MACADAM PAVEMENT DRIVE
 - TRENCH DRAIN
 - EXISTING DUCT BANK
 - PROPOSED DUCT BANK
 - PROPOSED UNDERDRAIN
 - PROPOSED STORM PIPE
 - PROPOSED STORM STRUCTURE
 - EXISTING TREE LINE
 - EXISTING CHAIN LINK FENCE
 - EXISTING SANITARY SEWER
 - EXISTING BURIED ELECTRIC LINE
 - EXISTING BURIED GAS LINE
 - EXISTING OVERHEAD UTILITY LINE
 - EXISTING BURIED WATER LINE
 - PROPOSED GRAVITY RETAINING WALL
 - 8' HIGH AMERISTAR FENCE (NEW)
 - 8' HIGH AMERISTAR FENCE (NEW) WITH INSULATED FOOTING
 - ISOLATION PANEL (TO MATCH AMERISTAR/CHAINLINK)

- REFERENCE DRAWINGS:
- | | |
|--|----------------|
| 1. REMOVAL PLAN | DWG.# 792788-A |
| 2. CIVIL SITE PLAN | DWG.# 792789-A |
| 3. STORM SEWER PROFILES | DWG.# 792791-A |
| 4. FENCE & GATE PLAN | DWG.# 792792-A |
| 5. SOIL EROSION & SEDIMENT CONTROL PLAN | DWG.# 792793-A |
| 6. SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH1 | DWG.# 792794-A |
| 7. SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH2 | DWG.# 792795-A |
| 8. CIVIL DETAILS SH1 | DWG.# 792796-A |
| 9. CIVIL DETAILS SH2 | DWG.# 792797-A |
| 10. CIVIL DETAILS SH3 | DWG.# 792798-A |
| 11. TREE REMOVAL PLAN | DWG.# TR-01 |
| 12. TREE REMOVAL NOTES & DETAILS | DWG.# TR-02 |
| 13. TREE REMOVAL NOTES & DETAILS | DWG.# TR-03 |

GENERAL NOTES
USE PRINTS OF LATEST REVISION ONLY.
DO NOT SCALE - USE DIMENSIONS ONLY.
FOR LIST OF REFERENCE DRAWINGS SEE DRAWING NO: THIS DRAWING
THIS DRAWING SUPERSEDES: NONE
THIS DRAWING IS SHEET NO. 1 OF 1 SHEETS.

MICHAEL J. BLAKE
N.J. PROFESSIONAL ENGINEER
L.C. NO. 24GE0521600
C.O.A. NO. 24GE28066400

STORM SEWER STRUCTURE SCHEDULE					
STRUCTURE	DESCRIPTION	RIM ELEVATION	BOTTOM INVERT	NORTHING	EASTING
CB-01	CATCH BASIN	602.00	598.38	712542.64	559686.30
CS-01	OUTLET CONTROL STRUCTURE	602.40	591.58	712478.12	559658.76
CS-02	OUTLET CONTROL STRUCTURE	601.40	590.36	712418.81	559633.43
CS-03	OUTLET CONTROL STRUCTURE	601.15	588.20	712300.70	559586.04
CS-04	OUTLET CONTROL STRUCTURE	599.65	586.55	712255.24	559504.07
CS-05	OUTLET CONTROL STRUCTURE	599.65	584.63	712299.07	559401.80
MH-01	48" DIA. MANHOLE	607.65	597.81	712518.86	559707.14
MH-02	48" DIA. MANHOLE	605.36	596.79	712446.94	559676.95
MH-03	48" DIA. MANHOLE	606.18	596.35	712428.54	559681.92
MH-04	48" DIA. MANHOLE	605.03	595.52	712394.25	559663.53
MH-05	48" DIA. MANHOLE	603.48	593.92	712394.76	559644.72
MH-06	48" DIA. MANHOLE	602.82	592.83	712268.91	559593.97
MH-07	48" DIA. MANHOLE	602.85	592.58	712232.49	559518.70
MH-08	48" DIA. MANHOLE	597.13	591.00	712294.28	559373.16
MH-21	48" DIA. MANHOLE	587.55	580.44	712404.24	559161.40

STORM SEWER STRUCTURE SCHEDULE							
NAME	LENGTH (FT)	INVERT EL. UPSTREAM	INVERT EL. DOWNSTREAM	INVERT COORDS. UPSTREAM	INVERT COORDS. DOWNSTREAM	SLOPE	MATERIAL
SD-01	31.50	598.38	598.06	712542.53 559686.37	712518.86 559707.14	1.00	12" RCP
SD-02	78.00	597.81	597.04	712518.86 559707.14	712446.94 559676.95	1.00	12" RCP
SD-03	5.00	604.00	603.95	712451.60 559678.74	712446.94 559676.95	1.00	12" RCP
SD-04	19.06	596.79	596.60	712446.94 559676.95	712428.54 559681.92	1.00	12" RCP
SD-05	38.91	596.35	595.96	712428.54 559681.92	712394.25 559663.53	1.00	18" RCP
SD-06	5.00	603.30	603.25	712399.17 559662.64	712394.25 559663.53	1.00	12" RCP
SD-07	18.81	595.71	595.52	712394.76 559644.72	712394.25 559633.53	1.00	18" RCP
SD-08	135.70	595.27	593.92	712268.91 559593.97	712394.76 559644.72	1.00	18" RCP
SD-09	5.00	601.22	601.17	712273.71 559592.58	712268.91 559593.97	1.00	12" RCP
SD-10	83.62	593.67	592.83	712232.49 559518.70	712268.91 559593.97	1.00	18" RCP
SD-11	5.00	599.88	599.83	712237.03 559520.78	712232.49 559518.70	1.00	12" RCP
SD-12	158.11	592.58	591.00	712232.49 559518.70	712294.28 559373.16	1.00	18" RCP
SD-21	64.50	591.58	590.61	712478.12 559658.76	712418.81 559633.43	1.50	12" RCP
SD-22	127.26	590.36	588.45	712418.81 559633.43	712300.70 559586.04	1.50	12" RCP
SD-23	93.73	588.20	586.80	712300.70 559504.07	712255.24 559504.07	1.50	15" RCP
SD-24	111.27	586.55	584.88	712255.24 559504.07	712299.07 559401.80	1.50	15" RCP
SD-25	262.42	584.63	580.69	712299.07 559401.80	712404.24 559161.40	1.50	15" RCP
SD-26	29.44	580.44	580.00	712404.24 559161.40	712377.76 559148.53	1.50	18" RCP

TRENCH DRAIN STRUCTURE SCHEDULE								
NAME	LENGTH (FT)	INVERT ELEVATION		INVERT SLOPE	RIM ELEVATION		INVERT COORDINATES	
		START	END		START	END	START	END
TD-1	67.23	606.00	604.00	2.97	608.00	606.00	712513.53, 559704.91	712451.60, 559678.74
TD-2	33.97	604.25	603.30	2.80	606.25	605.30	712429.14, 559678.63	712399.17, 559662.64
TD-3	133.72	601.81	601.22	0.44	603.81	603.22	712397.82, 559642.37	712273.71, 559592.58
TD-4	54.61	600.77	599.88	1.63	602.77	601.88	712286.65, 559543.60	712237.03, 559520.78

REVISION	DESCRIPTION
1	ISSUED FOR PERMITTING
2	ISSUED FOR REVIEW
3	ISSUED FOR REVIEW
4	ISSUED FOR REVIEW
5	ISSUED FOR REVIEW

WARNING: STATION CONTAINS KNOWN UNDERGROUND UTILITIES THAT EXIST WITHIN THE WORK AREA AND MAY ONLY BE SHOWN ON OTHER DISCIPLINE OR DIVISION DRAWINGS. ADDITIONAL UNKNOWN UTILITIES MAY ALSO BE PRESENT. CONTRACTOR TO FOLLOW PSE&G'S EXCAVATION PROCEDURE FOR ALL UNDERGROUND WORK.

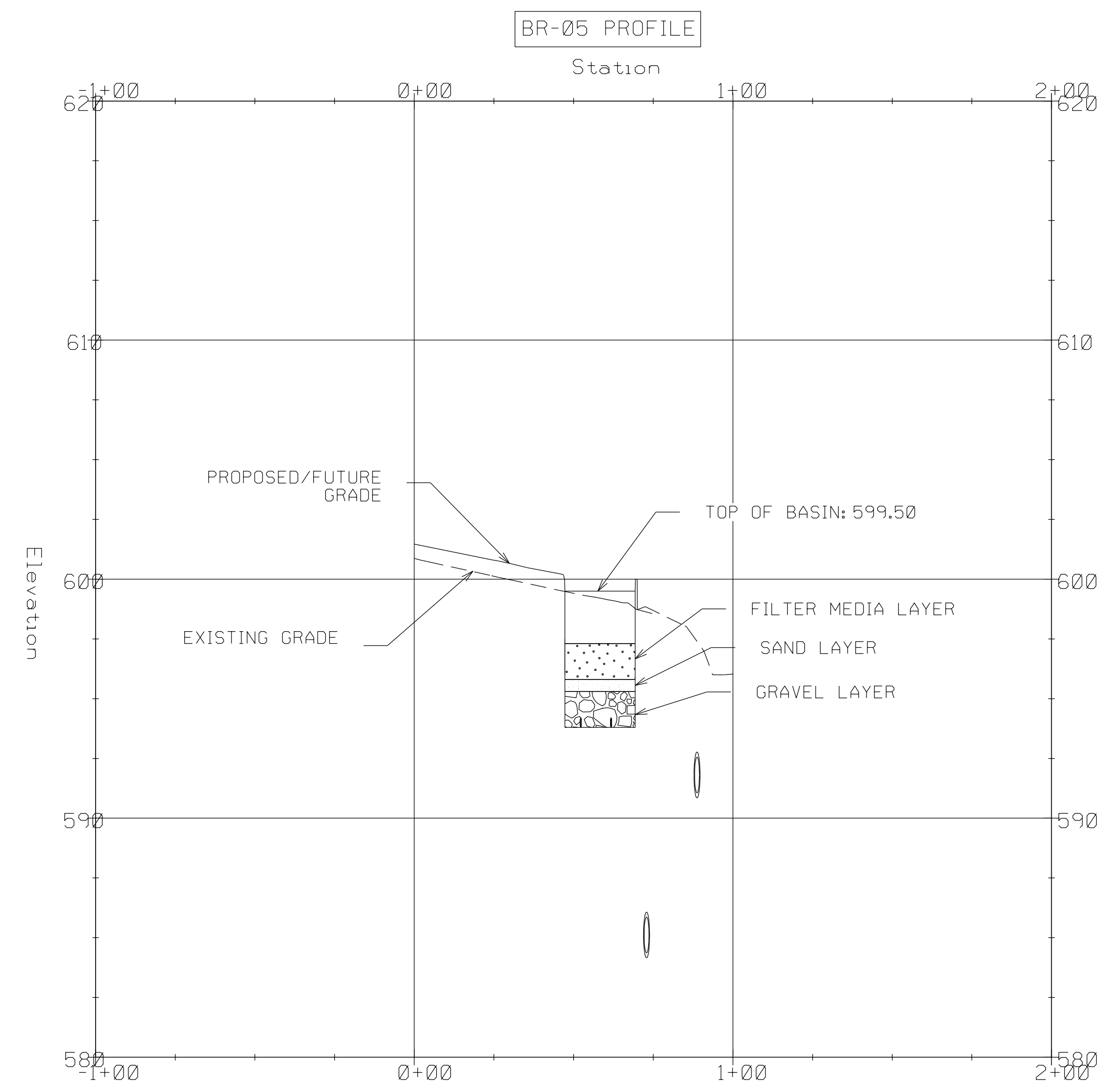
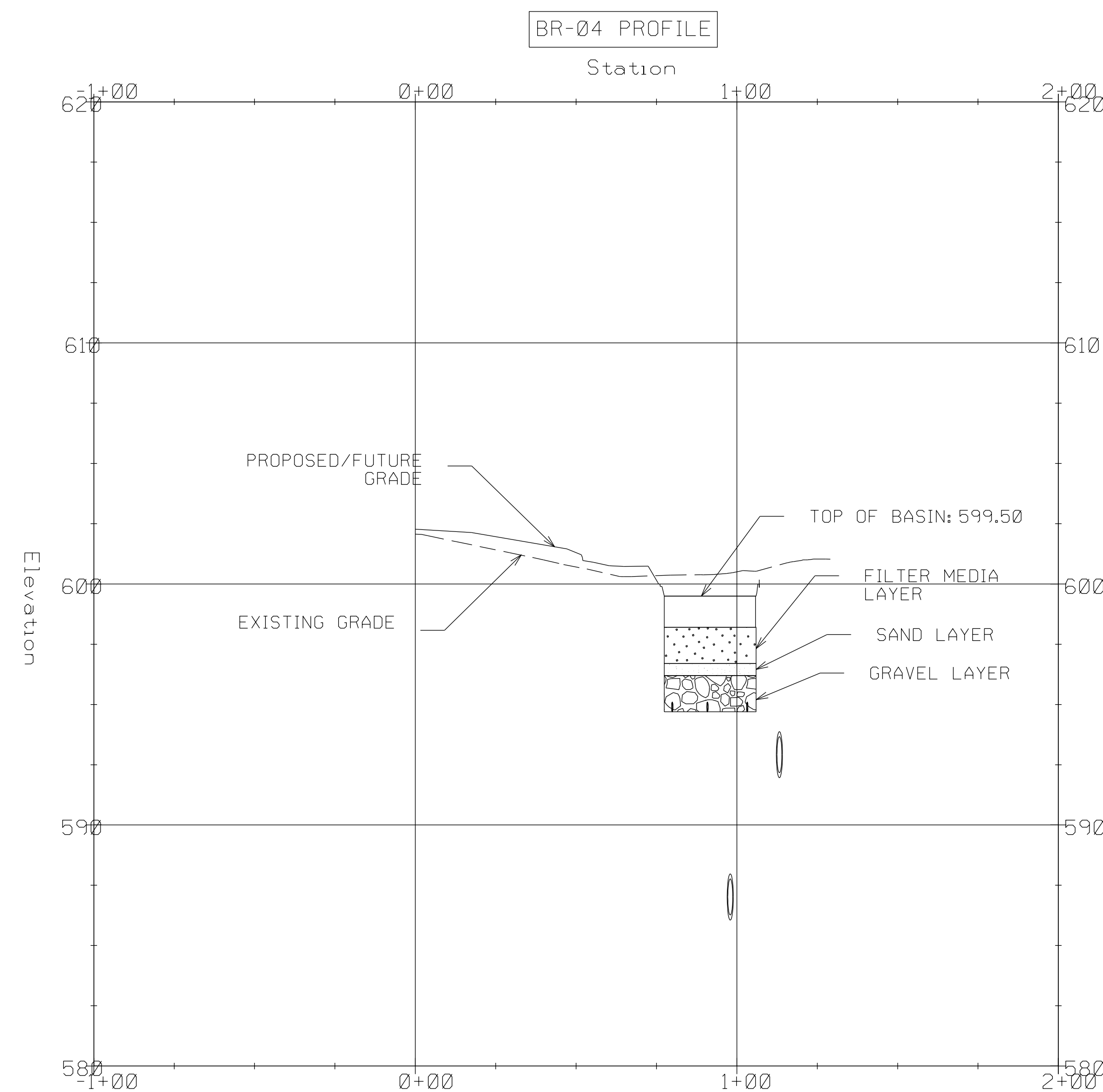
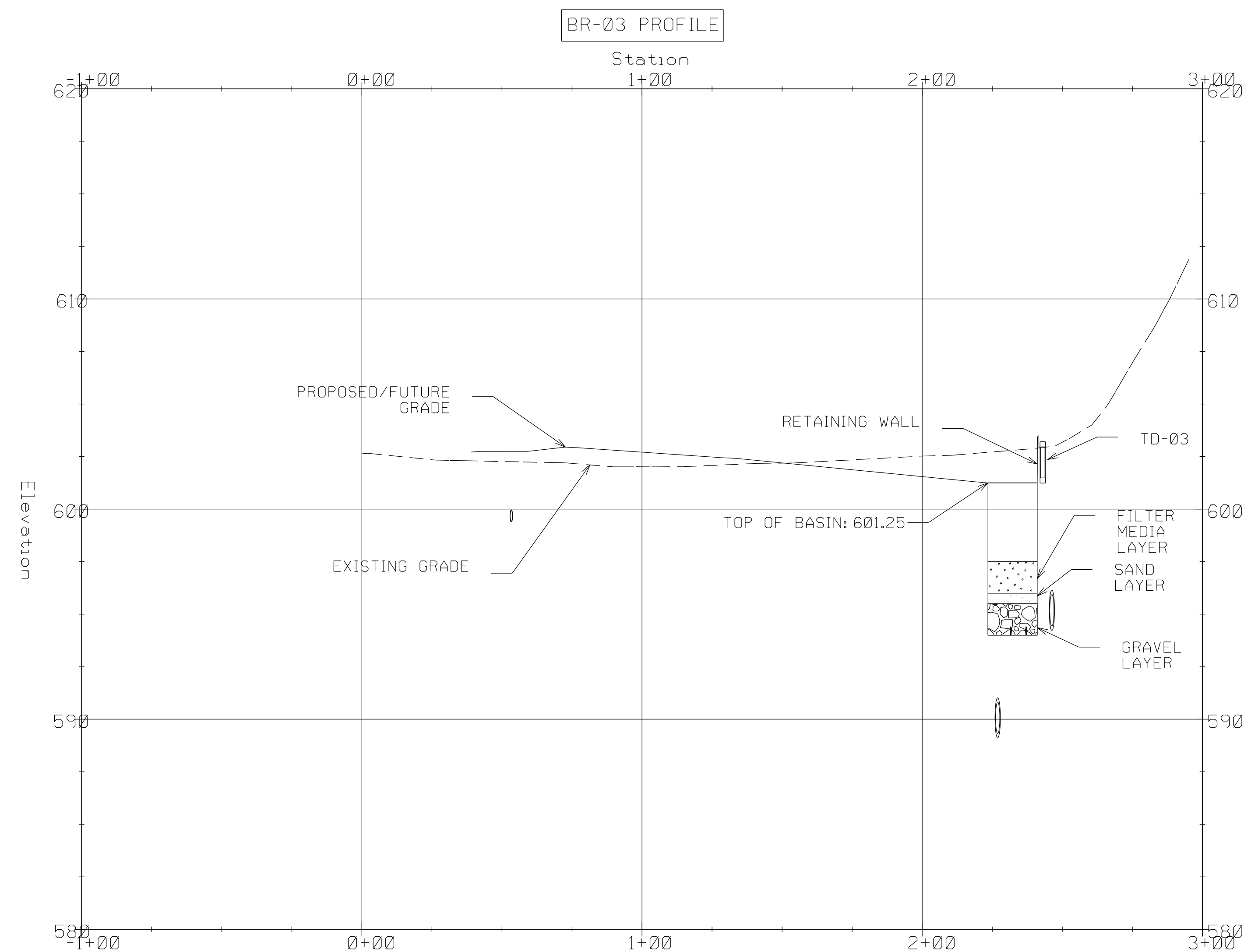
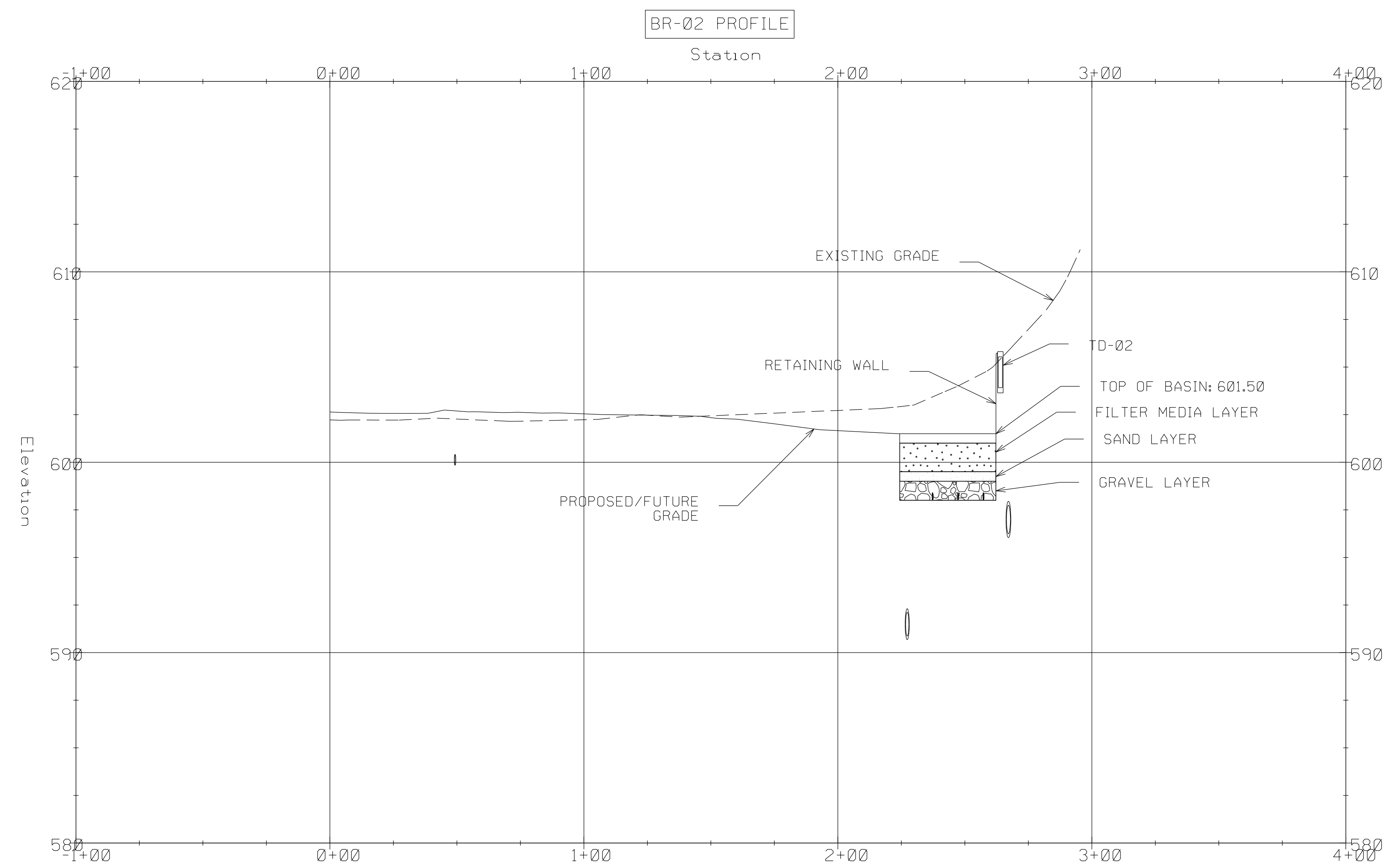
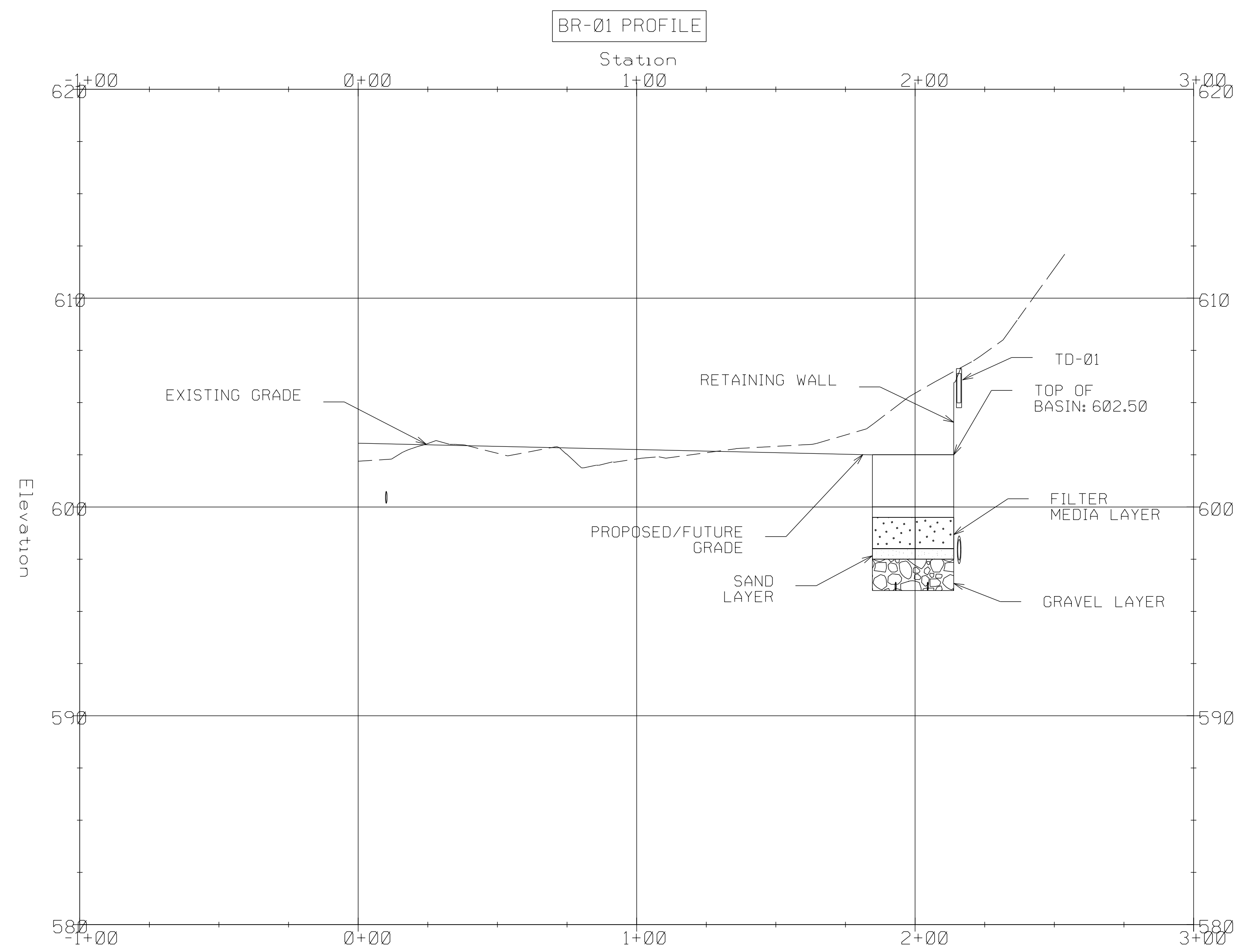
NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD

REVISION
WEST ORANGE SWITCHING STATION
230/26/4KV OUTDOOR SUBSTATION
GRADING & DRAINAGE PLAN

YARD CIVIL

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

792790 A - 0Per



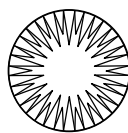
REFERENCE DRAWINGS:

- | | | | |
|-----|---------------------------------------|--|-----|
| 1. | REMOVAL PLAN | | |
| 2. | CIVIL SITE PLAN | | |
| 3. | GRADING & DRAINAGE | | |
| 4. | FENCE & GATE PLAN | | |
| 5. | SOIL EROSION & SEDIMENT CONTROL PLAN | | |
| 6. | SOIL EROSION & SEDIMENT CONTROL NOTES | | SH1 |
| 7. | SOIL EROSION & SEDIMENT CONTROL NOTES | | SH2 |
| 8. | CIVIL DETAILS SH1 | | |
| 9. | CIVIL DETAILS SH2 | | |
| 10. | CIVIL DETAILS SH3 | | |
| 11. | TREE REMOVAL PLAN | | |
| 12. | TREE REMOVAL NOTES & DETAILS | | |
| 13. | TREE REMOVAL NOTES & DETAILS | | |

DWG.# 792788-A
DWG.# 792789-A
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DWG.# 792796-A
DWG.# 792797-A
DWG.# 792798-A
DWG.# TR-01
DWG.# TR-02
DWG.# TR-03

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THIS DRAWING IS SHEET NO 1 OF 1 SHEETS.

MICHAEL J. BLAKE
J. PROFESSIONAL ENGINEER
LIC. NO. 24GE05521600
C.O.A. NO. 24GA28066400

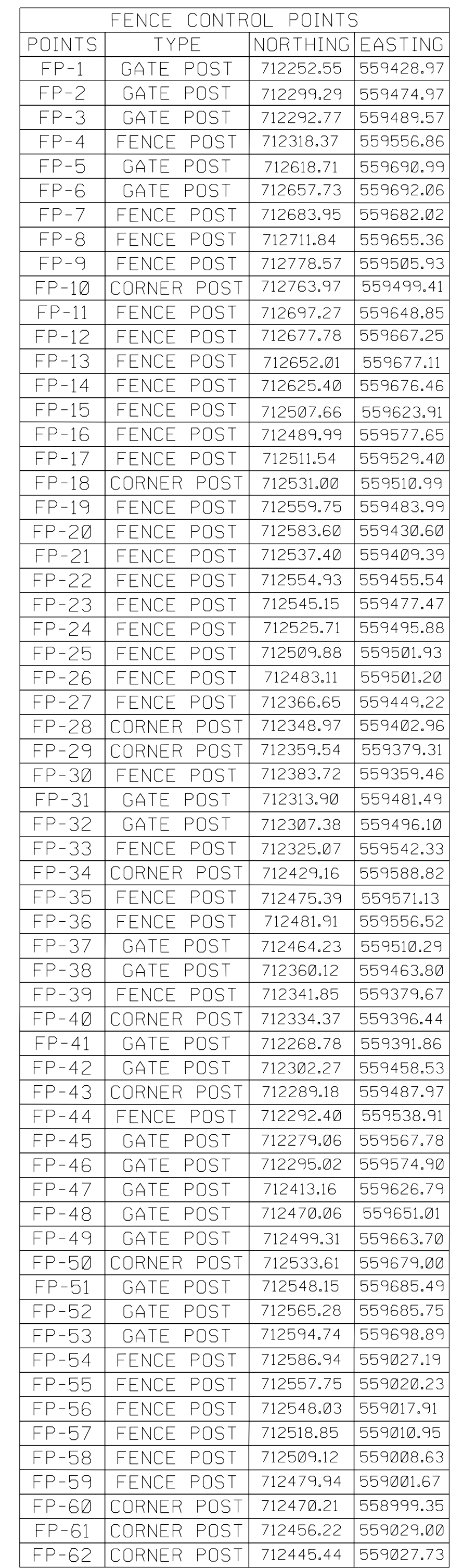
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NO	DATE	DESCRIPTION					DWN	CKD	EXD	APD
REVISION WEST ORANGE SWITCHING STATION 230/26/4KV OUTDOOR SUBSTATION STORM SEWER PROFILES										
YARD							CIVIL			
 PSEG PUBLIC SERVICE ELECTRIC AND GAS COMPANY ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.										
DRAWN <u>L.POTGIETER</u> _ _ CHECKED <u>S.MACALUSO</u> _ _ SCALE <u> </u> _ _ AS NOTED <u> </u> DATE <u>03/20/23</u> _ _ _ _ EXAMINED <u> </u> _ _ WBS/SO <u>3DWESTORNGLC</u> _ _ APPROVED <u> </u> _ _										
792791 A - 0Per										

WARNING: STATION CONTAINS KNOWN UNDERGROUND UTILITIES THAT EXIST WITHIN THE WORK AREA AND MAY ONLY BE SHOWN ON OTHER DISCIPLINE OR DIVISION DRAWINGS. ADDITIONAL UNKNOWN UTILITIES MAY ALSO BE PRESENT. CONTRACTOR TO FOLLOW PSE&G'S EXCAVATION PROCEDURE FOR ALL UNDERGROUND WORK.

D	5-08-24	ISSUED FOR PERMITTING
C	2-29-24	ISSUED FOR REVIEW
B	10-11-23	ISSUED FOR REVIEW
A	10-11-23	ISSUED FOR REVIEW
REV DATE		DESCRIPTION
 BURNS & MCDONNELL BURNS & MCDONNELL ENGINEERING COMPANY, INC. 3400 WARD PARKWAY SUITE 100 FORT WORTH, TEXAS 76107		THE REGISTRANT OF THE NEWLY APPLIED SEAL ASSUMES RESPONSIBILITY FOR THE CHANGES AS INDICATED BY THE FOLLOWING REVISION NUMBER 0

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24GE05521600
C.O.A. NO. 24GA28066400

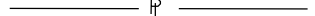
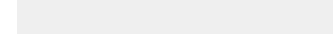
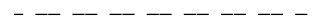
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NOTES:

1. BOUNDARY & TOPOGRAPHIC SURVEY, BLOCK 155 LOT 26.01, WEST ORANGE TOWNSHIP, ESSEX COUNTY, NEW JERSEY PREPARED BY DRESDNER ROBIN, FAIRFIELD NJ, DATED 3/28/16 LAST REVISED 7/11/2023.
2. HORIZONTAL DATUM = NAD-83 (2011). VERTICAL DATUM = NAVD-88 (GEOID 12A) UNITS = U.S. SURVEY FEET
3. ALL DIMENSIONS ARE IN FEET(FIT) UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LAYOUT AND ELEVATION CONTROL FOR THIS PROJECT.
5. THE CONTRACTOR SHALL REPAIR ANY CURB, SIDEWALK, OR LANDSCAPING DAMAGED DURING CONSTRUCTION.
6. CONTRACTOR SHALL RESTORE ANY DAMAGES INCURRED TO SURROUNDING PUBLIC OR PRIVATE PROPERTY AS A RESULT OF CONSTRUCTION.

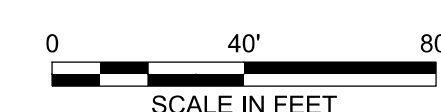
LEGEND:

	PROPERTY LINE
	PROPOSED PAD GRAVEL
	EXISTING PAD GRAVEL
	PROPOSED MACADAM PAVEMENT DRIVE
	EXISTING MACADAM PAVEMENT DRIVE
	TRENCH DRAIN
	PROPOSED DUCT BANK
	EXISTING DUCT BANK
	PROPOSED FENCE
	EXISTING TREE LINE
	EXISTING CHAIN LINK FENCE
	EXISTING SANITARY SEWER
	EXISTING BURIED ELECTRIC LINE
	EXISTING BURIED GAS LINE
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	EXISTING BURIED WATER LINE
	PROPOSED GRAVITY RETAINING WALL
	8' HIGH AMERISTAR FENCE (NEW)
	8' HIGH AMERISTAR FENCE (NEW) WITH INSULATED FOOTING
	ISOLATION PANEL (TO MATCH AMERISTAR/CHAINLINK)
	EXISTING FENCE (VARIOUS)

REFERENCE DRAWINGS:

1.	REMOVAL PLAN	
2.	CIVIL SITE PLAN	
3.	GRADING & DRAINAGE	
4.	STORM SEWER PROFILES	
5.	SOIL EROSION & SEDIMENT CONTROL PLAN	
6.	SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH1	
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13.	TREE REMOVAL NOTES & DETAILS	

DWG.# 792788-A
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 DWG.# 792798-A
 DWG.# TR-01
 DWG.# TR-02
 DWG.# TR-03



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MICHAEL J. BLAKE

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24GE05521600
C.O.A. NO. 24GA28066400

[illegible]

REVISION									
WEST ORANGE SWITCHING STATION									
230/26/4KV OUTDOOR SUBSTATION									
PERIMETER FENCE PLAN									

YARD CIVIL

 **PSEG**

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK, N.J.

DRAWN BY M. BUSSINGER CHECKED BY S. MACALUSO SCALE 1"=40'-0"
DATE 02/28/24 EXAMINED _____
WBS 9DWESTORNGLC APPROVED _____

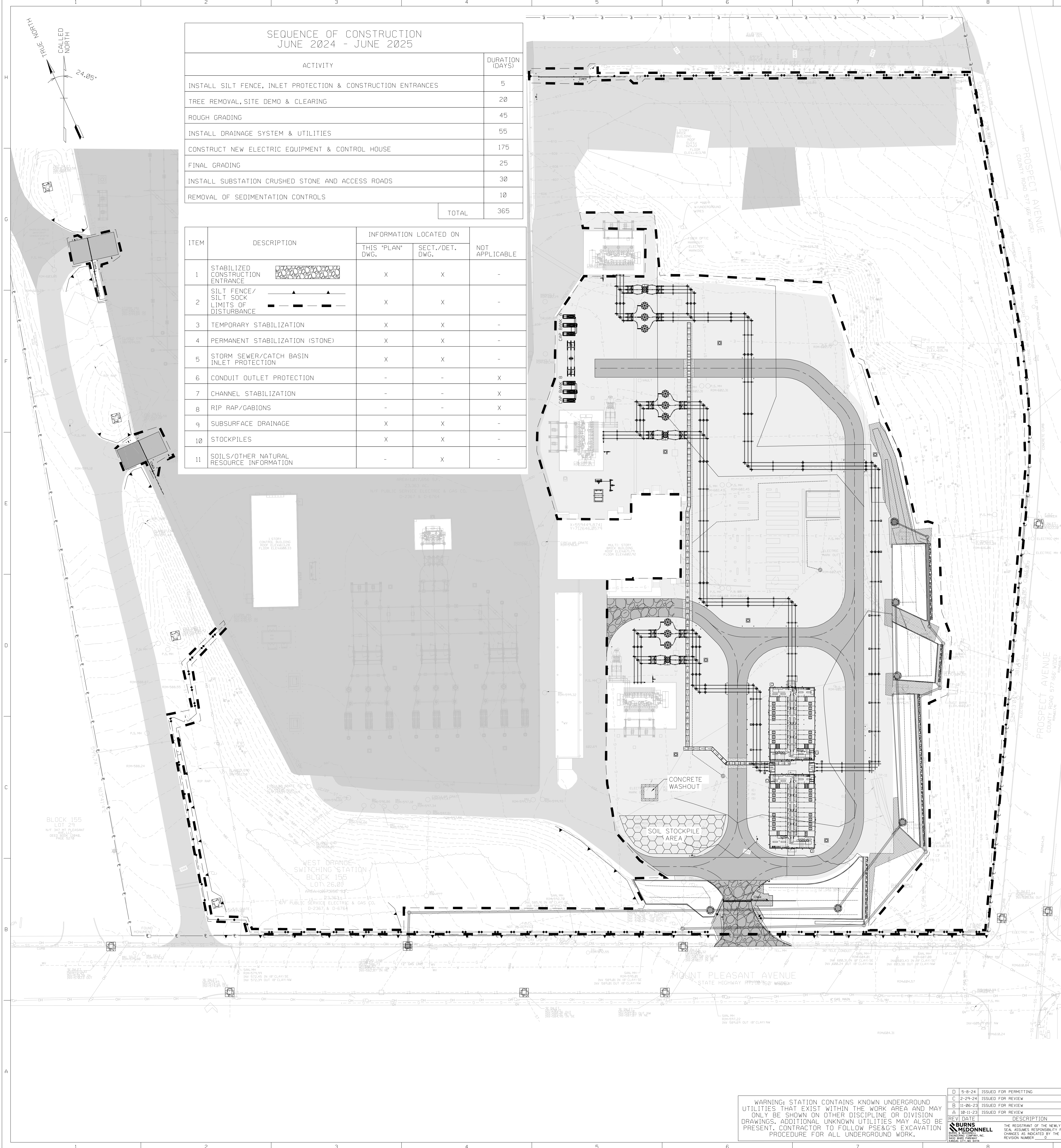
792792	A	-0Pe
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	-	-	
B	5-8-24	ISSUED FOR PERMITTING	
A	2-29-24	ISSUED FOR REVIEW	
REV	DATE	DESCRIPTION	

BURNS & MCDONNELL
BURNS & MCDONNELL
ENGINEERS AND ARCHITECTS, P.C.
9400 AVANT PARKWAY
SUITE 100
DALLAS, TEXAS 75243-6000
TEL: 214-691-1600 FAX: 214-691-1601
WWW.BURNSMCDONNELL.COM

THE REGISTRANT OF THE NEWLY APPLIED SEAL ASSUMES RESPONSIBILITY FOR THE CHANGES AS INDICATED BY THE FOLLOWING REVISION NUMBER _____.



SEQUENCE OF CONSTRUCTION JUNE 2024 - JUNE 2025		
ACTIVITY		DURATION (DAYS)
INSTALL SILT FENCE, INLET PROTECTION & CONSTRUCTION ENTRANCES		5
TREE REMOVAL, SITE DEMO & CLEARING		20
ROUGH GRADING		45
INSTALL DRAINAGE SYSTEM & UTILITIES		55
CONSTRUCT NEW ELECTRIC EQUIPMENT & CONTROL HOUSE		175
FINAL GRADING		25
INSTALL SUBSTATION CRUSHED STONE AND ACCESS ROADS		30
REMOVAL OF SEDIMENTATION CONTROLS		10
TOTAL		365

ITEM	DESCRIPTION	INFORMATION LOCATED ON		NOT APPLICABLE
		THIS "PLAN" DWG.	SECT./DET. DWG.	
1	STABILIZED CONSTRUCTION ENTRANCE	X	X	-
2	SILT FENCE/ SILT SOCK LIMITS OF DISTURBANCE	X	X	-
3	TEMPORARY STABILIZATION	X	X	-
4	PERMANENT STABILIZATION (STONE)	X	X	-
5	STORM SEWER/CATCH BASIN INLET PROTECTION	X	X	-
6	CONDUIT OUTLET PROTECTION	-	-	X
7	CHANNEL STABILIZATION	-	-	X
8	RIP RAP/GABIONS	-	-	X
9	SUBSURFACE DRAINAGE	X	X	-
10	STOCKPILES	X	X	-
11	SOILS/OTHER NATURAL RESOURCE INFORMATION	-	X	-

NOTES:
1. NOTIFY UTILITY PRIOR TO CONSTRUCTION.
2. COORDINATE ANY TEMPORARY MATTING WITH UTILITY.
3. ALL AREAS DISTURBED DURING INSTALLATION SHALL BE STABILIZED WITHIN 7 CALENDAR DAYS OF THAT DISTURBANCE.

STOCKPILE NOTE:
1. SOIL STOCKPILE MAY BE RELOCATED TO ACCOMMODATE CONSTRUCTION REQUIRED. MAINTAIN MINIMUM 50' SEPARATION FROM AREAS BELOW THE BASE FLOOD ELEVATION. FOLLOW PROVISIONS PER STOCKPILE DETAIL.

TOTAL AREA OF DISTURBANCE		
AREA	SQ. FT.	ACRES
TOTAL LIMITS OF DISTURBANCE	170,694	3.92

- LEGEND:
- PROPOSED PAD GRAVEL
 - PROPOSED MACADAM PAVEMENT DRIVE
 - EXISTING PAD GRAVEL
 - EXISTING MACADAM PAVEMENT DRIVE
 - EXISTING MINOR CONTOURS
 - EXISTING MAJOR CONTOURS
 - PROPOSED MINOR CONTOURS
 - PROPOSED MAJOR CONTOURS
 - PROPERTY LINE
 - STOCKPILE
 - CONSTRUCTION ENTRANCE
 - INLET PROTECTION
 - EROSION CONTROL BLANKET
 - TRENCH DRAIN
 - PROPOSED UNDERDRAIN
 - PROPOSED STORM PIPE
 - STORM STRUCTURE
 - LIMITS OF DISTURBANCE
 - SILT FENCE
 - EXISTING TREE LINE
 - EXISTING CHAIN LINK FENCE
 - PROPOSED FENCE
 - EXISTING SANITARY SEWER
 - EXISTING BURIED ELECTRIC LINE
 - EXISTING BURIED GAS LINE
 - EXISTING OVERHEAD UTILITY LINE
 - EXISTING BURIED WATER LINE
 - PROPOSED GRAVITY RETAINING WALL
 - 8' HIGH AMERISTAR FENCE (NEW)
 - 8' HIGH AMERISTAR FENCE (NEW) WITH INSULATED FOOTING
 - 8' HIGH CHAIN LINK W/ BARBED WIRE FENCE (NEW)
 - 8' HIGH CHAIN LINK W/ BARBED WIRE FENCE (NEW) WITH INSULATED FOOTING
 - ISOLATION PANEL (TO MATCH AMERISTAR/CHAINLINK)

- REFERENCE DRAWINGS:
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THIS DRAWING SUPERSEDES: NONE
THIS DRAWING IS SHEET NO. 1 OF 1 SHEETS.

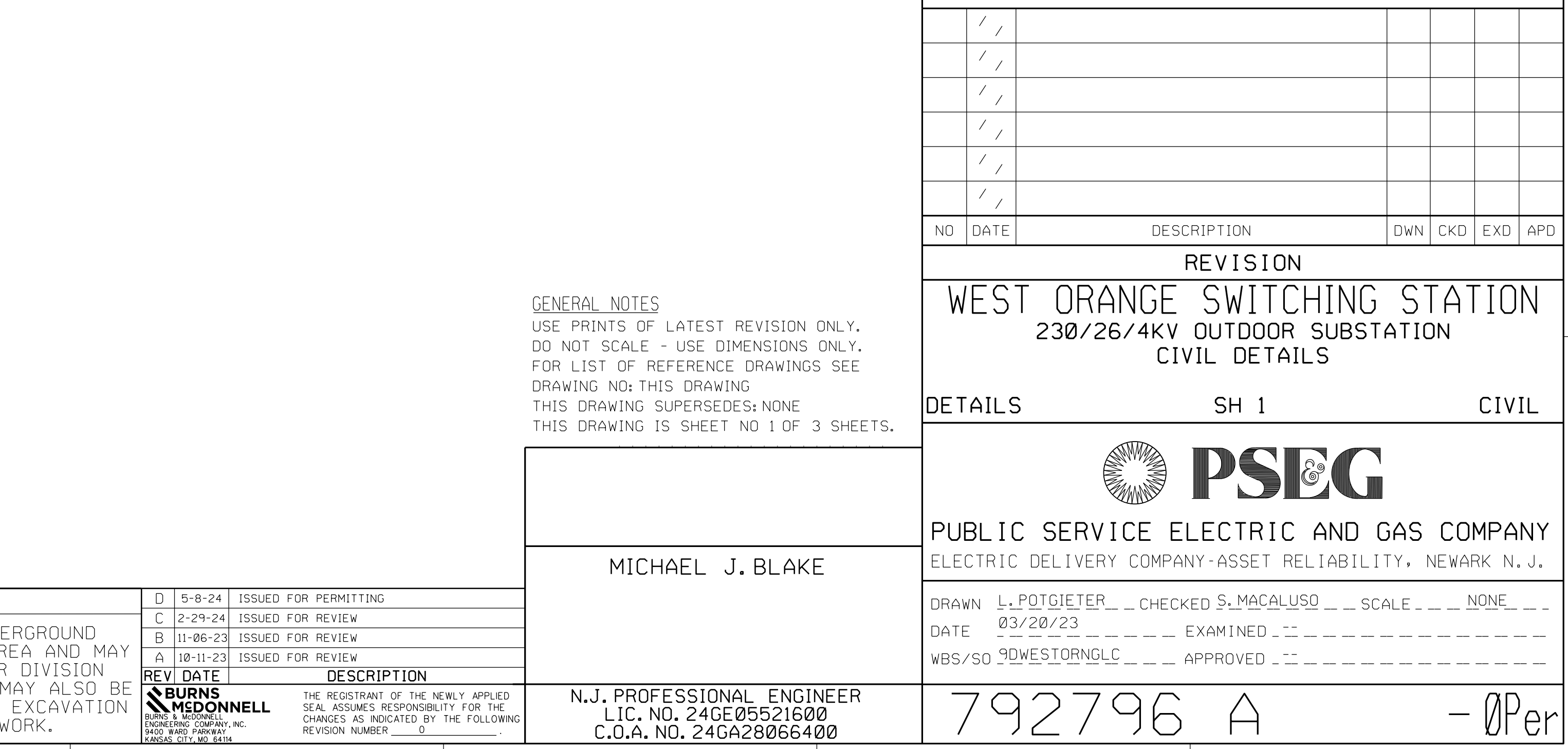
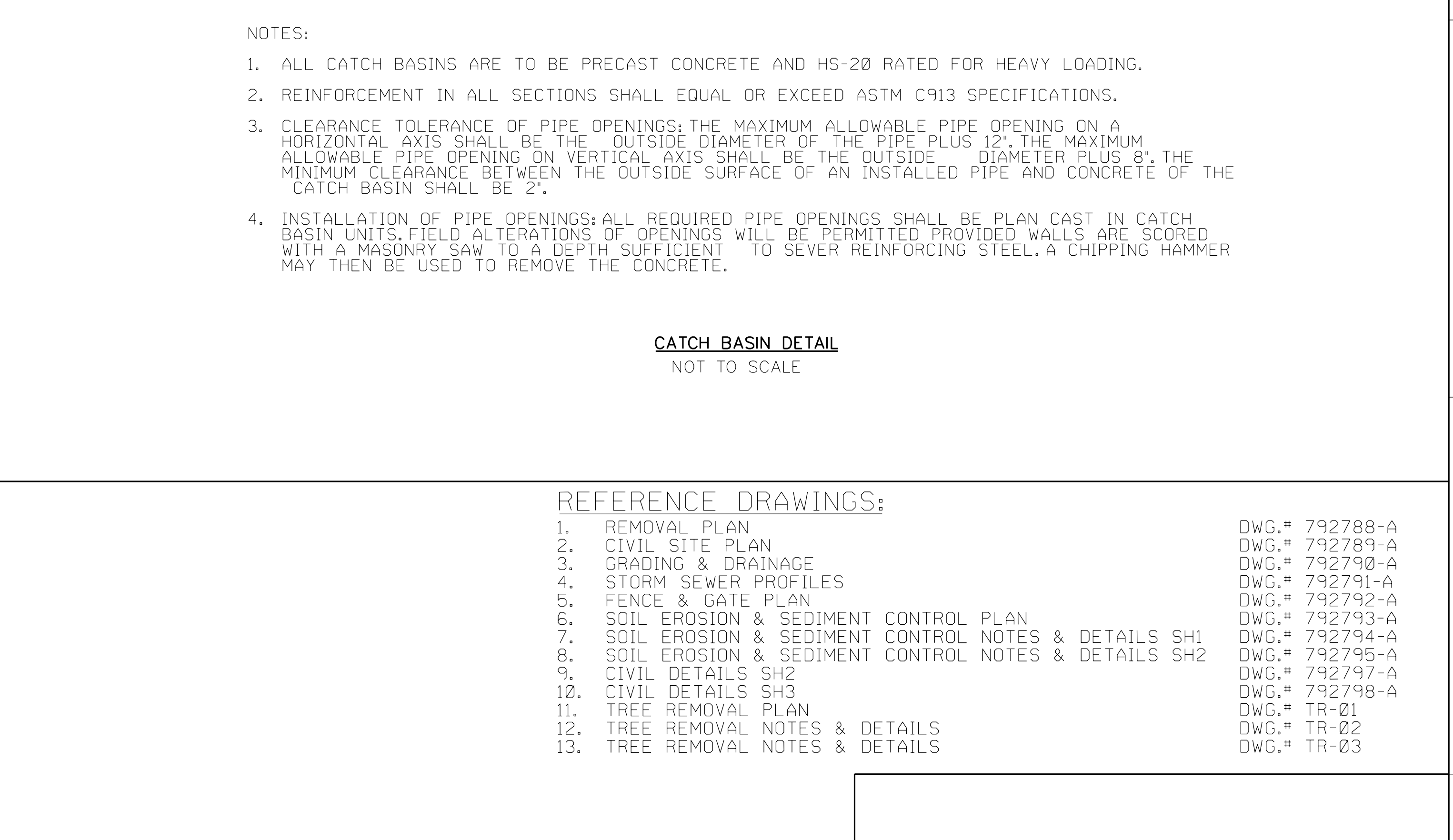
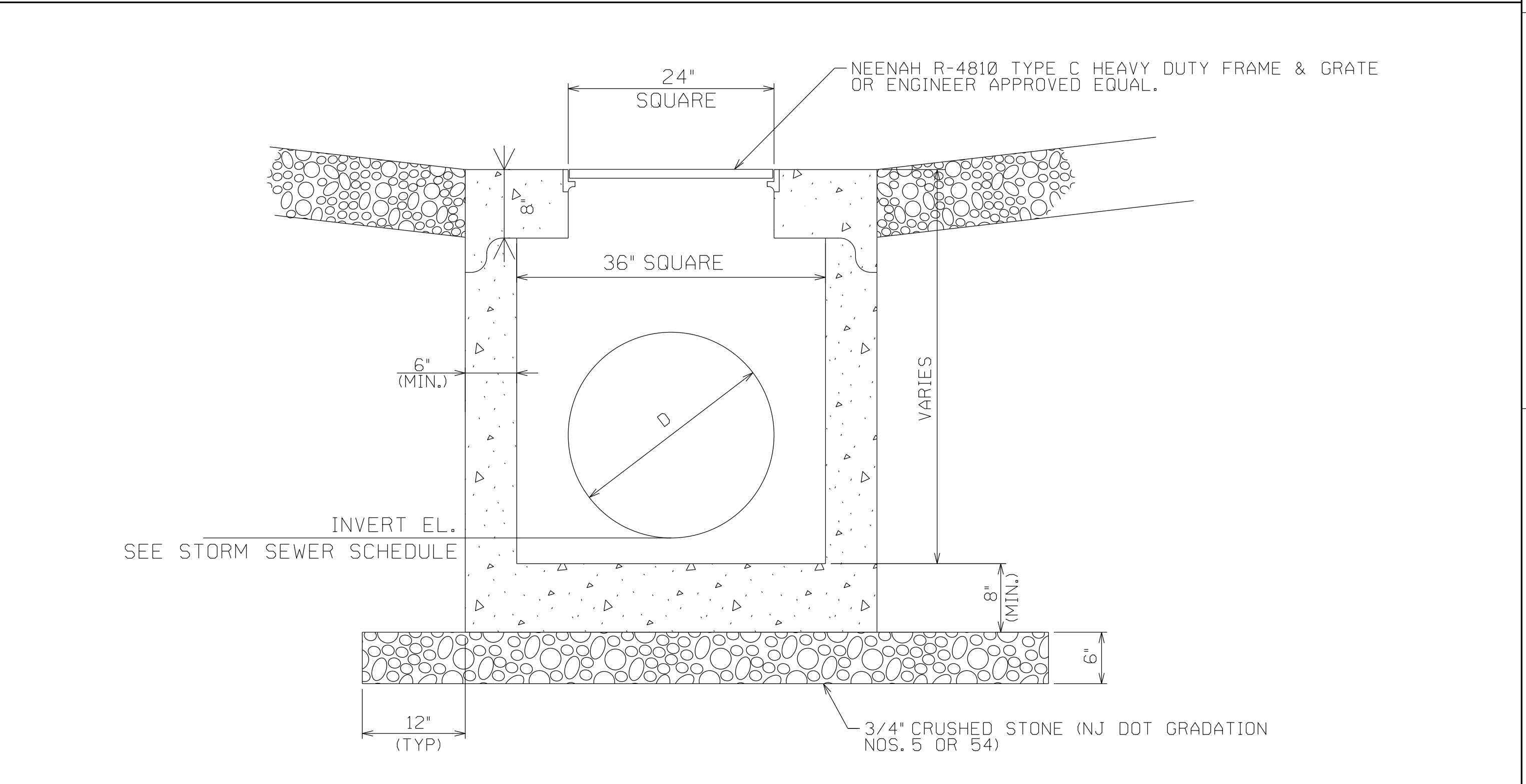
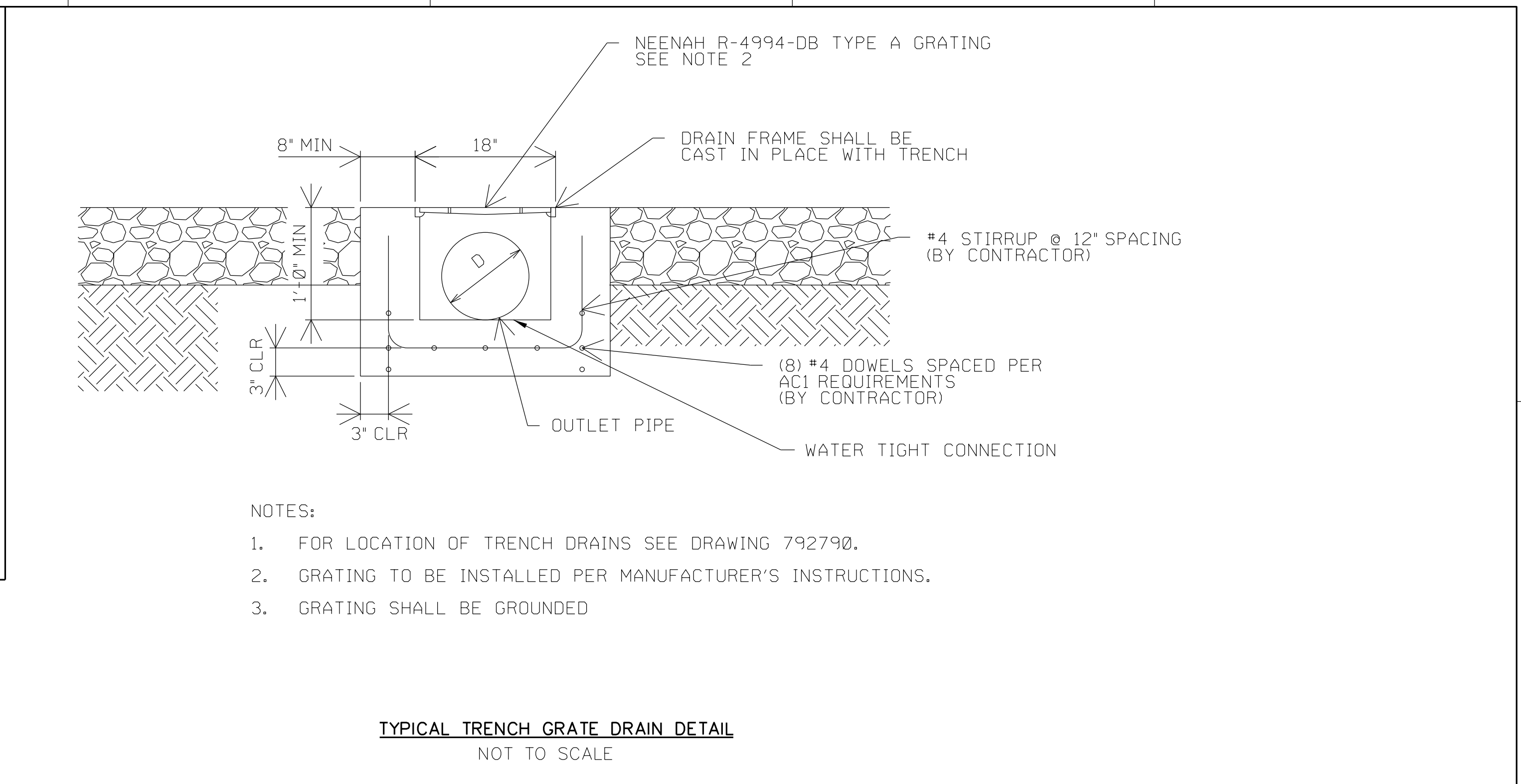
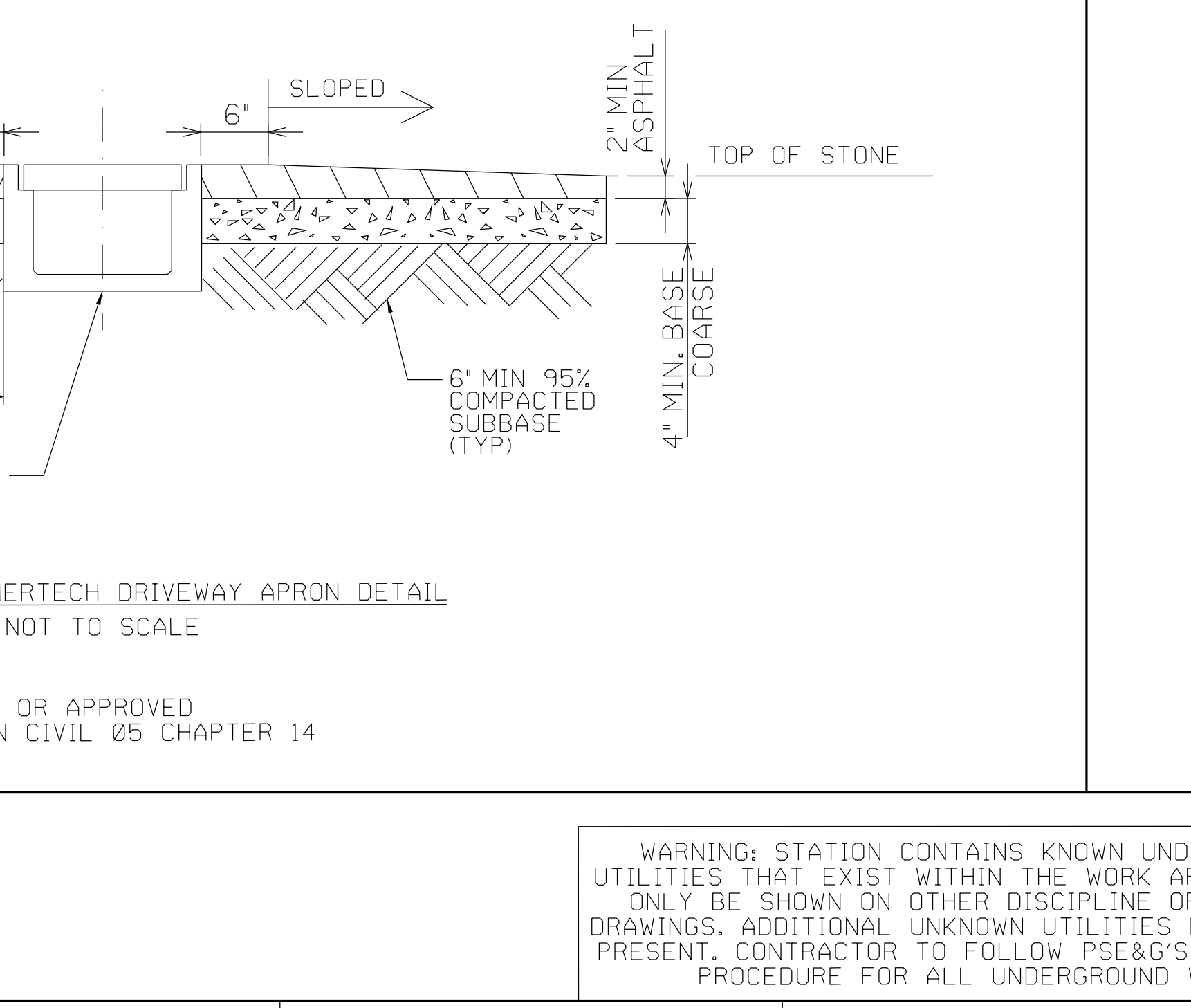
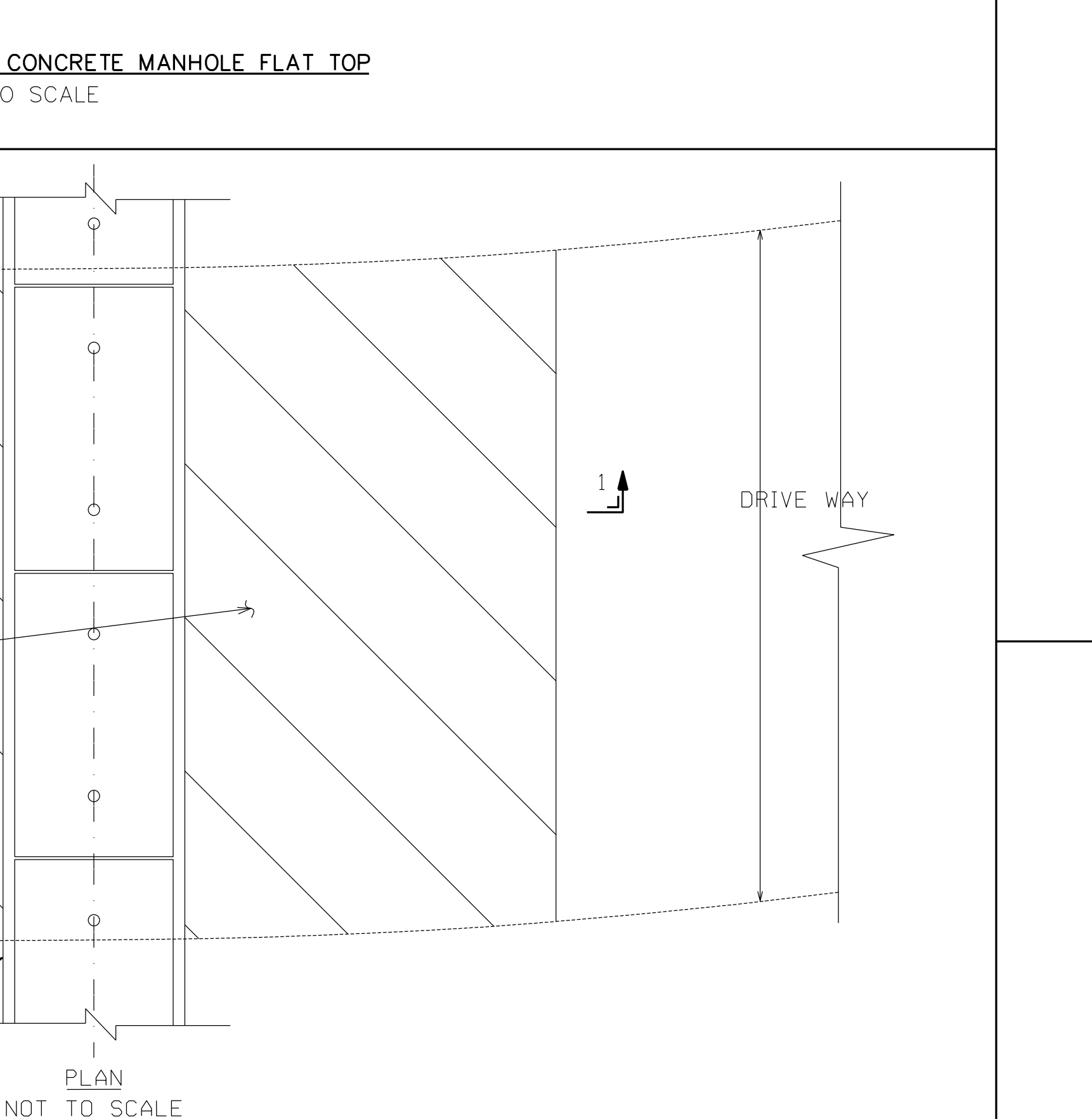
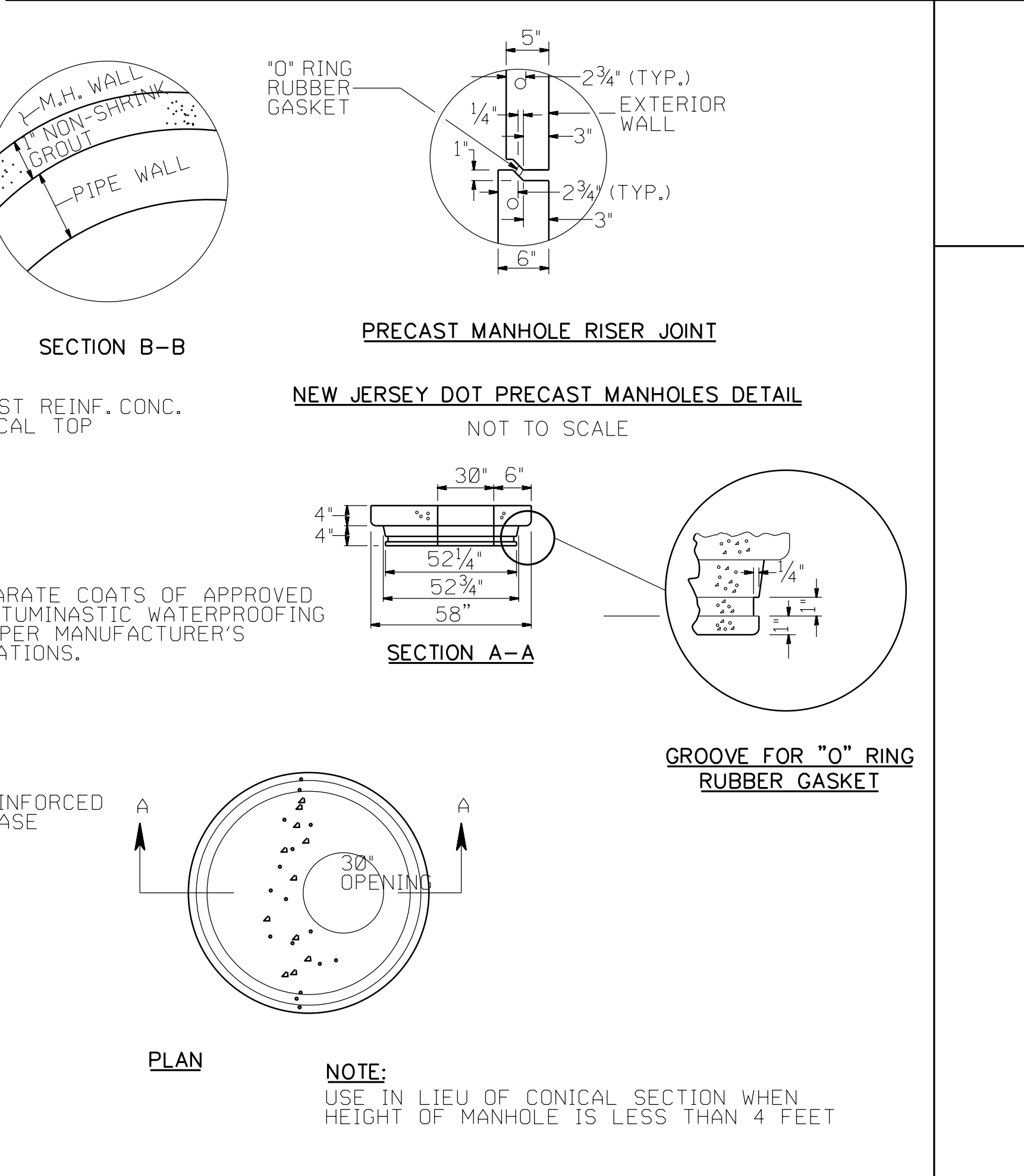
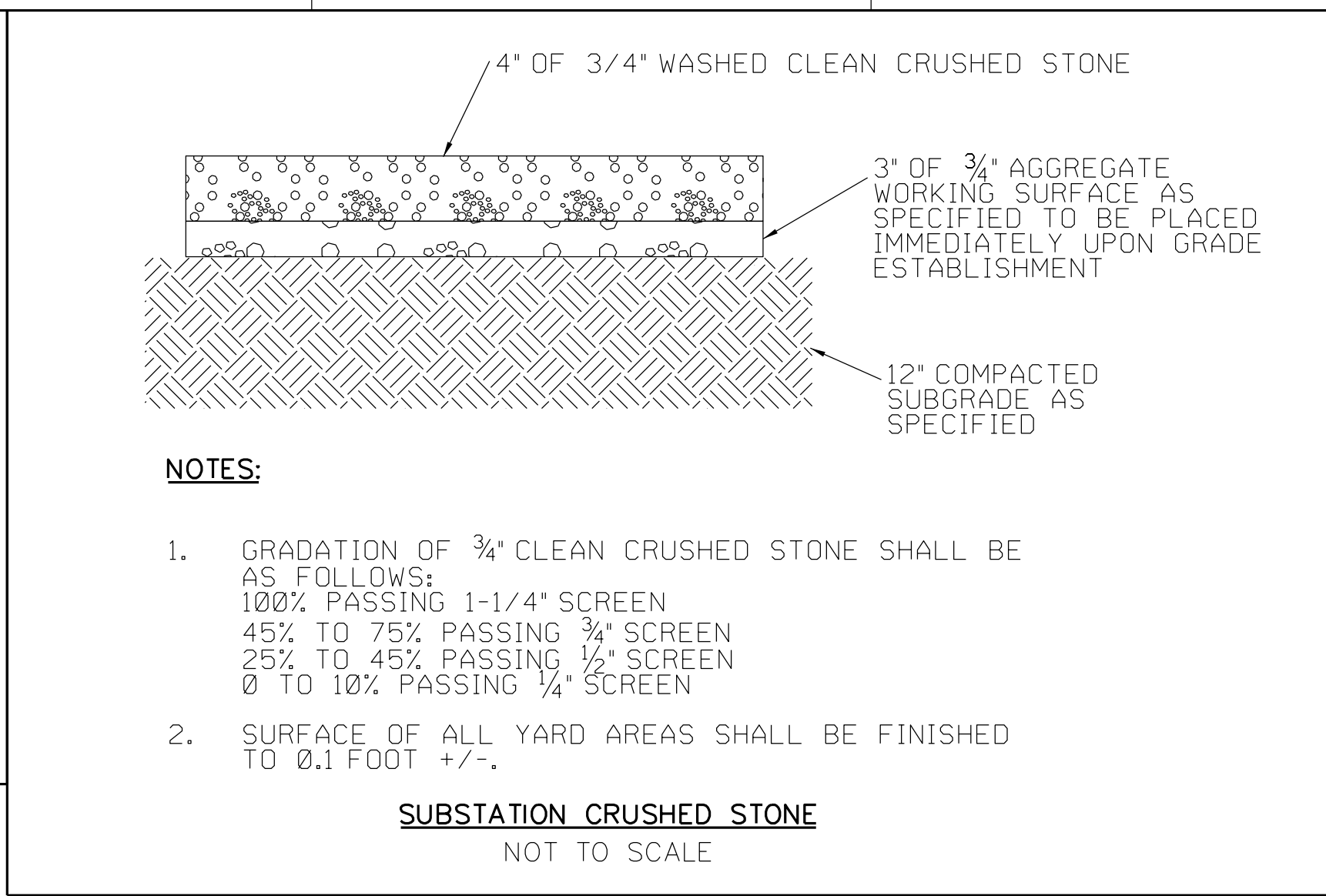
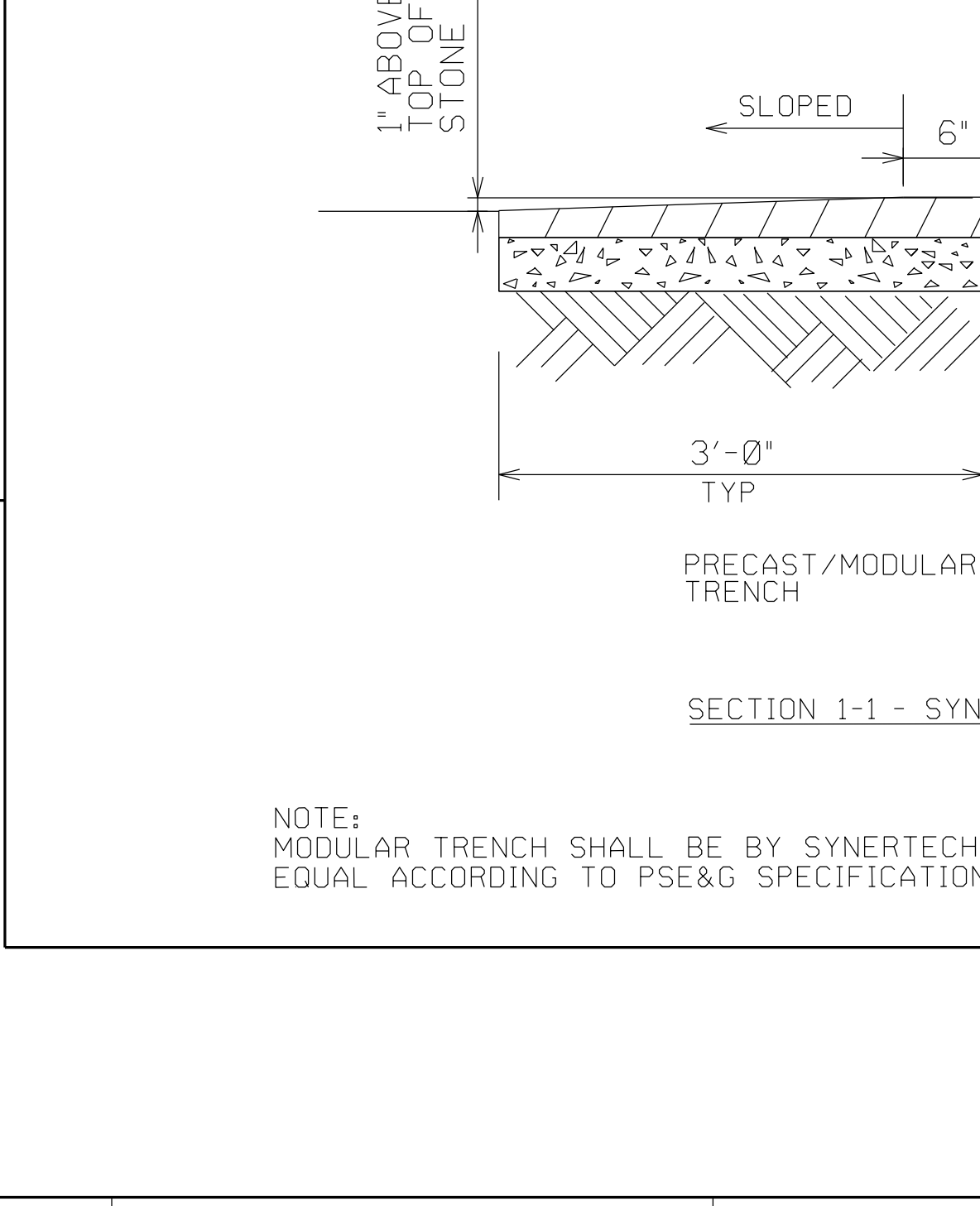
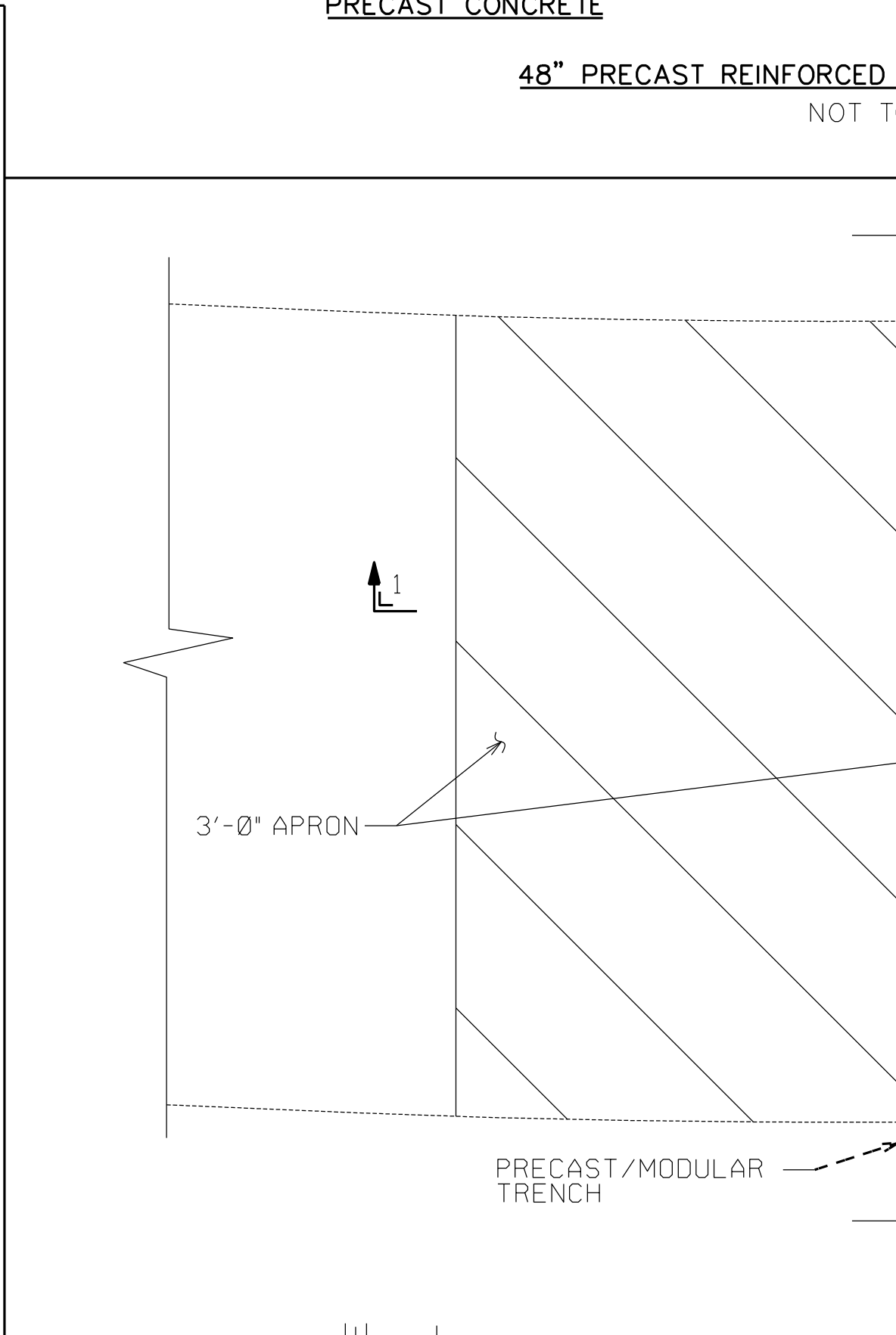
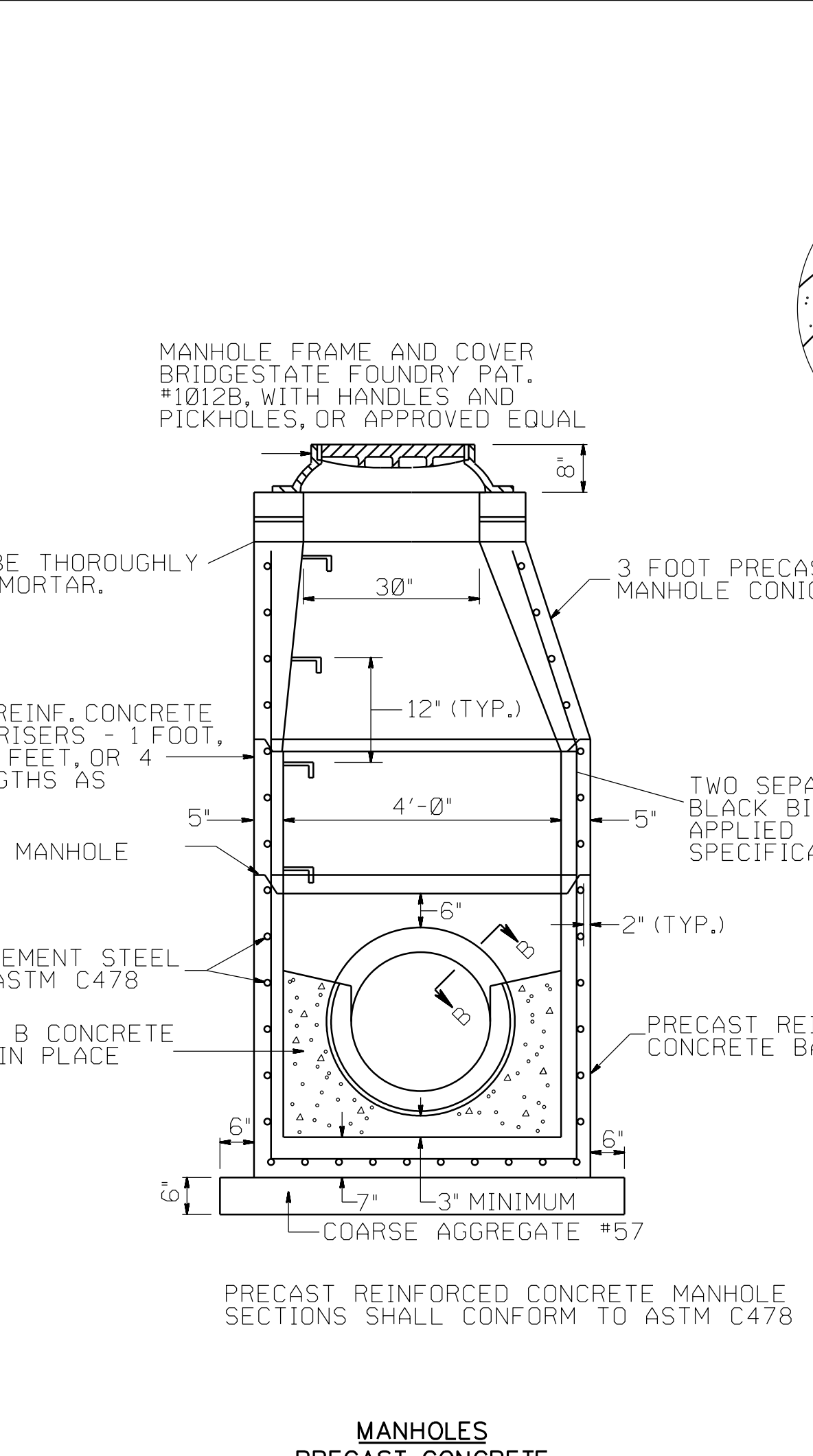
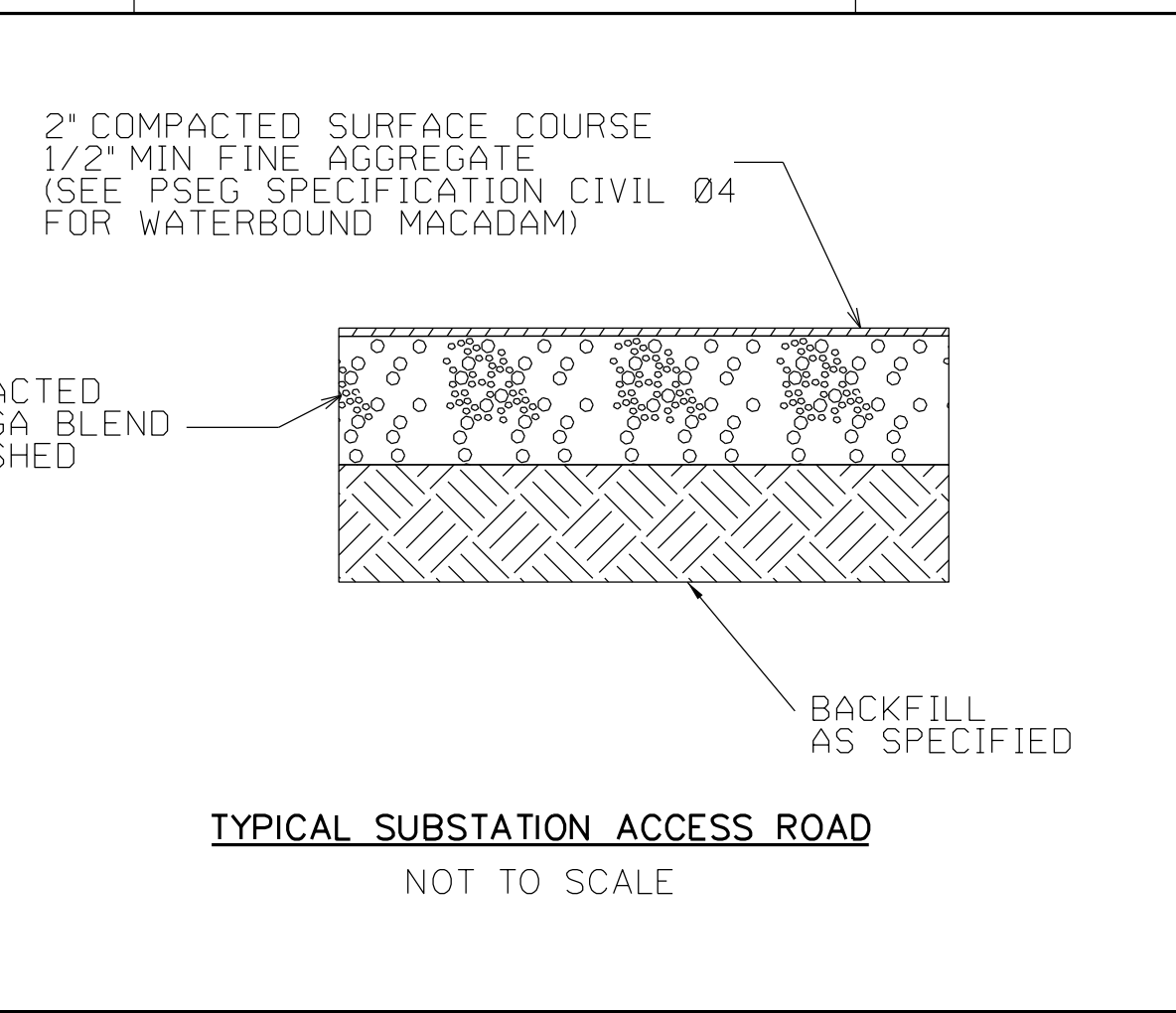
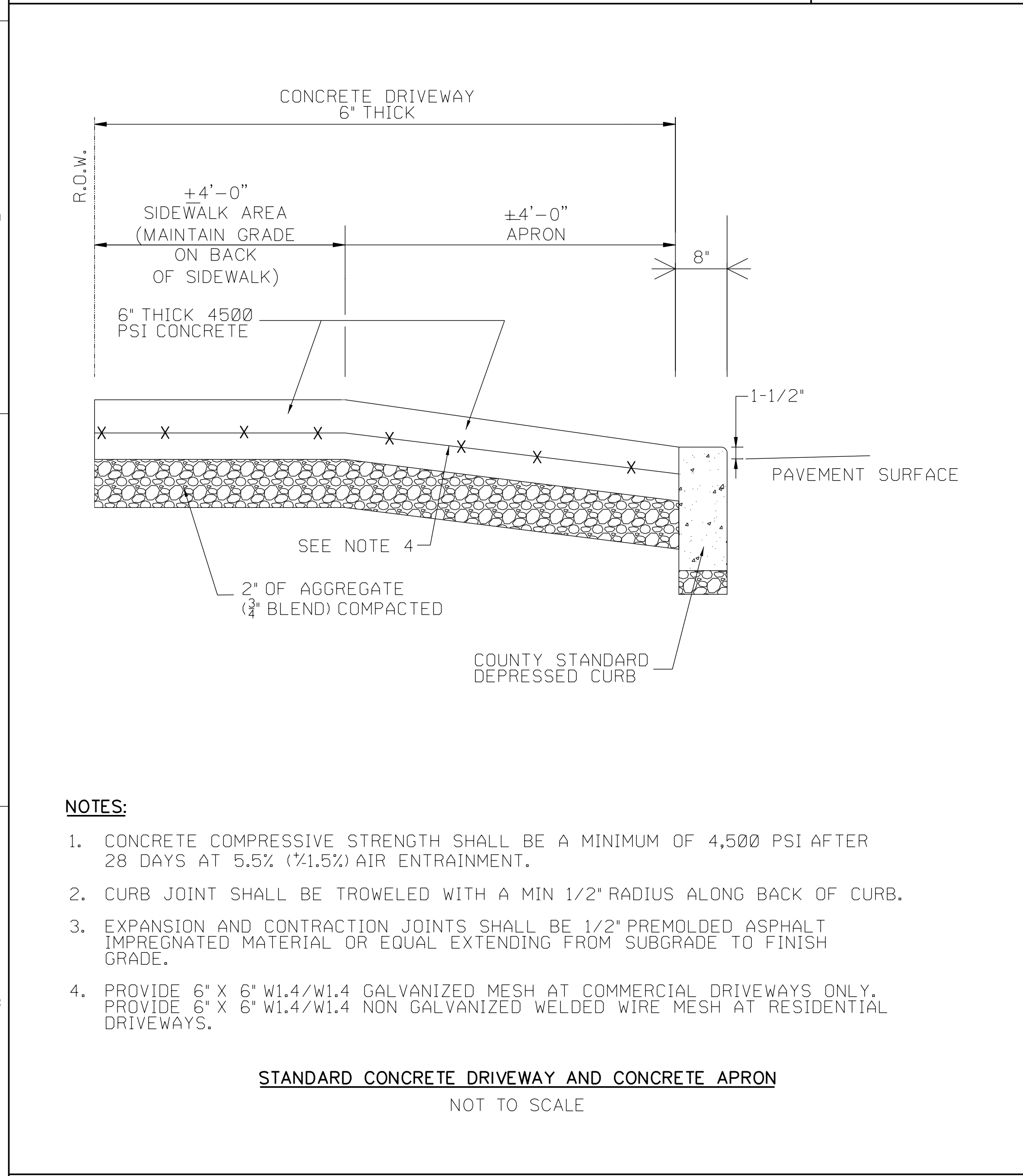
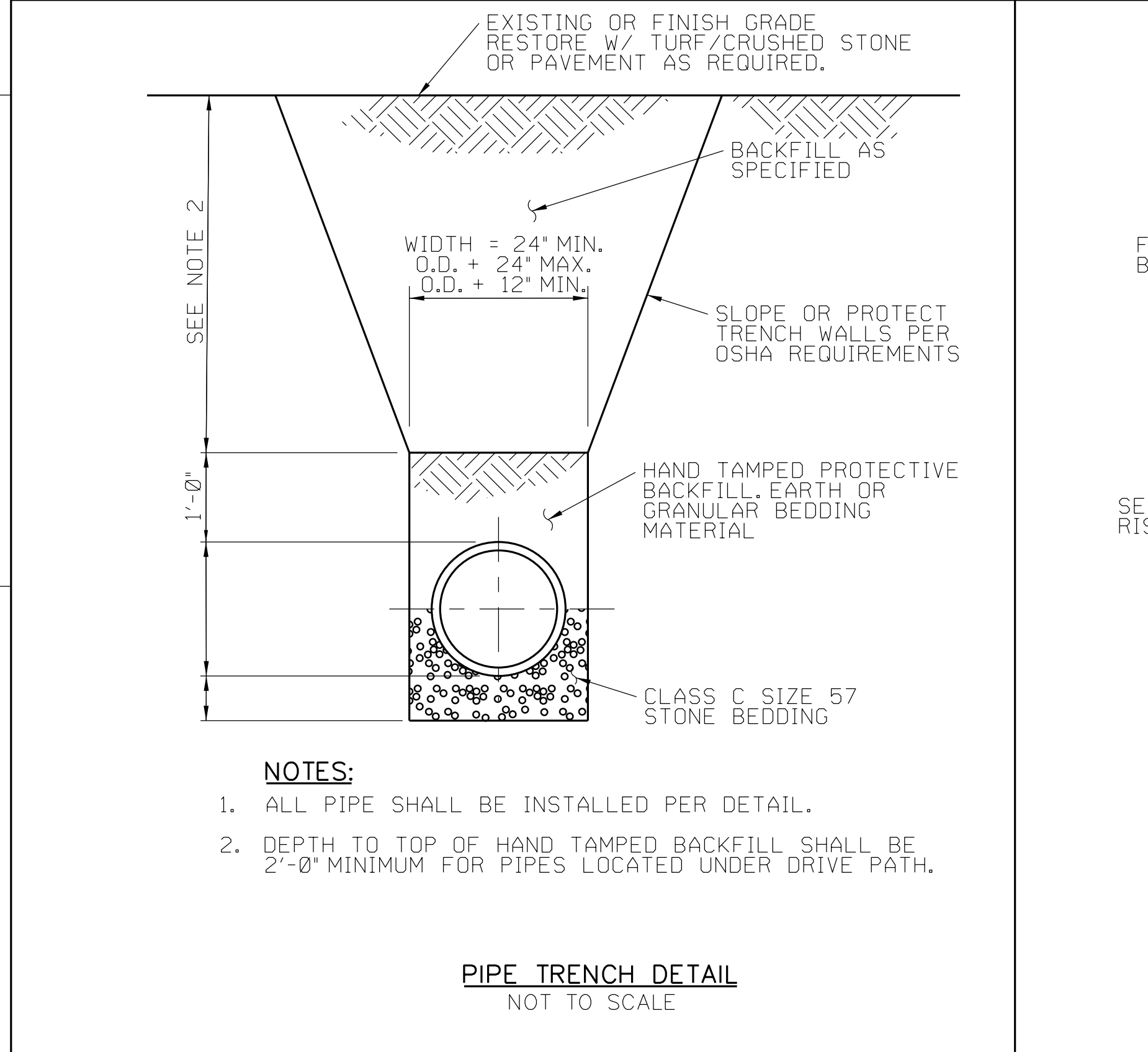
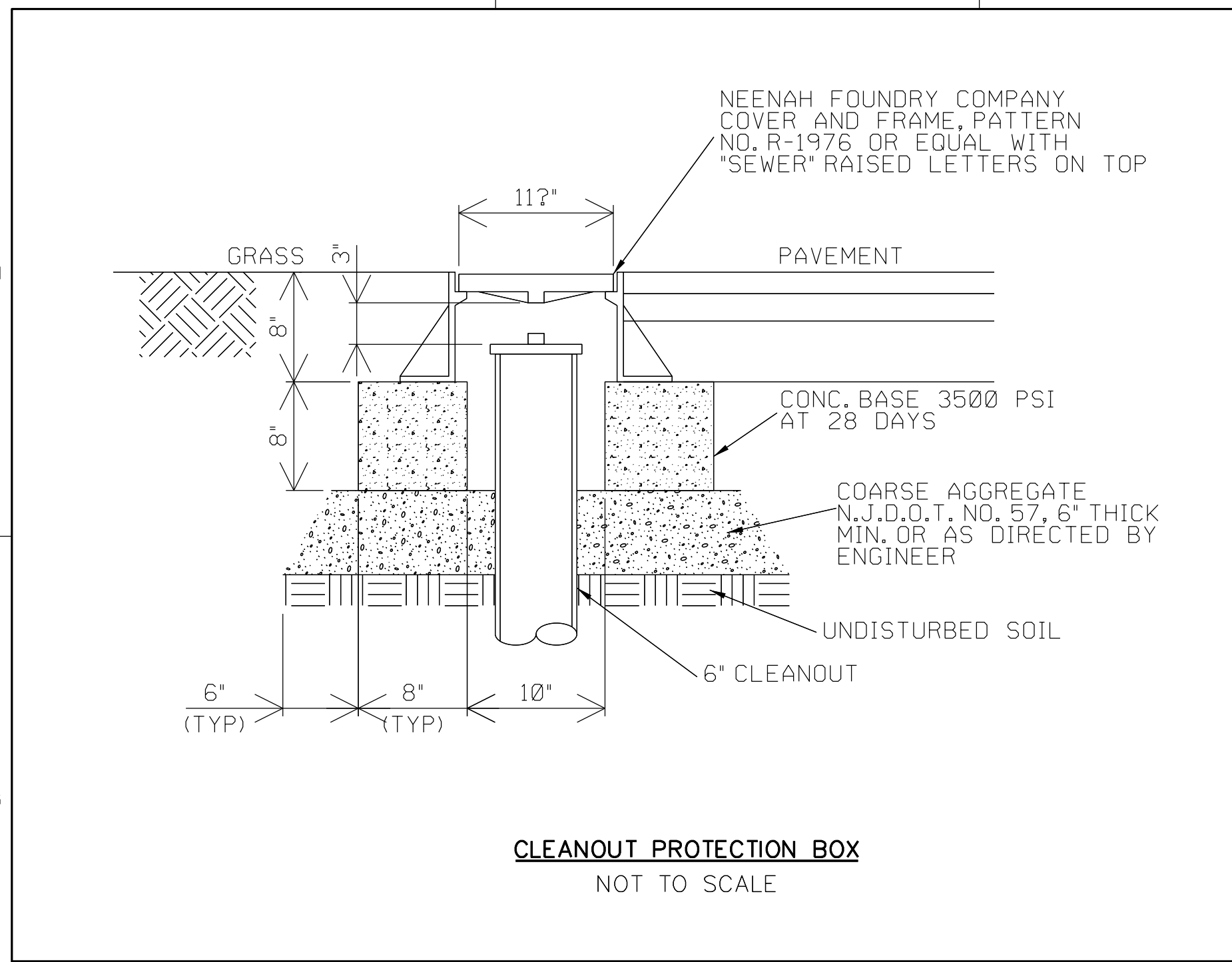
WARNING: STATION CONTAINS KNOWN UNDERGROUND UTILITIES THAT EXIST WITHIN THE WORK AREA AND MAY ONLY BE SHOWN ON OTHER DISCIPLINE OR DIVISION DRAWINGS. ADDITIONAL UNKNOWN UTILITIES MAY ALSO BE PRESENT. CONTRACTOR TO FOLLOW PS&G'S EXCAVATION PROCEDURE FOR ALL UNDERGROUND WORK.

REV	DATE	DESCRIPTION
D	5-8-24	ISSUED FOR PERMITTING
C	2-29-24	ISSUED FOR REVIEW
B	11-06-23	ISSUED FOR REVIEW
A	10-11-23	ISSUED FOR REVIEW

MICHAEL J. BLAKE
N.J. PROFESSIONAL ENGINEER
L.C. NO. 24CE0521600
C.O.A. NO. 24GA28066400

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD				
REVISION										
WEST ORANGE SWITCHING STATION 230/26/4KV OUTDOOR SUBSTATION SOIL EROSION & SEDIMENT CONTROL PLAN										
YARD			CIVIL							
PSEG PUBLIC SERVICE ELECTRIC AND GAS COMPANY ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.										
DRAWN: L.POTGIETER CHECKED: S.MACALUSO SCALE: 1"=30'-0" DATE: 03/20/23 EXAMINED: _____ WBS/SO: 90WESTORNGLE APPROVED: _____										
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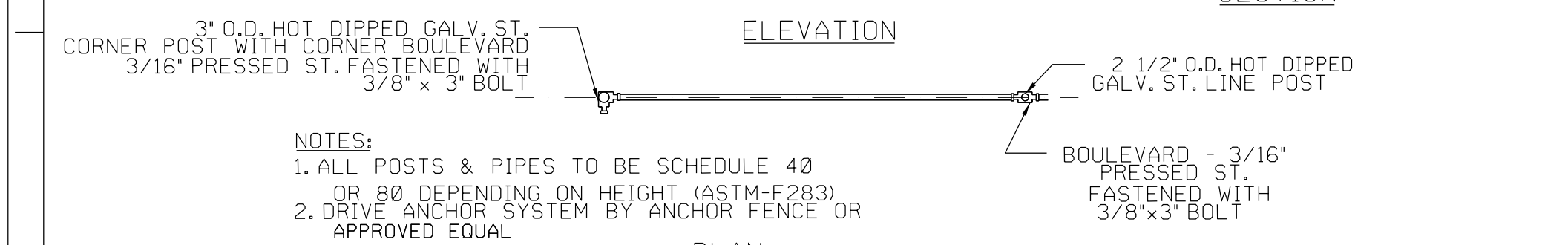
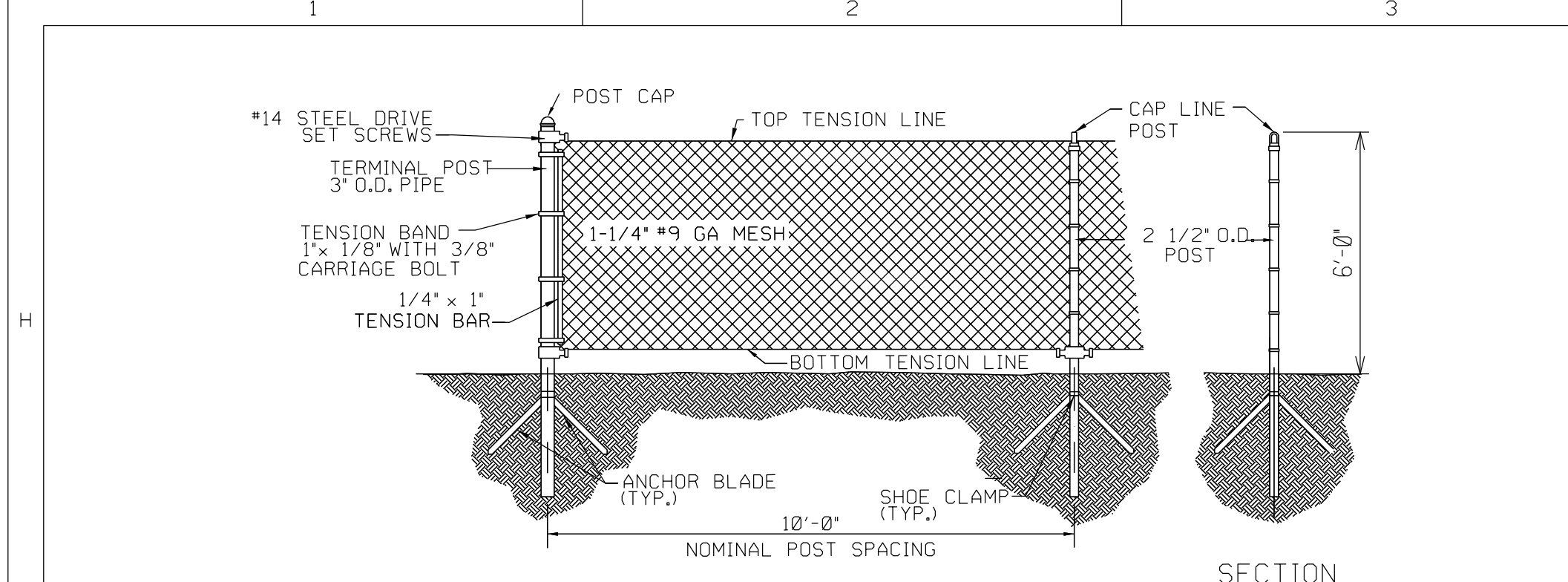
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REVISION	DESCRIPTION
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2	ISSUED FOR REVIEW
3	ISSUED FOR REVIEW
4	ISSUED FOR REVIEW

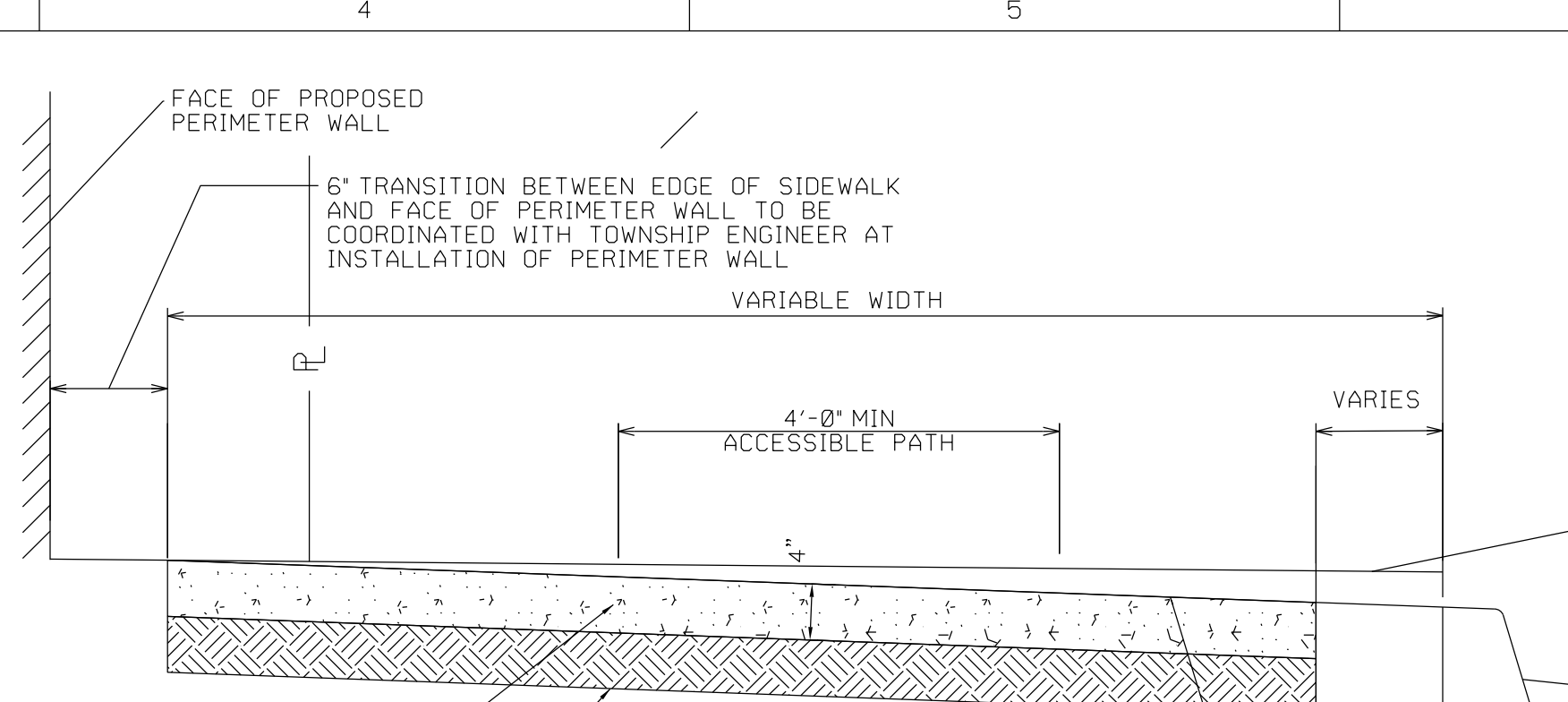
GENERAL NOTES
USE PRINTS OF LATEST REVISION ONLY.
DO NOT SCALE - USE DIMENSIONS ONLY.
FOR LIST OF REFERENCE DRAWINGS SEE DRAWING NO: THIS DRAWING
THIS DRAWING SUPERSEDES: NONE
THIS DRAWING IS SHEET NO 1 OF 3 SHEETS.

MICHAEL J. BLAKE
N.J. PROFESSIONAL ENGINEER
L.C. NO. 24CE05521600
C.O.A. NO. 24GA28066400

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD
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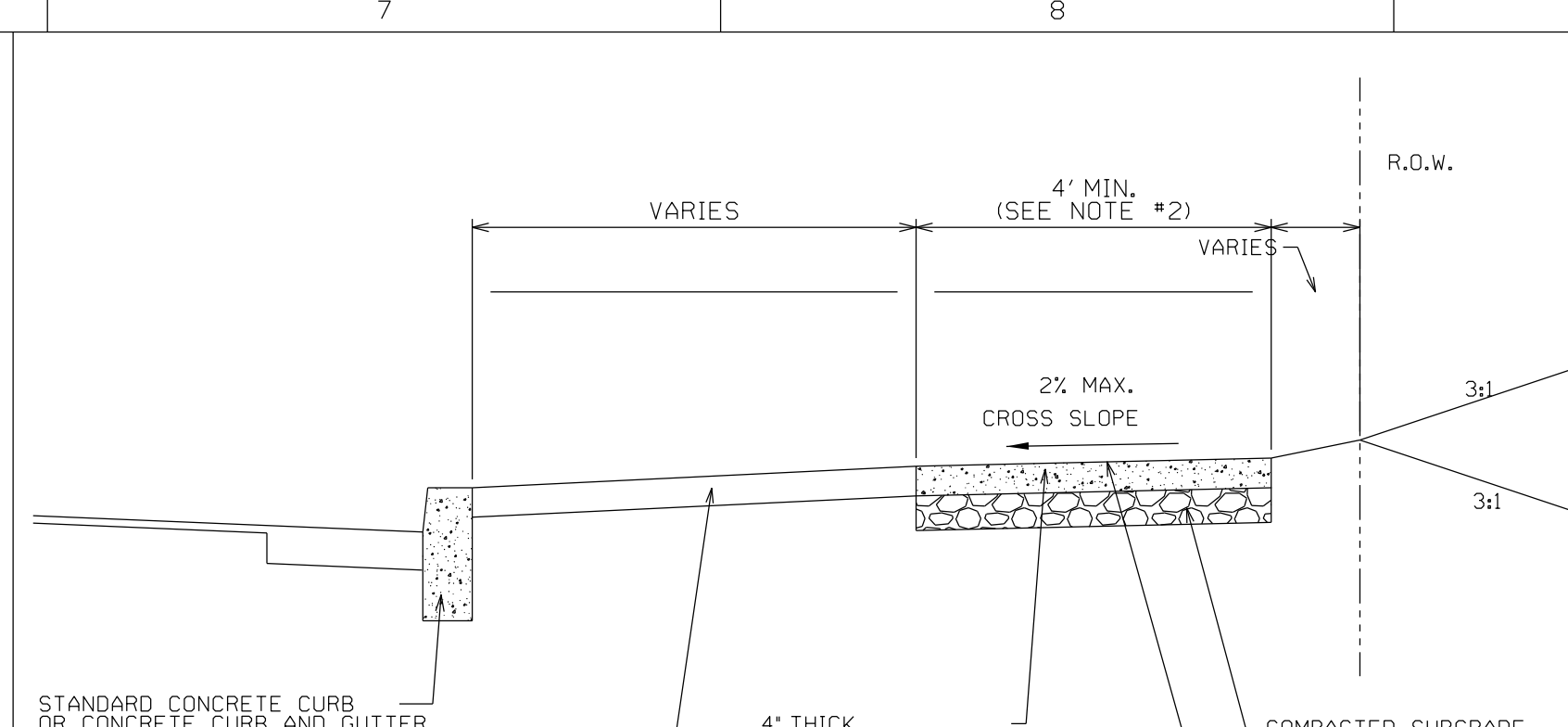


TEMPORARY CONSTRUCTION CHAIN LINK FENCE WITH ALUMINIZED OR GALVANIZED STEEL FABRIC NOT TO SCALE



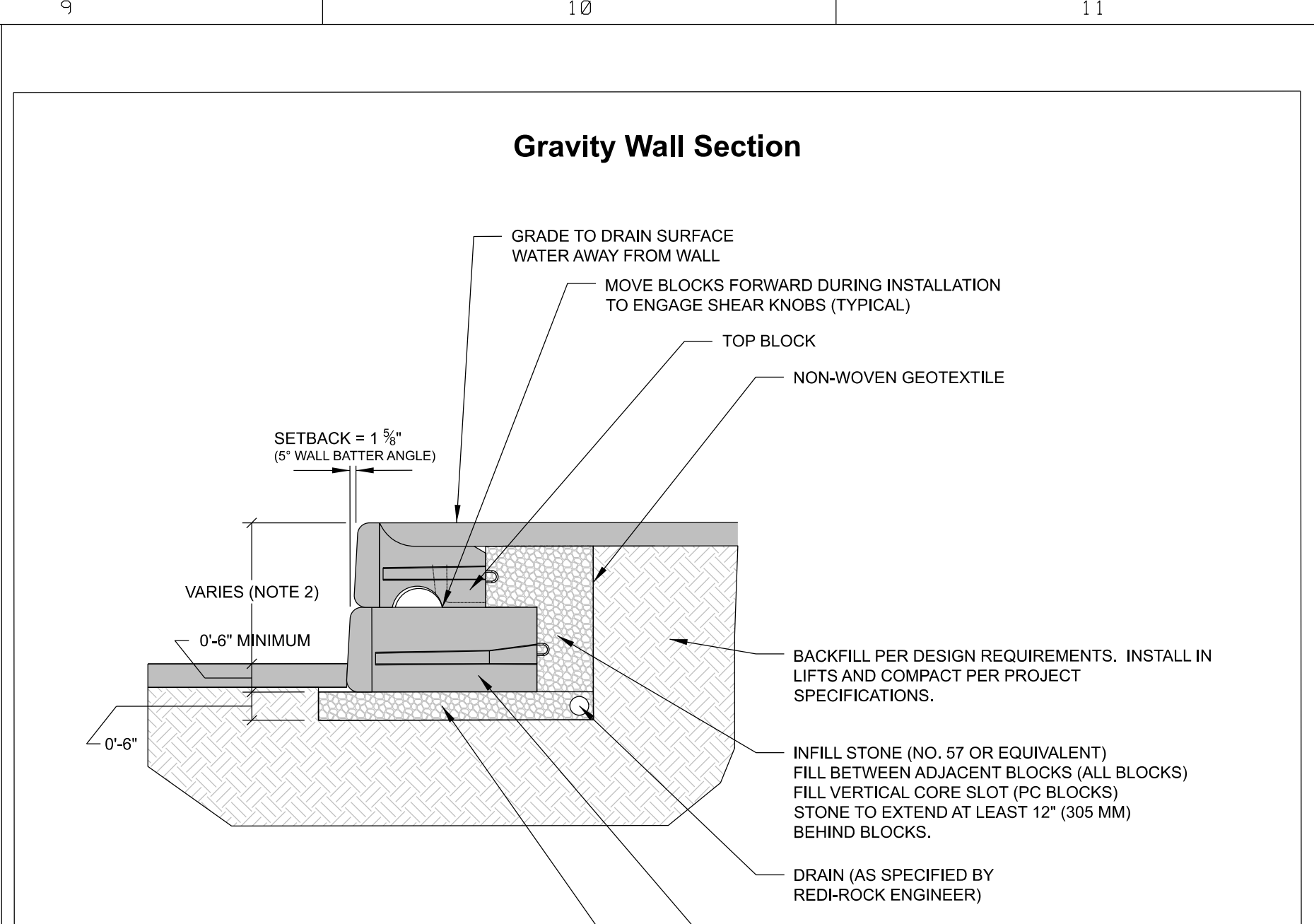
THE SIDEWALK AND RAMP SECTIONS SHALL BE BROOM FINISHED AND EDGED AT THE TOP CORNERS TO CREATE THE STANDARD FINISHED TOP, OR AS SPECIFIED BY THE TOWNSHIP ENGINEER.

SIDEWALKS: FALSE JOINT EVERY FOUR (4) FEET. EXPANSION JOINTS: A. AT START/END OF EXISTING SECTIONS. B. EVERY FOUR (4) FEET OR SIXTEEN (16) FEET, NOT TO EXCEED TWENTY (20) FEET. C. RECESSED 1/4 INCH FROM TOP FACE. D. SHALL BE PRE-FORMED, BITUMINOUS IMPREGNATED FIBER JOINT FILLER PER A.A.S.H.T.O. SPEC M-213.



NOTES: 1. TURF RESTORATION TO CONSIST OF A MINIMUM OF 4" OF SELECT TOPSOIL, FERTILIZER AND SEED AS PER SPECIFICATIONS. 2. IF SUBGRADE MATERIAL IS UNSUITABLE, CONTRACTOR TO REMOVE, PER COUNTY ENGINEER'S DISCRETION AND REPLACE WITH SELECT FILL AT NO EXTRA COST TO THE COUNTY. 3. SIDEWALK WIDTH SHALL BE 4'-0" MINIMUM UNLESS OTHERWISE NOTED ON THE APPROVED PLANS. 4. CONCRETE SHALL BE CLASS B WITH 28-DAY COMPRESSIVE STRENGTH OF 4,500 PSI AND 5.5% (+/- 1.5%) AIR ENTRAINMENT.

NOT TO SCALE



NOTES: 1. MOVE BLOCKS FORWARD DURING INSTALLATION TO ENGAGE SHEAR KNOBS. 2. FOR EXPOSED WALL HEIGHTS AND BURY DEPTHS, SEE DRAWING 776452-A GRADING CONTROL POINTS FOR TOP OF WALL AND BOTTOM OF WALL ELEVATIONS. 3. NON-WOVEN GEOTEXTILE SHALL BE MIRAFI 140N OR ENGINEER-APPROVED EQUAL. 4. CONTRACTOR SHALL COORDINATE QUANTITIES, INSTALLATION, MATERIALS, AND DRAWINGS WITH RED-ROCK. THE DETAIL ABOVE IS GENERIC AND SHOULD BE ADJUSTED AS NEEDED DEPENDING UPON FIELD SPECIFIC CONDITIONS.

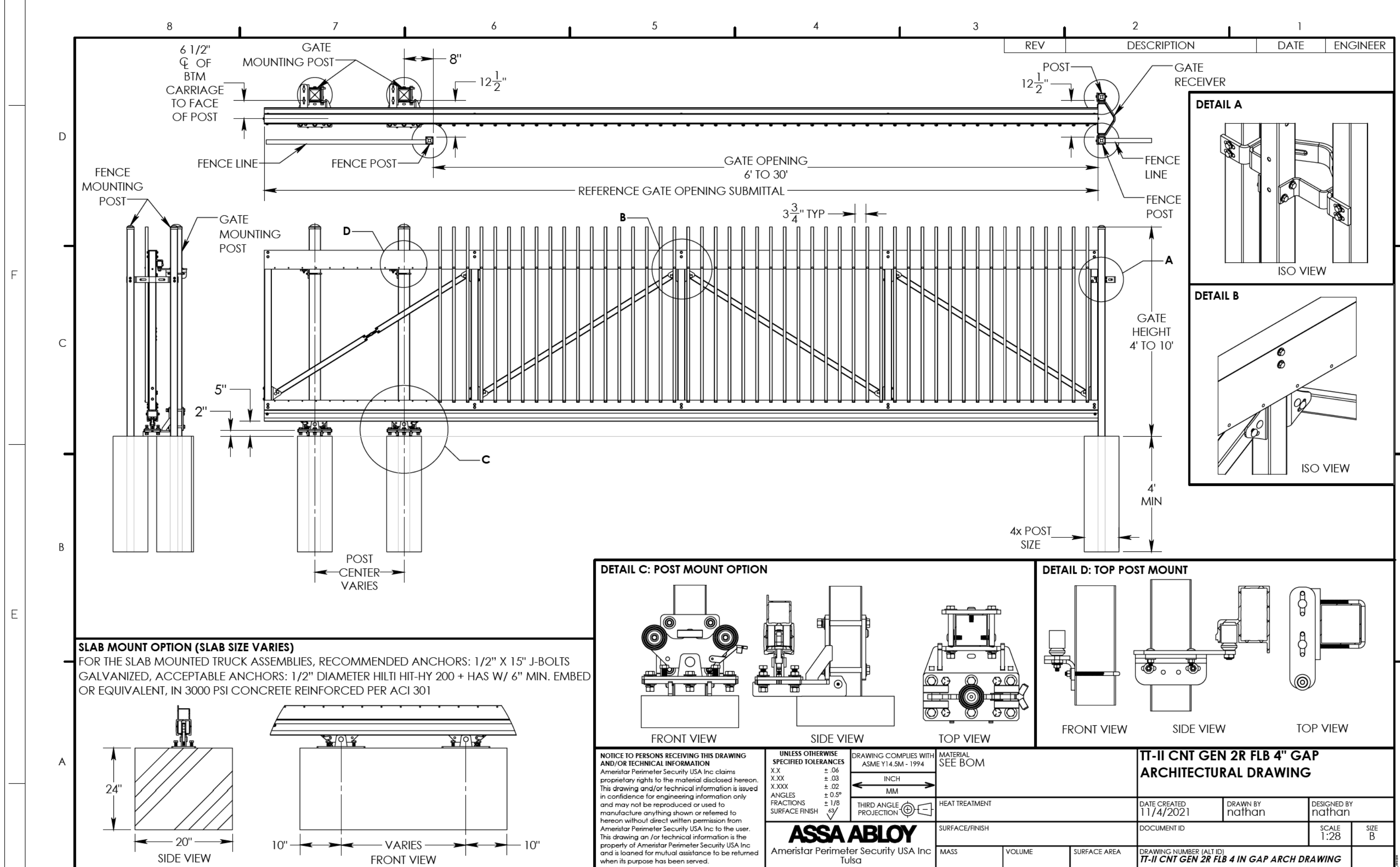
This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

GRAVITY WALL DETAIL

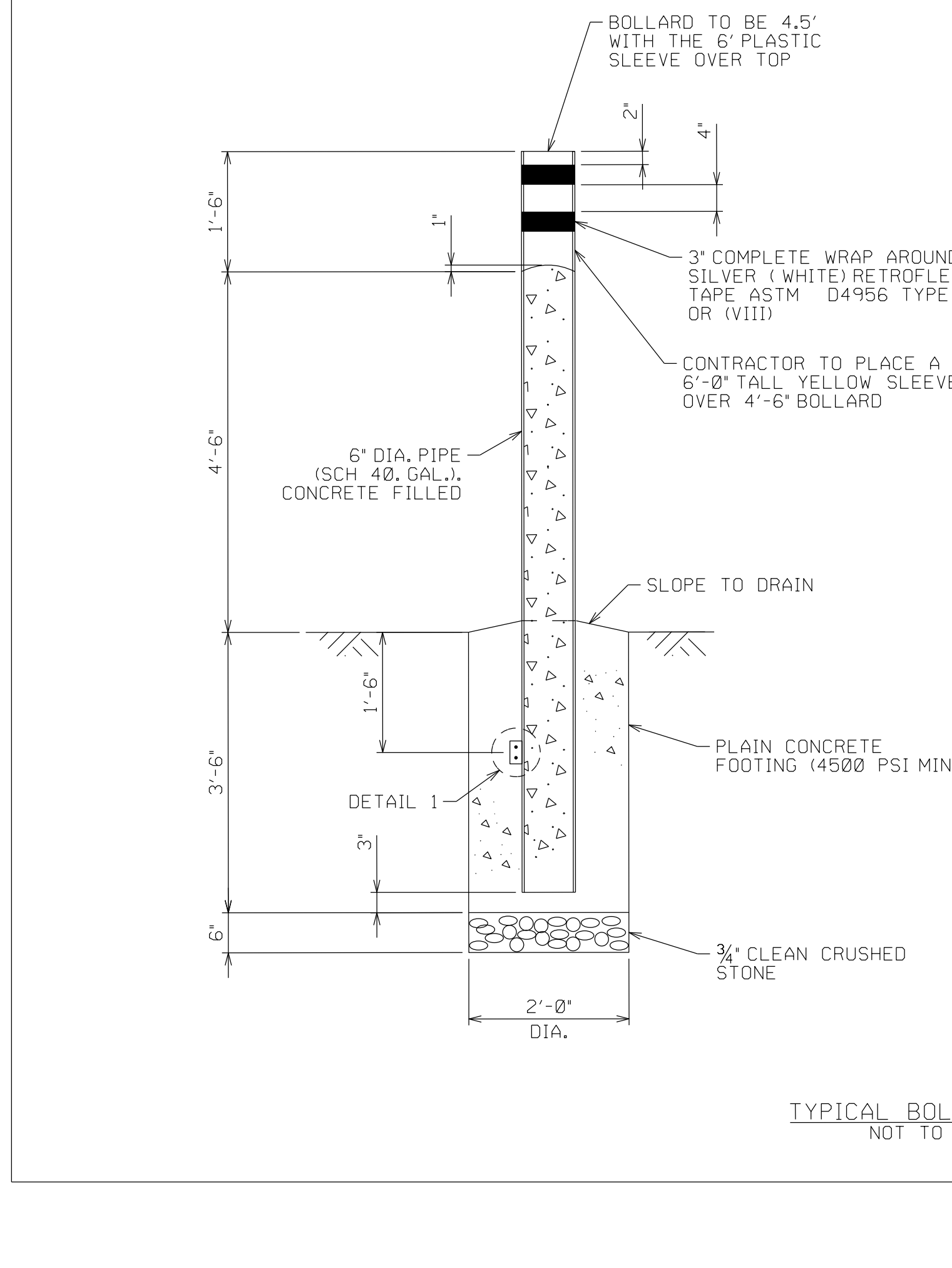
1 TYPICAL GRAVITY WALL DETAIL DWG

NOTES: 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. 2. BASIS OF DESIGN: PRECAST CONCRETE UTILITY WALL WITH STUCCO AND ASHLAR STONE VENEER TO BE EARTH TONE FINISH, EXACT COLOR TO BE DETERMINED. 3. DETAILED SIGNED AND SEALED SHOP DRAWINGS INCLUDING CALCULATIONS FOR WALL AND FOOTINGS TO BE PROVIDED WITH SHOP DRAWINGS. 4. CONTRACTOR MUST COORDINATE LOCATION OF ALL UTILITIES WITHIN CLOSE PROXIMITY TO WALLS FOOTINGS.

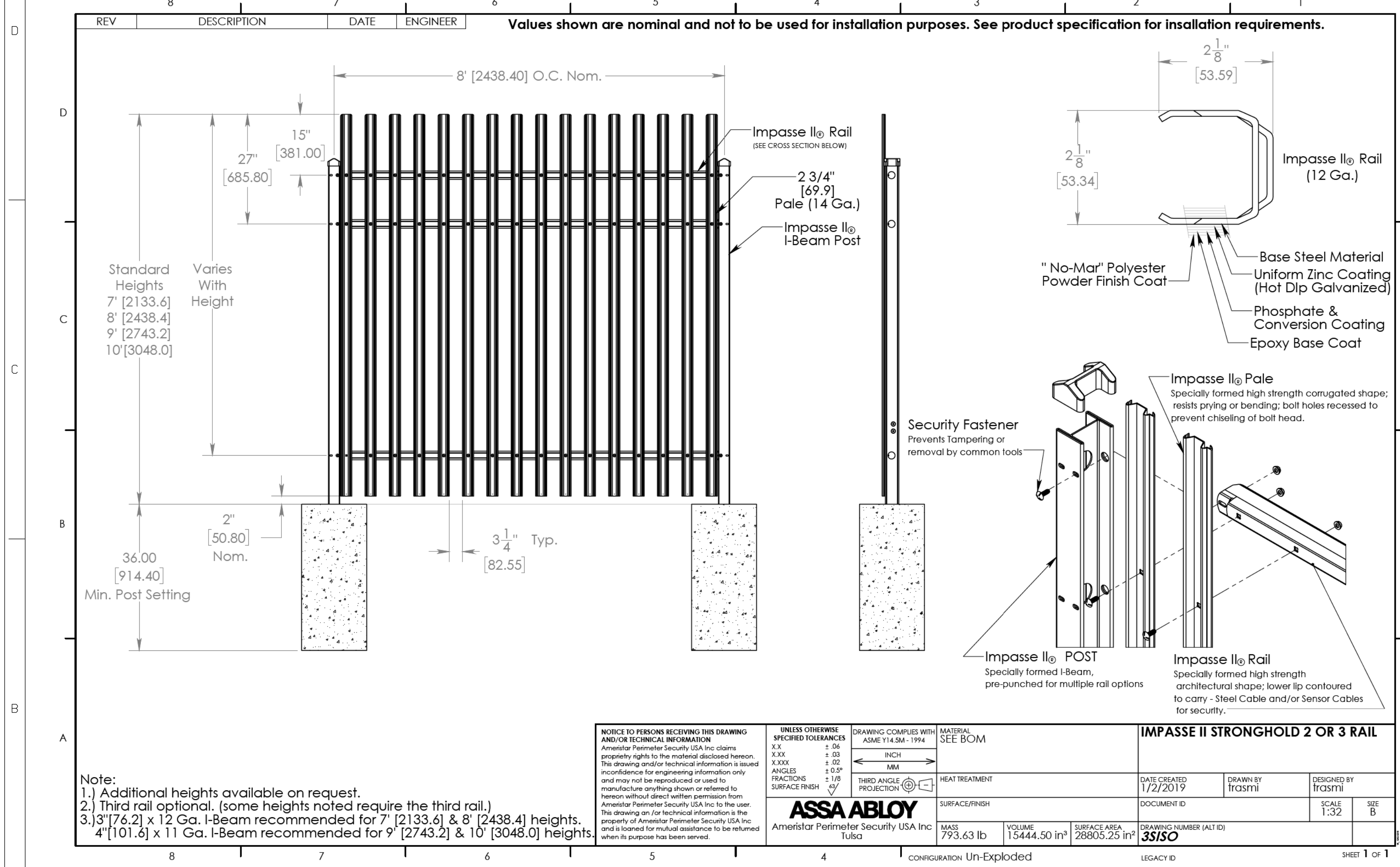
TYP. GRAVITY WALL DETAIL NOT TO SCALE



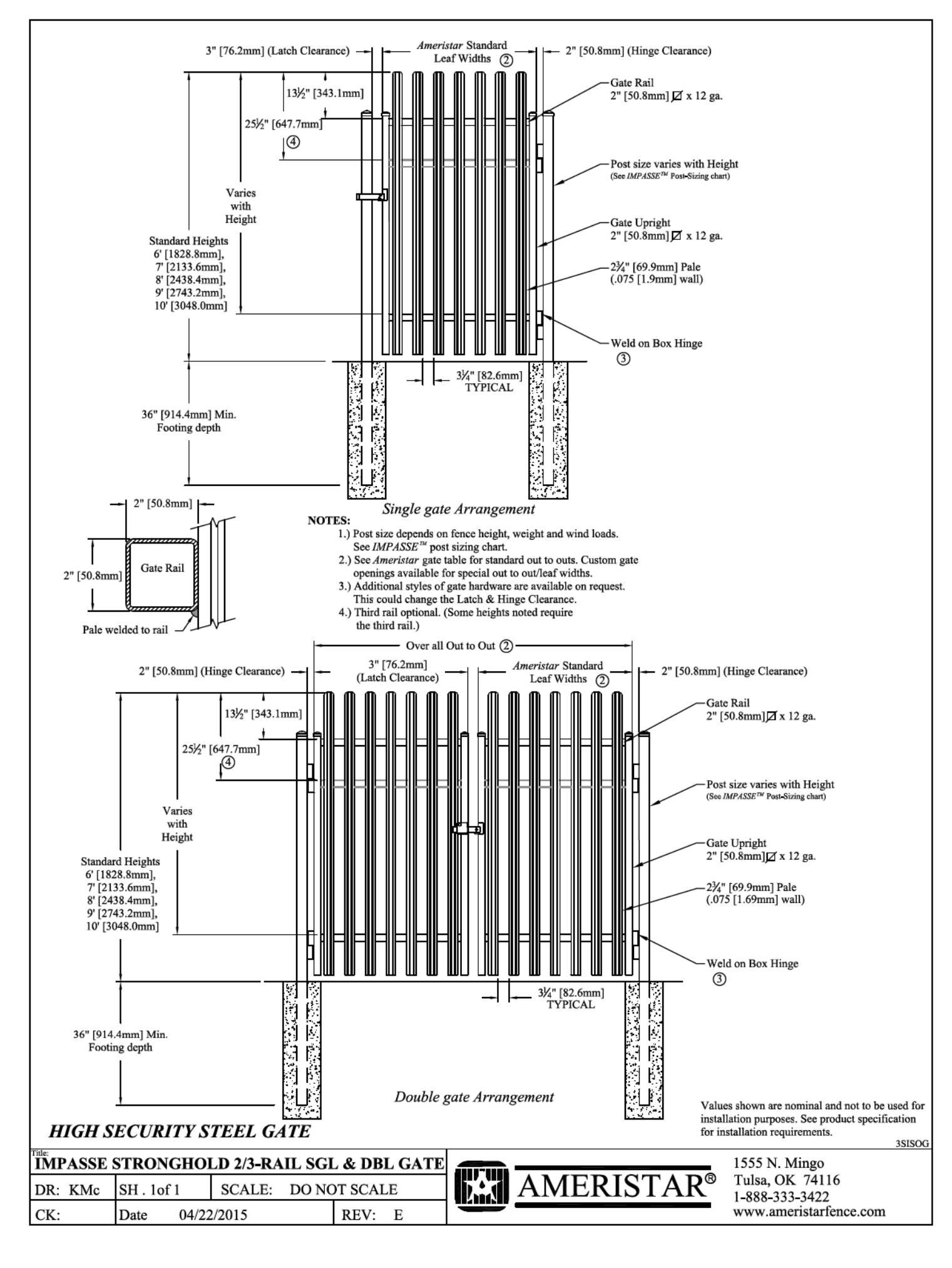
IT-II CNT GEN 2R FLB 4" GAP ARCHITECTURAL DRAWING



TYP. BOLLARD DETAIL NOT TO SCALE



IMPASSE II STRONGHOLD 2 OR 3 RAIL



HIGH SECURITY STEEL GATE

GRAVITY WALL DETAIL

1 TYPICAL GRAVITY WALL DETAIL DWG

NOTES: 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. 2. BASIS OF DESIGN: PRECAST CONCRETE UTILITY WALL WITH STUCCO AND ASHLAR STONE VENEER TO BE EARTH TONE FINISH, EXACT COLOR TO BE DETERMINED. 3. DETAILED SIGNED AND SEALED SHOP DRAWINGS INCLUDING CALCULATIONS FOR WALL AND FOOTINGS TO BE PROVIDED WITH SHOP DRAWINGS. 4. CONTRACTOR MUST COORDINATE LOCATION OF ALL UTILITIES WITHIN CLOSE PROXIMITY TO WALLS FOOTINGS.

TYP. GRAVITY WALL DETAIL NOT TO SCALE

REFERENCE DRAWINGS:

1. REMOVAL PLAN
2. CIVIL SITE PLAN
3. GRADING & DRAINAGE
4. STORM SEWER PROFILES
5. FENCE & GATE PLAN
6. SOIL EROSION & SEDIMENT CONTROL PLAN
7. SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH1
8. SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH2
9. CIVIL DETAILS SH1
10. CIVIL DETAILS SH3
11. TREE REMOVAL PLAN
12. TREE REMOVAL NOTES & DETAILS
13. TREE REMOVAL NOTES & DETAILS

NO DATE DESCRIPTION DWN CKD EXD APO

REVISION

WEST ORANGE SWITCHING STATION

230/26/4KV OUTDOOR SUBSTATION

CIVIL DETAILS

DETAILS SH 2 CIVIL

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

MICHAEL J. BLAKE

792797 A

DATE 03/20/23

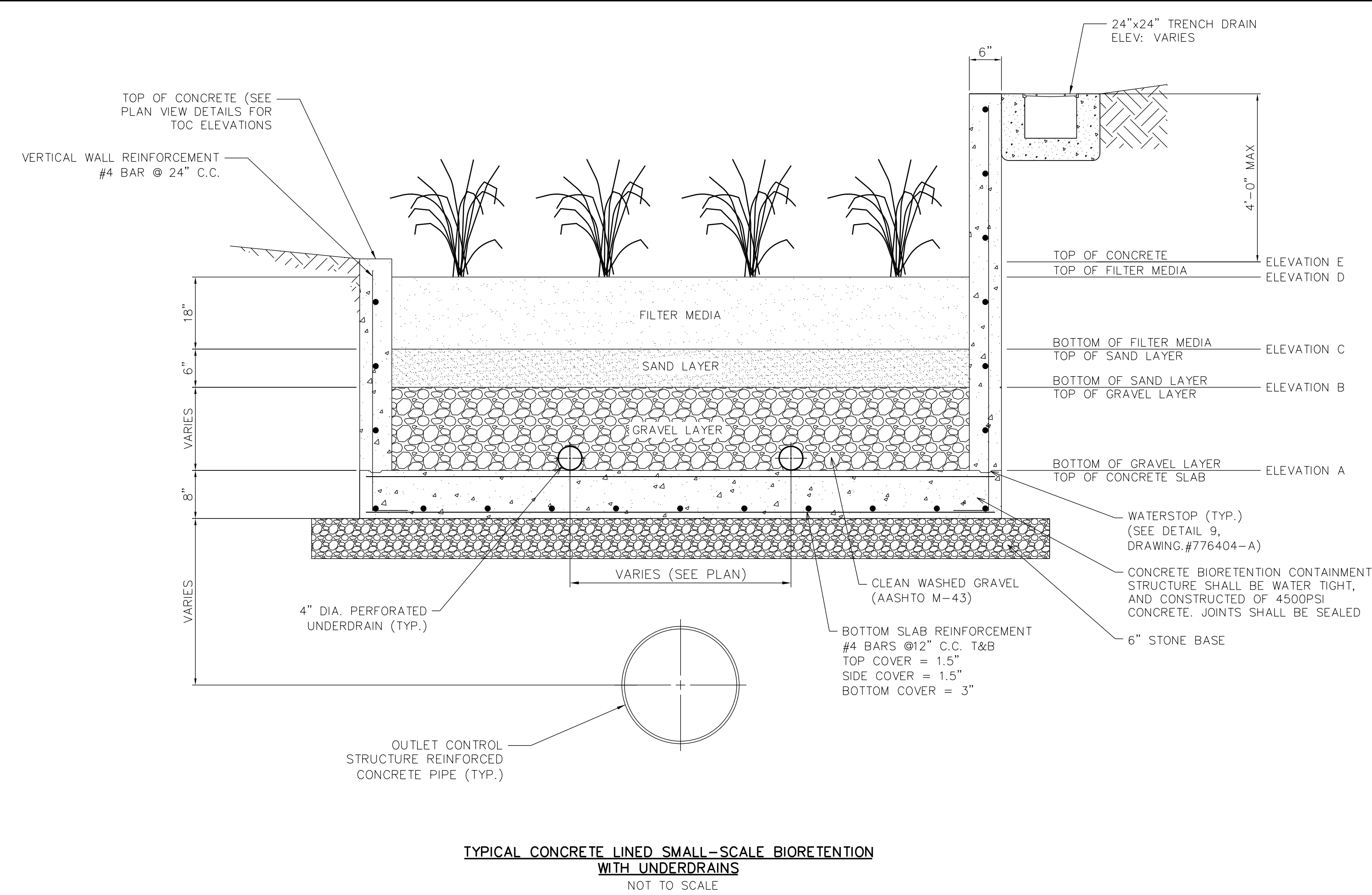
WBS/SD 90WESTORNGLE APPROVED

792797 A

WARNING: STATION CONTAINS KNOWN UNDERGROUND UTILITIES THAT EXIST WITHIN THE WORK AREA AND MAY ONLY BE SHOWN ON OTHER DISCIPLINE OR DIVISION DRAWINGS. ADDITIONAL UNKNOWN UTILITIES MAY ALSO BE PRESENT. CONTRACTOR TO FOLLOW PSE&G'S EXCAVATION PROCEDURE FOR ALL UNDERGROUND WORK.

REVISION

792797 A



TYPICAL CONCRETE LINED SMALL-SCALE BIORETENTION WITH UNDERDRAINS
NOT TO SCALE

BIORETENTION MEDIA NOTES:

- BIORETENTION MEDIA SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

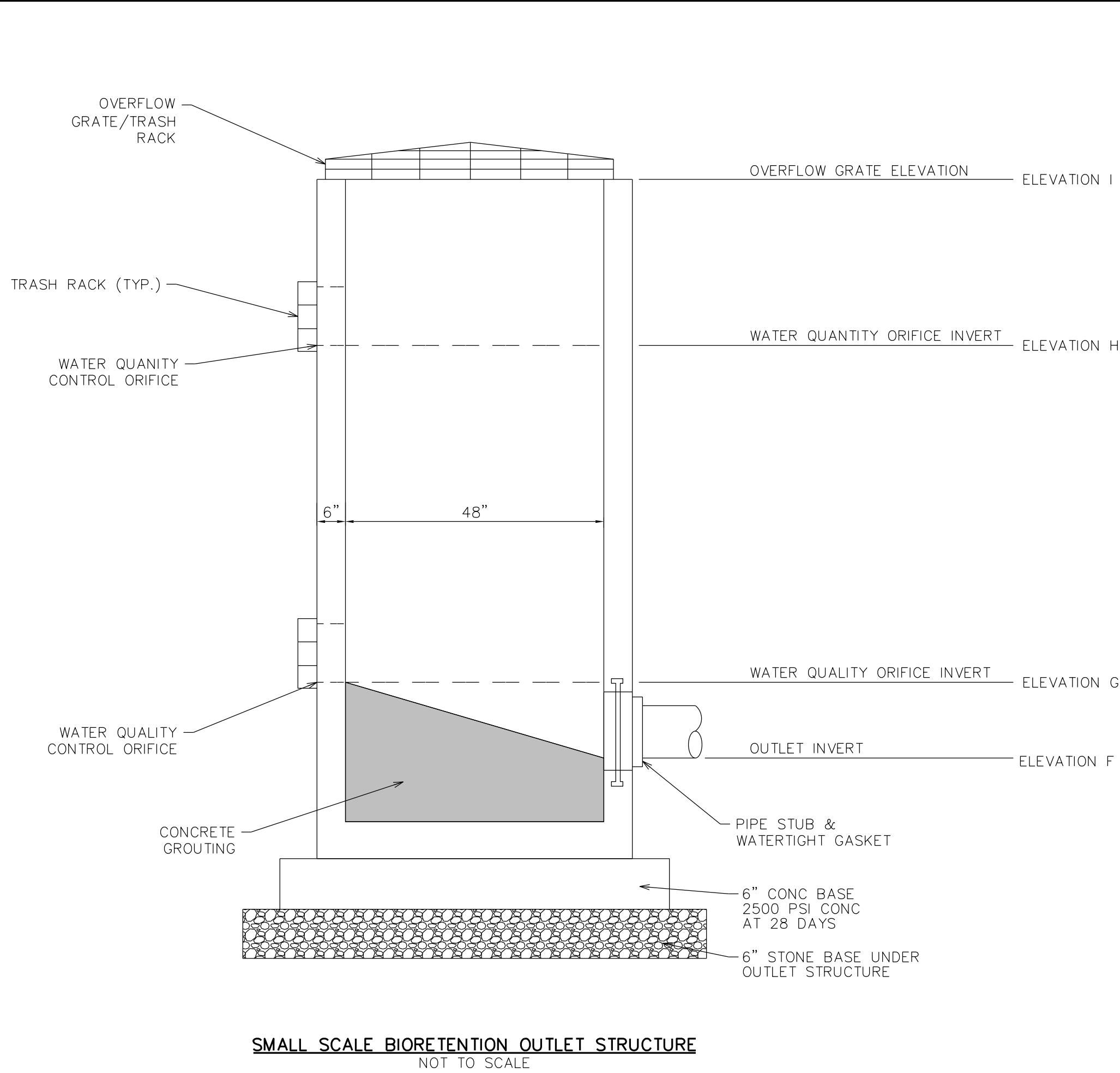
PROPERTY	REQUIREMENT	PROPERTY	REQUIREMENT
PH	5.5-6.5	ORGANIC MATTER	3.0%-7.0%
MG	35 LB./AC.	SAND	85-95%
K	85 LB./AC.	SILT	5-8%
SALTS	<500 PPM	CLAY	2-5%
CEC	10-25 CMOL/KG		
- THE SAND COMPONENT SHALL AT THE MINIMUM CONFORM TO THE SIEVE ANALYSIS FOR CONCRETE AGGREGATE SAND (ASTM-33) AND HAVE A PHOSPHORUS COMPOSITION NO GREATER THAN 10 MG/KG. THE USGA TEE/GREEN SIEVE GRADATION MIX C#108 IS PREFERABLE WHERE AVAILABLE.
- A MINIMUM OF 15% (BY VOLUME) AGED SPHAGNUM PEAT MOSS SHALL BE ADDED TO THIS MIXTURE TO MEET THE REQUIRED ORGANIC MATTER CONTENT. COMPOST SHALL COMPRISE NO MORE THAN 0.5% BY WEIGHT (5% BY VOLUME), AND SHALL BE RESTRICTED TO THE PLANTING.
- THE MEDIA SHALL BE THOROUGHLY BLENDED, PREFERABLY AT A MIXING PLANT. THE ONLY METHOD TO BLEND THE MEDIA ON-SITE SHALL REQUIRE A SCREENING PLANT WITH ADEQUATE CAPACITY TO ENSURE THAT THE PROPER RATIOS ARE FULLY BLENDED.
- THE MEDIA SHALL BE PLACED IN TWO LAYERS, WITH THE TOP OF THE LOWER LAYER SCARIFIED TO ENCOURAGE VERTICAL RATHER THAN HORIZONTAL FLOW AT THE INTERFACE BETWEEN LAYERS. THE LAYER COMBINATION CONSISTS OF A BOTTOM LAYER OF LOAMY PEAT-SAND OVERLAIN BY 6" OF THE SAME LOAMY PEAT-SAND, MIXED WITH 5% COMPOST IN ORDER TO REACH AN APPROPRIATE ORGANIC CONTENT TO PROMOTE INITIAL GROWTH OF THE PLANT MATERIAL.
- CALOTIC LIME SHALL BE ADDED AS REQUIRED TO MEET THE PH SPECIFICATIONS.
- ALL ORGANIC MATTER AMENDMENTS, TOPSOIL AND SAND SHALL BE TESTED FOR GRADATION AND FERTILITY AND PHOSPHORUS CONTENT TO OBTAIN THE PROPER MIXTURE RATIO. THE MEDIA SHALL BE MIXED WITH A SCREENING PLANT OR SIMILAR LARGE SCALE MIXING EQUIPMENT. THE ON-SITE "DIG AND DROP" METHOD SHALL NOT BE PERMITTED.
- THE ENGINEER SHALL APPROVE OF THE MIXTURE RATIO AND METHOD BEFORE PERMITTING THE BIORETENTION MEDIA TO BE PLACED IN THE FACILITY.
- EXISTING FILL DIRT AND TOPSOIL MUST BE COMPLETELY REMOVED BEFORE INSTALLING UNDERDRAIN STONE AND BIORETENTION MEDIA.
- ALL BIORETENTION SHALL BE PLACED BY TRACKHOE EXCAVATOR FROM THE SIDES OF THE FACILITIES, AND IN NO EVENT SHALL ANY TRACKED OR WHEELED EQUIPMENT BE PERMITTED TO CROSS THE BIORETENTION MEDIA. THE ENGINEER SHALL BE PRESENT TO WITNESS THE PLACEMENT OF BIORETENTION MEDIA. THE BULK DENSITY OF THE INSTALLED SHALL BE NO MORE THAN 95 POUNDS PER CUBIC FOOT.
- TO ALLOW FOR SETTLEMENT, THE BIORETENTION MEDIA SHALL BE LOOSELY PLACED AT A DEPTH ABOVE FINAL GRADE EQUAL TO 115% OF THE SPECIFIED. IT SHALL BE LEVELED BY HAND.

BIORETENTION SEED NOTES:

- VEGETATION WITHIN THE BIORETENTION BASIN SHALL BE IN ACCORDANCE WITH NEW JERSEY STORMWATER BEST MANAGEMENT PRACTICES MANUAL, CHAPTER 7
- SPECIFIC PLANTS SHALL BE APPROVED BY THE OWNER & ENGINEER
- SHADE SEED MIX TO BE SEEDED IN BIORETENTION BASIN BETWEEN SHRUB PLANTINGS. IT MAY ALSO BE USED AT THE OUTLET STRUCTURE. SUNNY SEED MIX TO BE PLACED ON BIORETENTION BASIN BOTTOM AND LOWER SLOPES. MEADOW MIX TO BE USED WHERE DIRECTED BY THE OWNER.
- ALL MULCH TO BE DOUBLE SHREDDED HARDWOOD MULCH, AGED FOR AT LEAST ONE YEAR. IN LOCATIONS WHERE FLOWS ARE CONCENTRATED ENOUGH TO MOBILIZE THE MULCH, MULCH SHALL BE COVERED WITH A WEED CONTROL GEOTEXTILE, STAPLED TO THE SOIL.

BIORETENTION STRUCTURE NOTES:

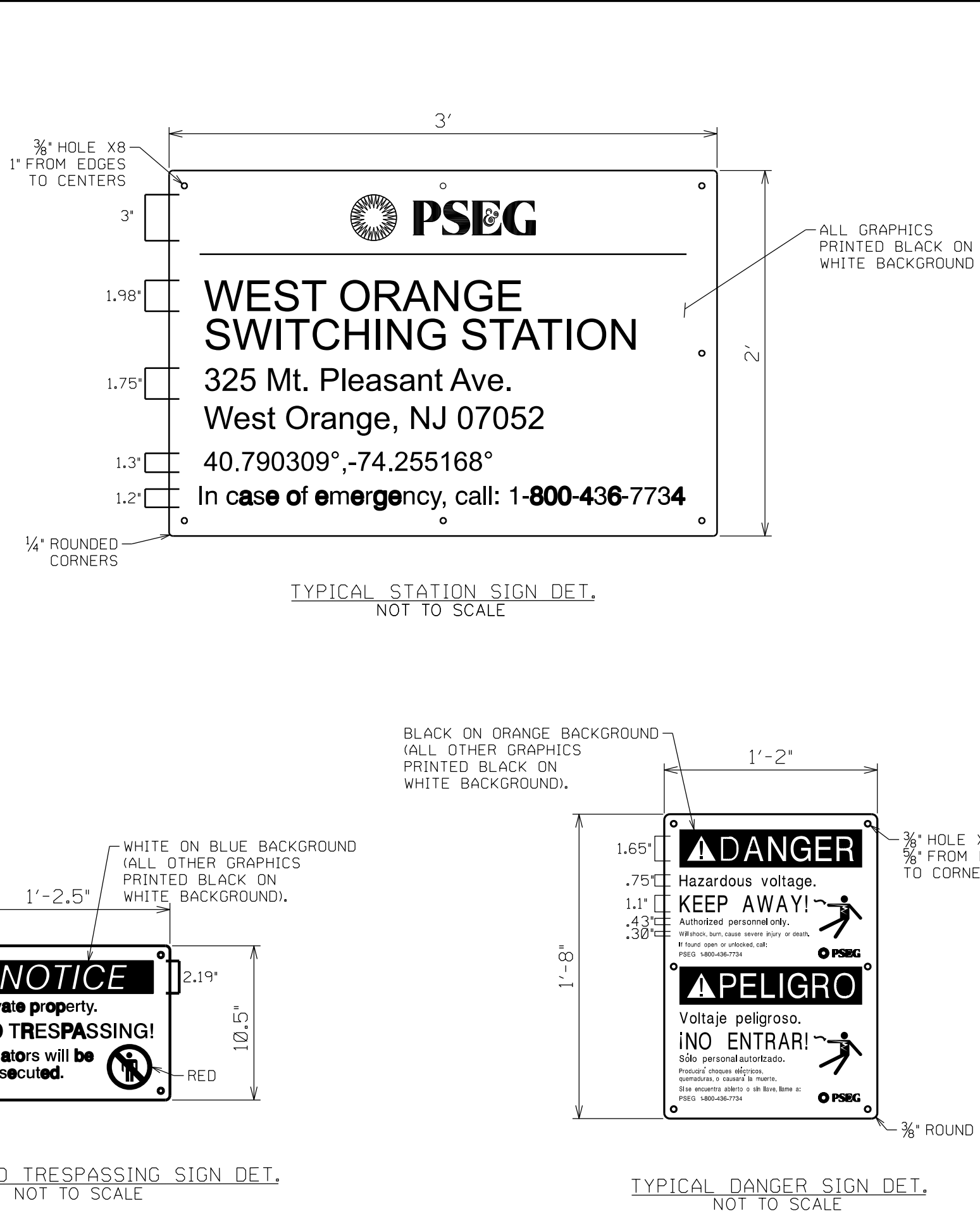
- REINFORCE WALL WITH A SINGLE CENTERED LAYER OF #6 @ 6" MAIN LONGITUDINAL REINFORCEMENT AND #6 @ 12" TRANSVERSE REINFORCEMENT
- BIORETENTION FILL AND STATION BACKFILL ON OPPOSITE SIDES OF ANY BASIN WALL MUST BE INSTALLED CONCURRENTLY. CONTRACTOR SHALL TREAT BASIN WALLS AS STORM DRAINAGE PIPES, AND BACKFILL EVENLY ON EITHER SIDE OF EACH WALL PER BMDG SPEC 31.20.00 SITE PREPARATION AND EARTHWORK 2.104.3.
- IF AT ANY TIME, THE FILL INSIDE THE BIORETENTION BASIN IS REMOVED, THE BASIN WALLS MUST BE TEMPORARILY SHORED TO ENSURE THE INTEGRITY OF THE BASIN WALLS



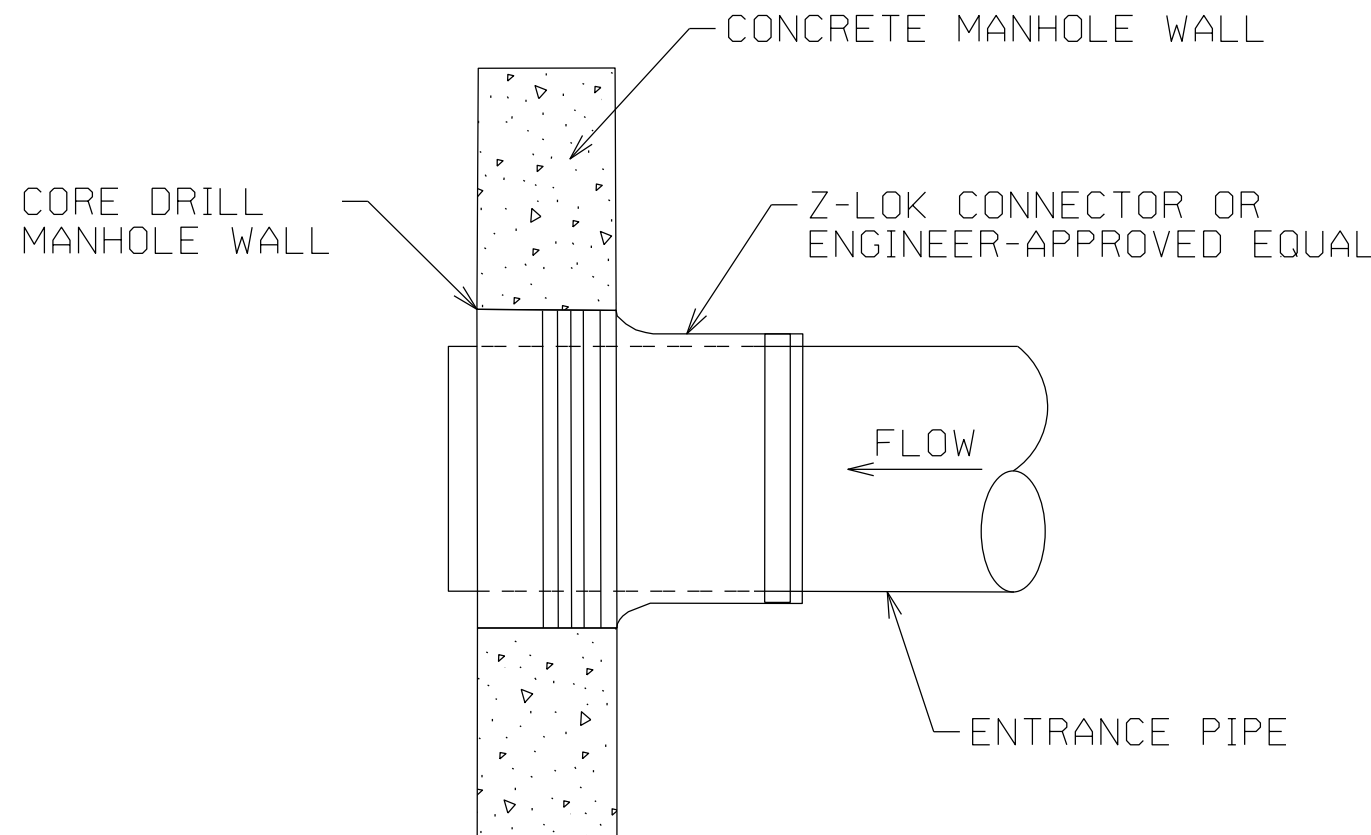
SMALL SCALE BIORETENTION OUTLET STRUCTURE
NOT TO SCALE

BIORETENTION AND CONTROL STRUCTURE ELEVATIONS AND CONTROL ORIFICES					
	BR-01	BR-02	BR-03	BR-04	BR-05
APPROXIMATE SEASONAL HIGH WATER TABLE ELEVATION*	595.00	597.00	593.00	593.70	592.80
UNDERDRAIN DIAMETER (IN)	4"	4"	4"	4"	4"
TOP OF BASIN WALL ELEVATION F	602.50'	601.50'	601.25'	599.75'	599.75'
TOP OF FILTER MEDIA LAYER ELEVATION D	599.50'	601.00'	597.50'	598.20'	597.30'
TOP OF SAND LAYER ELEVATION C	598.00'	599.50'	596.00'	596.70'	595.80'
TOP OF GRAVEL LAYER ELEVATION B	597.50'	599.00'	595.50'	596.20'	595.30'
BOTTOM OF BASIN ELEVATION A	596.00'	598.00'	594.00'	594.70'	593.80'
OVERFLOW GRATE ELEVATION I	602.40'	601.40'	601.15'	599.65'	599.65'
CONTROL STRUCTURE WATER QUANTITY ORIFICE & DIAMETER ELEVATION H	600.50' 2.5"x12" ORIFICE	601.10' 2.5"x12" ORIFICE	598.50' 2.5"x2.5" ORIFICE	598.30' 2.5"x2.5" ORIFICE	598.20' 2.5"x12" ORIFICE
CONTROL STRUCTURE WATER QUALITY ORIFICE & DIAMETER ELEVATION G	596.00' 2.5"Ø ORIFICE	598.00' 2.5"Ø ORIFICE	594.00' 2.5"Ø ORIFICE	594.70' 2.5"Ø ORIFICE	593.80' 2.5"Ø ORIFICE
CONTROL STRUCTURE OUTLET INVERT ELEVATION F	591.57'	590.35'	588.19'	586.53'	584.63'

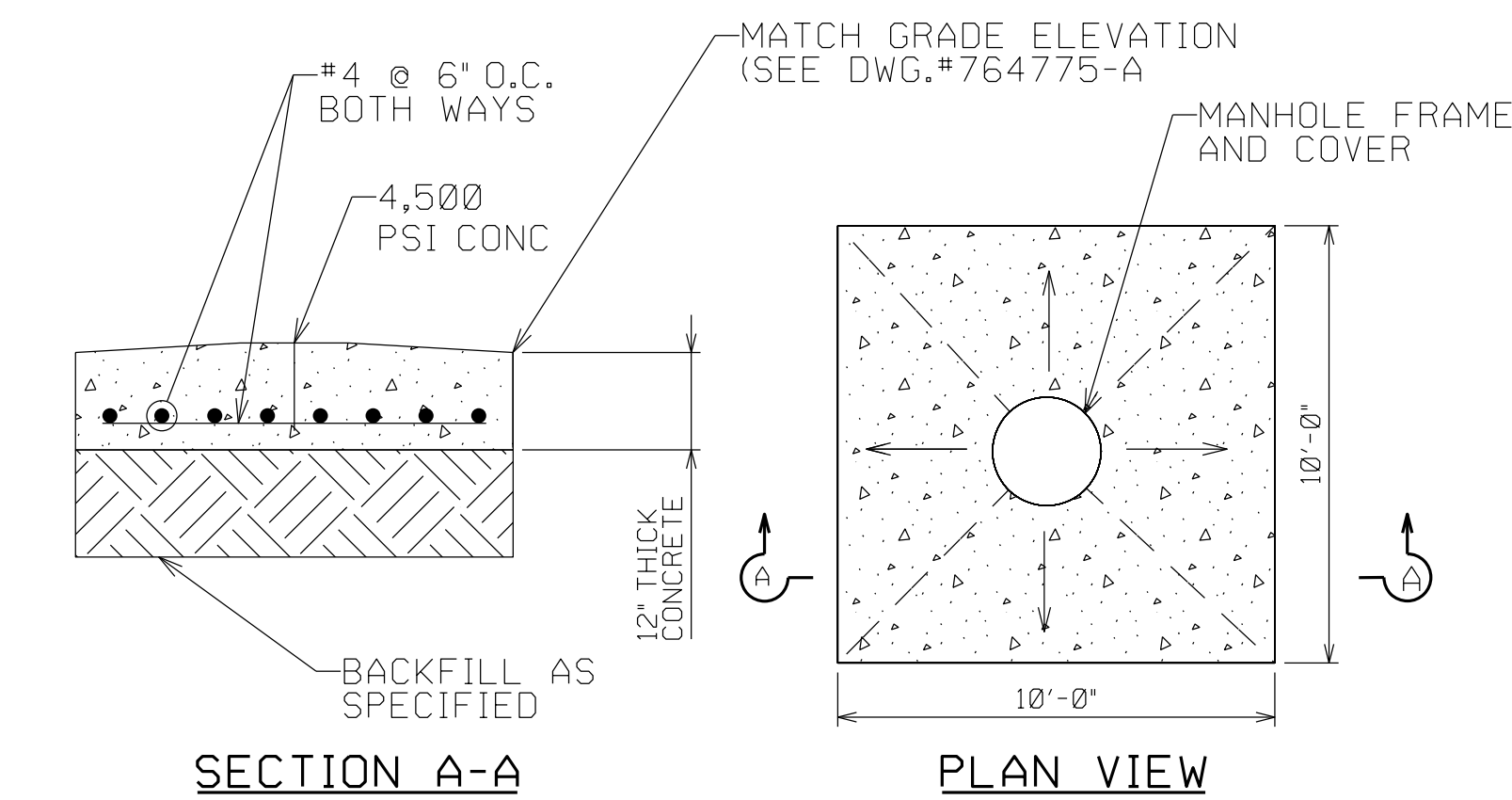
* TEST PIT AND SEASONAL HIGH-WATER TABLE DATA FOUND IN GEOTECHNICAL REPORT PROVIDED BY MELICK-TULLY & ASSOCIATES, DATED AUGUST 8, 2022 AND REPORT ADDENDUM DATED JANUARY 17, 2023.



- NOTES:
- DANGER HIGH VOLTAGE SIGN SHALL BE MOUNTED TO EXTERIOR OF SECURITY FENCE AT 50' SPACING AT MID-SPAN OF THE TYPICAL 10 FT. FENCE PANEL AND ALL GATE LEAFS. THEY SHALL BE PLACED AT A HEIGHT OF 5 FT.
 - STATION IDENTIFICATION SIGN SHALL BE MOUNTED ON ALL PROSPECT AVENUE AND MT PLEASANT AVE DRIVE GATES.
 - NO TRESPASSING SIGNS SHALL BE PLACED ON ALL PROSPECT AVENUE AND MT PLEASANT AVE DRIVE GATES.
 - SIGNS SHALL BE NON CONDUCTIVE MATERIAL. METAL SIGNS ARE PROHIBITED.
 - SIGNS SHALL BE MOUNTED WITH NYLON ANTI-THEFT BRACKETS.



EXISTING CONCRETE MANHOLE CONNECTION
NOT TO SCALE



DUCT BANK MANHOLE APRON
NOT TO SCALE

REFERENCE DRAWINGS:

- | NO. | DESCRIPTION | DWG.# |
|-----|---|----------------|
| 1. | REMOVAL PLAN | DWG.# 792788-A |
| 2. | CIVIL SITE PLAN | DWG.# 792789-A |
| 3. | GRADING & DRAINAGE | DWG.# 792790-A |
| 4. | STORM SEWER PROFILES | DWG.# 792791-A |
| 5. | FENCE & GATE PLAN | DWG.# 792792-A |
| 6. | SOIL EROSION & SEDIMENT CONTROL PLAN | DWG.# 792793-A |
| 7. | SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH1 | DWG.# 792794-A |
| 8. | SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS SH2 | DWG.# 792795-A |
| 9. | CIVIL DETAILS SH1 | DWG.# 792796-A |
| 10. | CIVIL DETAILS SH2 | DWG.# 792797-A |
| 11. | TREE REMOVAL PLAN | DWG.# TR-01 |
| 12. | TREE REMOVAL NOTES & DETAILS | DWG.# TR-02 |
| 13. | TREE REMOVAL NOTES & DETAILS | DWG.# TR-03 |

GENERAL NOTES
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FOR LIST OF REFERENCE DRAWINGS SEE DRAWING NO: THIS DRAWING
THIS DRAWING SUPERSEDES: NONE
THIS DRAWING IS SHEET NO 3 OF 3 SHEETS.

MICHAEL J. BLAKE

N.J. PROFESSIONAL ENGINEER
L.C. NO. 24CE0521600
C.O.A. NO. 24GA28066400

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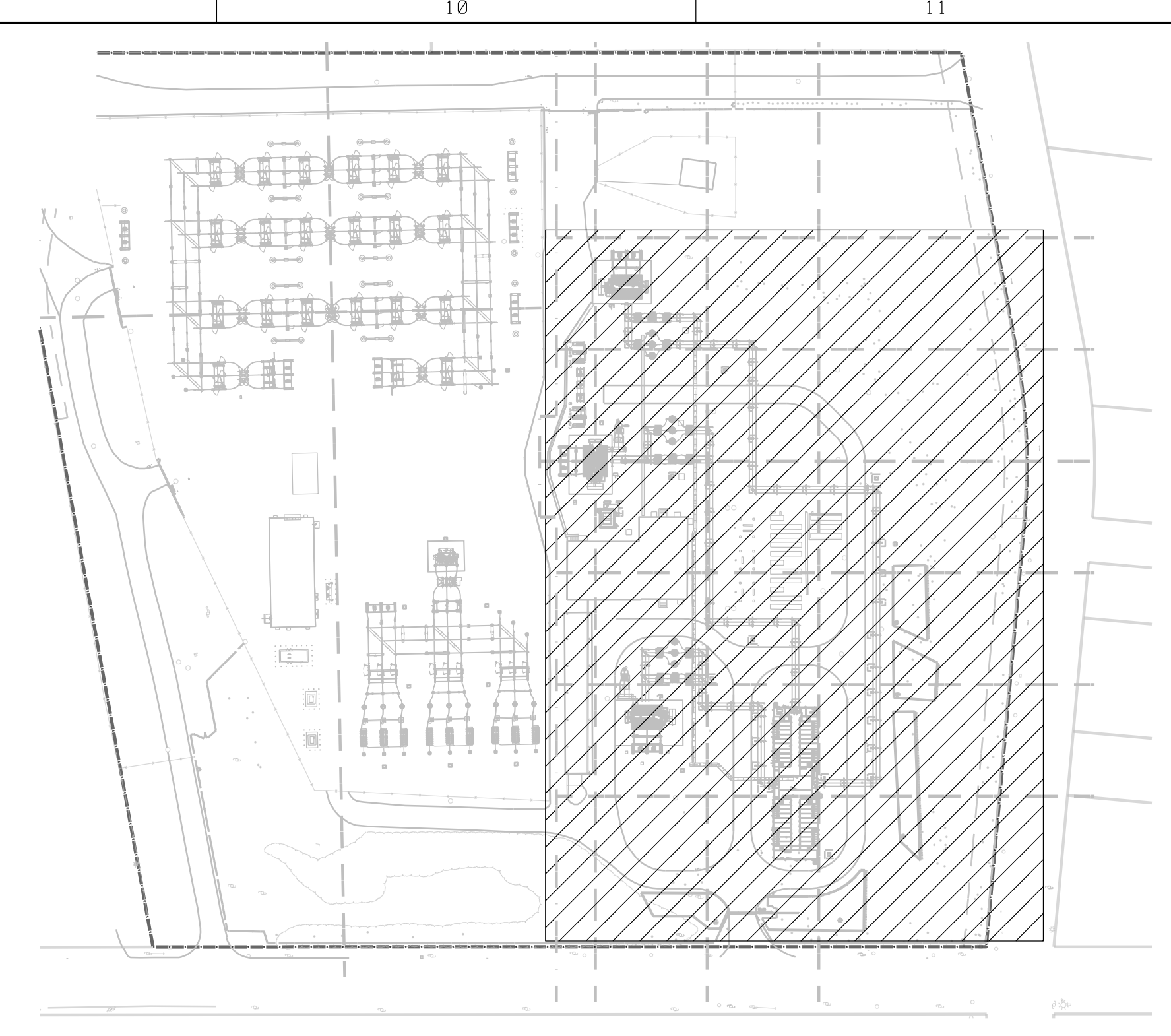
REVISION		
WEST ORANGE SWITCHING STATION 230/26/4KV OUTDOOR SUBSTATION CIVIL DETAILS		

DETAILS	SH 3	CIVIL
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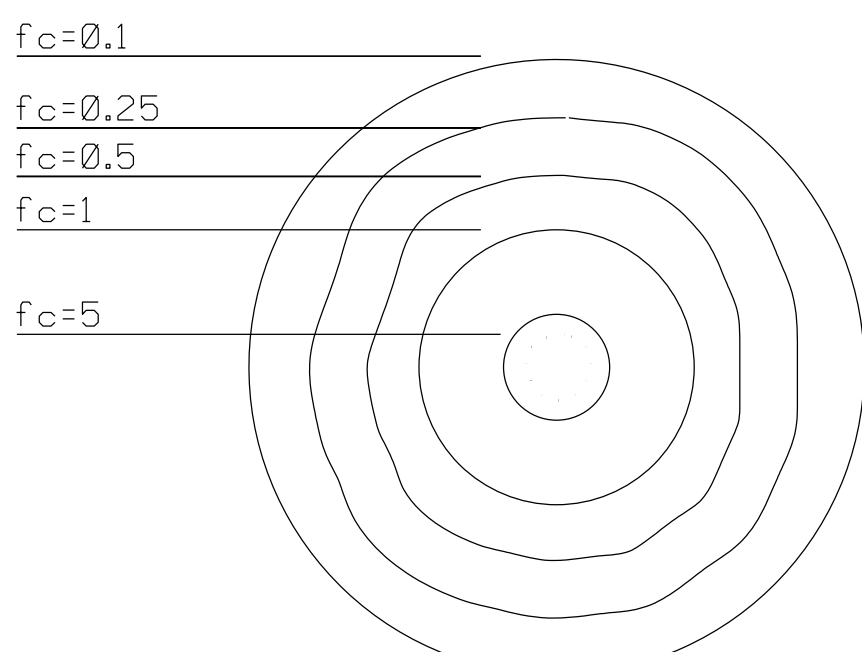
PSEG
PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

DRAWN L.POTGIETER - CHECKED S.MACALUSO - SCALE - NONE -
DATE 02/20/23 EXAMINED -
WBS/SO 90WESTORNG5LC - APPROVED -

792798 A - 0Per



KEY PLAN
NOT TO SCALE



SUBSTATION ISOFOOTCANDLE
LIGHTING INTENSITY LEVELS

LEGEND:

- UPLIGHT TYPE #2 & DOWNLIGHT TYPE #3
SEE DETAIL #4, REF. DWG.#2
- DOWNLIGHT TYPE #3
SEE DETAIL #4, REF. DWG.#2
- BUILDING WALLPACK
TYPE #4
- EXISTING
FLOODLIGHT
- AC RECEPTACLE
- BILL OF MATERIALS NUMBER
SEE REF. DWG.*X

REFERENCE DRAWINGS:

- 230/26/4KV ULTIMATE KEY PLAN DWG.#789276-A
- 26KV LIGHTING DETAILS DWG.#804365-A

NOTES:

- EACH RING SHOWN IS IN 10'-0" RADIUS INCREMENTS WITH THE LARGEST RADIUS SHOWN AT 30'-0".
- DOWN LIGHTS WILL BE ON FOR GENERAL ILLUMINATION AT NIGHT OR WHEN THE INTERNALLY WIRED OCCUPANCY SENSOR IS ACTIVATED.
- fc = FOOT CANDLES
- UPLIGHTS, DOWNLIGHTS & RECEPTACLES SHALL HAVE A SEPARATE CIRCUIT. SEE DETAIL 7, REF. DWG.#2.
- LIGHTS ARE PROVIDED AND INSTALLED BY BUILDING OR SWITCHGEAR MANUFACTURER. REFER TO THE VENDOR DRAWINGS FOR WIRING, DETAILS AND SPECIFICATIONS.
- LIGHTS TO BE PROVIDED WITH GLARE SHIELDS TO PREVENT LIGHT POLLUTION OUTSIDE OF THE STATION FENCELINE.

REPRODUCED FROM STANDARD DWG.#773788-A REV.0

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD

REVISION
WEST ORANGE SWITCHING STATION
26KV OUTDOOR SUBSTATION
LIGHTING PLAN

ARRANGEMENT ELECTRICAL



PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

DRAWN BY: J. MARSHALL CHECKED BY: M. KLEIN SCALE: 1"=20'-0"
DATE: 10/04/2032 EXAMINED BY: WBS
WBS: C823211-B.1.1-2.2 APPROVED

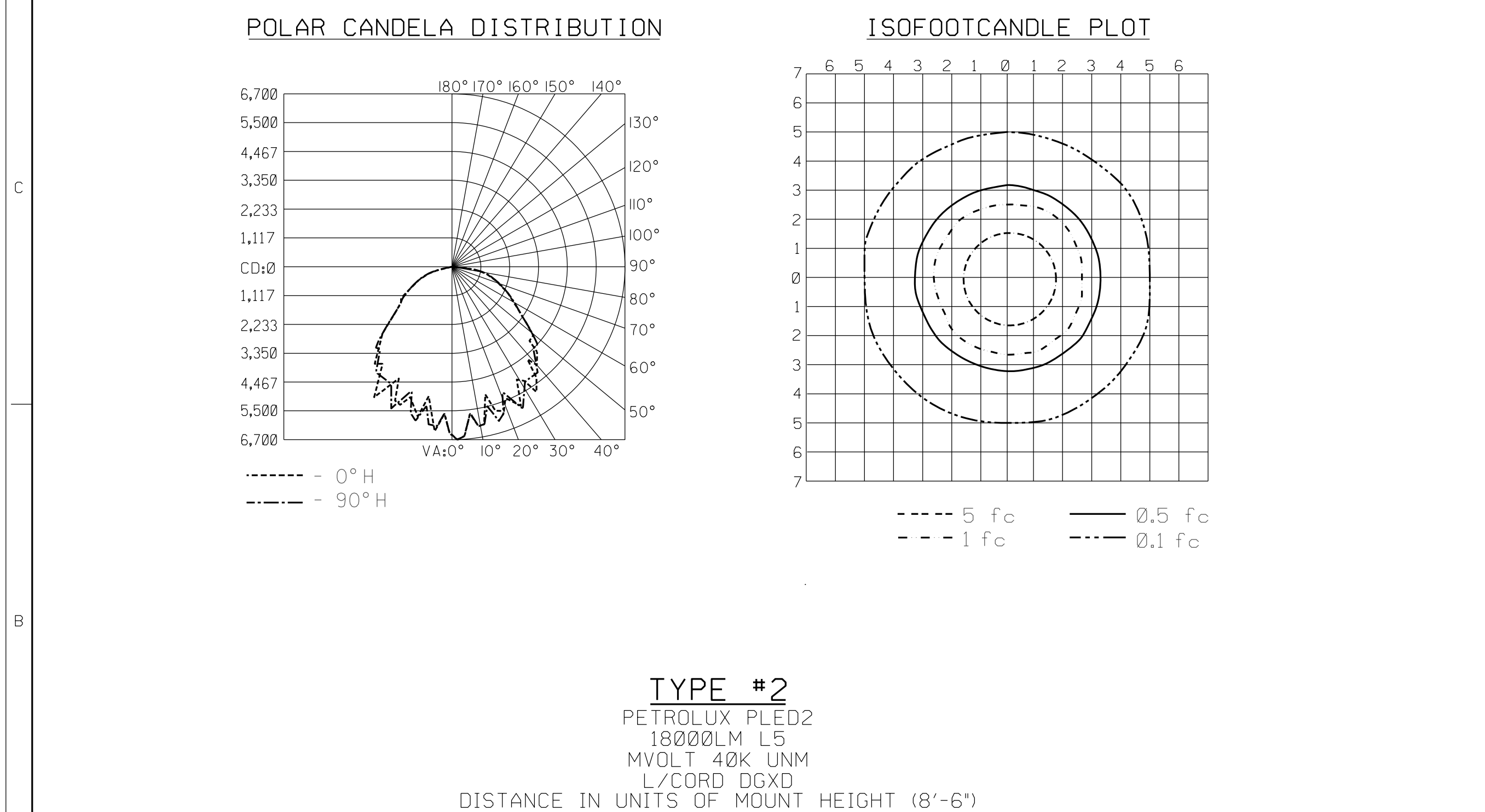
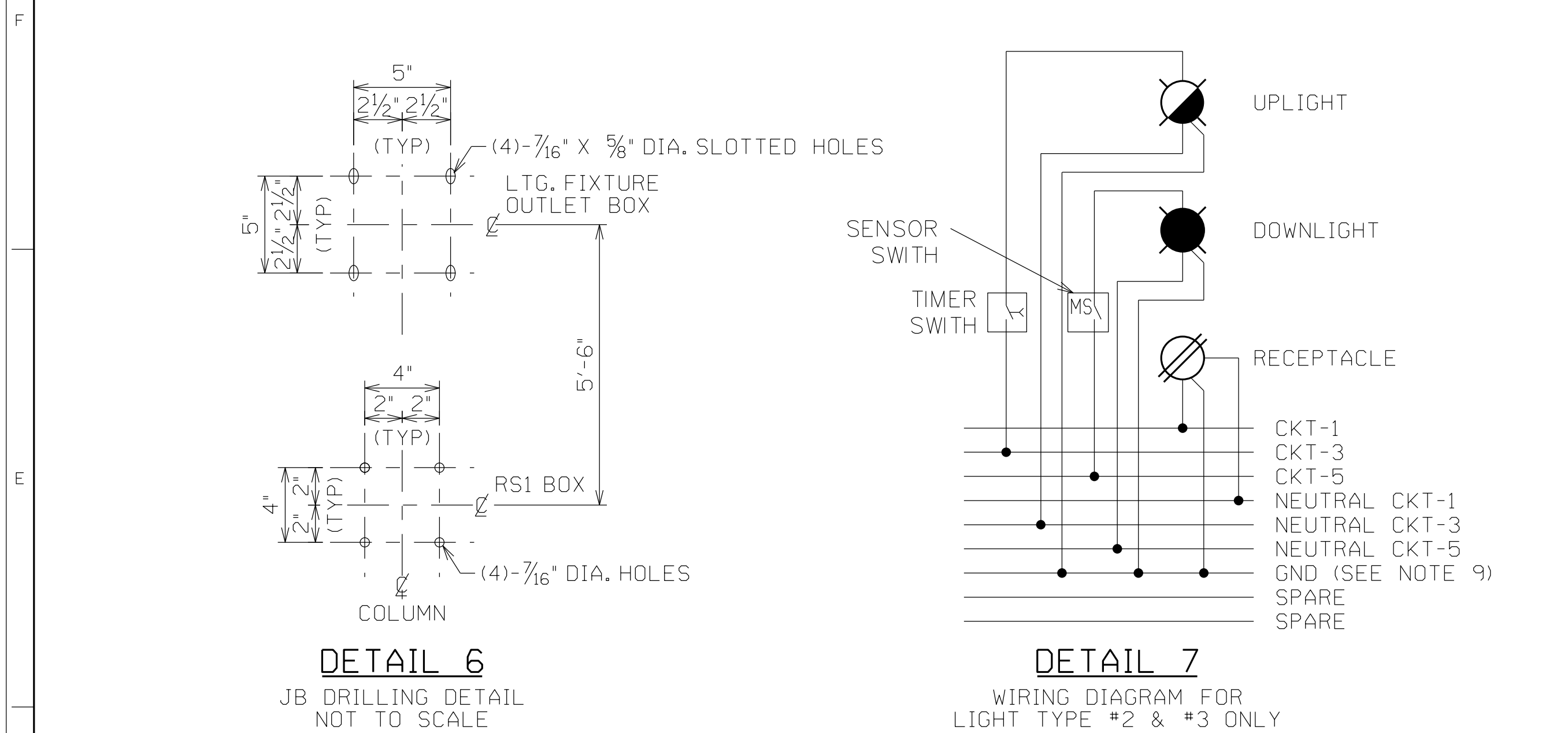
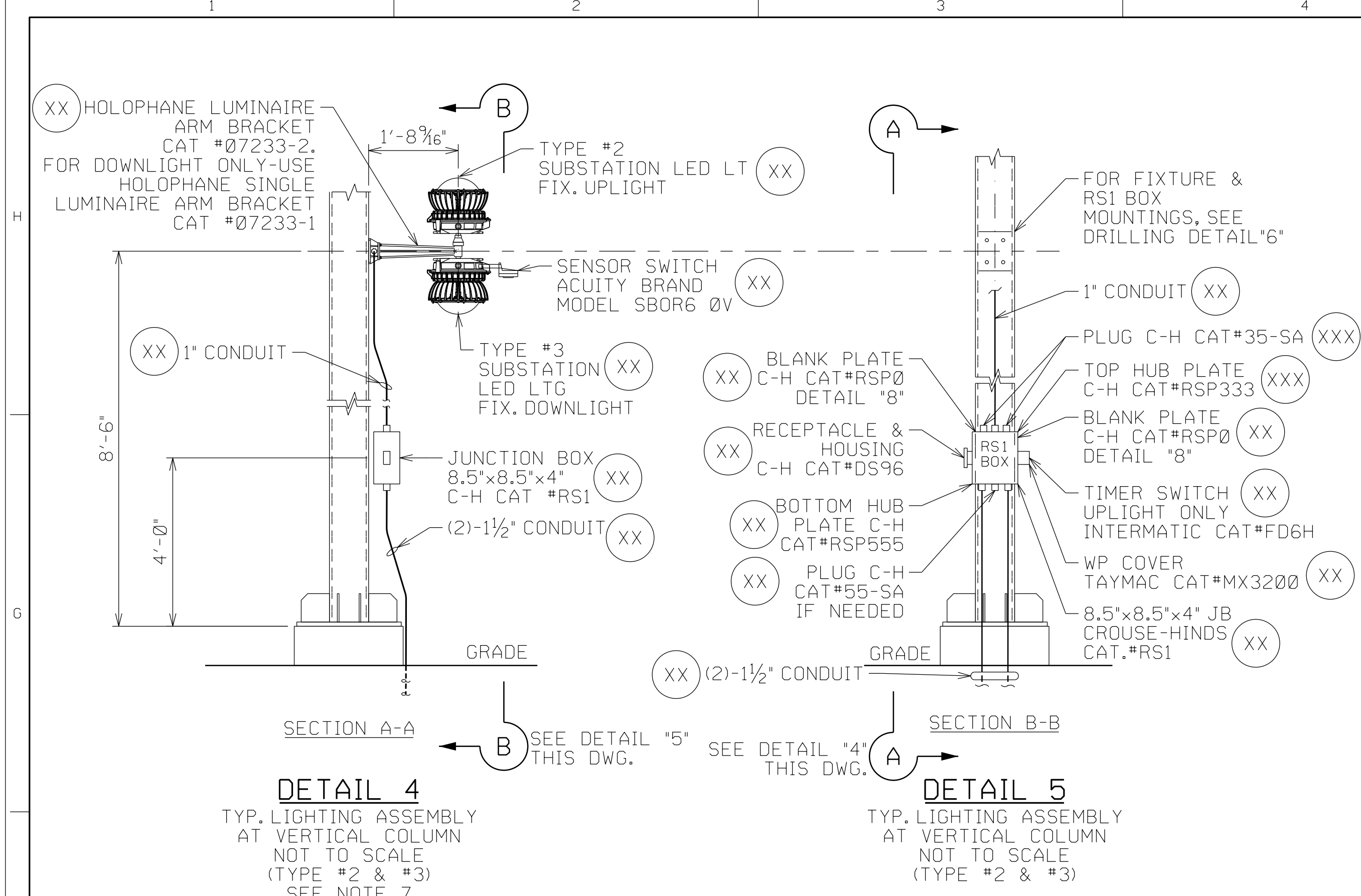
FOR LIST OF REFERENCE DRAWINGS SEE
DRAWING NO. THIS DWG.
THIS DRAWING SUPERSEDES NONE
JONATHAN M. COPA

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24060008400
C.O.A. NO. 24GA28066400

REV	DATE	DESCRIPTION
C	04-22-24	RE-ISSUED FOR LONG LEAD PERMITTING
B	02-29-24	RE-ISSUED FOR LONG LEAD PERMITTING
A	10-04-23	ISSUED FOR LONG LEAD PERMITTING

BURNS & MCDONNELL
ENGINEERING COMPANY, INC.
1000 SOUTH AVENUE
NEWARK, NJ 07102
THE REGISTAR OF THE NEWLY APPLIED
SEAL ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISION NUMBER: 0001

804348 A-0Per



FIXTURE SCHEDULE

SEE REF. DWG.#4 FOR LOCATIONS

LIGHTING FIXTURE	MANUFACTURER'S CATALOG NO./CUT SH.NO.	FIXTURE DESCRIPTION	LED WATTAGE & VOLTAGE	LUMENS NOMINAL	MTG HEIGHT	MOUNTING, ALL FIXTURES	QTY
XX TYPE #2	HOLOPHANE LTG PETROLUX LED PLED2 18000LM L5 MVOLT 40K UNM L/CORD DGXD	STANDARD UPLIGHT "LED" W/ LOCAL TIMER SWITCH	195W LED 120V	18000 LUMENS	8'-6"	FIELD DRILL PER HOLOPHANE FIXTURE NOTES & DETAILS	15
XX TYPE #3	HOLOPHANE LTG PETROLUX LED PLED2 8000LM L5 MVOLT 40K UNM L/CORD SBOR6 0V DGXD	STANDARD DOWNLIGHT "LED" W/ BUTTON PHOTOCELL & OCCUPANCY SENSOR	74W LED 120-277V	8000 LUMENS	8'-6"	FIELD DRILL PER HOLOPHANE FIXTURE NOTES & DETAILS	18
TYPE #4	LITHONIA LIGHTING WGE2 LED P1 30K 80CR1	GENERAL PURPOSE BUILDING MOUNTED (SUPPLIED W/ SWGR BUILDING)	100W LED 120-277V		10'-6"	SUPPLIED W/ SWITCHGEAR BUILDING, SEE NOTE 6	22

LEGEND

- UPLIGHT
- DOWNLIGHT
- RECEPTACLE
- SENSOR SWITCH
- TIMER SWITCH

NOTES:

- DOWN LIGHTS WILL BE ON FOR GENERAL ILLUMINATION AT NIGHT OR WHEN THE INTERNALLY WIRED OCCUPANCY SENSOR IS ACTIVATED.
- MOUNTING HEIGHT OF TYPE #2 & #3 FIXTURES ARE 8'-6".
- FC = FOOT CANDLES
- UPLIGHTS ARE SWITCHED AT LIGHT POSITIONS, WHERE UPLIGHTS ARE NOT INSTALLED, USE RSP0 BLANKS IN PLACE OF SWITCH ASSEMBLY.
- UPLIGHTS, DOWNLIGHTS & RECEPTACLES SHALL HAVE A SEPARATE CIRCUIT, SEE DETAIL 7, THIS DWG.
- LIGHTS ARE PROVIDED AND INSTALLED BY BUILDING OR SWITCHGEAR MANUFACTURE, REFER TO THE VENDOR DRAWINGS FOR WIRING, MOUNTING, DETAILS, AND SPECIFICATIONS.
- DOWNLIGHT ONLY LIGHTING ASSEMBLY SIMILAR TO UP/DOWN LIGHTING ASSEMBLY.
- PROVIDE MIN. OF 12" GAP BETWEEN OPTICAL ASSEMBLY AND BOTTOM OF DISCONNECT SWITCH BASES FOR BULB MAINTENANCE PURPOSES.
- EQUIPMENT GROUNDING CONDUCTOR SHALL BE IDENTIFIED WITH GREEN TAPE.

REFERENCE DRAWINGS:

- 230/26/4KV ULTIMATE KEY PLAN DWG.#789276-A
- 26KV LIGHTING PLAN DWG.#804348-A

REPRODUCED FROM STANDARD DWG.#458908-A REV.2

NO	DATE	DESCRIPTION	DWN	CKD	EXD	APD
1	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
2	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
3	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
4	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
5	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
6	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
7	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
8	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
9	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
10	10-04-23	ISSUED FOR LONG LEAD PERMITTING				
11	10-04-23	ISSUED FOR LONG LEAD PERMITTING				

REVISION

WEST ORANGE SWITCHING STATION
26KV OUTDOOR SUBSTATION
LIGHTING DETAILS

ARRANGEMENT ELECTRICAL



PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ELECTRIC DELIVERY COMPANY-ASSET RELIABILITY, NEWARK N.J.

DRAWN - J. MARSHALL - CHECKED - M. KLEIN - SCALE - 1"=10'-0" -
DATE - 10/04/2023 - EXAMINED -
WBS - C.823211-B.11.2.2 - APPROVED -

FOR LIST OF REFERENCE DRAWINGS SEE
DRAWING NO. THIS DWG.
THIS DRAWING SUPERSEDES NONE

JONATHAN M. COPA

N.J. PROFESSIONAL ENGINEER
LIC. NO. 24GE06008400
C.O.A. NO. 24GA28066400

804365 A-0Per