

PROPERTY OWNERS WITHIN 200 FEET

The Borough of Sayreville

TAX ASSESSOR'S OFFICE

167 MAIN STREET • SAYREVILLE, NJ 08872
TEL: 732-986-7800 • FAX: 732-483-4309

List of property owners within a 200' radius of the following Blocks & Lots:

BLOCKS	LOTS	OWNER
257	3.04 & 3.052	Consolidated Rail Corporation Norfolk Southern - Taxation Department 404 West Peachtree Street NW Atlanta, GA 30308
257.01	1, 1.01, 1.10, 4, 5, 6, 20 & 30.12	Consolidated Rail Corporation Norfolk Southern - Taxation Department 404 West Peachtree Street NW Atlanta, GA 30308
257.02	1, 1.01 & 22	Consolidated Rail Corporation Norfolk Southern - Taxation Department 404 West Peachtree Street NW Atlanta, GA 30308
BLOCK 20		Consolidated Rail Corporation Norfolk Southern - Taxation Department 404 West Peachtree Street NW Atlanta, GA 30308
BLOCK 201		Consolidated Rail Corporation Norfolk Southern - Taxation Department 404 West Peachtree Street NW Atlanta, GA 30308
256	2.03	Borough of Sayreville 187 Main Street Sayreville, NJ 08872
256	3 & 3.01	Sayreville Economic & Redevelopment Agency 187 Main Street Sayreville, NJ 08872
256.01	10	Middlesex County Utilities Authority P.O. Box 139 Sayreville, NJ 08872
257	3.06	Fair Fellowship Ministries, Inc. 2707 Main Street Sayreville, NJ 08872
257.01	1.03 & 3.01	Middlesex County Utilities Authority P.O. Box 139 Sayreville, NJ 08872

Sayreville, NJ
www.sayreville.com

BLOCK 1.07	Middlesex County Utilities Authority P.O. Box 139 Sayreville, NJ 08872
257.01	Sayreville Economic & Redevelopment Agency 187 Main Street Sayreville, NJ 08872
257.01	Sayreville Economic & Redevelopment Agency 187 Main Street Sayreville, NJ 08872
257.01	Sayreville Economic & Redevelopment Agency 187 Main Street Sayreville, NJ 08872
275.02	New Jersey Turnpike Authority Turnpike & Highway 18 East Brunswick, NJ 08816
236.01	C & K International, LLC 2400 Main Street Sayreville, NJ 08872
236.01	New Jersey Turnpike Authority 581 Main Street Woodbridge, NJ 07095
GARDEN STATE PARKWAY	Garden State Parkway New Jersey Turnpike Authority P.O. Box 5042 Woodbridge, NJ 07095
EASEMENT	Borough of Sayreville 187 Main Street Sayreville, NJ 08872
EASEMENT	Middlesex County Utilities Authority P.O. Box 139 Sayreville, NJ 08872

This is to certify that the preceding list of names, addresses and block & lot numbers are, to the best of my knowledge, within a 200' radius of the property known as:

BLOCKS	LOTS
257	3.04 & 3.052
257.01	1, 1.01, 1.10, 4, 5, 6, 20 & 30.12
257.02	1, 1.01 & 22

as shown on the official tax map for the Borough of Sayreville.

Dated: September 22, 2023

Joseph J. Kupski
Tax Assessor

Be advised that these records may contain information governed by L. 2015, c. 236 and L. 2020, c. 123, which include civil and criminal penalties for improper disclosure.

LIST OF SAYREVILLE UTILITIES (2023):

NJDEP 38 West State Street P.O. Box 42 Trenton, NJ 08625	PREAG 10 Howe Lane New Brunswick, NJ 08902 732-721-7000 OR: 80 Park Plaza P.O. Box 570 Newark, NJ 07102
Middlesex County Planning Board 75 Beyond Street, 3rd Floor New Brunswick, NJ 08902 732-745-3812	JCP&L c/o FireEnergy 300 Madison Avenue P.O. Box 1914 Morristown, NJ 07962-1914 Attn: Corporate Properties 732-723-6005 or 1-800-662-3115
NJDOT David Goldberg Transportation Center 1030 Parkway Avenue P.O. Box 600 Trenton, NJ 08625	Borough of Sayreville Water & Sewer 3751 Borden Avenue Plain, NJ 08055 732-980-7060
New Jersey Natural Gas Company 1415 Wyckoff Road Wall Township, NJ 07727	Middlesex County Utilities Authority (MCUA) 2571 Main Street Sayreville, NJ 08872-0066
Utilities 275 Centennial Avenue CN805 Plainfield, NJ 08055-8005 Attn: Construction Department 732-683-0600	Transcontinental Gas Pipeline Corporation 115 Coal Bend Road Lawrenceville, NJ 08840 Attn: Robert Frazier 1-800-440-8475
Middlesex County Landfill 53 Edgemoor Road East Brunswick, NJ 08816-1636 732-246-4313 OR: P.O. Box 1396 Houston, TX 77251	
Consolidated Rail Corporation 300 Fellowship Road, Suite 200 Mount Laurel, NJ 08054	
Verizon New Jersey 540 Broad Street - 20th Floor Newark, NJ 07102 OR: P.O. Box 152206 Irving, TX 75015	

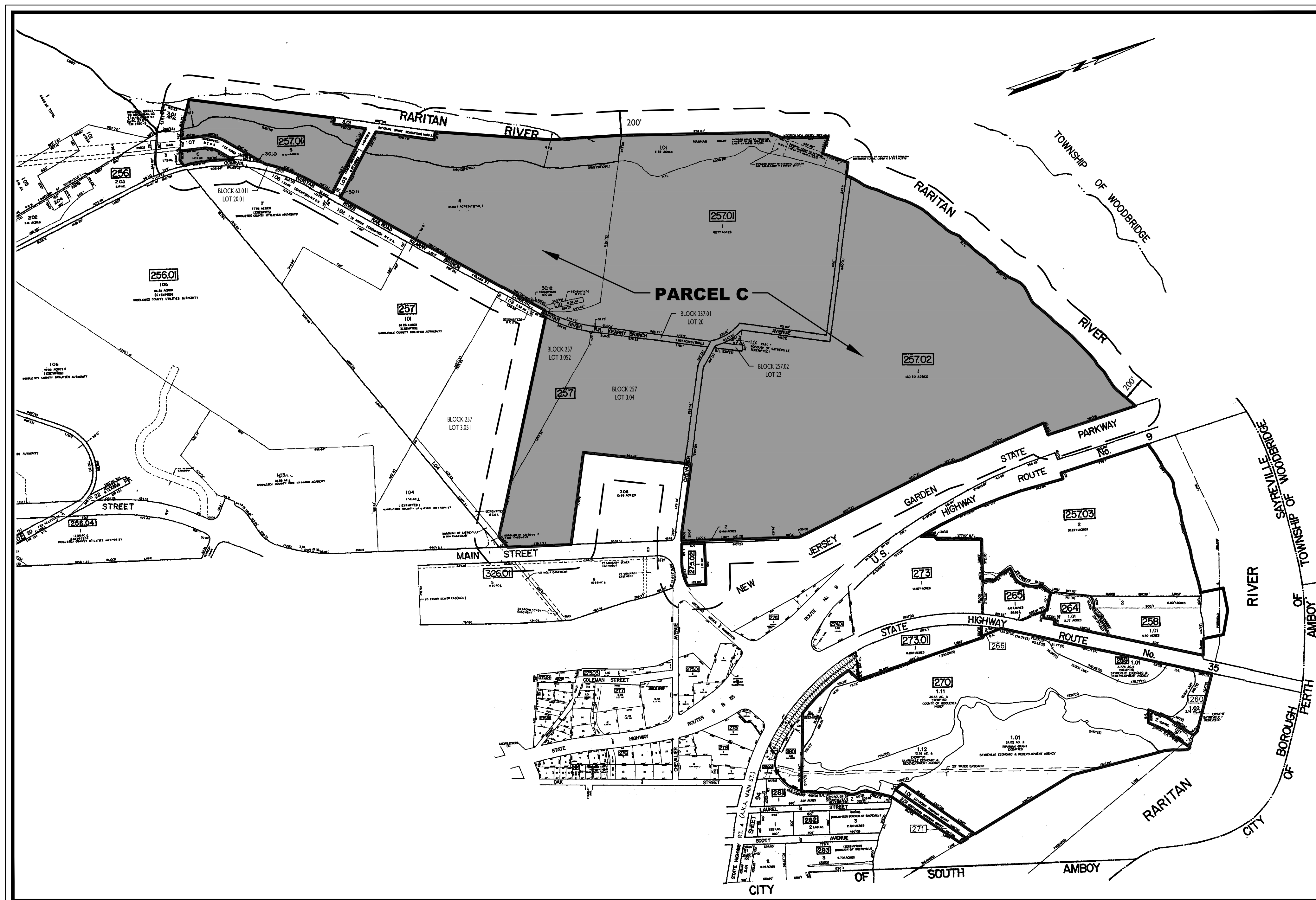
PHASE 1A GATEWAY SERVICES DISTRICT AMENDED SITE PLAN

FOR SAYREVILLE SEAPORT ASSOCIATES

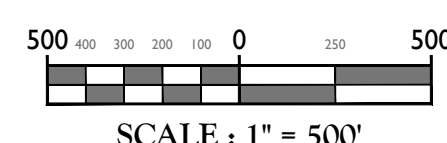
BLOCK 256.01, LOT 24

BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE, MIDDLESEX COUNTY, NEW JERSEY



KEY & ZONING MAP

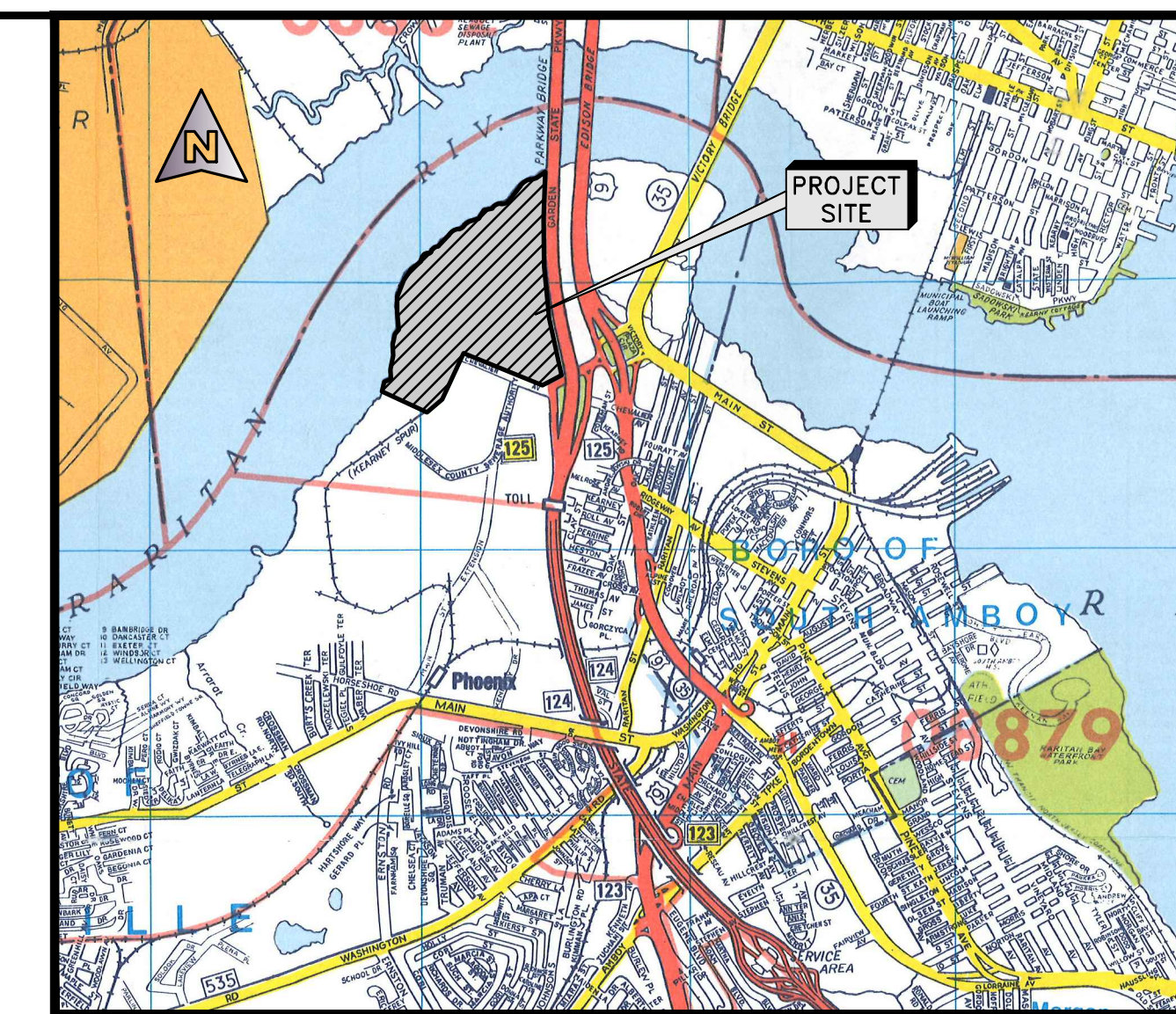


APPROVED BY THE PLANNING BOARD OF THE BOROUGH OF SAYREVILLE AT THE REGULAR MEETING OF _____ DATE _____

CHAIRMAN _____ DATE _____

SECRETARY _____ DATE _____

ENGINEER _____ DATE _____



LOCATION MAP
1" = 3,280' (APPROX.)

- OWNER: SAYREVILLE ECONOMIC AND REDEVELOPMENT AGENCY
167 MAIN STREET
SAYREVILLE, NJ 08872
- APPLICANT: SAYREVILLE SEAPORT ASSOCIATES URBAN RENEWAL, L.P.
c/o POJM REAL ESTATE
655 BROAD STREET
14th FLOOR
NEWARK, NJ 07102
- PARKING REQUIREMENT PER WATERFRONT REDEVELOPMENT PLAN:

	REQUIRED	PROPOSED
PARKING		
GATEWAY SERVICES DISTRICT BLOCK 257.02, LOT 1.05 (4,950 S.F.) : 4 SPACES/1,000	20	41 SPACES TOTAL* 2 MAKE READY EV SPACES INCLUDING 1 ADA
GATEWAY SERVICES DISTRICT BLOCK 256.01, LOT 24 (25,000 S.F.) : 4 SPACES/1,000	101	208 SPACES TOTAL 12 MAKE READY EV SPACES INCLUDING 1 ADA
LOT COVERAGE	75%	16.82%
MAXIMUM ALLOWABLE LOT COVERAGE		
LOT COVERAGE SHALL BE CALCULATED BASED ON THE TOTAL AREA OF PARCELS A, B AND C (418 ACRES)		
EXISTING IMPERVIOUS	25.04 ACRES	
PROPOSED IMPERVIOUS	45.31 ACRES	
TOTAL IMPERVIOUS	70.31 ACRES	

* BLOCK 257.02, LOT 1.05 ALSO INCLUDES 375 SPACES ASSOCIATED WITH MOVIE THEATER BUILDING 6300, SAME BEING APPROVED AS PART OF THE RIVERTON VILLAGE PHASE 1 SITE PLAN APPLICATION VIA PLANNING BOARD RESOLUTION ADOPTED JANUARY 8, 2020. THIS AMENDED SITE PLAN FOR THE GATEWAY SERVICES DISTRICT DOES NOT PROPOSE ANY MODIFICATIONS TO THE PREVIOUSLY APPROVED 375 SPACES.

INDEX OF SHEETS	
SHT. No.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES AND LEGEND
3	EXISTING SITE CONSTRAINTS
4	DIMENSION PLAN
5	UTILITIES PLAN
6	GRADING PLAN
7	SOIL EROSION AND SEDIMENT CONTROL PLAN
8-9	SOIL EROSION AND SEDIMENT CONTROL DETAILS
10	LIGHTING PLANS
11-12	LIGHTING DETAILS
13-14	PROFILES
15-21	CONSTRUCTION DETAILS

Colliers
Engineering & Design
www.colliersengineering.com
Copyright © 2023 Colliers Engineering & Design, Inc. All rights reserved. This drawing and all the information contained herein is authorized for use only by the party for whom the services were contracted or its direct or indirect transferee. This drawing may not be copied, revised, discarded, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

Doing Business as **MASER**

811
PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, OPERATORS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE TO CONTACT 811.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DESCRIPTION

REV	DATE	DESCRIPTION
1	9/20/23	ISSUE FOR PERMITTING
2	10/20/23	ISSUE FOR PERMITTING

Daniel W. Busch
NEW JERSEY PROFESSIONAL
ENGINEER - LICENSE NUMBER: 6442093

PHASE 1A
GATEWAY SERVICES
DISTRICT
AMENDED SITE PLAN
FOR
SAYREVILLE
SEAPORT
ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

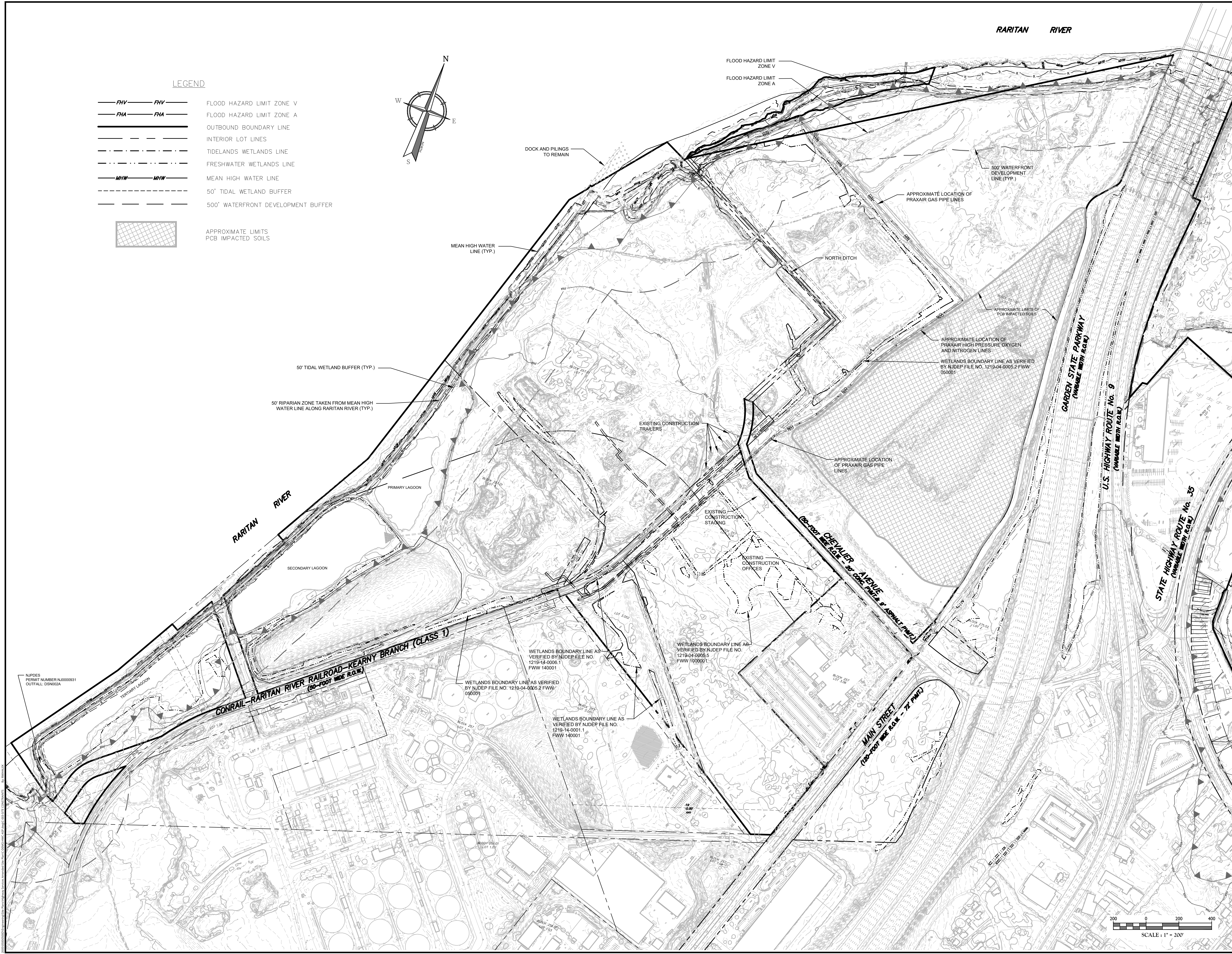
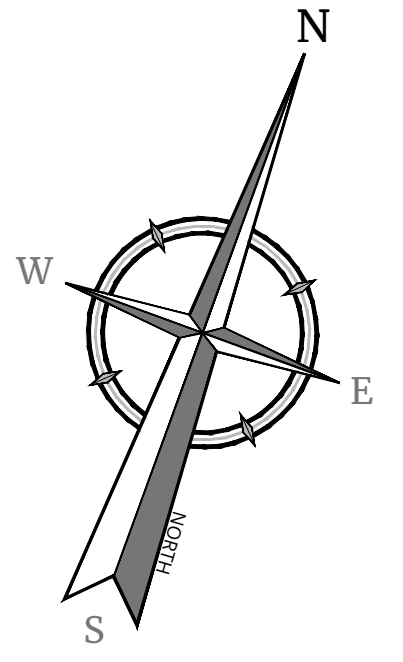
Colliers
Engineering & Design
HOLMDEL (Headquarters)
331 Newnam Springs Road,
Suite 203
Red Bank, NJ 07070
Phone: 732-983-1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SCALE: AS SHOWN DATE: 9/11/2023 DRAWN BY: RM CHECKED BY: DWB
PROJECT NUMBER: 050025050 DRAWING NAME: C-COVER-HWC-ASP

SHEET TITLE: COVER SHEET
SHEET NUMBER: 1 of 21

LEGEND

- FHV FLOOD HAZARD LIMIT ZONE V
- FHA FLOOD HAZARD LIMIT ZONE A
- OUTBOUND BOUNDARY LINE
- INTERIOR LOT LINES
- TIDELANDS WETLANDS LINE
- FRESHWATER WETLANDS LINE
- MHW MEAN HIGH WATER LINE
- 50' TIDAL WETLAND BUFFER
- 500' WATERFRONT DEVELOPMENT BUFFER
- APPROXIMATE LIMITS PCB IMPACTED SOILS



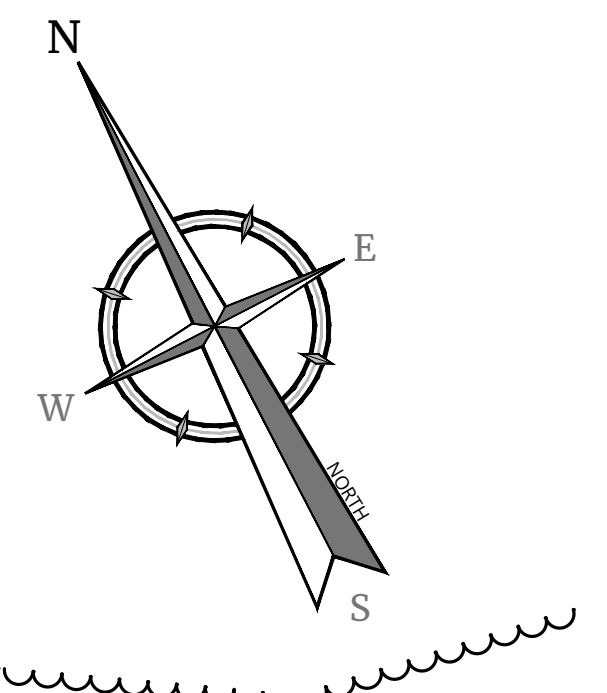
REV	DATE	DESCRIPTION	DRAWN BY
1	8/11/2023	UPDATE PAVING TABLES	RM
2	8/11/2023	REVISION FOR PLANNING BOARD SUBMISSION	RM/AJC

REV	DATE	DESCRIPTION	DRAWN BY
1	8/11/2023	UPDATE PAVING TABLES	RM
2	8/11/2023	REVISION FOR PLANNING BOARD SUBMISSION	RM/AJC

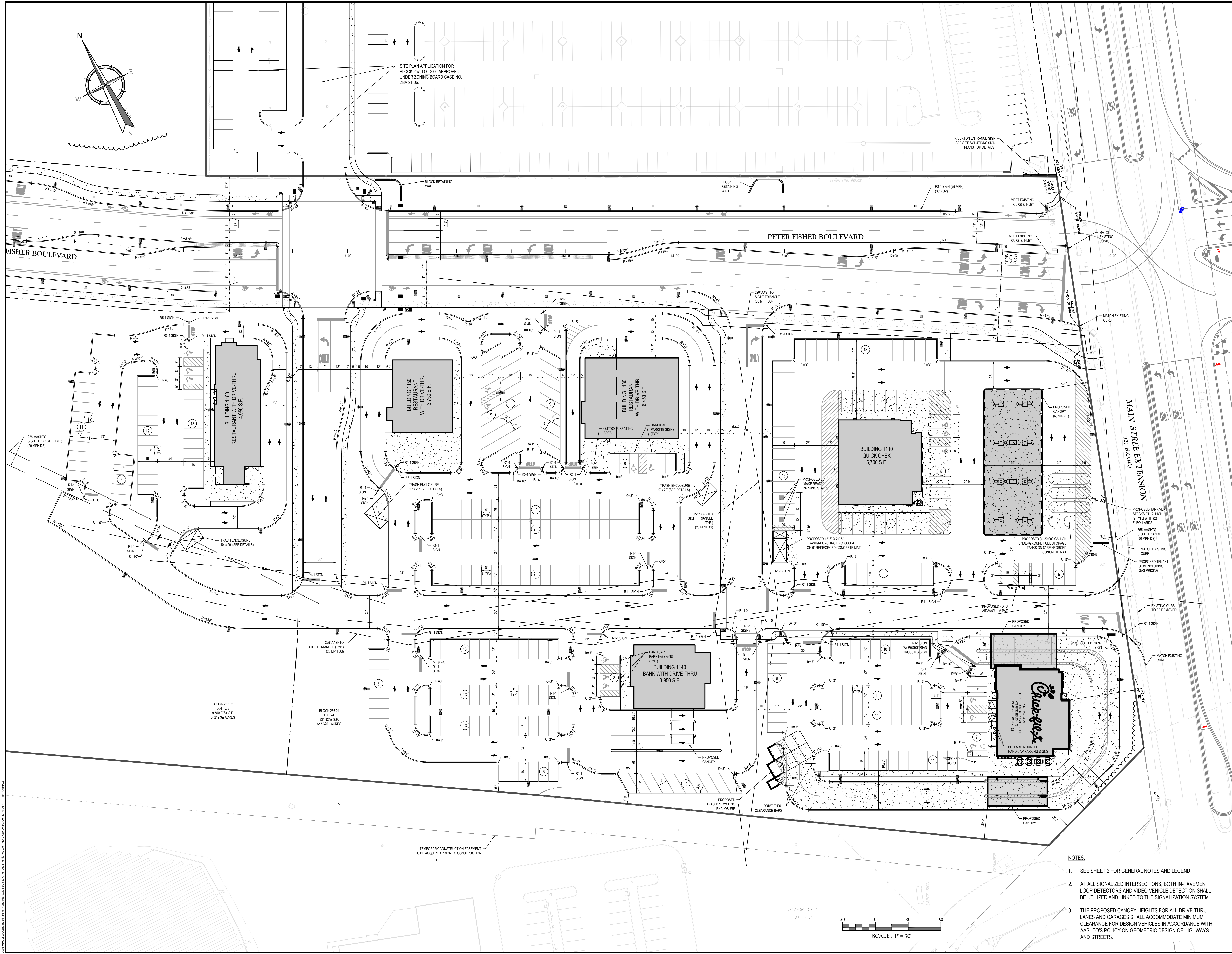
Daniel W. Busch
 NEW JERSEY LICENSED PROFESSIONAL ENGINEER
 LICENSE NUMBER: GE42093
 COLLIERS ENGINEERING & DESIGN, INC.
 NJ, C.O.A.#: 364627966509

PHASE IA
 GATEWAY SERVICES
 DISTRICT
 AMENDED SITE PLAN
 FOR
**SAYREVILLE
 SEAPORT
 ASSOCIATES**
 BLOCK 256.01, LOT 24
 BLOCK 257.02, LOT 1.05
 BOROUGH OF SAYREVILLE
 MIDDLESEX COUNTY
 NEW JERSEY

Colliers
 Engineering & Design
 #
 HOLMDEL (Headquarters)
 331 NEWVIEW SQUARE ROAD,
 SUITE 203
 RED BANK, NJ 07071
 PHONE: 732-983-1950
 COLLIERS ENGINEERING & DESIGN, INC.
 DOING BUSINESS AS MASER CORP. (TWO)
 SCALE: AS SHOWN DATE: 8/11/2023 DRAWN BY: RM CHECKED BY: DWB
 PROJECT NUMBER: 05000505F DRAWING NAME: C-DEM-HWC-ASP
 SHEET TITLE: EXISTING SITE CONSTRAINTS
 SHEET NUMBER: 3 of 21
 NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



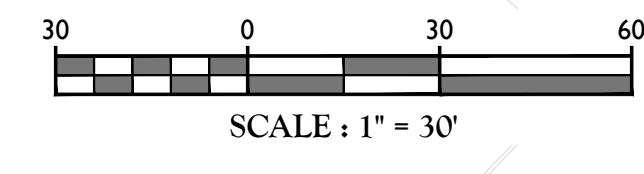
SITE PLAN APPLICATION FOR
BLOCK 257, LOT 3.06 APPROVED
UNDER ZONING BOARD CASE NO.
ZBA 21-06



BLOCK 257.02
LOT 1.05
9,550.97± S.F.
OR 219.3± ACRES

BLOCK 256.01
LOT 24
331,924± S.F.
OR 7.620± ACRES

BLOCK 257
LOT 3.051



- NOTES:**
- SEE SHEET 2 FOR GENERAL NOTES AND LEGEND.
 - AT ALL SIGNALIZED INTERSECTIONS, BOTH IN-PAVEMENT LOOP DETECTORS AND VIDEO VEHICLE DETECTION SHALL BE UTILIZED AND LINKED TO THE SIGNALIZATION SYSTEM.
 - THE PROPOSED CANOPY HEIGHTS FOR ALL DRIVE-THRU LANES AND GARAGES SHALL ACCOMMODATE MINIMUM CLEARANCE FOR DESIGN VEHICLES IN ACCORDANCE WITH ASHTO'S POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS.

Colliers
Engineering & Design
www.colliersengineering.com
Copyright © 2023 Colliers Engineering & Design, Inc. All rights reserved. The drawing and all the information contained herein is authorized for use only by the party for whom the services were rendered or to whom it is provided. This drawing may not be copied, revised, disclosed, distributed or relied upon for any other purpose without the express written consent of Colliers Engineering & Design.

Doing Business as **MASER**
811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, SPOILERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE TO CALL 811.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DESCRIPTION	DRAWN BY	DESCRIPTION
1	10/20/23	UPDATE PARKING TABLES	RM	
2	10/20/23	REVISION FOR PLANNING BOARD SUBMISSION	RM/AJC	

REV	DATE	DESCRIPTION	DRAWN BY	DESCRIPTION
1	10/20/23	UPDATE PARKING TABLES	RM	
2	10/20/23	REVISION FOR PLANNING BOARD SUBMISSION	RM/AJC	

Daniel W. Busch
DANIEL W. BUSCH
NEW JERSEY PROFESSIONAL
ENGINEER - LICENSE NUMBER: GE42093

PHASE 1A
GATEWAY SERVICES
DISTRICT
AMENDED SITE PLAN
FOR
**SAYVILLE
SEAPORT
ASSOCIATES**
BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05
BOROUGH OF SAYVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers
Engineering & Design
HOLMDEL (Headquarters)
331 Newnam Springs Road,
Suite 203
Red Bank, NJ 07701
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (TWO)

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	9/11/2023	RM	DWB
PROJECT NUMBER:	DRAWING NAME:		
0500050507	C-LAYT-HWC-ASP		

SHEET TITLE:	DIMENSION PLAN
SHEET NUMBER:	4 of 21

REV	DATE	DESCRIPTION	DRAWN BY	DATE	DESCRIPTION
1	10/20/23	UPDATE PARKING TABLES	RM		
2	10/20/23	REVISED FOR PLANNING BOARD SUBMISSION	RM		



DANIEL W. BUSCH
NEW JERSEY PROFESSIONAL ENGINEER - LICENSE NUMBER: GE42093

PHASE 1A GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

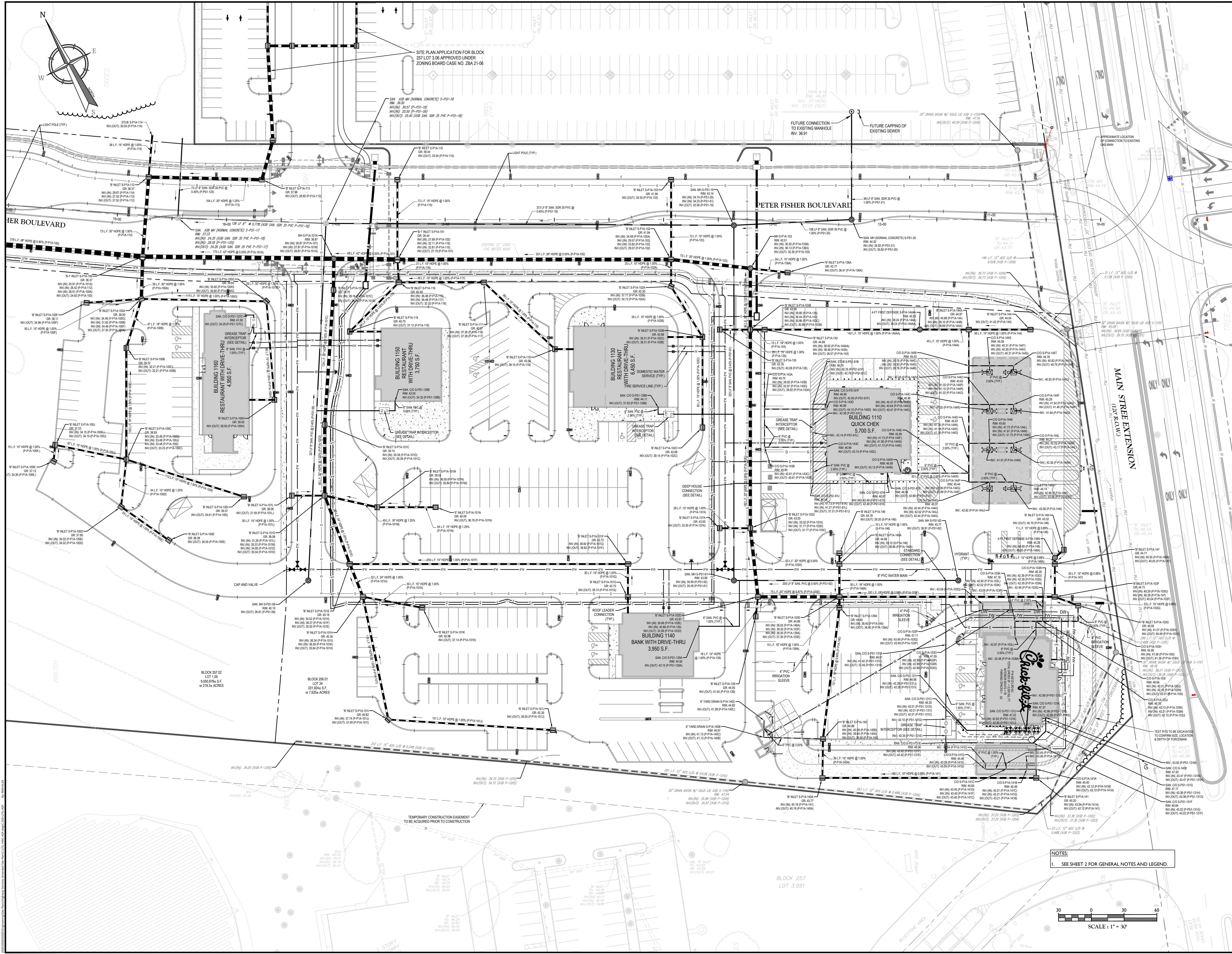
HOLMDEL (Headquarters)
331 Newnam Springs Road,
Suite 203
Red Bank, NJ 07071
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (TWO)

Colliers Engineering & Design
PROJECT NUMBER: 05000500f
DRAWING NAME: C-UTILS-HWC-ASP

SCALE: AS SHOWN
DATE: 9/11/2023
RM
DWB

SHEET TITLE: UTILITIES PLAN
SHEET NUMBER: 5 of 21

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



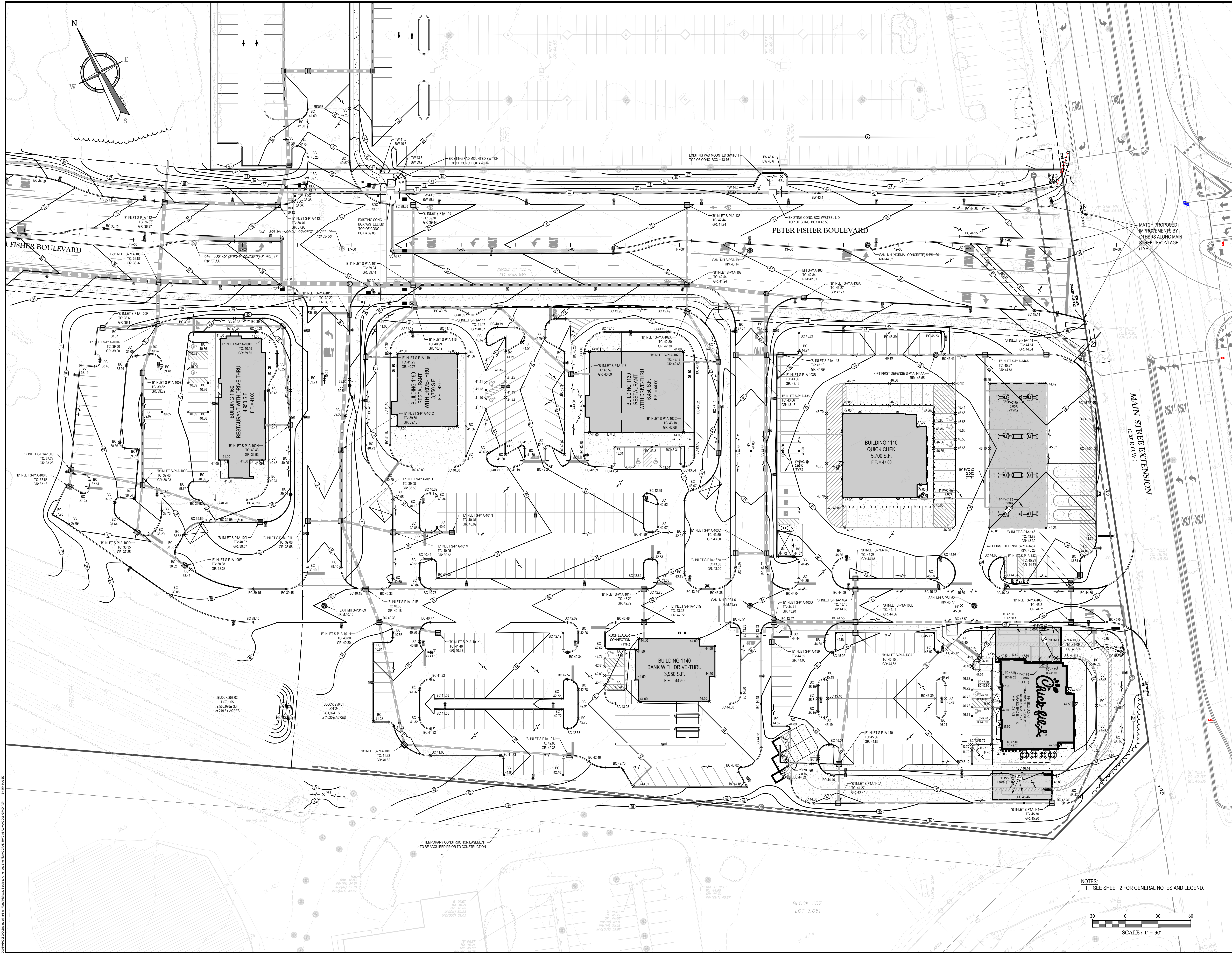
NOTES:
1. SEE SHEET 2 FOR GENERAL NOTES AND LEGEND.

SCALE: 1" = 30'

BLOCK 257
LOT 3.051

VERTICAL SCALE: 1" = 10'

DATE PLOTTED: 10/20/23 10:58:52 AM



REV	DATE	DESCRIPTION	DRAWN BY	DESCRIPTION
1	10/20/23	UPDATE PARKING TABLES	RM	
2	11/02/23	REVISION FOR PLANNING BOARD SUBMISSION	RM	

REV	DATE	DESCRIPTION	DRAWN BY	DESCRIPTION
1	10/20/23	UPDATE PARKING TABLES	RM	
2	11/02/23	REVISION FOR PLANNING BOARD SUBMISSION	RM	



DANIEL W. BUSCH
NEW JERSEY PROFESSIONAL ENGINEER - LICENSE NUMBER: GE42093

PHASE 1A
GATEWAY SERVICES DISTRICT
AMENDED SITE PLAN FOR
SAYREVILLE SEAPORT ASSOCIATES

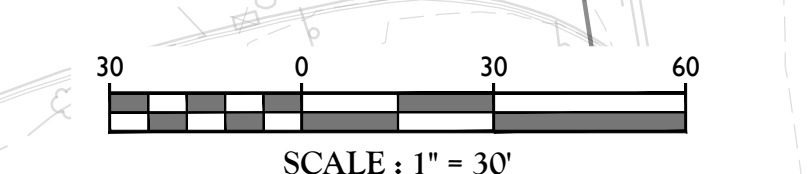
BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

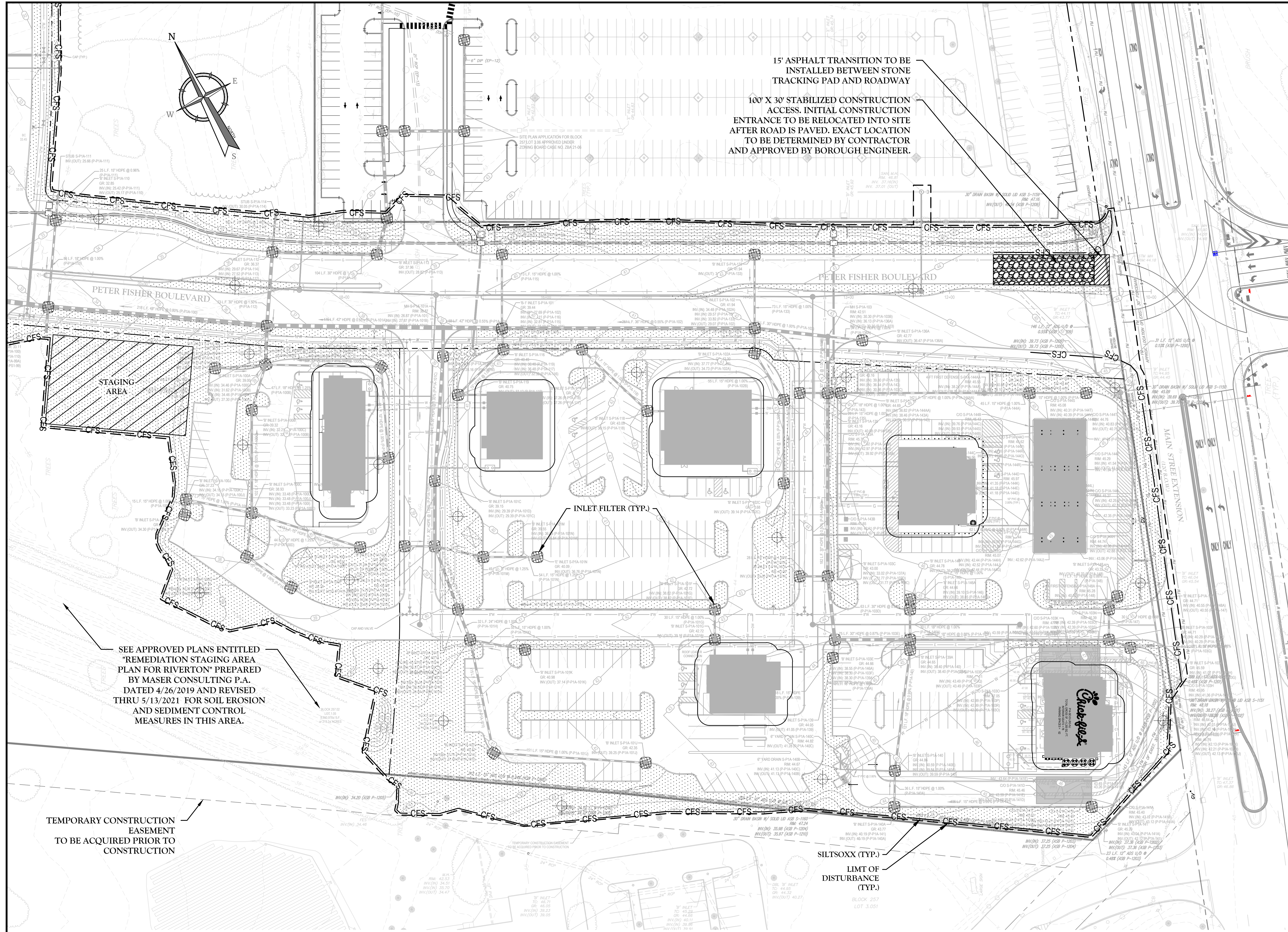
Colliers Engineering & Design
331 Newnam Springs Road, Suite 203
Red Bank, NJ 07071
Phone: 732-383-1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (TWO)

SCALE: AS SHOWN
DATE: 8/11/2023
PROJECT NUMBER: 050005050
DRAWING NAME: C-GRAD-HWC-ASP

SHEET TITLE: GRADING PLAN

NOTES:
1. SEE SHEET 2 FOR GENERAL NOTES AND LEGEND.





15' ASPHALT TRANSITION TO BE INSTALLED BETWEEN STONE TRACKING PAD AND ROADWAY

100' X 30' STABILIZED CONSTRUCTION ENTRANCE TO BE RELOCATED INTO SITE AFTER ROAD IS PAVED. EXACT LOCATION TO BE DETERMINED BY CONTRACTOR AND APPROVED BY BOROUGH ENGINEER.

SEE APPROVED PLANS ENTITLED "REMEDIATION STAGING AREA PLAN FOR RIVERTON" PREPARED BY MASER CONSULTING P.A. DATED 4/26/2019 AND REVISED THRU 5/13/2021 FOR SOIL EROSION AND SEDIMENT CONTROL MEASURES IN THIS AREA.

TEMPORARY CONSTRUCTION EASEMENT TO BE ACQUIRED PRIOR TO CONSTRUCTION

SILT-SOXX (TYP.)

LIMIT OF DISTURBANCE (TYP.)

BLK 257 LOT 3-2051

LEGEND

SOIL COMPACTION TESTING AREAS

RECOMMENDED SOIL COMPACTION TEST LOCATIONS

SOIL COMPACTION ANALYSIS AREA = 39.3 ACRES

TOTAL AREA OF DISTURBANCE = 4,165,451± S.F. (95.63 ACRES)
THIS PLAN IS FOR SOIL EROSION AND SEDIMENT CONTROL PURPOSES ONLY.

- NOTES:**
- THE LIMIT OF DISTURBANCE, SOIL COMPACTION TESTING AREAS, AND SOIL EROSION AND SEDIMENT CONTROL (SECC) MEASURES SHOWN HEREON WERE ORIGINALLY APPROVED AS PART OF THE RIVERTON VILLAGE PHASE I SITE PLAN APPLICATION (SOIL EROSION AND SEDIMENT CONTROL PLANS PREPARED BY MASER CONSULTING P.A. DATED MAY 15, 2019 AND REVISED THROUGH JULY 2, 2021). AS SUCH, SOME SECC MEASURES HAVE ALREADY BEEN IMPLEMENTED AND/OR ARE ONGOING. SOME MEASURES WILL BE IMPLEMENTED IN THE FUTURE. THE SUBJECT GATEWAY SERVICES DISTRICT IS LOCATED WITHIN THE AREA COVERED UNDER THE PRIOR SOIL EROSION AND SEDIMENT CONTROL (SECC) APPROVAL ISSUED FOR RIVERTON VILLAGE PHASE I. ONGOING AND NECESSARY ADDITIONAL SECC MEASURES ASSOCIATED WITH THE GATEWAY SERVICES DISTRICT SHALL BE PERFORMED IN COMPLIANCE WITH THE RIVERTON VILLAGE PHASE I SECC APPROVAL AND AS AMENDED HEREON.
 - THE LIMIT OF DISTURBANCE AND SOIL COMPACTION TESTING AREAS IDENTIFIED HEREON ENCOMPASS ALL AREAS SUBJECT OF THE RIVERTON VILLAGE PHASE I SECC APPROVAL. NOT JUST THE GATEWAY SERVICES DISTRICT.
 - A SOIL COMPACTION MITIGATION VERIFICATION FORM MUST BE FILLED OUT COMPLETELY AND SUBMITTED TO THE BOROUGH ENGINEER OFFICE PRIOR TO FINAL INSPECTION AND ISSUANCE OF A COMPLIANCE REPORT.
 - SEE SHEET 2 FOR GENERAL NOTES AND PLAN LEGEND.

SOIL DECOMPACTION AND TESTING REQUIREMENTS

MCNJ-SOIL-NOTE-2000 05/01/18

A. SOIL COMPACTION TESTING REQUIREMENTS

- SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL STANDARD FOR VEGETATIVE COVER NOTES SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 4.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER (SEE "STANDARD FOR VEGETATIVE COVER" NOTES FOR TOPSOIL REQUIREMENTS).
- AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE SOIL EROSION CONTROL PLAN. MINIMUM 2 TESTS FOR LIMIT OF DISTURBANCE UP TO 1 ACRE PLUS 2 TESTS PER ACRE OF LIMIT OF DISTURBANCE THEREAFTER, SPACED EVENLY THROUGHOUT THE SITE.
- COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN SHALL BE USED TO MARK THE LOCATIONS OF TESTS AND ATTACHED TO THE COMPACTION MITIGATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
- IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE PROBING OR PENETRATION TESTING METHODS (SEE DETAILS), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL IDENTITY TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL IDENTITY TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

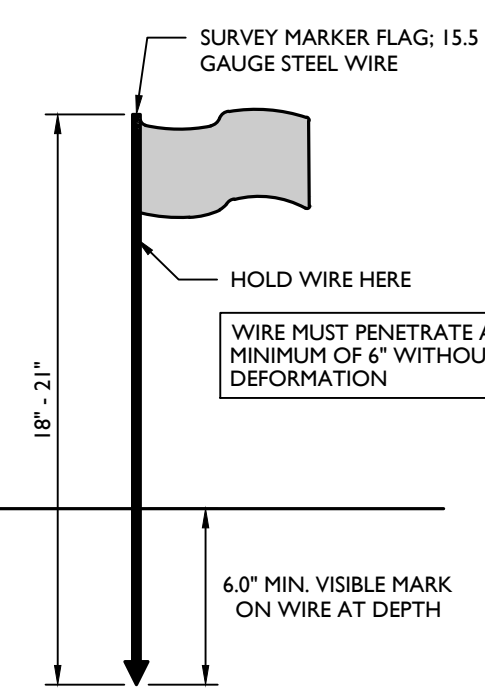
B. COMPACTION TESTING METHODS

- PROBING WIRE TEST (SEE DETAIL)
- HANDHELD PENETROMETER TEST (SEE DETAIL)
- TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
- NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)
- ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

NOTE: SOIL COMPACTION TESTING IS NOT REQUIRED IF WHEN SUBSOIL COMPACTION MITIGATION IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION. FOR ADDITIONAL REQUIREMENTS AND EXCEPTIONS SEE SECTION 19 "STANDARD FOR LAND GRADING" OF THE STANDARD.

C. PROCEDURES FOR SOIL COMPACTION MITIGATION

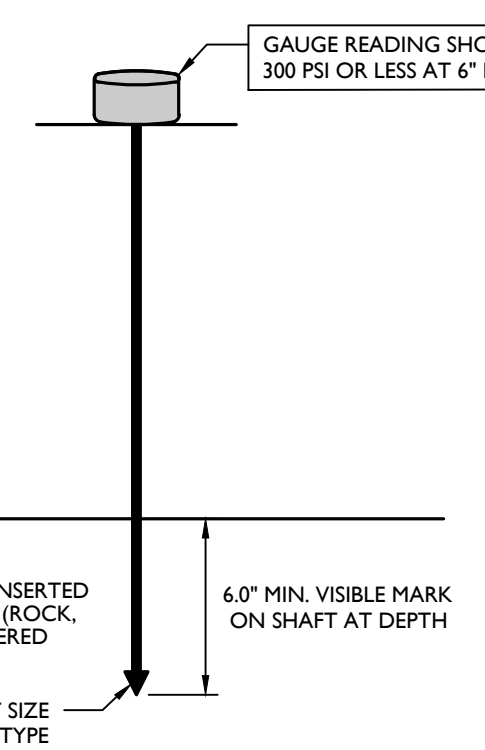
- PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
- RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (4" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).
- IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.



NOTES:

- SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE WIRE.
- RECORD THE DEPTH OF PENETRATION WHEN WIRE IS DEFORMED.

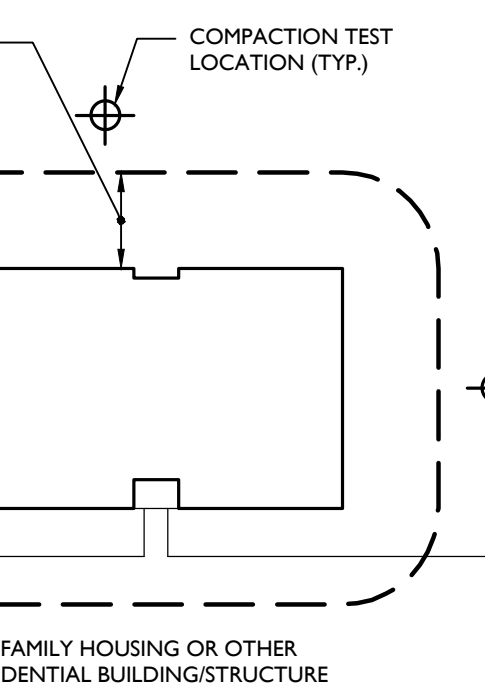
PROBING WIRE TEST DETAIL



NOTE:

- SOIL SHOULD BE MOIST BUT NOT SATURATED. DO NOT TEST WHEN SOIL IS EXCESSIVELY DRY OR SUBJECT TO FREEZING TEMPERATURES. SLOW, STEADY DOWNWARD PRESSURE USED TO ADVANCE THE PROBE. PROBE MUST PENETRATE AT LEAST 6" WITH LESS THAN 300 PSI READING ON THE GAUGE.
- USE 1/2" TIP FOR FIRM SOIL, 3/4" TIP FOR SOFT SOIL.

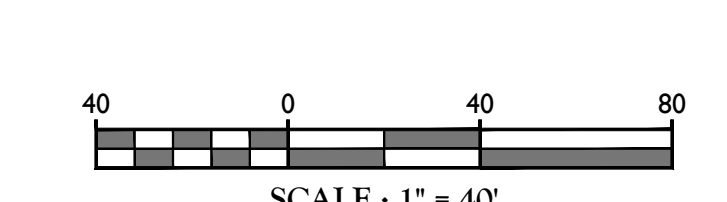
HANDHELD SOIL PENETROMETER TEST DETAIL



NOTES:

- SOIL COMPACTION TESTING LOCATIONS IDENTIFIED ARE RECOMMENDED LOCATIONS FOR GRADED/DISTURBED AREAS WITHIN THE VICINITY OF BUILDINGS AND STRUCTURES OR ON INDIVIDUAL LOTS. MINIMUM TWO (2) TEST PITS PER LOT UP TO 1 ACRE OF DISTURBANCE.
- FOR GRADED/DISTURBED AREAS WITHIN OPEN OR COMMON SPACES, SOIL COMPACTION TESTING SHALL BE PERFORMED AT TWO (2) TEST PITS PER ACRE OF OVERALL LIMIT OF DISTURBANCE, EVENLY DISTRIBUTED.

TYPICAL SOIL COMPACTION TESTING LOCATIONS DETAIL



Colliers
Engineering & Design
www.colliersengineering.com
Copyright © 2023 Colliers Engineering & Design, Inc. All rights reserved. The drawing and all the information contained herein is authorized for use only by the party for whom the services were rendered or to whom it is issued. This drawing shall not be copied, revised, disclosed, distributed or relied upon by any other person without the express written consent of Colliers Engineering & Design.

Doing Business as **MASER**

811
Know what's below.
Call before you dig.
FOR STATE SPECIFIC DIAL-111 NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DESCRIPTION
1	10/20/23	UPDATE PAVING TABLES
2	10/20/23	REVISED FOR PLANNING BOARD SUBMISSION

REV	DATE	DESCRIPTION
1	10/20/23	UPDATE PAVING TABLES
2	10/20/23	REVISED FOR PLANNING BOARD SUBMISSION

Daniel W. Busch

DANIEL W. BUSCH
LICENSED PROFESSIONAL ENGINEER - LICENSE NUMBER: GE04293

PHASE 1A GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

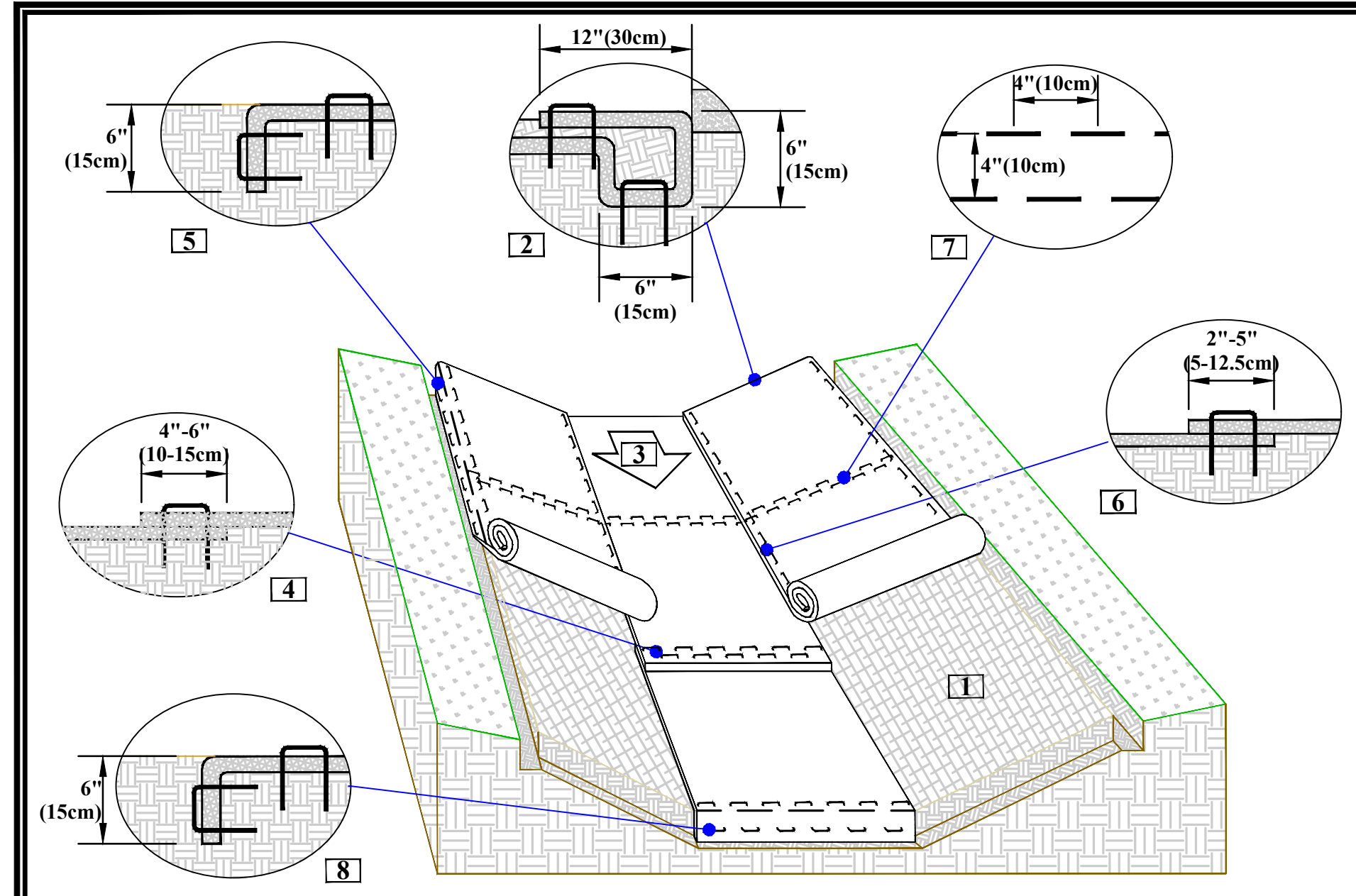
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers
Engineering & Design
HOLMDEL (Headquarters)
531 Newnam Springs Road,
Suite 203
Riverton, NJ 07071
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SOIL EROSION & SEDIMENT CONTROL PLAN

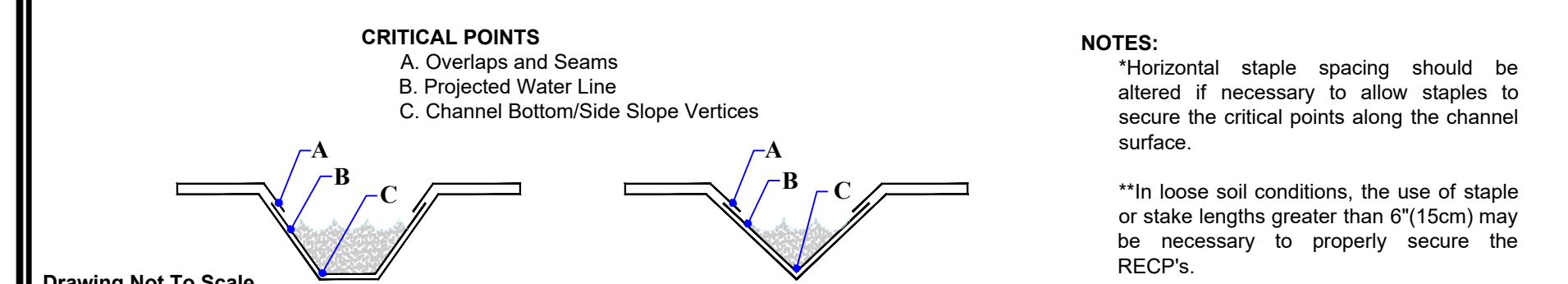
7 of 21

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



CHANNEL INSTALLATION DETAIL

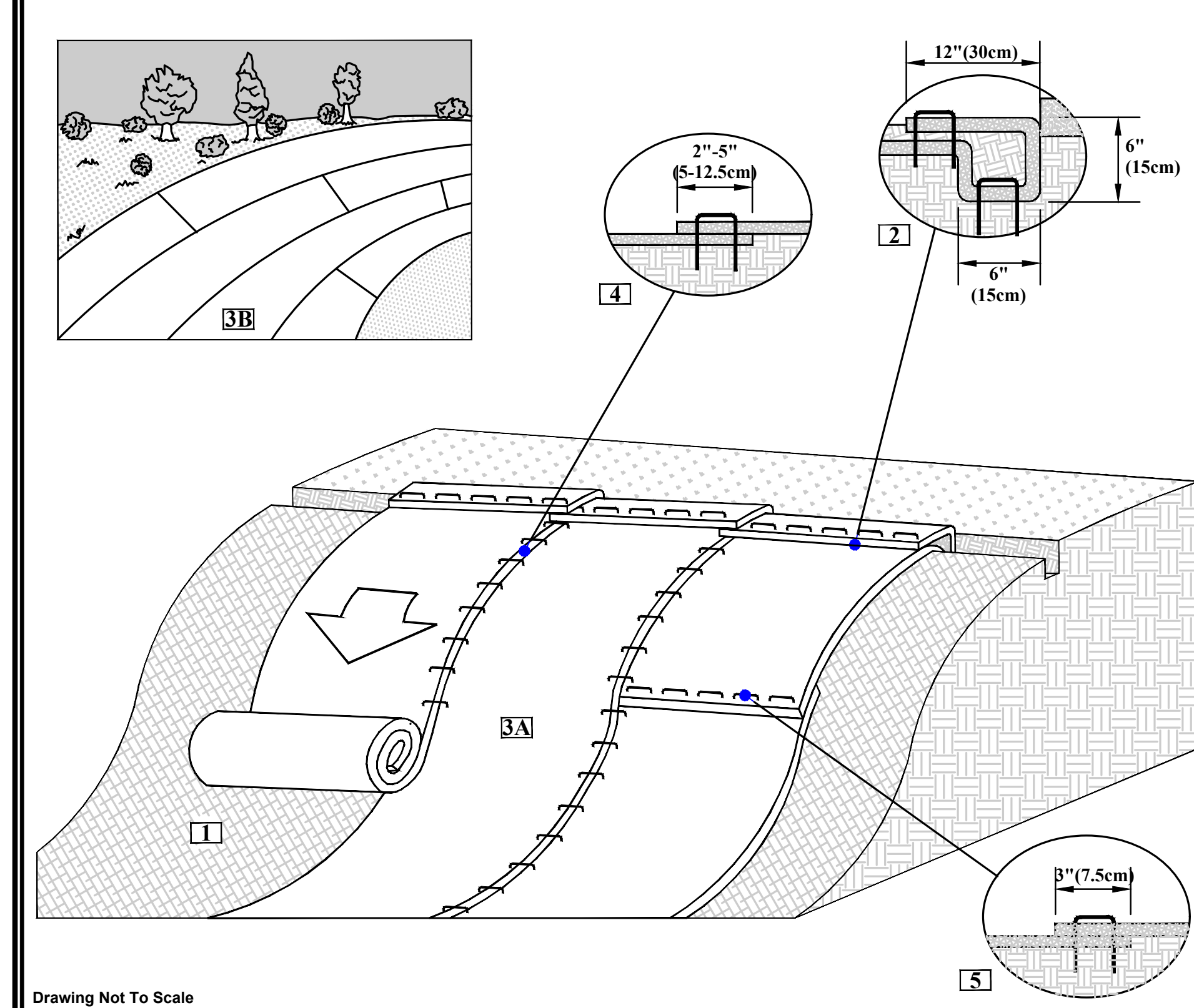
1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the channel by anchoring the RECPs in a 6\"/>



CRITICAL POINTS
 A. Overlaps and Seams
 B. Projected Water Line
 C. Channel Bottom/Side Slope Vertices

NOTES:
 *Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.
 **In loose soil conditions, the use of staple or stake lengths greater than 6\"/>

Drawing Not To Scale

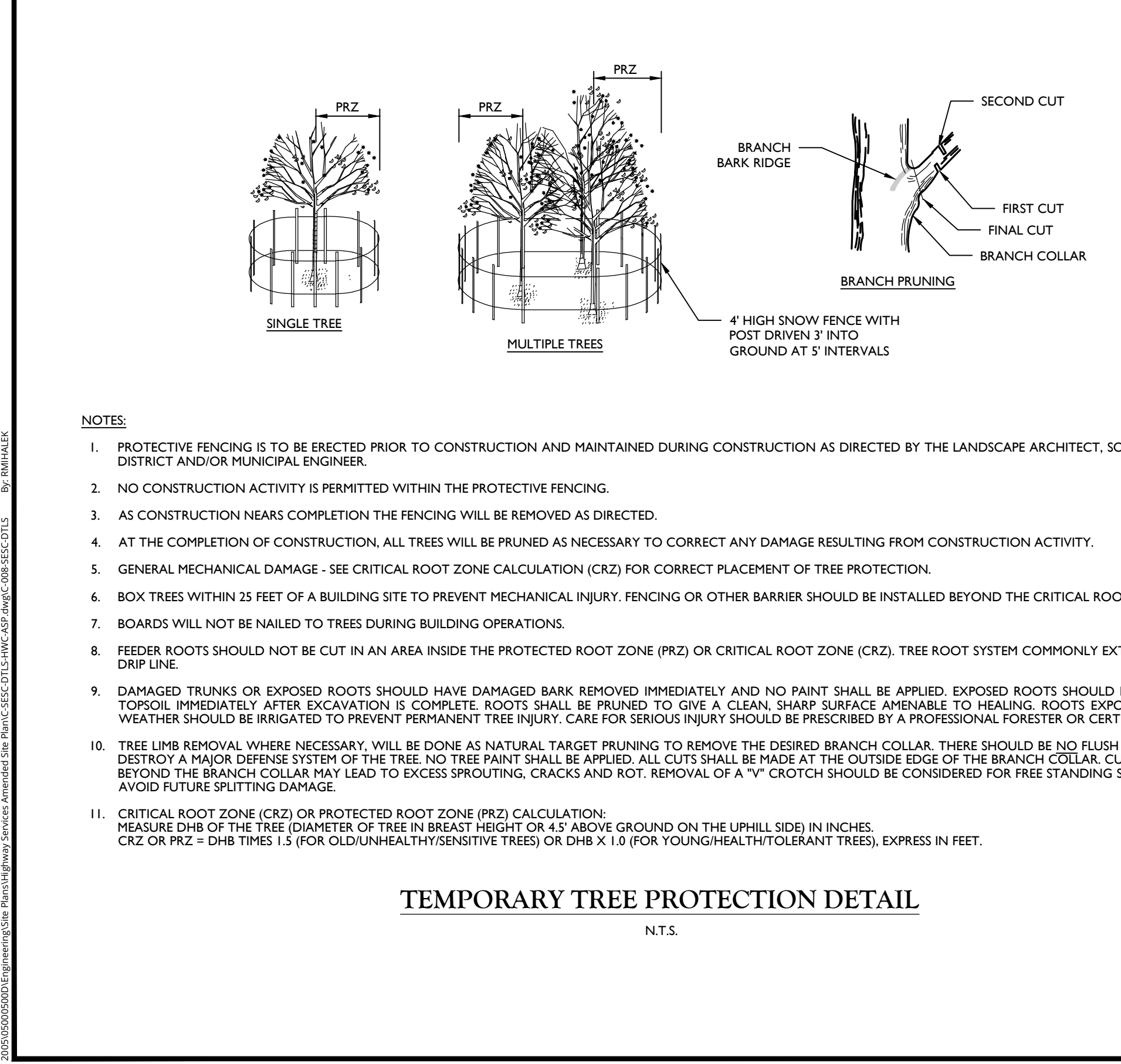


SLOPE INSTALLATION DETAIL

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECPs in a 6\"/>

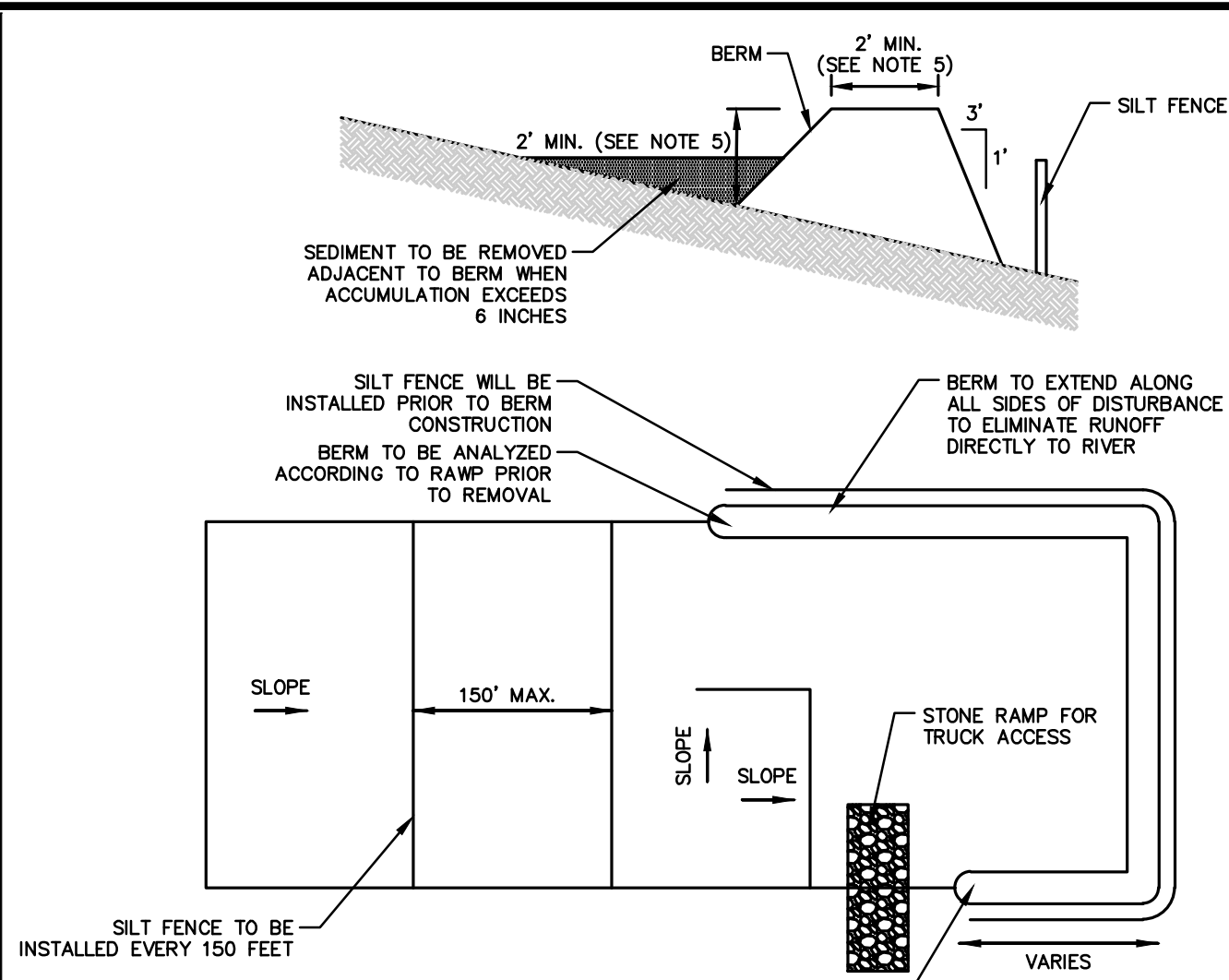
NOTES:
 In loose soil conditions, the use of staple or stake lengths greater than 6\"/>

Drawing Not To Scale



TEMPERARY TREE PROTECTION DETAIL

1. PROTECTIVE FENCING IS TO BE ERECTED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION AS DIRECTED BY THE LANDSCAPE ARCHITECT, SOIL CONSERVATION DISTRICT AND/OR MUNICIPAL ENGINEER.
2. NO CONSTRUCTION ACTIVITY IS PERMITTED WITHIN THE PROTECTIVE FENCING.
3. AS CONSTRUCTION NEARS COMPLETION THE FENCING WILL BE REMOVED AS DIRECTED.
4. AT THE COMPLETION OF CONSTRUCTION, ALL TREES WILL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE REMOVED EXPOSED DURING DIRT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR CERTIFIED TREE EXPERT.
5. DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TOPSOIL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE REMOVED EXPOSED DURING DIRT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR CERTIFIED TREE EXPERT.
6. TREE LIMB REMOVAL WHEN NECESSARY, WILL BE DONE AS NATURAL TARGET PRUNING TO REMOVE THE DESIRED BRANCH COLLAR. THERE SHOULD BE NO FLUSH CUTS. FLUSH CUTS DESTROY A NARROW DEFENSE SYSTEM OF THE TREE. NO TREE PAINT SHALL BE APPLIED. ALL CUTS SHALL BE MADE AT THE OUTSIDE EDGE OF THE BRANCH COLLAR. CUTS MADE TOO FAR BEYOND THE BRANCH COLLAR MAY LEAD TO EXCESS SPROUTING, CRACKS AND ROT. REMOVAL OF A Y-CROTCH SHOULD BE CONSIDERED FOR TREE STANDING SPECIMEN TREES TO AVOID FUTURE SPLITTING DAMAGE.
7. CRITICAL ROOT ZONE (CRZ) OR PROTECTED ROOT ZONE (PRZ) CALCULATION: MEASURE DBH OF THE TREE DIAMETER OF TREE IN BRANCH HEIGHT OR 4.5' ABOVE GROUND ON THE UPHILL SIDE IN INCHES. CRZ OR PRZ = DBH TIMES 1.5 (FOR OLD/JUN/HEALTHY/SENSITIVE TREES) OR DBH X 1.0 (FOR YOUNG/HEALTHY/TOLERANT TREES). EXPRESS IN FEET.

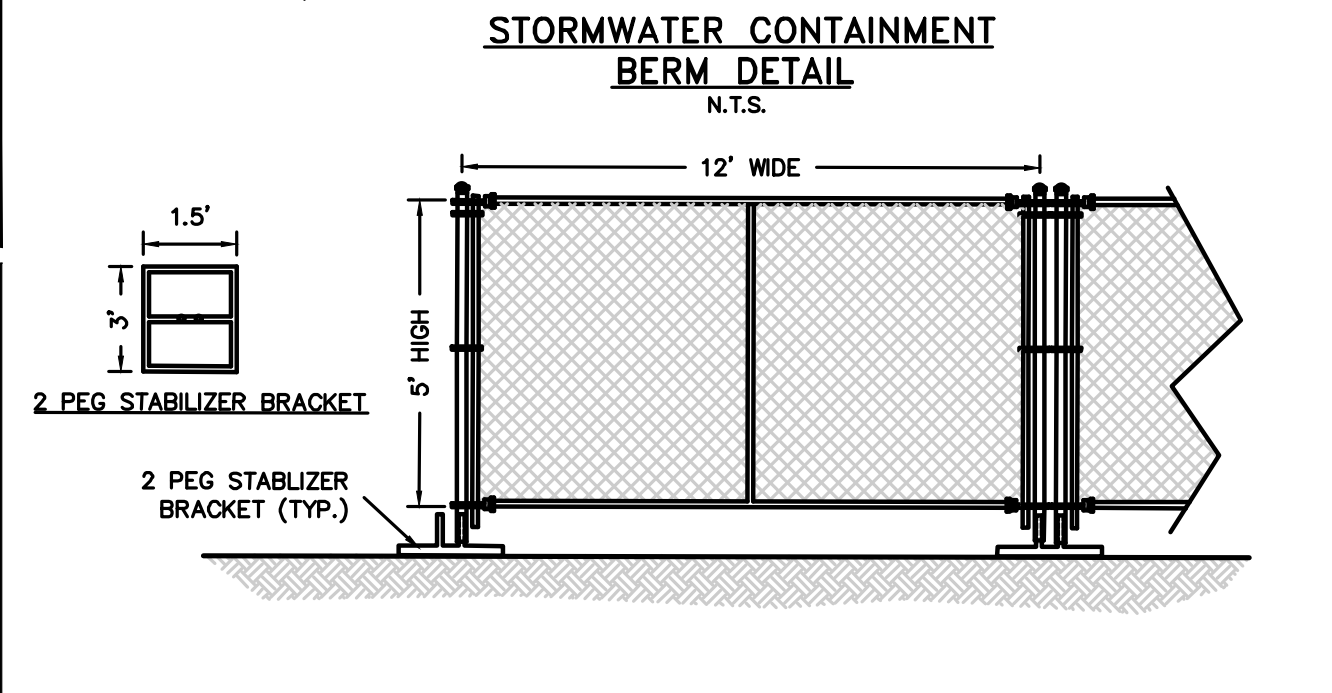


STORMWATER CONTAINMENT BERM DETAIL

N.T.S.

NOTES:

1. STORMWATER RUNOFF AND WASTEWATER GENERATED FROM THE DECONTAMINATION OF EQUIPMENT OR VEHICLES SHALL BE CAPTURED AND CONTAINED WITHIN AREA OF DISTURBANCE FOR ANALYSIS. FINAL DISPOSAL/DISCHARGE OF WASTEWATER SHALL BE BASED UPON ANALYTICAL RESULTS. WASTERS TO BE PUMPED TO SEDIMENT BASINS IF DETERMINED TO NOT CONTAIN RADIOLOGICAL AND/OR CONTAMINATED MATERIAL. OTHERWISE, EFFLUENT IS TO BE DISPOSED OF AT A NEAREST APPROVED FACILITY.
2. BERM IS TO BE INSTALLED IMMEDIATELY DOWNSTREAM PRIOR TO ANY EXCAVATION OF RADIOLOGICAL MATERIAL TO PREVENT RUNOFF FROM DISCHARGING DIRECTLY TO THE BARTON RIVER.
3. BERM LOCATIONS ARE TO BE INSPECTED AND APPROVED BY BOROUGHS OF SAYREVILLE SOIL EROSION REPRESENTATIVE PRIOR TO ANY EXCAVATION.
4. BERMS ARE TO BE INSTALLED ALONG PERIMETER OF STOCKPILE AREAS CONTAINING CONTAMINATED MATERIAL. BERMS TO BE CONSTRUCTED PRIOR TO STOCKPILING MATERIAL. CALCULATIONS AND MATERIAL SPECIFICATIONS AND/OR SAMPLES FOR BERM CONSTRUCTION TO BOROUGHS AND PROJECT ENVIRONMENTAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
5. BERM MATERIAL IS TO BE ANALYZED PRIOR TO REMOVAL ACCORDING TO RAWP REQUIREMENTS.

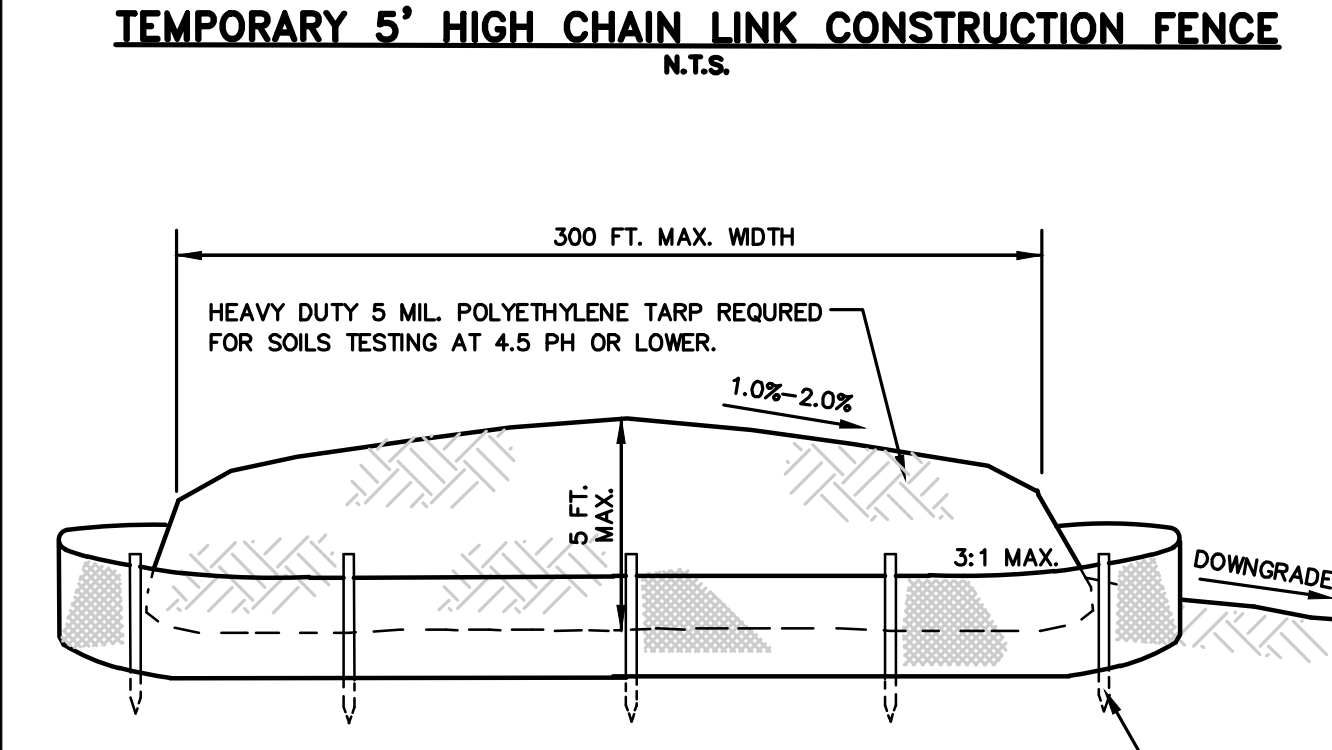


ADS HDPE PIPE RISER AND INLET PROTECTION DETAIL

NOT TO SCALE

NOTES:

1. INLET PROTECTION SHALL BE IN ACCORDANCE WITH THE INLET PROTECTION (WOODEN FRAME) DETAIL.



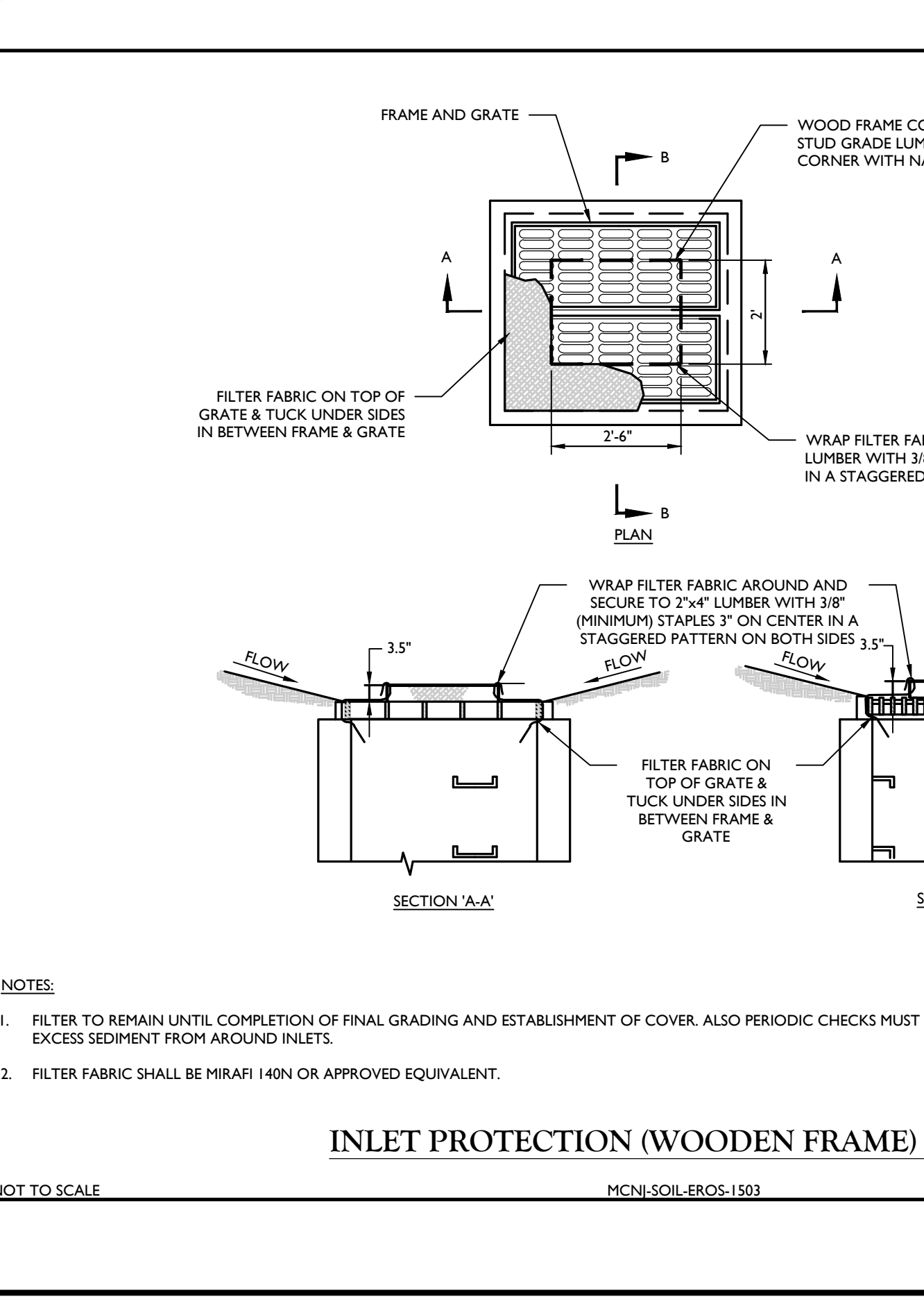
SOIL STOCKPILE

N.T.S.

NOTES:

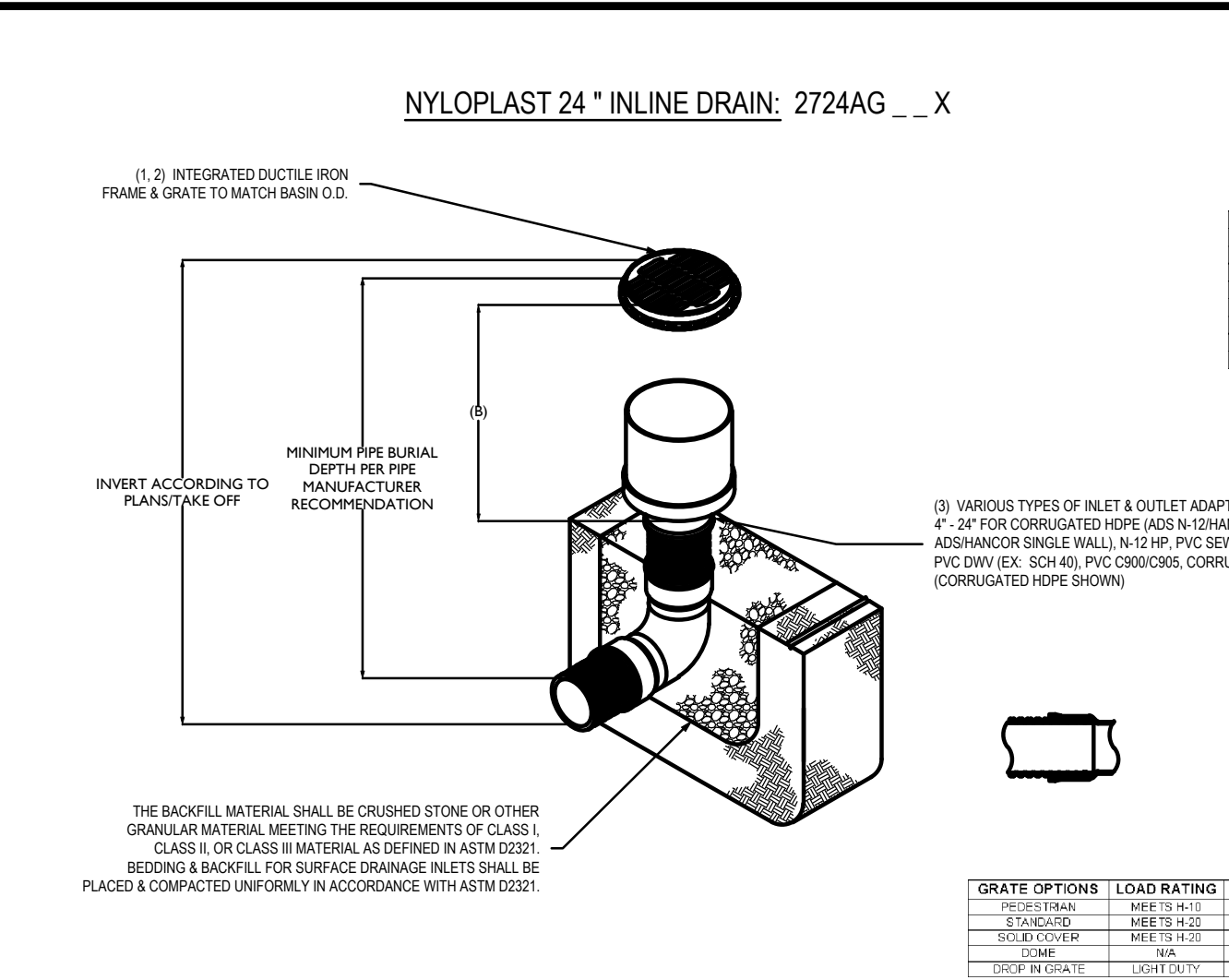
1. SOIL STOCKPILE MUST BE LOCATED WITHIN DELINEATED LIMIT OF DISTURBANCE.
2. ALL STOCKPILES TO REMAIN UNDISTURBED FOR MORE THAN 14 DAYS SHALL BE STABILIZED IN ACCORDANCE WITH SOIL EROSION SEDIMENT CONTROL STANDARDS.

Drawing Not To Scale



INLET PROTECTION (WOODEN FRAME) DETAIL

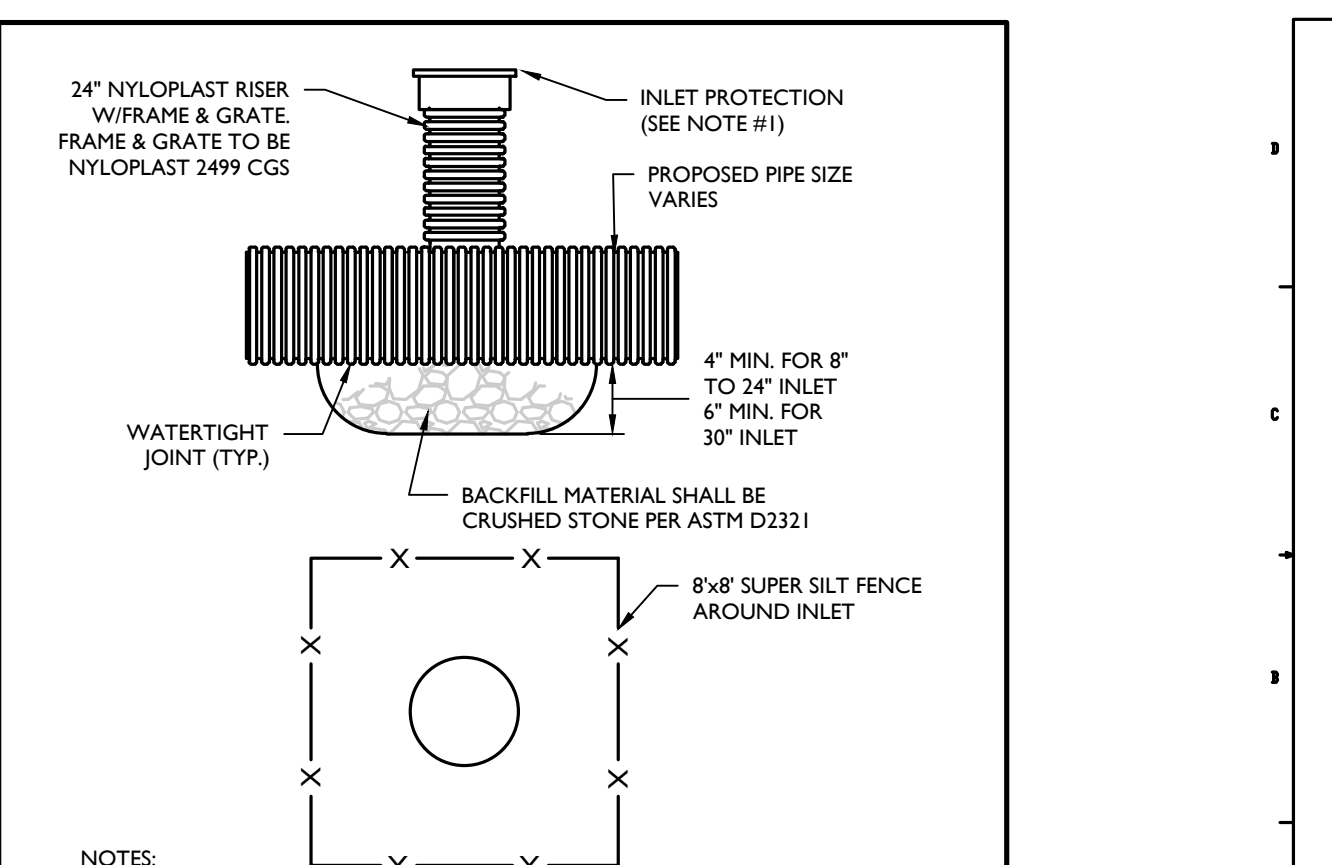
NOT TO SCALE



NYLOPLAST 24\"/>

NOTES:

1. GRADED SHOULDER SHALL BE 2\"/>



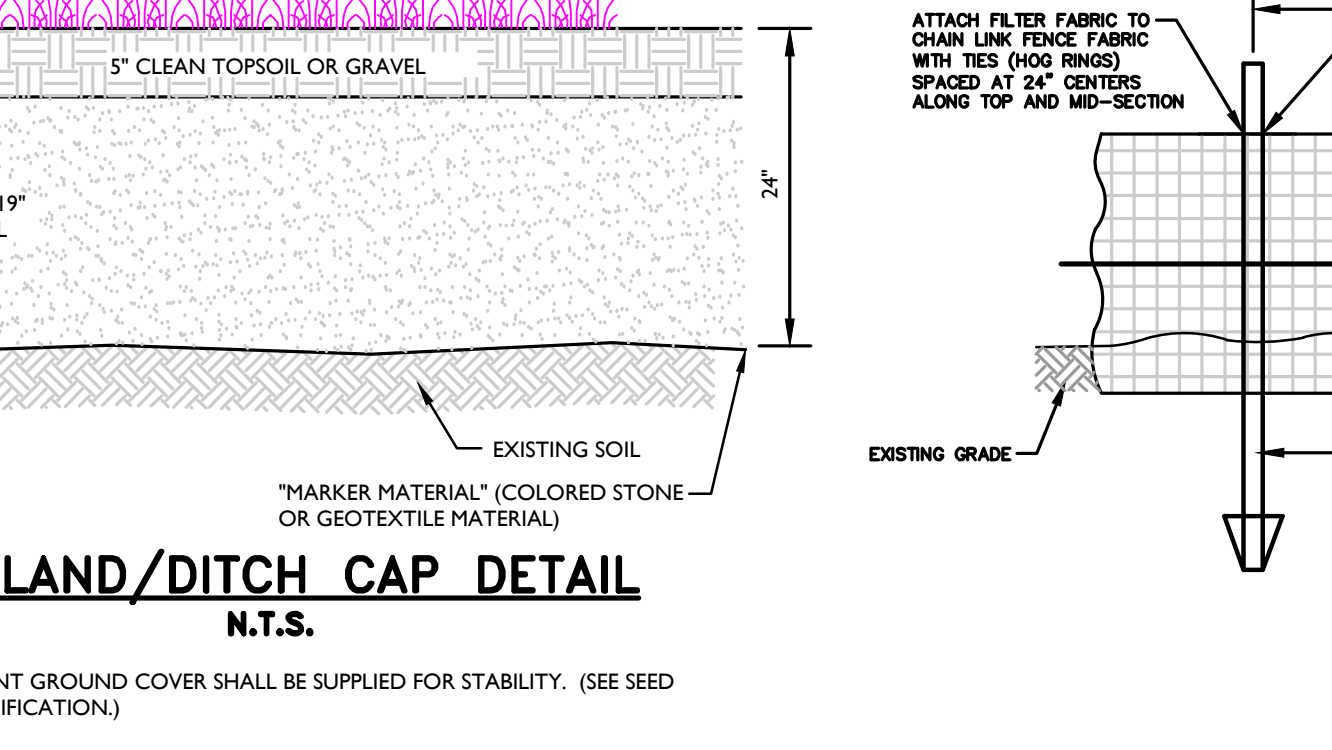
WETLAND/DITCH CAP DETAIL

N.T.S.

NOTES:

1. PERMANENT GROUND COVER SHALL BE SUPPLIED FOR STABILITY. (SEE SEED MIXTURE SPECIFICATION).
2. CAP IS TO BE INSTALLED OVER THE ENTIRE AREA OF THE WETLANDS IDENTIFIED ON THE PLAN WITHIN THE LIMIT OF DISTURBANCE.

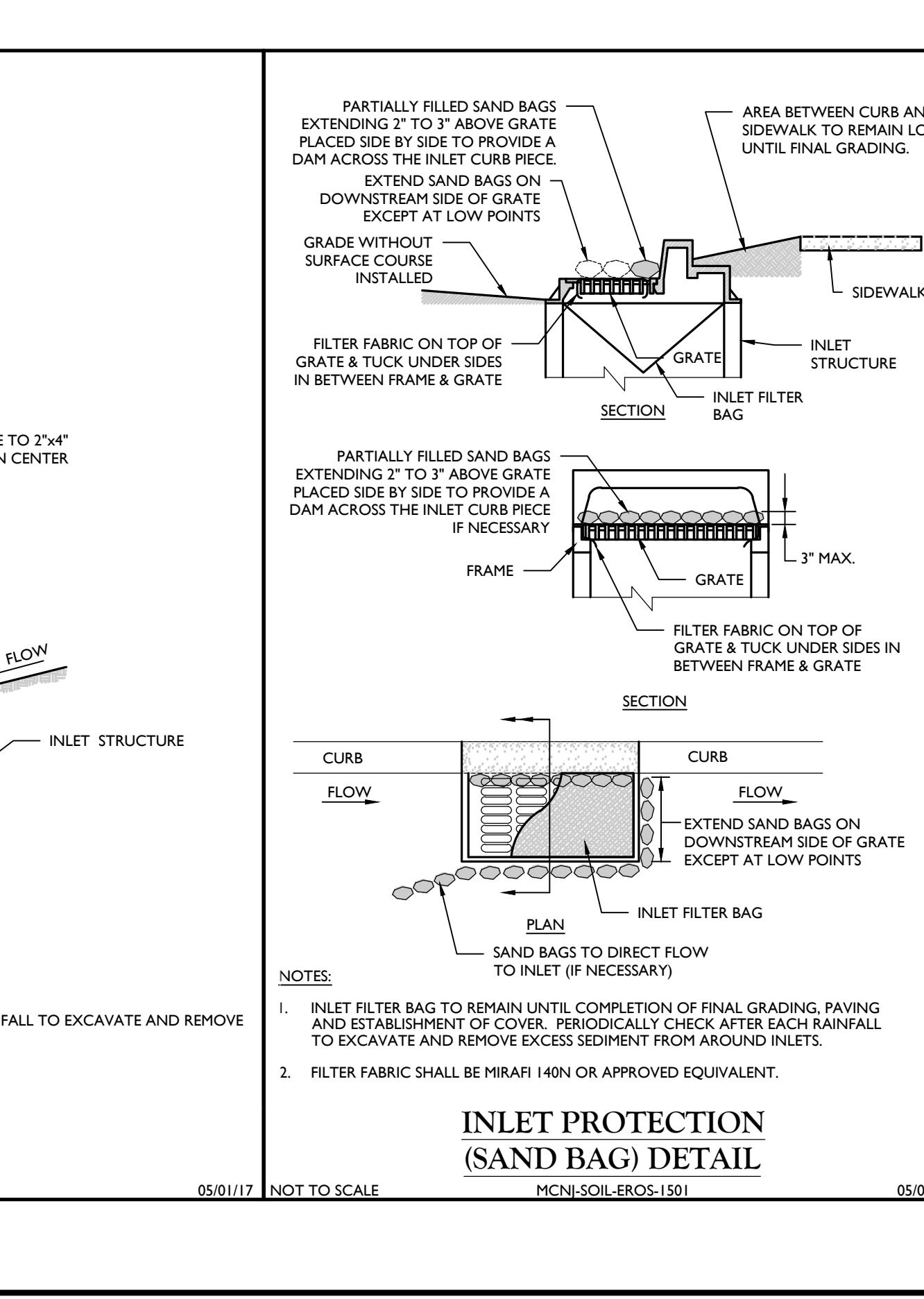
Drawing Not To Scale



SUPER SILT FENCE DETAIL

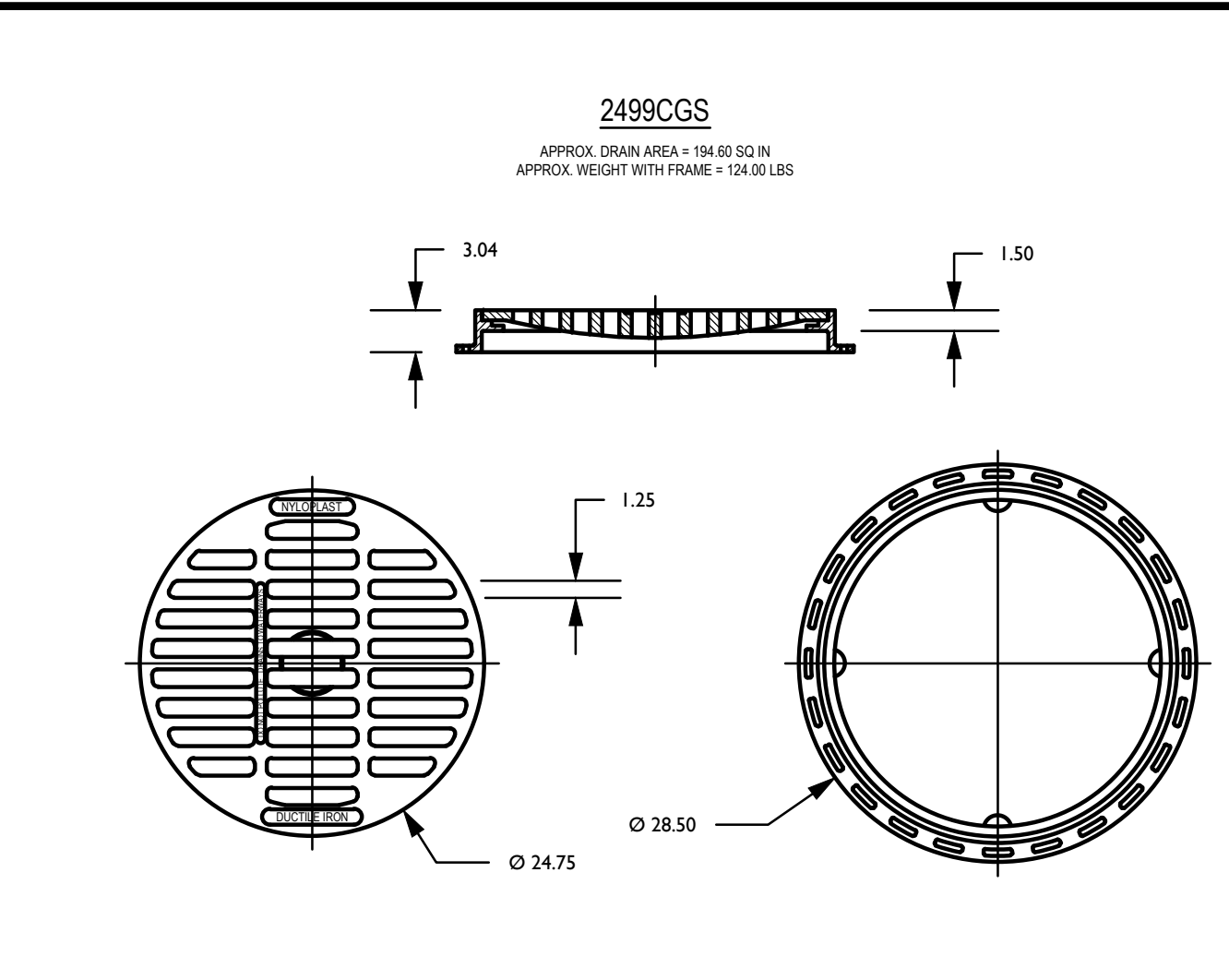
N.T.S.

Drawing Not To Scale



INLET PROTECTION (SAND BAG) DETAIL

NOT TO SCALE

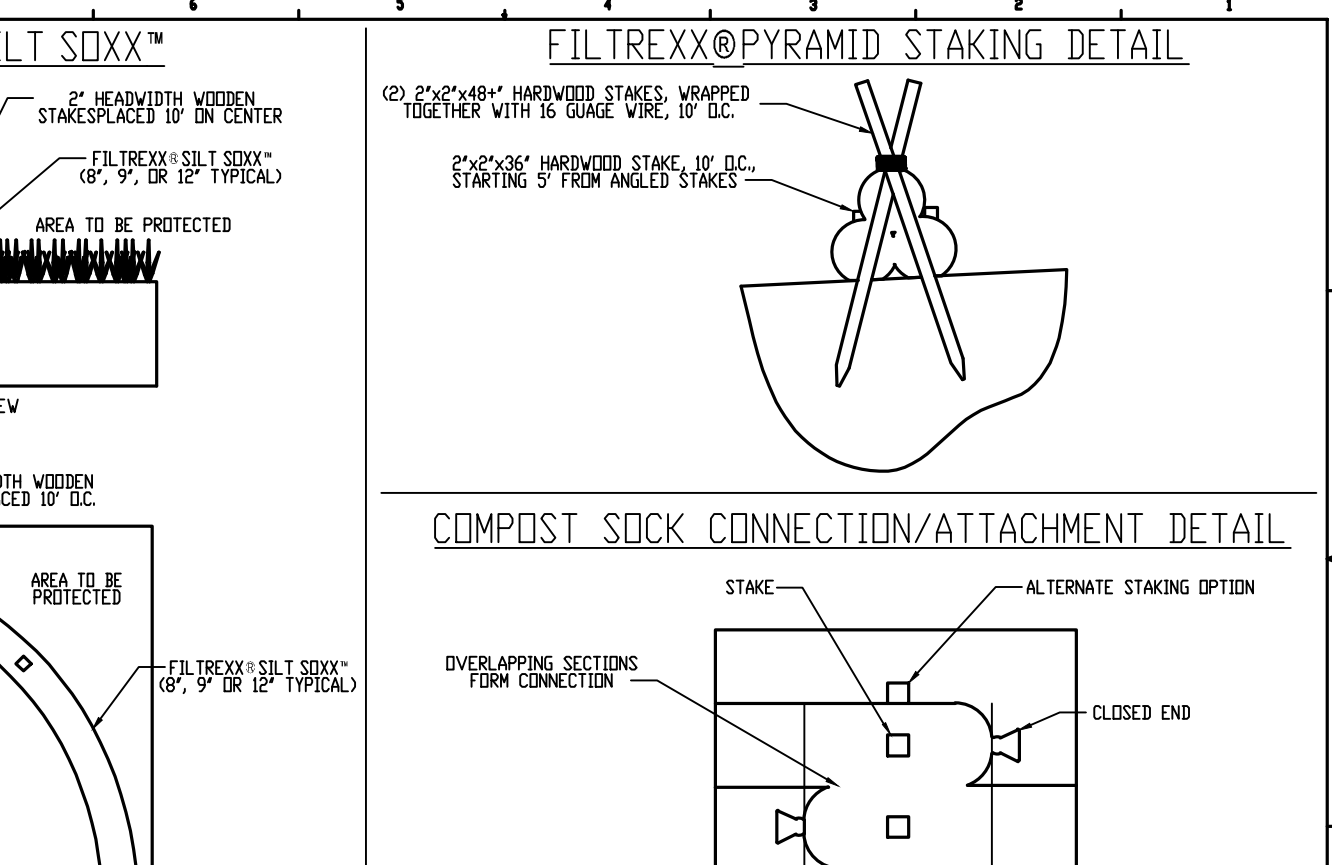


SILT FENCE DETAIL

N.T.S.

NOTES:

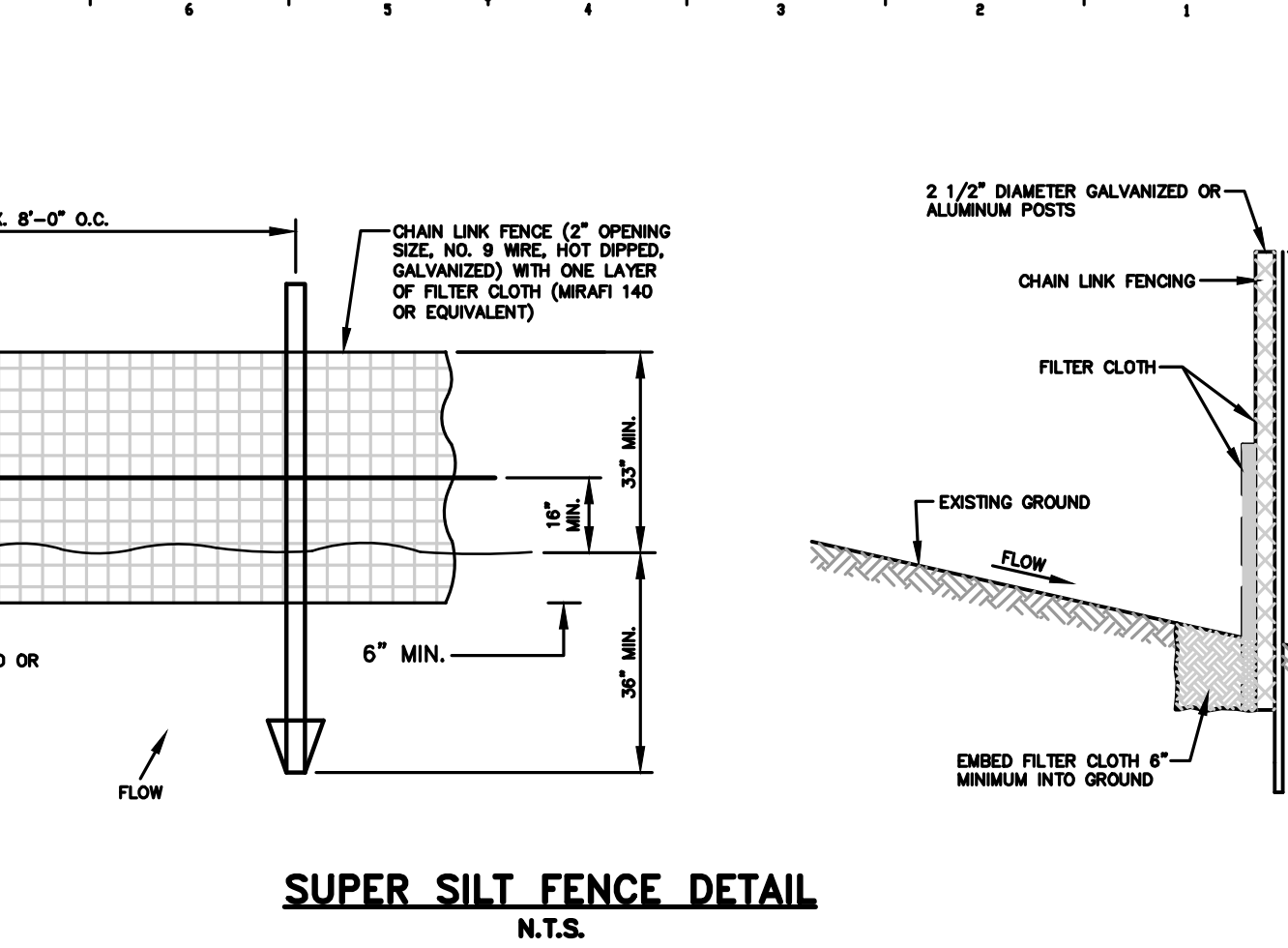
1. PROVIDE EROSION CONTROL MATTING AT END OF DIVERSION BERM TO CENTER OF SWALE.



DIVERSION BERM DETAIL

N.T.S.

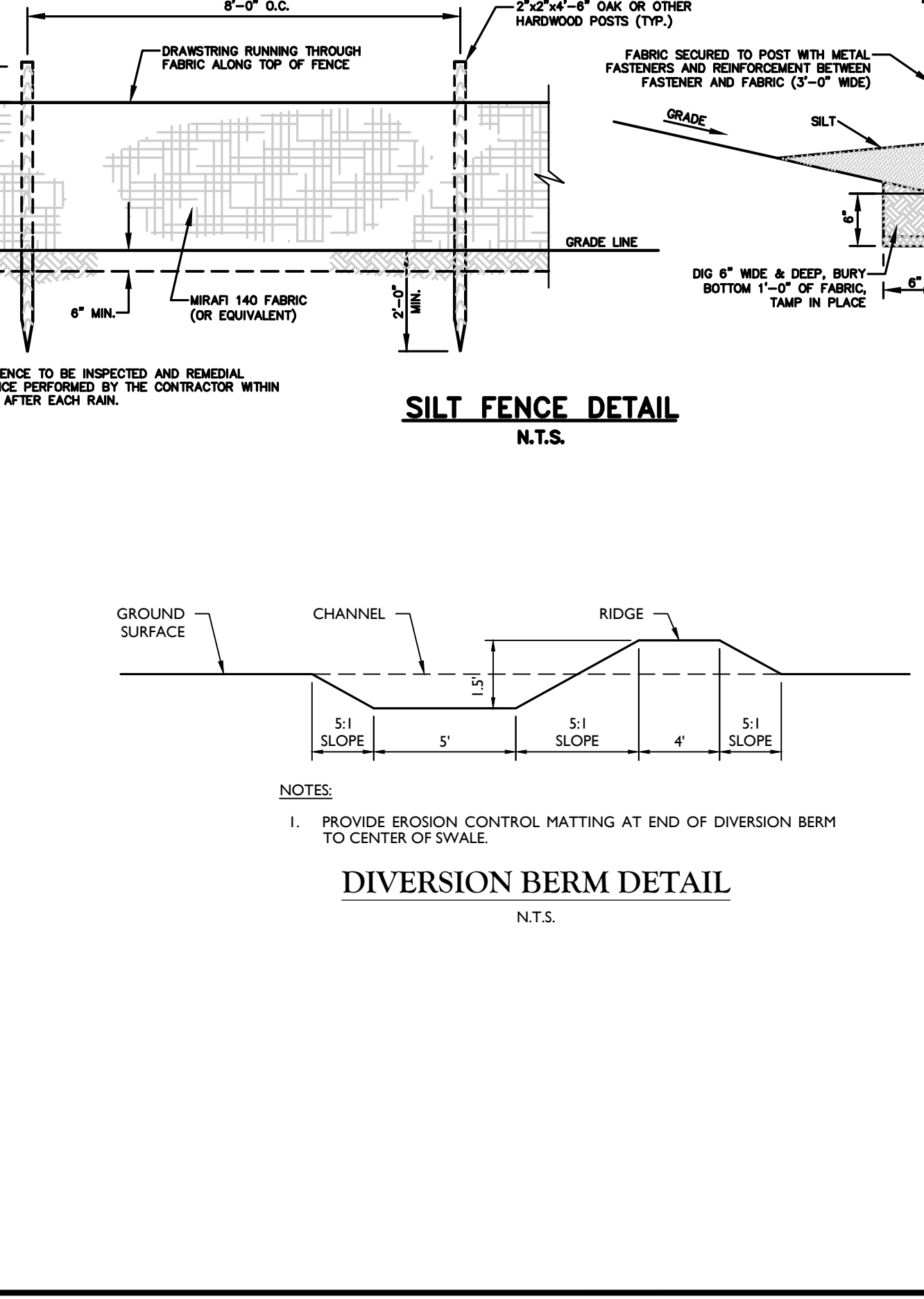
Drawing Not To Scale



INLET PROTECTION (SAND BAG) DETAIL

NOT TO SCALE

Drawing Not To Scale



INLET PROTECTION (SAND BAG) DETAIL

NOT TO SCALE

Colliers Engineering & Design

www.colliersengineering.com

Doing Business as **MASER**

811 PROTECT YOURSELF

CALL BEFORE YOU DIG

FOR STATE SPECIFIC DIAL-111 NUMBERS VISIT WWW.CALL111.COM

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	05/01/17	ISSUE FOR PERMITS	RM	DWB
2	05/01/17	REVISIONS	RM	DWB
3	05/01/17	REVISIONS	RM	DWB

DANIEL W. BUSCH

NEW JERSEY PROFESSIONAL ENGINEER - LICENSE NUMBER: GE42093

PHASE 1A GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
 BLOCK 257.02, LOT 1.05

BOROUGHS OF SAYREVILLE MIDDLESEX COUNTY NEW JERSEY

Colliers Engineering & Design

331 Newbury Springs Road, Suite 203, Red Bank, NJ 07071

Project Number: 0500000907

Scale: AS SHOWN

Date: 05/01/2017

Drawn By: RM

Checked By: DWB

Project Name: SOIL EROSION & SEDIMENT CONTROL DETAILS

Sheet Number: 8 of 21

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

REV	DATE	DESCRIPTION
1	10/20/23	UPDATE PARKING TABLES
2	10/20/23	MODIFICATION TO PARKING BOARD SUBMISSION

REV	DATE	DESCRIPTION
1	10/20/23	UPDATE PARKING TABLES
2	10/20/23	MODIFICATION TO PARKING BOARD SUBMISSION

Daniel W. Busch
DANIEL W. BUSCH
 NEW JERSEY PROFESSIONAL ENGINEER - LICENSE NUMBER: GE42093

PHASE 1A
 GATEWAY SERVICES DISTRICT
 AMENDED SITE PLAN
 FOR
SAYVILLE SEAPORT ASSOCIATES
 BLOCK 256.01, LOT 24
 BLOCK 257.02, LOT 1.05
 BOROUGH OF SAYVILLE
 MIDDLESEX COUNTY
 NEW JERSEY

Colliers
 Engineering & Design
 #

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	9/11/2023	JW	X009BK
PROJECT NUMBER:	DRAWING NAME:		
050005050	C-4 LIGHT-HWC-ASP		

LIGHTING LEGEND

- POLE MOUNT LUMINAIRE
- POLE MOUNT LUMINAIRE
- CANOPY LUMINAIRE
- WALL MOUNT
- 0.25 FOOTCANDES
- 0.50 FOOTCANDES
- 1.00 FOOTCANDES

GENERAL NOTES

1. THIS SHEET IS TO BE USED FOR LIGHTING PURPOSES ONLY.
2. LIGHT LEVELS ON PLAN REPRESENT AVERAGE FOOTCANDLE LEVELS AT FINISHED EXTERIOR GRADE.
3. A LIGHT LOSS FACTOR OF .92 WAS USED FOR MODELING.
4. ALL MOUNTING HEIGHTS ARE MEASURED FROM FINISHED EXTERIOR GRADE TO LIGHT SOURCE.
5. POLE LOCATIONS MAY VARY DUE TO SITE CONDITIONS. CONTRACTOR TO FIELD VERIFY POLE LOCATIONS PRIOR TO INSTALLATION TO ACCOMMODATE UTILITIES, FENCES, ETC.
6. UNDERGROUND CONDUIT LOCATIONS SHALL BE COORDINATED WITH THE PROPOSED TREE LOCATIONS. CONCRETE FOOTING FOR POLE MOUNTED LIGHTS TO BE DESIGNED BY OTHERS. FOOTING DETAIL TO BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.
7. ELECTRICAL WIRING DESIGN FOR SITE LIGHTING TO BE DESIGNED BY OTHERS.
8. SITE LIGHTING SUBSTITUTIONS WILL NOT BE PERMITTED UNLESS SUBSTITUTIONS ARE SUBMITTED AND APPROVED LUMINAIRES TO BE MANUFACTURED BY BETA, COOPERATION-INVUE, CREE, AND STERBERG, OR APPROVED EQUIVA.
9. LUMINAIRES AND POLE FINISHES TO BE BLACK.
10. THE LIGHTING WILL REMAIN ON FROM DUSK TO DAWN. ALL LIGHTS WILL BE CONTROLLABLE FOR OPTIONAL DIMMING OR SECURITY LIGHTING.

LIGHTING PLAN NOTES

*SEE PLAN FOR LOCATIONS

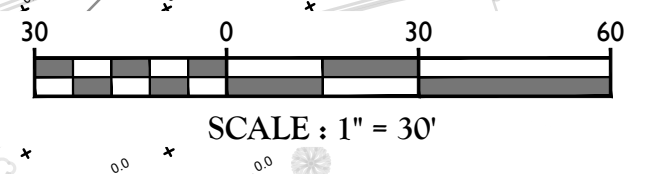
LIGHTING STATISTICS*

AREA DESCRIPTION	SYMBOL	AVERAGE	MAXIMUM	MINIMUM	MAX/MIN	AVG/MIN
HIGHWAY SERVICE AREA PARKING & DRIVES		2.1 FC	28.3 FC	0.4 FC	70.8: 1.0	5.3: 1.0
PRIMARY ACCESS DRIVES		2.0 FC	5.1 FC	0.5 FC	10.2: 1.0	4.0: 1.0

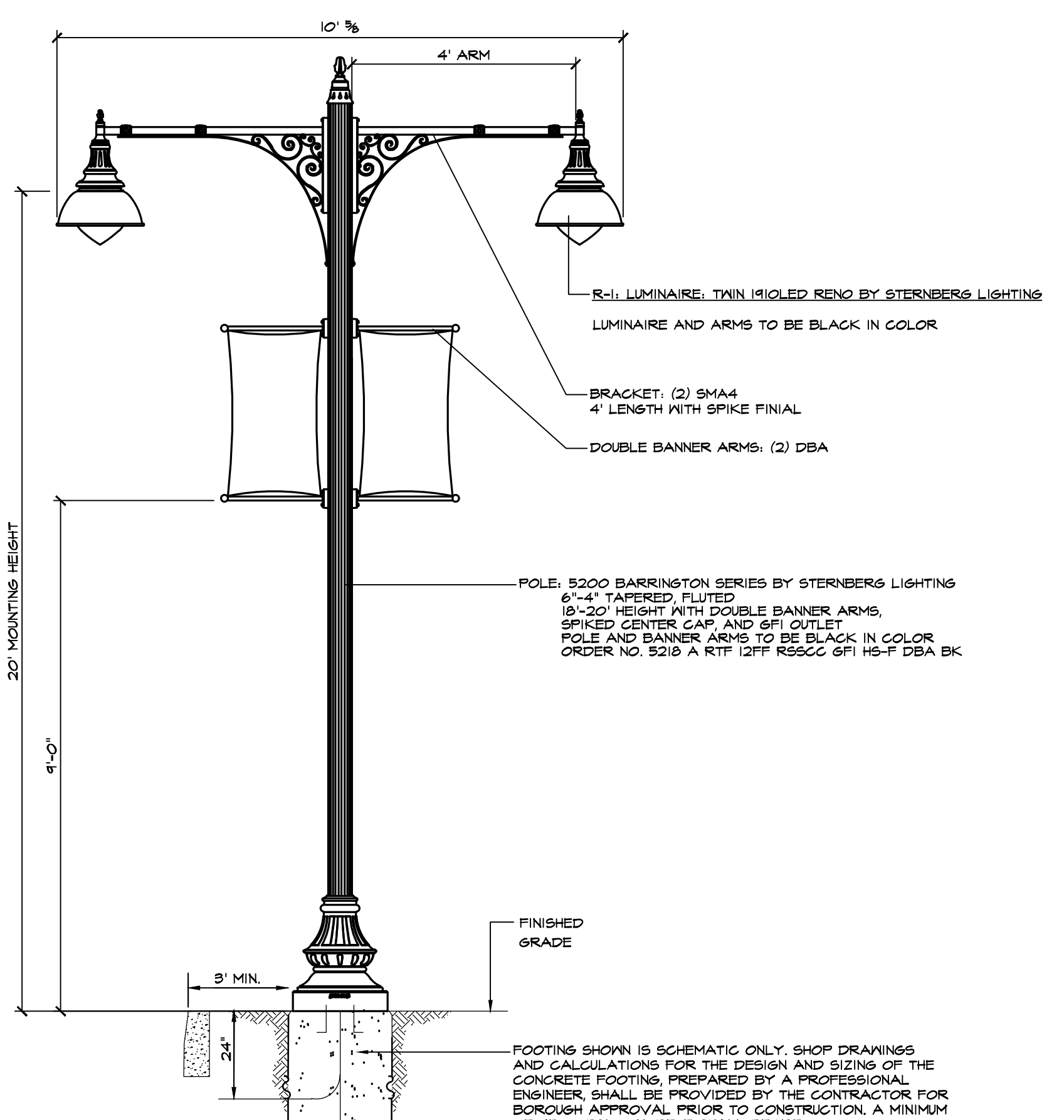
*MODEL DOES NOT INCLUDE ALL BUILDING LIGHTING. THEREFORE STATISTICS FOR SIDEWALKS ARE NOT SHOWN. SEE UPDATED OVERALL SITE LIGHTING PLANS FOR LAYOUT, PHOTOMETRICS, AND STATISTICS IN THE ROADWAY AREA OF PETER FISHER BOULEVARD.

LIGHTING SCHEDULE

SYMBOL	LABEL	QTY	CATALOG NUMBER	LAMP	LUMENS PER LAMP	WATTAGE	MOUNT
	A	10	EMM E04 LED E1 5WQ (70308030)	84 LED	11,949 LUMENS	97 WATTS	18' SINGLE POLE
	B-1	11	EMM E04 LED E1 T3	84 LED	11,745 LUMENS	99 WATTS	18' SINGLE
	B-4	3	EMM E03 LED E1 T3	63 LED	8,809 LUMENS	150 WATTS	18' TWIN
	B-5	32	EMM E03 LED E1 T3	63 LED	8,809 LUMENS	75 WATTS	18' SINGLE
	C-1	16	SCV-LED-1SL-SC40	LED	14,400 LUMENS	102 WATTS	14.5' CEILING
	C-2	8	SCV-LED-23L-SC40	LED	23,187 LUMENS	188 WATTS	14.5' CEILING
	C-3	11	RLS40WH640	LED	690 LUMENS	9.2 WATTS	11' CEILING
	W-1	6	XWM-FT-LED-D4L-40K	40 LED	4,837 LUMENS	30 WATTS	10' WALL
	R-2	4	1910LED LBS 1L 40K T4 HDL09	84 LED	6,260 LUMENS	54 WATTS	20' SINGLE

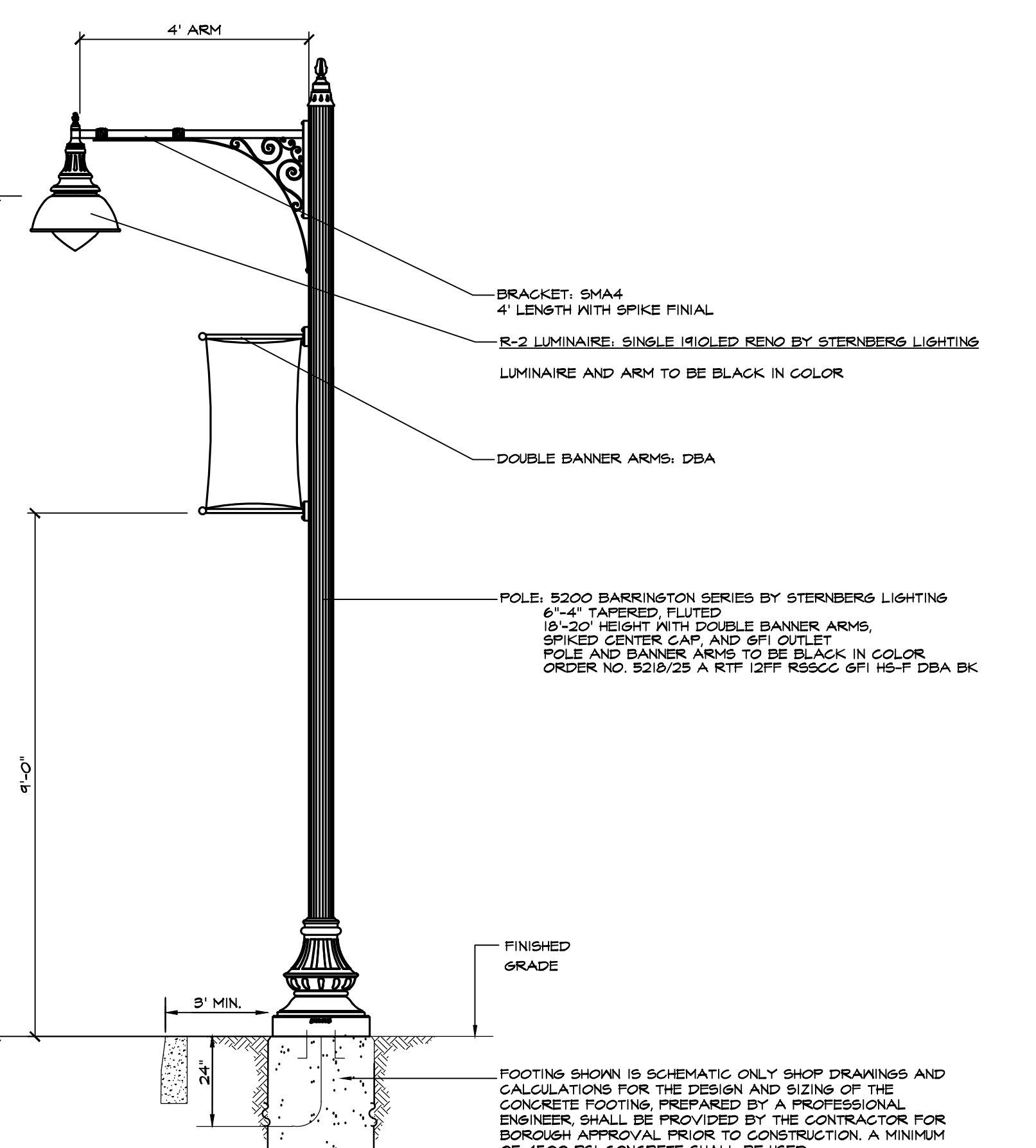


DATE PLOTTED: 10/20/23 10:52 AM PLOTTER: HP DesignJet T1300 PS



LIGHT FIXTURE TYPE 'R-1' DETAIL
NOT TO SCALE

NOTES:
1. LIGHT FIXTURE AS MANUFACTURED BY STERNBERG LIGHTING OR APPROVED EQUAL.
2. MOUNTING HEIGHT OF LIGHT FIXTURE 'R-1' TO BE 20'-0".



LIGHT FIXTURE TYPE 'R-2' DETAIL
NOT TO SCALE

NOTES:
1. LIGHT FIXTURE AS MANUFACTURED BY STERNBERG LIGHTING OR APPROVED EQUAL.
2. MOUNTING HEIGHT OF LIGHT FIXTURE 'R-2' TO BE 18'-0" OR 20'-0" - SEE PLANS FOR LOCATIONS.

Specification Sheet
Project Name: _____ City: _____
Type: _____ Catalog / Part Number: _____

CCT - Color Temp (K)
2700K 3000K 3500K 4000K 5000K
7 Year Warranty

Description
The 1910 LED series is a medium scale decorative pendant luminaire which consists of a decorative cast aluminum frame, and optional heavy gauge spun aluminum shade with integrated lens frame. The cast aluminum shade is powder coated and out penetration.

Features
Mounting Configuration: 1W: 1 Arm Mount, 2A: 2 Arm Mount @ 180°, 3A: 3 Arm @ 120°, 4A: 4 Arm @ 90°, 2AM: 2 Arm Mid Mount @ 180°, 3AM: 3 Arm Mid Mount @ 120°, 4AM: 4 Arm Mid Mount @ 90°, 2AM: 2 Arm Mid Mount @ 180°, 3AM: 3 Arm Mid Mount @ 120°, 4AM: 4 Arm Mid Mount @ 90°, 2AM: 2 Arm Mid Mount @ 180°, 3AM: 3 Arm Mid Mount @ 120°, 4AM: 4 Arm Mid Mount @ 90°, 2AM: 2 Arm Mid Mount @ 180°, 3AM: 3 Arm Mid Mount @ 120°, 4AM: 4 Arm Mid Mount @ 90°
IP Rating: _____
Optional Control Receptacle: _____
Optional Control: _____
Optional Fuse: _____
Optional Hanging: _____
Optional House Side Shield: _____
Optional Fixed Ceiling Mount Board: _____
Physical: _____

LIGHT FIXTURE 'R-2' DETAIL
NOT TO SCALE

NOTES:
1. LIGHT FIXTURE TO BE MANUFACTURED BY STERNBERG OR APPROVED EQUAL.
2. LIGHT FIXTURE TO BE BLACK.

Specification Sheet
Project Name: _____ City: _____
Type: _____ Catalog / Part Number: _____

How to Order

Mounting Configuration	Mounting Height	Color Temp	Warranty	Notes
1W: 1 Arm Mount	18'-0"	3000K	7 Year	
2A: 2 Arm Mount @ 180°	18'-0"	3000K	7 Year	
3A: 3 Arm @ 120°	18'-0"	3000K	7 Year	
4A: 4 Arm @ 90°	18'-0"	3000K	7 Year	
2AM: 2 Arm Mid Mount @ 180°	18'-0"	3000K	7 Year	
3AM: 3 Arm Mid Mount @ 120°	18'-0"	3000K	7 Year	
4AM: 4 Arm Mid Mount @ 90°	18'-0"	3000K	7 Year	
2AM: 2 Arm Mid Mount @ 180°	18'-0"	3000K	7 Year	
3AM: 3 Arm Mid Mount @ 120°	18'-0"	3000K	7 Year	
4AM: 4 Arm Mid Mount @ 90°	18'-0"	3000K	7 Year	

Notes:
1. Mounting height is based on finished grade.
2. Mounting height is based on finished grade.
3. Mounting height is based on finished grade.
4. Mounting height is based on finished grade.
5. Mounting height is based on finished grade.
6. Mounting height is based on finished grade.
7. Mounting height is based on finished grade.
8. Mounting height is based on finished grade.
9. Mounting height is based on finished grade.
10. Mounting height is based on finished grade.

Scottsdale Vertex™ (SCV) Petroleum Canopy Light

Overview
Lumen: 25,000
Wattage: 250W
Voltage: 120V
Frequency: 60Hz
Color Temp: 3000K
Warranty: 5 Year

Features & Specifications
• Rugged, cast aluminum housing with anodized aluminum finish.
• Custom lens and mounting hardware.
• 180° beam spread.
• 3000K color temperature.
• 250W power consumption.
• 25,000 lumens output.
• 5 year warranty.

Ordering Example: SCV LED 120 30 180 250 3000 5Y

Scottsdale Vertex™ (SCV) Petroleum Canopy Light

Ordering Example: SCV LED 120 30 180 250 3000 5Y

Product Description:
The Scottsdale Vertex™ (SCV) Petroleum Canopy Light is a rugged, cast aluminum luminaire designed for use in industrial and commercial environments. It features a custom lens and mounting hardware, a 180° beam spread, and a 3000K color temperature. The luminaire is powered by a 250W LED source and provides 25,000 lumens of light output. It is backed by a 5-year warranty.

Technical Specifications:
• Power: 250W
• Voltage: 120V
• Frequency: 60Hz
• Color Temperature: 3000K
• Beam Spread: 180°
• Lumens: 25,000
• Warranty: 5 Year

HALO RLS6 LED 600 Series

Product Description:
The HALO RLS6 LED 600 Series is a recessed retrofit luminaire designed for use in commercial and industrial environments. It features a 5 1/2" diameter and is available in multiple color temperatures and beam spreads. The luminaire is powered by a 60W LED source and provides 6,000 lumens of light output. It is backed by a 5-year warranty.

Technical Specifications:
• Diameter: 5 1/2"
• Power: 60W
• Voltage: 120V
• Frequency: 60Hz
• Color Temperature: 3000K, 4000K, 5000K
• Beam Spread: 30°, 45°, 60°
• Lumens: 6,000
• Warranty: 5 Year

HALO RLS6 LED 600 Series

Product Description:
The HALO RLS6 LED 600 Series is a recessed retrofit luminaire designed for use in commercial and industrial environments. It features a 5 1/2" diameter and is available in multiple color temperatures and beam spreads. The luminaire is powered by a 60W LED source and provides 6,000 lumens of light output. It is backed by a 5-year warranty.

Technical Specifications:
• Diameter: 5 1/2"
• Power: 60W
• Voltage: 120V
• Frequency: 60Hz
• Color Temperature: 3000K, 4000K, 5000K
• Beam Spread: 30°, 45°, 60°
• Lumens: 6,000
• Warranty: 5 Year

1910LEDBS RENO SERIES

Product Description:
The 1910LEDBS RENO SERIES is a decorative luminaire designed for use in commercial and industrial environments. It features a cast aluminum frame and is available in multiple color temperatures and beam spreads. The luminaire is powered by a 60W LED source and provides 6,000 lumens of light output. It is backed by a 5-year warranty.

Technical Specifications:
• Diameter: 5 1/2"
• Power: 60W
• Voltage: 120V
• Frequency: 60Hz
• Color Temperature: 3000K, 4000K, 5000K
• Beam Spread: 30°, 45°, 60°
• Lumens: 6,000
• Warranty: 5 Year

POLE DETAIL FOR FIXTURES LOCATED WITHIN PLANTING AREAS
NOT TO SCALE

Notes:
1. LIGHT FIXTURE TO BE MANUFACTURED BY CREE OR APPROVED EQUAL.
2. PRODUCT ORDERING NUMBER: P5R2CQ-1-BK.
3. LIGHT POLE TO BE BLACK.

POLE DETAIL FOR FIXTURES LOCATED WITHIN PARKING LOT PAVEMENT AREAS
NOT TO SCALE

Notes:
1. LIGHT FIXTURE TO BE MANUFACTURED BY CREE OR APPROVED EQUAL.
2. PRODUCT ORDERING NUMBER: P5R2CQ-1-BK.
3. LIGHT POLE TO BE BLACK.
4. TO BE USED WITH RAISED CONCRETE BASE WITHIN PARKING LOTS.

CONCRETE BASE FOR PARKING LOT LIGHT FIXTURES LOCATED WITHIN PLANTING AREAS
NOT TO SCALE

Notes:
1. CONCRETE BASE FOR FIXTURES P-1 THRU P-3 AND B-1 THROUGH B-5 ONLY. NOT TO BE UTILIZED FOR FIXTURES R-1 OR R-2.

RAISED CONCRETE BASE FOR LIGHT FIXTURES LOCATED WITHIN PARKING LOT PAVEMENT AREAS
NOT TO SCALE

Notes:
1. CONCRETE BASE FOR FIXTURES P-1 THRU P-3 AND B-1 THROUGH B-5 ONLY. NOT TO BE UTILIZED FOR FIXTURES R-1 OR R-2.

ORIGINAL LIGHT FIXTURE 'R-1' REFERENCE DETAIL
NOT TO SCALE - MAY BE OBSOLETE - NOT IN CURRENT SCOPE

Notes:
1. LIGHT FIXTURE TO BE MANUFACTURED BY STERNBERG OR APPROVED EQUAL.
2. LIGHT FIXTURE TO BE BLACK.

POLE DETAIL FOR FIXTURES LOCATED WITHIN PLANTING AREAS
NOT TO SCALE

Notes:
1. LIGHT FIXTURE TO BE MANUFACTURED BY CREE OR APPROVED EQUAL.
2. PRODUCT ORDERING NUMBER: P5R2CQ-1-BK.
3. LIGHT POLE TO BE BLACK.

POLE DETAIL FOR FIXTURES LOCATED WITHIN PARKING LOT PAVEMENT AREAS
NOT TO SCALE

Notes:
1. LIGHT FIXTURE TO BE MANUFACTURED BY CREE OR APPROVED EQUAL.
2. PRODUCT ORDERING NUMBER: P5R2CQ-1-BK.
3. LIGHT POLE TO BE BLACK.
4. TO BE USED WITH RAISED CONCRETE BASE WITHIN PARKING LOTS.

CONCRETE BASE FOR PARKING LOT LIGHT FIXTURES LOCATED WITHIN PLANTING AREAS
NOT TO SCALE

Notes:
1. CONCRETE BASE FOR FIXTURES P-1 THRU P-3 AND B-1 THROUGH B-5 ONLY. NOT TO BE UTILIZED FOR FIXTURES R-1 OR R-2.

RAISED CONCRETE BASE FOR LIGHT FIXTURES LOCATED WITHIN PARKING LOT PAVEMENT AREAS
NOT TO SCALE

Notes:
1. CONCRETE BASE FOR FIXTURES P-1 THRU P-3 AND B-1 THROUGH B-5 ONLY. NOT TO BE UTILIZED FOR FIXTURES R-1 OR R-2.

ORIGINAL LIGHT FIXTURE 'R-1' REFERENCE DETAIL
NOT TO SCALE - MAY BE OBSOLETE - NOT IN CURRENT SCOPE

Notes:
1. LIGHT FIXTURE TO BE MANUFACTURED BY STERNBERG OR APPROVED EQUAL.
2. LIGHT FIXTURE TO BE BLACK.

Colliers Engineering & Design
www.colliersengineering.com
PROTECT YOURSELF
CALL US TODAY
FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT WWW.CALL11.COM

REV	DATE	DESCRIPTION
1	10/20/23	ISSUE FOR PLANNING BOARD SUBMISSION
2	10/20/23	ISSUE FOR PLANNING BOARD SUBMISSION
3	10/20/23	ISSUE FOR PLANNING BOARD SUBMISSION

DANIEL W. BUSCH
NEW JERSEY PROFESSIONAL ENGINEER - LICENSE NUMBER: GE042093

PHASE 1A GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design
331 Newnam Springs Road, Suite 203
Red Bank, NJ 07071
Phone: 732.883.1950
COLLIERS ENGINEERING & DESIGN, INC.
DORIS BLOOMER AS MEMBER CONSULTING

SCALE: AS SHOWN
DATE: 9/11/2023
PROJECT NUMBER: 05000509
DRAWING NAME: C-LIGHT-DTL5-HWC-ASP

SHEET FILE: LIGHTING DETAILS

11 of 21

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

DESCRIPTION
The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application, recognizing evolving environmental and regulatory trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

SPECIFICATION FEATURES
Typical cast aluminum top housing attaches to cast aluminum mounting arm with four stainless steel fasteners. One-piece aluminum housing with mounting hub and top casting allows for mounting and components. (See the mounting accessories section for a full selection of mounting arms. Only these arms are compatible with this luminaire.)
Continuous silicone gaskets seal lens to top casting and shade. The mounting hardware cast aluminum construction and stainless steel assembly. SHADES: Slurry gray or black powder coated aluminum. Other superior surface finish and color options in form. DCO/REPAIR: Die-cast aluminum 1/8" thick door and doorfasteners to underside of shade with a thick wall mounting silicone gasket. Mounting hub slips attached to mounting arm.

Options
Choice of native patented, high efficiency AccuLED Optics™ are factory installed. Options are factory designed to shape the optics, maximizing efficiency and modification specific. AccuLED Optics technology, creates consistent distributions with the stability to meet custom application requirements. Offered Standard in 4000K or 2700 CCT and nominal 70 CRI. Optional 3000 CCT and 80 CRI. For the ultimate level of light control, an optional silicone gasket accessory can be used for factory installation. The housing is available in decorative finishes. Architectural Colors brochure for a complete selection. Options to meet American Art requirements.

Finish
Housing is finished in a five-stage super TDC polyurethane powder coat finish. 2.5 mil minimum thickness for superior protection against UV rays and weather. LightBAR™ cover plates are standard white and may be specified to match finish colors include black, bronze, grey, white, dark platinum and graphite metallic. RA and custom color matches available. Contact Outdoor Architectural Colors brochure for a complete selection. Options to meet American Art requirements.

Warranty
Five-year warranty.

ENERGY DATA
Lumen Package: 3000-21,000
Voltage Range: 120-277V
Efficiency Range: 105-158
Power Factor: 0.95
Power Consumption: 10W-100W
Temperature: -40°C to 40°C

COOPER Lighting Solutions

ORDERING INFORMATION
Sample Number: ECM-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
ECM-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting Solutions

ORDERING INFORMATION
Sample Number: ECM-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
ECM-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting Solutions

ORDERING INFORMATION
Sample Number: ECM-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
ECM-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting Solutions

DESCRIPTION
The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application, recognizing evolving environmental and regulatory trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

SPECIFICATION FEATURES
Typical cast aluminum top housing attaches to cast aluminum mounting arm with four stainless steel fasteners. One-piece aluminum housing with mounting hub and top casting allows for mounting and components. (See the mounting accessories section for a full selection of mounting arms. Only these arms are compatible with this luminaire.)
Continuous silicone gaskets seal lens to top casting and shade. The mounting hardware cast aluminum construction and stainless steel assembly. SHADES: Slurry gray or black powder coated aluminum. Other superior surface finish and color options in form. DCO/REPAIR: Die-cast aluminum 1/8" thick door and doorfasteners to underside of shade with a thick wall mounting silicone gasket. Mounting hub slips attached to mounting arm.

Options
Choice of native patented, high efficiency AccuLED Optics™ are factory installed. Options are factory designed to shape the optics, maximizing efficiency and modification specific. AccuLED Optics technology, creates consistent distributions with the stability to meet custom application requirements. Offered Standard in 4000K or 2700 CCT and nominal 70 CRI. Optional 3000 CCT and 80 CRI. For the ultimate level of light control, an optional silicone gasket accessory can be used for factory installation. The housing is available in decorative finishes. Architectural Colors brochure for a complete selection. Options to meet American Art requirements.

Finish
Housing is finished in a five-stage super TDC polyurethane powder coat finish. 2.5 mil minimum thickness for superior protection against UV rays and weather. LightBAR™ cover plates are standard white and may be specified to match finish colors include black, bronze, grey, white, dark platinum and graphite metallic. RA and custom color matches available. Contact Outdoor Architectural Colors brochure for a complete selection. Options to meet American Art requirements.

Warranty
Five-year warranty.

ENERGY DATA
Lumen Package: 3000-21,000
Voltage Range: 120-277V
Efficiency Range: 105-158
Power Factor: 0.95
Power Consumption: 10W-100W
Temperature: -40°C to 40°C

COOPER Lighting Solutions

Colliers Engineering & Design

www.colliersengineering.com

Copyright © 2023, Colliers Engineering & Design, Inc. All rights reserved. No sharing or all the information contained herein is authorized for use only by the party for whom it was created and is to remain confidential. This drawing may be copied, revised, modified, distributed or used in any other manner without the express written consent of Colliers Engineering & Design.

Doing Business as **MASER**

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, ENGINEERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANCHORED BY ANY UTILITY.

Know what's below. Call before you dig.
FOR STATE SPECIFIC CALL PHONE NUMBERS VISIT: WWW.CALL811.COM

ORDERING INFORMATION
Sample Number: ECM-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
ECM-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting Solutions

ORDERING INFORMATION
Sample Number: ECM-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
ECM-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting Solutions

ORDERING INFORMATION
Sample Number: ECM-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
ECM-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting Solutions

ORDERING INFORMATION
Sample Number: ECM-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
ECM-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM	ECM-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting Solutions

DESCRIPTION
The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application, recognizing evolving environmental and regulatory trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

SPECIFICATION FEATURES
Typical cast aluminum top housing attaches to cast aluminum mounting arm with four stainless steel fasteners. One-piece aluminum housing with mounting hub and top casting allows for mounting and components. (See the mounting accessories section for a full selection of mounting arms. Only these arms are compatible with this luminaire.)
Continuous silicone gaskets seal lens to top casting and shade. The mounting hardware cast aluminum construction and stainless steel assembly. SHADES: Slurry gray or black powder coated aluminum. Other superior surface finish and color options in form. DCO/REPAIR: Die-cast aluminum 1/8" thick door and doorfasteners to underside of shade with a thick wall mounting silicone gasket. Mounting hub slips attached to mounting arm.

Options
Choice of native patented, high efficiency AccuLED Optics™ are factory installed. Options are factory designed to shape the optics, maximizing efficiency and modification specific. AccuLED Optics technology, creates consistent distributions with the stability to meet custom application requirements. Offered Standard in 4000K or 2700 CCT and nominal 70 CRI. Optional 3000 CCT and 80 CRI. For the ultimate level of light control, an optional silicone gasket accessory can be used for factory installation. The housing is available in decorative finishes. Architectural Colors brochure for a complete selection. Options to meet American Art requirements.

Finish
Housing is finished in a five-stage super TDC polyurethane powder coat finish. 2.5 mil minimum thickness for superior protection against UV rays and weather. LightBAR™ cover plates are standard white and may be specified to match finish colors include black, bronze, grey, white, dark platinum and graphite metallic. RA and custom color matches available. Contact Outdoor Architectural Colors brochure for a complete selection. Options to meet American Art requirements.

Warranty
Five-year warranty.

ENERGY DATA
Lumen Package: 3000-21,000
Voltage Range: 120-277V
Efficiency Range: 105-158
Power Factor: 0.95
Power Consumption: 10W-100W
Temperature: -40°C to 40°C

COOPER Lighting Solutions

LIGHT FIXTURE 'B-5' DETAIL
NOT TO SCALE

NOTES:
1. LIGHT FIXTURE TO BE MANUFACTURED BY EATON LIGHTING OR APPROVED EQUAL.
2. POLE ARM ORDERING NUMBER: VAS164-BK.
3. LIGHT FIXTURE TO BE BLACK.

CONCRETE BASE FOR PARKING LOT LIGHT FIXTURES LOCATED WITHIN PLANTING AREAS
NOT TO SCALE

FOOTING SHOWN IS SCHEMATIC ONLY. SHOP DRAWINGS AND CALCULATIONS FOR THE DESIGN AND SIZING OF THE CONCRETE FOOTING, PREPARED BY A PROFESSIONAL ENGINEER, SHALL BE PROVIDED BY THE CONTRACTOR FOR BOROUGH APPROVAL PRIOR TO CONSTRUCTION. A MINIMUM OF 4500 PSI CONCRETE SHALL BE USED.

POLE DETAIL FOR FIXTURES LOCATED WITHIN PLANTING AREAS
NOT TO SCALE

NOTES:
1. POLE TO BE MANUFACTURED BY EATON OR APPROVED EQUAL.
2. PRODUCT ORDERING NUMBER: BWS-8-2-2-2-BK.
3. LIGHT POLE TO BE BLACK.
4. POLE TO BE TRIMMED IN FIELD TO MEET BAY MOUNTING HEIGHT.

RAISED CONCRETE BASE FOR LIGHT FIXTURES LOCATED WITHIN PARKING LOT PAVEMENT AREAS
NOT TO SCALE

FOOTING SHOWN IS SCHEMATIC ONLY. SHOP DRAWINGS AND CALCULATIONS FOR THE DESIGN AND SIZING OF THE CONCRETE FOOTING, PREPARED BY A PROFESSIONAL ENGINEER, SHALL BE PROVIDED BY THE CONTRACTOR FOR BOROUGH APPROVAL PRIOR TO CONSTRUCTION. A MINIMUM OF 4500 PSI CONCRETE SHALL BE USED.

ORDERING INFORMATION
Sample Number: CSP-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
CSP-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	CSP-EMM-LED-E1-F1-FL-GM	CSP-EMM-LED-E1-F1-FL-GM	CSP-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting by Eaton | Product Selection Guide | Sixth Edition | www.cooperlighting.com

ORDERING INFORMATION
Sample Number: CSP-EMM-LED-E1-F1-FL-GM

Product Family	Number of LightBARS™	Lens Type	Voltage	Distribution	Mid Section Type	Shade Type	Color*
CSP-EMM-LED-E1-F1-FL-GM	1	LED LightBAR™	120-277V	120° Beam	CSP-EMM-LED-E1-F1-FL-GM	CSP-EMM-LED-E1-F1-FL-GM	CSP-EMM-LED-E1-F1-FL-GM

Options (Add as Suffix)

Accessories (Order Separately)

Mounting Accessories (Order Separately)

COOPER Lighting by Eaton | Product Selection Guide | Sixth Edition | www.cooperlighting.com

DESCRIPTION
The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application, recognizing evolving environmental and regulatory trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

SPECIFICATION FEATURES
Typical cast aluminum top housing attaches to cast aluminum mounting arm with four stainless steel fasteners. One-piece aluminum housing with mounting hub and top casting allows for mounting and components. (See the mounting accessories section for a full selection of mounting arms. Only these arms are compatible with this luminaire.)
Continuous silicone gaskets seal lens to top casting and shade. The mounting hardware cast aluminum construction and stainless steel assembly. SHADES: Slurry gray or black powder coated aluminum. Other superior surface finish and color options in form. DCO/REPAIR: Die-cast aluminum 1/8" thick door and doorfasteners to underside of shade with a thick wall mounting silicone gasket. Mounting hub slips attached to mounting arm.

Options
Choice of native patented, high efficiency AccuLED Optics™ are factory installed. Options are factory designed to shape the optics, maximizing efficiency and modification specific. AccuLED Optics technology, creates consistent distributions with the stability to meet custom application requirements. Offered Standard in 4000K or 2700 CCT and nominal 70 CRI. Optional 3000 CCT and 80 CRI. For the ultimate level of light control, an optional silicone gasket accessory can be used for factory installation. The housing is available in decorative finishes. Architectural Colors brochure for a complete selection. Options to meet American Art requirements.

Finish
Housing is finished in a five-stage super TDC polyurethane powder coat finish. 2.5 mil minimum thickness for superior protection against UV rays and weather. LightBAR™ cover plates are standard white and may be specified to match finish colors include black, bronze, grey, white, dark platinum and graphite metallic. RA and custom color matches available. Contact Outdoor Architectural Colors brochure for a complete selection. Options to meet American Art requirements.

Warranty
Five-year warranty.

ENERGY DATA
Lumen Package: 3000-21,000
Voltage Range: 120-277V
Efficiency Range: 105-158
Power Factor: 0.95
Power Consumption: 10W-100W
Temperature: -40°C to 40°C

COOPER Lighting Solutions

Colliers Engineering & Design

HOLMDEL (Headquarters)
331 Newman Springs Road,
Suite 203
Red Bank, NJ 07701
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DORIS BORDO ASHBY MEMBER CONSULTING

DANIEL W. BUSCH
NEW JERSEY PROFESSIONAL ENGINEER - LICENSE NUMBER: G64293

PHASE 1A GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

SCALE: AS SHOWN DATE: 9/11/2023 DRAWN BY: RM CHECKED BY: DWB
PROJECT NUMBER: 05000509 C/LIGHT-DTL5-HWC-ASP
SHEET NUMBER: LIGHTING DETAILS
12 of 21

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

REV	DATE	DESCRIPTION
1	10/20/23	UPDATE PAVING TABLES
2	10/20/23	REVISED FOR PLANNING BOARD SUBMISSION

REV	DATE	DESCRIPTION
1	10/20/23	UPDATE PAVING TABLES
2	10/20/23	REVISED FOR PLANNING BOARD SUBMISSION



DANIEL W. BUSCH
ENGINEER - LICENSE NUMBER: GE42093

PHASE 1A
GATEWAY SERVICES
DISTRICT
AMENDED SITE PLAN
FOR
SAYREVILLE
SEAPORT
ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers
Engineering & Design

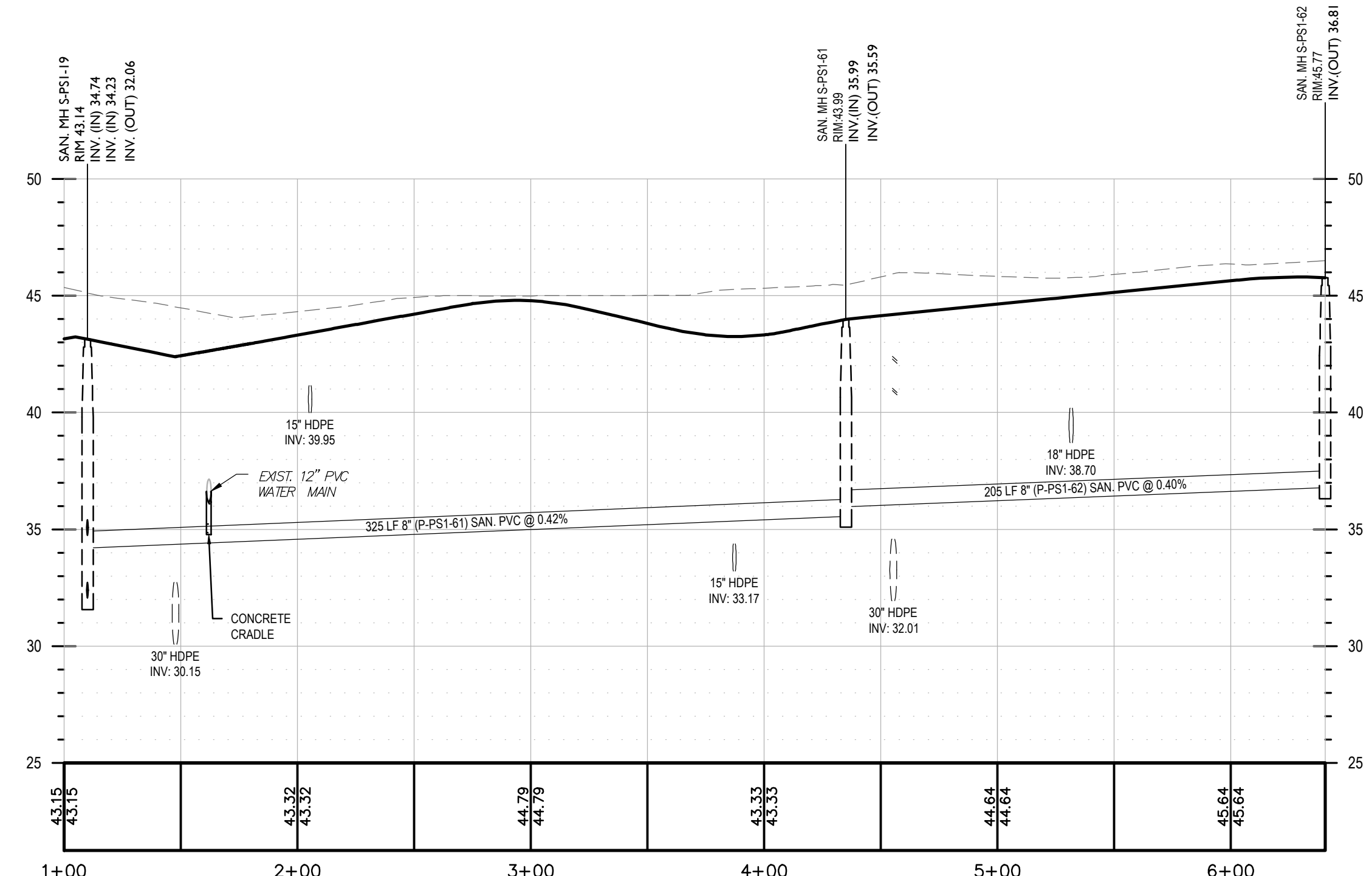
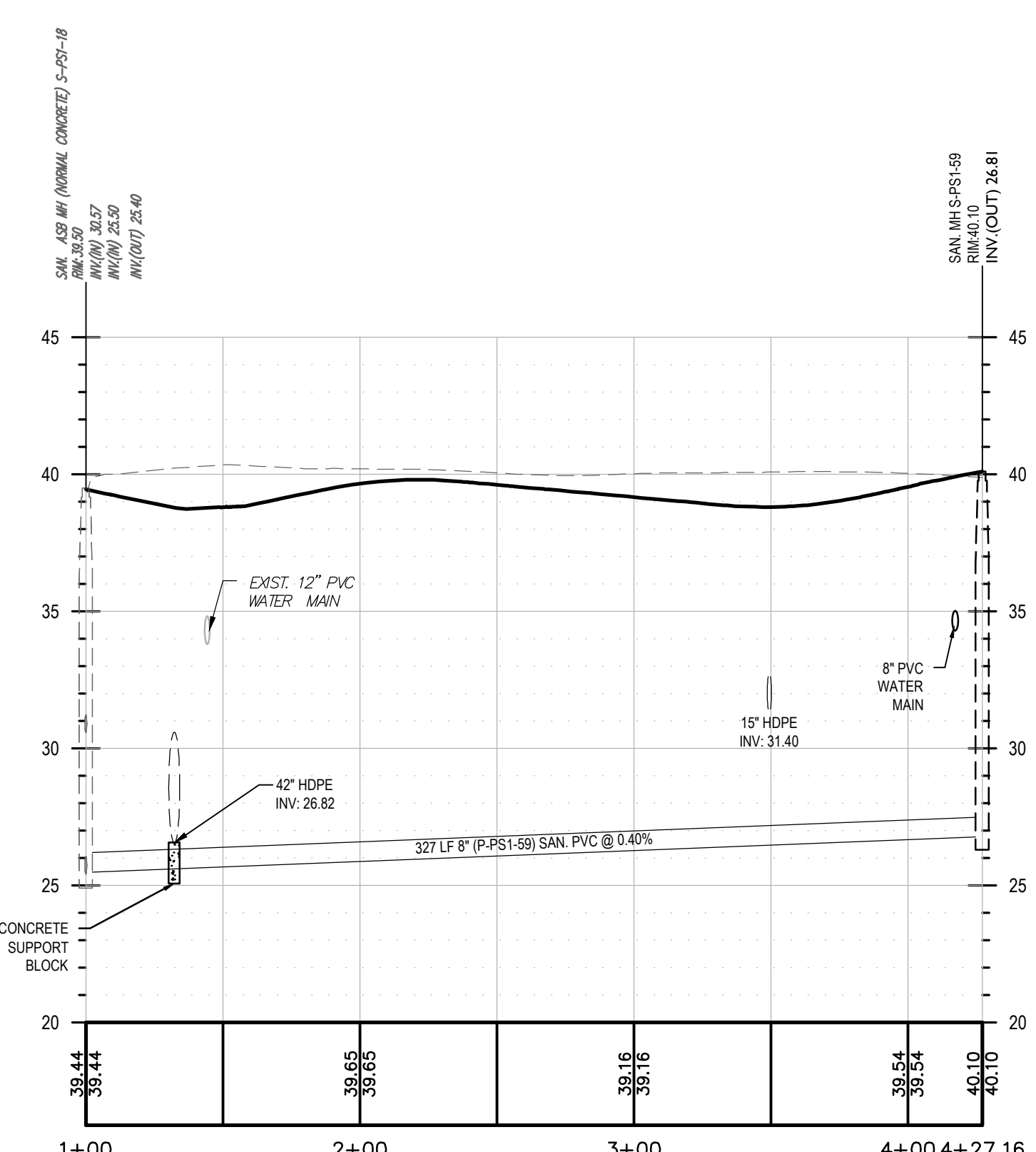
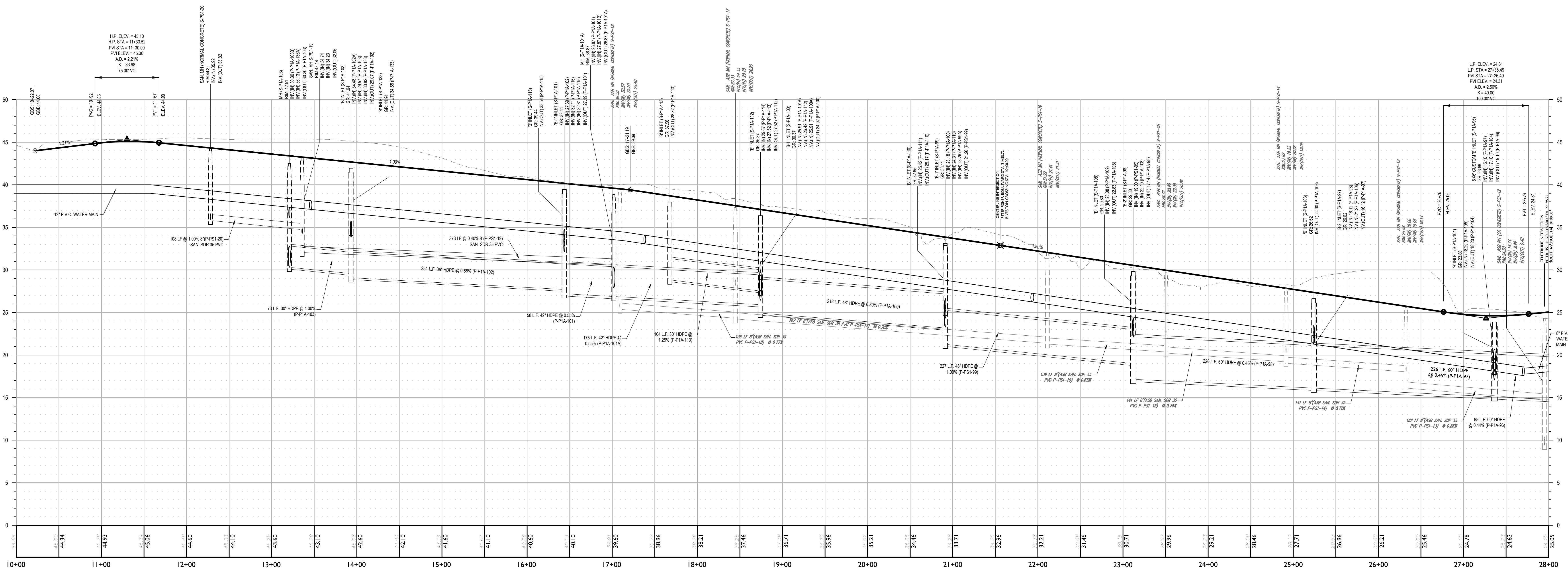
HOLMDEL (Headquarters)
531 Newnam Springs Road,
Suite 203
Red Bank, NJ 07701
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CORP. (TWO)

SCALE: AS SHOWN
DATE: 9/11/2023
PROJECT NUMBER: 050005001
DRAWING NAME: C-PROJ-HWC-ASP

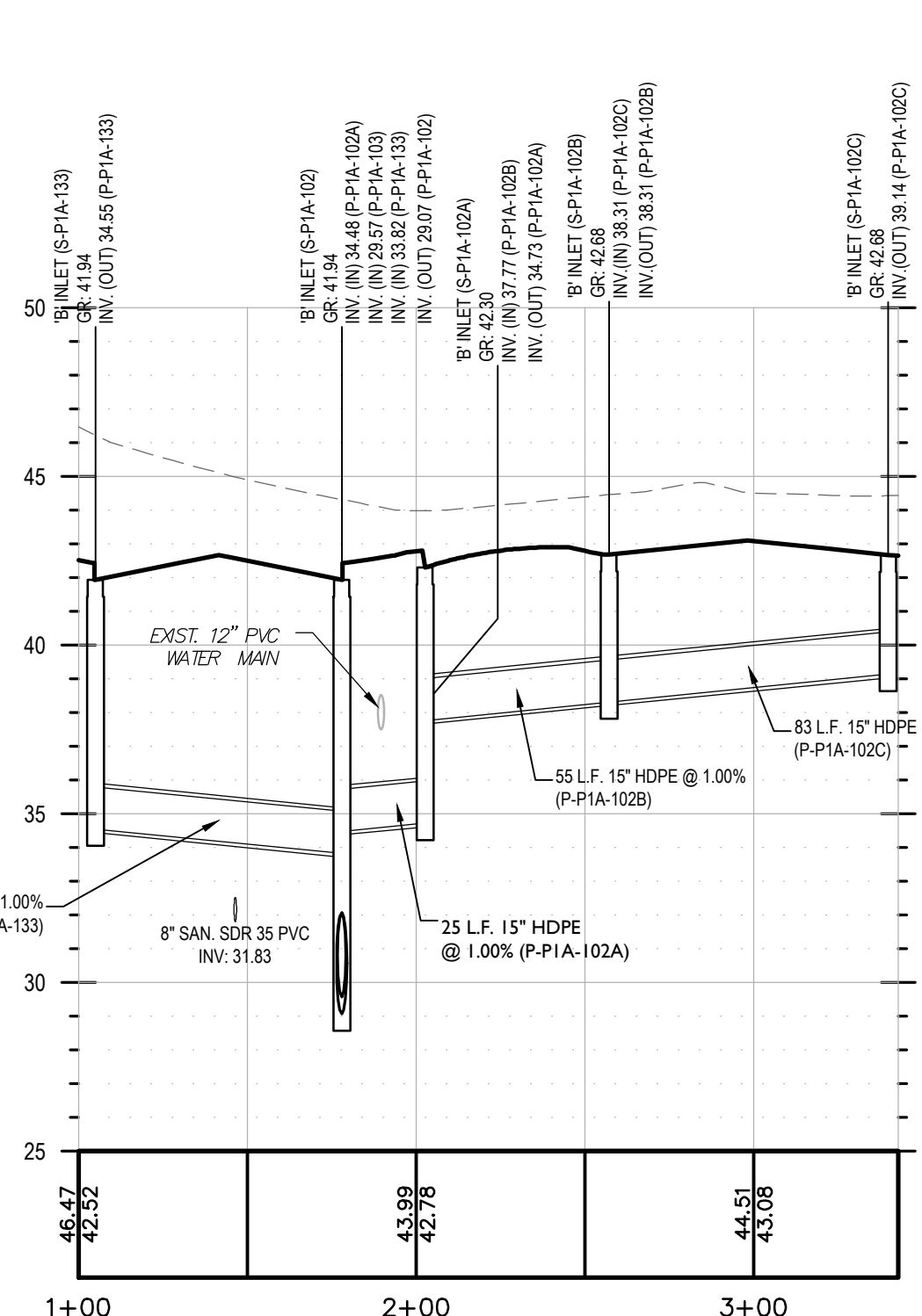
DRAWN BY: RM
CHECKED BY: DWB

SHEET TITLE: PROFILES

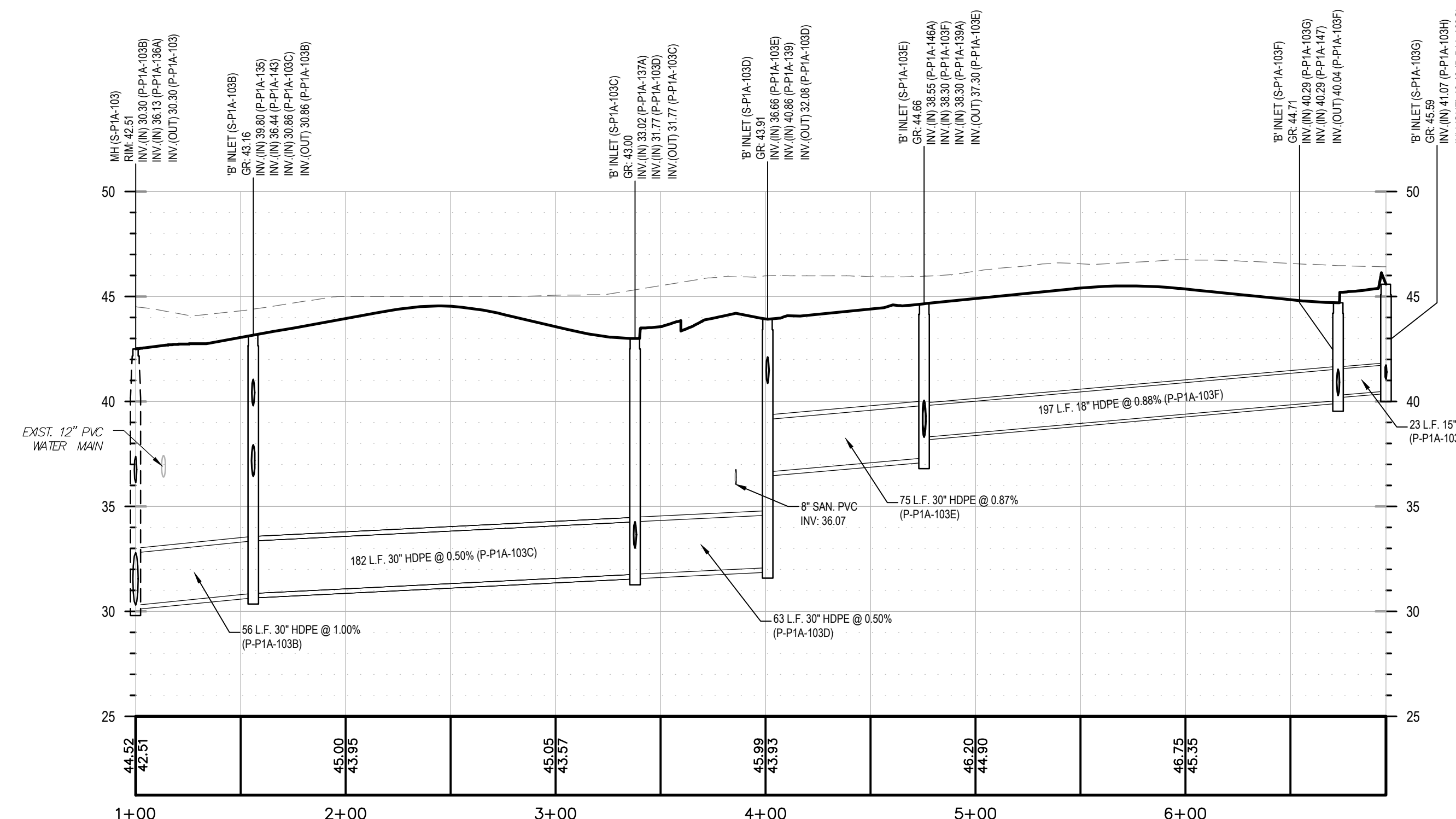
SHEET NUMBER: 13 of 21



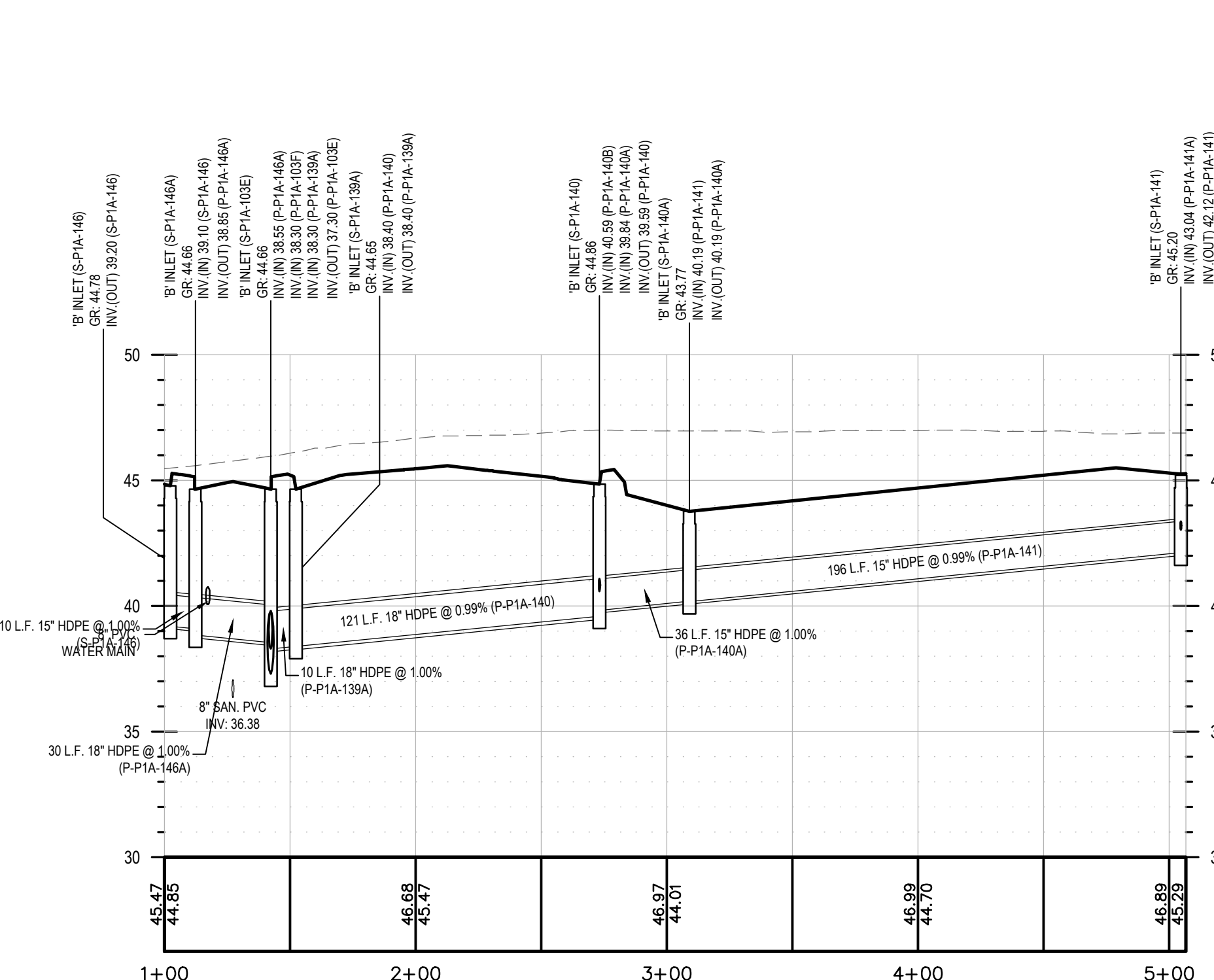
C:\Users\jw\OneDrive\Documents\Projects\2023\050005001\Drawings\13-PROFILES.dwg



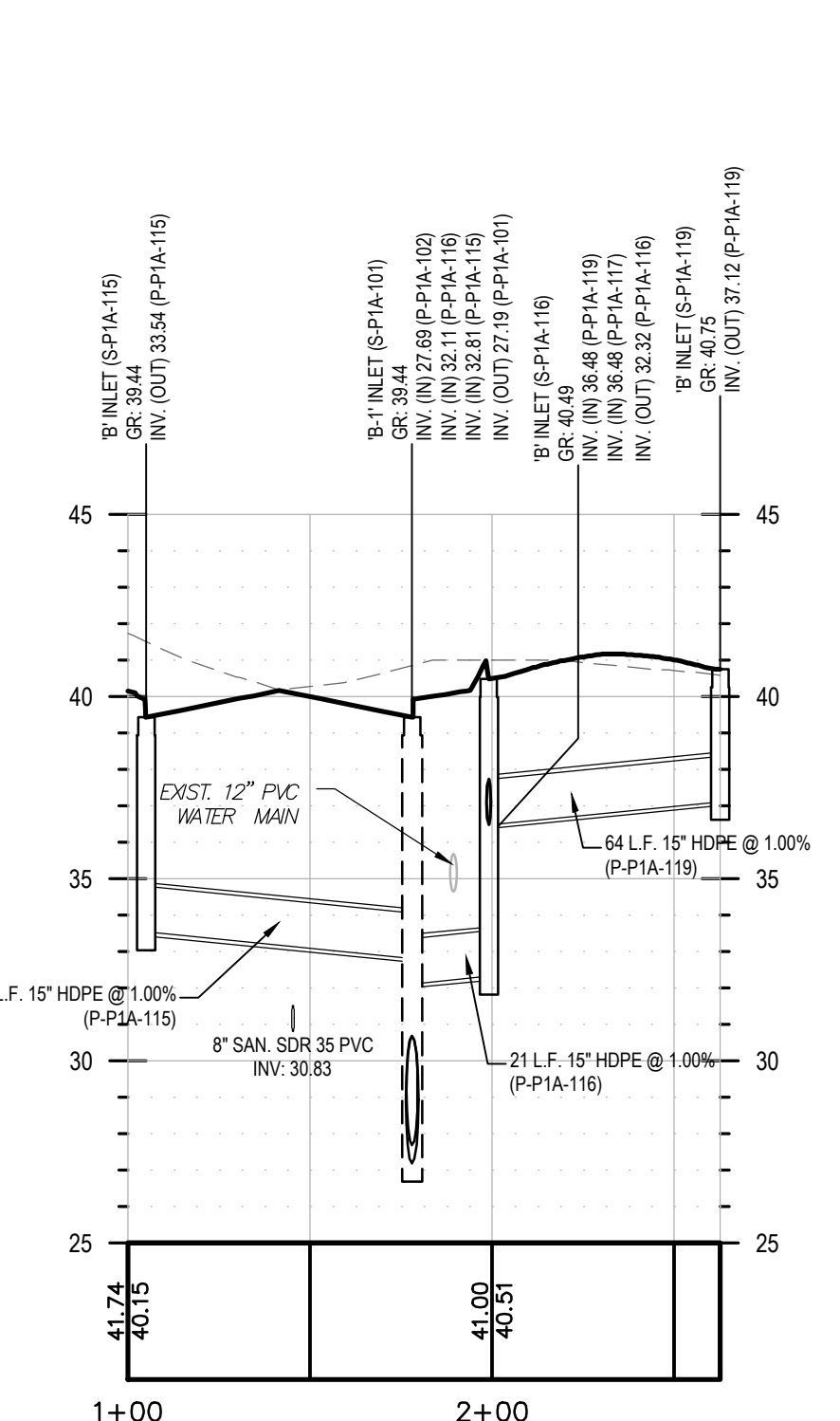
PROFILE OF STM-HC-001
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



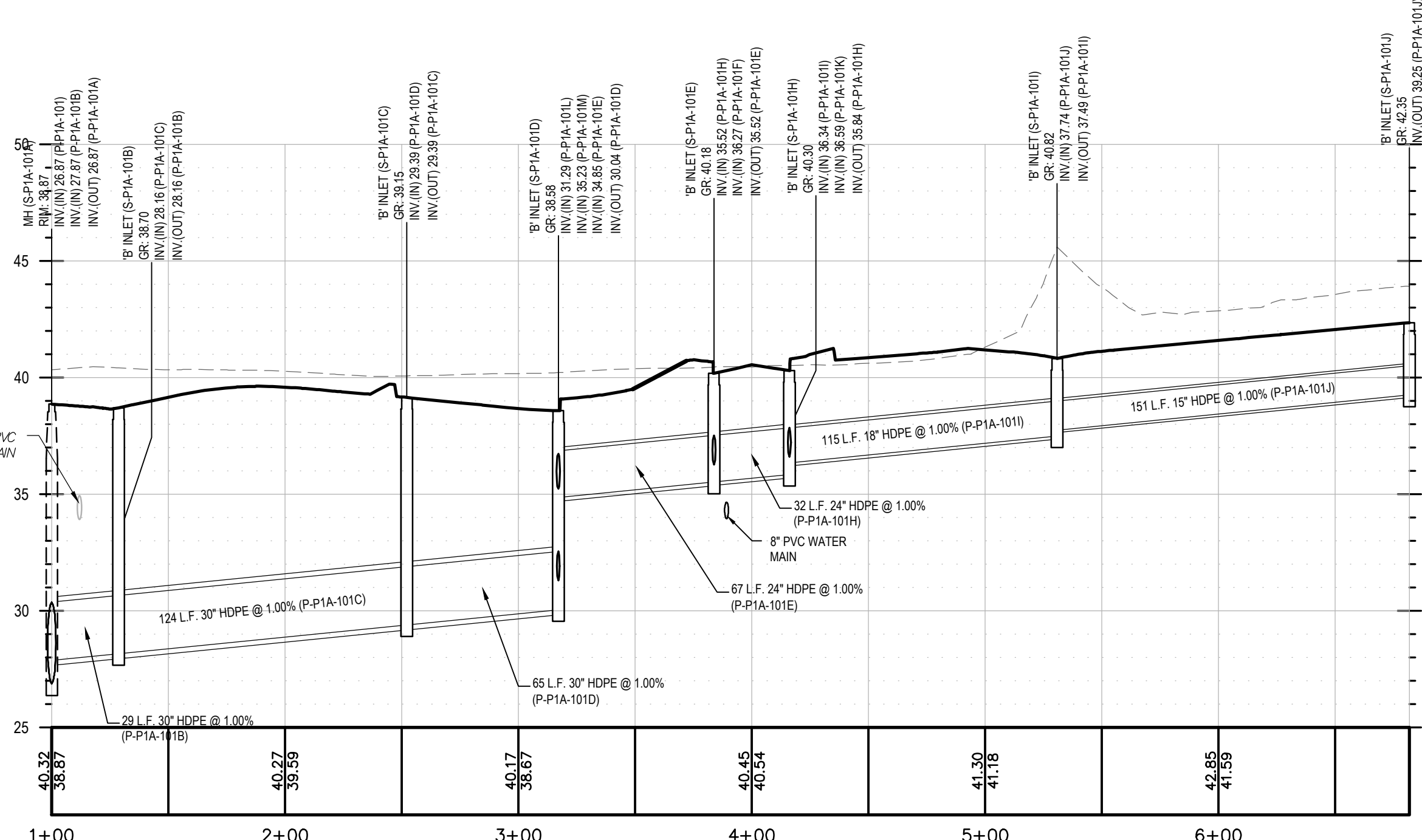
PROFILE OF STM-HC-002
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



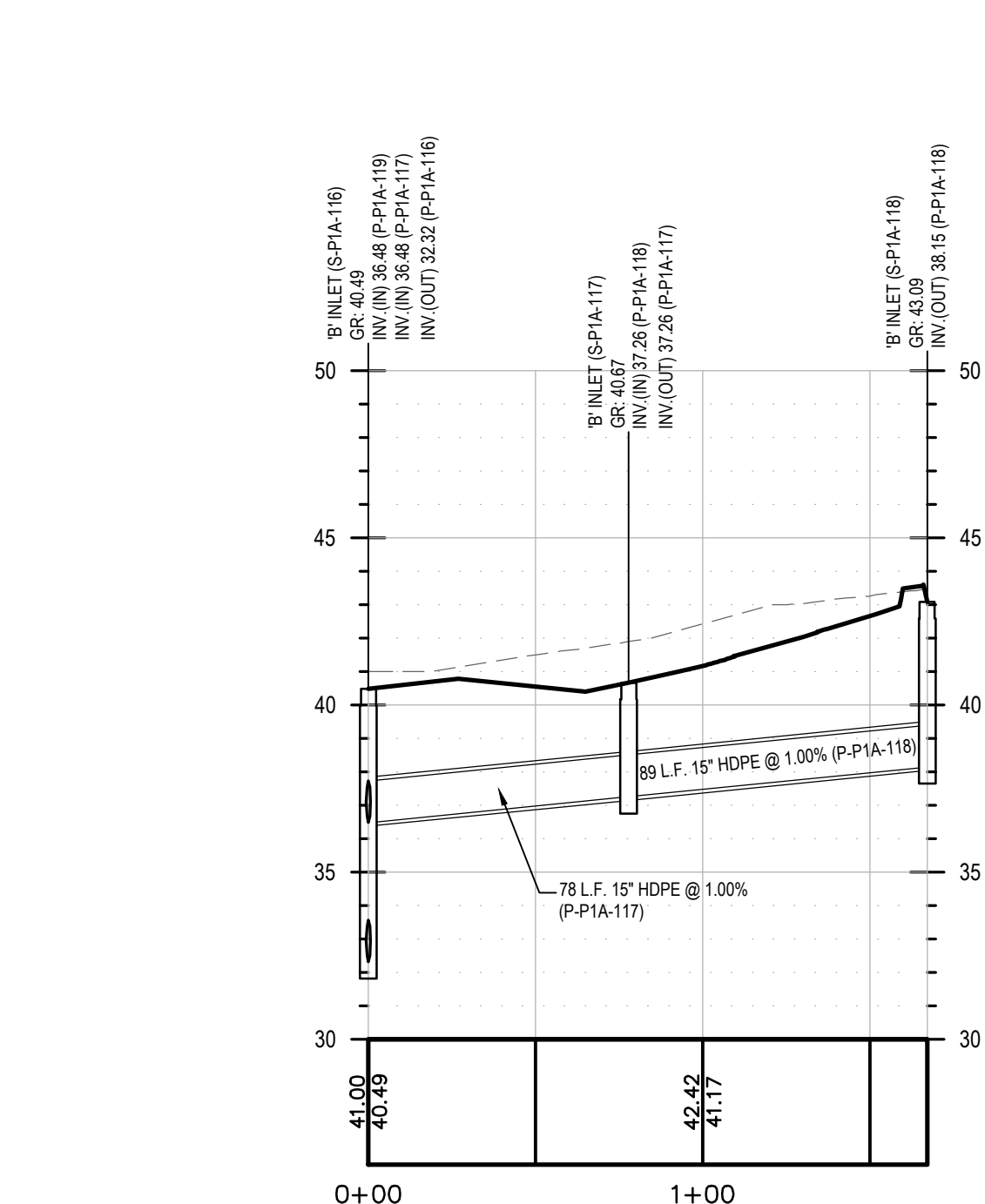
PROFILE OF STM-HC-003
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



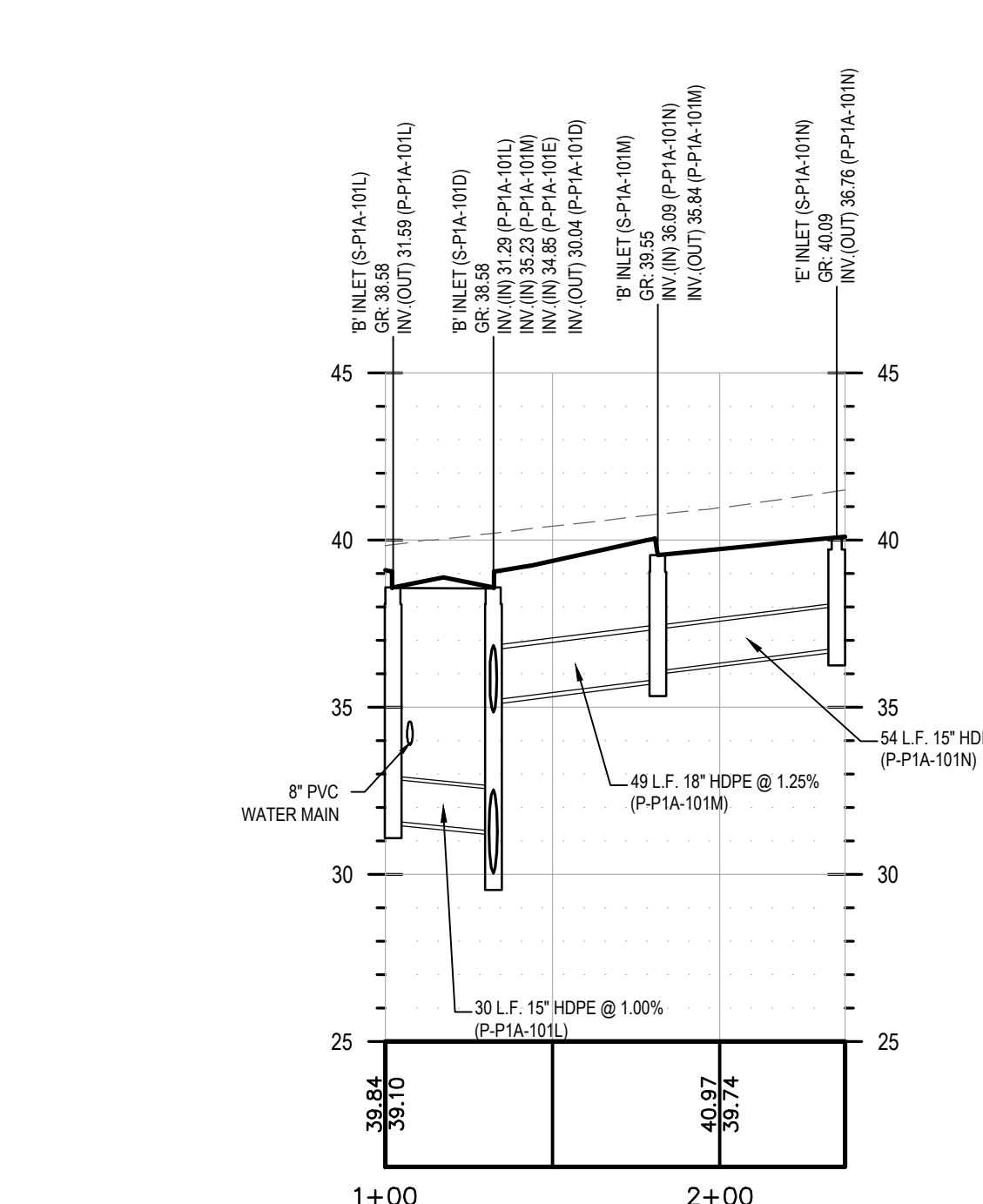
PROFILE OF STM-HC-004
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



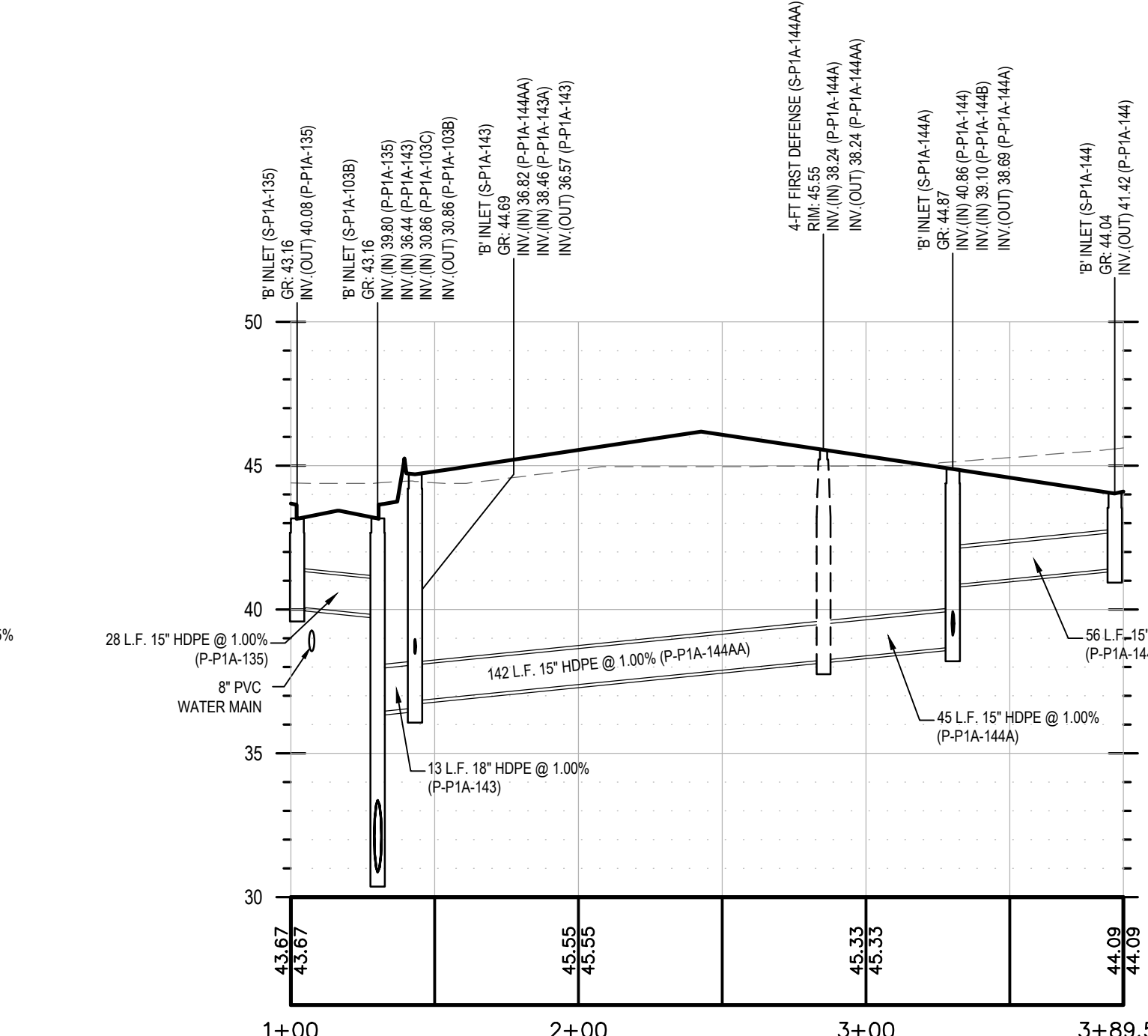
PROFILE OF STM-HC-005
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



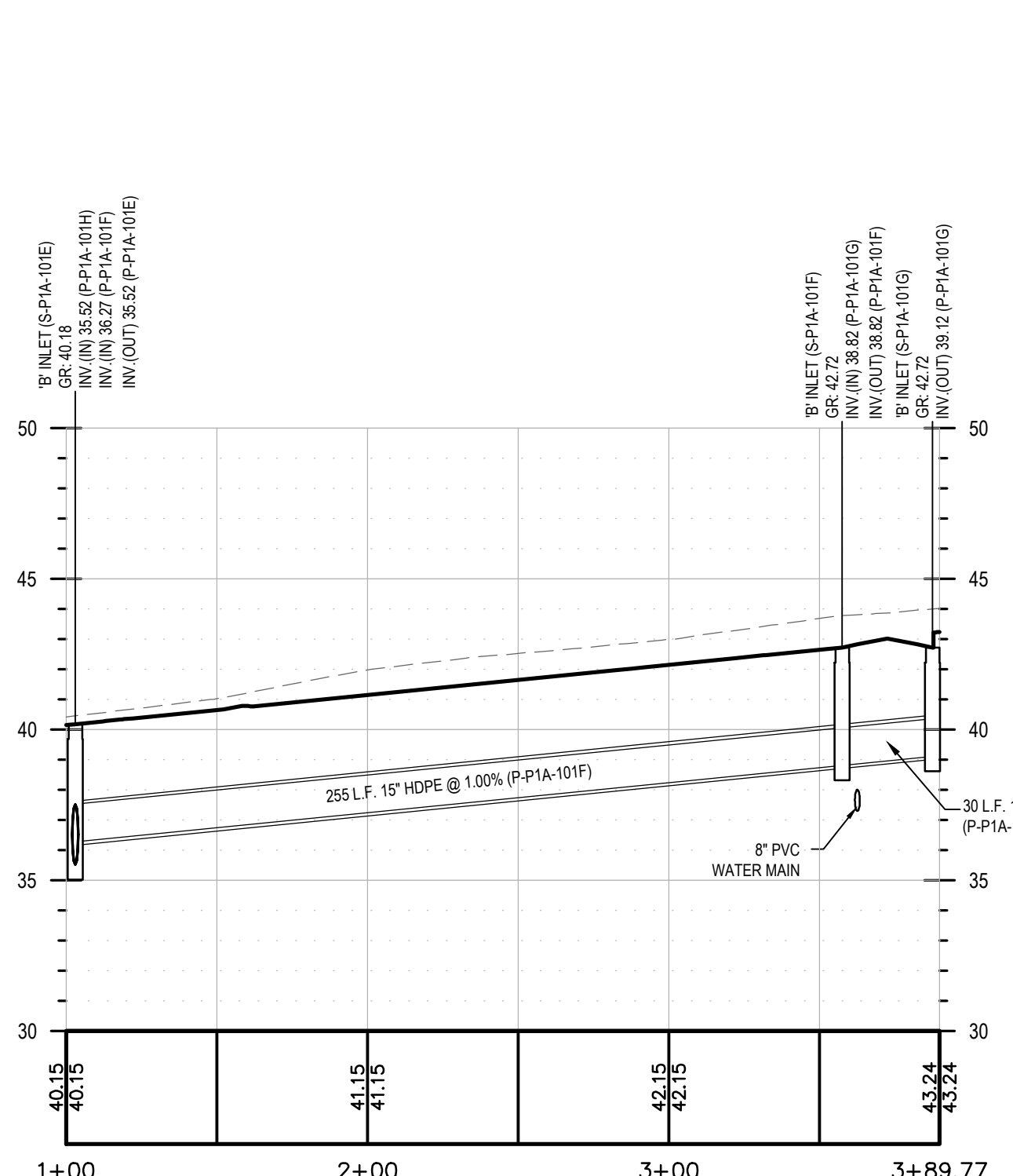
PROFILE OF STM-HC-006
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



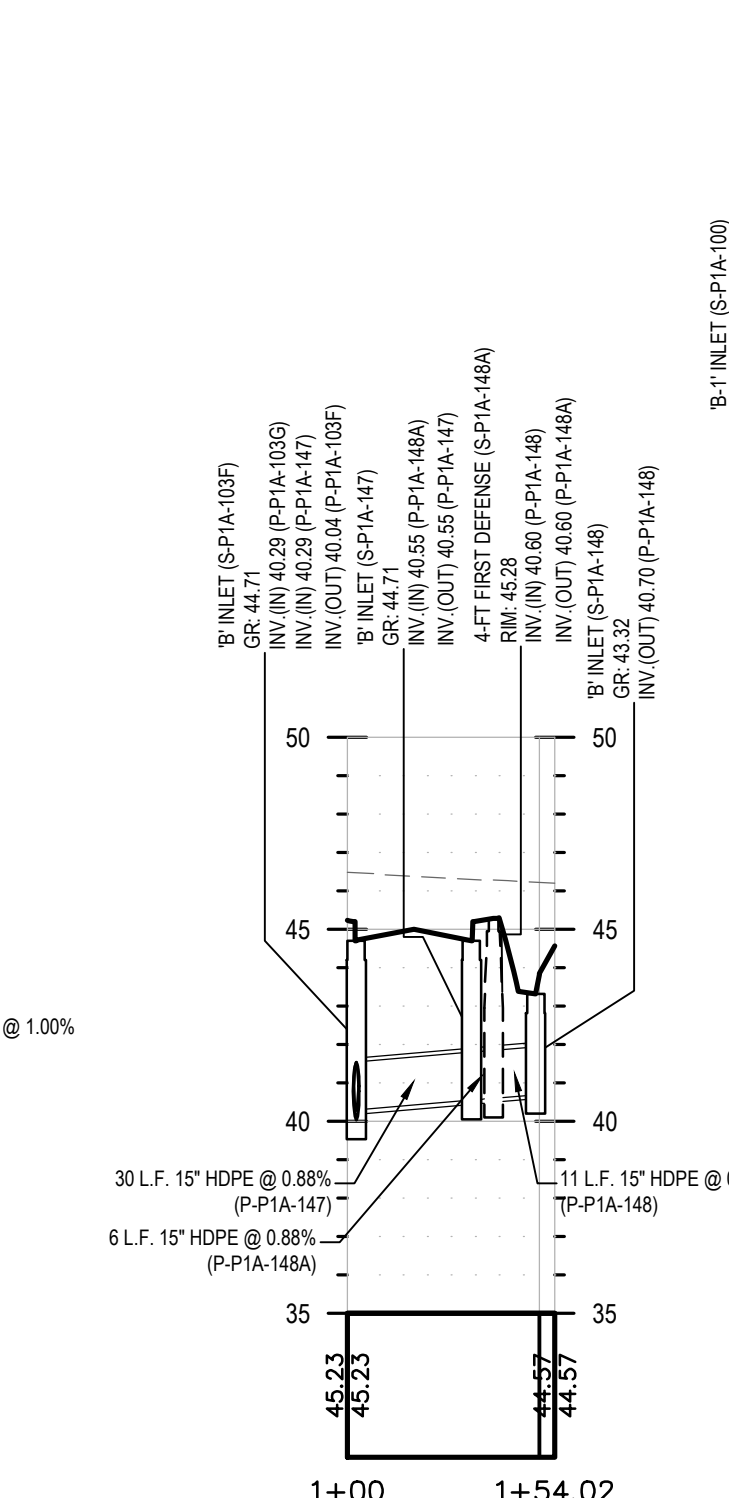
PROFILE OF STM-HC-007
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



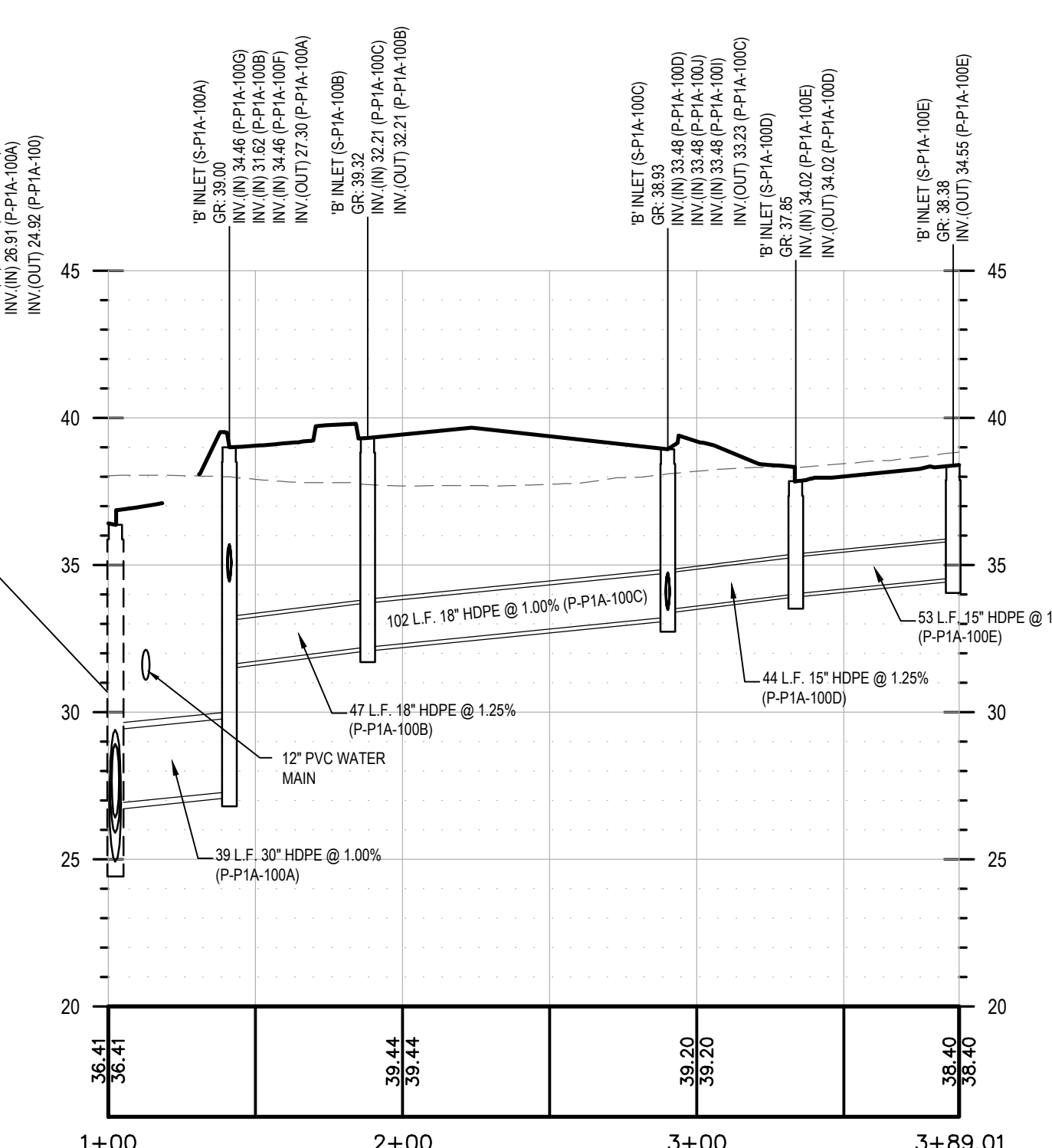
PROFILE OF STM-HC-008
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



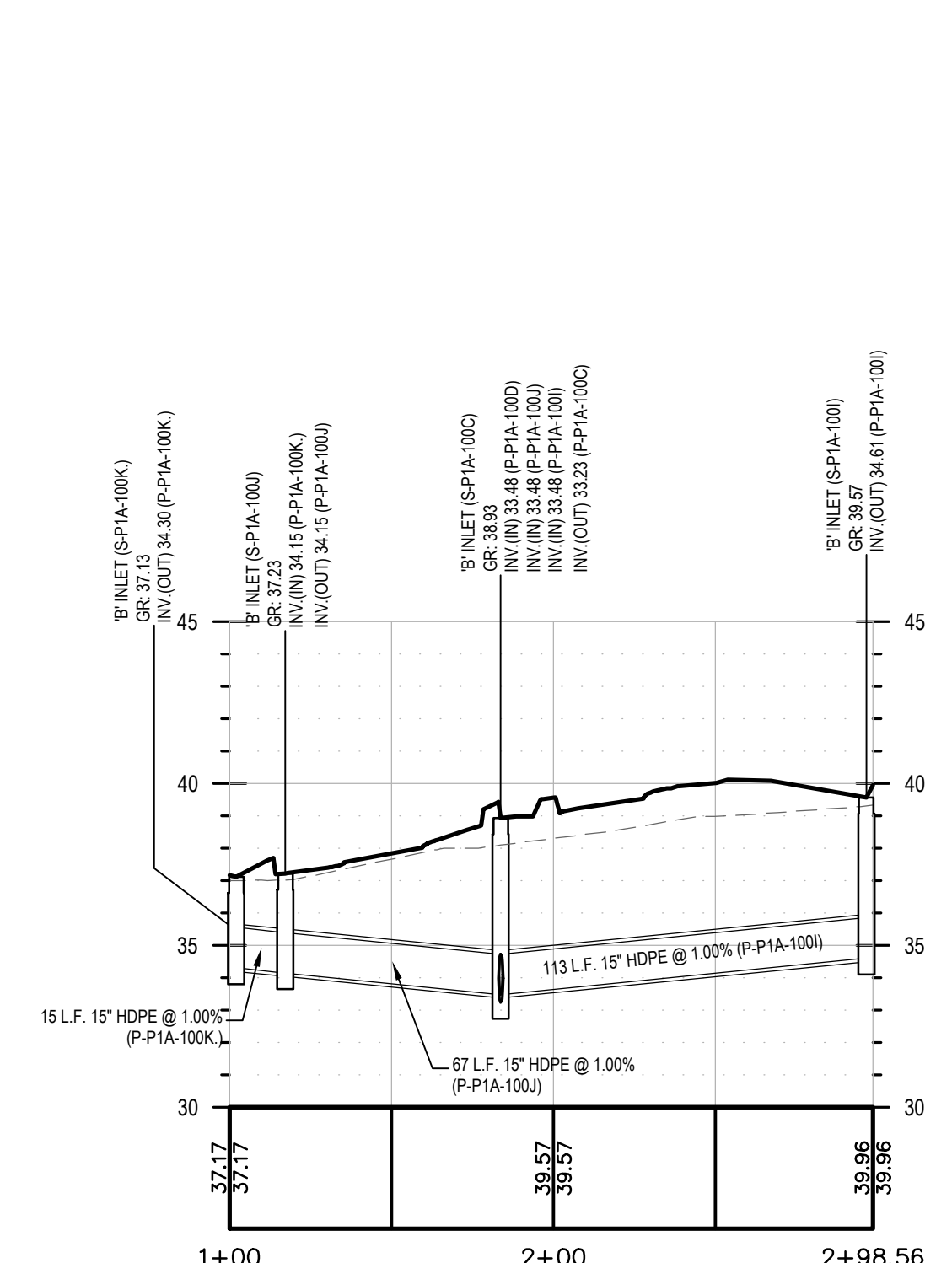
PROFILE OF STM-HC-009
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



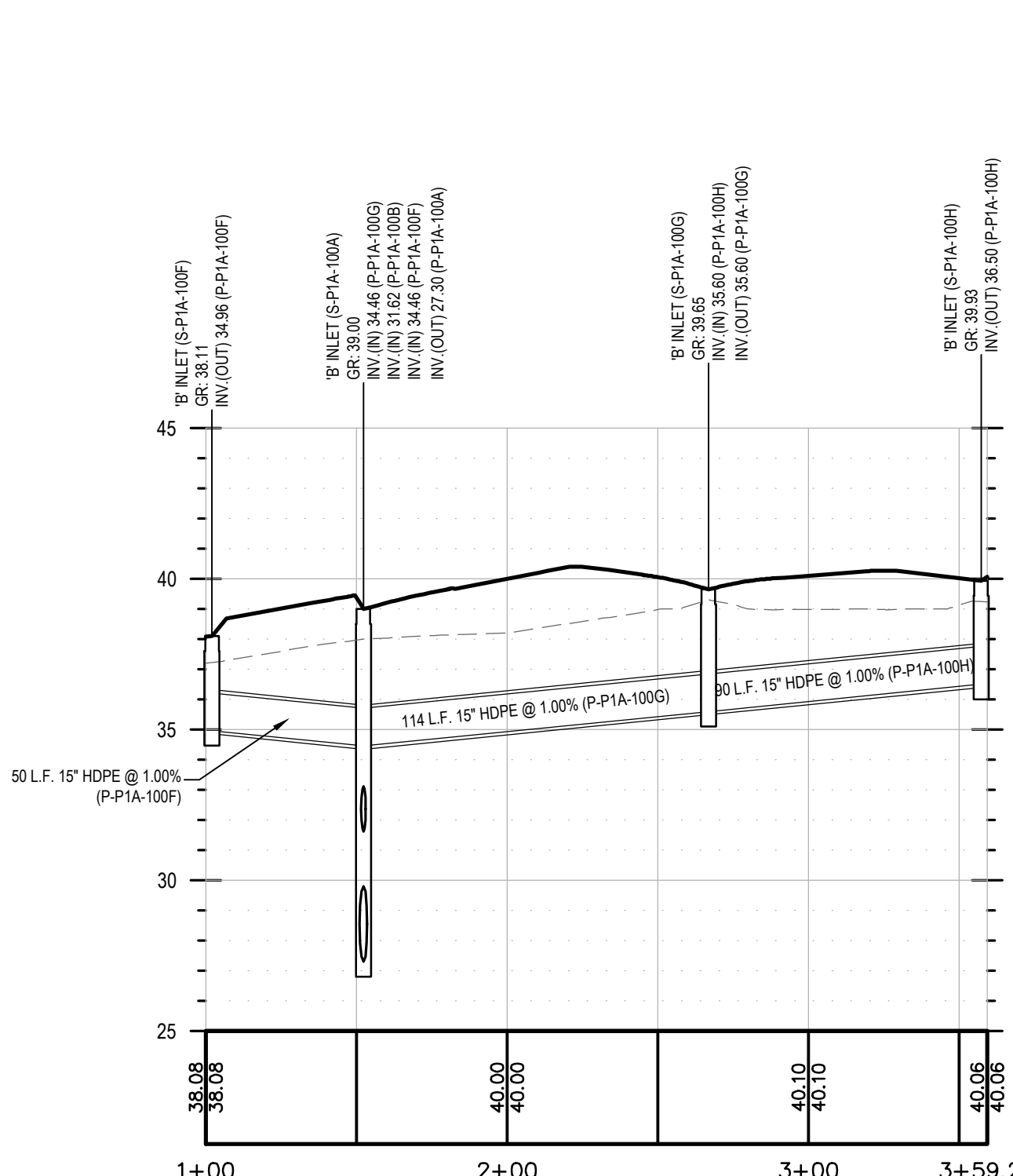
PROFILE OF STM-HC-010
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF STM-HC-011
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF STM-HC-012
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'



PROFILE OF STM-HC-013
HORIZONTAL : 1" = 50'
VERTICAL : 1" = 5'

Table with columns: REV, DATE, DRAWN BY, DESCRIPTION. It contains revision records for the drawings.



DANIEL W. BUSCH
NEW JERSEY PROFESSIONAL
ENGINEER, LICENSE NUMBER: GE42093

PHASE 1A
GATEWAY SERVICES
DISTRICT
AMENDED SITE PLAN
FOR
SAYREVILLE
SEAPORT
ASSOCIATES

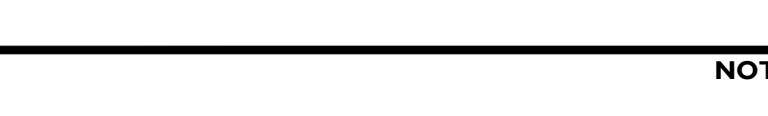
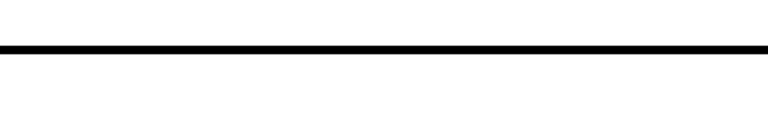
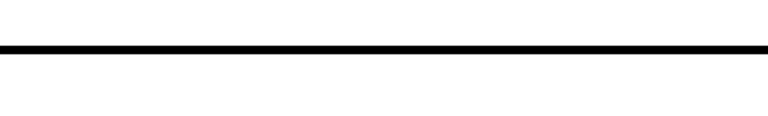
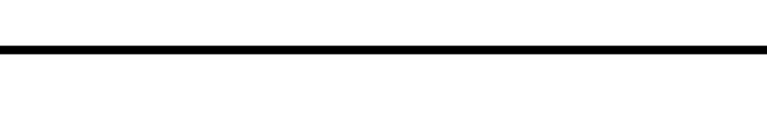
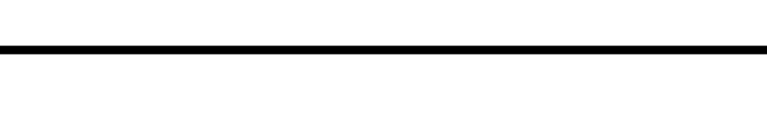
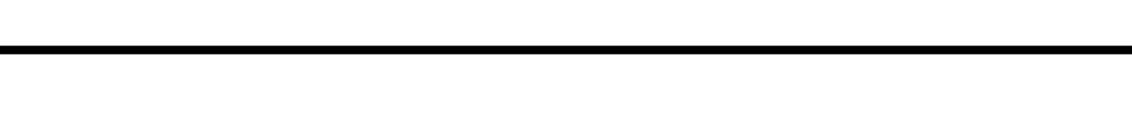
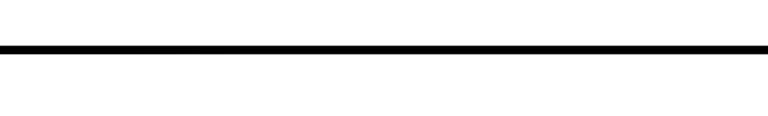
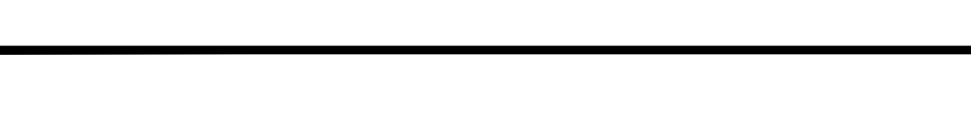
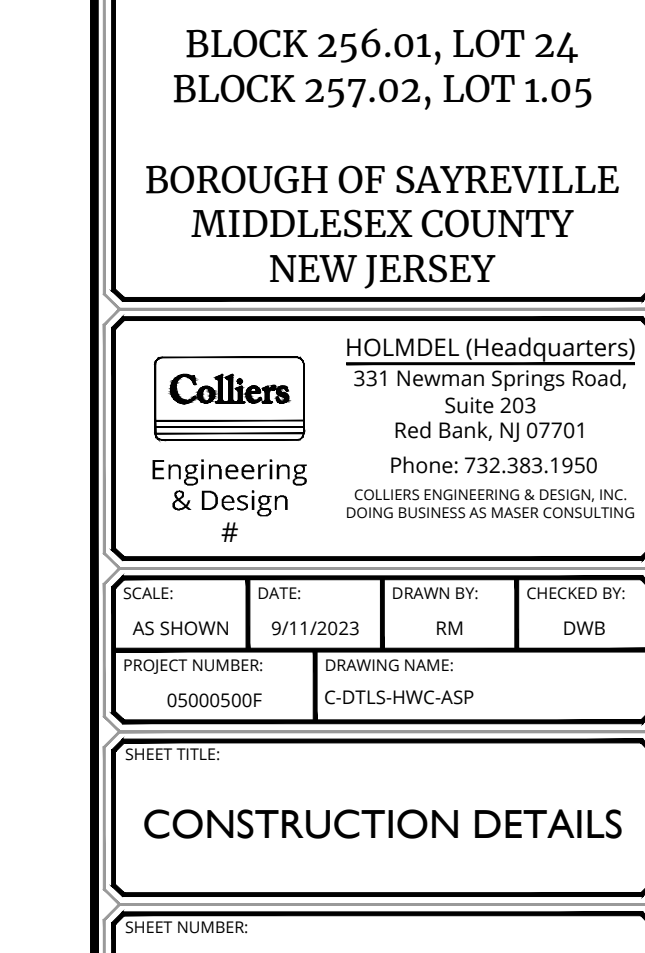
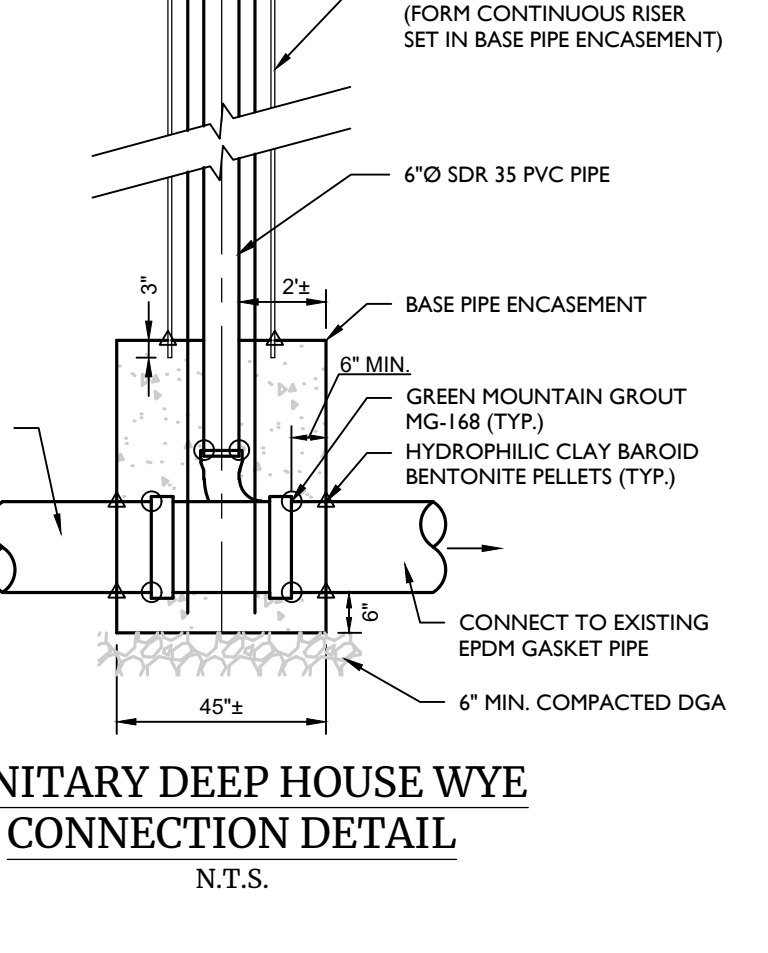
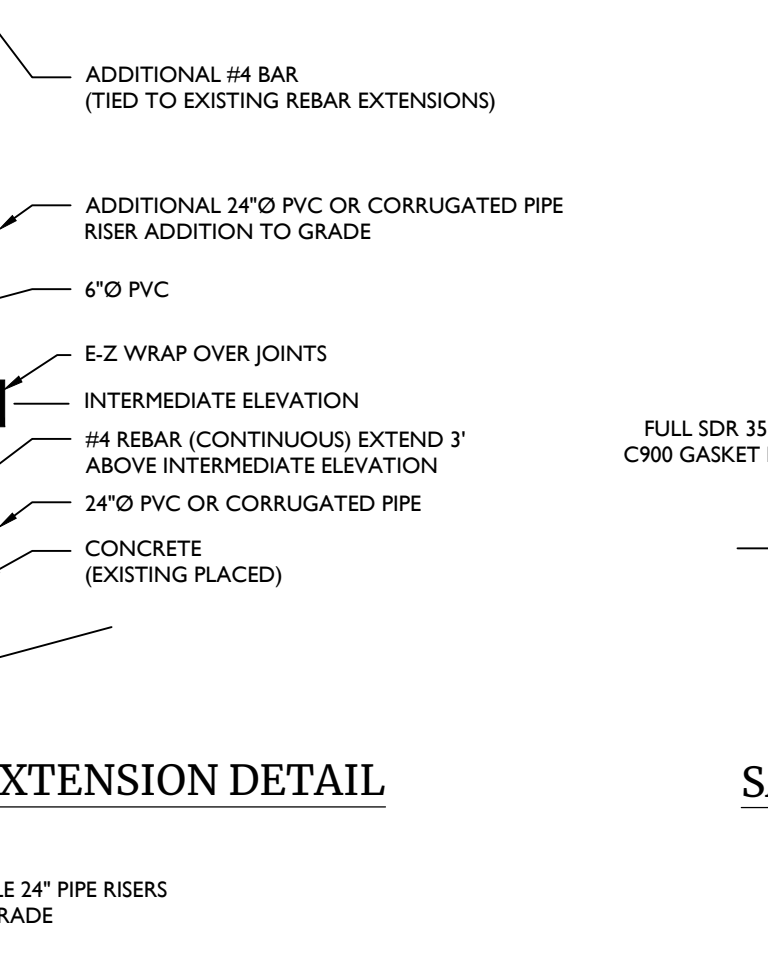
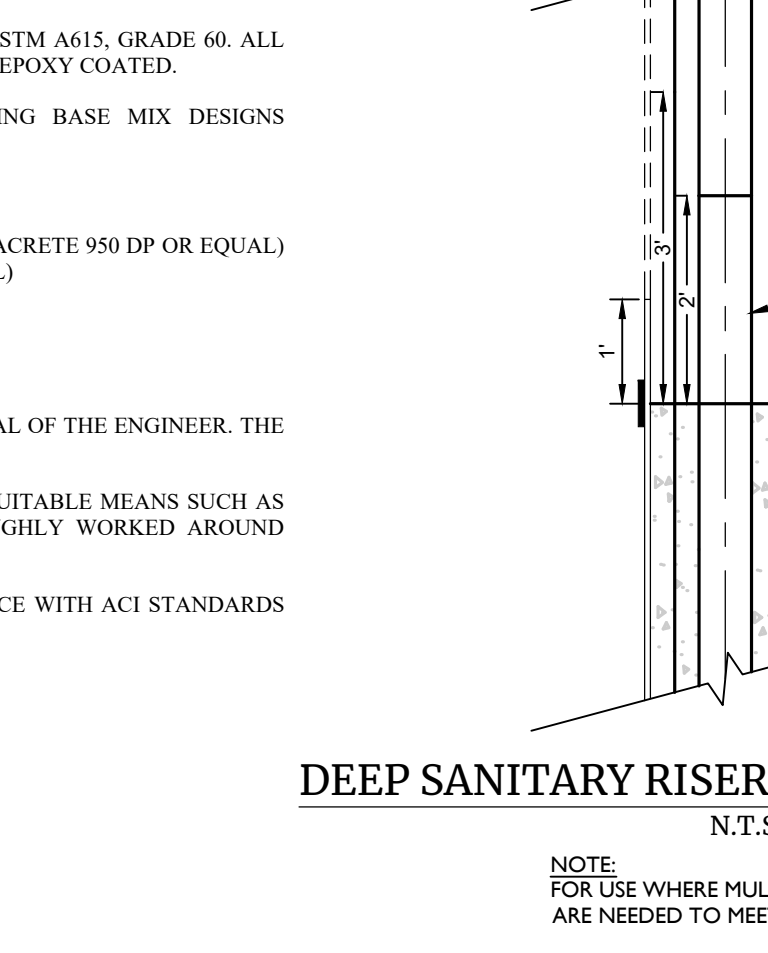
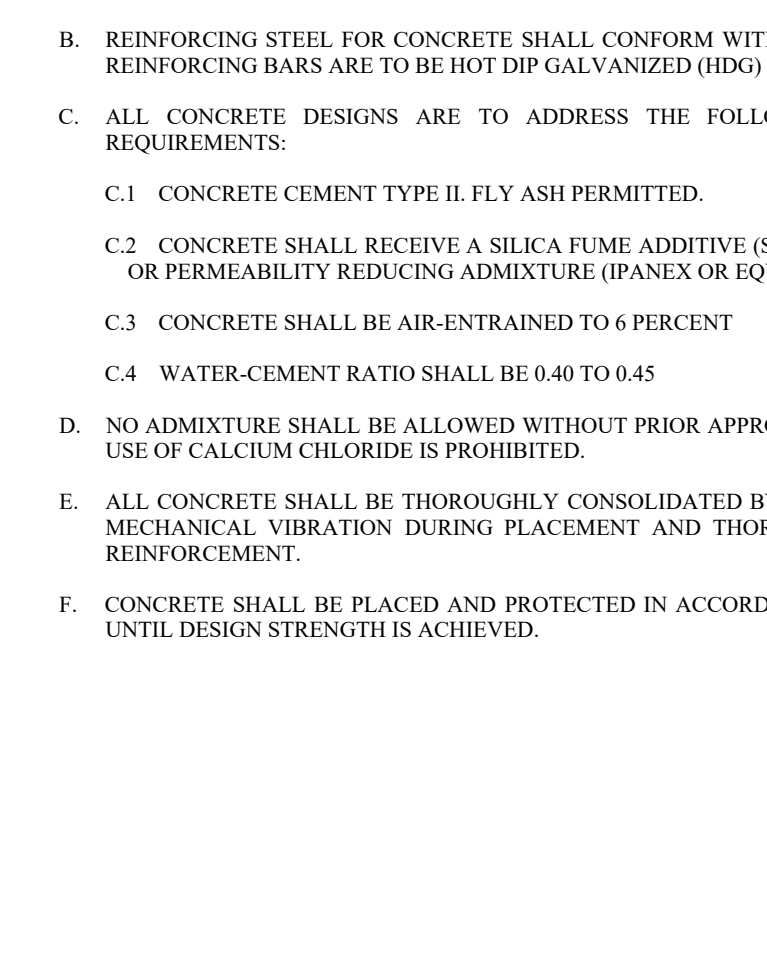
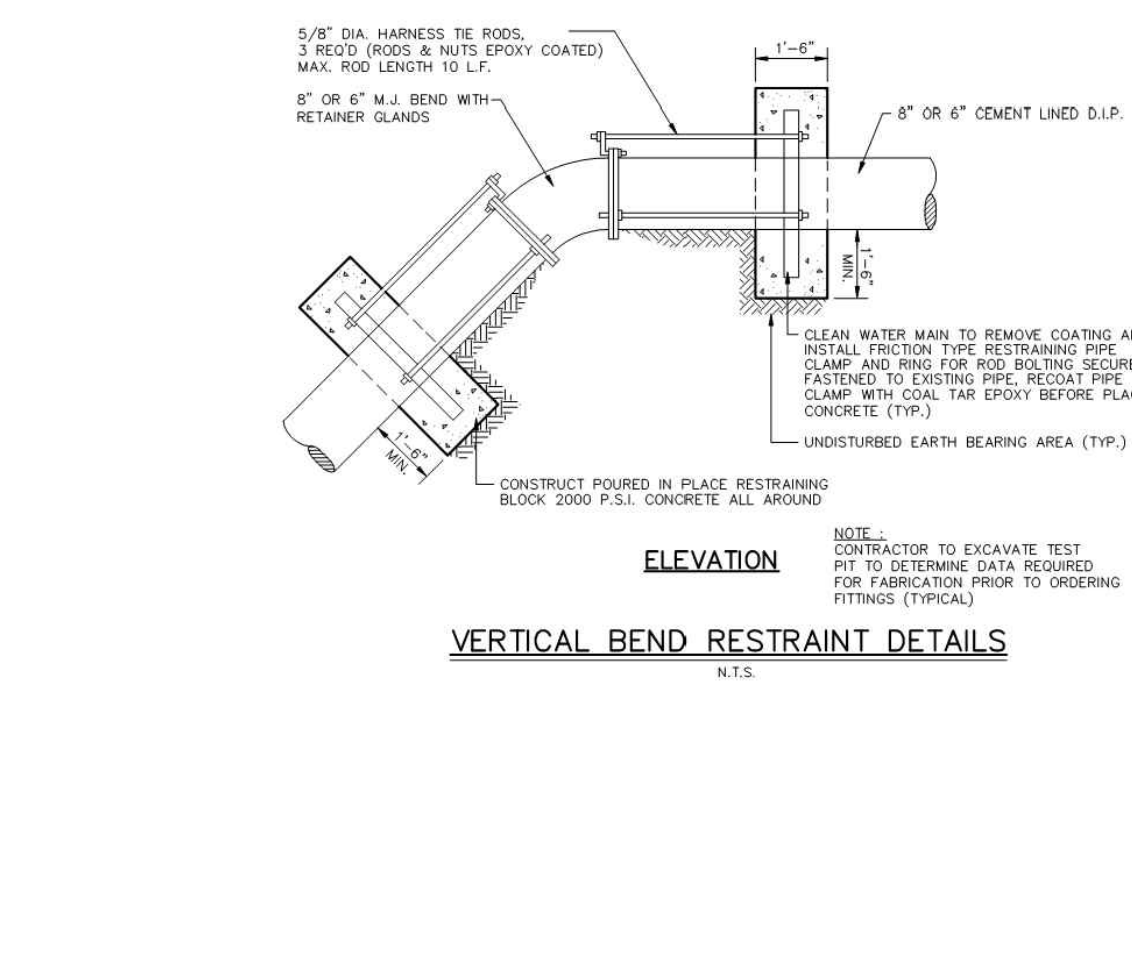
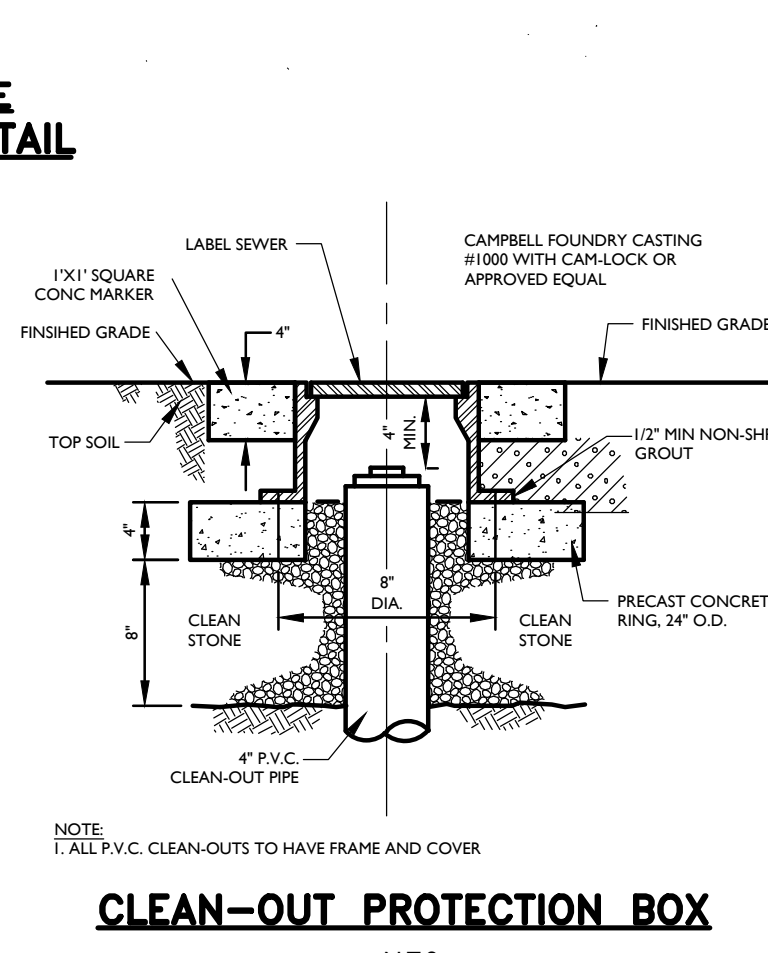
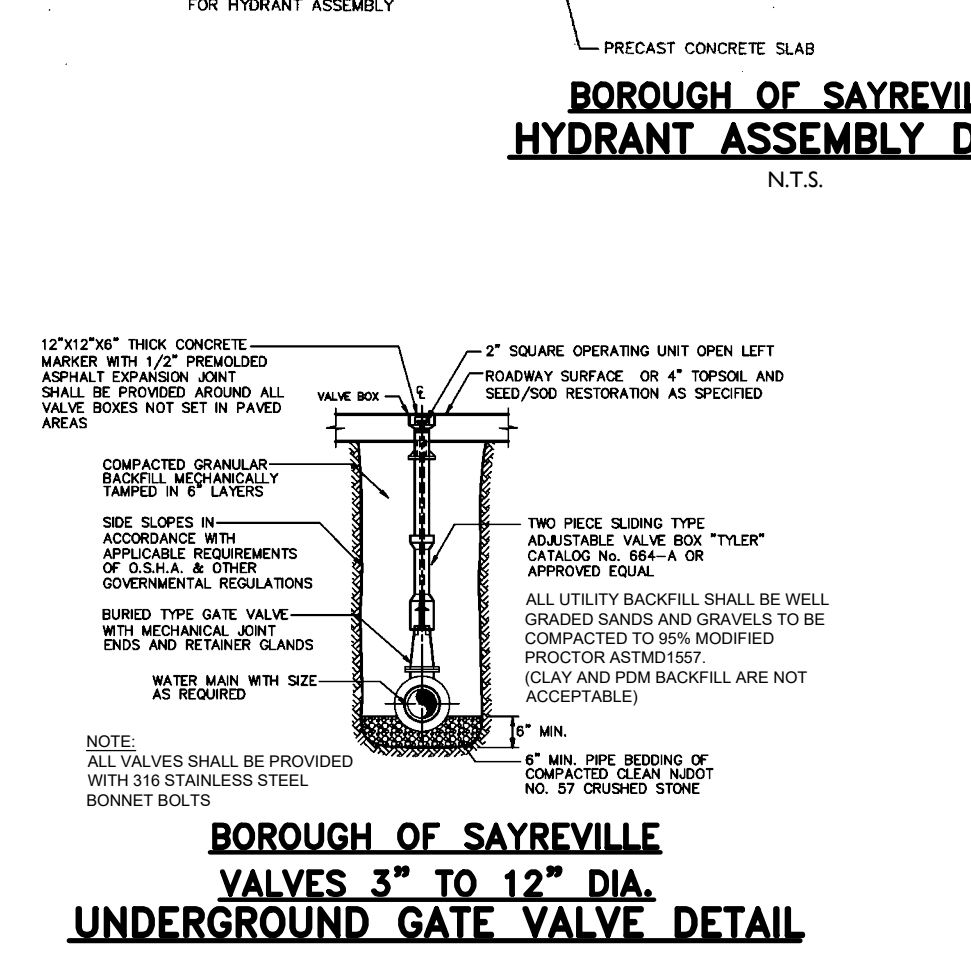
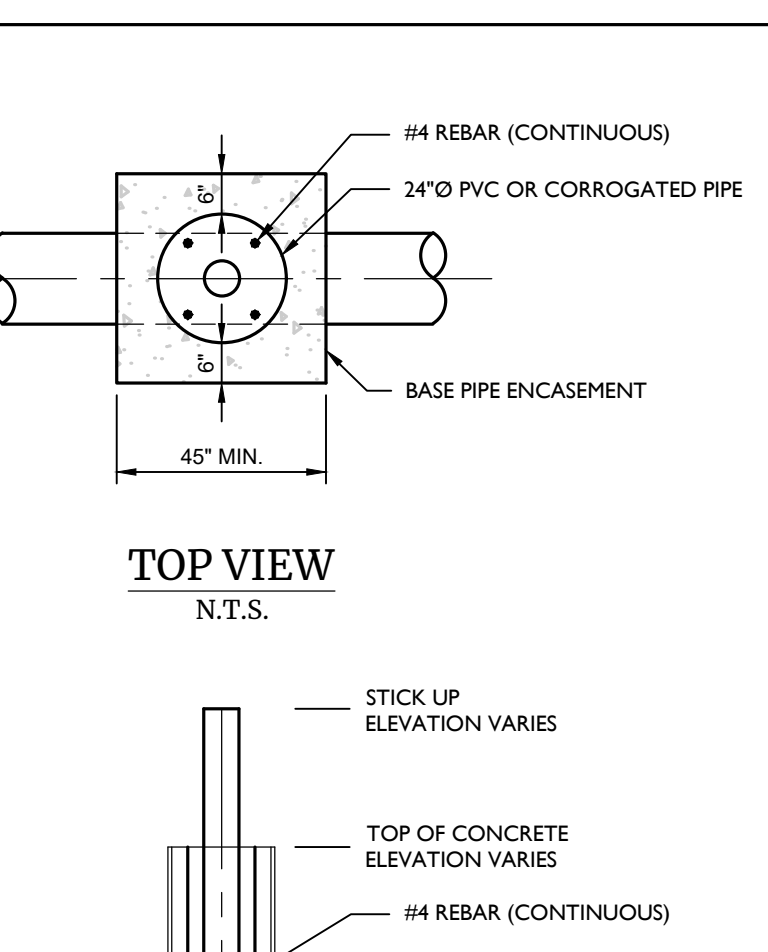
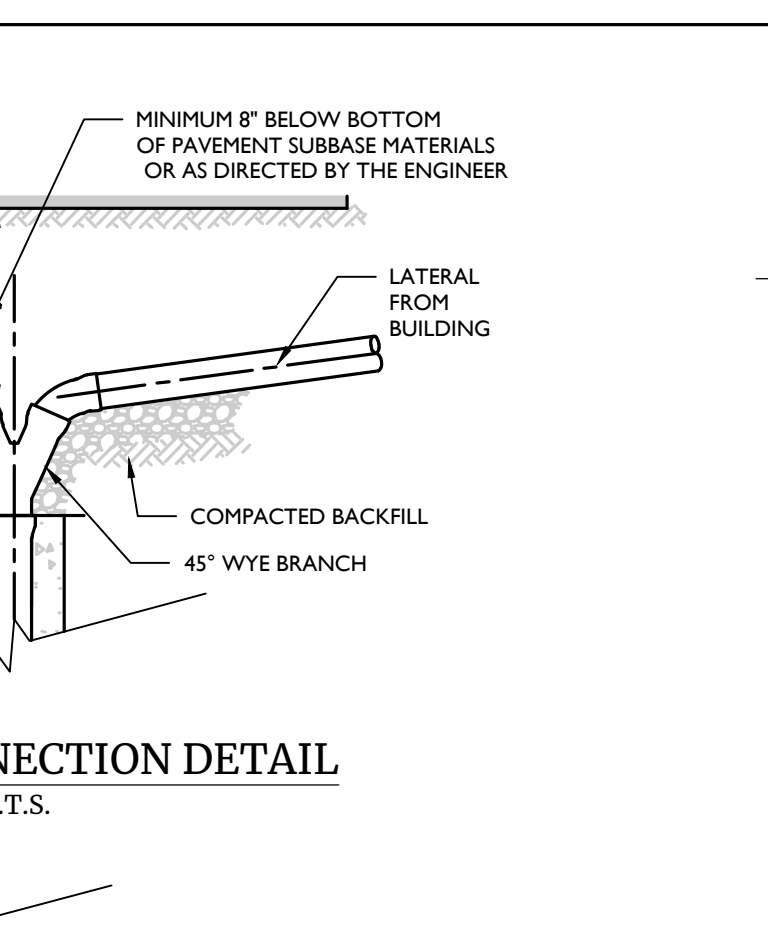
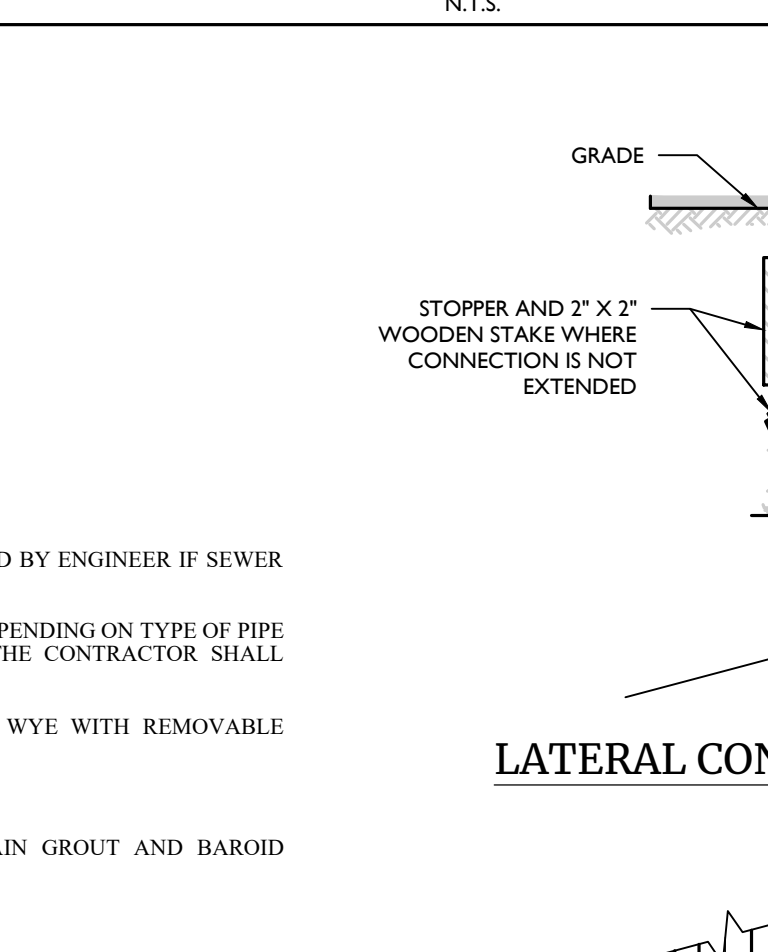
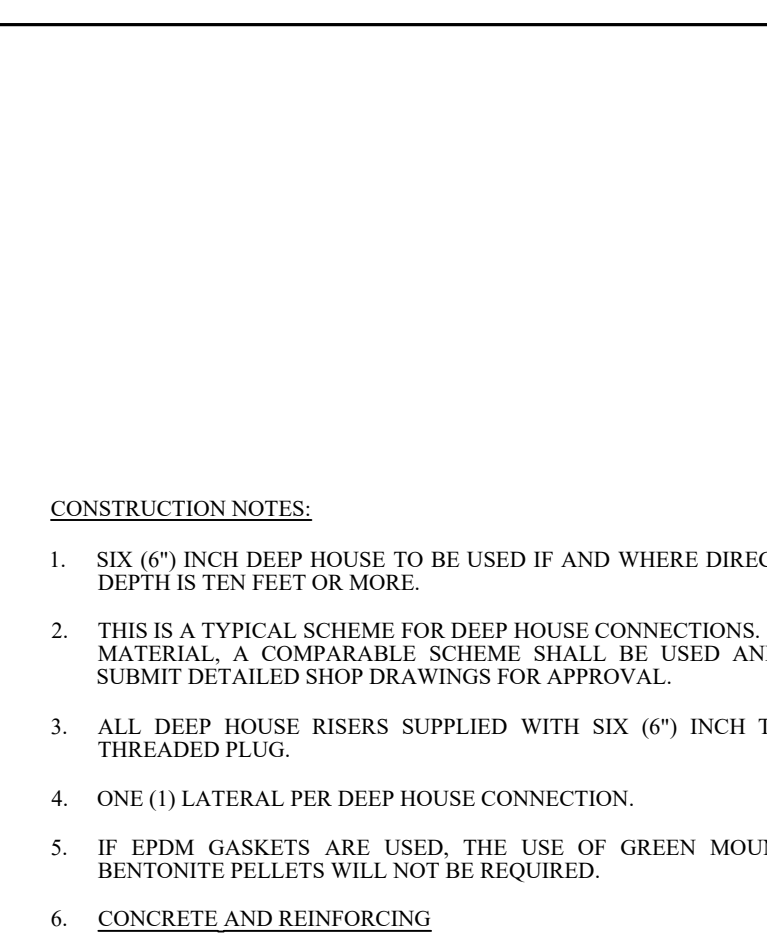
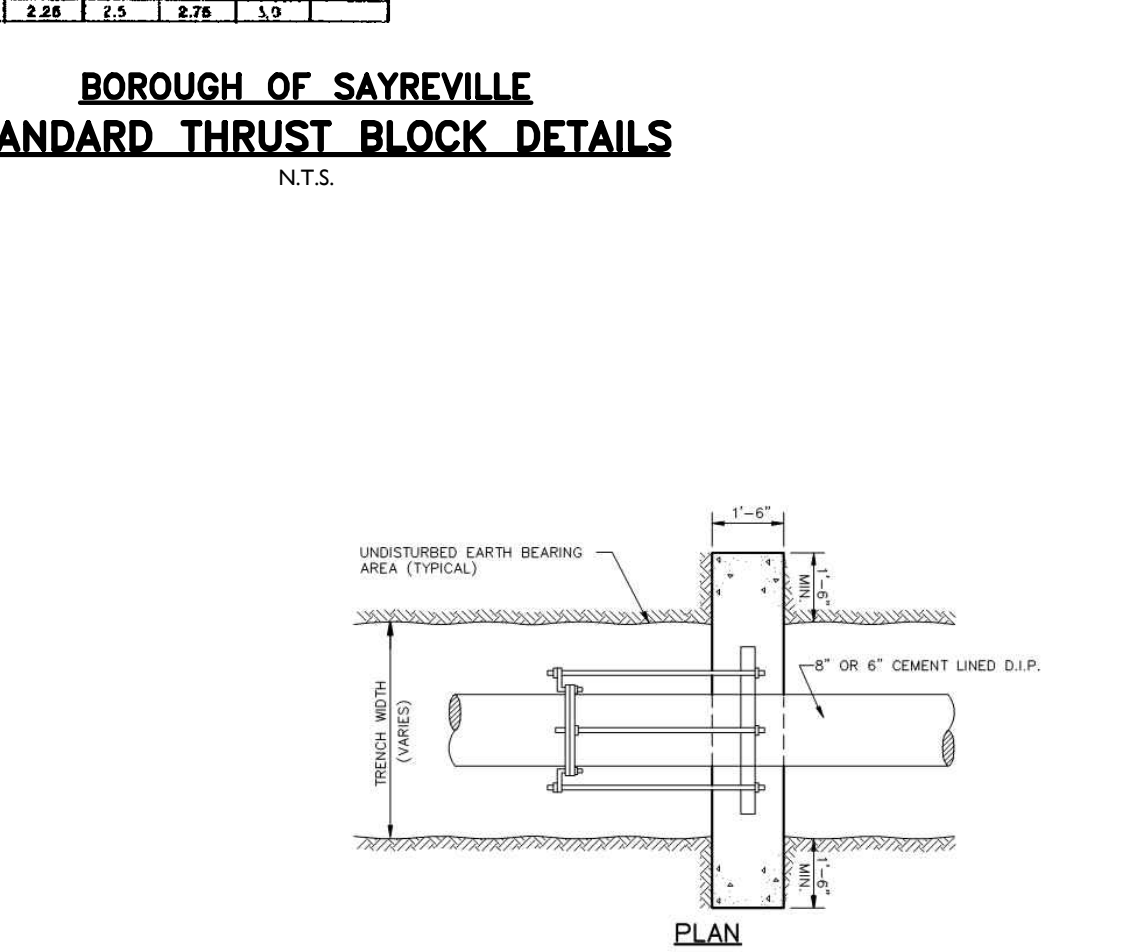
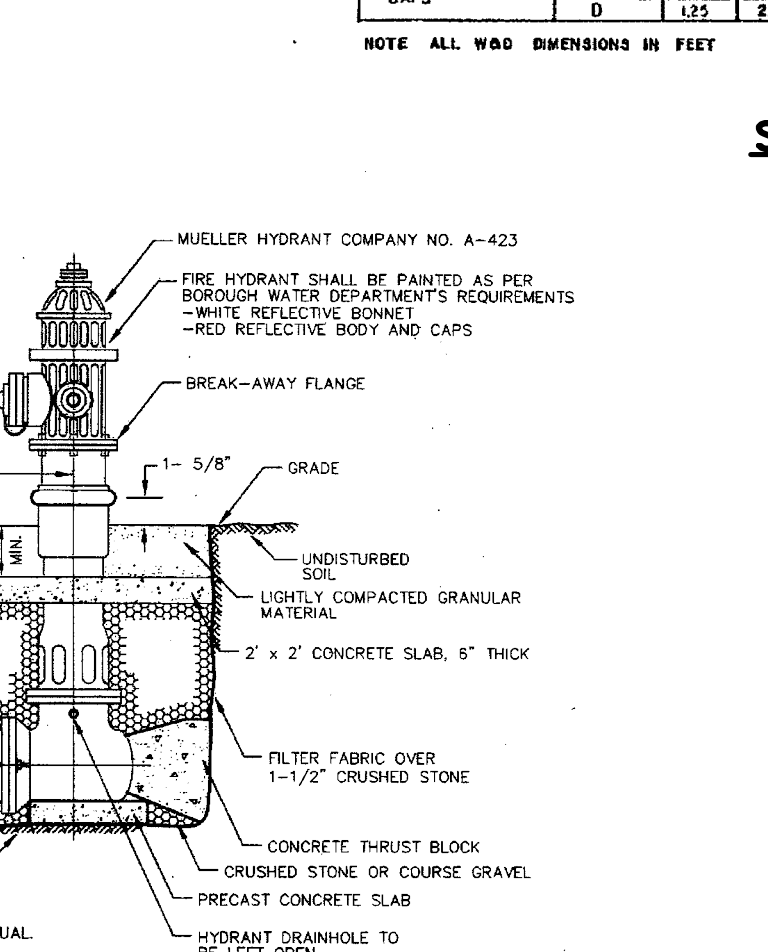
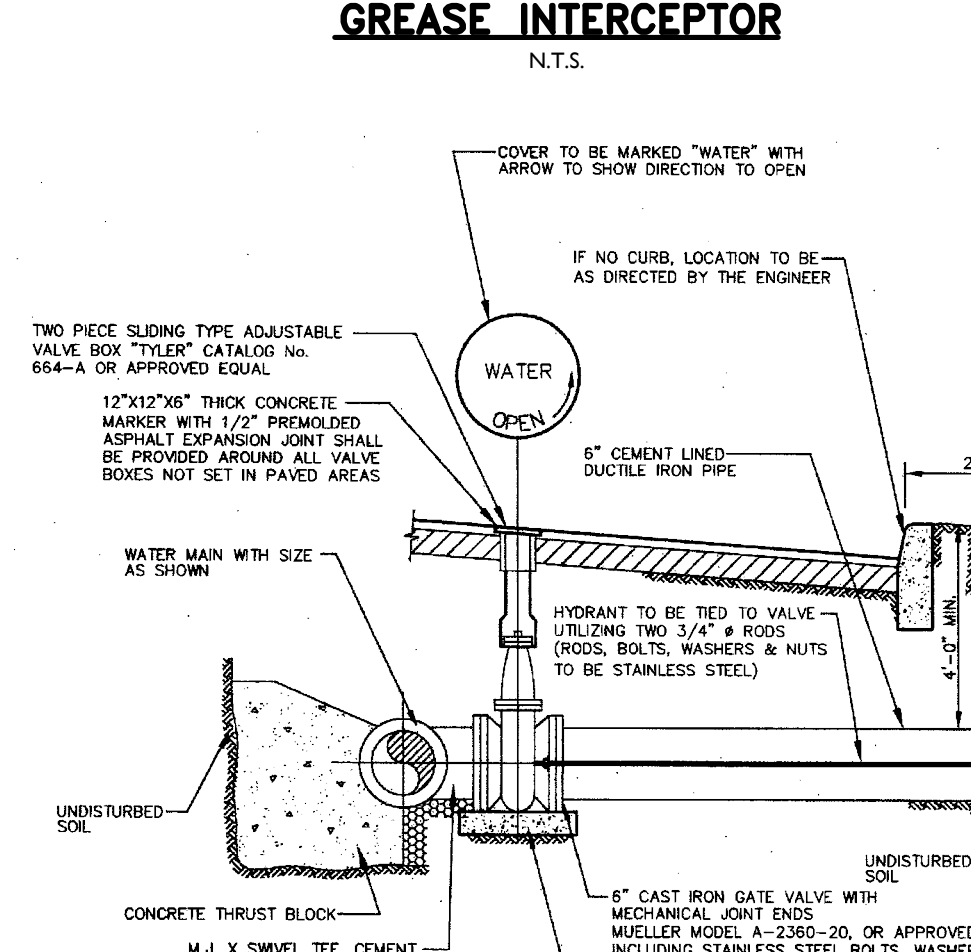
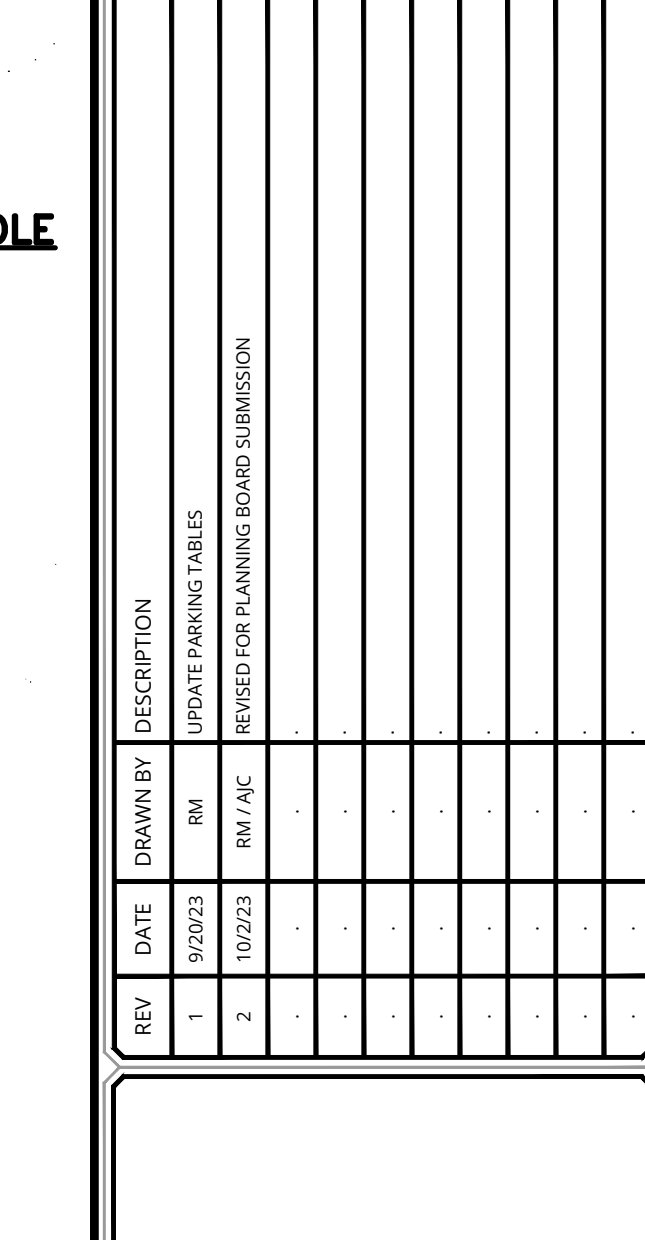
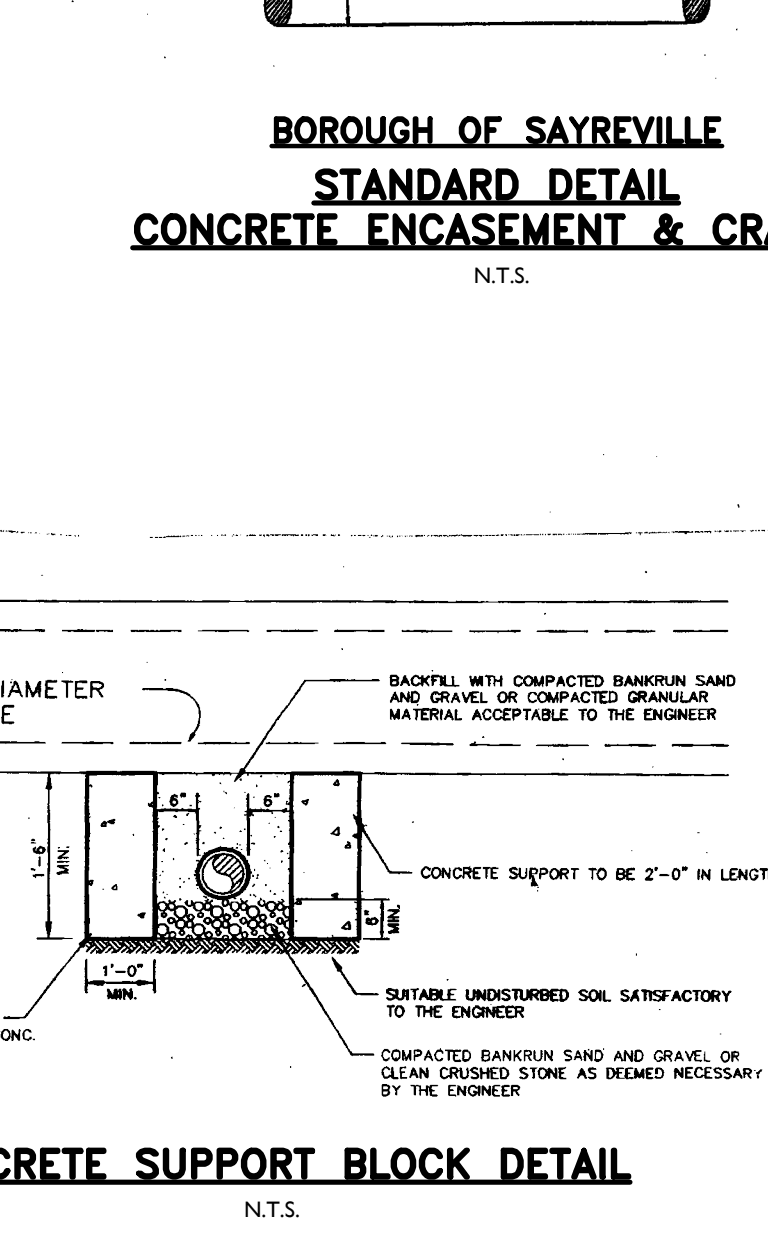
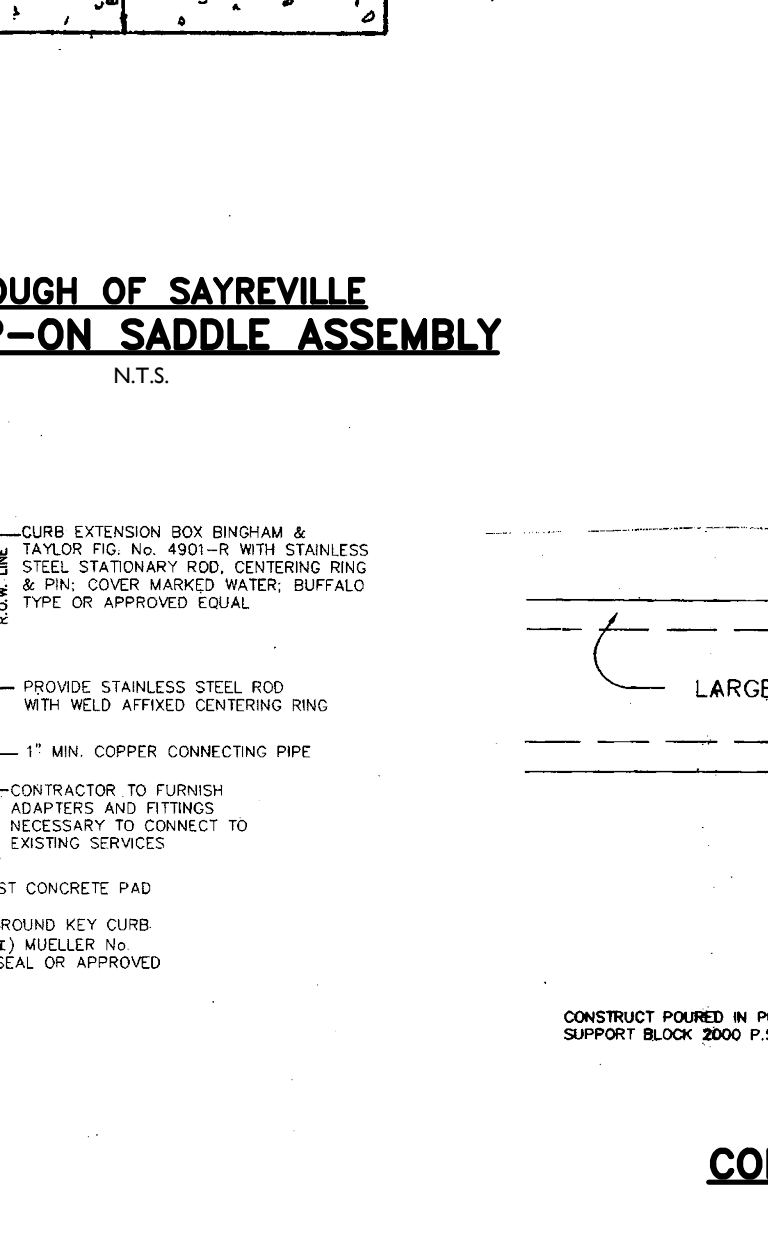
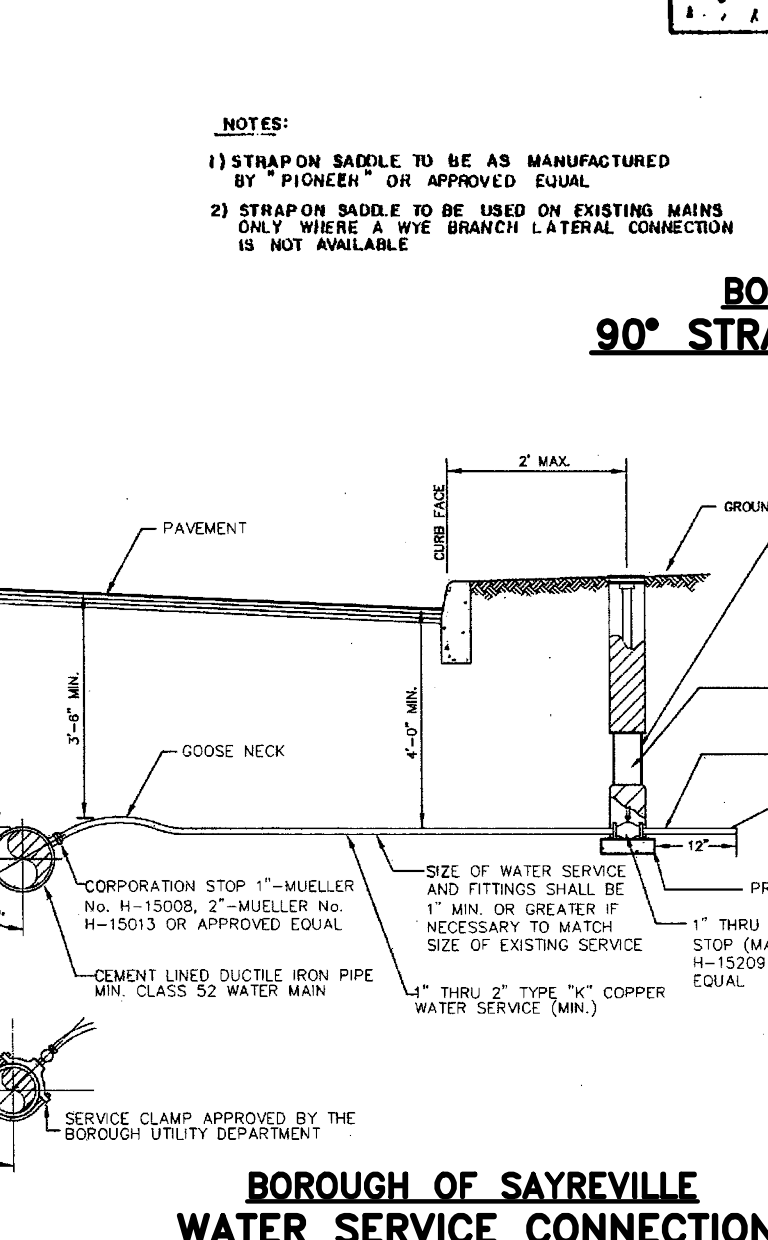
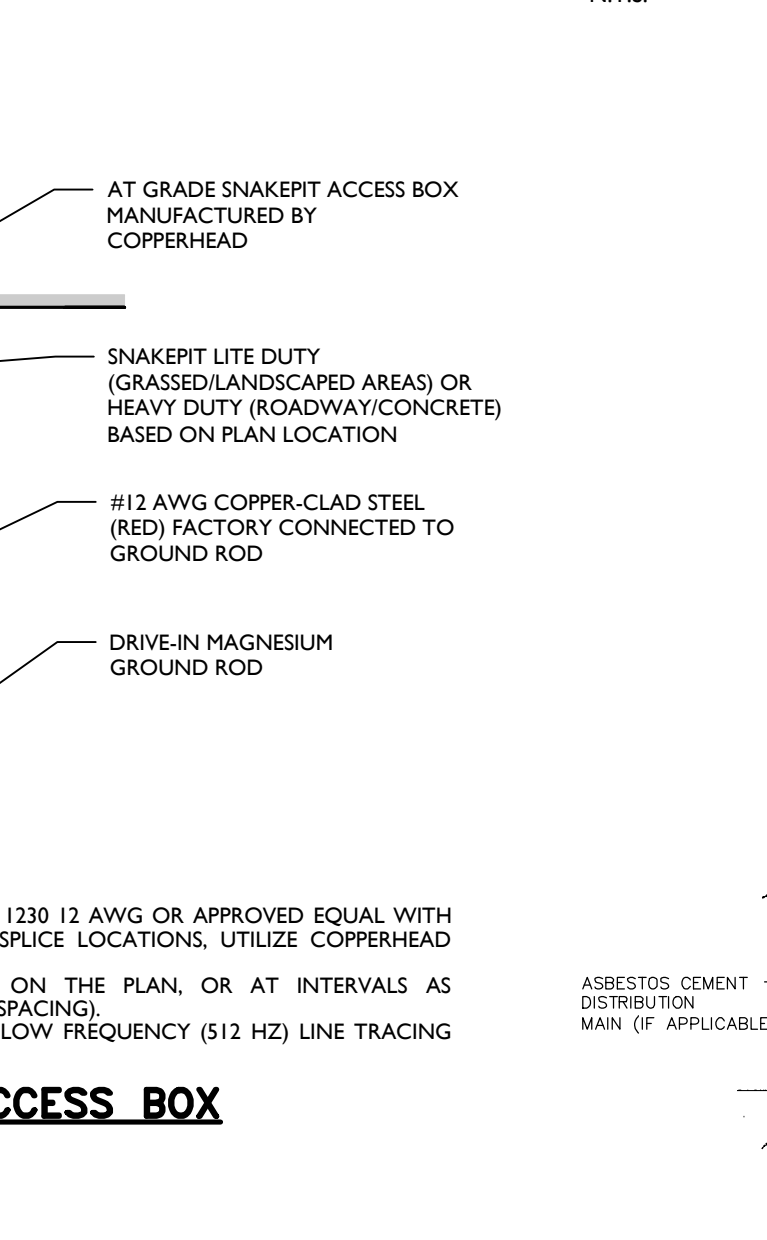
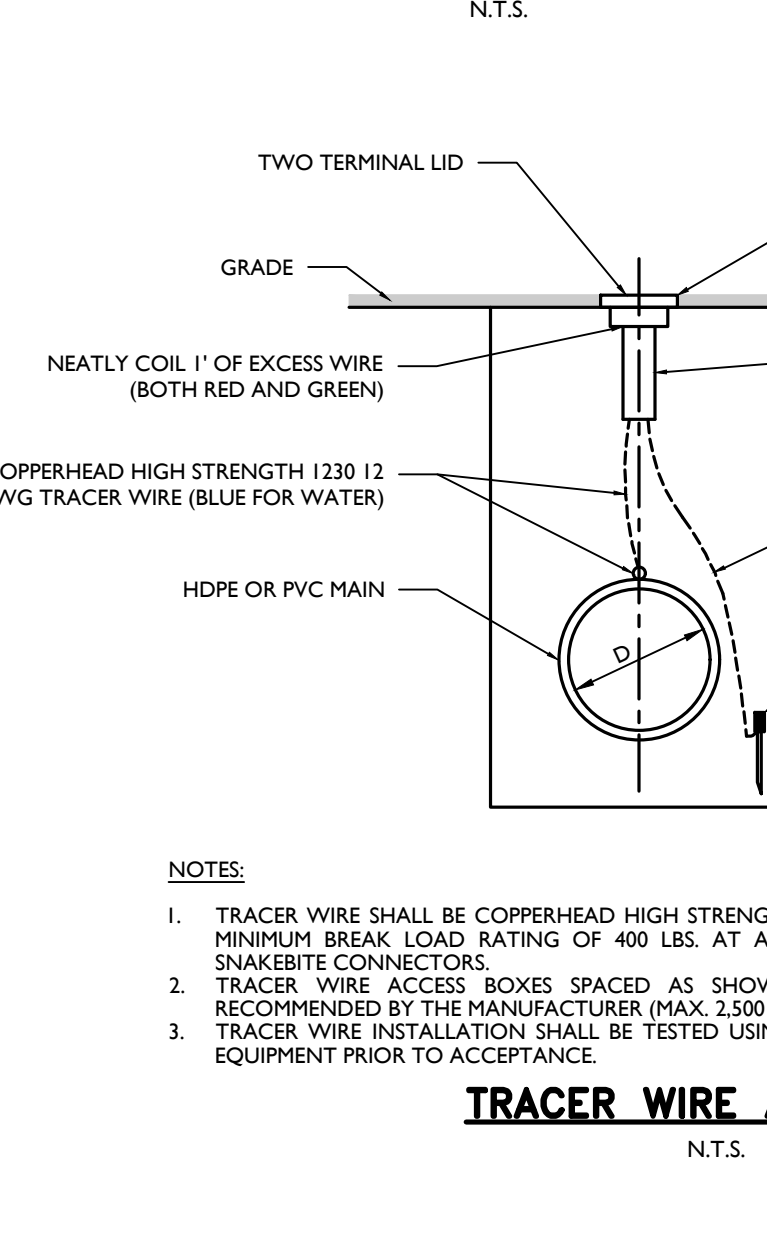
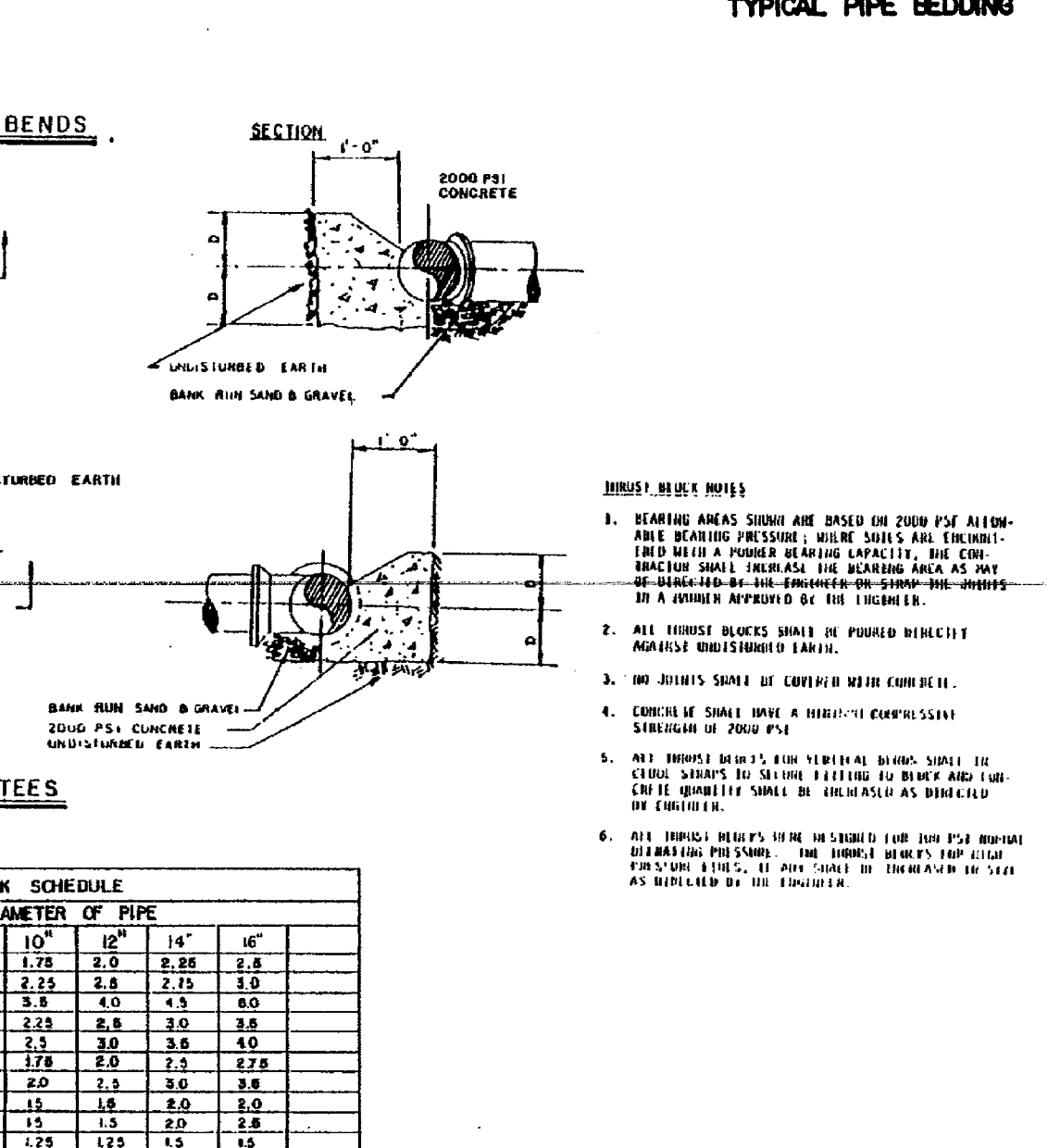
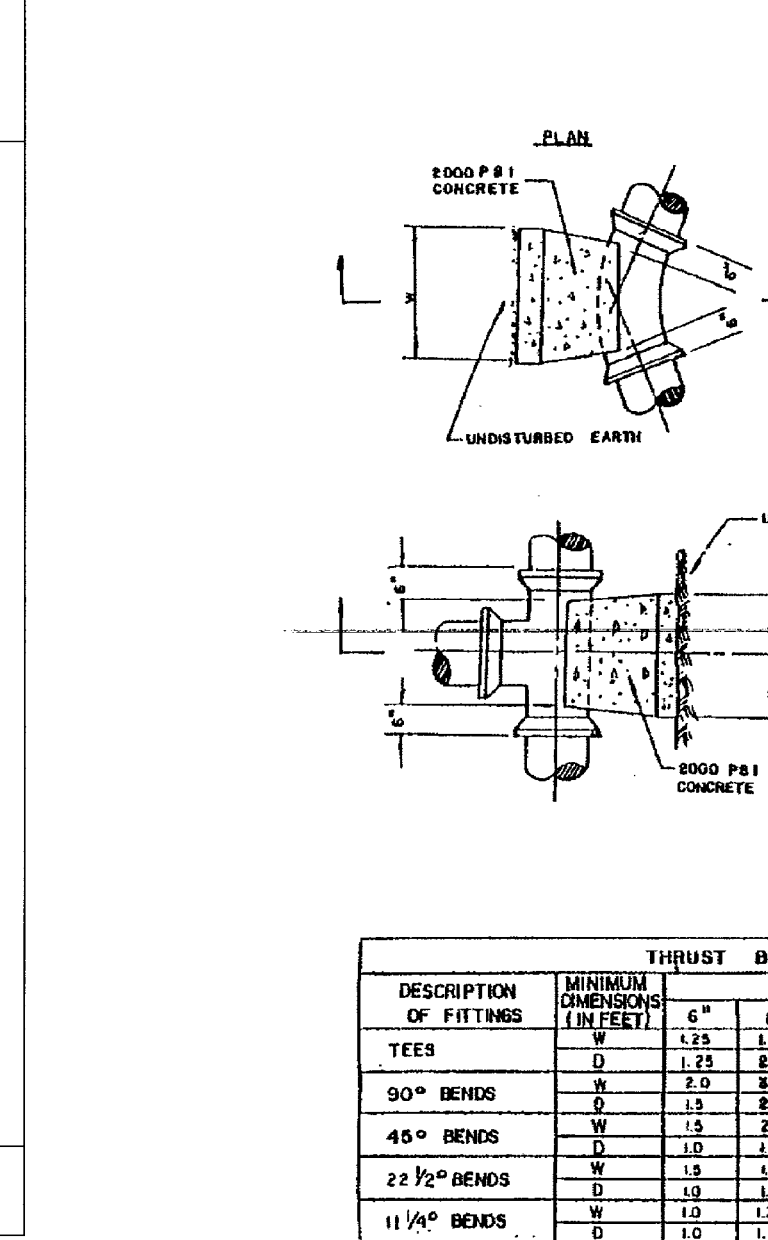
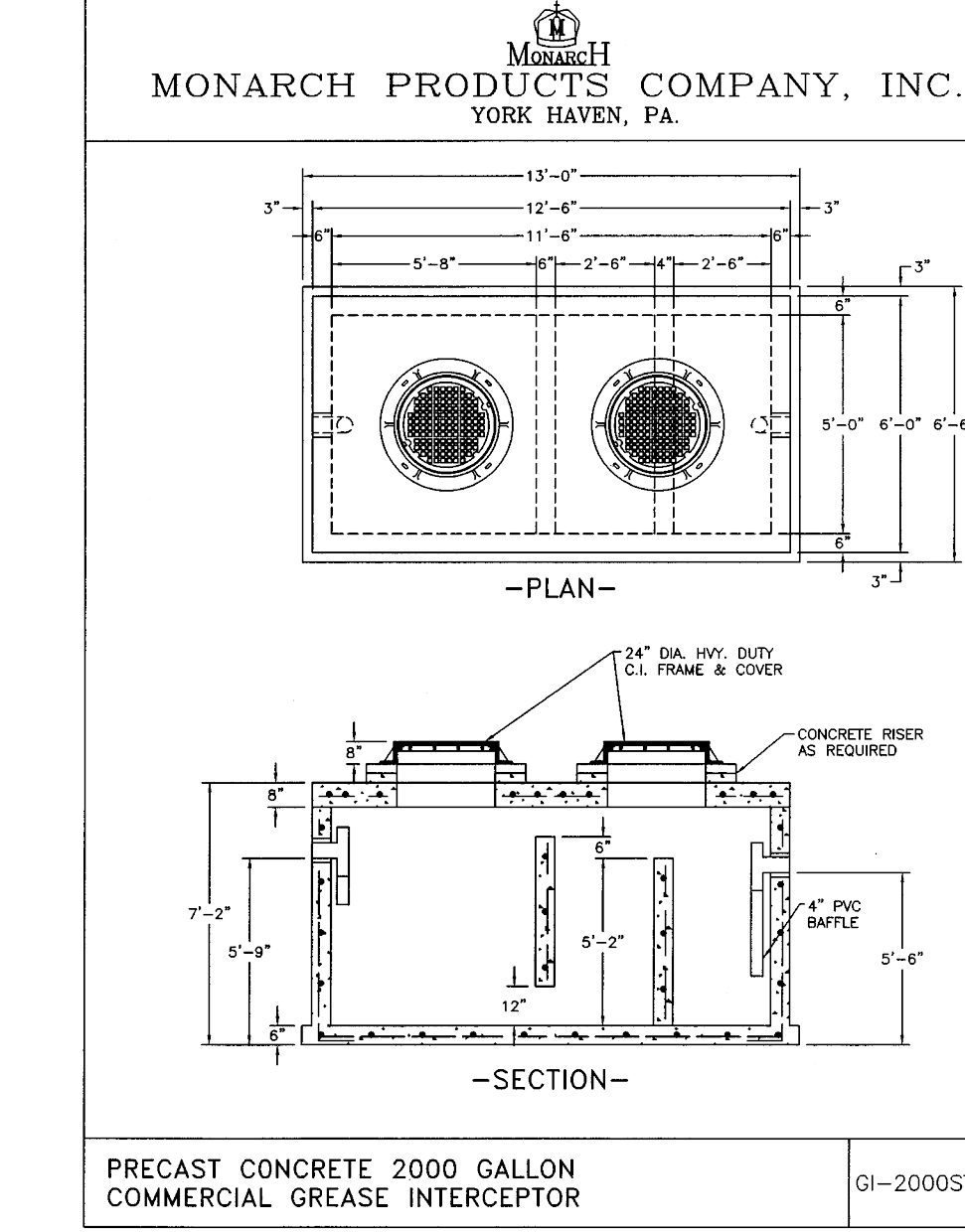
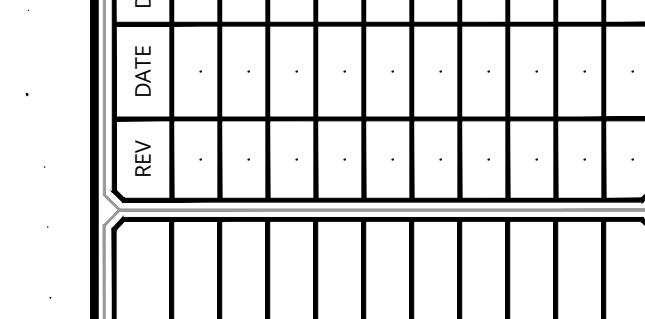
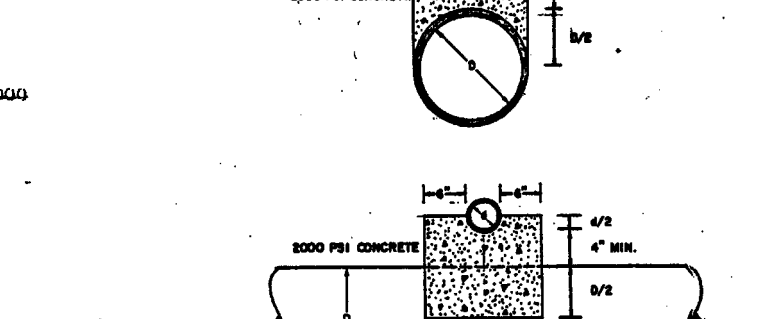
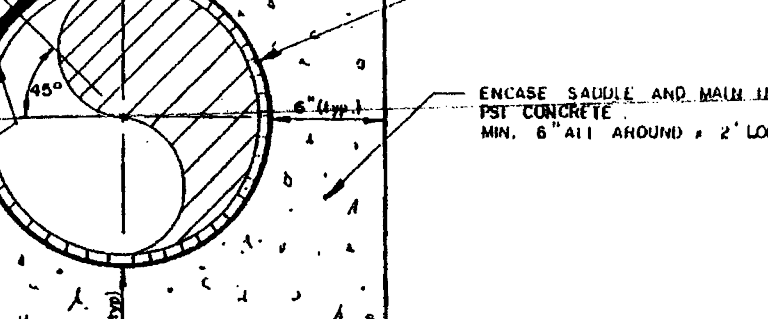
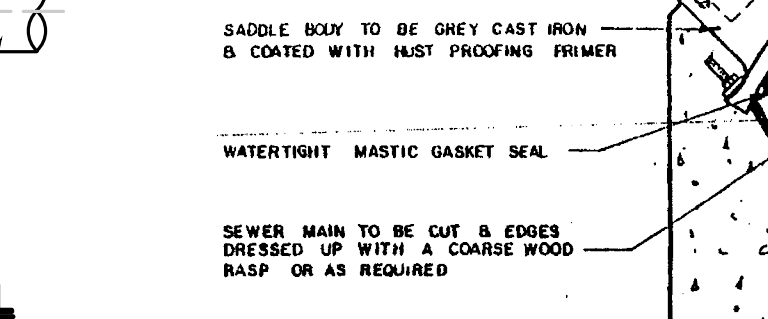
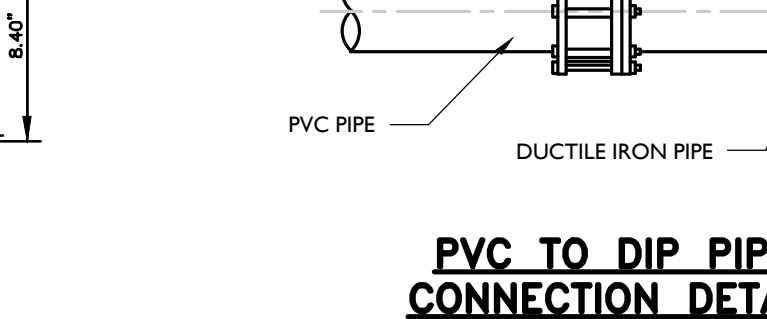
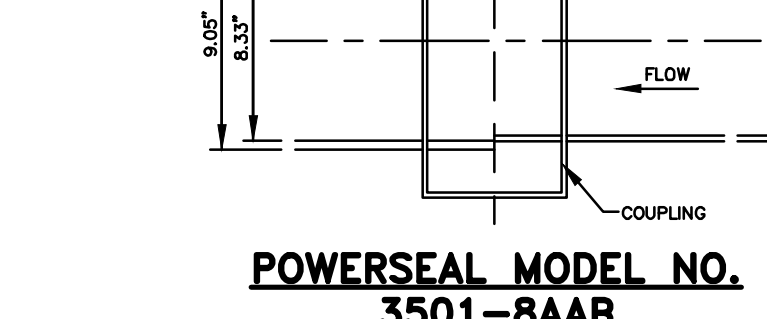
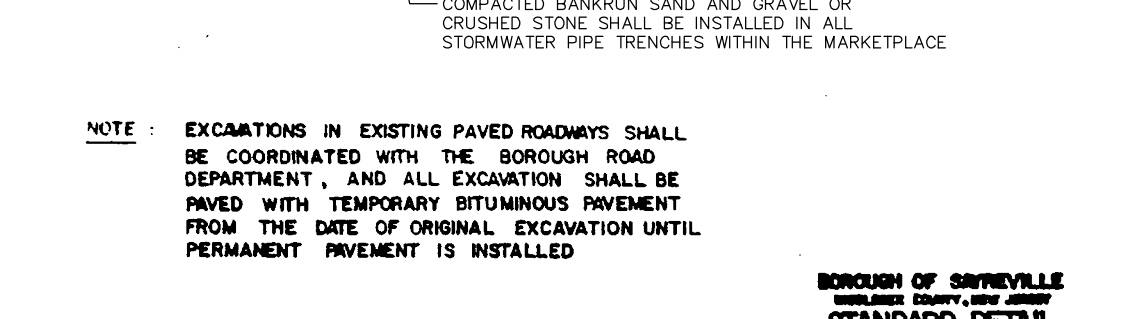
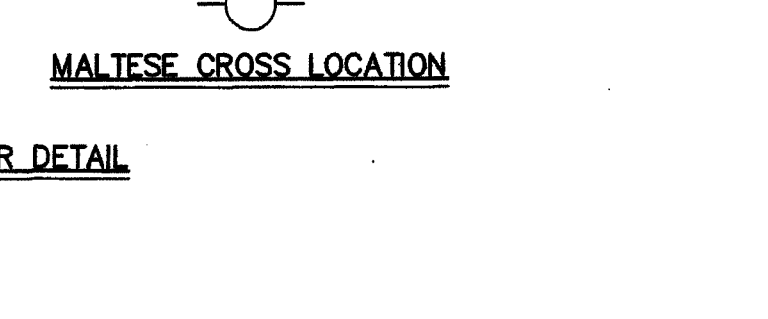
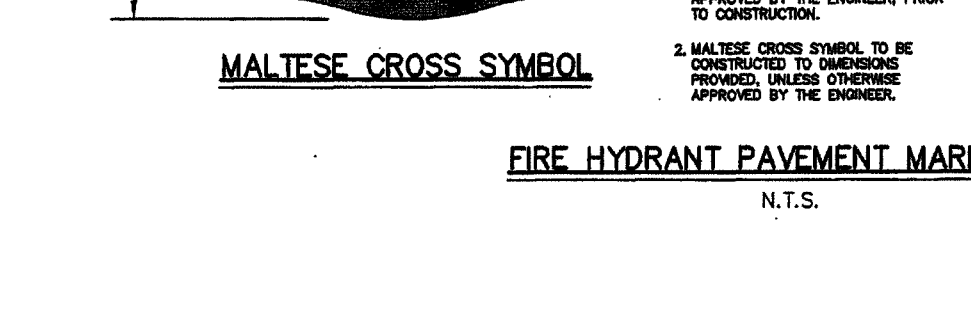
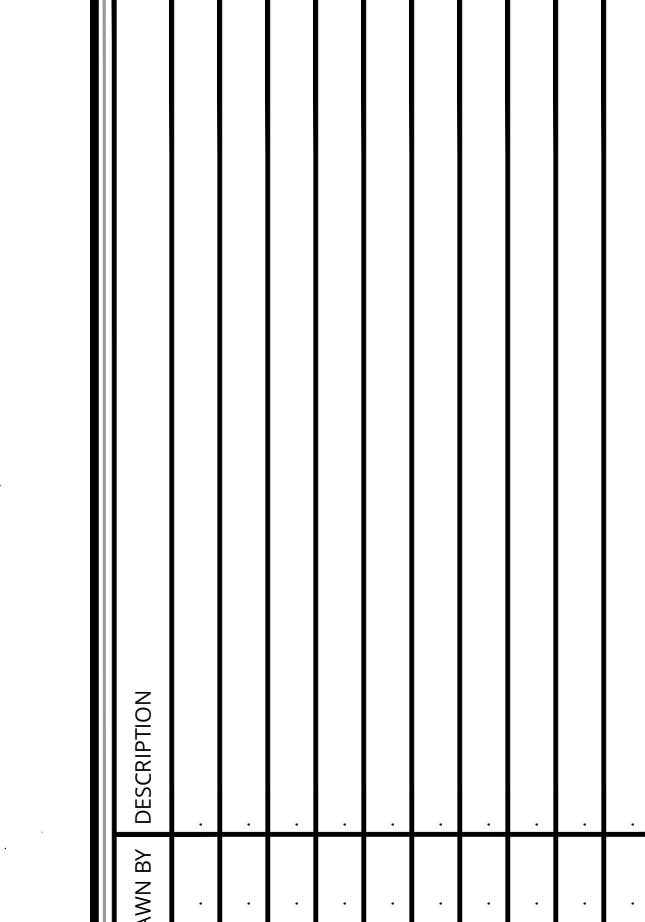
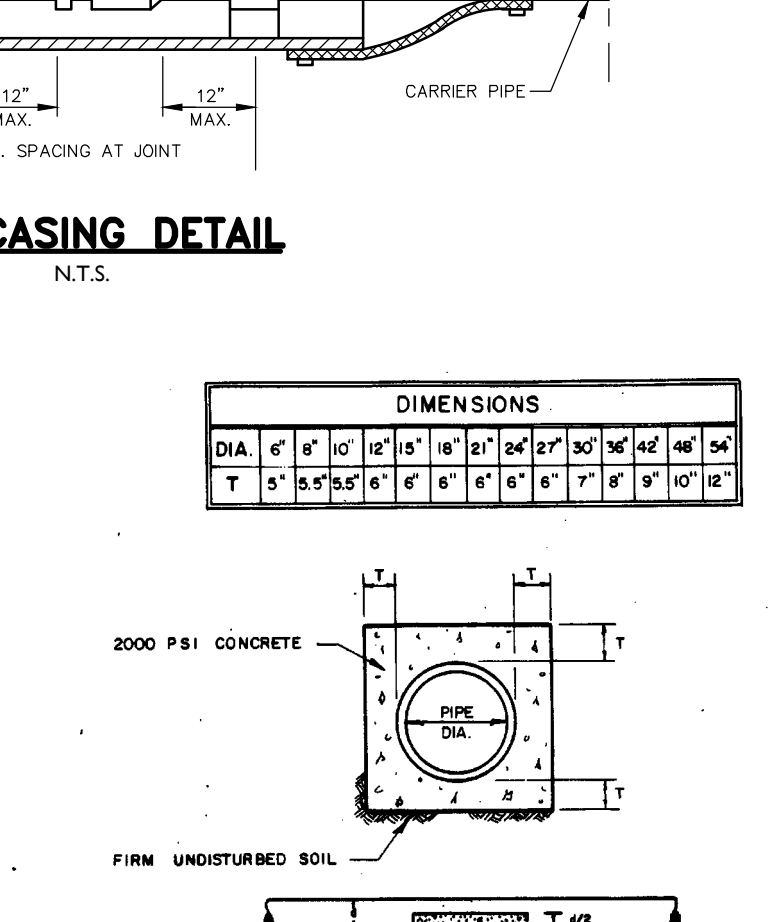
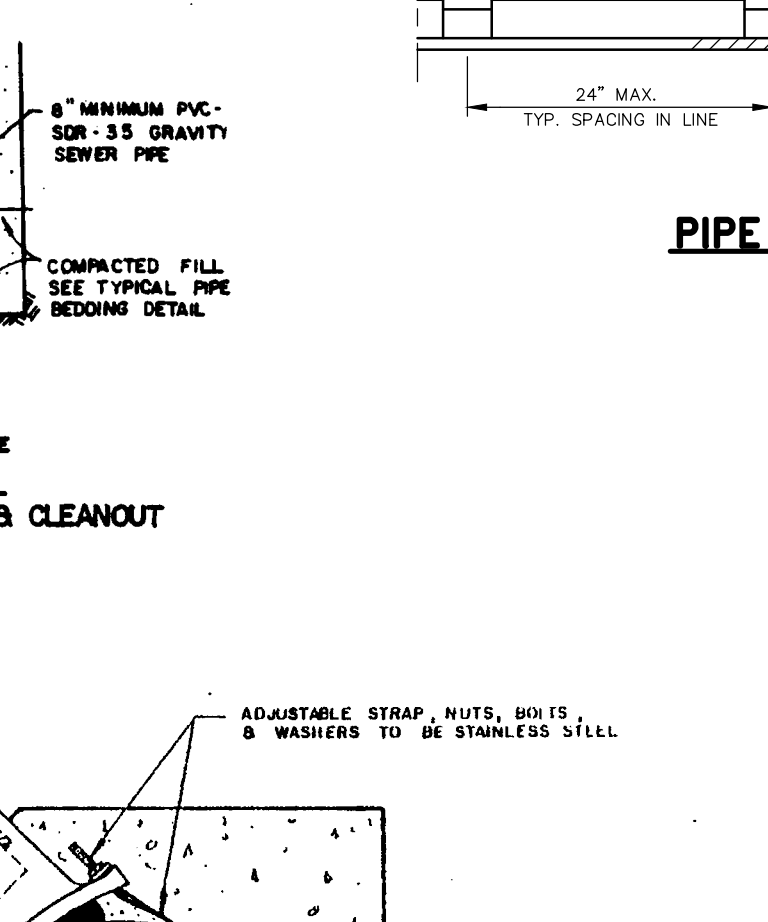
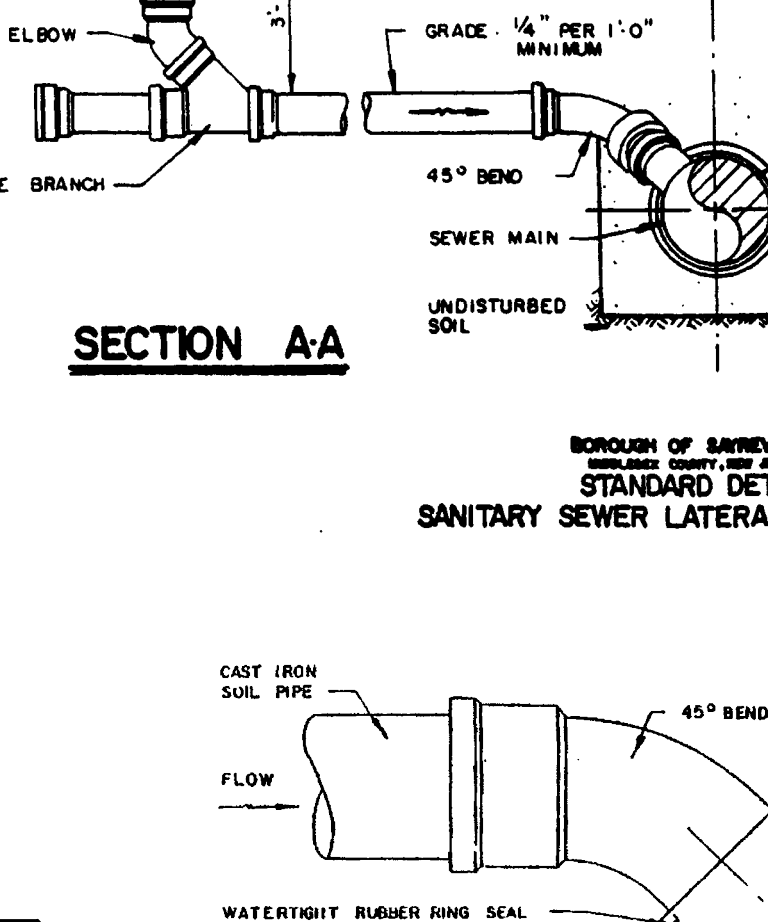
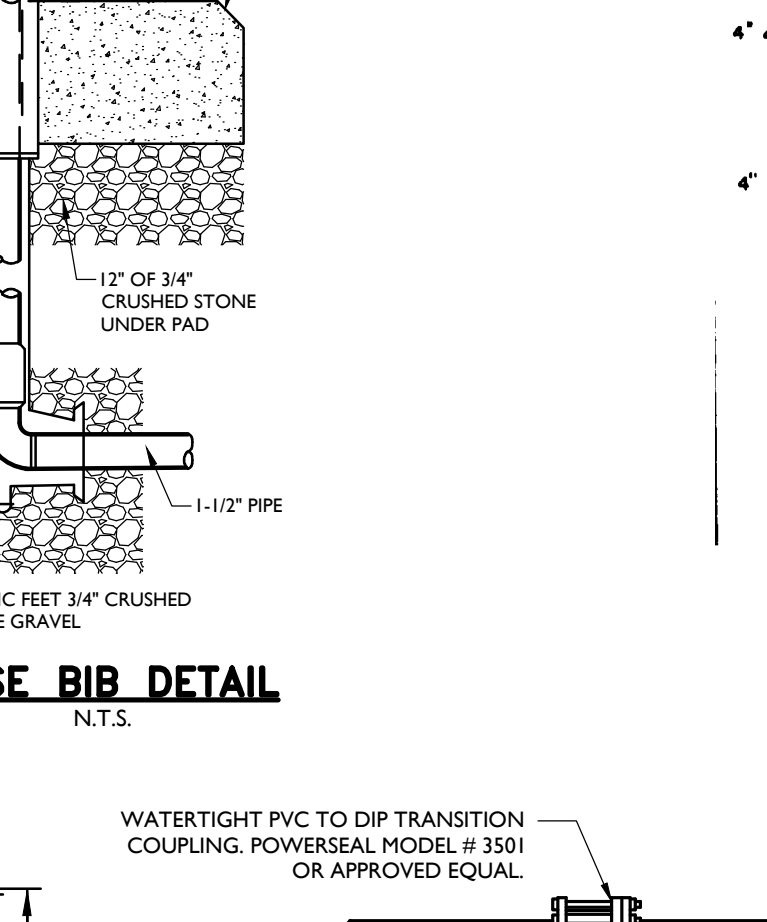
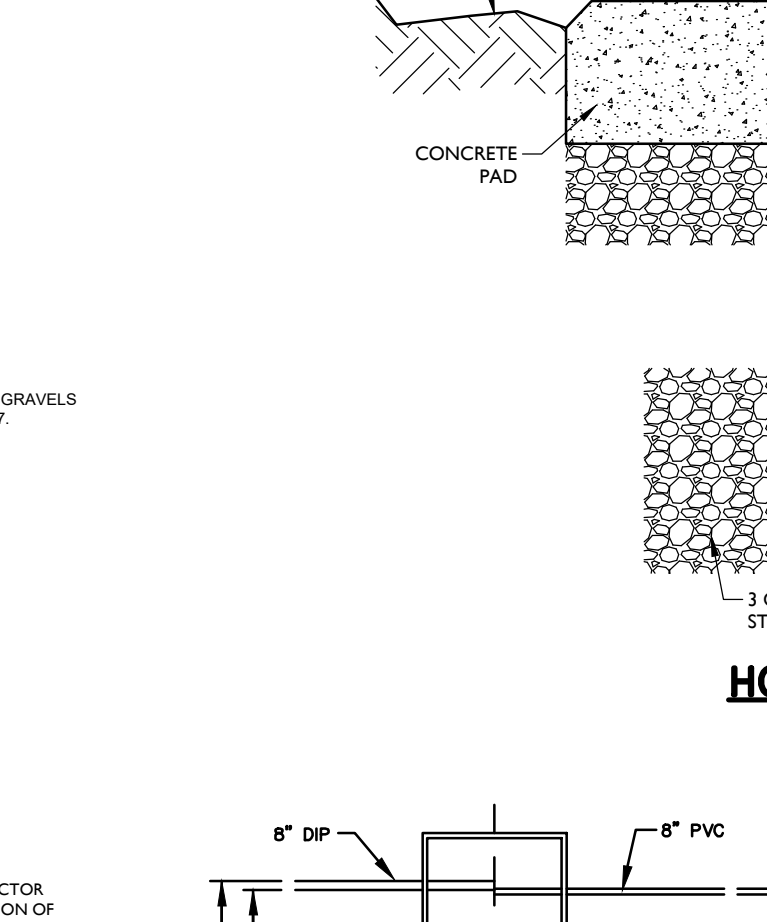
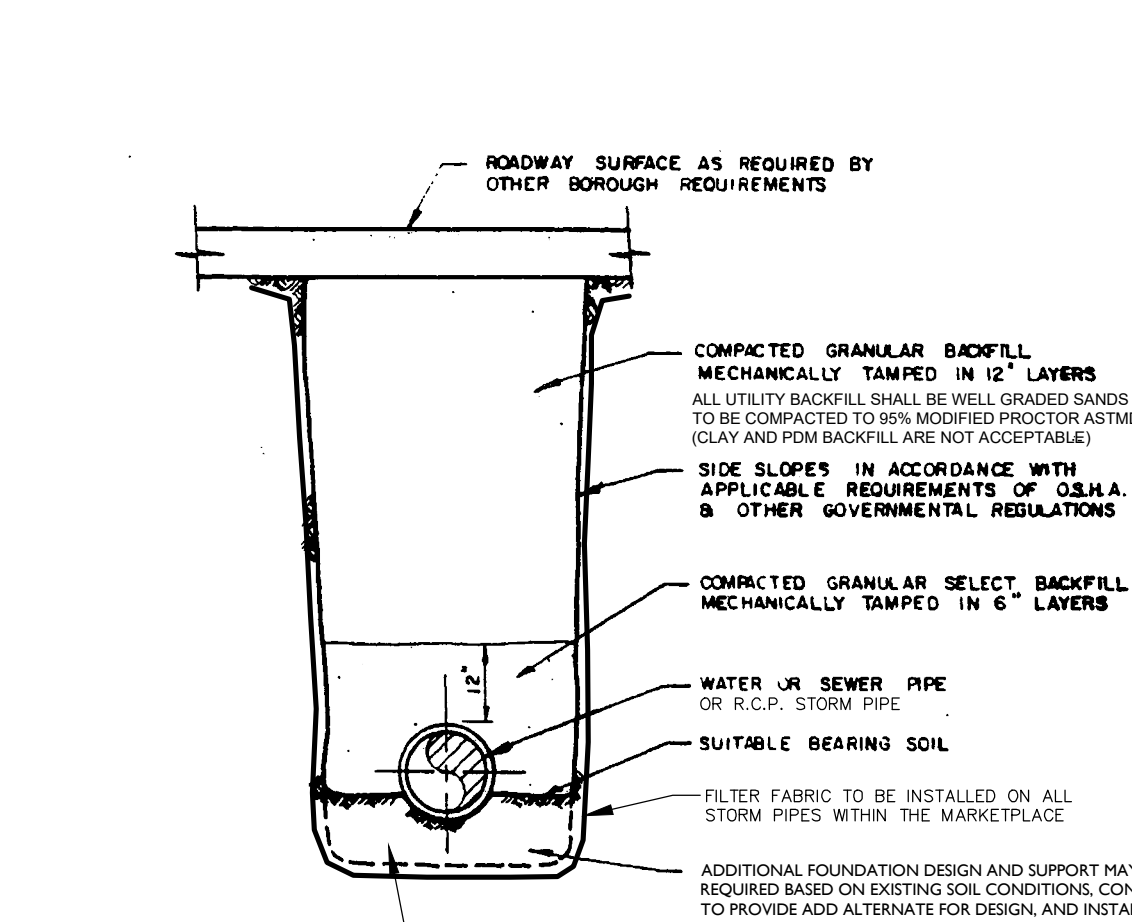
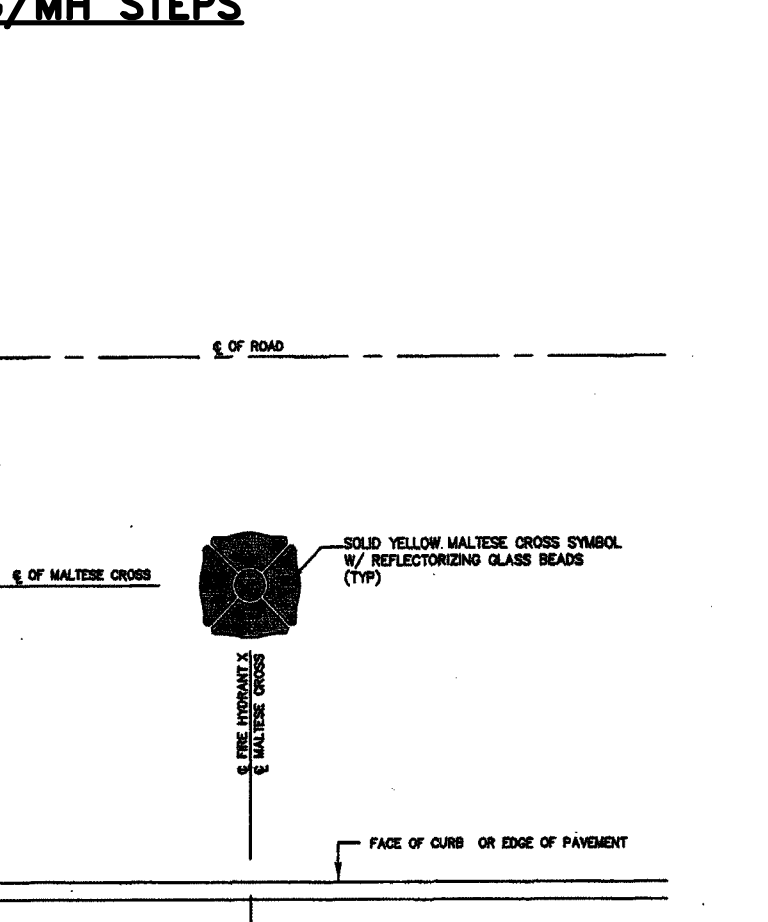
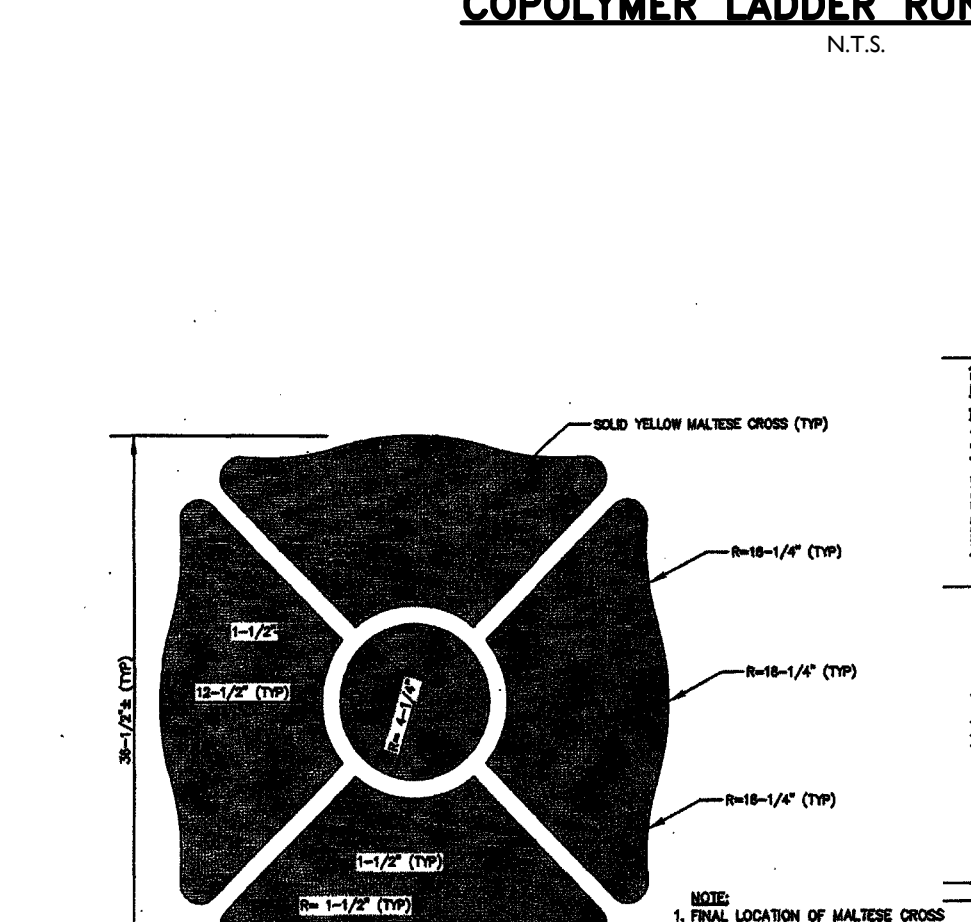
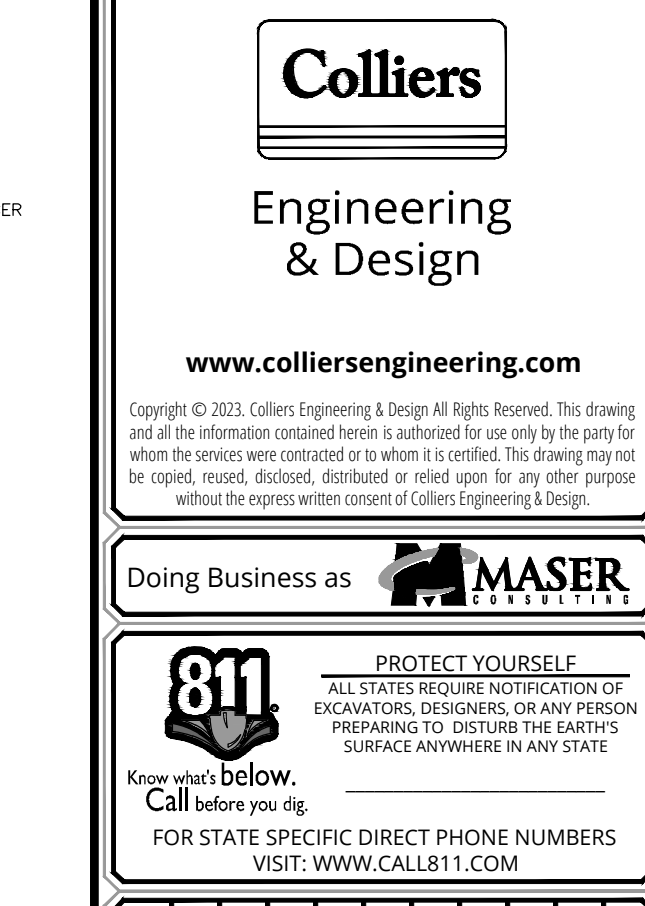
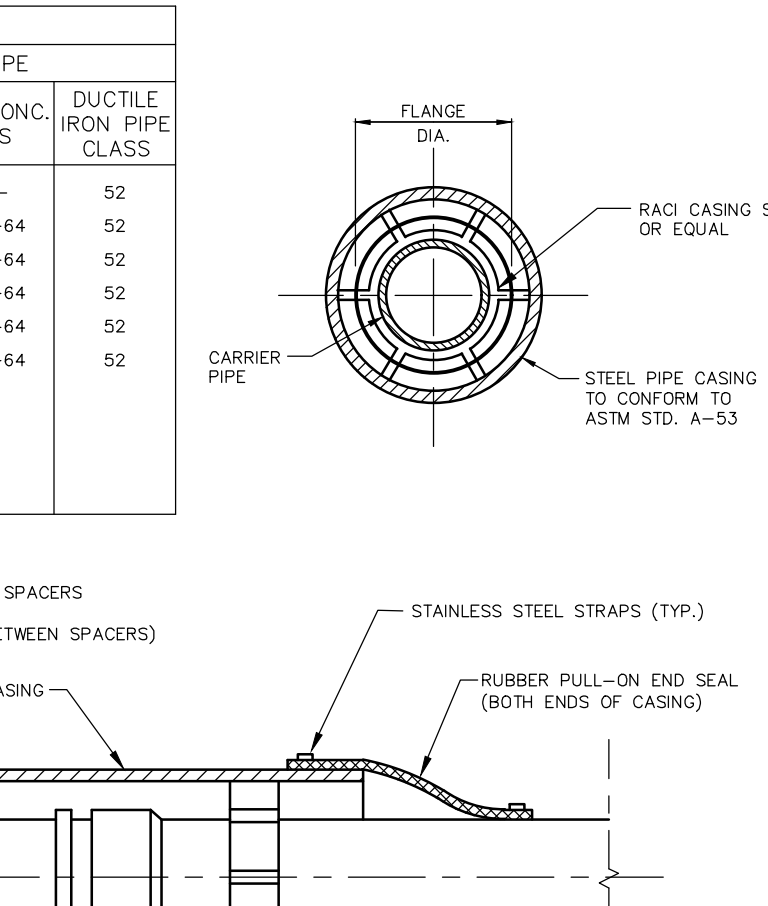
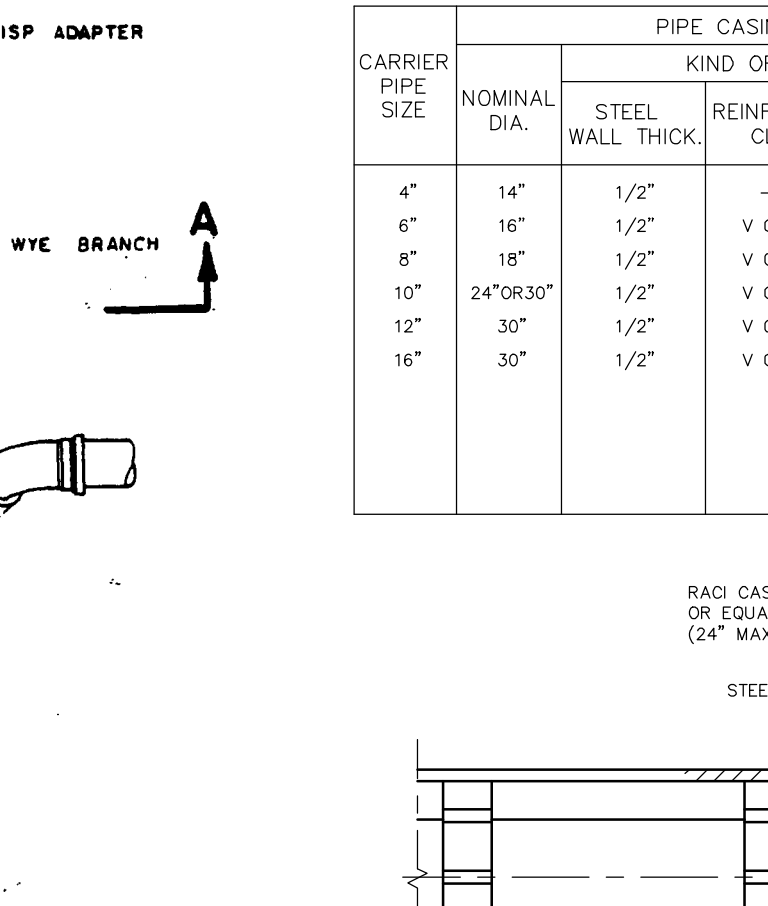
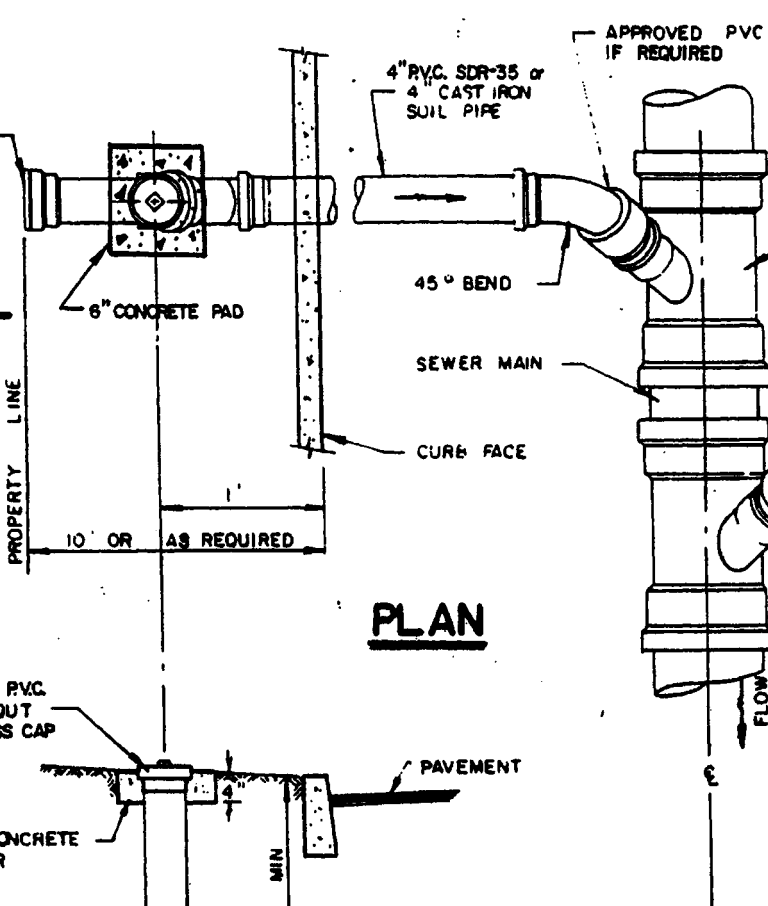
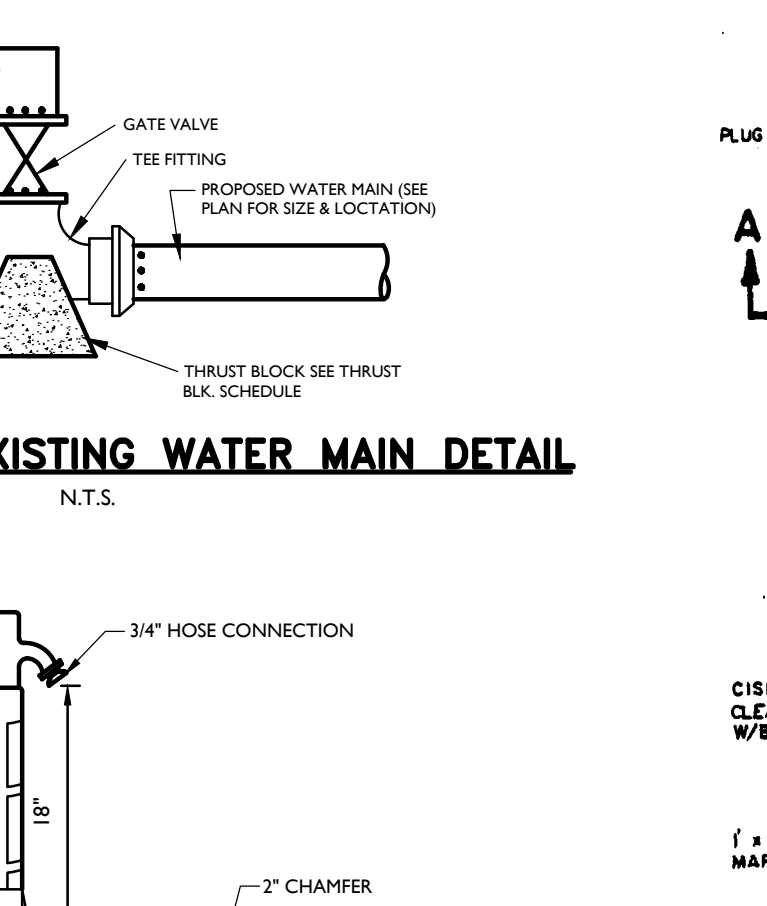
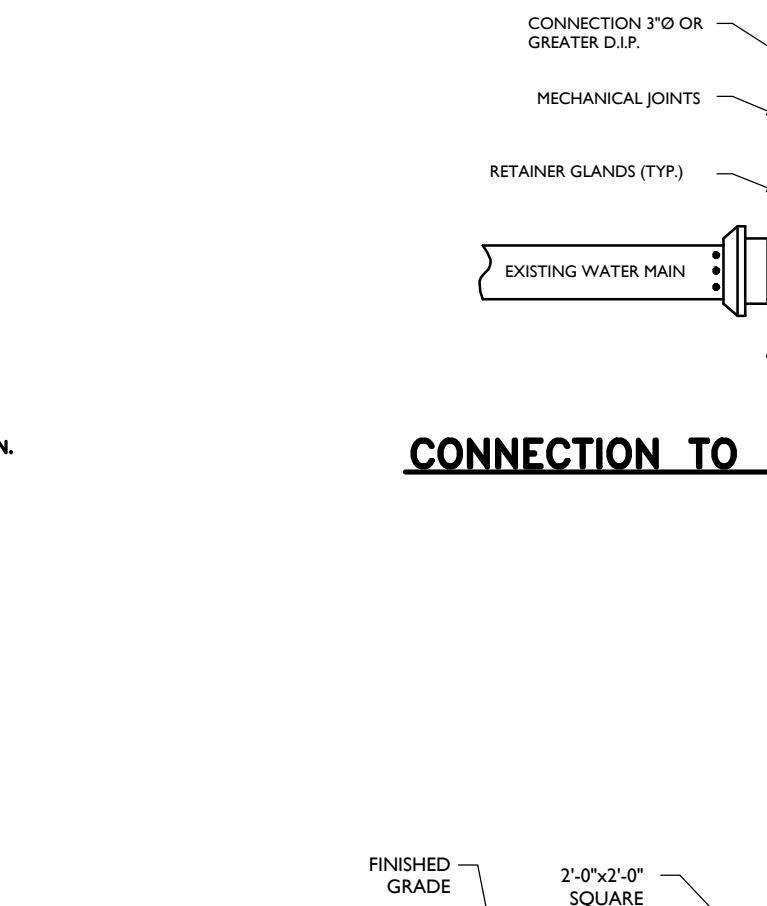
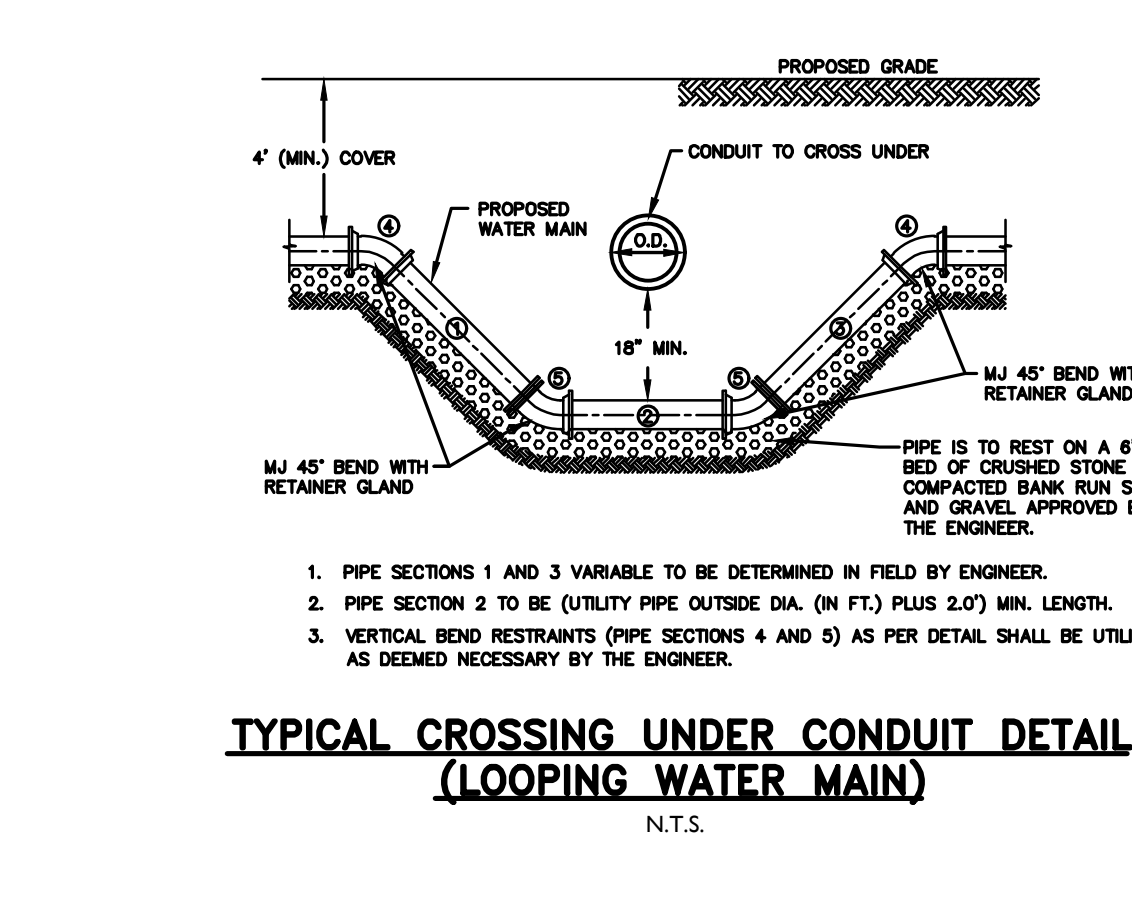
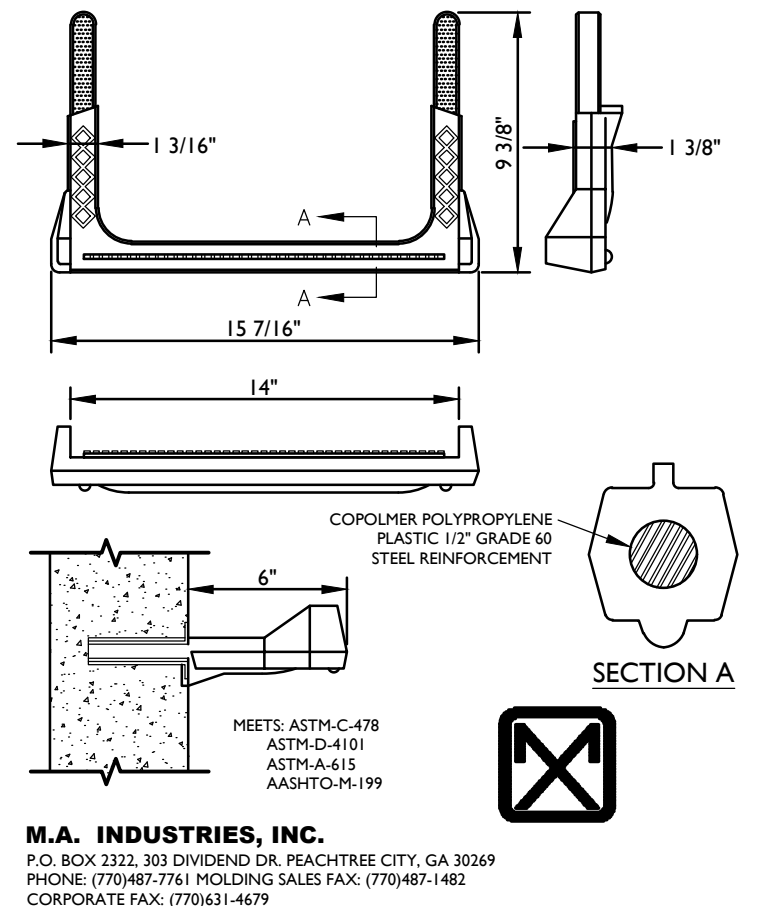
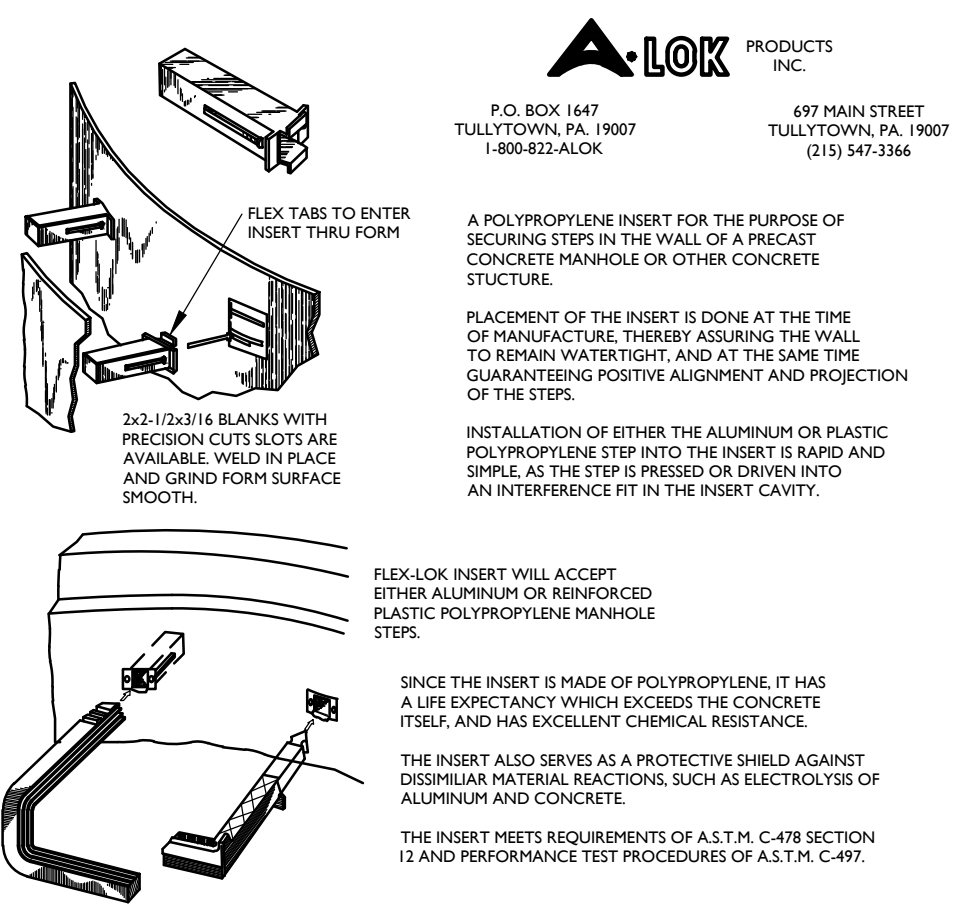
BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

HOLMDEL (Headquarters)
531 Newnam Springs Road,
Suite 203
Red Bank, NJ 07071
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

Colliers Engineering & Design

SCALE: AS SHOWN DATE: 9/11/2023 DRAWN BY: RM DWB
PROJECT NUMBER: 050005001 DRAWING NAME: C-PROJ-HWC-ASP



Colliers Engineering & Design

www.colliersengineering.com

Copyright © 2013 Colliers Engineering & Design, Inc. All rights reserved. The drawing and all the information contained herein is authorized for use only by the party for whom the drawing was prepared or its direct or indirect licensee. No other party may copy, reproduce, distribute, disseminate or use in any way for any other purpose without the express written consent of Colliers Engineering & Design.

Doing Business as **MASER**

811 PROTECT YOURSELF
Call before you dig
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

CARRIER PIPE SIZE	PIPE CASING OR EQUAL		DUCTILE IRON PIPE CLASS
	STEEL WALL THICK	REINFC. CONC. CLASS	
4"	1/4"	1/2"	52
6"	1/4"	1/2"	52
8"	1/4"	1/2"	52
10"	3/8"	1/2"	52
12"	3/8"	1/2"	52
16"	3/8"	1/2"	52

PHASE IA GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE MIDDLESEX COUNTY NEW JERSEY

Daniel W. Busch
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GA42093
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.A. # 2462799650

Colliers Engineering & Design

HOLMDEL (Headquarters)
337 NEWTON SPRINGS ROAD
Suite 203
Red Bank, NJ 07071
Phone: 732.383.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

DATE: 9/11/2023
DRAWN BY: RM
CHECKED BY: DWB

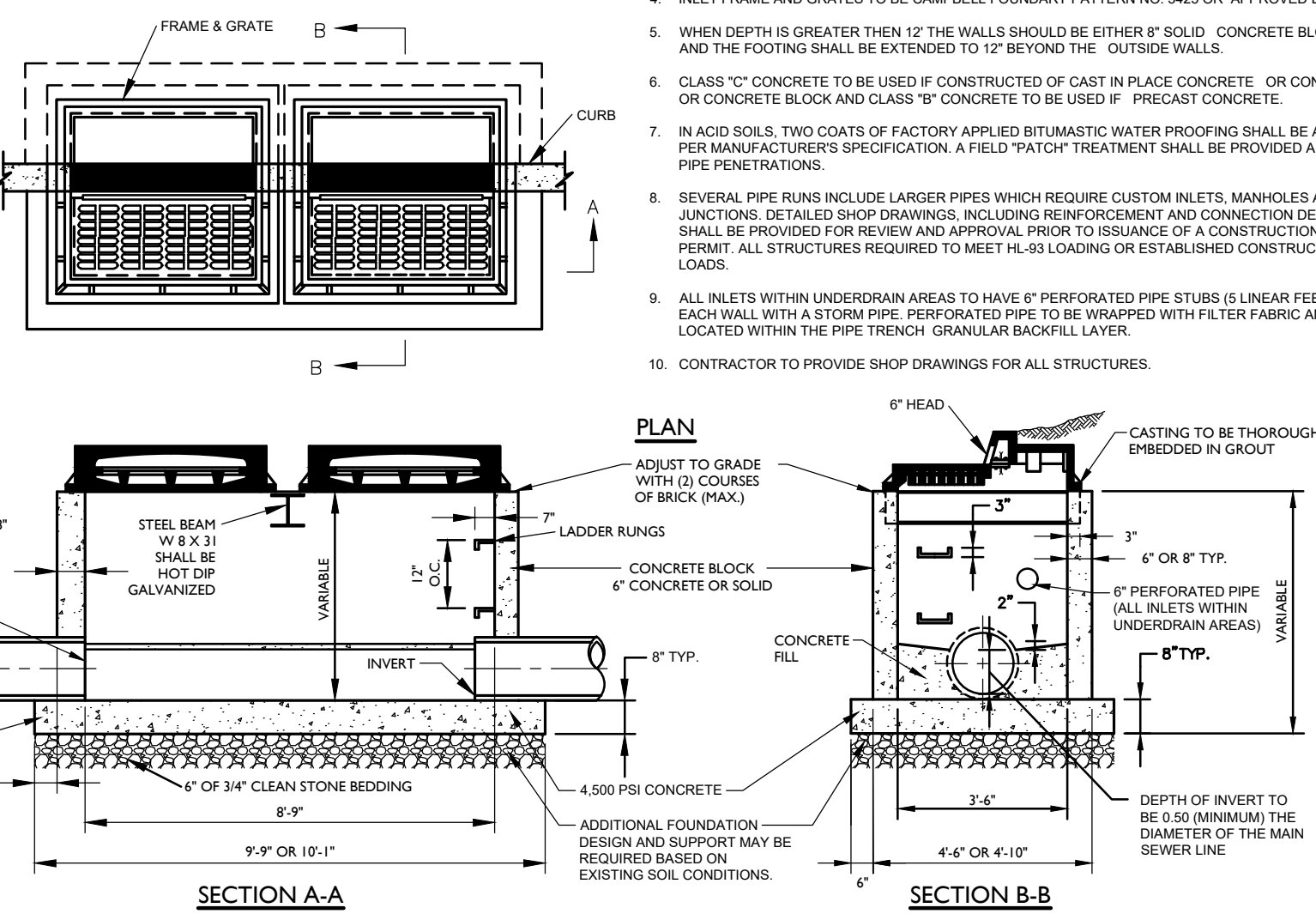
PROJECT NUMBER: 0500050501
DRAWING NAME: C-UTLS-HVC-ASP

SHEET TITLE: CONSTRUCTION DETAILS

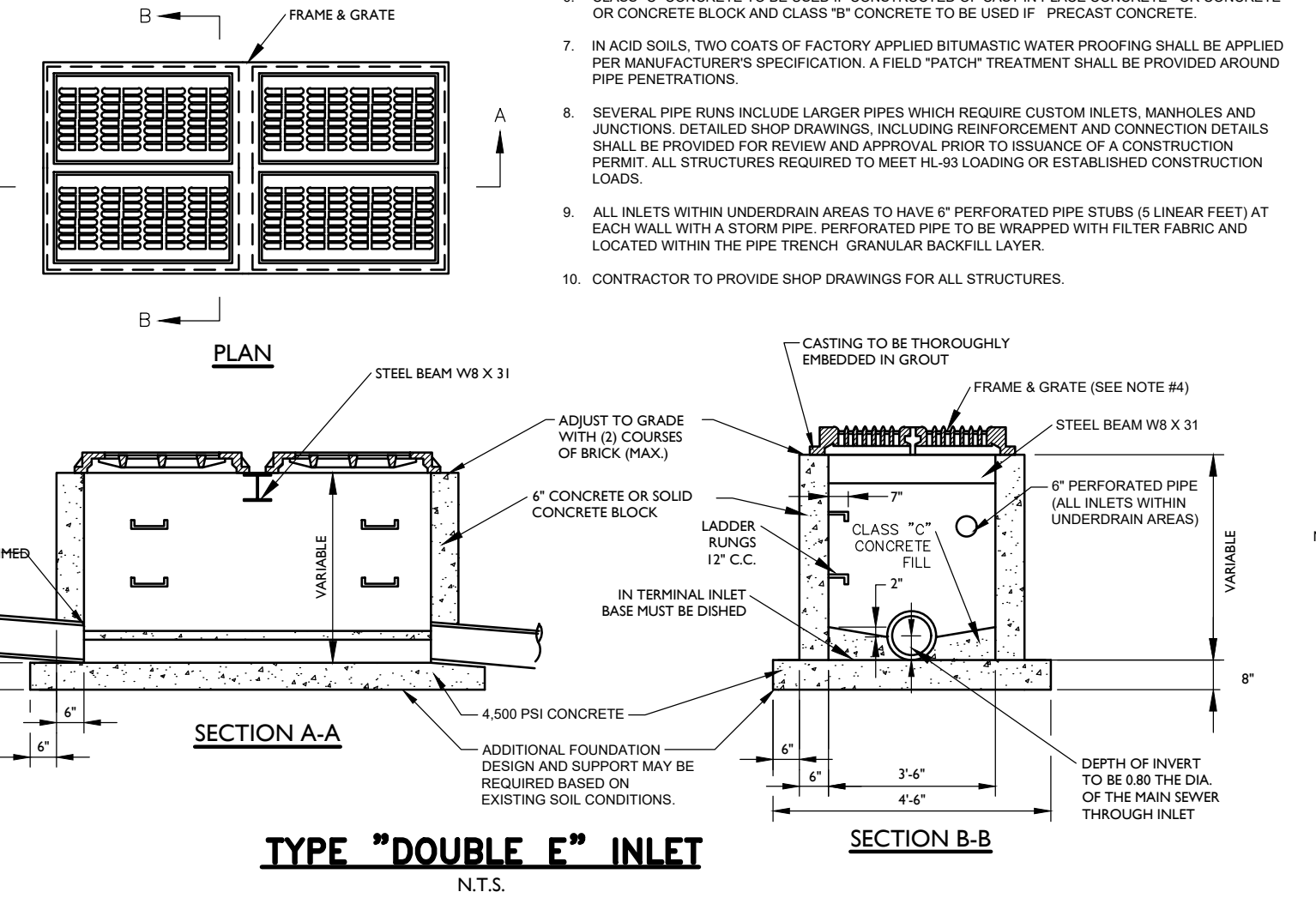
SHEET NUMBER: 15 of 21

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

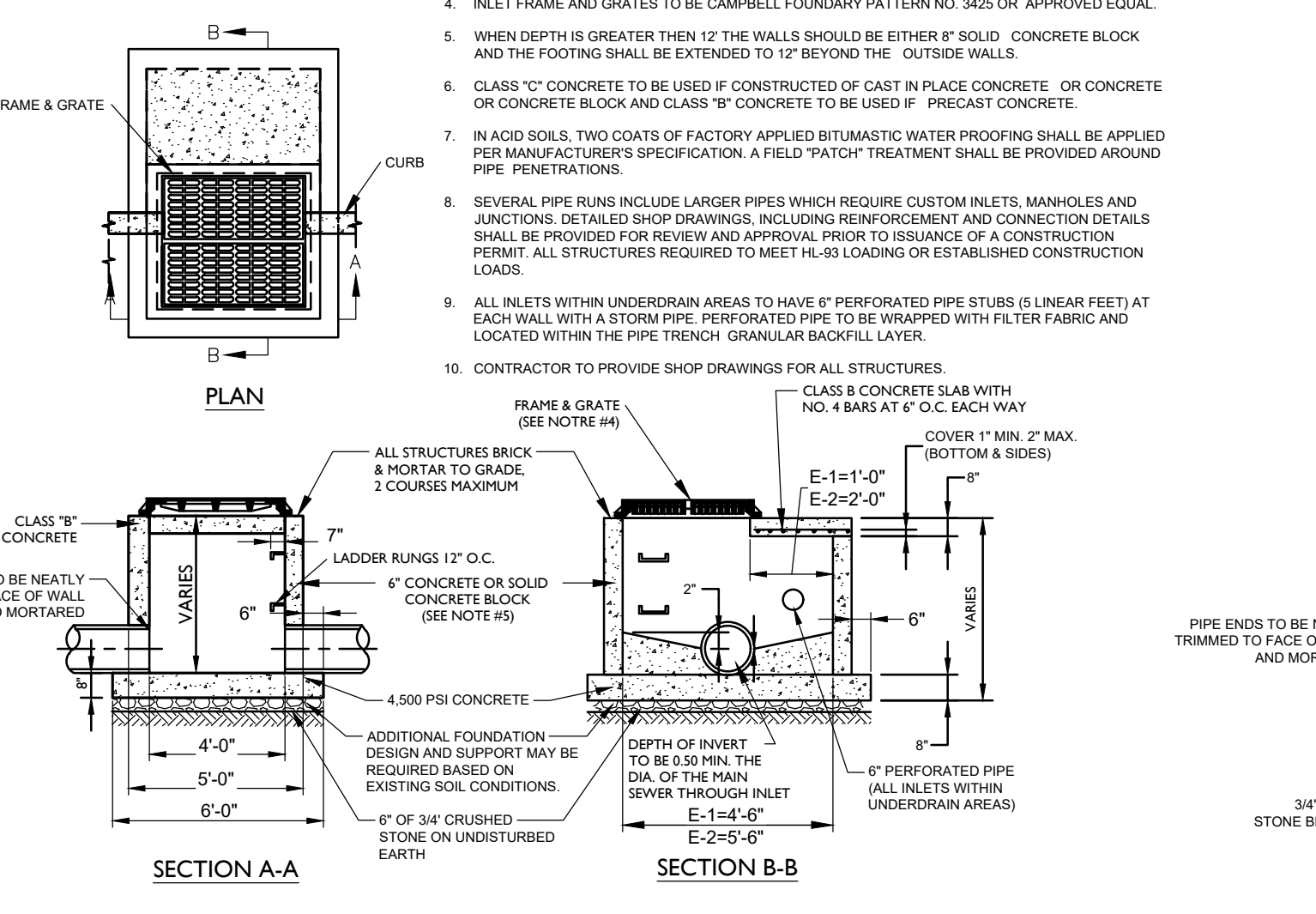
- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 - INLETS MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE. & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1/2" CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK & POINTED.
 - PROVIDE 1/2" DIA. X 1/4" ALUMINUM LASSER RINGS, 12" O.C. OR COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REIN. MA. INDUSTRIES P20-F OR P20-B WITH PRECAST PRESS FIT INSERTS, 12" O.C.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NO. 3425 OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THAN 12" THE WALLS SHOULD BE EITHER "SOLID" CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
 - CLASS "C" CONCRETE TO BE USED IF CONSTRUCTED OF CAST IN PLACE CONCRETE. OR CONCRETE OR CONCRETE BLOCK AND CLASS "B" CONCRETE TO BE USED IF PRECAST CONCRETE.
 - IN ACID SOILS, TWO COATS OF FACTORY APPLIED BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION. A FIELD "PATCH" TREATMENT SHALL BE PROVIDED AROUND PIPE PENETRATIONS.
 - SEVERAL PIPE RUNS INCLUDE LARGER PIPES WHICH REQUIRE CUSTOM INLETS, MANHOLES AND JUNCTIONS. DETAILED SHOP DRAWINGS, INCLUDING REINFORCEMENT AND CONNECTION DETAILS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A CONSTRUCTION PERMIT. ALL STRUCTURES REQUIRED TO MEET HL-93 LOADING OR ESTABLISHED CONSTRUCTION LOADS.
 - ALL INLETS WITH UNDERDRAIN AREAS TO HAVE 6" PERFORATED PIPE STUBS IN LINEAR FEET AT EACH WALL WITH A STORM PIPE, PERFORATED PIPE TO BE WRAPPED WITH FILTER FABRIC AND LOCATED WITHIN THE PIPE TRENCH GRANULAR BACKFILL LAYER.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL STRUCTURES.



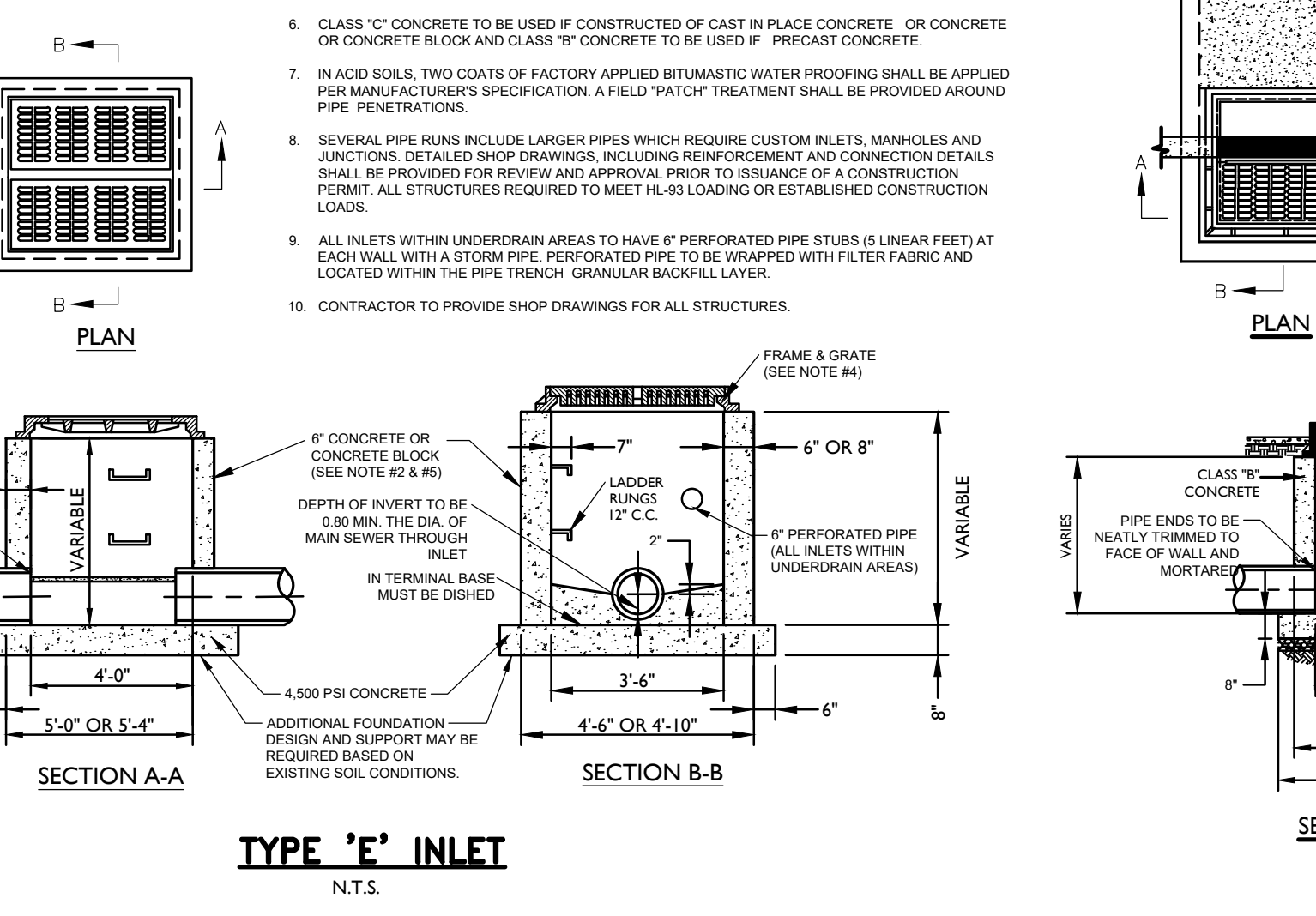
- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 - INLETS MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE. & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1/2" CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK & POINTED.
 - PROVIDE 1/2" DIA. X 1/4" ALUMINUM LASSER RINGS, 12" O.C. OR COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REIN. MA. INDUSTRIES P20-F OR P20-B WITH PRECAST PRESS FIT INSERTS, 12" O.C.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NO. 3425 OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THAN 12" THE WALLS SHOULD BE EITHER "SOLID" CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
 - CLASS "C" CONCRETE TO BE USED IF CONSTRUCTED OF CAST IN PLACE CONCRETE. OR CONCRETE OR CONCRETE BLOCK AND CLASS "B" CONCRETE TO BE USED IF PRECAST CONCRETE.
 - IN ACID SOILS, TWO COATS OF FACTORY APPLIED BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION. A FIELD "PATCH" TREATMENT SHALL BE PROVIDED AROUND PIPE PENETRATIONS.
 - SEVERAL PIPE RUNS INCLUDE LARGER PIPES WHICH REQUIRE CUSTOM INLETS, MANHOLES AND JUNCTIONS. DETAILED SHOP DRAWINGS, INCLUDING REINFORCEMENT AND CONNECTION DETAILS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A CONSTRUCTION PERMIT. ALL STRUCTURES REQUIRED TO MEET HL-93 LOADING OR ESTABLISHED CONSTRUCTION LOADS.
 - ALL INLETS WITH UNDERDRAIN AREAS TO HAVE 6" PERFORATED PIPE STUBS IN LINEAR FEET AT EACH WALL WITH A STORM PIPE, PERFORATED PIPE TO BE WRAPPED WITH FILTER FABRIC AND LOCATED WITHIN THE PIPE TRENCH GRANULAR BACKFILL LAYER.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL STRUCTURES.



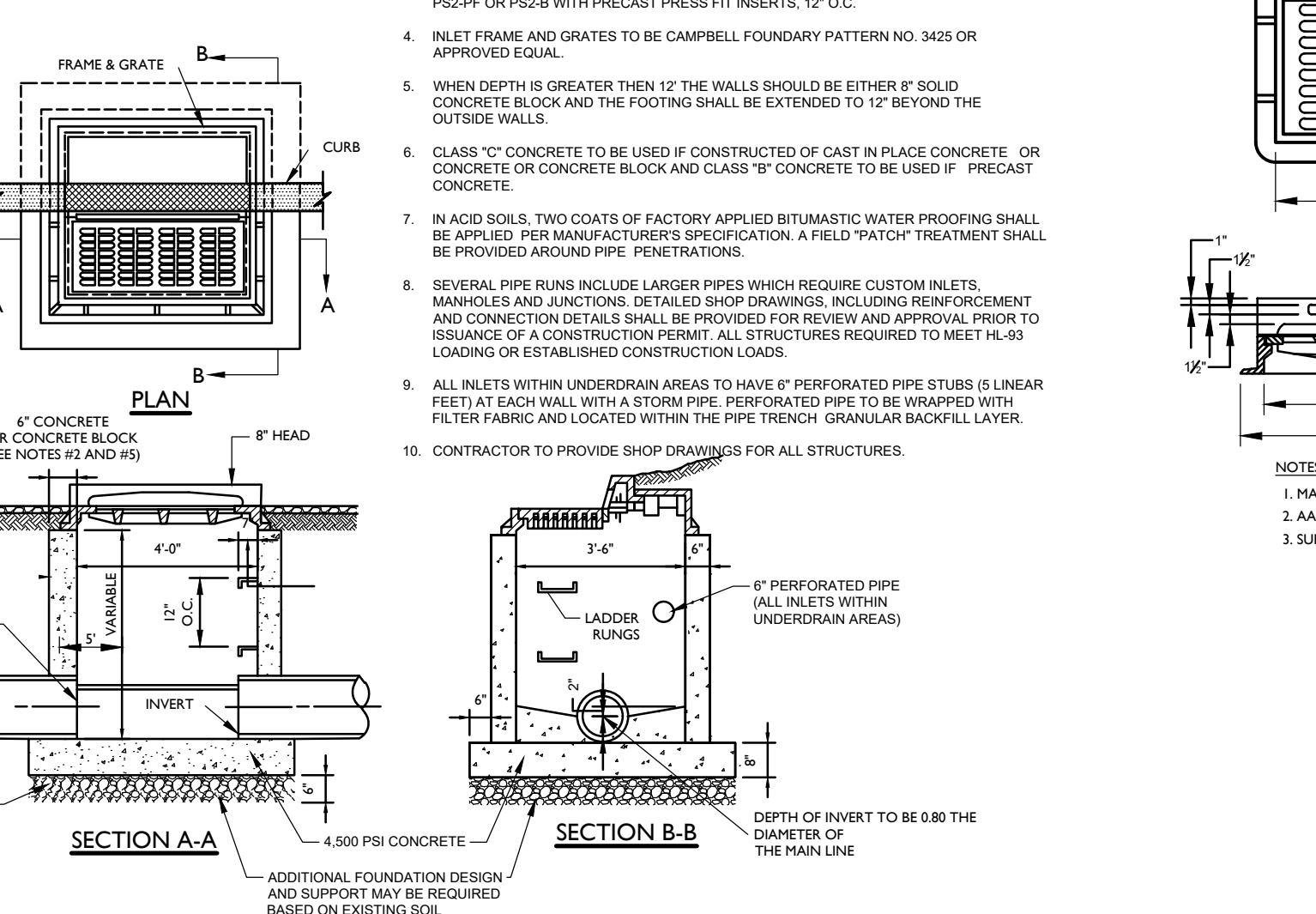
- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 - INLETS MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE. & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1/2" CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK & POINTED.
 - PROVIDE 1/2" DIA. X 1/4" ALUMINUM LASSER RINGS, 12" O.C. OR COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REIN. MA. INDUSTRIES P20-F OR P20-B WITH PRECAST PRESS FIT INSERTS, 12" O.C.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NO. 3425 OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THAN 12" THE WALLS SHOULD BE EITHER "SOLID" CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
 - CLASS "C" CONCRETE TO BE USED IF CONSTRUCTED OF CAST IN PLACE CONCRETE. OR CONCRETE OR CONCRETE BLOCK AND CLASS "B" CONCRETE TO BE USED IF PRECAST CONCRETE.
 - IN ACID SOILS, TWO COATS OF FACTORY APPLIED BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION. A FIELD "PATCH" TREATMENT SHALL BE PROVIDED AROUND PIPE PENETRATIONS.
 - SEVERAL PIPE RUNS INCLUDE LARGER PIPES WHICH REQUIRE CUSTOM INLETS, MANHOLES AND JUNCTIONS. DETAILED SHOP DRAWINGS, INCLUDING REINFORCEMENT AND CONNECTION DETAILS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A CONSTRUCTION PERMIT. ALL STRUCTURES REQUIRED TO MEET HL-93 LOADING OR ESTABLISHED CONSTRUCTION LOADS.
 - ALL INLETS WITH UNDERDRAIN AREAS TO HAVE 6" PERFORATED PIPE STUBS IN LINEAR FEET AT EACH WALL WITH A STORM PIPE, PERFORATED PIPE TO BE WRAPPED WITH FILTER FABRIC AND LOCATED WITHIN THE PIPE TRENCH GRANULAR BACKFILL LAYER.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL STRUCTURES.



- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 - INLETS MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE. & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1/2" CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK & POINTED.
 - PROVIDE 1/2" DIA. X 1/4" ALUMINUM LASSER RINGS, 12" O.C. OR COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REIN. MA. INDUSTRIES P20-F OR P20-B WITH PRECAST PRESS FIT INSERTS, 12" O.C.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NO. 3425 OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THAN 12" THE WALLS SHOULD BE EITHER "SOLID" CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
 - CLASS "C" CONCRETE TO BE USED IF CONSTRUCTED OF CAST IN PLACE CONCRETE. OR CONCRETE OR CONCRETE BLOCK AND CLASS "B" CONCRETE TO BE USED IF PRECAST CONCRETE.
 - IN ACID SOILS, TWO COATS OF FACTORY APPLIED BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION. A FIELD "PATCH" TREATMENT SHALL BE PROVIDED AROUND PIPE PENETRATIONS.
 - SEVERAL PIPE RUNS INCLUDE LARGER PIPES WHICH REQUIRE CUSTOM INLETS, MANHOLES AND JUNCTIONS. DETAILED SHOP DRAWINGS, INCLUDING REINFORCEMENT AND CONNECTION DETAILS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A CONSTRUCTION PERMIT. ALL STRUCTURES REQUIRED TO MEET HL-93 LOADING OR ESTABLISHED CONSTRUCTION LOADS.
 - ALL INLETS WITH UNDERDRAIN AREAS TO HAVE 6" PERFORATED PIPE STUBS IN LINEAR FEET AT EACH WALL WITH A STORM PIPE, PERFORATED PIPE TO BE WRAPPED WITH FILTER FABRIC AND LOCATED WITHIN THE PIPE TRENCH GRANULAR BACKFILL LAYER.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL STRUCTURES.



- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 - INLETS MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE. & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1/2" CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK & POINTED.
 - PROVIDE 1/2" DIA. X 1/4" ALUMINUM LASSER RINGS, 12" O.C. OR COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REIN. MA. INDUSTRIES P20-F OR P20-B WITH PRECAST PRESS FIT INSERTS, 12" O.C.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NO. 3425 OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THAN 12" THE WALLS SHOULD BE EITHER "SOLID" CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
 - CLASS "C" CONCRETE TO BE USED IF CONSTRUCTED OF CAST IN PLACE CONCRETE. OR CONCRETE OR CONCRETE BLOCK AND CLASS "B" CONCRETE TO BE USED IF PRECAST CONCRETE.
 - IN ACID SOILS, TWO COATS OF FACTORY APPLIED BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION. A FIELD "PATCH" TREATMENT SHALL BE PROVIDED AROUND PIPE PENETRATIONS.
 - SEVERAL PIPE RUNS INCLUDE LARGER PIPES WHICH REQUIRE CUSTOM INLETS, MANHOLES AND JUNCTIONS. DETAILED SHOP DRAWINGS, INCLUDING REINFORCEMENT AND CONNECTION DETAILS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A CONSTRUCTION PERMIT. ALL STRUCTURES REQUIRED TO MEET HL-93 LOADING OR ESTABLISHED CONSTRUCTION LOADS.
 - ALL INLETS WITH UNDERDRAIN AREAS TO HAVE 6" PERFORATED PIPE STUBS IN LINEAR FEET AT EACH WALL WITH A STORM PIPE, PERFORATED PIPE TO BE WRAPPED WITH FILTER FABRIC AND LOCATED WITHIN THE PIPE TRENCH GRANULAR BACKFILL LAYER.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL STRUCTURES.



- NOTES:**
- INVERTS TO BE ELIMINATED IN BOTTOM OF TERMINAL INLETS. BOTTOMS SHALL BE DISHED AND SLOPED TOWARDS THE OUTLET PIPE AT A RATE OF GRADE OF 2 INCHES PER FOOT.
 - INLETS MAY BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. IF CONCRETE BLOCK IS USED, THE BOTTOM SHALL BE AS SHOWN FOR CONCRETE. & THE OUTSIDE OF THE WALLS SHALL BE PLASTERED WITH 1/2" COAT OF 1/2" CEMENT SAND MORTAR. THE INSIDE WALLS JOINTS SHALL BE STRUCK & POINTED.
 - PROVIDE 1/2" DIA. X 1/4" ALUMINUM LASSER RINGS, 12" O.C. OR COPOLYMER POLYPROPYLENE PLASTIC STEPS WITH 1/2" DIA. GRADE 60 STEEL REIN. MA. INDUSTRIES P20-F OR P20-B WITH PRECAST PRESS FIT INSERTS, 12" O.C.
 - INLET FRAME AND GRATES TO BE CAMPBELL FOUNDRY PATTERN NO. 3425 OR APPROVED EQUAL.
 - WHEN DEPTH IS GREATER THAN 12" THE WALLS SHOULD BE EITHER "SOLID" CONCRETE BLOCK AND THE FOOTING SHALL BE EXTENDED TO 12" BEYOND THE OUTSIDE WALLS.
 - CLASS "C" CONCRETE TO BE USED IF CONSTRUCTED OF CAST IN PLACE CONCRETE. OR CONCRETE OR CONCRETE BLOCK AND CLASS "B" CONCRETE TO BE USED IF PRECAST CONCRETE.
 - IN ACID SOILS, TWO COATS OF FACTORY APPLIED BITUMASTIC WATER PROOFING SHALL BE APPLIED PER MANUFACTURER'S SPECIFICATION. A FIELD "PATCH" TREATMENT SHALL BE PROVIDED AROUND PIPE PENETRATIONS.
 - SEVERAL PIPE RUNS INCLUDE LARGER PIPES WHICH REQUIRE CUSTOM INLETS, MANHOLES AND JUNCTIONS. DETAILED SHOP DRAWINGS, INCLUDING REINFORCEMENT AND CONNECTION DETAILS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A CONSTRUCTION PERMIT. ALL STRUCTURES REQUIRED TO MEET HL-93 LOADING OR ESTABLISHED CONSTRUCTION LOADS.
 - ALL INLETS WITH UNDERDRAIN AREAS TO HAVE 6" PERFORATED PIPE STUBS IN LINEAR FEET AT EACH WALL WITH A STORM PIPE, PERFORATED PIPE TO BE WRAPPED WITH FILTER FABRIC AND LOCATED WITHIN THE PIPE TRENCH GRANULAR BACKFILL LAYER.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL STRUCTURES.

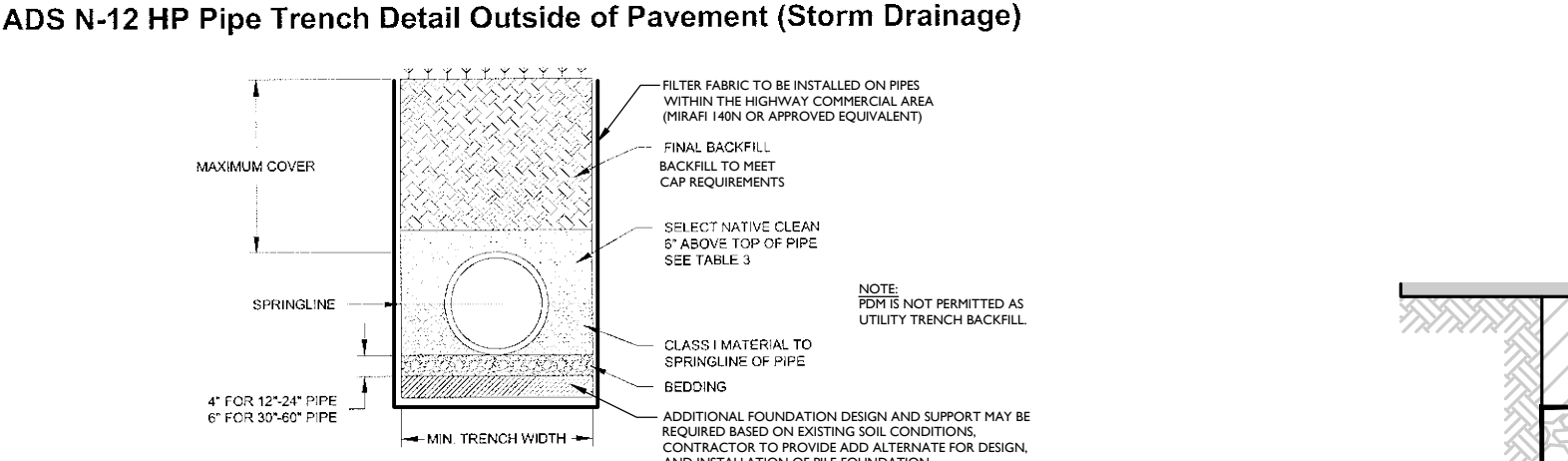
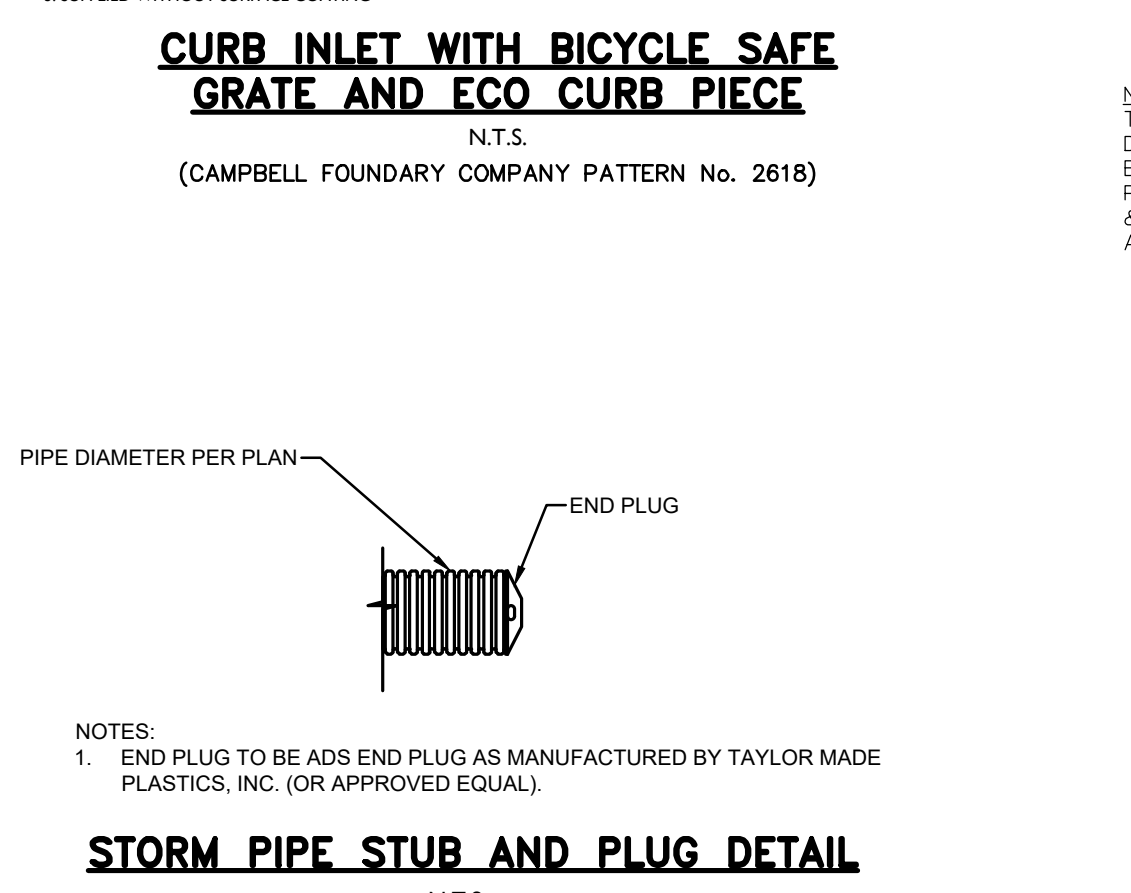
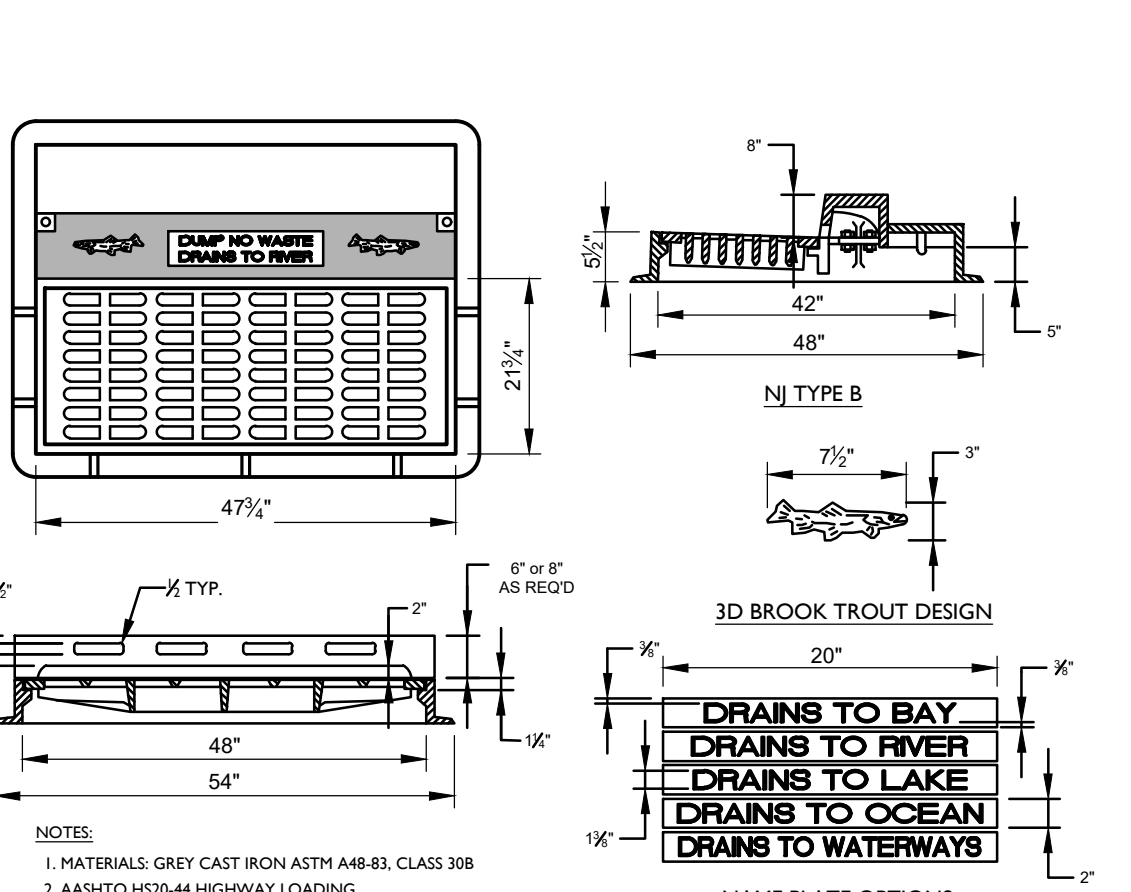
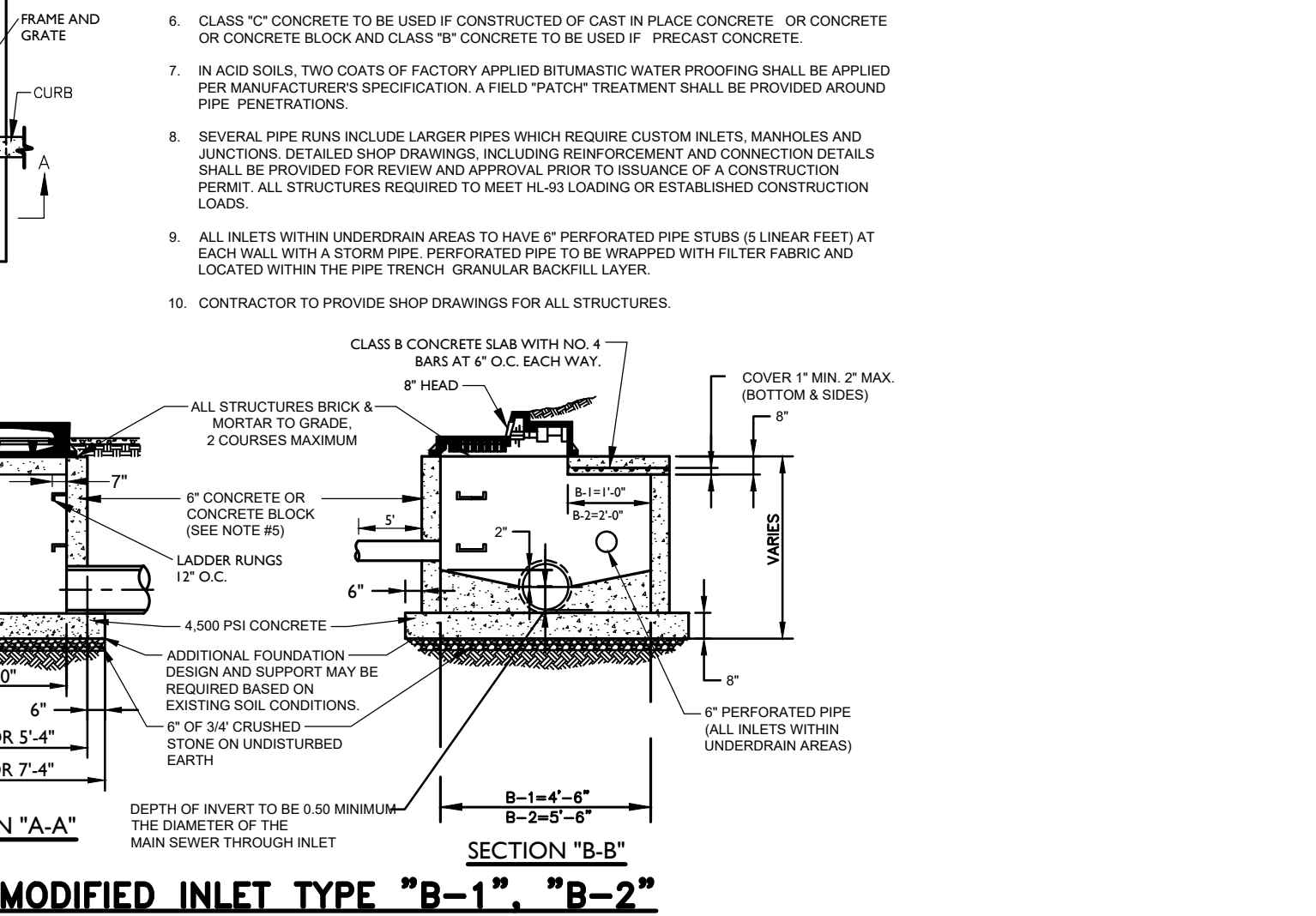
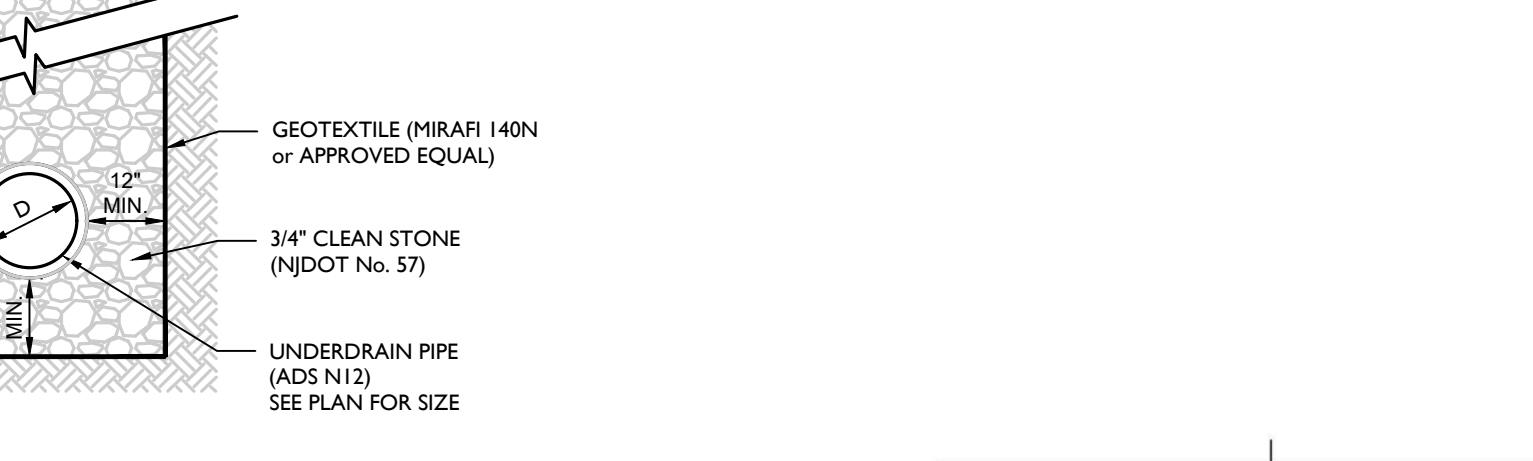
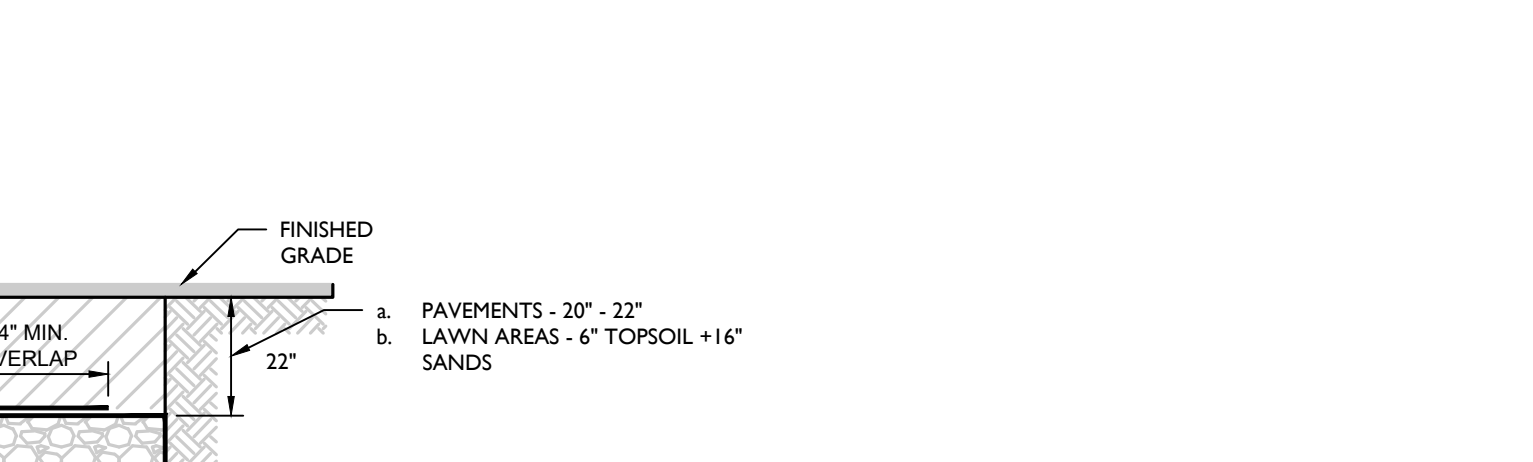
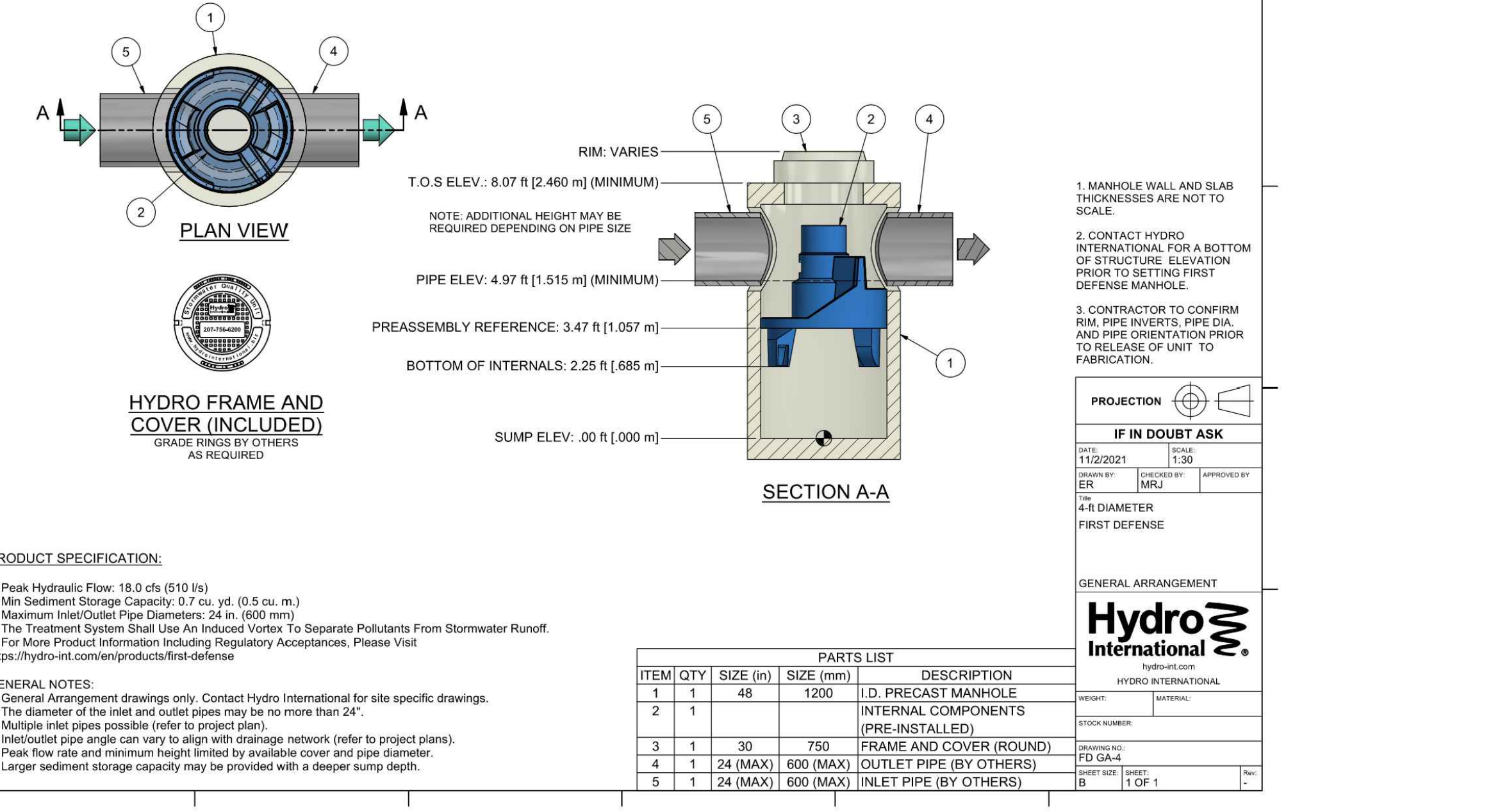
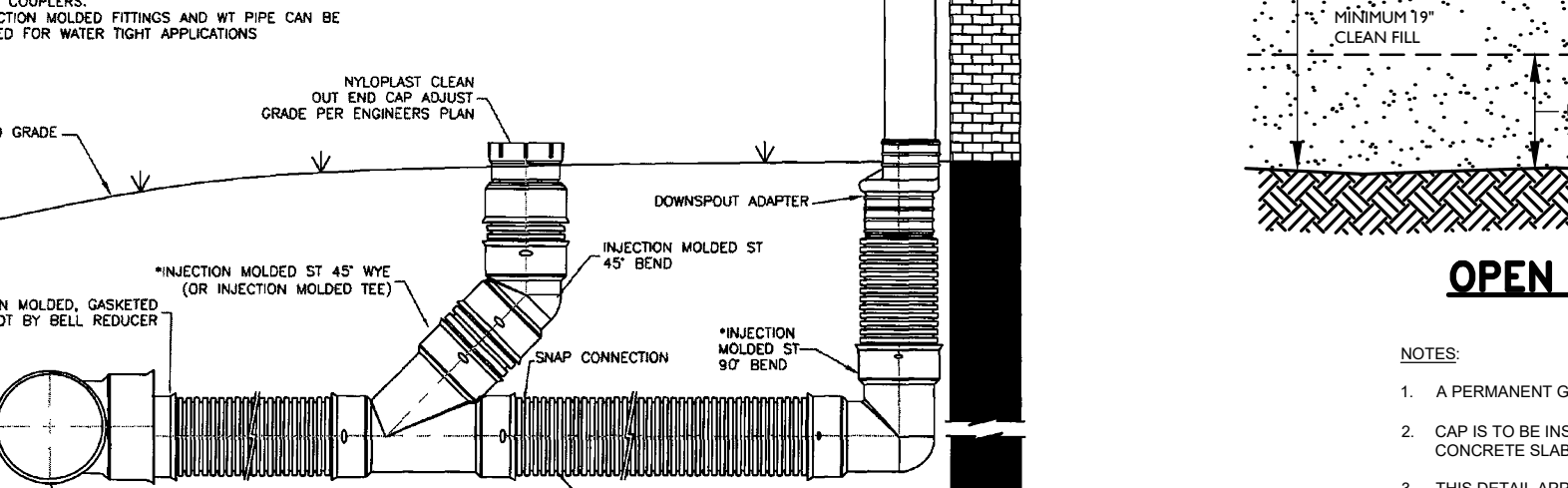
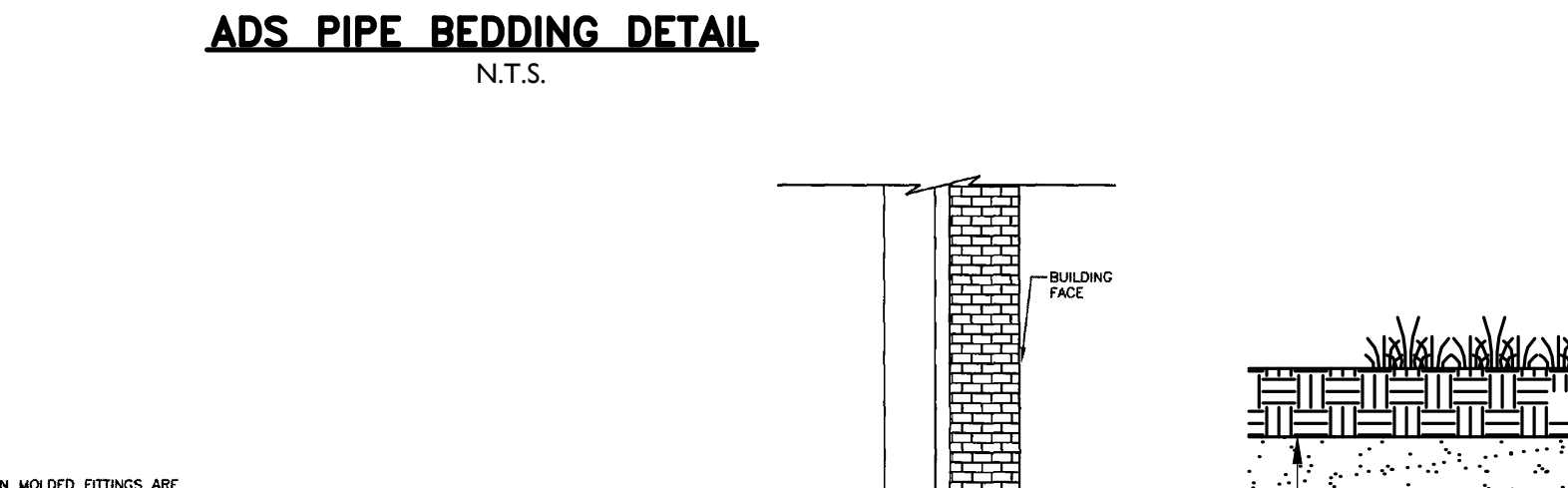


Table 3
Maximum Cover for ADS N-12 HP Pipe (Outside of Pavement) for Storm Drainage, ft (m)

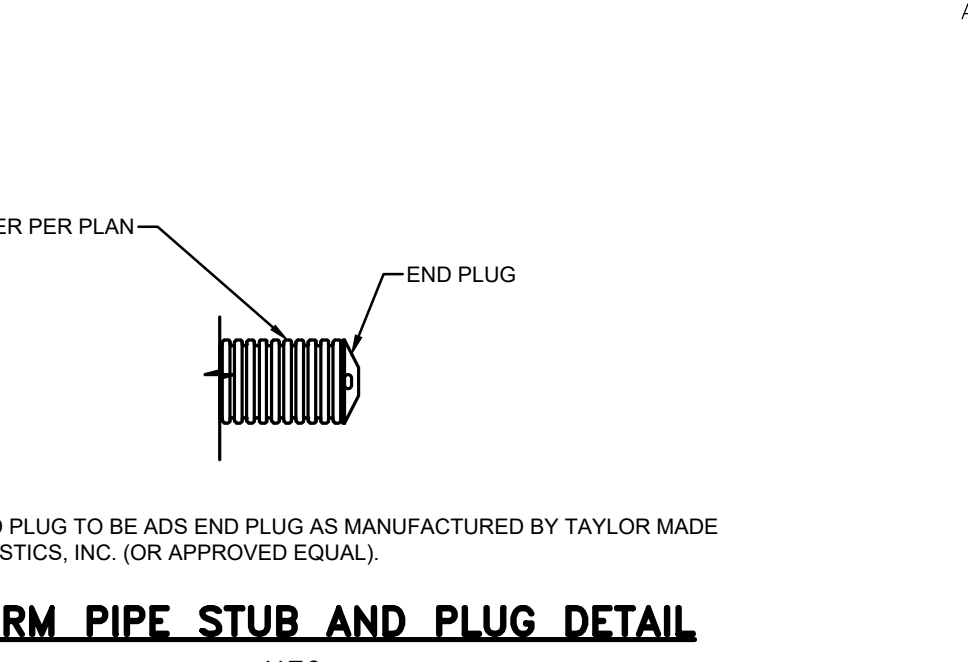
Diameter (in (mm))	Class 2	Class 3	Class 4
12 (305)	17 (5.2)	14 (4.3)	11 (3.3)
15 (375)	17 (5.2)	14 (4.3)	10 (3.0)
18 (450)	16 (4.9)	13 (4.0)	10 (3.0)
24 (600)	14 (4.3)	12 (3.7)	9 (2.7)
30 (750)	13 (4.0)	12 (3.7)	8 (2.4)
36 (900)	11 (3.4)	12 (3.7)	7 (2.1)
48 (1200)	11 (3.4)	10 (3.0)	6 (1.8)
60 (1500)	11 (3.4)	10 (3.0)	6 (1.8)



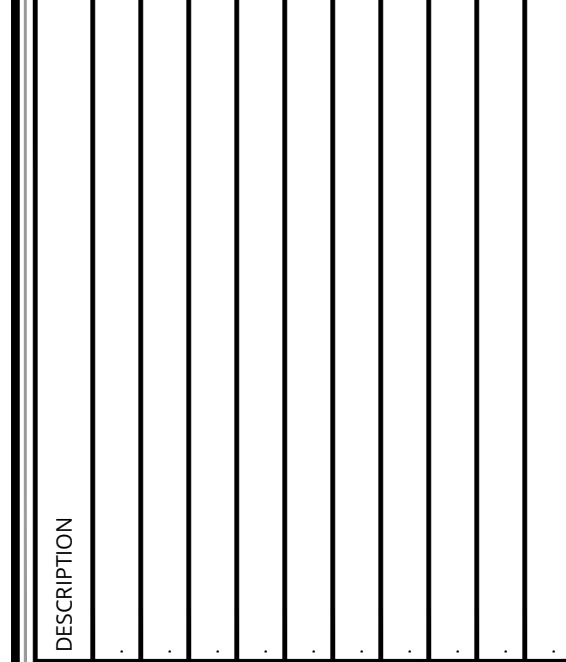
- Notes:**
- Results based on calculations shown in the Structures section of the ADS Drainage Handbook. Calculations assume a soil density of 120 pcf (1926 kg/m³) for overburden material.
 - Backfill materials and compaction levels not shown in this table may also be acceptable. Contact ADS for further detail.
 - Class 1 material used below springline must be adequately "infit" into haunch and in between corrugations.
 - Compaction levels shown are for standard Proctor density.
 - For projects where cover exceeds the maximum values listed above, contact ADS for specific design considerations.
 - Calculations assume no hydrostatic pressure. Hydrostatic pressure will result in a reduction in allowable fill height. Reduction in allowable fill height must be assessed by the design engineer for the specific field conditions.
 - ALL UTILITY BACKFILL SHALL BE WELL GRADED SANDS AND GRAVELS TO BE COMPACTED TO 95% MODIFIED PROCTOR STD M55.7. (CLAY AND FGM BACKFILL ARE NOT ACCEPTABLE)



CURB INLET WITH BICYCLE SAFE GRATE AND ECO CURB PIECE
N.T.S.
(CAMPBELL FOUNDRY COMPANY PATTERN No. 2618)



TRENCH FRAME AND GRATE
N.T.S.



REV	DATE	DESCRIPTION	DRAWN BY	DESCRIPTION
1	10/2023	UPDATE PAVING TABLES	RM	
2	1/2024	REVISIONS FOR PAVING BOARD SUBMISSION	RM/AVC	

Daniel W. Busch
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE42093
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.#: 2642796609

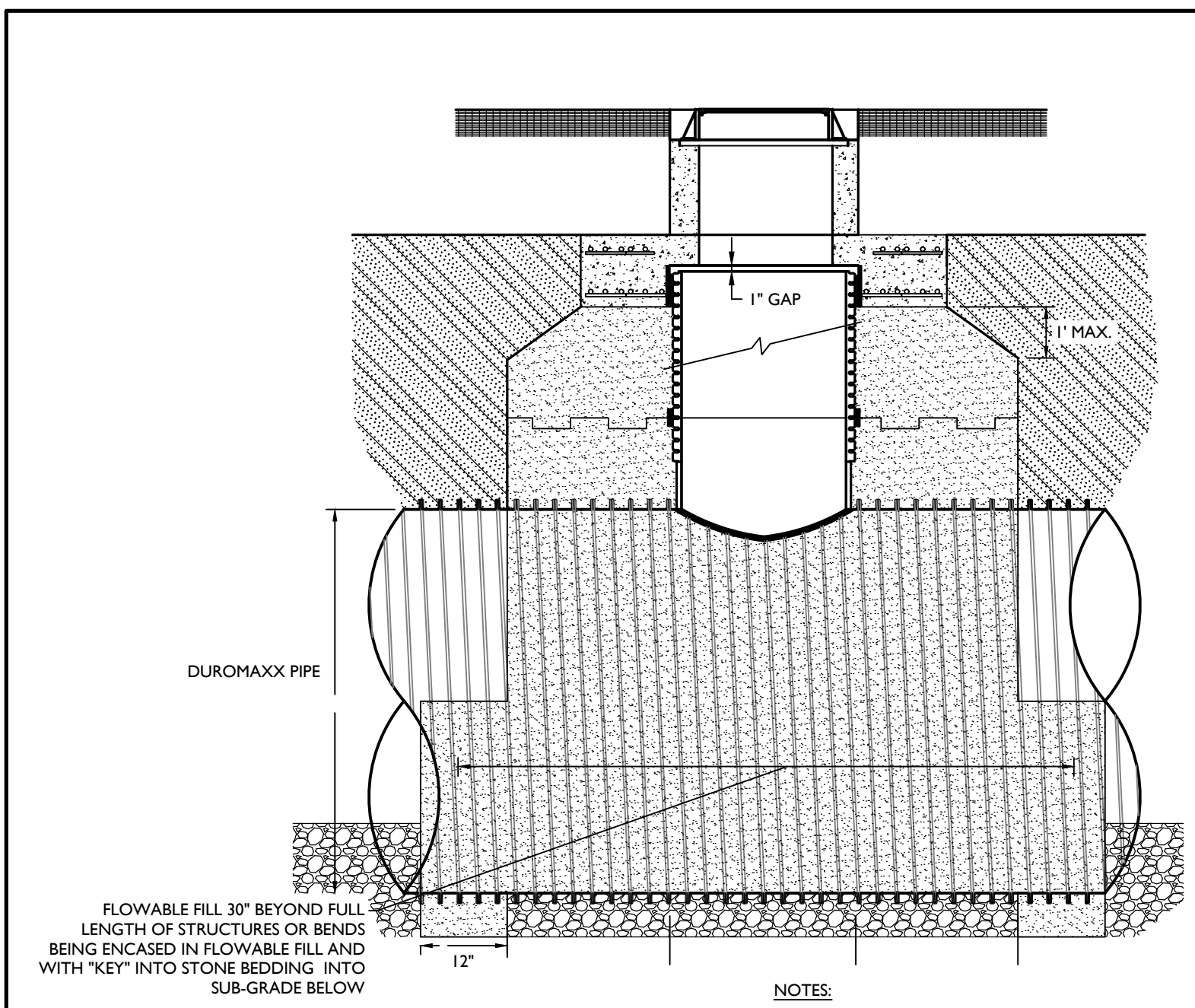
PHASE 1A GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

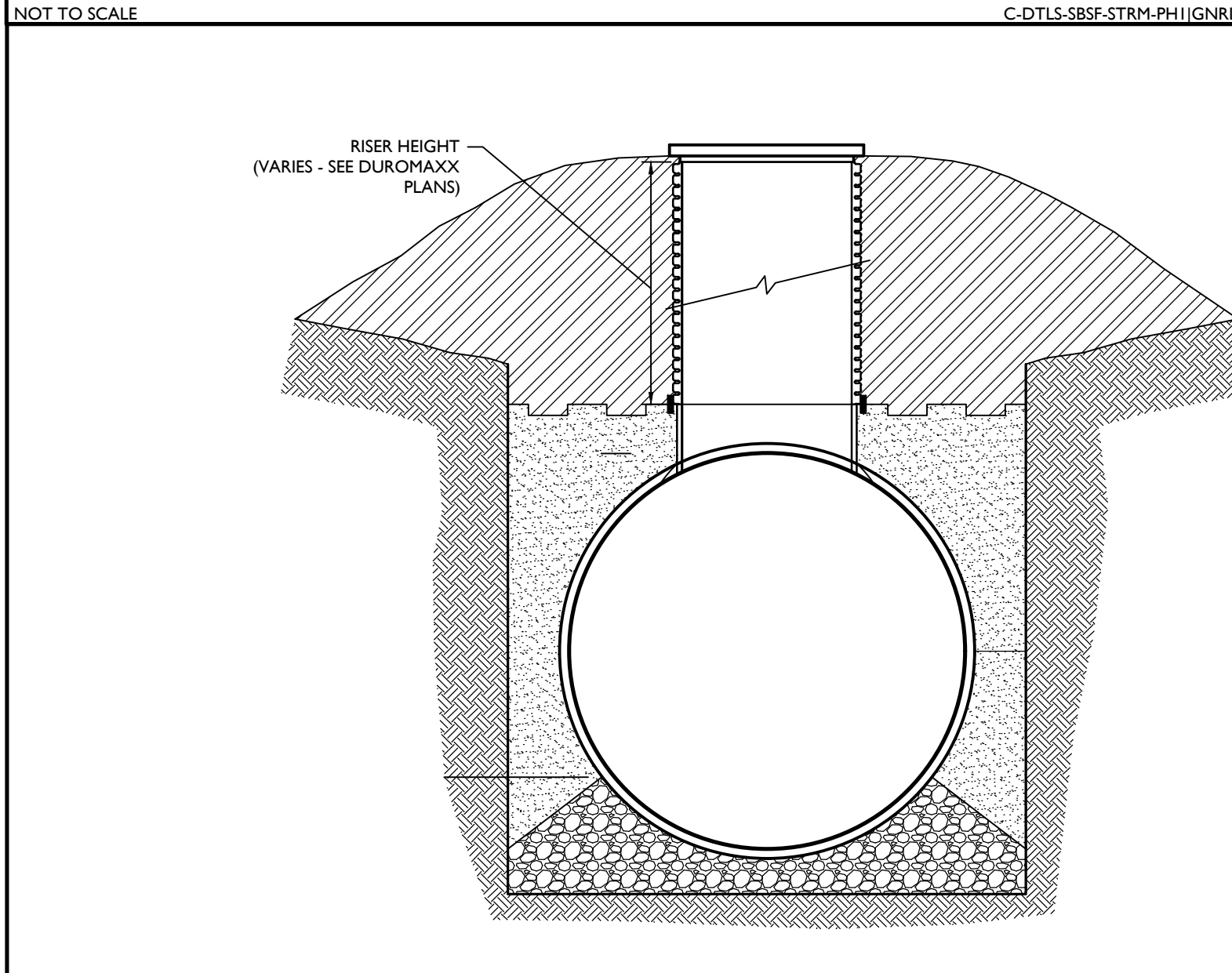
BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers
Engineering & Design

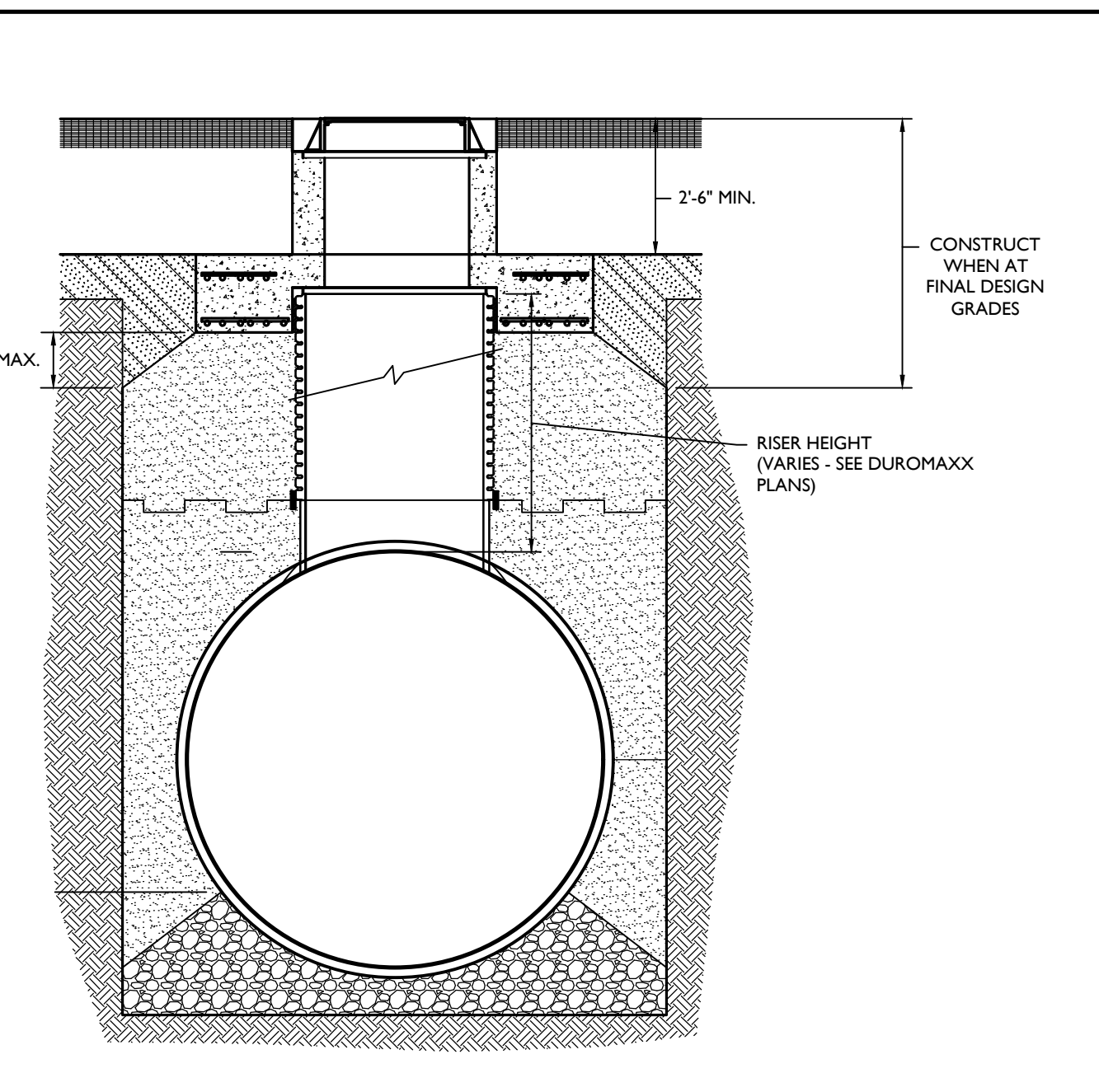
HOLMDEL (Headquarters)
331 Newnam Springs Road,
Suite 203
Red Bank, NJ 07071
Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC.
DOUGLASSVILLE, GA 30036



DUROMAXX ACCESS RISER INSTALLATION DETAIL
 C-DT15-SBSF-STRM-PH1(IGNRL-DT15-STND-GRID) 6/520



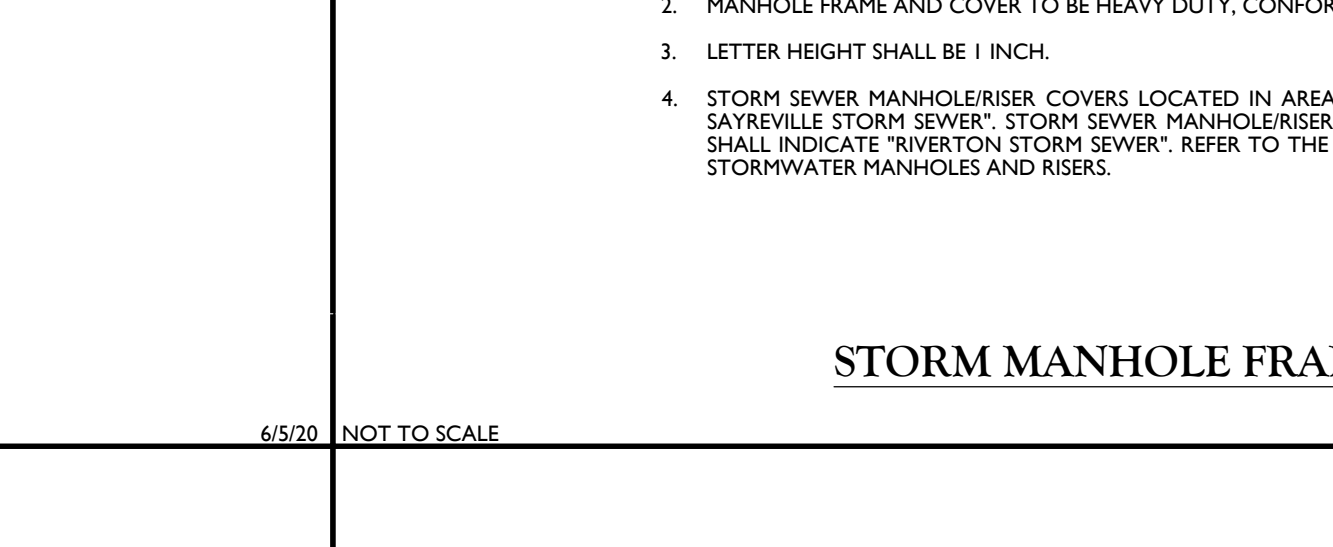
TEMPORARY FILL DETAIL AT RISERS
 C-DT15-SBSF-STRM-PH1(IGNRL-DT15-STND-GRID) 6/520



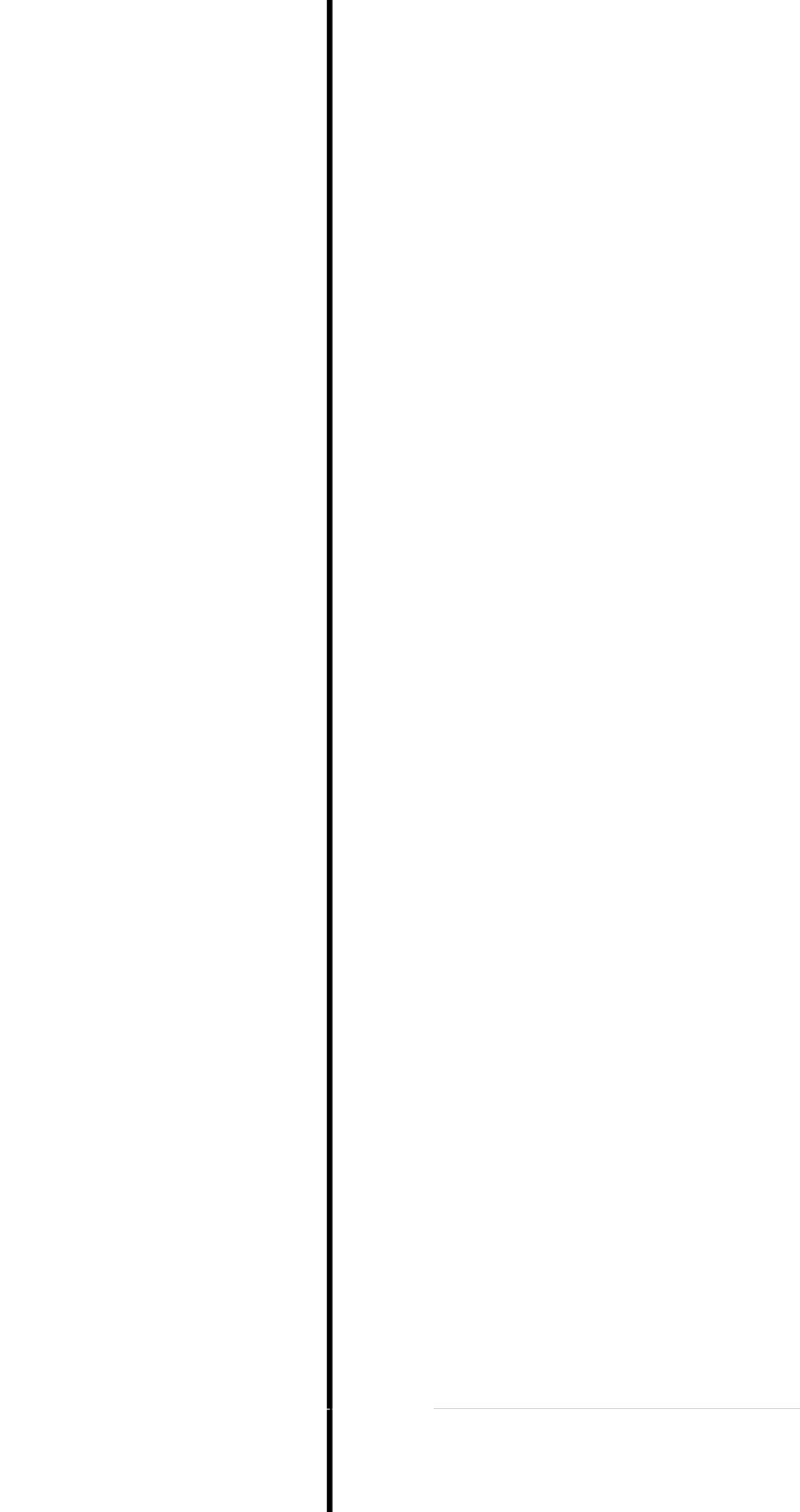
CONSTRUCTION HAUL ROAD DETAIL (OVER PIPE)
 C-DT15-SBSF-STRM-PH1(IGNRL-DT15-STND-GRID) 6/520

CONSTRUCTION NOTES

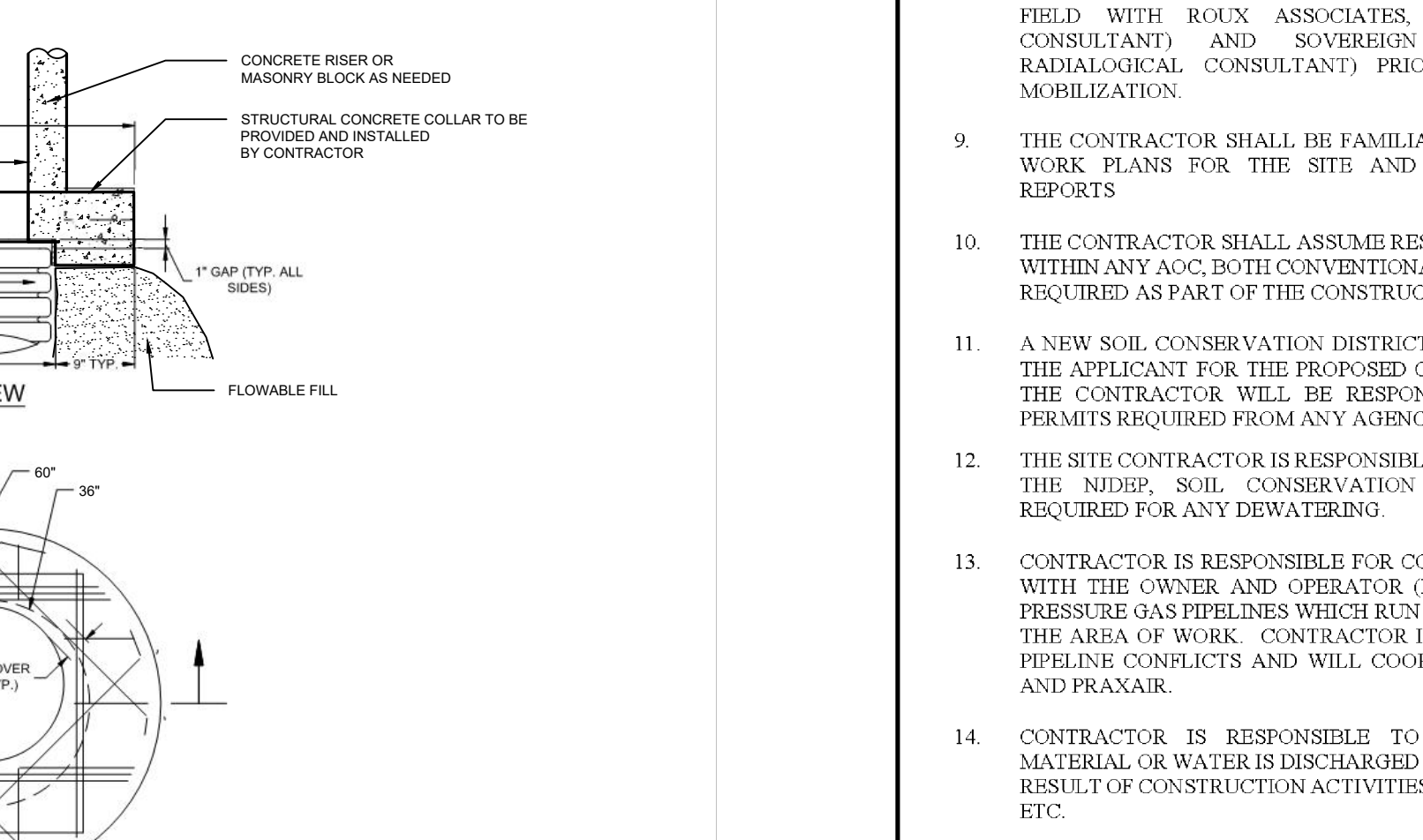
- THESE CONSTRUCTION PLANS ARE FOR FINAL CONSTRUCTION OF THE DUROMAXX PIPE STORM WATER COLLECTOR. ADDITIONAL ADS PIPE EXTENSIONS WILL ALSO BE CONSTRUCTED WHERE INDICATED. THIS INCLUDES DEWATERING, BRACED EXCAVATIONS, MATERIAL SEGREGATION AND ON-SITE RELOCATION AS NEEDED. PLACEMENT OF STRUCTURAL BACKFILL MATERIALS, TEMPORARY RISER INSTALLATION AND PROTECTION OF PIPE AND RISER SYSTEM AFTER INSTALLATION.
- CONTRACTOR TO PROVIDE A DETAILED CONSTRUCTION SEQUENCE FOR REVIEW AND APPROVAL.
- ALL SIEC MEASURES ARE TO BE MAINTAINED BY THE CONTRACTOR AT ALL TIMES. THIS INCLUDES RELOCATING THE SIEC MEASURES AS PIPE INSTALLATION ADVANCES. SITE REMEDIATION SIEC PLAN DETAILS SHALL APPLY.
- THE CONTRACTOR SHALL INSTALL ALL TEMPORARY SHORING AND BRACING REQUIRED FOR THE INSTALLATION OF THE STORM SEWER LINES INCLUDING PLUMBNESS, STRUCTURAL STABILITY AND SAFETY. BRACING AND SHORING AND SEQUENCES OF SUCH WORK SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HIS/HER LICENSED ENGINEER REGISTERED IN THE STATE OF NEW JERSEY AND ALL SUBMITTALS SHALL BEAR THE ENGINEER'S SEAL AND SIGNATURE.
- A SHOP DRAWING DESIGN SUBMITTAL WILL BE REQUIRED FOR TEMPORARY SUPPORT STRUCTURES AND WILL NEED TO MEET OSHA REQUIREMENTS. THE SHOP DRAWINGS ARE TO BE REVIEWED AND APPROVED BY THE SITE CONSTRUCTION MANAGER. THE TEMPORARY EXCAVATION SUPPORT SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM DESIGN CRITERIA:
 - A. SOIL PARAMETERS:
 EXISTING FILLS:
 SOIL UNIT WEIGHT = 120 PCF
 SOIL FRICTION ANGLE = 28 DEGREES
 POORLY GRADED SANDS & GRAVELS:
 SOIL UNIT WEIGHT = 120 PCF
 SOIL FRICTION ANGLE = 32 DEGREES
 CLAY AND SANDS:
 SOIL UNIT WEIGHT = 120 PCF
 COHESION = 400 PSF
 - B. SURCHARGE LOADS:
 CONTRACTOR SHALL EVALUATE AND DESIGN THE TEMPORARY EXCAVATION SUPPORT FOR SURCHARGE LOADS BASED UPON THEIR MEANS AND METHODS.
- EXCAVATION AND BACKFILL WILL BE STAGED AS PIPE, CHAMBER AND RISER SECTIONS ARE PLACED AND BACKFILLED. DEWATERING REPORT MAY BE REDUCED AS BACKFILL PROCEEDS. CALCULATIONS WILL NEED TO BE PROVIDED TO SUPPORT REDUCED DEWATERING AS BACKFILL PROCEEDS TO ENSURE EXCESSIVE UPLIFT FORCES DO NOT OCCUR ON THE PIPE AND STRUCTURES.
- CONTRACTOR'S SEQUENCE OF CONSTRUCTION SHALL MINIMIZE THE AMOUNT OF DEWATERING REQUIRED. ALL GROUNDWATER GENERATED DURING DEWATERING OPERATIONS SHALL BE PUMPED TO INTERRIAL BELL AND VALLEY OR IN-LINE CASKETS MEETING THE WATER TIGHT JOINT PERFORMANCE REQUIREMENTS OF ASTM D2312.
- MASTER CONSULTING HAS PERFORMED NO ENVIRONMENTAL WORK FOR THIS PROPERTY AND THIS PLAN IS NOT DEPENDING ENVIRONMENTAL CONDITIONS OR A CERTIFICATION/WARRANTY FOR THE ADEQUACY OF THE PROPOSED REMEDIATION TREATMENTS, CONTROLS AND REMEDIES WHICH ARE BEING CONSTRUCTED AREAS OF CONTAMINATION DEPICTED WITHIN THESE PLANS ARE APPROXIMATE AND THE CONTRACTOR SHALL CONFIRM THE EXACT LOCATIONS IN THE FIELD WITH ROCK ASSOCIATES, INC. (SITE ENVIRONMENTAL CONSULTANT) AND SOVEREIGN CONSULTING, INC. (SITE RADIOLIOLOGICAL CONSULTANT) PRIOR TO ANY EXCAVATION OR MOBILIZATION.
- THE CONTRACTOR SHALL BE FAMILIAR WITH THE REMEDIAL ACTION WORK PLANS FOR THE SITE AND APPLICABLE ENVIRONMENTAL REPORTS.
- THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR DISTURBANCE WITHIN ANY AGC, BOTH CONVENTIONAL AND RADIOLOGICAL WHICH IS REQUIRED AS PART OF THE CONSTRUCTION SHOWS HEREON.
- A NEW SOIL CONSERVATION DISTRICT PERMIT WILL BE OBTAINED BY THE APPLICANT FOR THE PROPOSED CONSTRUCTION SHOWN HEREON. THE CONTRACTOR WILL BE RESPONSIBLE TO OBTAIN ALL OTHER PERMITS REQUIRED FROM ANY AGENCY.
- THE SITE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL PERMITS FROM THE NIDOP, SOIL CONSERVATION DISTRICT AND/OR BOROUGH REQUIRED FOR ANY DEWATERING.
- CONTRACTOR IS RESPONSIBLE FOR CONTACTING AND COORDINATING WITH THE OWNER AND OPERATOR (PRAXAIR) OF THE ACTIVE HIGH PRESSURE GAS PIPELINES WHICH RUN THROUGH THE SITE AND WITHIN THE AREA OF WORK. CONTRACTOR IS AWARE OF EXISTING PRAXAIR PIPELINE CONFLICTS AND WILL COORDINATE WITH SITE DEVELOPER AND PRAXAIR.
- CONTRACTOR IS RESPONSIBLE TO ENSURE NO CONTAMINATED MATERIAL OR WATERS DISCHARGED FROM THE SITE, INCLUDING AS A RESULT OF CONSTRUCTION ACTIVITIES, STORM EVENTS, TIDAL EVENTS, ETC.
- THE CONTRACTOR IS RESPONSIBLE FOR PROJECT SAFETY, INCLUDING PROVISION OF ALL APPROPRIATE SAFETY DEVICES AND TRAINING REQUIRED. THE SITE HAS CONTAMINATED RADIOACTIVE MATERIAL AND CONTAMINATED SURFACE AND SUBSURFACE SOIL. SEPARATE HEALTH AND SAFETY PLANS HAVE BEEN PREPARED BY ROCK ASSOCIATES, INC. AND SOVEREIGN CONSULTING, INC. THESE PLANS SHALL BE REVIEWED AND IMPLEMENTED BY THE CONTRACTOR AT ALL TIMES.
- PURSUANT TO THE "ONE CALL" LAW, CONTRACTOR SHALL CALL 1-800-272-1600 OR 811 PRIOR TO ANY EXCAVATION TO REQUEST A MARKOUT OF UNDERGROUND UTILITIES.
- MANY FACTORS WILL AFFECT THE FINAL EARTHWORK RESULTS. THESE FACTORS MAY INCLUDE BUT ARE NOT LIMITED TO, WEATHER CONDITIONS DURING CONSTRUCTION, EARTH MOVING EQUIPMENT USED, EXPERIENCE OF EQUIPMENT OPERATORS AND COMPACTION ACCURACY.
- CONTRACTOR SHALL COORDINATE PROPOSED STAGING AREA CONSTRUCTION AND ANY ACCESS ROAD PREPARATION NEEDS WITH SOVEREIGN DUE TO RADIOLOGICAL AREAS BEING TRAVERSED. CONTRACTOR SHALL INCLUDE COSTS FOR HAUL ROADS AND ADDITIONAL SIEC MEASURES FOR THEIR STAGING AREA. SIEC STAYS ARE TO BE COORDINATED WITH THE SITE ENGINEER AND DEVELOPER.
- THE CONTRACTOR IS TO ANTICIPATE CONSTRUCTING UP TO TWO (2) CONSTRUCTION HAUL ROAD DETAIL (OVER PIPE) METHODS. CONTRACTOR TO COORDINATE LOCATIONS WITH PROJECT DEVELOPER.
- CONTRACTOR TO COORDINATE WITH DUROMAXX AND ADS VENDORS REGARDING THEIR STAYS AND CAP CONNECTION NEEDS. ALL JOINTS ARE TO BE WATER-TIGHT.
- THE STORM MAIN WORK ALONG SOUTH AVENUE SHALL BE COORDINATED WITH THE SANITARY SOWER INSTALLATION FOR CONCURRENT INSTALLATION.



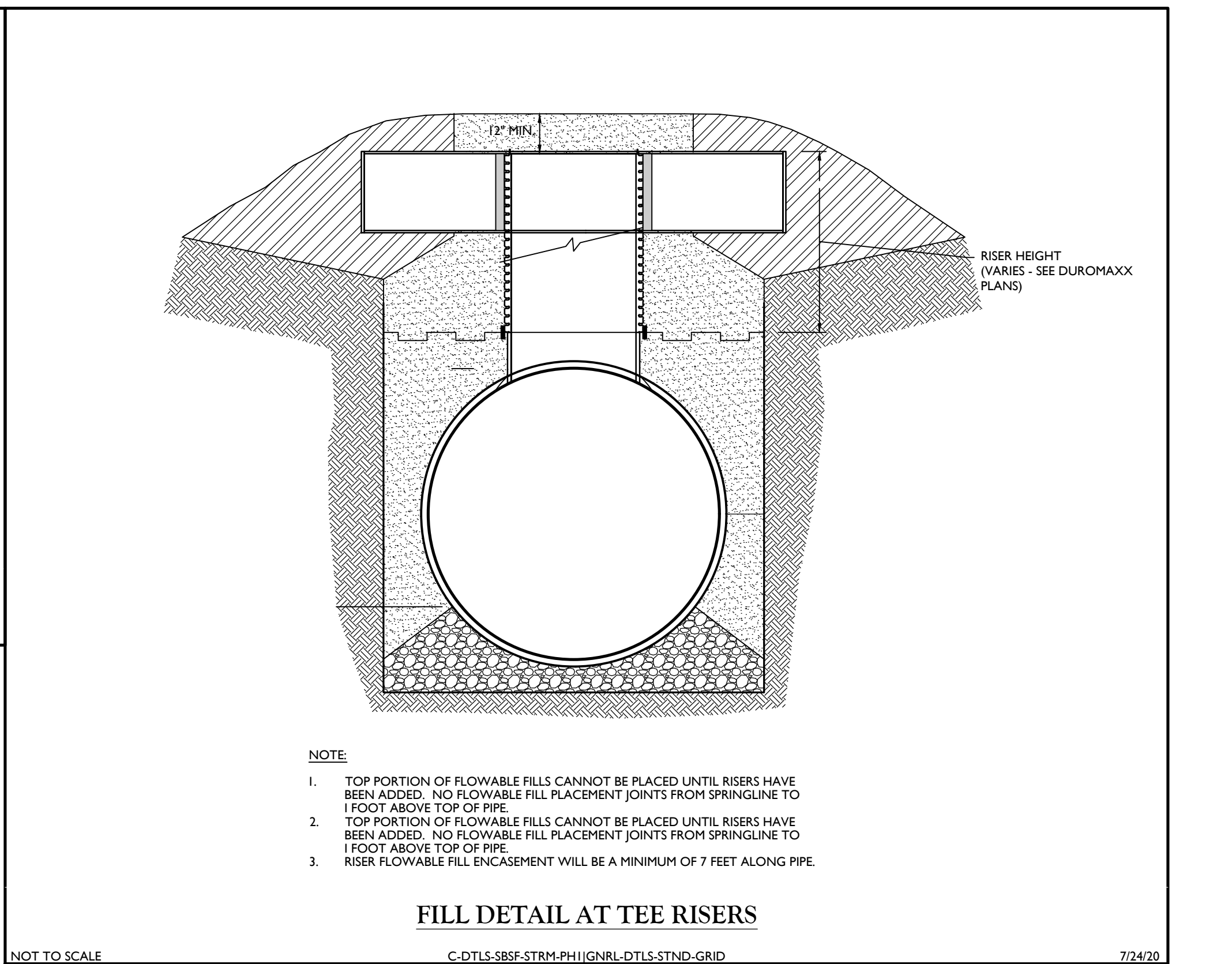
STORM MANHOLE FRAME AND COVER DETAIL
 C-DT15-SBSF-STRM-PH1(IGNRL-DT15-STND-GRID) 6/520



PIPE BACKFILL DETAIL
 C-DT15-SBSF-STRM-PH1(IGNRL-DT15-STND-GRID) 6/520



PRECAST CONCRETE COLLAR DETAIL
 C-DT15-SBSF-STRM-PH1(IGNRL-DT15-STND-GRID) 6/520



FILL DETAIL AT TEE RISERS
 C-DT15-SBSF-STRM-PH1(IGNRL-DT15-STND-GRID) 7/2420

CONSTRUCTION NOTES

- TOP PORTION OF FLOWABLE FILLS CANNOT BE PLACED UNTIL RISERS HAVE BEEN ADDED. NO FLOWABLE FILL PLACEMENT JOINTS FROM SPRINGLINE TO FOOT ABOVE TOP OF PIPE.
- TOP PORTION OF FLOWABLE FILLS CANNOT BE PLACED UNTIL RISERS HAVE BEEN ADDED. NO FLOWABLE FILL PLACEMENT JOINTS FROM SPRINGLINE TO 1 FOOT ABOVE TOP OF PIPE.
- RISER FLOWABLE FILL ENCASEMENT WILL BE A MINIMUM OF 7 FEET ALONG PIPE.

NOTE

- TOP PORTION OF FLOWABLE FILLS CANNOT BE PLACED UNTIL RISERS HAVE BEEN ADDED. NO FLOWABLE FILL PLACEMENT JOINTS FROM SPRINGLINE TO FOOT ABOVE TOP OF PIPE.
- TOP PORTION OF FLOWABLE FILLS CANNOT BE PLACED UNTIL RISERS HAVE BEEN ADDED. NO FLOWABLE FILL PLACEMENT JOINTS FROM SPRINGLINE TO 1 FOOT ABOVE TOP OF PIPE.
- RISER FLOWABLE FILL ENCASEMENT WILL BE A MINIMUM OF 7 FEET ALONG PIPE.

PIPE MATERIAL SPECIFICATIONS

- DUROMAXX PIPING**
 - A. DUROMAXX IS A REINFORCED POLYETHYLENE PIPE WITH A SMOOTH WATERWAY WALL AND EXTERIOR PROFILE THAT IS REINFORCED WITH HIGH STRENGTH GALVANIZED STEEL RIBS. THE CONTINUOUS REINFORCING RIBS ARE COMPLETELY ENCASED WITHIN THE POLYETHYLENE PROFILE. DUROMAXX IS MANUFACTURED USING A HELICAL WINDING PROCESS THAT RESULTS IN A CONTINUOUSLY FIBRILLATED, WELDED CIRCUMFERENTIAL LAP SEAM. THE PIPE PROFILE IS MANUFACTURED USING A HIGH-QUALITY PRESSURE-RATED THERMOPLASTIC MEETING THE REQUIREMENTS OF ASTM F2562 "STANDARD SPECIFICATION FOR STEEL REINFORCED THERMOPLASTIC PIPE AND FITTINGS FOR NON-PRESSURE DRAINAGE AND SEWERAGE" FOR THE PURPOSE OF HYDRAULIC DESIGN. THE RECOMMENDED MANNINGS "N" VALUE SHALL BE 0.012 FOR PIPE DIAMETERS INCLUDED WITHIN THIS SPECIFICATION. PIPE LENGTH & ALL DIMENSIONS SHOWN ARE SUBJECT TO MANUFACTURER'S TOLERANCES OF ±1% ACCORDING TO ASTM F2562.
 - B. VIRBON HIGH DENSITY POLYETHYLENE PRESSURE-RATED RESINS ARE USED TO MANUFACTURE DUROMAXX PIPE. RESINS SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF CRI CLASSIFICATION 45466 C AS DEFINED AND DESCRIBED IN THE LATEST VERSION OF ASTM D3390 "STANDARD SPECIFICATION FOR POLYETHYLENE PLASTIC PIPE AND FITTINGS MATERIALS".
 - C. ALL FITTINGS SHALL BE FABRICATED FROM DR 32.5 HDPE PIPE. FITTINGS WILL BE PREPARED TO JOIN WITH ADS PIPE MATERIALS TO ENSURE WATER TIGHT JOINT PERFORMANCE OF ASTM D3212.
 - D. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL QUESTIONS ABOUT INSTALLATION ARE ADDRESSED PRIOR TO INSTALLATION.
- ADS PIPING**
 - A. ADS PIPING IS MANUFACTURED IN ACCORDANCE WITH ASTM F2881 OR AASHTO M330 FOR PIPES UP TO 60 INCHES IN DIAMETER FOR THE PURPOSE OF HYDRAULIC DESIGN. THE RECOMMENDED MANNINGS "N" VALUE SHALL BE 0.012 FOR PIPE DIAMETERS INCLUDED WITHIN THIS SPECIFICATION.
 - B. FITTINGS SHALL CONFORM TO ASTM F2881 OR AASHTO M330 BELL AND SPOOT CONNECTIONS SHALL UTILIZE A WELDED OR INTERRIAL BELL AND VALLEY OR IN-LINE CASKETS MEETING THE WATER TIGHT JOINT PERFORMANCE REQUIREMENTS OF ASTM D2312.
 - C. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321 AND ADS RECOMMENDED INSTALLATION GUIDELINES FOR UP TO 60-INCH DIAMETER THE MINIMUM COVER SHALL BE 3 FT IN SINGLE RUN APPLICATIONS. BACKFILL FOR MINIMUM COVER SITUATIONS SHALL CONSIST OF GRANULAR FILL MATERIALS APPROVED BY THE ENGINEER.

MATERIAL SPECIFICATIONS

- GRANULAR FILLS

THESE MATERIALS SHALL BE WELL GRADED AND MEET THE FOLLOWING PARTICLE SIZE DISTRIBUTION:

U.S. STANDARD SIEVE SIZE	PERCENT FINER BY WEIGHT
2"	100
1"	85-100
3/8"	70-100
No. 10	50-100
No. 20	30-85
No. 60	15-65
No. 200	5-20

SOIL PLASTICITY IS ACCEPTABLE BUT SHOULD BE LESS THAN 6 PERCENT.

- DENSE GRADED AGGREGATES (D.G.A.)
 WHERE NEEDED, THESE MATERIALS SHALL MEET THE REQUIREMENTS PRESENTED IN THE NIDOP STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. 2007 (LATEST EDITION) RECYCLED CONCRETE AGGREGATES (R.C.A.) MAY ALSO BE ACCEPTABLE DEPENDING UPON WHERE THEY ARE TO BE USED.
- DRAINAGE PIPE BEDDING LAYER.
 THESE MATERIALS SHALL MEET THE FOLLOWING PARTICLE SIZE DISTRIBUTION FOR NIDOP NO. 57 STONE (3/4" CLEAN STONE):

U.S. STANDARD SIEVE SIZE	PERCENT FINER BY WEIGHT
1-1/2"	100
1"	95-100
1/2"	25-60
No. 4	0-10
No. 8	0-5

ALTERNATE MATERIAL GRADATIONS MAY BE SUBMITTED FOR ENGINEER APPROVAL. ALL MATERIAL SUBMISSIONS FOR IMPORT SHALL BE WELL GRADED, 100 PERCENT PASSING THE 2" U.S. SIEVE SIZE AND SHALL HAVE NO MORE THAN 20 PERCENT NON-PLASTIC FINES.

SHOP DRAWINGS

- ALL DESIGN SUBMITTALS PREPARED BY MANUFACTURER AND CONTRACTOR'S ENGINEER SHALL BE REVIEWED BY THE SITE DESIGN ENGINEER OF RECORD IN ADDITION TO THE BOROUGH ENGINEER. THIS INCLUDES DUROMAXX PIPE, RISER, CHAMBER DETAILS, AND ADS PIPING.
- THE PRECAST STRUCTURAL CONCRETE COLLARS ARE TO BE DESIGNED BY A CERTIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY FOR THE CONTRACTOR. A SHOP DRAWING SUBMITTAL, CALCULATIONS AND APPROVAL WILL BE REQUIRED. ALL DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A CERTIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NEW JERSEY.
- STAGING AREA PLAN FOR REVIEW OF HAUL ROAD ACCESS NEEDS AND ADDITIONAL SIEC MEASURES REQUIRED, IF ANY.
- VIBRATION AND SETTLEMENT MONITORING PLAN SHALL BE PROVIDED IF SHEET PILE OR PILE INSTALLATION IS PROPOSED TO MONITOR NEARBY STRUCTURES AND PRAXAIR LINES. VIBRATION MONITORING PLAN SHALL BE PREPARED FOR ANY WORK WITHIN 50 FEET OF THE PRAXAIR LINES.

Colliers
 Engineering & Design
 www.colliersengineering.com
 Copyright © 2023. Colliers Engineering is a registered professional engineering firm. The design and all the information contained herein is authorized for use only by the party for whom the services were rendered or to whom it was specifically intended. No part of this drawing may be copied, revised, distorted, distributed or relied upon by any other person without the express written consent of Colliers Engineering & Design.

Doing Business as MASER
811
 Know what's below.
 Call before you dig.
 FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

DATE	DESCRIPTION

DATE	DESCRIPTION

Daniel W. Busch
 NEW JERSEY LICENSED PROFESSIONAL ENGINEER
 LICENSE NUMBER: 6642093
 COLLIER ENGINEERING & DESIGN, INC.
 N.J. C.E.A. # 2643779650

PHASE I
 GATEWAY SERVICES DISTRICT
 AMENDED SITE PLAN FOR
SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
 BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE
 MIDDLESEX COUNTY
 NEW JERSEY

Colliers
 Engineering & Design
 #

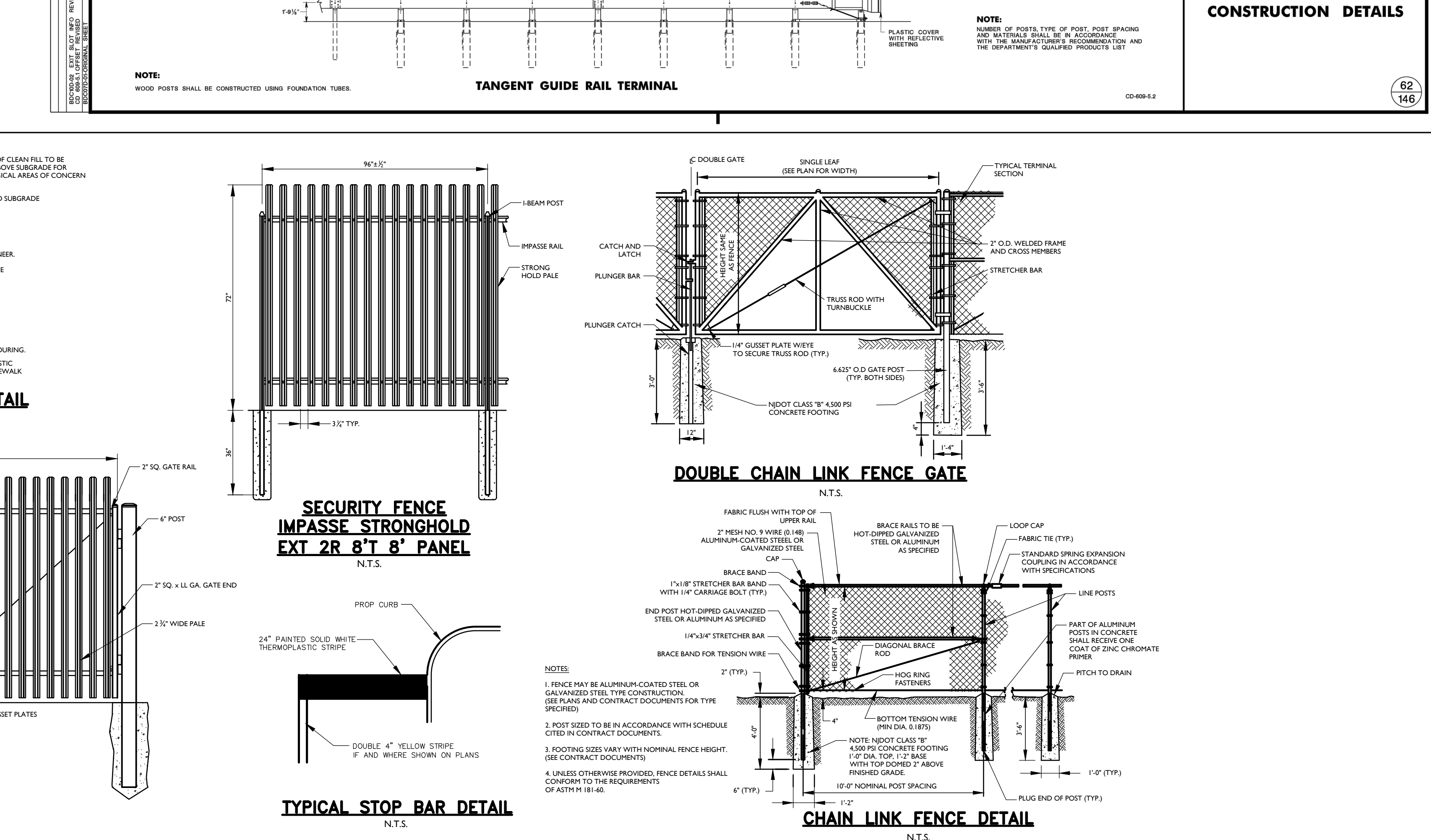
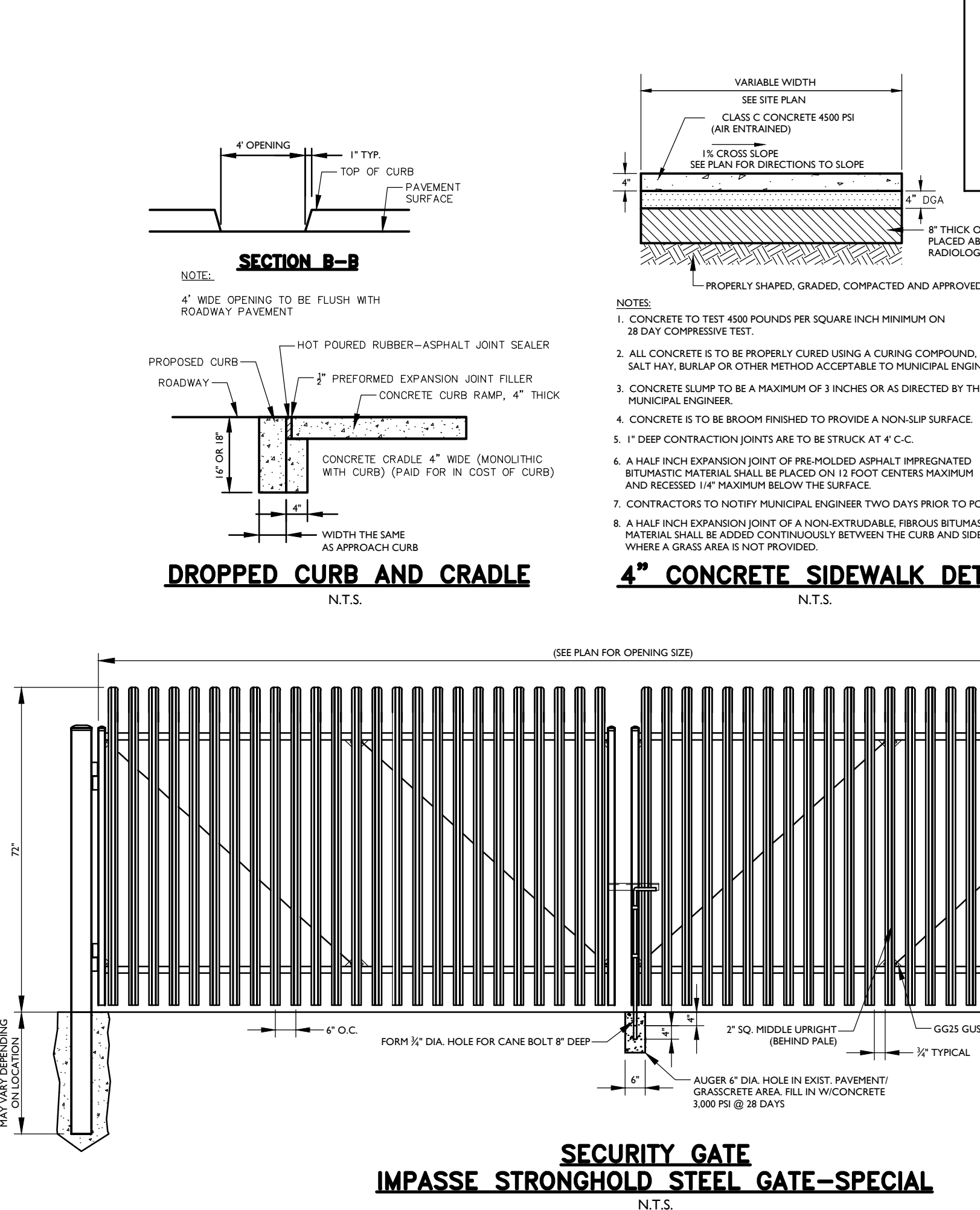
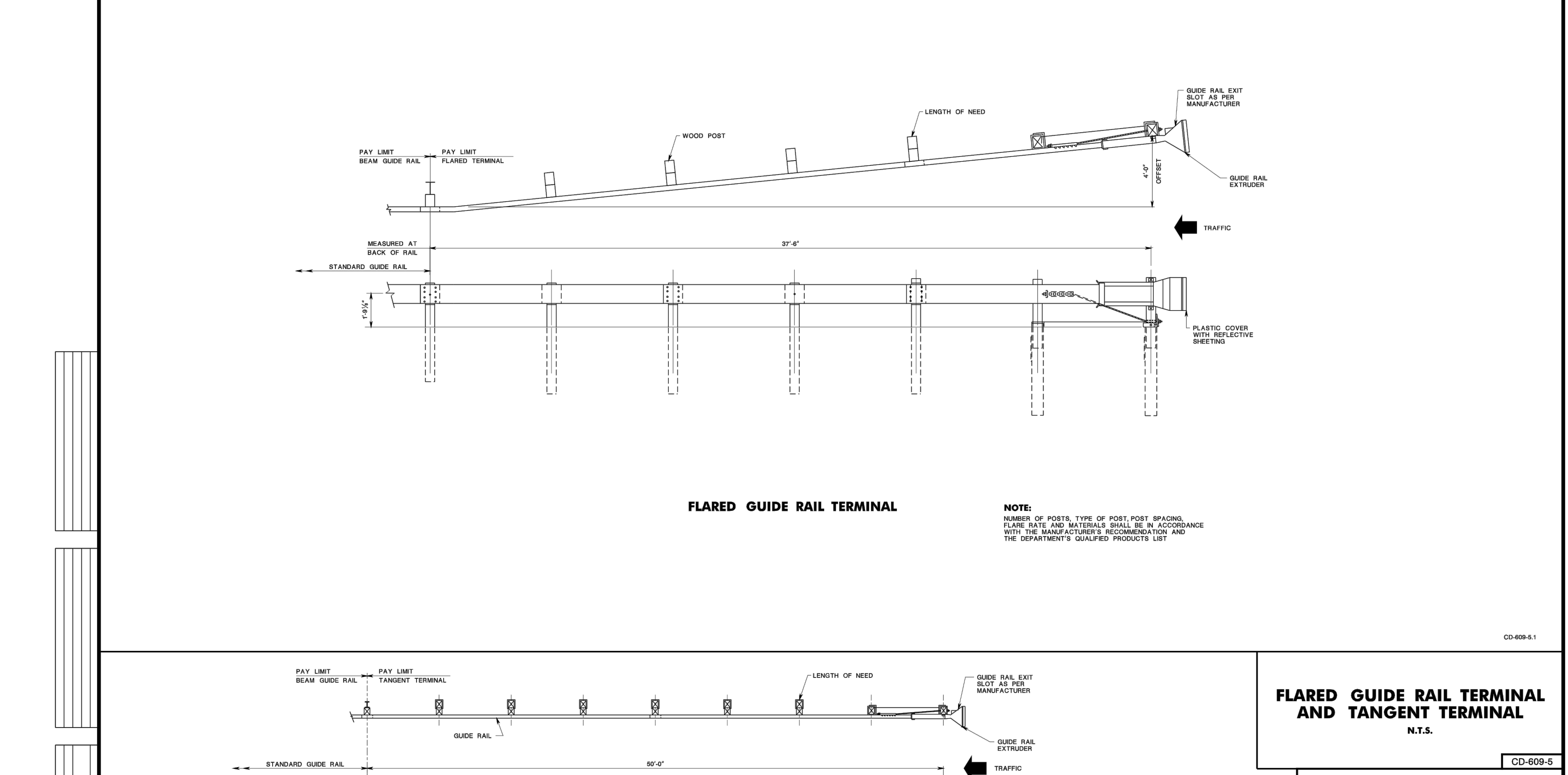
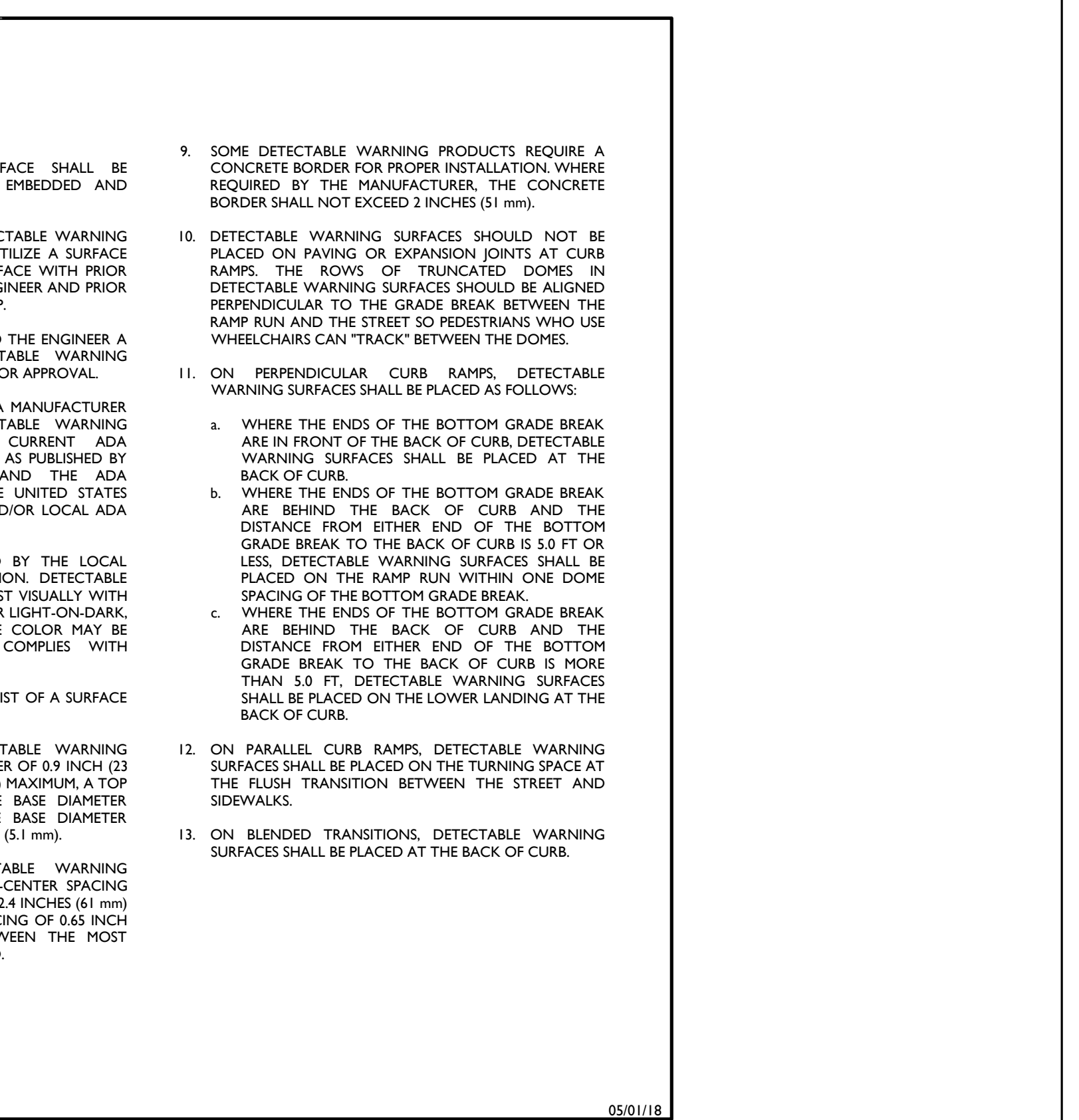
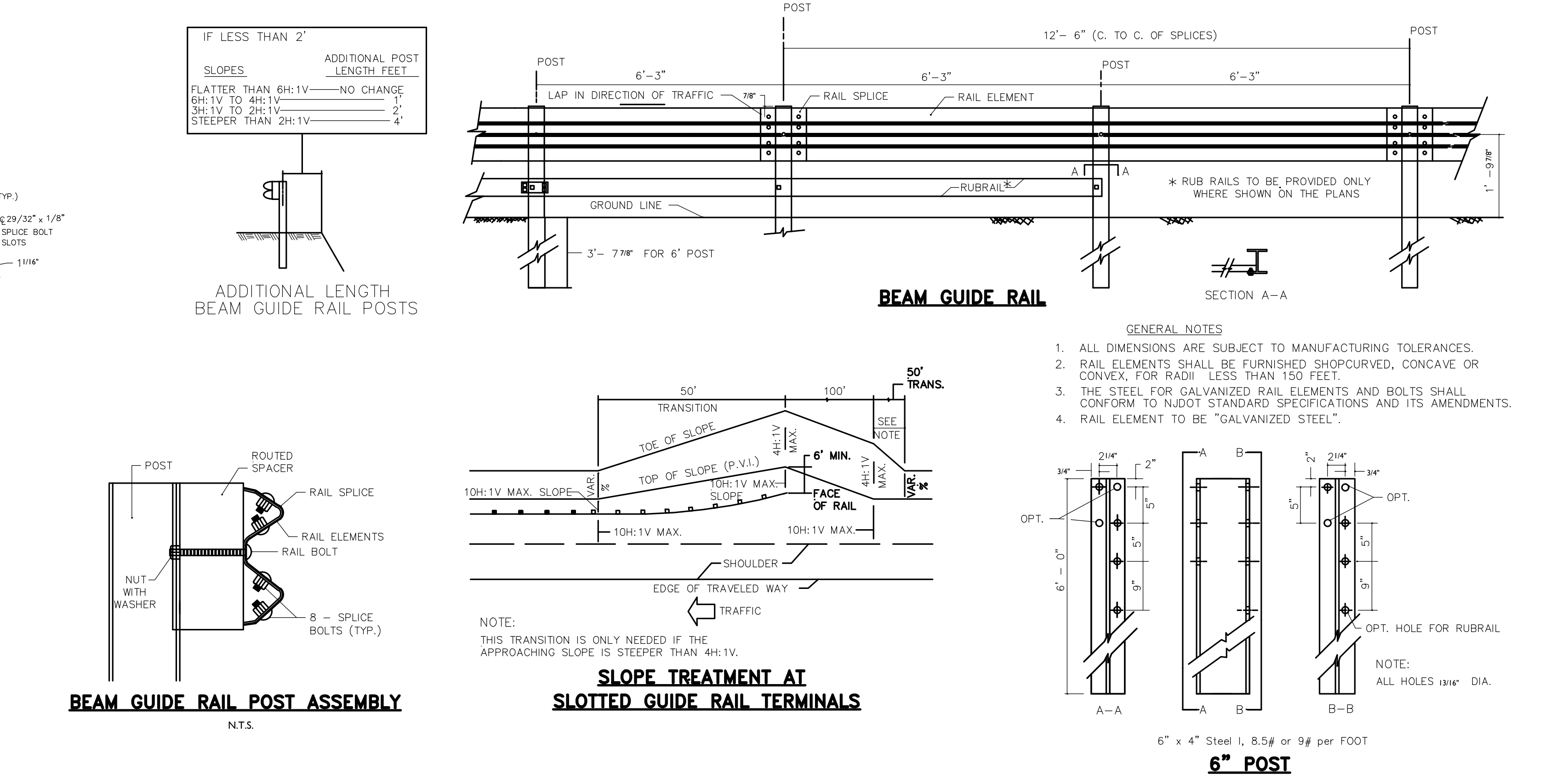
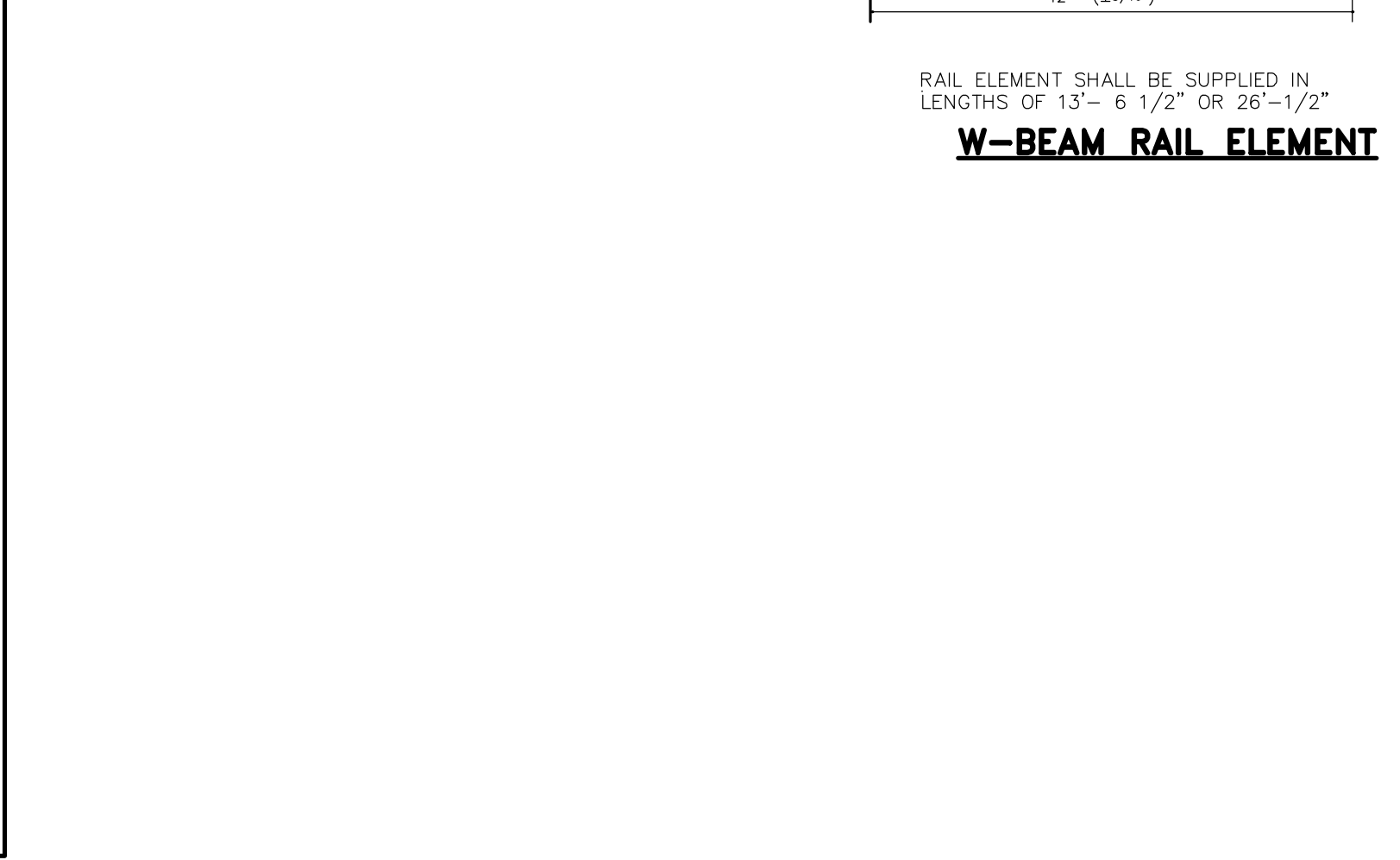
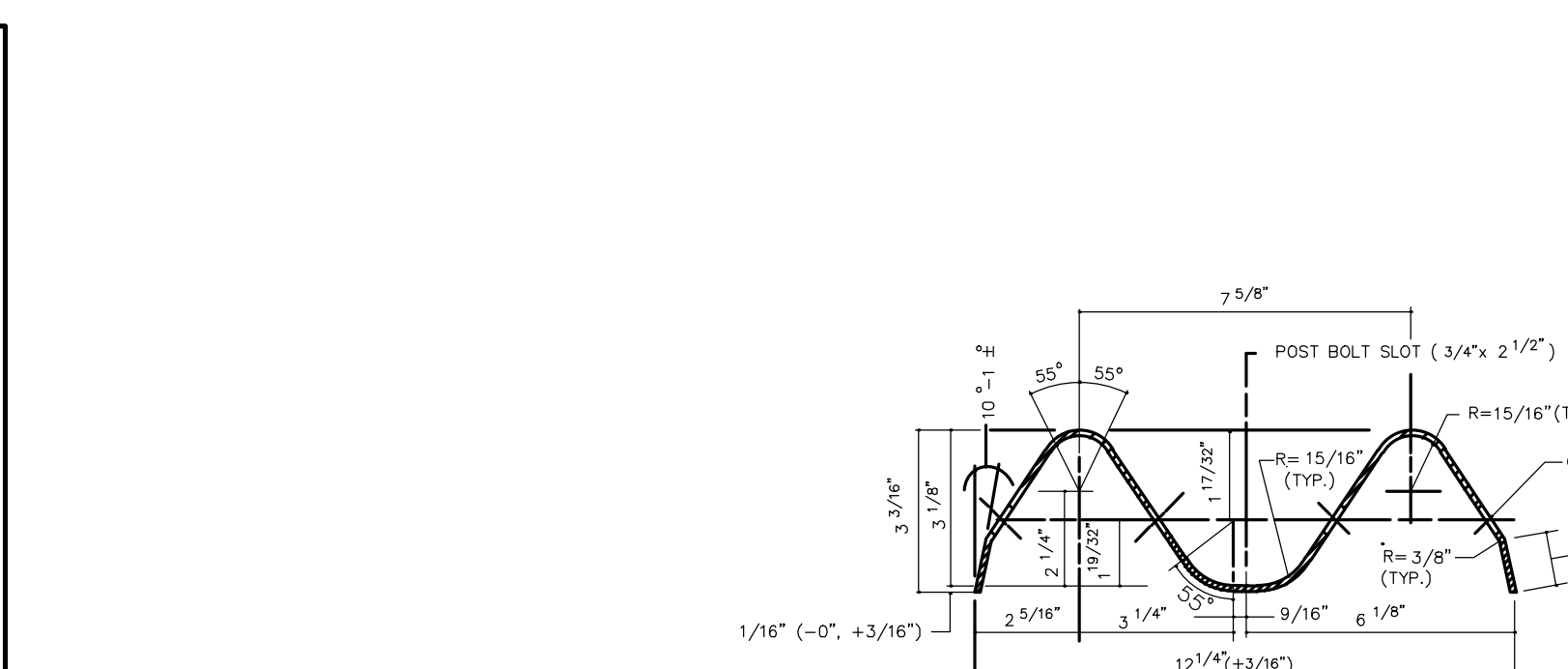
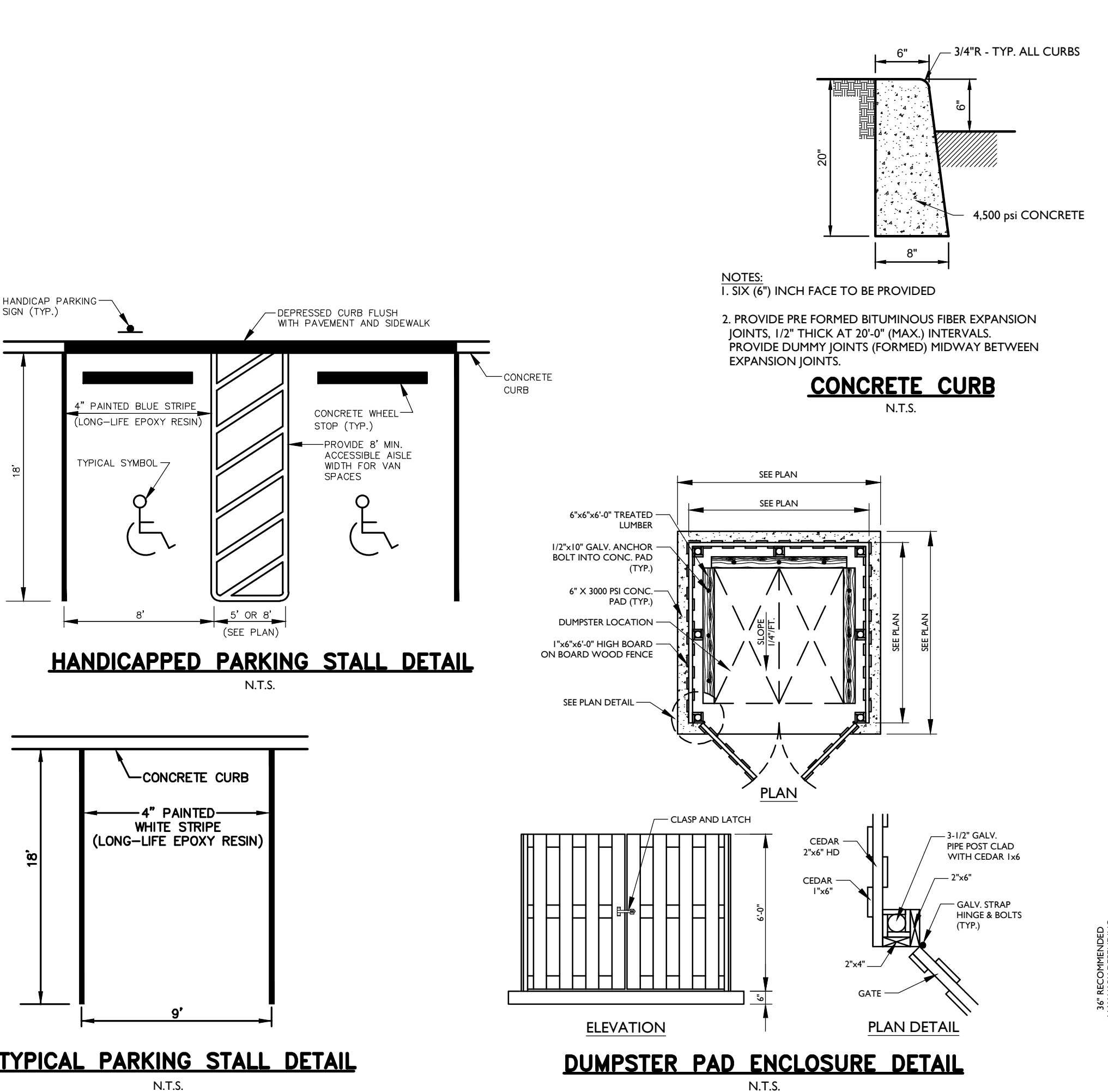
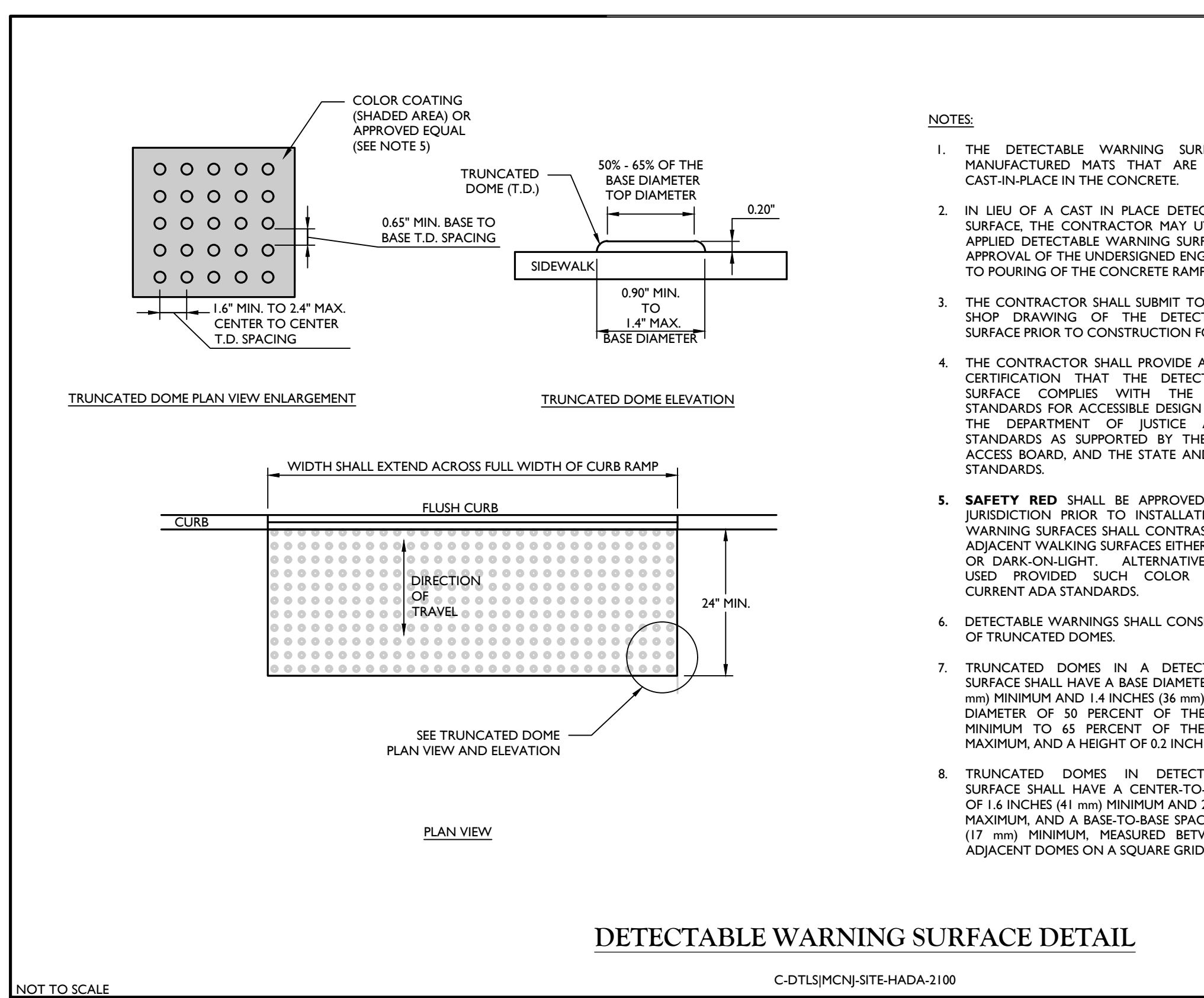
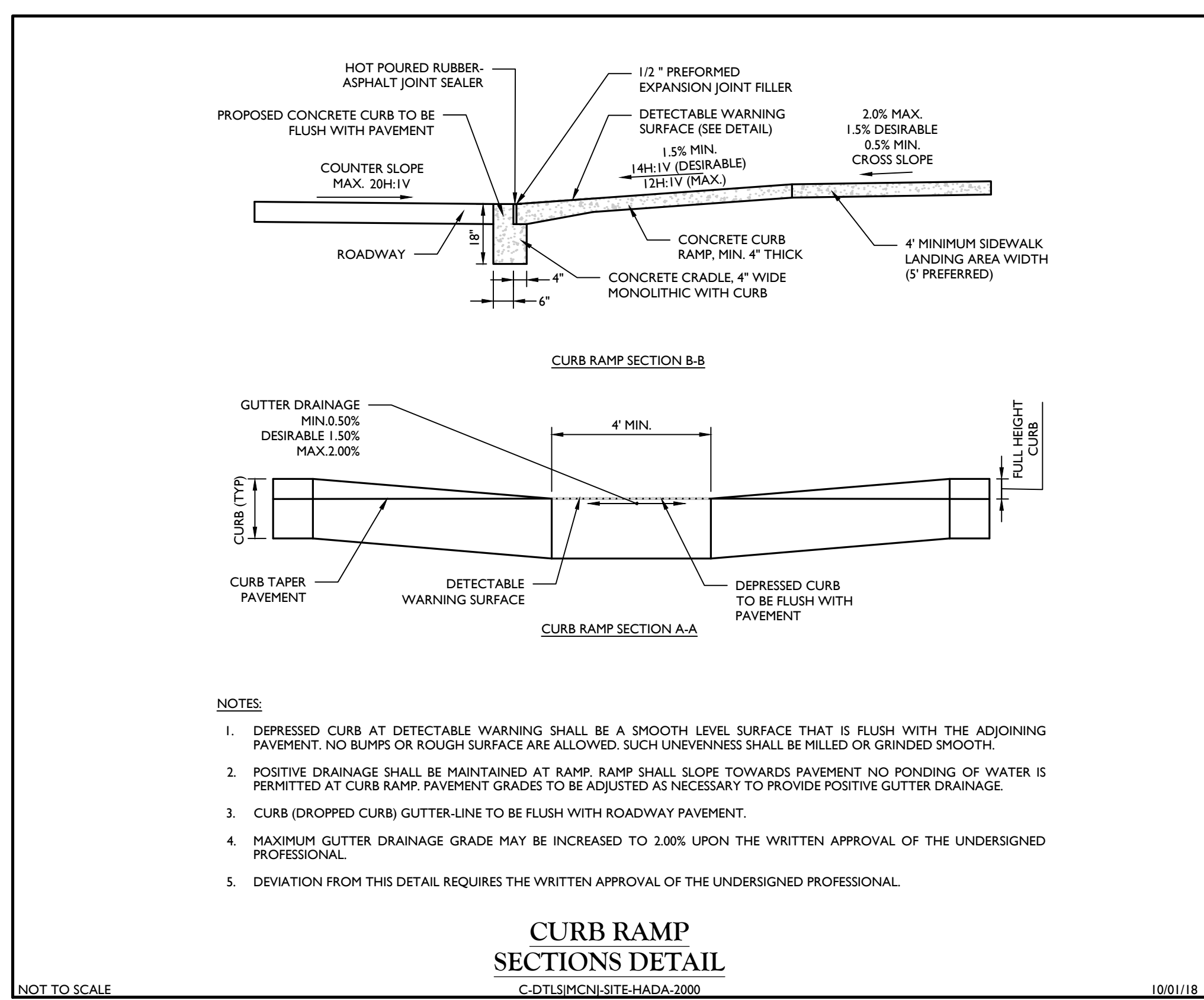
SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	8/11/2023	RM	DWB

PROJECT NUMBER: 05000050f
 DRAWING NAME: C-DT15-HVC-ASP

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
18 of 21

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



Colliers Engineering & Design
www.colliersengineering.com
Copyright © 2023. Colliers Engineering & Design, Inc. All rights reserved. No drawing or all the information contained herein is authorized for use by any party who is not an employee or contractor of Colliers Engineering & Design, Inc. The drawings and information contained herein are for the sole use of the client and are not to be reprinted, copied, or otherwise used without the written consent of Colliers Engineering & Design, Inc.

Doing Business as **MASER**

811 Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

PROTECT YOURSELF! ALL STATES REQUIRE NOTIFICATION OF EDUCATORS, ENGINEERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE. WORKERS: BE AWARE. BE SAFE.

REV	DATE	DESCRIPTION
1	10/01/18	ISSUE FOR PERMITTING SUBMISSION
2	10/01/18	ISSUE FOR PERMITTING SUBMISSION
3	10/01/18	ISSUE FOR PERMITTING SUBMISSION

REV	DATE	DESCRIPTION
1	10/01/18	ISSUE FOR PERMITTING SUBMISSION
2	10/01/18	ISSUE FOR PERMITTING SUBMISSION
3	10/01/18	ISSUE FOR PERMITTING SUBMISSION

REV	DATE	DESCRIPTION
1	10/01/18	ISSUE FOR PERMITTING SUBMISSION
2	10/01/18	ISSUE FOR PERMITTING SUBMISSION
3	10/01/18	ISSUE FOR PERMITTING SUBMISSION

Daniel W. Busch
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 6642093
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.#. # 26424799690

PHASE IA GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE MIDDLESEX COUNTY NEW JERSEY

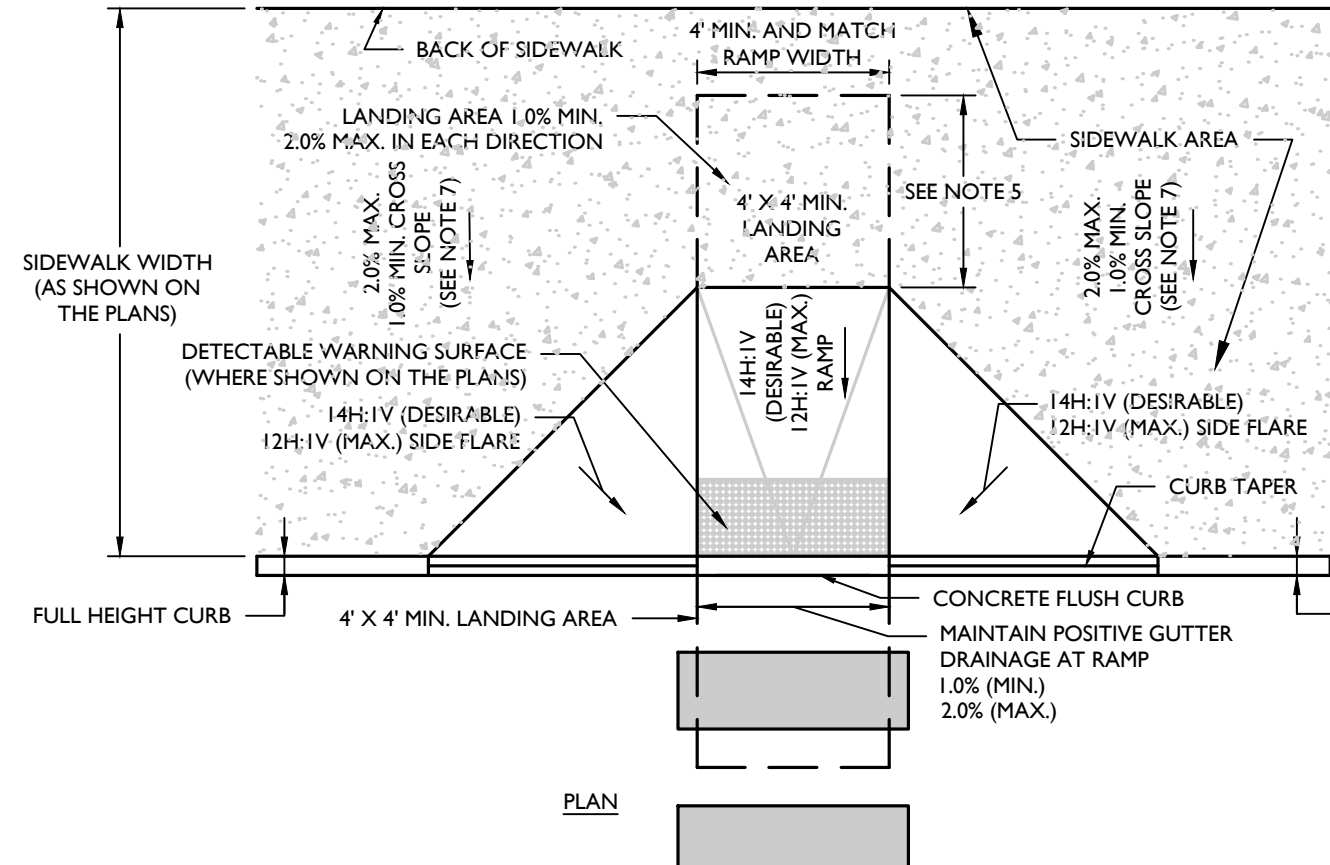
Colliers Engineering & Design
333 NEWTON SPRINGFIELD
Suite 203
Red Bank, NJ 07071
Phone: 732-383-1950
COLLIERS ENGINEERING & DESIGN, INC.
DOWNSIDE OFFICE AT MASER CORP. (TWO)

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	9/11/2023	RM	DWB
PROJECT NUMBER	DRAWING NAME		
050005001	C-DTSLM-CN-ASP		

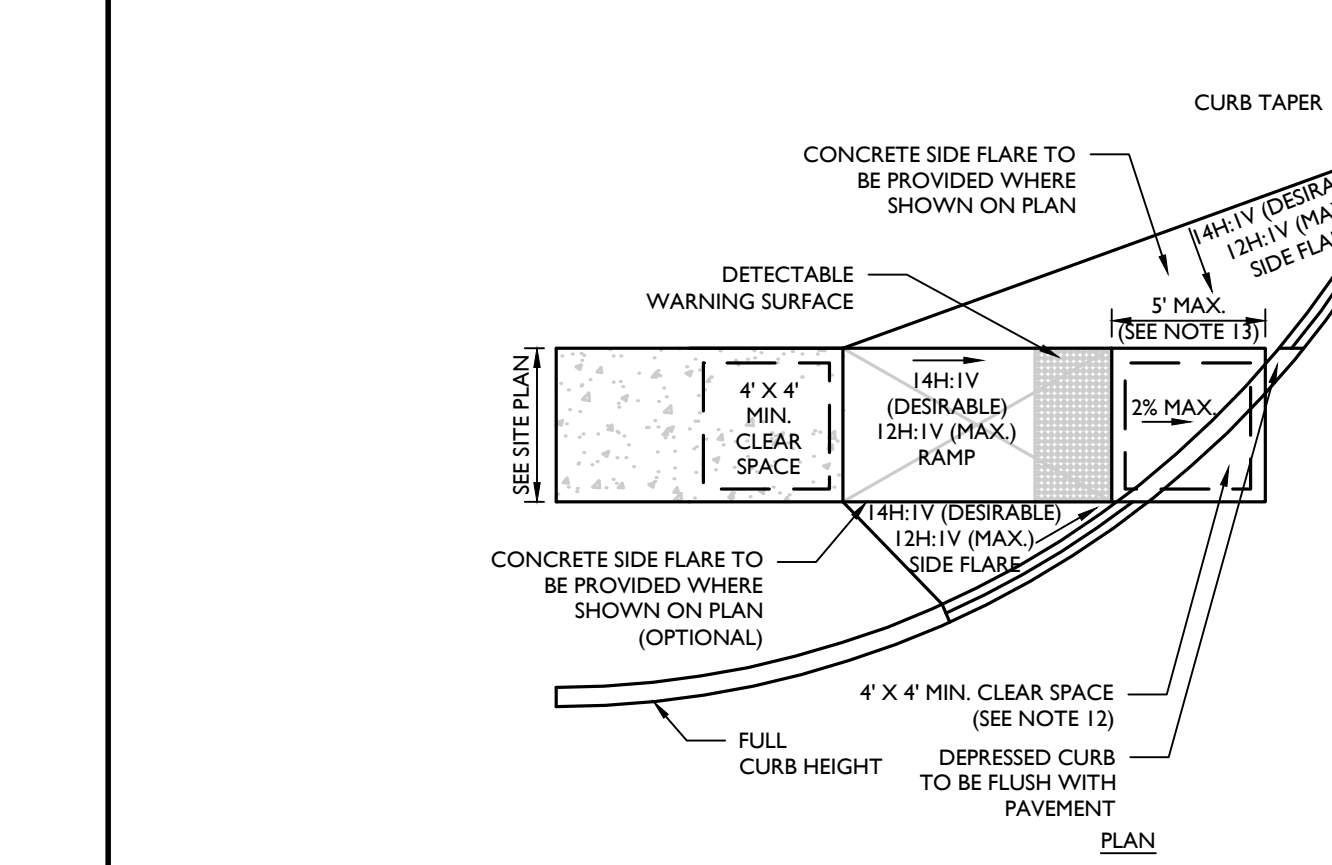
SHEET TITLE: **CONSTRUCTION DETAILS**

SHEET NUMBER: **20** of **21**

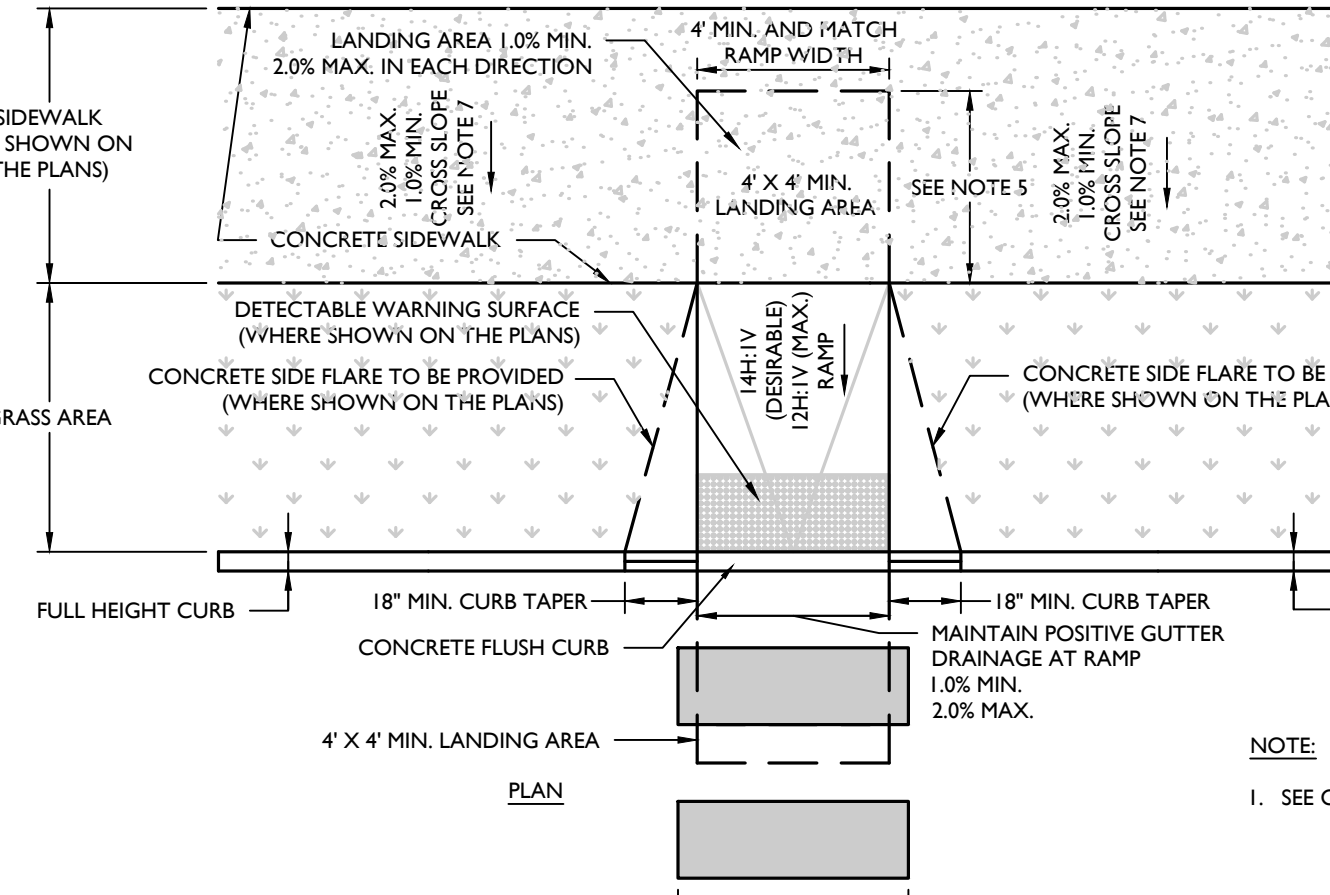
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



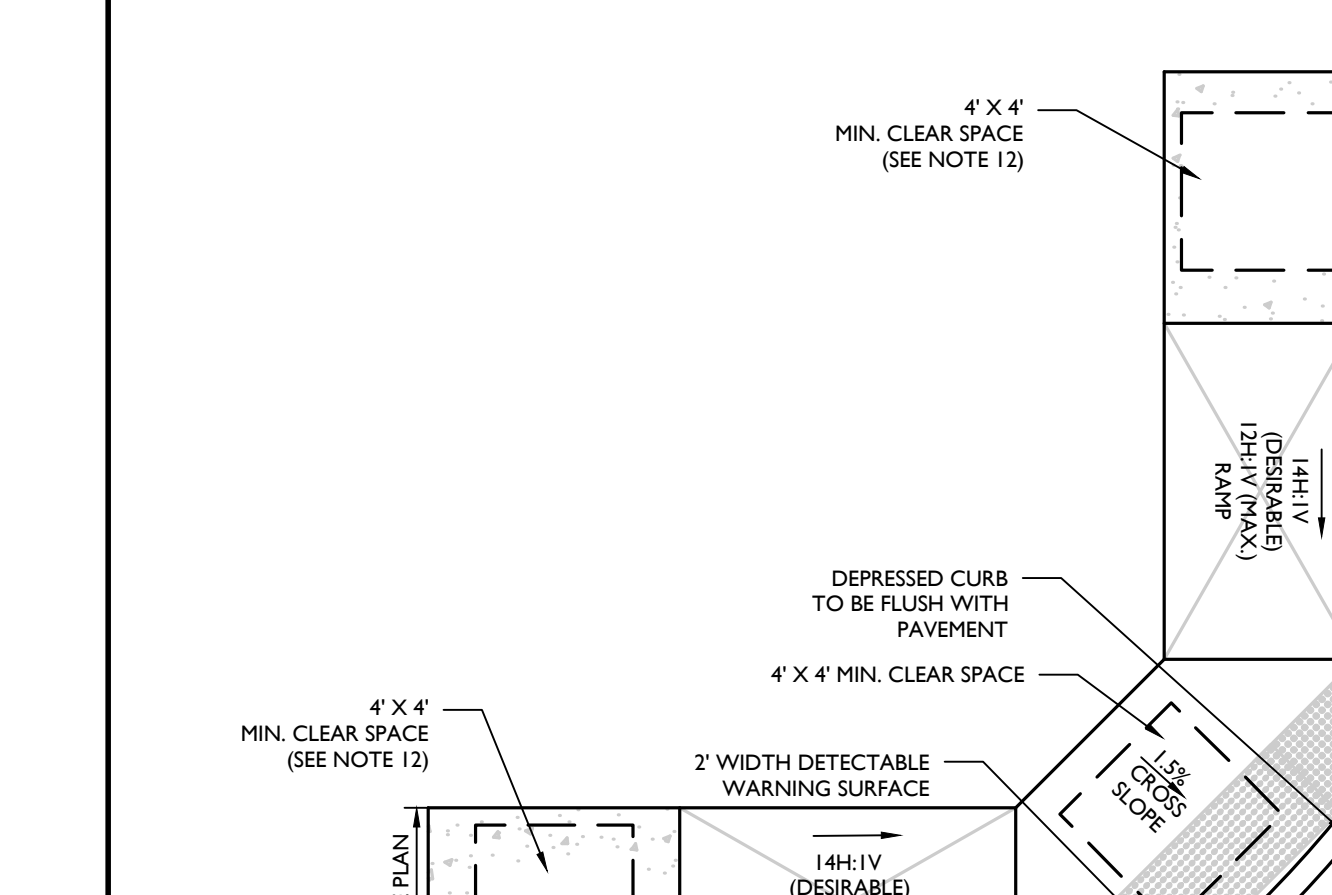
CURB RAMP TYPE 1 DETAIL
C-DTLSIMCN SITE-HADA-1000



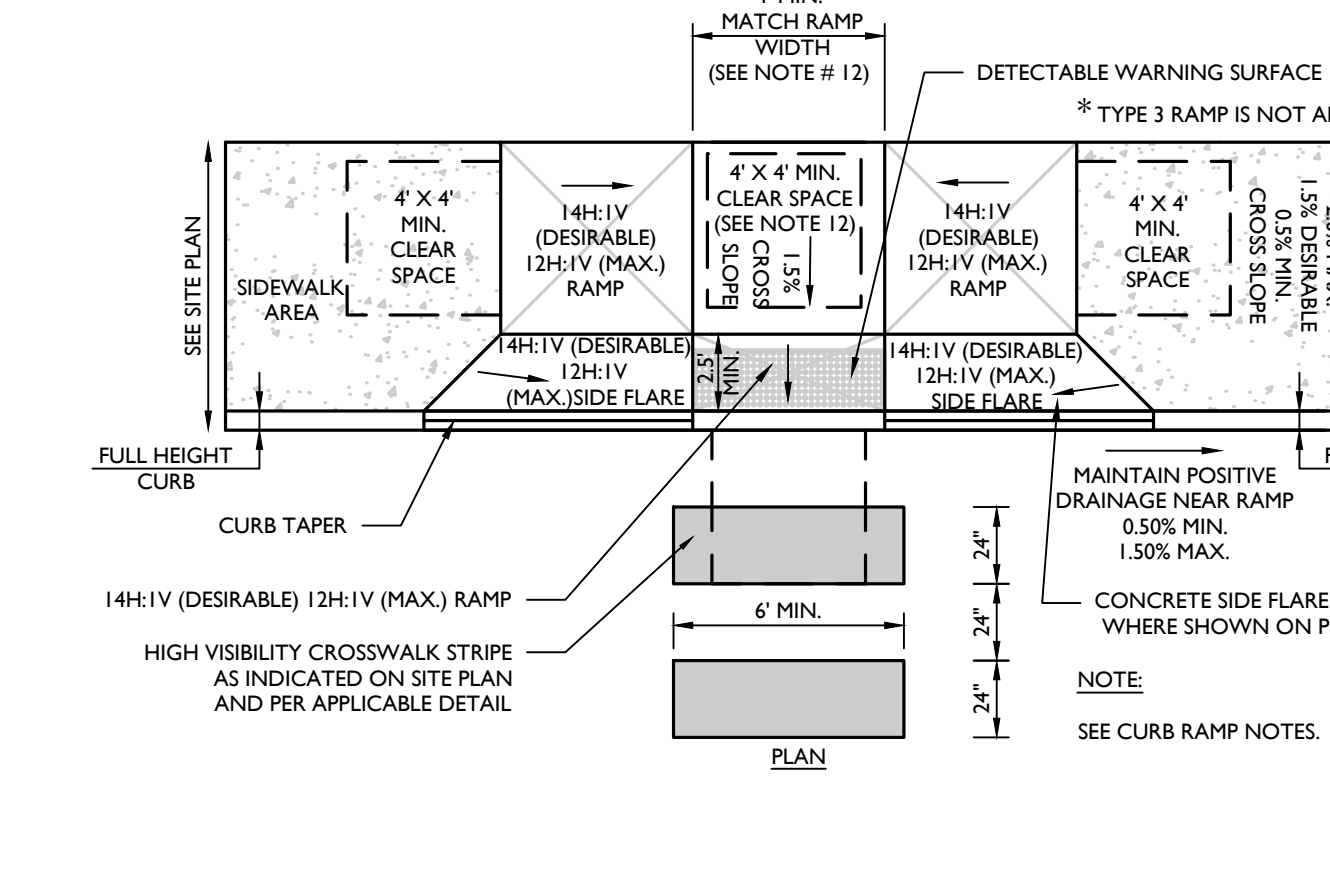
CURB RAMP TYPE 5 DETAIL
C-DTLSIMCN SITE-HADA-1400



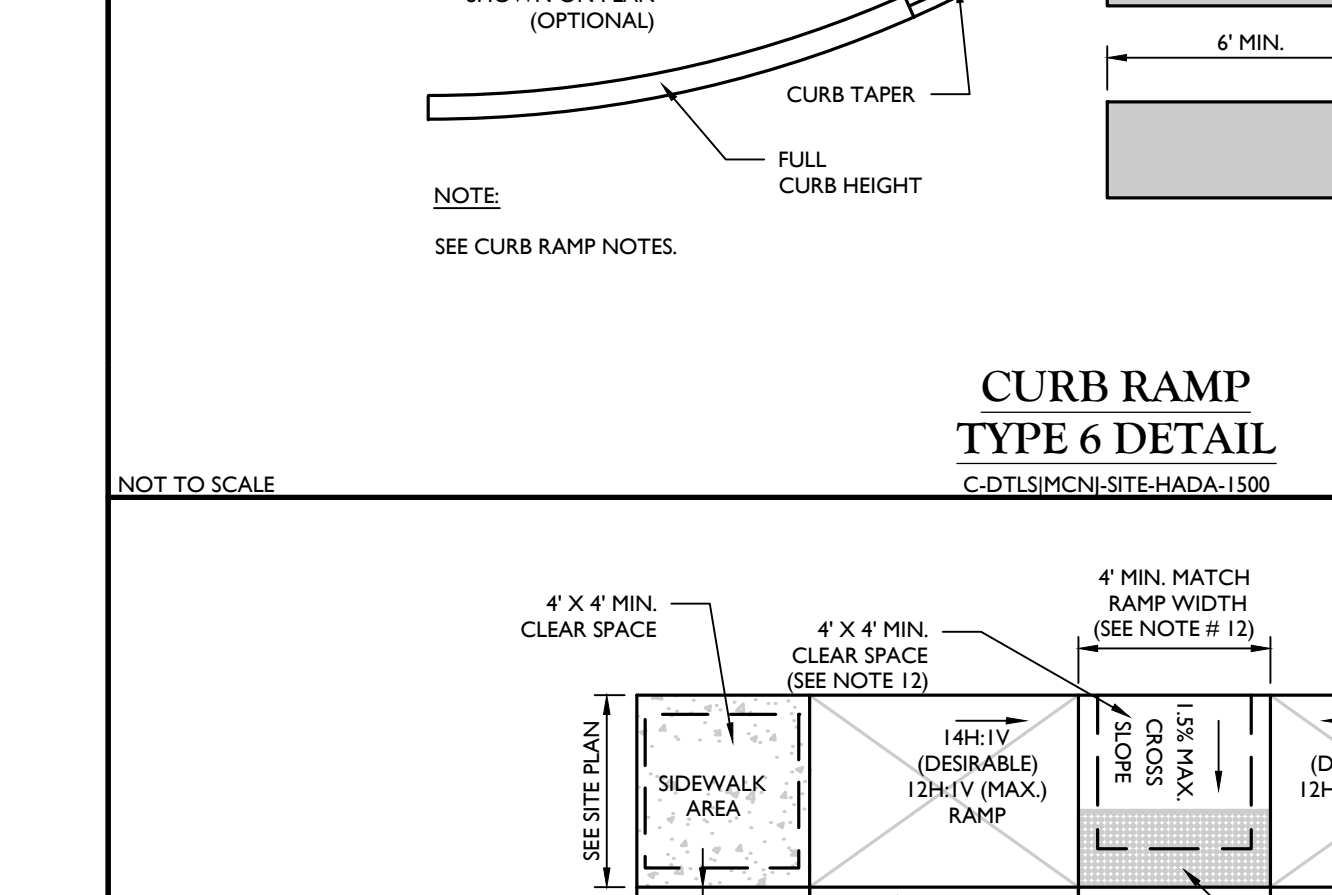
CURB RAMP TYPE 2 DETAIL
C-DTLSIMCN SITE-HADA-1100



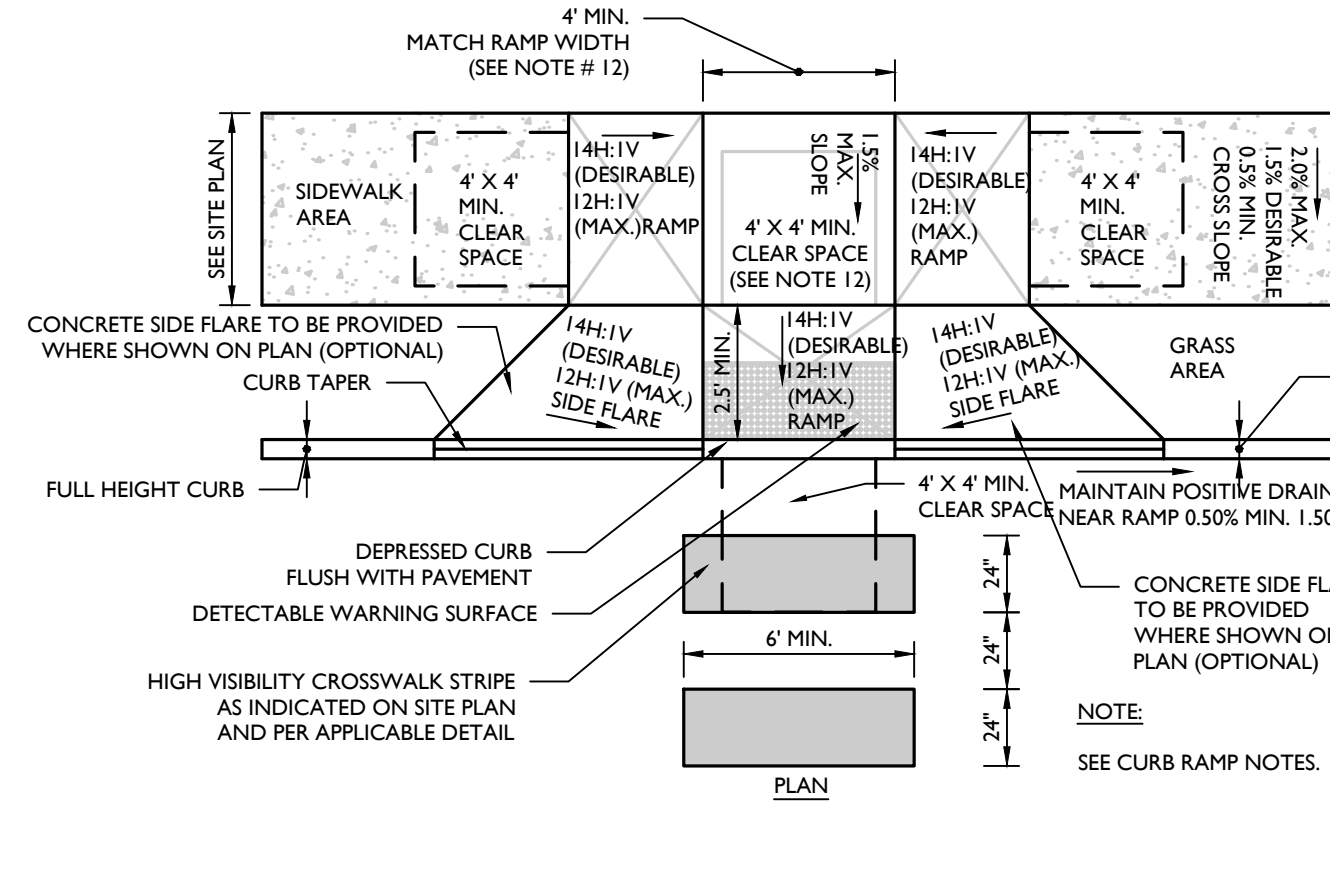
CURB RAMP TYPE 6 DETAIL
C-DTLSIMCN SITE-HADA-1500



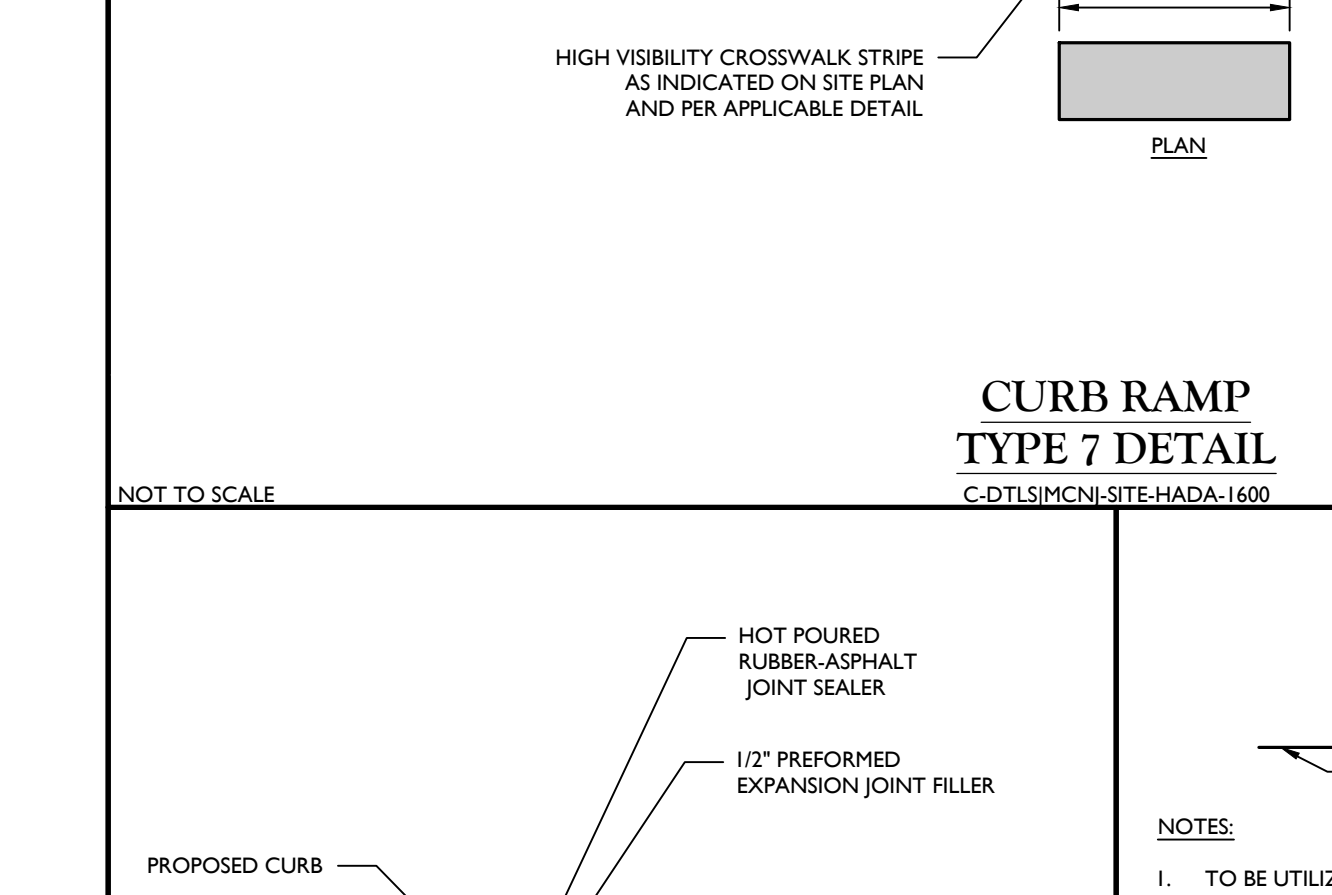
CURB RAMP TYPE 3 DETAIL
C-DTLSIMCN SITE-HADA-1200



CURB RAMP TYPE 7 DETAIL
C-DTLSIMCN SITE-HADA-1600



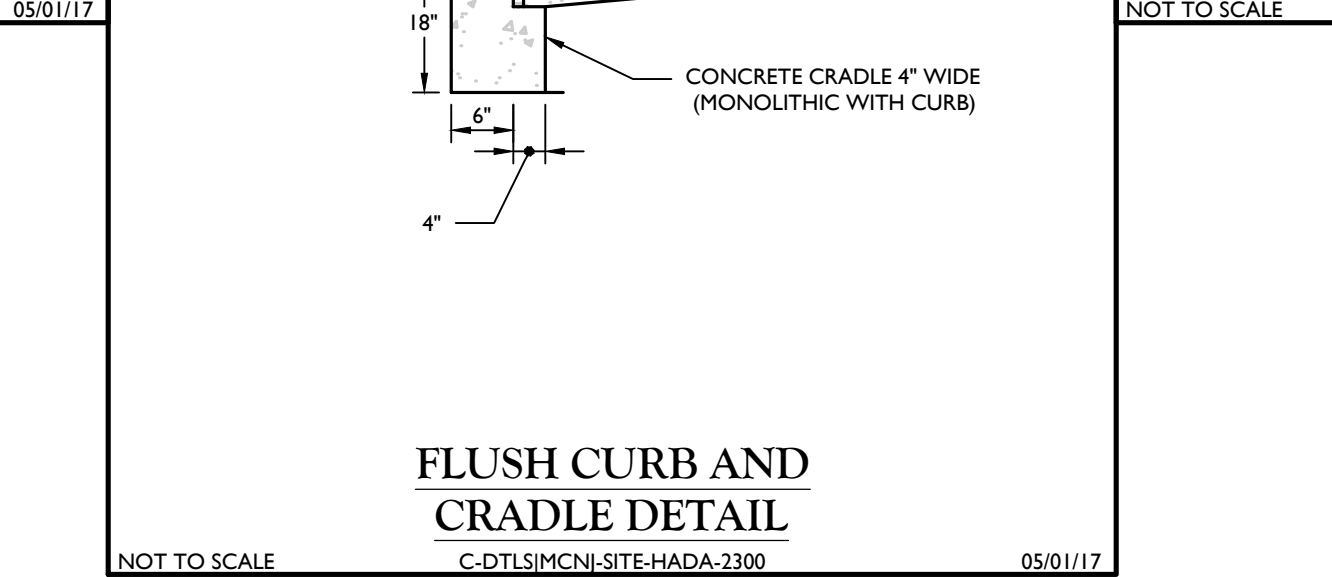
CURB RAMP TYPE 4 DETAIL
C-DTLSIMCN SITE-HADA-1300



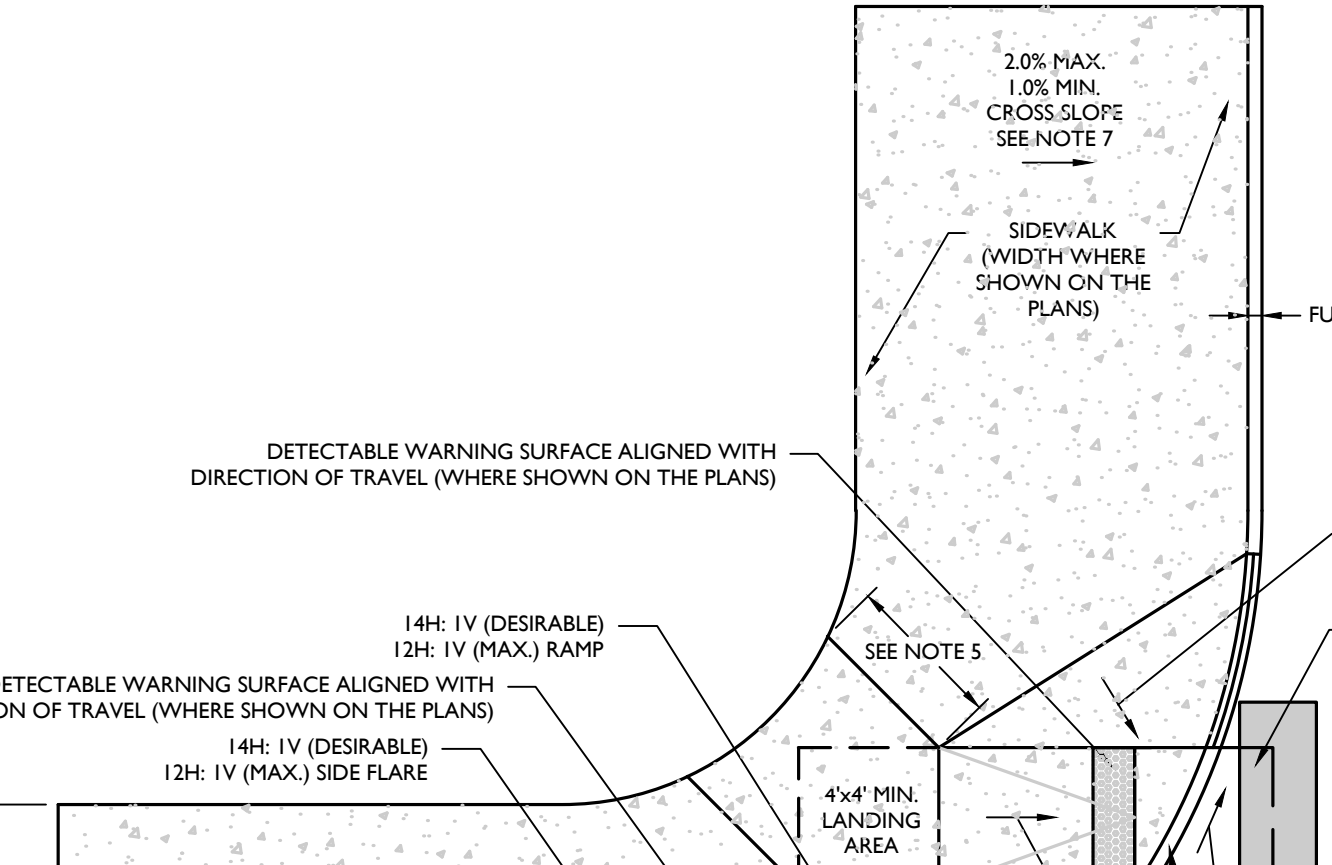
CURB RAMP CURB TAPER DETAIL
C-DTLSIMCN SITE-HADA-2301



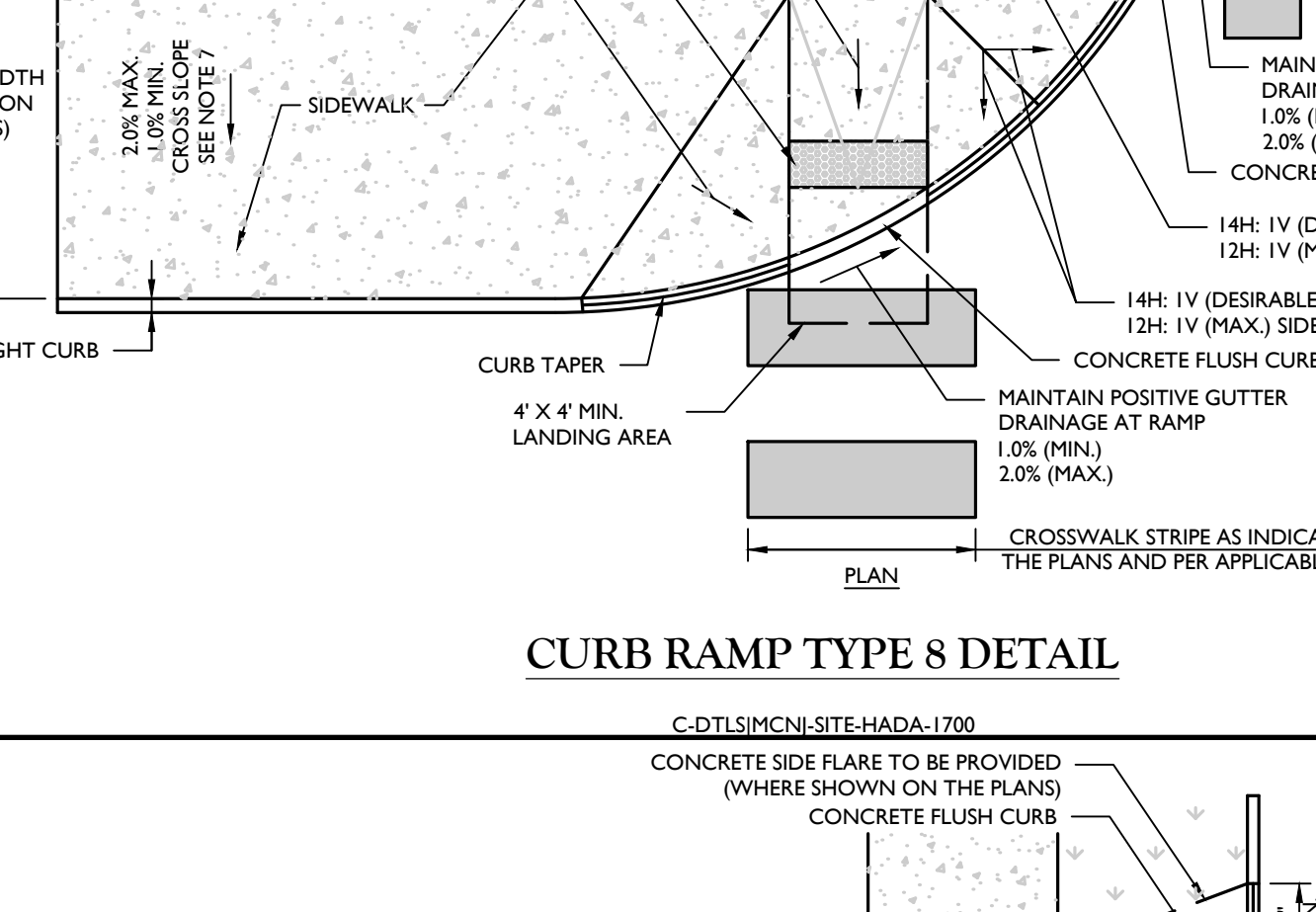
CURB RAMP TYPE 8 DETAIL
C-DTLSIMCN SITE-HADA-1700



FLUSH CURB AND CRADLE DETAIL
C-DTLSIMCN SITE-HADA-2300



TYPICAL CURB RAMP TYPE 2A DETAIL
C-DTLSIMCN SITE-HADA-1900



TYPICAL CURB RAMP TYPE 2B DETAIL
C-DTLSIMCN SITE-HADA-1901

ADA INSTRUCTIONS TO CONTRACTOR

- NOTES:**
- CONTRACTOR MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA COMPLIANT COMPONENTS FOR THIS SITEPROJECT. THESE COMPONENTS, AS CONSTRUCTED, MUST COMPLY WITH THE LATEST FEDERAL ADA STANDARDS FOR ACCESSIBLE DESIGN AND CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY MUST COMPLY WITH THE LATEST FEDERAL PROPOSED "ASSESSIBILITY" GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY (PROVISED).
 - FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACE PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCES, MUST COMPLY WITH THESE ADA CODE REQUIREMENTS AND ANY SUPPLEMENTAL STATE REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
(NOTE THIS LIST IS NOT INTENDED TO CAPTURE EVERY APPLICABLE FEDERAL, STATE AND LOCAL RULE AND REGULATION. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE LAW, WHETHER OR NOT SPECIFICALLY HEREIN):
A. PARKING SPACES AND PARKING AISLES - SLOPE MUST NOT EXCEED 1:48 (1/4" PER FOOT OR NORMALLY 2.0%) IN ANY DIRECTION.
B. CURB RAMPS - SLOPES MUST NOT EXCEED 1:12 (8.33).
C. LANDINGS
I. LANDINGS AT CURB RAMPS - MUST BE 4 FT. MIN., X 4 FT. MIN. AND ARE TO BE INCREASED TO 5 FEET WHERE THE LANDING SPACE (TURNING SPACE) IS CONSTRAINED AT THE BACK OF THE SIDEWALK.
II. LANDINGS AT RAMPS - MUST BE 5 FT. MIN. IN THE DIRECTION OF TRAVEL AND BE PROVIDED AT EACH END OF THE RAMP. MUST PROVIDE POSITIVE DRAINAGE (1/4" MIN.) AND MUST NOT EXCEED 1:48 (1/4" PER FOOT OR NORMALLY 2.0%) IN ANY DIRECTION, WHEN LANDING IS ALSO A TURNING SPACE, IT MUST BE A MINIMUM 5 FT X 5 FT.
III. LANDINGS AT DOORWAYS - SEE NOTE F BELOW.
D. PATH OF TRAVEL ALONG ON-SITE ACCESSIBLE ROUTE - MUST PROVIDE A 36 INCH (EXCLUDING THE CURB) OR GREATER UNSTRUCTURED WIDTH OF TRAVEL. (CAR OVERHANGS MUST NOT REDUCE THIS MINIMUM WIDTH). IN A PUBLIC RIGHT-OF-WAY, THE MINIMUM WIDTH EXCLUDING THE CURB IS 4 FT. THE SLOPE MUST BE NO GREATER THAN 1:20 (5.0%) IN THE DIRECTION OF TRAVEL, AND MUST NOT EXCEED 1:48 (1/4" PER FOOT OR NORMALLY 2.0%) IN CROSS-SLOPE.
E. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20 (5.0%), AN ADA RAMP WITH A MAXIMUM SLOPE OF 1:12 (8.33), FOR A MAXIMUM RISE OF 30 INCHES, MUST BE PROVIDED. THE RAMP MUST HAVE A MINIMUM CLEAR WIDTH OF 36 INCHES, HAVE ADA HAND RAILS AND LANDINGS (MIN. 5 FT. LONG IN THE DIRECTION OF TRAVEL) ON EACH END THAT ARE SLOPED A MIN. 1% AND NO MORE THAN 1:48 (1/4" PER FOOT OR NORMALLY 2.0%) FOR POSITIVE DRAINAGE.
F. EXTERIOR DOORWAYS - MUST HAVE A "LEVEL" LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED NO MORE THAN 1/4" (1/4" PER FOOT OR NORMALLY 2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA IS GENERALLY 5 FT X 5 FT, EXCEPT WHERE OTHERWISE PERMITTED BY ADA STANDARDS (SEE APPLICABLE CODE SECTIONS).
 - IT IS RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE OFFICIAL, INCLUDING WHETHER OR NOT FULL PROTECTION IS REQUIRED.
 - IT IS RECOMMENDED THAT THE CONTRACTOR CHECK THE FLOOR OF FORMWORK FOR COMPLIANCE WITH ADA STANDARDS PRIOR TO POURING CONCRETE.

- NOTES:**
- CONTRACTOR SHALL PREPARE SHOP DRAWINGS OF EACH CURB RAMP FOR SUBMISSION AND APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL COUNTY, STATE OR OTHER AGENCIES ENGINEER HAVING JURISDICTION.
 - LANDING AREA APPROACH SIDEWALK TRANSITIONS AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
 - CURB AT RAMP OPENING (FLUSH CURB) TO BE FLUSH WITH ROADWAY PAVEMENT.
 - CROSSWALKS AND PAVEMENT MARKINGS TO BE INSTALLED AS DENOTED ON SITE PLAN.
 - MAXIMUM RAMP SLOPE MAY BE 12H:1V UPON APPROVAL OF ENGINEER. RAMP SLOPES SHOWN ARE THE PREFERRED SLOPE. SIDE FLARE SLOPES MAY BE 10H:1V UPON APPROVAL OF THE ENGINEER.
 - MINIMUM RAMP CROSS-SLOPE SHALL BE 0.50%. THE MAXIMUM RAMP CROSS-SLOPE MAY BE 2.00% UPON APPROVAL OF THE ENGINEER. CROSS-SLOPES SHOWN IN THE DETAILS ARE THE PREFERRED SLOPES TO MAINTAIN A LEVEL OF CONSTRUCTION TOLERANCE.
 - ACCESSIBLE RAMPS SHALL BE INSTALLED PURSUANT WITH THE CURRENT UNITED STATES ACCESS BOARD ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES AND THE ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE AND OTHER APPLICABLE LOCAL AND STATE STANDARDS IN EFFECT AT THE DATE OF CONSTRUCTION.
 - DEVIATIONS FROM THE CURB RAMP DETAILS REQUIRE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
 - THE RAMP SURFACE SHALL HAVE A NON-SLIP, HAND BROOMED FINISH.
 - CONCRETE EXPANSION JOINTS SHALL HAVE A FIRM SURFACE WITH 1/4" BEVELED CONCRETE EDGES. THE JOINT SURFACE SHALL NOT BE MORE THAN 1/4" BELOW THE ADJOINING CONCRETE SURFACE.
 - CURB RAMP MUST BE WHOLLY CONTAINED WITHIN THE CROSSWALK CROSSING.
 - THE CLEAR SPACE SHALL BE INCREASED TO 5 FEET WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF THE SIDEWALK.
 - THE MAXIMUM SEPARATION BETWEEN THE BACK OF CURB AND DETECTABLE WARNING SURFACE SHALL NOT EXCEED 5 FEET. THE MAXIMUM SEPARATION AREA MAY BE WITHIN THE 4' X 4' CLEAR SPACE.
 - SEE SEPARATE DETAILS FOR "DETECTABLE WARNING SURFACE" AND "CURB RAMP SECTIONS"
 - WHERE SIDE FLARES ARE NOT REQUIRED, PROVIDE AN 18" CURB TAPER TO THE FLUSH CURB.
 - ALL CURB RAMP FLUSH CURB SHALL BE MADE WITH CONCRETE CURB CRADLE, REGARDLESS OF THE CURB MATERIAL USED THROUGHOUT THE SITE.

CURB RAMP NOTES

C-DTLSIMCN SITE-HADA-2500 10/01/18

Colliers Engineering & Design

www.colliersengineering.com

Copyright © 2013 Colliers Engineering & Design. All rights reserved. This drawing and all the information contained herein is authorized for use only by the party to whom the drawings were issued or to whom it is copied. This drawing may not be copied, revised, deleted, distributed or used in any other project without the express written consent of Colliers Engineering & Design.

Doing Business as **MASER**

811 PROTECT YOURSELF. All states require notification of excavators, designers, or any person preparing to disturb the earth's surface anywhere in your state.

Know what's below. Call before you dig. FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL11.COM

REV	DATE	DESCRIPTION

REV	DATE	DESCRIPTION	BY	CHKD	APPV
1	10/01/18	UPDATE PARKING TABLES			
2	10/01/18	PROVIDED FOR PLANNING BOARD SUBMISSION			

Daniel W. Busch
NEW JERSEY LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: GE42093
COLLIERS ENGINEERING & DESIGN, INC.
N.J. C.O.P.#: 2642798960

PHASE IA GATEWAY SERVICES DISTRICT AMENDED SITE PLAN FOR SAYREVILLE SEAPORT ASSOCIATES

BLOCK 256.01, LOT 24
BLOCK 257.02, LOT 1.05

BOROUGH OF SAYREVILLE
MIDDLESEX COUNTY
NEW JERSEY

Colliers Engineering & Design

HOLMDEL (Headquarters) 331 Newnam Springs Road, Suite 203 Red Bank, NJ 07071 Phone: 732.983.1950
COLLIERS ENGINEERING & DESIGN, INC. ONE BURGESS PLACE MASER CORP. TNY

SCALE: AS SHOWN	DATE: 9/11/2023	BY: RM	CHECKED BY: DWB
PROJECT NUMBER: 05000506f	DRAWING NAME: C-DTLSIMCN-ASP	SHEET NUMBER:	
CONSTRUCTION DETAILS			
21 of 21			