SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.01

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY, NEW JERSEY

UTILITIES

JERSEY CENTRAL POWER AND LIGHT (JCP&L)
ATTN: CHRIS GUNTHER
101 CRAWFORD'S CORNER ROAD
HOLMDEL, NJ 07733
(732)212-4287
(732)546-8925 (CELL)
CGUNTHER@FIRSTENERGYCORP.COM

CABLEVISION
ATTN: JUAN A. KEY
751 BRICK BOULEVARD
BRICK, NJ 08723
(973)659-2210

VERIZON
ATTN: BILL HIGGINS
999 W. MAIN STREET
FREEHOLD, NJ 07728
(732)683-5180
WILLIAM.W.HIGGINS@VERIZON.COM

PUBLIC SERVICE ELECTRIC AND GAS (PSEG)
ATTN: MICHAEL MEEHAN
80 PARK PLAZA
NEWARK, NJ 07102
(732)220-6242
(732)921-2447 (CELL)
MICHAEL.MEEHAN@PSEG.COM

MIDDLESEX COUNTY UTILITIES AUTHORITY (MCUA)
ATTN: KEVIN AIELLO
PO BOX 159 - 2571 MAIN STREET EXTENSION
SAYREVILLE, NJ 08872
(732)721-3800 EXT. 230
KAIELLO@MCUA.COM

MIDDLESEX WATER COMPANY (MWC)
ATTN: LADISLAO F. MONTERROSA
485C ROUTE 1 SOUTH, SUITE 400
ISELIN, NJ 08830
(732)634-1550
(732)638-7531 (DIRECT)
LMONTERROSA@MIDDLESEXWATER.COM

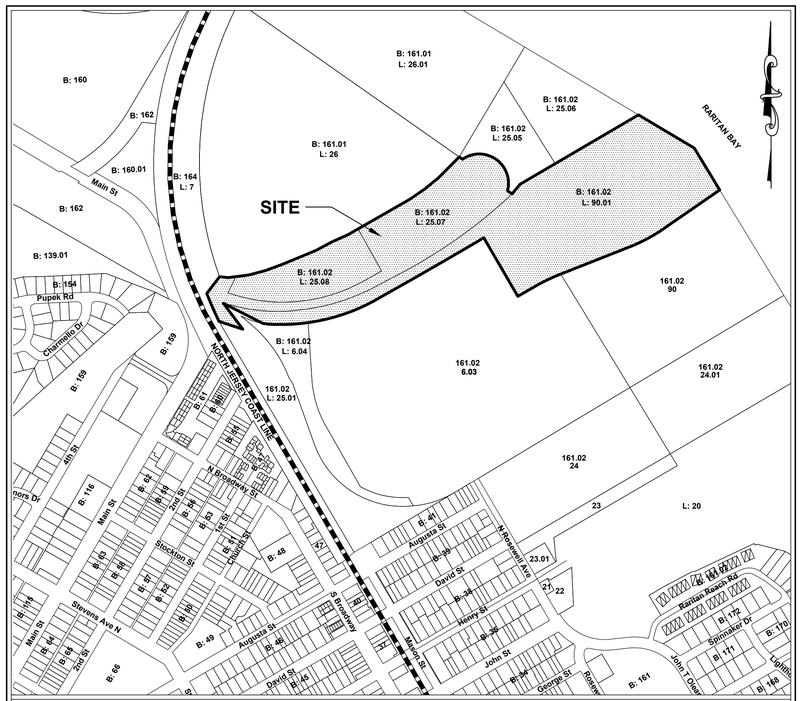
TRANSCONTINENTAL GAS PIPELINE CORP
2800 POST OAK BOULEVARD
HOUSTON, TEXAS 77251

NJ TRANSIT RAIL CORPORATION
1 PENN PLAZA E STE 1
NEWARK, NJ 07105

CONSOLIDATED RAIL CORPORATION
110 FRANKLIN ROAD SE
ROANOKE, VA 24042-0028

PROPERTY OWNERS WITHIN 200' OF SITE

BLOCK	LOT	QUAL	CLA	PROPERTY OWNER	PROPERTY LOCATION	Add'l Lots
61	13	C36	2	RAO, KAUSHAL & TEJANDRA 143 MAIN ST-UNIT 114 SOUTH AMBOY, NJ 08879	143 MAIN ST	
61	13	C39	2	SALZMANN, JOHN S 137 MAIN STREET SOUTH AMBOY, NJ 08879	137 MAIN ST	
61	13	C40	2	BOURKE, LISA-MARIA 135 MAIN ST-UNIT 40 SOUTH AMBOY, NJ 08879	135 MAIN ST	
139.01	90		1	MOCCO, PETER 245 TENTH ST, SUITE C JERSEY CITY, NJ 07302	MAIN ST	
159	22		1	MOCCO, LORRAINE 345 TENTH ST JERSEY CITY, NJ 07302	FOURTH & MAIN STS	23
161.01	26		4B	NRG REMA LLC PO BOX 1410 HOUSTON, TEXAS 77251	135 MAIN ST.	26
161.02	6.03		4B	MANHATTAN BEACH CLUB STREET LLC PO BOX 3418 MS #002 GREENVILLE, SC 29602	3 RADFORD FERRY RD	
161.02	6.04		1	MANHATTAN BEACH CLUB STREET LLC PO BOX 3418 MS #002 GREENVILLE, SC 29602	1 RADFORD FERRY RD	
161.02	25.05		1	SOUTH AMBOY DEVELOPMENT CO, LLC 100 LENOX DR, SUITE 100 LAWRENCEVILLE, NJ 08648	MAIN ST	
161.02	25.06		15C	SOUTH AMBOY REDEVELOPMENT AGENCY 140 N BROADWAY SOUTH AMBOY, NJ 08879	MAIN ST	
161.02	25.08		1	NEW SOUTH AMBOY DEVELOPMENT CO, LLC 100 LENNOX DR, SUITE 100 LAWERENCEVILLE, NJ 08648	MAIN STREET	



LOCATION MAP
SCALE: 1" = 400'

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	OVERALL SITE PLAN
3	GENERAL NOTES AND STANDARD LEGEND
4	ESTIMATE OF QUANTITIES
5	ENVIRONMENTAL PLAN
6 – 7	EXISTING CONDITIONS PLANS
8 – 9	SITE CLEARING & ENVIRONMENTAL REMEDIATION PLANS
10	SITE PREPARATION PLAN
11 – 12	SITE PLANS
13 – 14	CURBING, SIGNING AND STRIPING PLANS
15 – 16	GRADING PLANS
17 – 18	DRAINAGE & UTILITY PLANS
19 – 22	SOIL EROSION AND SEDIMENT CONTROL PLANS
23 – 26	LANDSCAPE PLANS
27 – 30	PAVILION PLANS
31 – 32	LIGHTING PLANS AND DETAILS
33 – 36	ELECTRICAL PLANS
37	SECURITY AND WI-FI PLAN
39	FORCE MAIN SANITARY SEWER PROFILES
40 – 51	CONSTRUCTION DETAILS
52 – 54	STAIR & RAMP PLANS
55	PRECAST BLOCK RETAINING WALL PLANS
56 – 63	BULKHEAD PLANS
64 – 65	DOCK PLAN & DETAILS
66 – 70	DREDGING PLANS

No.	Date	Revision	Revised By	Checked By

400 0 400 800
SCALE IN FEET

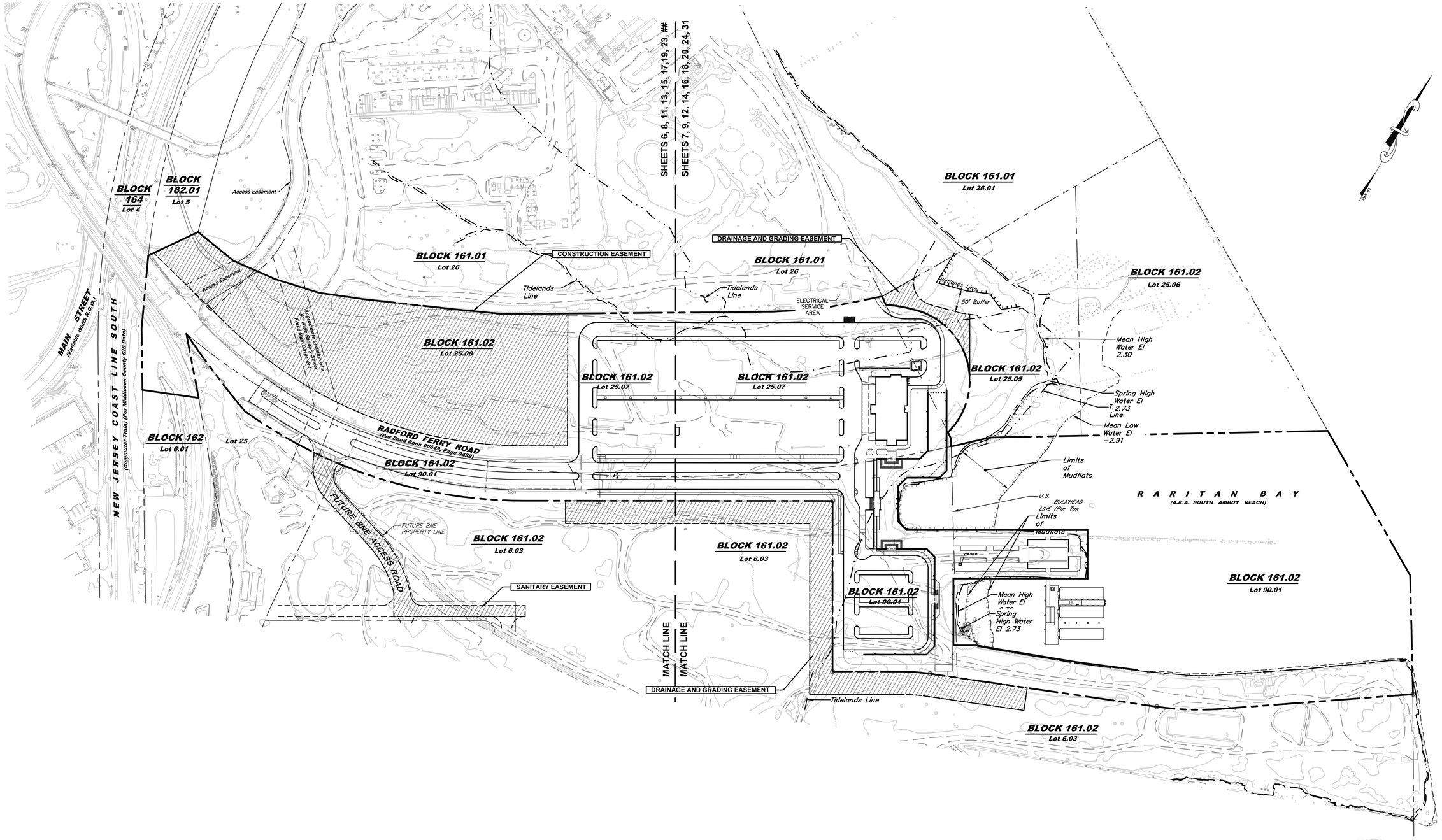
FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

COVER SHEET
FOR
SOUTH AMBOY FERRY TERMINAL
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 300'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	1 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-CVR1.dwg 1 Cover Sheet



NOTES:

1. SEE SHEETS 6 AND 7 FOR THE EXISTING CONDITIONS PLAN.
2. SEE SHEETS 11 AND 12 FOR THE SITE PLAN.

No.	Date	Revision	Revised By	Checked By

100 0 100 200
SCALE IN FEET

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1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
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OVERALL SITE PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 100'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	2 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SP-OVR1.dwg 2 Overall Site Plan

GENERAL NOTES:

1. CONSTRUCTION PRACTICES SHALL BE IN ACCORDANCE WITH THE **NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2019**, AS AMENDED BY THE SUPPLEMENTARY SPECIFICATIONS SPECIFIC TO THIS CONSTRUCTION CONTRACT.

2. PRIOR TO BEGINNING CONSTRUCTION THE **CONTRACTOR**, IN CONJUNCTION WITH THE **ENGINEER** AND THE INSPECTOR, SHALL DOCUMENT THE EXISTING ON SITE AND ADJOINING OFF SITE CONDITIONS, BY MEANS OF DATE STAMPED **DIGITAL VIDEO** SUPPLEMENTED WITH DATE STAMPED **DIGITAL PHOTOGRAPHS** AND DATED WRITTEN NOTES. AREAS OF SPECIAL CONCERN MAY BE DOCUMENTED DURING THE COURSE OF THE CONTRACT, BY APPROVAL OF THE **ENGINEER**, AND ONLY IF THE DOCUMENTATION IS MADE IN CONJUNCTION WITH THE **ENGINEER** AND THE INSPECTOR PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION IN THE AREA CONCERNED. COPIES OF ALL DIGITAL AND WRITTEN MATERIAL SHALL BE PROVIDED TO THE **CITY OF SOUTH AMBOY** PRIOR TO COMMENCEMENT OF WORK. DOCUMENTATION OF THE EXISTING ON SITE AND ADJOINING OFF SITE CONDITIONS SHALL BE USED IN THE EVENT OF ANY DISPUTE ARISING DURING THE COURSE OF CONSTRUCTION. THE CITY OF SOUTH AMBOY WILL REJECT ALL CLAIMS WHICH ARE NOT VERIFIED BY THIS PRIOR DOCUMENTATION.

3. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE **STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY**.

4. ALL SOIL EROSION MEASURES SHALL BE IN PLACE PRIOR TO ANY GROUND DISTURBANCE.

5. USING METHODS AND PRACTICES, SET FORTH BY THE **NEW JERSEY STATE SOIL CONSERVATION COMMITTEE'S STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY**, THE **CONTRACTOR** SHALL MAINTAIN TEMPORARY STABILIZATION, DUST CONTROL, AND SEEDING.

6. THE **CONTRACTOR** SHALL PREPARE AND SUBMIT ALL DOCUMENTS TO OBTAIN ALL PERMITS AND APPROVALS NECESSARY FOR THIS WORK. THE CHARGES TO PREPARE THE DOCUMENTS AND THE FEES REQUIRED FOR ALL PERMITS, APPROVALS, AND REGISTRATIONS SHALL BE PAID BY THE **CONTRACTOR** IN ACCORDANCE WITH **SUBSECTION 107.01.02**.

7. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL–INCLUSIVE. THE **CONTRACTOR** SHALL VERIFY THEIR LOCATION AND COMPLETENESS PRIOR TO THE BEGINNING OF WORK. NO WORK SHALL BEGIN UNTIL THE **CONTRACTOR** PROVIDES THE **ENGINEER** WITH THE CONFIRMATION NUMBER OBTAINED FROM THE **ONE–CALL SYSTEM** IN ACCORDANCE WITH THE **UNDERGROUND FACILITY PROTECTION ACT**.

8. IT SHALL BE THE **CONTRACTOR'S** RESPONSIBILITY TO VISIT THE SITE BEFORE BIDDING ON THE PROJECT TO DETERMINE IF THERE ARE EXISTING ABOVE GROUND UTILITIES THAT MAY INFLUENCE THE PLANNED CONSTRUCTION ACTIVITY. IT SHALL ALSO BE THE **CONTRACTOR'S** RESPONSIBILITY TO CONTACT ANY OF THE UTILITIES NOTICED IN THE FIELD OR SHOWN ON THE CONSTRUCTION PLANS TO ACQUIRE INFORMATION REGARDING SAID UTILITY. IT IS THEN THE **CONTRACTOR'S** RESPONSIBILITY TO ACCOUNT IN THE BID FOR ANY NON TYPICAL CONSTRUCTION TECHNIQUE NECESSARY TO COMPLETE THE PROJECT BASED ON THE ABOVE FINDINGS.

9. IT SHALL BE THE **CONTRACTOR'S** RESPONSIBILITY TO VERIFY THE INVERT ELEVATION, PIPE SIZES, NUMBER OF PIPE PENETRATIONS AND ANGLE OF PENETRATION OF ANY EXISTING DRAINAGE DIRECTLY CONNECTING TO PRECAST UNITS PRIOR TO ORDERING THE UNITS. ANY UNITS REQUIRING REPLACEMENT DUE TO INVERT ELEVATION, PIPE SIZES, OR OTHER INCONSISTENCIES SHALL BE DONE SO AT THE **CONTRACTOR'S** EXPENSE AND AT NO ADDITIONAL COST TO THE **CITY OF SOUTH AMBOY**.

10. ANY EXISTING PIPES WHICH ARE TO REMAIN IN AREAS OF EXCAVATION MAY BE UNDER CONDITIONS OF MINIMAL COVER. CARE SHOULD BE TAKEN NOT TO DAMAGE EXISTING PIPES AND STRUCTURES IN AREAS WHERE THEY ARE TO REMAIN. EXISTING PIPE AND STRUCTURES IN AREAS WHERE THEY ARE TO REMAIN, DAMAGED DURING EXCAVATION OR CONSTRUCTION, SHALL BE REPAIRED OR REPLACED AS INSTRUCTED BY THE **ENGINEER**, AT THE EXPENSE OF THE **CONTRACTOR** AND AT NO ADDITIONAL COST TO THE **CITY OF SOUTH AMBOY**.

11. THE **CONTRACTOR** SHALL BE RESPONSIBLE FOR ALL ASPECTS OF CONSTRUCTION DEWATERING IF REQUIRED TO RENDER AND MAINTAIN EXCAVATIONS IN A DEWATERED AND HYDROSTATICALLY RELIEVED CONDITION. THE **CONTRACTOR** SHALL DESIGN, FURNISH, INSTALL, OPERATE, MONITOR, MAINTAIN AND REMOVE THE DEWATERING SYSTEM. PRIOR TO BEGINNING ANY WORK ON THE DEWATERING SYSTEM, THE **CONTRACTOR** SHALL SUBMIT A DETAILED DEWATERING PLAN, SIGNED AND SEALED BY A **NJ PROFESSIONAL ENGINEER**, TO THE **CITY OF SOUTH AMBOY** AND THE **FREEHOLD SOIL CONSERVATION DISTRICT** FOR APPROVAL. THE **CONTRACTOR** SHALL BE RESPONSIBLE FOR OBTAINING ALL APPROVALS AND PERMITS NECESSARY FOR TEMPORARY DEWATERING. THE COST OF DESIGNING FURNISHING, INSTALLING, OPERATING, MONITORING, MAINTAINING AND REMOVING A DEWATERING SYSTEM AND ANY MATERIALS, EQUIPMENT AND LABOR NECESSARY FOR AND INCIDENTAL TO SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS ITEMS REQUIRING SUCH WORK. ANY TEMPORARY DEWATERING REQUIRED FOR TEST PITS SHALL BE THE RESPONSIBILITY OF THE **CONTRACTOR** AND SHALL BE PAID FOR UNDER THE PRICE BID FOR THE VARIOUS ITEMS REQUIRING SUCH WORK.

12. THE EDGES OF ANY AREA OF EXCAVATION, ADJACENT TO OR CROSSING, ANY PAVED OR CONCRETE SURFACE, SHALL BE SAW CUT TO THE FULL DEPTH OF THE PAVING OR CONCRETE. SAWCUTTING WILL NOT BE MEASURED SEPARATELY. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS PAY ITEMS REQUIRING SAWCUTTING.

13. EXISTING FEATURES TO BE RESET/RELOCATED OR REMOVED IN THE PROJECT, FOR WHICH THERE IS NO PAY ITEM, SHALL BE RESET/RELOCATED OR REMOVED UNDER THE PRICE BID FOR THE ITEM **CLEARING SITE**.

14. THE **CONTRACTOR** SHALL BE RESPONSIBLE FOR MAINTAINING DRIVEWAY ACCESS AT ALL LOCATIONS THROUGHOUT THE DURATION OF THE PROJECT. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE ITEM **CLEARING SITE**.

15. THE **CONTRACTOR** SHALL PROVIDE SMOOTH DRIVABLE TRANSITIONS BETWEEN EXISTING AND PROPOSED PAVEMENT IN DRIVEWAY AREAS AND AT CONSTRUCTION LIMITS. THE EXACT LIMITS OF PAVEMENT CONSTRUCTION MAY BE ADJUSTED BY THE **ENGINEER** IN THE FIELD.

16. THE **CONTRACTOR** SHALL EXERCISE CAUTION SO AS NOT TO DAMAGE THE ROOT SYSTEM OF ANY PLANTINGS TO REMAIN. ALL ROOTS OF ANY PLANTS OR TREES TO REMAIN, WHICH ARE EXPOSED DURING CONSTRUCTION, SHALL BE WATERED AND KEPT SHADED OR COVERED WITH WET STRAW, MOSS OR OTHER SUITABLE MATERIAL UNTIL THE FINAL GRADING IS COMPLETED. THE **CONTRACTOR** SHALL REPLACE ANY EXISTING PLANTINGS DAMAGED DURING CONSTRUCTION, AS IN THE OPINION OF THE **ENGINEER**, WITH A PLANTING OF SIMILAR SPECIES, HEIGHT AND/OR CALIPER TO THE SATISFACTION OF THE **ENGINEER**, AT NO ADDITIONAL COST TO THE **CITY OF SOUTH AMBOY**. PLANT ESTABLISHMENT AND REPLACEMENT PERIOD WILL BE SPECIFIED IN THE **STANDARD SPECIFICATIONS**.

17. NO TREES SHALL BE REMOVED UNTIL VERIFIED IN THE FIELD BY THE **ENGINEER**. NO SEPARATE PAYMENT WILL BE MADE FOR TREE AND/OR SHRUB TRIMMING OR REMOVAL. ALL COSTS THEREOF SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM **CLEARING SITE**.

18. STRIPPED MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STORED AND REUSED AS REQUIRED FOR THE PROJECT. EXCESS STRIPPED MATERIAL SHALL BE DISPOSED OF OFF–SITE BY THE **CONTRACTOR**. THE COST OF STRIPPING SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM **EXCAVATION, UNCLASSIFIED**. NO SEPARATE PAYMENT WILL BE MADE FOR THE VOLUME OF MATERIAL STRIPPED.

19. HORIZONTAL DATUM IS **NAD83** AND VERTICAL DATUM IS **NAVD88** BASED ON GPS OBSERVATIONS.

20. A PRE–CONSTRUCTION MEETING SHALL BE HELD WITH THE **CITY OF SOUTH AMBOY'S** ENGINEERING REPRESENTATIVES PRIOR TO COMMENCING ANY CONSTRUCTION ON THE PROJECT.

21. THE **CONTRACTOR** SHALL PROVIDE AND MAINTAIN ALL NECESSARY SAFEGUARDS TO PROTECT PUBLIC SAFETY AND ADJOINING PROPERTIES.

22. THE **CONTRACTOR** SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS.

23. THE CONTRACTOR'S ATTENTION IS CALLED TO THE POTENTIAL FOR CONFLICTS BETWEEN THE EXISTING WALL REMNANTS AND PROPOSED STEEL SHEET PILE WALL. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE PROPOSED SHEET PILE WALL IN THE LOCATIONS AND DEPTHS SHOWN WITHIN THESE CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMEDY SUCH CONFLICTS AND SUCH WILL BE DEEMED MEANS AND METHODS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF ALL STRUCTURES, SOILS, UTILITIES, SITE FEATURES, ETC. THAT MAY BE IMPACTED BY HIS OR HER WORK. ALL COSTS FOR SUCH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND AT NO ADDITIONAL COST TO THE CITY OF SOUTH AMBOY.

NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD LEGEND

Linear Features

Existing	PROPOSED	
W	W	Water Main (Size)
G	G	Gas Main (Size)
T	T	Telephone Conduit
E	E	Electric Conduit (Highway or Utility)
CTV	CTV	Cable TV
FO	FO	Fiber Optic
(Size & Type) (Over 30" – Draw to Size)	(SIZE & TYPE)	Sanitary Sewers or Storm Drains
		Pavements (Concrete or Bituminous)
		Shoulders
		Curbs
(F) (C) 5+00 B.L.	(C) (F) B.L. 10+00	Slopes (Cut & Fill)
		Base Line
		Twp., City, County Lines
Existing R.O.W. Line	PROPOSED R.O.W. LINE	Right of Way Lines (Access Permitted)
Existing R.O.W. & No Access Line	PROP. R.O.W. & NO ACCESS LINE	Right of Way Lines (No Access)
		Easements
P.L.	P.L.	Property Line
X X X		Fence (Size & Type)
		Reset Fence
		Beam Guide Rail
		Reset Beam Guide Rail
		Noise Walls
		Wetland Limit Line
		Silt Fence
Ditch	DITCH	Ditches
		Railroad Tracks
		Tree Line
		Trench Drain

Topographical Features

Existing	PROPOSED	
		Inlets (Label Type)
		Inlets (Type ES)
		Manholes (Label Type or Utility)
		Reset (Inlets or Manholes)
		Reconstructed (Inlets or Manholes)
		Cast Iron Extension (Frame or Ring) (Inlet or Manhole)
		New Manhole Casting, Square Frame, Circular Cover
		R.C. End Section or C.M. Headwall
		Headwalls
		Headwalls & Aprons
W		Water Gate Valves
		Reset Water Gate Valves
G		Gas Gate Valves
		Reset Gas Gate Valves
Hyd.		Hydrants
		Reset Hydrants
		Utility Pole (Type & Number)
		Utility Pole To Be Removed
		Utility Pole To Be Removed And Replaced
	TEMP	Temporary Utility Pole
		Traffic Signal
J.B.	J.B.	Junction Box
		Fiber Optic Junction Box
J.B. & Light	J.B.	Junction Box Foundation
		Signs
		Vertical Panels

Topographical Features

Existing	PROPOSED	
		Guide Rail End Terminals
		Beam Guide Rail Anchorages
Mon.		Monuments
		ROW Monument (ROW Control Points)
	TEST PIT NUMBER	Test Pit
Boring Number	BORING NUMBER	Borings (Boring Number)
		Decidous Tree (Size, Kind)
		Evergreens
		Bush
		Hedges
		Swamp

Double Reference Codes

LE-DOQ - EST. & DIST. OF QTY - ROADWAY
TS - TYPICAL SECTIONS
PSI - PLAN SHEET INDEX
C - CONSTRUCTION PLANS
EP - ENVIRONMENTAL PLANS
D - DRAINAGE PLANS
P - PROFILES
T - TIES
GR - GRADING AND DRAINAGE
TC - TRAFFIC CONTROL (AND STAGING PLANS)
E - ELECTRICAL PLANS
TSP - TRAFFIC SIGNAL PLANS
HL - HIGHWAY LIGHTING PLANS
L - LANDSCAPE PLANS
SL - SIGN LOCATION PLANS
SS - TRAFFIC SIGNING AND STRIPING PLANS
STD - SIGN TEXT DETAILS
MS - METHOD OF CROSS SECTIONS
X - CROSS SECTIONS
DTL - CONSTRUCTION DETAILS
AR - ARCHITECTURAL PLANS
EOQB - ESTIMATE OF QUANTITIES - BRIDGE
B - BRIDGE PLANS

Miscellaneous Symbols

- Items With No Alternate
- Milling
- Removal of Concrete Base Course & Concrete Surface Courses
- PROFILE / LEVEL LINE
- High Point
- Low Point
- B.M. — Bench Mark
- CONCRETE BRIDGE APPROACH

ABBREVIATIONS USED IN THIS CONTRACT

AH., BK.	AHEAD, BACK	J.B.	JUNCTION BOX	RCP, R.C.P.	REINFORCED CONCRETE PIPE
℄, B.L.	BASELINE	LT., RT.	LEFT, RIGHT	RE, R.E.	RESIDENT ENGINEER
B.M.	BENCH MARK	L.O.P.	LIMIT OF PAVEMENT (PAVING)	RMC, R.M.C.	RIGID METALLIC CONDUIT
B.T.	BELL TELEPHONE	L.O.M.	LIMIT OF MILLING	RNMC, R.N.M.C.	RIGID NON-METALLIC CONDUIT
BIT., BITUM.	BITUMINOUS	M.B.	MAILBOX	ROW, R.O.W.	RIGHT OF WAY
BLDG.	BUILDING	M.P.	MILE POST	R.R.	RAILROAD
℄, C.L.	CENTERLINE	MAX.	MAXIMUM	RTE., RT.	ROUTE
C.I.P.	CAST IRON PIPE	MIN.	MINIMUM	SAN.	SANITARY
C.M.P.	CORRUGATED METAL PIPE	NO.	NUMBER	SDWK.	SIDEWALK
CONC.	CONCRETE	N.T.S.	NOT TO SCALE	S.H.D.	STATE HIGHWAY DEPARTMENT
CULV.	CULVERT	PAVT.	PAVEMENT	SHLD.	SHOULDER
D, DIA.	DIAMETER	PERF.	PERFORATED	℄, S.L.	SURVEY LINE
D.C.	DROP CURB	P.G.L.	PROFILE GRADE LINE	S.O.D.	SUBBASE OUTLET DRAIN
DE	DITCH EXCAVATION	℄, P.L.	PROPERTY LINE, PROFILE LINE	STY.	STORY
DEP., DP	DEPRESSED CURB	PK	PARKER KAYLON MASONRY NAIL	T	TANGENT
DH	DRILL HOLE	POC, P.O.C.	POINT ON CURVE	TBA	TO BE ABANDONED
DWY	DRIVEWAY	POL, P.O.L.	POINT ON LINE	TBR	TO BE REMOVED
E.B., W.B., N.B., S.B.	EASTBOUND, WESTBOUND NORTHBOUND, SOUTHBOUND	POT, P.O.T.	POINT ON TANGENT	TEL.	TELEPHONE
		PRC, P.R.C.	POINT OF REVERSE CURVE	TEMP.,	TEMPORARY
EL., ELEV.	ELEVATION	PROP.	PROPOSED	THK., TH.	THICK
EXIST.	EXISTING	PT, P.T.	POINT OF TANGENCY	TYP.	TYPICAL
GR.	GRATE	PCP, P.C.P.	POLYVINYL CHLORIDE PIPE,	U.D.	UNDERDRAIN
HT.	HEIGHT	PVC, P.V.C.	POINT OF VERTICAL CURVATURE	U.O.N.	UNLESS OTHERWISE NOTED
H.W.	HEADWALL	PVI, P.V.I.	POINT OF VERTICAL INTERSECTION	UP, U.P.	UTILITY POLE
HYD.	HYDRANT	PVT, P.V.T.	POINT OF VERTICAL TANGENCY, PAVEMENT	VAR.	VARIABLE, VARIES
INV.	INVERT	R	RADIUS	W.C.V.C.	WHITE CONCRETE VERTICAL CURB
IP	IRON PIN	RCCP, R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE	WM	WATER METER
HP	HIGH POINT			X-SECT	CROSS SECTION
LP	LOW POINT				

ELECTRICAL PLAN ABBREVIATIONS

C	CUTOFF LUMINAIRE, TYPE
E	EXPRESSWAY LUMINAIRE
ID	IMAGE DETECTOR
IDC	IMAGE DETECTOR CABLE
JBF	JUNCTION BOX FOUNDATION
L	LUMINAIRE
LMA-A	LIGHTING MAST ARM, ALUMINUM
LMA-S	LIGHTING MAST ARM, STEEL
LSA	LIGHTING STANDARD, ALUMINUM
LSF	LIGHTING STANDARD, FIBERGLASS
LSS	LIGHTING STANDARD, STEEL
MAS	MAST ARM SIGN
MSC II	MEDIUM SEMI-CUTOFF LUMINAIRE, TYPE 2
MSC III	MEDIUM SEMI-CUTOFF LUMINAIRE, TYPE 3
PB	PUSH BUTTON
PSH	PEDESTRIAN SIGNAL HEAD
PSS	PEDESTRIAN SIGNAL STANDARD
TSH	TRAFFIC SIGNAL HEAD
TSMA-A	TRAFFIC SIGNAL MAST ARM, ALUMINUM
TSMA-S	TRAFFIC SIGNAL MAST ARM, STEEL
TSS-C	TRAFFIC SIGNAL STANDARD, ALUMINUM "C"
TSS-K	TRAFFIC SIGNAL STANDARD, ALUMINUM "K"
TSS-S	TRAFFIC SIGNAL STANDARD, STEEL
TSS-SC	TRAFFIC SIGNAL STANDARD, STEEL COMBINATION
TSS-T	TRAFFIC SIGNAL STANDARD, ALUMINUM "T"
UL-P	UNDERDECK LIGHTING, TYPE "P"
UL-W	UNDERDECK LIGHTING, TYPE "W"
V	VERTICAL LUMINAIRE

N. J. PLANE COORDINATE SYSTEM

North Arrow To Be Used On Standard Construction Sheets Where Bearings Refer To N. J. Plane Coordinate System

N.T.S.

PERMIT CONDITIONS:

1. THE **CONTRACTOR'S** ATTENTION IS DIRECTED TO SUBSECTION **107.01.02** OF THE PROJECT SPECIAL PROVISIONS AS WELL AS THE ENVIRONMENTAL PLAN ON SHEET XX REGARDING PERMIT REQUIREMENTS AND LIMITATIONS.

2. THE **CONTRACTOR** SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE PERMITS. A COPY OF FEDERAL, STATE AND COUNTY PERMITS ISSUED FOR THE PROJECT IS INCLUDED IN THE SPECIAL PROVISIONS. FAILURE BY THE **CONTRACTOR** TO ACQUAINT **HIMSELF/HERSELF** WITH THE REQUIREMENTS STIPULATED IN THE PERMITS SHALL NOT RELIEVE **HIM/HER** FROM RESPONSIBILITY FOR PROPERLY ESTIMATING THE COST TO SUCCESSFULLY PERFORM THE WORK.

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

GENERAL NOTES AND STANDARD LEGEND

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	GTB		13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
GTB	SAT	----	3 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-GN.dwg 3 General Notes AND Standard Legend

ESTIMATE OF QUANTITIES

NJDOT PAY ITEM	"PAY ITEM NUMBER"	DESCRIPTION	"CONTRACT QUANTITY"	UNIT	"PLAN SHEET TOTALS"	"IF AND WHERE DIRECTED"
151006M	1	PERFORMANCE BOND AND PAYMENT BOND	DOLLAR	DOLL	1	
152015P	2	POLLUTION LIABILITY INSURANCE	DOLLAR	DOLL	1	
153003P	3	PROGRESS SCHEDULE	LUMP SUM	LS	1	
153005M	4	PROGRESS SCHEDULE UPDATE	6	UNIT	6	
153011M	5	TRAINEES	20,000	HR	20,000	
154003P	6	MOBILIZATION	LUMP SUM	LS	1	
155006M	7	FIELD OFFICE TYPE B SET UP	1	UNIT	1	
155024M	8	FIELD OFFICE TYPE B MAINTENANCE	24	MO	24	
157004M	9	CONSTRUCTION LAYOUT	DOLLAR	DOLL	1	
158006M	10	SILT FENCE	2,520	LF	2,520	
158033M	11	INLET FILTER TYPE 2, 2' X 4'	31	UN	31	
158048M	12	FLOATING TURBIDITY BARRIER, TYPE 3	1,350	LF	1,350	
158060M	13	CONSTRUCTION DRIVEWAY	100	TON	100	
158063P	14	CONCRETE WASHOUT SYSTEM	LUMP SUM	LS	1	
158072M	15	OIL ONLY EMERGENCY SPILL KIT, TYPE 1	2	UNIT	2	
158090M	16	TREE PROTECTION	500	LF		500
159015M	17	CONSTRUCTION IDENTIFICATION SIGN 4' X 6'	1	UNIT	1	
160004M	18	FUEL PRICE ADJUSTMENT	DOLLAR	DOLL	1	
160007M	19	ASPHALT PRICE ADJUSTMENT	DOLLAR	DOLL	1	
161003P	20	FINAL CLEANUP	LUMP SUM	LS	1	
201003P	21	CLEARING SITE	LUMP SUM	LS	1	
201018M	22	MONITORING WELL	8	UNIT	8	
201030M	23	SEALING OF ABANDONED WELL	8	UNIT	8	
202006M	24	EXCAVATON, TEST PIT	50	CY		50
202009P	25	EXCAVATION, UNCLASSIFIED	43,465	CY	43,465	
202015P	26	EXCAVATION, REGULATED MATERIAL	2,815	CY	2,815	
202024M	27	DISPOSAL OF REGULATED MATERIAL	4,900	TON	4,900	
202027M	28	DISPOSAL OF REGULATED MATERIAL,HAZARDOUS	275	TON		275
202063P	29	TREATMENT OPERATIONS AND REPORTING OF GROUNDWATER MANAGEMENT	LUMP SUM	LS	1	
202ANS1M	30	DREDGING, PROCESSING, TRANSPORT AND PLACEMENT	14,400	CY	14,400	
203009P	31	I-9 SOIL AGGREGATE	16,225	CY	16,225	
203015P	32	I-11 SOIL AGGREGATE	7,150	CY	7,150	
203021P	33	I-14 SOIL AGGREGATE	29,000	CY	29,000	
203040P	34	GEOTEXTILE	42,560	SY	42,560	
203050M	35	CONTROLLED LOW STRENGTH MATERIAL	100	CY		100
203060P	36	VERTICAL WICK DRAIN	101,250	LF	101,250	
203063M	37	VERTICAL WICK DRAIN OBSTRUCTION CLEARANCE	3,375	LF		3,375
203066P	38	SLOPE INCLINOMETER CASING	150	LF	150	
203072P	39	SETTLEMENT PLATFORM	12	UN	12	
301NS1P	40	PERVIOUS PAVEMENT SUBBASE	8,050	CY	8,050	
302006M	41	DENSE-GRADED AGGREGATE BASE COURSE, 4" THICK	3,100	SY	3,100	
302012P	42	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	6,575	SY	6,575	
401009P	43	HMA MILLING, 3" OR LESS	5,000	SY	5,000	
401030M	44	TACK COAT	500	GAL	500	
401042M	45	HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE	688	TON	688	
401096M	46	HOT MIX ASPHALT 19 M 64 BASE COURSE	133	TON	133	
402006M	47	MODIFIED OPEN-GRADED 9.5 MM FRICTION COURSE	3,000	TON	3,000	
402NS1M	48	MODIFIED OPEN-GRADED 19 MM FRICTION COURSE	7,500	TON	7,500	
501009P	49	TEMPORARY COFFERDAM	LUMP SUM	LS	1	
502006M	50	PRE-BORED HOLE	200	LF	200	
502018M	51	DYNAMIC PILE LOAD TEST	2	UNIT	2	
502NS1M	52	CONCRETE-FILLED STEEL PIPE PILE, 12.75" DIAMETER	800	LF	800	
504009P	53	REINFORCEMENT STEEL, GALVANIZED	251,291	LB	251,291	
504NS1M	54	CONCRETE SPLASH PAD	1,825	CY	1,825	
504NS2M	55	CONCRETE PAD - PLAZA WALKWAY & PAVILION - 8 INCH	300	CY	300	
504NS3M	56	CONCRETE SHEET PILE CAP	274	CY	274	
504NS4P	57	CONCRETE FOUNDATION, PAVILION	127	CY	127	
504NS5P	58	CONCRETE STAIRS, TYPE 1	2	UN	2	
504NS6P	59	CONCRETE STAIRS, TYPE 2	1	UN	1	
504NS7P	60	CONCRETE STAIRS, TYPE 3	1	UN	1	
504NS8P	61	CONCRETE HANDICAP RAMPS	2	UN	2	
504NS9P	62	CONCRETE PIPE COLLAR	LUMP SUM	LS	1	
506NS1M	63	STRUCTURAL STEEL, GALVANIZED	348,280	LB	348,280	
509NS1P	64	RAILING, BULKHEAD	1,350	LF	1,350	
509NS2P	65	RAILING, PRECAST CONCRETE WALL	940	LF	940	
509NS3P	66	RAILING, STAIRWAYS	LUMP SUM	LS	1	
509NS4P	67	RAILING, HANDICAP RAMPS	LUMP SUM	LS	1	
511006P	68	STEEL SHEET PILING	87,500	SF	87,500	
511NS1P	69	STEEL TIE-BACK SHEETING	19,800	SF	19,800	
511NS2P	70	7-PILE DOLPHIN CLUSTER	4	UNIT	4	
513003P	71	RETAINING WALL, LOCATION NO. 1	8,255	SF	8,255	
513003P	72	RETAINING WALL, LOCATION NO. 2	540	SF	540	
513NS1P	73	TEMPORARY RETAINING WALL, SURCHARGE	LUMP SUM	LS	1	
515NS1P	74	FLOATING DOCK SYSTEM	LUMP SUM	LS	1	
516NS1P	75	ALUMINUM GANGWAYS, RAMPS, PLATFORMS, RAILINGS AND DECKING	LUMP SUM	LS	1	
601122P	76	15" REINFORCED CONCRETE PIPE	895	LF	895	
601124P	77	18" REINFORCED CONCRETE PIPE	365	LF	365	
601128P	78	24" REINFORCED CONCRETE PIPE	476	LF	476	
601132P	79	30" REINFORCED CONCRETE PIPE	252	LF	252	
601134P	80	36" REINFORCED CONCRETE PIPE	250	LF	250	
601136P	81	42" REINFORCED CONCRETE PIPE	576	LF	576	
601NS1P	82	6" POLYVINYL CHLORIDE PIPE	234	LF	234	
601NS2P	83	3" PERFORATED POLYVINYL CHLORIDE, UNDERDRAIN PIPE, SCHEDULE 80	8,712	LF	8,712	
601NS3P	84	3" POLYVINYL CHLORIDE INSPECTION PORT	70	UN	70	
602006P	85	CONCRETE HEADWALL	9	CY	9	
602012M	86	INLET, TYPE B	32	UN	32	

ESTIMATE OF QUANTITIES

NJDOT PAY ITEM	"PAY ITEM NUMBER"	DESCRIPTION	"CONTRACT QUANTITY"	UNIT	"PLAN SHEET TOTALS"	"IF AND WHERE DIRECTED"
602060M	87	MANHOLE, 6' DIAMETER	3	UN	3	
602153M	88	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING	1	UN	1	
602210M	89	BICYCLE SAFE GRATE	33	UN	33	
602213M	90	CURB PIECE	1	UN	1	
603NS1P	91	RIPRAP STONE CHANNEL PROTECTION, 42" THICK (D50=14")	45	SY	45	
606015P	92	CONCRETE SIDEWALK, REINFORCED, 5" THICK	3,100	SY	3,100	
606084P	93	DETECTABLE WARNING SURFACE	17	SY	17	
606140P	94	TREE GRATES	10	UN	10	
606NS1P	95	BRICK PAVING BLOCKS	2,010	SY	2,010	
607021P	96	9" X 18" CONCRETE VERTICAL CURB	10,200	LF	10,200	
607NS1M	97	WHEEL STOP	13	UN	13	
610003M	98	TRAFFIC STRIPES, 4"	16,920	LF	16,920	
610008M	99	TRAFFIC MARKINGS, SYMBOLS	1,775	SF	1,775	
610017M	100	TRAFFIC MARKING LINES, 24"	500	LF	500	
612003P	101	REGULATORY AND WARNING SIGN	206	SF	206	
615NS1P	102	PRE-ENGINEERED PAVILION	LUMP SUM	LS	1	
620NS1P	103	ENTRANCE SIGN & PILLERS	LUMP SUM	LS	1	
625NS1P	104	RAILROAD TRACK INTERPRETIVE DISPLAY	LUMP SUM	LS	1	
625NS2P	105	RAISED STONE SLEEPER DISPLAY	3	UN	3	
625NS3P	106	CANTENARY LIGHTING STRUCTURE	3	UN	3	
630NS1P	107	INTERPRETIVE EXHIBIT PANEL	12	UN	12	
630NS2P	108	GROUND MARKERS, HISTORICAL	17	UN	17	
630NS3P	109	FLAGPOLE, 35 FT	4	UN	4	
630NS4P	110	FLAGPOLE, 40 FT	2	UN	2	
630NS5P	111	DECORATIVE BOLLARDS	10	UN	10	
630NS6P	112	PRECAST CONCRETE PLANTERS	21	UN	21	
630NS7P	113	TRASH RECEPTICALS	15	UN	15	
630NS8P	114	BENCHES	32	UN	32	
630NS9P	115	BICYCLE RACKS	3	UN	3	
651243P	116	WATER SERVICE CONNECTION	1	UNIT	1	
651245M	117	FIRE HYDRANT	3	UNIT	3	
651285P	118	WATER METER PIT	LUMP SUM	LS	1	
651375P	119	2" HIGH DENSITY POLYETHYLENE WATER PIPE	452	LF	452	
651NS1P	120	6" DUCTILE IRON WATER PIPE, CLASS 52	2,050	LF	2,050	
652236P	121	8" POLYVINYL CHLORIDE SEWER PIPE	694	LF	694	
652416P	122	2" HIGH DENSITY POLYETHLENE SEWER PIPE	1,507	LF	1,507	
652420M	123	MANHOLE, SANITARY SEWER	3	UN	3	
652NS1M	124	MANHOLE, SANITARY SEWER, SPECIAL	1	UN	1	
652NS2M	125	AIR RELEASE VALVE AND MANHOLE, SANITARY SEWER	1	UN	1	
652NS3M	126	PRESSURE CLEAN OUT VALVE AND MANHOLE, SANITARY SEWER	1	UN	1	
652NS4P	127	3" HIGH DENSITY POLYETHLENE SEWER PIPE	1,780	LF	1,780	
652NS5M	128	PUMP STATION PACKAGE NO. 1	LUMP SUM	LS	1	
652NS6M	129	PUMP STATION PACKAGE NO. 2	LUMP SUM	LS	1	
653NS1P	130	2" GAS MAIN, EXCAVATION AND BACKFILL	1,565	LF	1,565	
653081M	131	GAS SERVICE ALLOWANCE	DOLLAR	DOLL	1	
701030P	132	3" RIGID NONMETALLIC CONDUIT	25	LF	25	
701033P	133	4" RIGID NONMETALLIC CONDUIT	3,885	LF	3,885	
701195P	134	MULTIPLE LIGHTING WIRE, NO. 2 AWG	9,000	LF	9,000	
701196P	135	MULTIPLE LIGHTING WIRE, NO. 4 AWG	3,350	LF	3,350	
701198P	136	MULTIPLE LIGHTING WIRE, NO. 6 AWG	2,350	LF	2,350	
701201P	137	MULTIPLE LIGHTING WIRE, NO. 8 AWG	200	LF	200	
701208P	138	SERVICE WIRE, NO. 3/0 AWG	100	LF	100	
701NS1P	139	1 1/2" RIGID NONMETALLIC CONDUIT	7,080	LF	7,080	
701NS2P	140	MULTIPLE LIGHTING WIRE, NO. 3 AWG	8,500	LF	8,500	
701NS3P	141	ELECTRIC SERVICE, TRANSFORMER AND METER PACKAGE	LUMP SUM	LS	1	
701NS4M	142	FOUNDATION, TYPE 1	59	UN	59	
701NS5M	143	FOUNDATION, TYPE 2	11	UN	11	
701NS6P	144	ELECTRICAL HANDHOLE	8	UN	8	
701NS7M	145	ELECTRIC SERVICE ALLOWANCE	DOLLAR	DOLL	1	
701NS8M	146	FIBER OPTIC AND CABLE SERVICE ALLOWANCE	DOLLAR	DOLL	1	
703003M	147	LIGHTING STANDARD TYPE 1, SQUARE ALUMINUM	20	UN	20	
703010M	148	LIGHTING STANDARD TYPE 2, DECORATIVE	47	UN	47	
703018M	149	LUMINAIRE TYPE 1, PARKING AREA	20	UN	20	
703019M	150	LUMINAIRE TYPE 2, DECORATIVE	47	UN	47	
703NS1M	151	PAVILION LIGHTING, DECORATIVE	8	UN	8	
704NS1P	152	SITE SECURITY SYSTEM	LUMP SUM	LS	1	
804006P	153	TOPSOIL SPREADING, 5" THICK	24,500	SY	24,500	
804015P	154	BORROW TOPSOIL	3,400	CY	3,400	
806NS1P	155	FERTILIZING AND SEEDING, LAWN MIX	7,808	SY	7,808	
806NS2P	156	FERTILIZING AND SEEDING, MARINE GRASSLAND MIX	2,793	SY	2,793	
809003M	157	TOPSOILSTABILIZATION, TYPE 2 MAT	2,000	SY	2,000	
809003M	158	STRAW MULCHING	24,500	SY	24,500	
809NS1M	159	STONE MULCHING, 4 " THICK	628	SY	628	
811004M	160	LARGE DECIDUOUS TREE, 2-2 1/2" CALIPER, B&B	185	UN	185	
811039M	161	EVERGREEN TREES, 6-7 FT HIGH, B&B	101	UN	101	
811057M	162	DECIDUOUS SHRUB, 3-4 FT HIGH, B&B	139	UN	139	
811060M	163	DECIDUOUS SHRUB, 24-30" HIGH, B&B	382	UN	382	
811063M	164	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	805	UN	805	
811069M	165	EVERGREEN SHRUB, 36-42" HIGH, B&B	20	UN	20	
811078M	166	EVERGREEN SHRUB, 18-24" HIGH, #3 CONTAINER	16	UN	16	
811099M	167	GROUND COVER, #1 CONTAINER	20	UN	20	
811138M	168	PLANT ESTABLISHMENT AND MAINTENANCE PERIOD, 1 YEAR	LUMP SUM	LS	1	

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ESTIMATE OF QUANTITIES

FOR

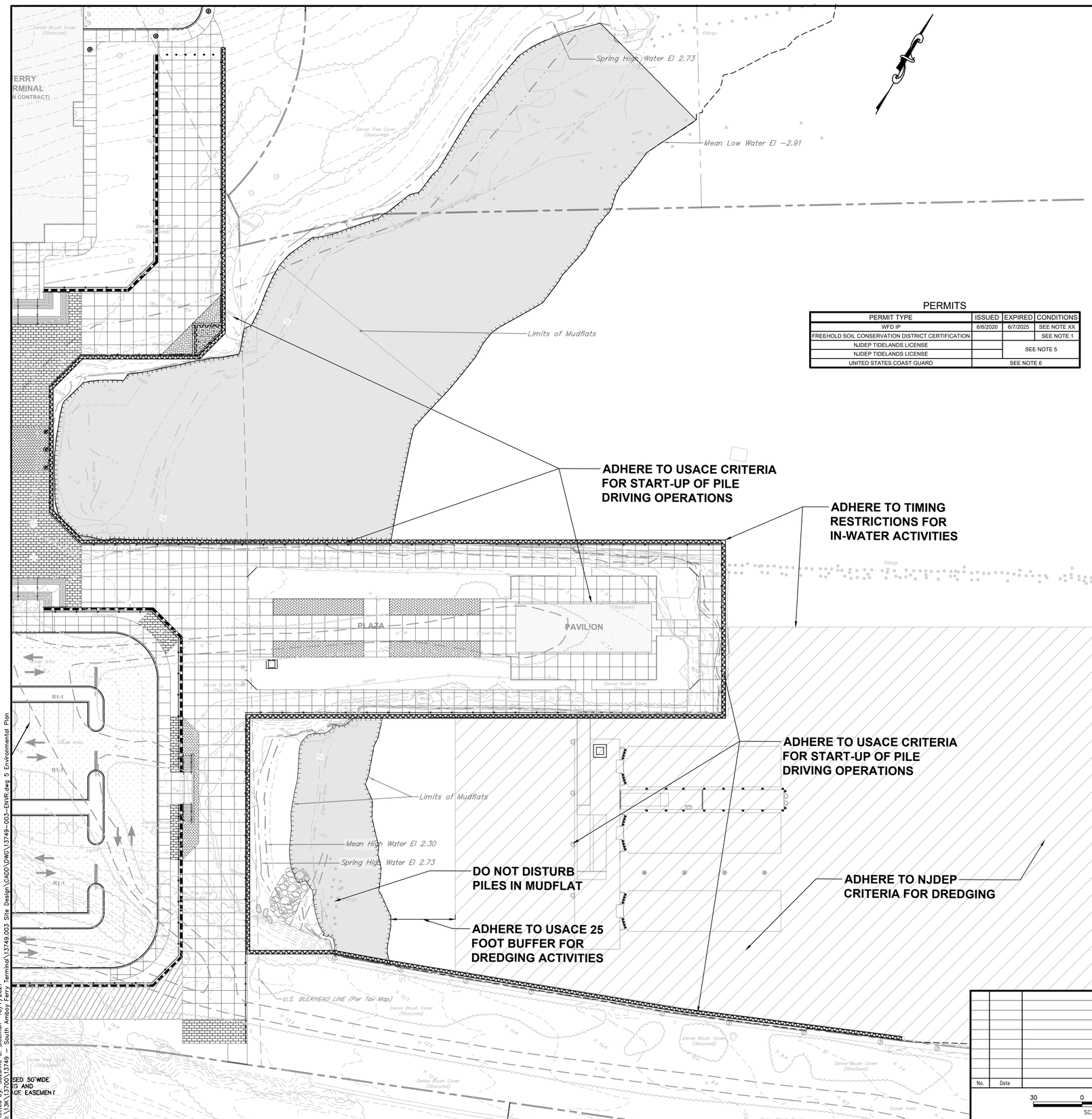
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	GTB		13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
GTB	JM	----	4 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CAD0\DWG\13749-003-GN.dwg 4 Estimate of Quantities



PERMITS

PERMIT TYPE	ISSUED	EXPIRED	CONDITIONS
WFD IP	6/8/2020	6/7/2025	SEE NOTE XX
FREEHOLD SOIL CONSERVATION DISTRICT CERTIFICATION			SEE NOTE 1
NJDEP TIDELANDS LICENSE		SEE NOTE 5	
NJDEP TIDELANDS LICENSE			
UNITED STATES COAST GUARD	SEE NOTE 6		

PERMIT CONDITIONS

1. SEE APPENDIX F OF THE SPECIAL PROVISIONS FOR ALL PERMITTING CONDITIONS WHICH MUST BE FOLLOWED FOR THE DURATION OF CONSTRUCTION.
2. A FRESHWATER WETLANDS ASSESSMENT OF THE PROJECT AREA WAS PERFORMED BY FRENCH & PARRELLO ASSOCIATES ON DECEMBER 19, 2018, AND REVEALED THAT FRESHWATER WETLANDS ARE NOT PRESENT (1) LANDWARD OF EXISTING BULKHEADS, (2) LANDWARD OF PROPOSED BULKHEAD LOCATIONS WHERE NO BULKHEADS ARE CURRENTLY PRESENT OR (3) WITHIN 50 FEET OF PROPOSED CONSTRUCTION NOT BOUNDED BY BULKHEADS. WETLANDS WERE ONLY IDENTIFIED AT THE NORTHEASTERN LIMITS OF LOT 25.05, BLOCK 161.02.
3. UNITED STATES ARMY CORPS OF ENGINEERS (USACE)
   - A. THE CONTRACTOR SHALL COMPLY WITH THE SECTION 106 MEMORANDUM OF AGREEMENT (MOA) BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION AND THE NEW JERSEY STATE HISTORIC PRESERVATION OFFICER, EXECUTED ON JULY 25, 2003, AMENDED DECEMBER 22, 2009, EXTENDED DECEMBER 17, 2019, AND AMENDED ON JULY 9, 2021. SHOULD ANY PREVIOUSLY UNKNOWN HISTORIC OR ARCHEOLOGICAL REMAINS BE ENCOUNTERED, OBSERVED OR IDENTIFIED WHILE ACCOMPLISHING THE ACTIVITIES AUTHORIZED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY USACE.
   - B. THE PERMITTEE SHALL AVOID IN-WATER WORK FROM JANUARY 1 TO MAY 31 OF ANY CALENDAR YEAR TO MINIMIZE IMPACTS TO WINTER FLOUNDER EARLY LIFE STAGE ESSENTIAL FISH HABITAT (EFH).
   - C. THE CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES (BMPS) TO MINIMIZE TURBIDITY DURING ALL IN-WATER WORK ACTIVITIES AS WELL AS PREVENT CONSTRUCTION MATERIALS, INCLUDING DEBRIS, FROM ENTERING ANY WATERBODY TO BECOME DRIFT OR POLLUTION HAZARDS. THE CONTRACTOR SHALL UTILIZE A TURBIDITY CURTAIN AROUND THE PROJECT AREA, AS PRACTICABLE.
   - D. TO PREVENT THE DISTURBANCE OF MUDFLATS, THE CONTRACTOR SHALL MAINTAIN A 25-FOOT BUFFER FROM THE TOP OF THE DREDGE AREA SLOPE TO THE WATERWARD EDGE OF THE MUDFLATS. TO AVOID ANY UNNECESSARY DISTURBANCES TO THE MUDFLATS, THE PERMITTEE SHALL NOT REMOVE PILES WITHIN THE MUDFLAT AREA. THE PERMITTEE SHALL RESTORE ANY AREAS OF MUDFLAT THAT MAY BE IMPACTED TEMPORARILY DURING CONSTRUCTION.
   - E. DURING THE INSTALLATION OF PILES AND SHEET PILING, THE CONTRACTOR SHALL UTILIZE A 20-MINUTE SOFT START AT THE BEGINNING OF EACH WORKDAY AND FOLLOWING CESSATION OF PILE DRIVING FOR A PERIOD OF 30 MINUTES OR LONGER. FOR IMPACT PILE DRIVING, PILE DRIVING SHALL COMMENCE WITH AN INITIAL SET OF THREE STRIKES BY THE HAMMER AT 40% ENERGY, FOLLOWED BY A ONE-MINUTE WAIT PERIOD, THEN TWO SUBSEQUENT 3-STRIKE SETS AT 40% ENERGY, WITH ONE-MINUTE WAITING PERIODS, BEFORE INITIATING CONTINUOUS IMPACT DRIVING. FOR VIBRATORY PILE INSTALLATION, PILE DRIVING WILL BE INITIATED FOR 15 SECONDS AT REDUCED ENERGY FOLLOWED BY A ONE-MINUTE WAITING PERIOD. THIS SEQUENCE OF 15 SECONDS OF REDUCED ENERGY DRIVING, ONE-MINUTE WAITING PERIOD SHALL BE REPEATED TWO ADDITIONAL TIMES, FOLLOWED IMMEDIATELY BY PILE-DRIVING AT FULL RATE AND ENERGY.
4. NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION (NJDEP)
   - A. IN ORDER TO PROTECT WINTER FLOUNDER, A TIMING RESTRICTION OF JANUARY 1 THROUGH MAY 31 SHALL BE IMPOSED FOR ANY IN-WATER DISTURBANCE, SEDIMENT GENERATING ACTIVITIES AND PILE DRIVING.
   - B. IN ORDER TO PROTECT ANADROMOUS SPECIES, A TIMING RESTRICTION FROM MARCH 1 THROUGH JUNE 30 SHALL BE IMPOSED FOR ANY IN-WATER DISTURBANCE, SEDIMENT GENERATING ACTIVITIES AND PILE DRIVING.
   - C. DREDGING SHALL BE LIMITED TO AN AUTHORIZED PROJECT DEPTH OF -13' BELOW MEAN LOW WATER (MLW).
   - D. THE APPLICANT SHALL EXERCISE CAUTION AND EMPLOY ALL REASONABLE CONTROLS TO MINIMIZE THE RELEASE OF SEDIMENTATION INTO THE ADJACENT WATERS DURING THE DREDGING AND DEWATERING PROCESS.
   - E. THE DREDGE SHALL BE OPERATED SO AS TO CONTROL THE RATE OF DESCENT OF THE BUCKET SO AS TO MAXIMIZE THE VERTICAL CUT OF THE CLAMSHELL BUCKET WHILE NOT PENETRATING THE SEDIMENT BEYOND THE VERTICAL DIMENSION OF THE OPEN BUCKET (I.E. OVERFILLING THE BUCKET). THIS WILL REDUCE THE AMOUNT OF FREE WATER IN THE DREDGED MATERIAL, WILL AVOID OVERFILLING THE BUCKET, AND MINIMIZE THE NUMBER OF DREDGE BUCKET CYCLES NEEDED TO COMPLETE THE DREDGING CONTRACT.
   - F. THE CLOSED CLAMSHELL ENVIRONMENTAL BUCKET SHALL BE LIFTED SLOWLY THROUGH THE WATER, AT A RATE OF 2 FEET PER SECOND OR LESS.
   - G. DREDGED MATERIAL SHALL BE PLACED INTO THE BARGE IN A MANNER THAT PREVENTS SPILLAGE OF THE MATERIAL OVERBOARD.
   - H. THE DISCHARGE (I.E. "OVERFLOW") OF WATER FROM THE BARGE/SCOW INTO WHICH DREDGED MATERIAL IS PLACED IS PROHIBITED.
   - I. ALL BARGES OR SCOWS USED TO HOLD, OR TRANSPORT DREDGED MATERIAL SHALL BE OF SOLID HULL CONSTRUCTION OR BE SEALED WITH CONCRETE.
   - J. THE GUNWALES OF THE DREDGE SCOWS SHALL NOT BE RINSED OR HOSED DURING DREDGING EXCEPT TO THE EXTENT NECESSARY TO ENSURE THE SAFETY OF WORKERS MANEUVERING ON THE DREDGE SCOWS.
   - K. ALL DECANT WATER HOLDING SCOWS SHALL BE WATER TIGHT AND OF SOLID HULL CONSTRUCTION.
   - L. DECANT WATER FROM THIS PROJECT MAY ONLY BE DISCHARGED INTO THE CHANNEL FROM WHERE THE DREDGED MATERIAL ORIGINATED, IN CLOSE PROXIMITY TO THE DREDGING CONTRACT AREA. DISCHARGE TO ANOTHER RECEIVING WATERBODY REQUIRES PRIOR APPROVAL FROM THE DEPARTMENT AND MAY REQUIRE A NEW JERSEY DISCHARGE POLLUTANT ELIMINATION SYSTEM/DISCHARGE TO SURFACE WATER (NJDPES/DSW) PERMIT.
   - M. ALL WATER SHALL BE HELD IN THE DECANT HOLDING SCOW A MINIMUM OF 24 HOURS AFTER THE LAST ADDITION OF WATER TO THE SCOW THE DECANT WATER MAY ONLY BE DISCHARGED AFTER THIS 24-HOUR RETENTION PERIOD.
   - N. DURING PUMPING OF THE DECANT WATER FROM THE HOLDING SCOW, GREAT CARE SHALL BE TAKEN TO AVOID RE- SUSPENDING OR PUMPING SEDIMENT WHICH HAS SETTLED IN THE DECANT HOLDING SCOW.
   - O. A SPILL PLATE SHALL BE PLACED BETWEEN THE BARGE AND THE UPLAND PROPERTY DURING THE OFF-LOADING OF MATERIAL ON THE UPLAND PROPERTY. THE SPILL PLATE SHALL BE MAINTAINED DURING THE ENTIRE OFF-LOADING OPERATION AT THIS SITE.
   - P. THIS PERMIT AUTHORIZES THE PLACEMENT OF DREDGED MATERIAL FROM THIS PROJECT ON-SITE UNDER THE PAVED ACCESS ROAD AND PARKING LOT. DREDGED MATERIAL FROM THIS PROJECT SHALL BE PROCESSED USING A MINIMUM OF 8% PORTLAND CEMENT ON BARGES PRIOR TO PLACEMENT ON-SITE.
   - Q. IF THE PERMITTEE ELECTS TO DISPOSE/USE THE DREDGED MATERIAL FROM THIS PROJECT AT AN ALTERNATE LOCATION, WRITTEN AUTHORIZATION MUST BE OBTAINED FROM THE OFFICE OF DREDGING AND SEDIMENT TECHNOLOGY PRIOR TO THE TRANSPORT OF ANY DREDGED MATERIAL TO SAID ALTERNATIVE DISPOSAL / USE LOCATION. ANY ALTERNATE DISPOSAL/USE LOCATION MUST OBTAIN ALL REQUIRED STATE, LOCAL AND FEDERAL PERMITS BEFORE THE OFFICE WOULD GRANT A MODIFICATION OF THIS PERMIT TO TRANSPORT DREDGED MATERIAL TO THE ALTERNATE LOCATION.
5. NJDEP TIDELANDS LICENSE
   - A. BE ADVISED THAT TIDELAND LICENSES HAVE BEEN OBTAINED FOR THE PROPOSED SOUTH AMBOY FERRY TERMINAL PROJECT. THESE LICENSES APPLY TO PROPOSED ACTIVITIES ON BLOCK 161.02, LOTS 6.03, 25.05, 25.07 AND 90.01.
6. UNITED STATES COAST GUARD
   - A. THE CONTRACTOR SHALL SUBMIT THE FOLLOWING INFORMATION, AT A MINIMUM, TO THE U.S. COAST GUARD (USCG) FIRST COASTAL DISTRICT VIA EMAIL TO D1LNM@USCG.MIL OR FAX (617) 223-8921, A MINIMUM OF 14 DAYS PRIOR TO STARTING OPERATIONS FOR PUBLICATION IN THE LOCAL NOTICE TO MARINERS:
     - DATE OF SUBMISSION.
     - NAME, PHONE NUMBER, AND EMAIL ADDRESS OF PROJECT POINT OF CONTACT COMPANY NAME.
     - TYPE OF WORK.
     - WATERWAY AND LOCATION WHERE WORK WILL BE DONE LATITUDE & LONGITUDE OF WORK AREA.
     - WORK START & STOP DATES AND HOURS OF OPERATION EQUIPMENT ON SCENE.
     - PASSING ARRANGEMENTS/TIME TO MOVE VESSELS TO NOT IMPEDE NAVIGATION VHF RADIO CHANNEL MONITORED.
     - DISPOSAL SITE (IF USED).
     - NOAA CHART NUMBER FOR THE AREA.
   - B. THE CONTRACTOR SHALL ENSURE THAT ANY VESSELS USED IN CONJUNCTION WITH THE PROJECT MUST COMPLY WITH THE PORT OF NEW YORK ANCHORAGE GROUND REGULATIONS CODIFIED AT 33 CFR 110.156, INCLUDING PARAGRAPH (L)(11) REGARDING VESSELS THAT IMPEDE OR OBSTRUCT VESSEL MOVEMENTS.
   - C. THE CONTRACTOR SHALL MOVE DREDGING EQUIPMENT ON DEMAND TO ALLOW VESSELS TO TRANSIT THE AREA BEING DREDGED.
   - D. THE CONTRACTOR SHALL CHOCK THE BARGES IF WATER DEPTHS ARE LESS THAN TWO FEET AT MEAN LOW WATER TO ENSURE THE BARGES DO NOT REST ON THE BOTTOM AT ANY STAGE OF THE TIDE.

No.	Date	Revision	Revised By	Checked By

30 0 30 60
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FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

ENVIRONMENTAL PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	GTB	1" = 30'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
GTB	SAT	----	5 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-ENVR.dwg 5 Environmental Plan

EXISTING LEGEND

- SUBJECT PROPERTY LINE
- ADJOINING PROPERTY LINE
- EASEMENT LINE
- X 123.45 — SPOT ELEVATION
- X BC 123.45 — BOTTOM OF CURB ELEVATION
- TC 123.45 — TOP OF CURB ELEVATION
- X BW 123.45 — BOTTOM OF WALL ELEVATION
- TW 123.45 — TOP OF WALL ELEVATION
- FF 123.45 — FINISHED FLOOR ELEVATION
- 123 — MINOR CONTOUR
- 130 — MAJOR CONTOUR
- FENCE LINE
- EDGE OF PAVEMENT
- CURB
- EDGE OF GRAVEL
- RAILROAD TRACKS
- EDGE OF WATER
- TREES AND LIMIT OF CLEARING
- GUIDERAIL
- G — APPROXIMATE LOCATION OF UNDERGROUND GAS LINE
- OHW — APPROXIMATE LOCATION OF OVERHEAD WIRES
- W — APPROXIMATE LOCATION OF UNDERGROUND WATER LINE
- S — APPROXIMATE LOCATION OF UNDERGROUND SANITARY LINE
- DRAINAGE INLET
- APPROXIMATE LOCATION OF UNDERGROUND STORM DRAINAGE PIPE
- SIGN
- LIGHT POLE
- UTILITY POLE
- MONITORING WELL

GENERAL NOTES:

1. TOPOGRAPHIC AND WETLANDS INFORMATION SHOWN HEREON WAS TAKEN FROM A PLAN ENTITLED "TOPOGRAPHIC SURVEY PREPARED FOR LOTS 25.05, 25.06, 25.07 AND 25.08, BLOCK 161.01 AND LOT 90.01 BLOCK 161.02, SITUATED IN THE CITY OF SOUTH AMBOY, MIDDLESEX COUNTY, NEW JERSEY", PREPARED BY FRENCH AND PARRELLO ASSOCIATES, DATED APRIL 9, 2019. THE VERTICAL DATUM IS BASED ON NAVD88.
2. BOUNDARY INFORMATION SHOWN HEREON WAS TAKEN FROM A PLAN ENTITLED "PLAN OF SURVEY PREPARED FOR LOTS 25.05, 25.06, 25.07 AND 25.08, BLOCK 161.01 AND LOT 90.01 BLOCK 161.02, SITUATED IN THE CITY OF SOUTH AMBOY, MIDDLESEX COUNTY, NEW JERSEY", PREPARED BY FRENCH AND PARRELLO ASSOCIATES, DATED APRIL 9, 2019. THE HORIZONTAL DATUM IS BASED ON NAD83.
3. ANY UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON ABOVE GROUND OBSERVATIONS, UTILITY MARKINGS FOUND IN THE FIELD AND/OR INFORMATION SUPPLIED BY THE UTILITY COMPANIES. SINCE NO PHYSICAL LOCATION OF THE UNDERGROUND FACILITIES HAVE BEEN MADE BY THE UNDERSIGNED, NO GUARANTEE IS BEING MADE FOR THEIR COMPLETENESS OR ACCURACY.
4. PER FEMA FLOOD MAP NUMBER 34023C0157G, REVISED JANUARY 30, 2015, THE SUBJECT PROPERTY IS LOCATED WITHIN FLOOD ZONES.
5. THIS PLAN DOES NOT ADDRESS THE ABSENCE OR PRESENCE OF ANY HAZARDOUS MATERIALS ON OR IN THE VICINITY OF THE SUBJECT PROPERTY

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
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New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

EXISTING CONDITIONS PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	6 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-EC-DEM01.dwg 6 Existing Conditions Plan

SHEET 6

BLOCK 161.02
Lot 25.06

BLOCK 161.02
Lot 25.05

BLOCK 161.02
Lot 25.07

BLOCK 161.02
Lot 6.03

BLOCK 161.02
Lot 90.01

Wetlands Line

Mean High Water El 2.30

Tidelands Line

Spring High Water El 2.73

Mean Low Water El -2.91

Limits of Mudflats

U.S. BULKHEAD LINE (Per Tax Map)

Tidelands Line

FPA-1
FPA-2
FPA-3
FPA-4
FPA-5
FPA-6
FPA-7
FPA-8
FPA-9
FPA-10
FPA-11
FPA-12
FPA-13
FPA-14
FPA-17
FPA-18
FPA-19
FPA-21
FPA-26
FPA-27
FPA-28
FPA-29
FPA-30
FPA-31
FPA-32
FPA-33
FPA-34
FPA-35
FPA-36
FPA-37
FPA-38
FPA-39
FPA-40
FPA-41

RARITAN BAY
(A.K.A. SOUTH AMBOY REACH)

NOTE:

1. SEE SHEET 6 FOR NOTES AND EXISTING LEGEND.

MATCH LINE

MATCH LINE

INSET

PLAN

INSET

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40 0 40 80
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EXISTING CONDITIONS PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
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SKW	DFK	-----	7 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
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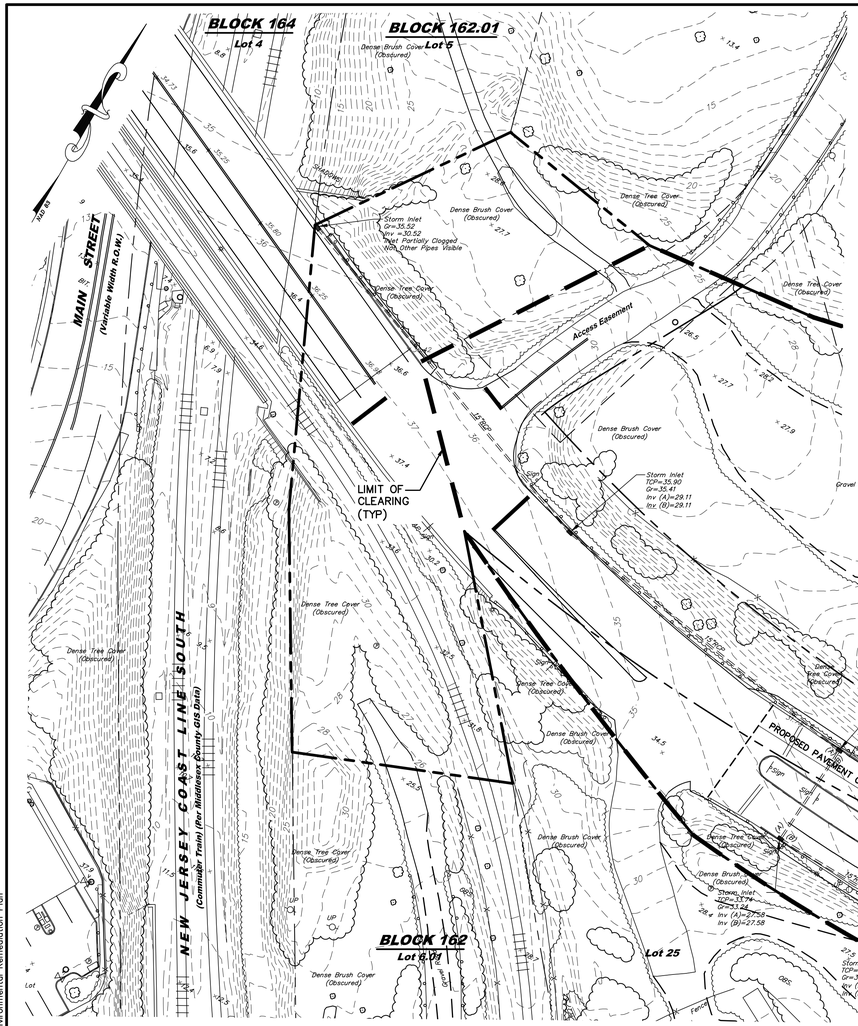
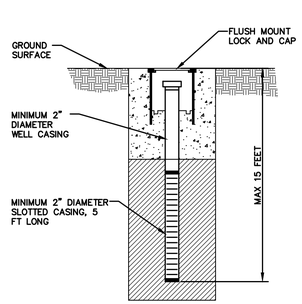
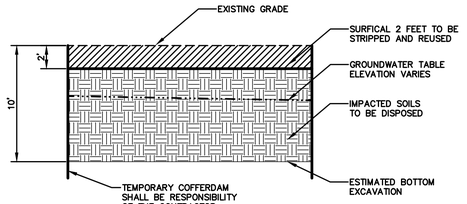




TO BE INSTALLED IN ACCORDANCE WITH NJDEP STANDARDS AND UNDER THE DIRECTION OF THE LSRP

UNCONSOLIDATED AQUIFER WELL DETAIL

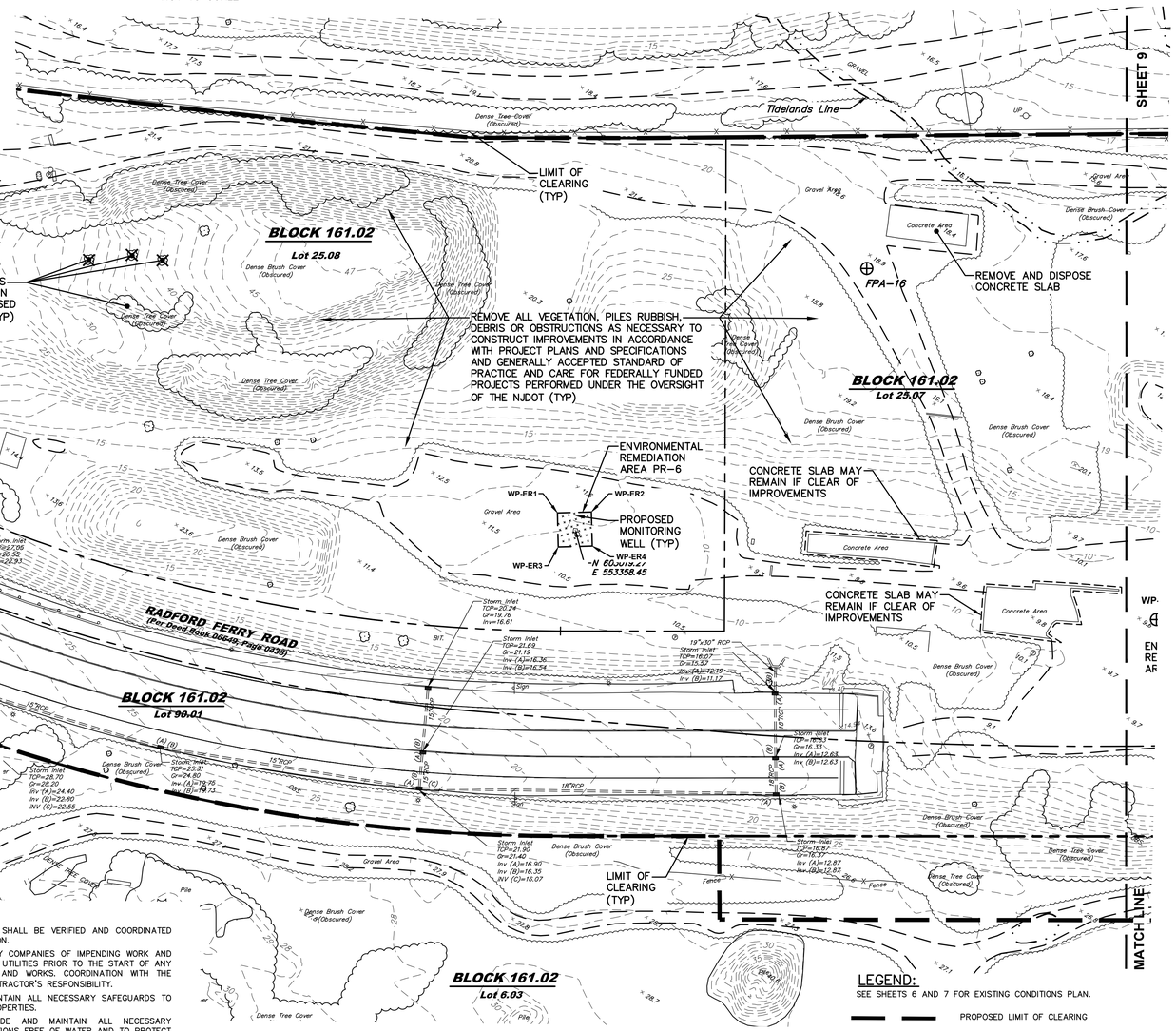
NOT TO SCALE



ENVIRONMENTAL REMEDIATION AT PR-1 AND PR-6

NOT TO SCALE

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	TO BE CONSTRUCTED	
201003P	21	CLEARING SITE	1	LS
201018M	22	MONITORING WELL	2	UNIT
201030M	23	SEALING OF ABANDONED WELL	3	UNIT
202015P	26	EXCAVATION, REGULATED MATERIAL	120	CY
202024M	27	DISPOSAL OF REGULATED MATERIAL	210	TON
202027M	28	DISPOSAL OF REGULATED MATERIAL,HAZARDOUS	10	TON
202063P	29	TREATMENT OPERATIONS AND REPORTING OF GROUNDWATER MANAGEMENT	1	LS
203015P	32	I-11 SOIL AGGREGATE	120	CY
501009P	49	TEMPORARY COFFERDAM	1	LS



ARCHAEOLOGICAL MONITORING NOTES:

1. ALL WORK SHALL BE SUBJECT TO THE PROVISIONS OF THE ARCHEOLOGICAL MONITORING PLAN INCLUDED IN THE PROJECT SPECIFICATIONS.
2. "ARCHAEOLOGICAL MONITOR" MEANS AN ARCHAEOLOGIST MEETING THE SECRETARY OF THE INTERIOR'S STANDARDS AS SET FORTH IN 48 FR 44716 AND WHO IS AUTHORIZED TO PERFORM ARCHAEOLOGICAL MONITORING FOR THE PROJECT. ARCHAEOLOGICAL MONITOR WILL BE RETAINED BY THE CITY UNDER SERATRE CONTRACT.
3. THE CONTRACTOR SHALL: A) MAINTAIN REGULAR CONTACT WITH THE RESIDENT ENGINEER AND ARCHAEOLOGICAL MONITOR. B) ENSURE THAT THE ARCHAEOLOGICAL MONITOR HAS ACCESS TO THE SITE AT ALL REASONABLE TIMES. C) WORK WITH THE RESIDENT ENGINEER TO ENSURE THAT THE ARCHAEOLOGICAL MONITOR IS AWARE OF THE PROJECT SCHEDULE AND HAS TWO BUSINESS DAYS' NOTICE OF OPERATIONS REQUIRING MONITORING. D) COMMUNICATE THE REQUIREMENTS AND PROCEDURES FOR MONITORING TO ANY SUBCONTRACTORS. E) PROVIDE THE ARCHAEOLOGICAL MONITOR WITH A COPY OF THE CONTRACTOR'S HEALTH AND SAFETY PLAN AND INTRODUCE THE SITE SAFETY AND HEALTH OFFICER TO THE ARCHAEOLOGICAL MONITOR BEFORE THE START OF MONITORING WORK.
4. CONSTRUCTION ACTIVITIES THAT WILL REQUIRE ARCHAEOLOGICAL MONITORING INCLUDE: A) TRENCHING FOR UTILITIES AND DRAINAGE, AND ANY OTHER BULK REMOVAL OF MATERIAL BY MACHINERY OR HAND DIGGING WHERE EXCAVATION EXTENDS TO DEPTHS BELOW 15 FEET ABOVE MEAN SEA LEVEL, EXCEPT AS WHERE GROUND IS DETERMINED BY THE ARCHAEOLOGICAL MONITOR TO BE ALREADY DISTURBED OR OF NO ARCHAEOLOGICAL INTEREST, OR WHERE EXCAVATIONS ARE WITHIN FILLS PLACED BY THE CONTRACTOR AS PART OF THE PROJECT. B) THE RELOCATION OR REMOVAL OF ANY ARTIFACTS, SUCH AS STONE SLEEPERS, IRON AND STONE RAILS, CATENARY OR RAILROAD–RELATED ARTIFACTS (OBSERVATIONAL MONITORING ONLY). C) DREDGING TO THE NORTHEAST OF THE WESTMORELAND PIER, AS INDICATED ON PROJECT PLANS. D) DEMOLITION OR REMOVAL OF EXISTING TIMBER BULKHEADS OR PILES, IF NECESSARY.
5. SHORT–DURATION WORK STOPPAGES: ON THE BASIS OF OBSERVATIONS, THE ARCHAEOLOGICAL MONITOR MAY REQUEST THE CONTRACTOR FOR A SHORT–TERM CESSATION OF WORK AT A PARTICULAR LOCATION IN ORDER TO RECORD INFORMATION IN MORE DETAIL, OR TO MORE THOROUGHLY EVALUATE EXPOSED MATERIAL. "SHORT–TERM CESSATION OF WORK" IS DEFINED AS A PERIOD OF NOT MORE THAN TWO HOURS. STOPPAGES IN EXCESS OF TWO HOURS WILL FALL UNDER DOCUMENTARY MONITORING, AND REQUIRE AUTHORIZATION AS SET FORTH HEREIN.
6. DOCUMENTARY MONITORING: THE DECISION ON THE NECESSITY FOR DOCUMENTARY MONITORING WILL BE MADE BY THE ARCHAEOLOGICAL MONITOR IN CONSULTATION WITH REPRESENTATIVES OF THE NJDOT BEPR AND THE NJSHPO. IF THE ARCHAEOLOGICAL MONITOR ON SITE DETERMINES THAT THERE ARE SIGNIFICANT ARCHAEOLOGICAL RESOURCES AT THE WORK LOCATION, AND THAT THESE CANNOT BE ADEQUATELY EVALUATED AND RECORDED THROUGH OBSERVATIONAL MONITORING (UP TO AND INCLUDING A TWO–HOUR CESSATION OF WORK), HE/SHE WILL INFORM THE CONTRACTOR AND THE RESIDENT ENGINEER IMMEDIATELY, AND IN ANY CASE WITHIN THE TWO–HOUR CESSATION PERIOD IF IMPLEMENTED.

THE RESIDENT ENGINEER WILL CONVENE, AS SOON AS REASONABLY POSSIBLE, A SITE MEETING OR CONFERENCE PHONE CALL BETWEEN THE CONTRACTOR, THE ARCHAEOLOGICAL MONITOR, REPRESENTATIVES OF THE NJDOT–BEPR AND THE NJSHPO AND OTHER PARTIES AS CONSIDERED NECESSARY BY THE RESIDENT ENGINEER (E.G., REPRESENTATIVES OF THE TRIBAL NATIONS), TO DISCUSS THE NEED FOR DOCUMENTARY MONITORING, RECOMMEND APPROPRIATE DOCUMENTATION PROCEDURES AND IDENTIFY THE ANTICIPATED EXTENT AND DURATION OF THE WORK NEEDED. THIS WORK WILL NOT PROCEED WITHOUT THE WRITTEN APPROVAL AND AGREEMENT OF BOTH THE NJDOT BEPR AND THE NJSHPO. A SUMMARY RECORD OF EACH DECISION WILL BE EMAILED BY THE RESIDENT ENGINEER TO THE CITY OF SOUTH AMBOY AND THOSE REPRESENTATIVES OF THE NJDOT BEPR AND THE NJSHPO INVOLVED IN THE DECISION.

FOR THE DURATION OF EACH DOCUMENTARY MONITORING EPISODE THE DEFINED PORTION OF THE SITE WILL BE UNDER THE CONTROL OF THE ARCHAEOLOGICAL MONITOR, WHO WILL BE FREE TO OPERATE, WITHIN THE TERMS OF THE AGREEMENT, AT THAT LOCATION. THE ARCHAEOLOGICAL MONITOR WILL CONFORM TO THE HEALTH AND SAFETY PLAN PROVISIONS THAT APPLY AT THE PROJECT SITE, AND WILL CONSULT WITH THE CONTRACTOR'S SITE SAFETY AND HEALTH OFFICER BEFORE STARTING WORK ON EACH EPISODE OF DOCUMENTARY MONITORING.

THE ARCHAEOLOGICAL MONITOR WILL INFORM THE CONTRACTOR AND RESIDENT ENGINEER AS SOON AS EACH DOCUMENTARY MONITORING EPISODE IS COMPLETE.

SALVAGE NOTES:

1. ALL SALVAGE OPERATIONS SHALL BE PERFORMED UNDER THE DIERCTION OF ARCHAEOLOGICAL MONITOR. TO THE EXTENT POSSIBLE, ALL SALVAGE OPERATIONS SHALL OCCUR PRIOR TO CLEARING SITE.
2. THE CONTRACTOR SHALL REMOVE AND STORE ANY EXISTING IMPROVEMENT OR ARTIFACT OBSERVED ON OR ABOVE THE GROUND SURFACE OR ENCOUNTERED DURING EXCAVATIONS OF ANY KIND, WHICH ARE DETERMINED BY THE ARCHAEOLOGICAL MONITOR TO BE OF HISTORICAL SIGNIFICANCE. ARTIFACTS KNOWN TO EXISTING ONSITE INCLUDE CANTENTARY POLES, STONE SLEEPERS, STONE RAILS, IRON RAILS, RAIL SPIKES AND RELATED HARDWARE. WORK TO INCLUDE REMOVAL, HANDLING AND STORAGE OF ALL ARTIFACTS IDENTIFIED BY THE ARCHAEOLOGICAL MONITOR TO HAVE HISTORICAL SIGNIFICANCE.
3. CARE SHALL BE TAKEN NOT TO DAMAGE THE ARTIFACTS DURING REMOVAL, HANDLING AND STORAGE. SECURITY OF STORED ARTIFACTS SHALL BE TO THE SATISFACTION OF THE ARCHAEOLOGICAL MONITOR AND RESIDENT ENGINEER.
4. THE CITY SHALL MAINTAIN ALL OWNERSHIP RIGHTS TO ALL ARTIFACTS. ANY ARTIFACTS NOT MAINTAINED BY THE CITY AFTER THE PROJECT SHALL BE OFFERED FOR DONATION IN ACCORDANCE WITH THE PROJECT MOA, PRIOR TO ALTERNATE DISPOSITION. CONTRACTOR SHALL ASSIST AND/OR EXECUTE FINAL DISPOSITION OF ARTIFACTS, INCLUDING RELOCATION OFF–SITE OR DISPOSAL, IF DIRECTED.

CLEARING SITE AND DEMOLITION NOTES:

1. THE EXISTING BULKHEAD(S), RETAINING WALLS, PILINGS, AND OTHER SITE IMPROVEMENTS, INCLUDING THOSE AREAS WHICH ARE SUBMERGED, ARE PRESENTED HEREON FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE CORRECT, COMPLETE OR ALL INCLUSIVE.
2. THE BIDDERS SHALL VISIT THE EXISTING BULKHEAD(S) AND SITE, INCLUDING SUBMERGED AREAS, BEFORE SUBMITTING THEIR BIDS TO ASCERTAIN THE EXTENT OF THE WORK. THE INFORMATION SHOWN ON THESE DRAWINGS SHALL NOT BE CONSTRUED IN ANY WAY AS A WAIVER FOR THE BIDDER TO CONDUCT SUCH INDEPENDENT INVESTIGATION AND EXAMINATION, AS DEEMED NECESSARY TO ASCERTAIN THE EXTENT OF THE SITE CLEARING WORK AND THE CONDITIONS THAT MAY BE ENCOUNTERED DURING THE DEMOLITION WORK. THE EXISTING BULKHEAD(S) AND SITE CONTENTS IN CONFLICT WITH THE PROPOSED IMPROVEMENTS, AND NOT CONSIDERED TO BE OF HISTORICAL SIGNIFICANCE BY ARCHAEOLOGICAL MONITOR, SHALL BE DEMOLISHED IN THEIR ENTIRETY, REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
3. CLEARING SITE SHALL CONSTITUTE THE REMOVAL OF ALL TREES AND VEGETATION, EXISTING LIGHTING STRUCTURES AND STRUCTURES, POLES, FENCES, DEBRIS, RUBBISH, CONCRETE PADS AND ANY OTHER EXISTING FEATURE VISIBLE ON THE GROUND SURFACE OR ENCOUNTERED WITHIN EXCAVATIONS OF ANY KIND AND INCUMBERING CONSTRUCTION AND NOT DETERMINED TO BE OF HISTORICAL SIGNIFICANCE BY THE ARCHAEOLOGICAL MONITOR. CLEARING SITE SHALL ALSO INCLUDE THE RESETTING AND/OR REPLACEMENT OF ANY EXISTING FENCES, PAVEMENT, CONCRETE SIDEWALKS, CURB, INLETS, MANHOLES, PIPES, OR ANY OTHER EXISTING FEATAURE WHICH ARE DISTURBED OR IMPACTED INTENTIONALLY OR UNINTENTIONALLY DURING THE ADVANCEMENT OF THE WORK.

GENERAL NOTES:

1. ALL DIMENSIONS, DETAILS AND ELEVATIONS SHALL BE VERIFIED AND COORDINATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES OF IMPENDING WORK AND FIELD VERIFY THE ACTUAL LOCATION OF ALL UTILITIES PRIOR TO THE START OF ANY CONSTRUCTION FOR UTILITY COORDINATION AND WORKS. COORDINATION WITH THE UTILITIES DURING CONSTRUCTION IS THE CONTRACTOR'S RESPONSIBILITY.
3. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY SAFEGUARDS TO PROTECT PUBLIC SAFETY AND ADJOINING PROPERTIES.
4. THE CONTRACTOR SHALL DESIGN, PROVIDE AND MAINTAIN ALL NECESSARY EQUIPMENT AND METHODS TO KEEP EXCAVATIONS FREE OF WATER AND TO PROTECT WORK FROM DAMAGE BY WATER DURING ALL STAGES OF CONSTRUCTION. PAYMENT FOR DEWATERING SHALL BE ABSORBED BY ALL OF THE OTHER PAY ITEMS IN THE CONTRACT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS.
6. MAINTENANCE OF THE FEDERAL CHANNEL ALONG RARITAN RIVER SHALL BE PROVIDED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL PHASE HIS/HER WORK IN SUCH A MANNER AS TO AT NO TIME BLOCK OR IMPEDE THE CHANNEL. NO SEPARATE PAYMENT SHALL BE MADE FOR MAINTENANCE OF THE CHANNEL, AND ALL COSTS SHALL BE INCLUDED IN THE VARIOUS ITEMS IN THE PROPOSAL.
7. ANY DIRT, DEBRIS OR SEDIMENT RESULTING FROM THE CONTRACTOR'S WORK OR STORM RUNOFF SHALL BE IMMEDIATELY REMOVED FROM RARITAN RIVER.
8. JERSEY CENTRAL POWER AND LIGHT (JCPANDL) TO DE–ENERGIZE AND REMOVE OVERHEAD UTILITY LINES PRIOR TO ANY DEMOLITION AND/OR CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THERE IS SUFFICIENT OVERHEAD CLEARANCE FOR THE WORK TO BE PERFORMED.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF ALL STRUCTURES, SOILS, UTILITIES, SITE FEATURES, ETC. THAT MAY BE IMPACTED BY HIS OR HER WORK. ALL COSTS FOR SUCH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR OF THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.

LEGEND:

SEE SHEETS 6 AND 7 FOR EXISTING CONDITIONS PLAN.

PROPOSED LIMIT OF CLEARING

EXISTING FEATURE AND/OR STRUCTURE TO BE REMOVED

EXISTING FEATURES TO BE REMOVED

No.	Date	Revision	Revised By	Checked By

40 0 40 80

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

SITE CLEARING & ENVIRONMENTAL REMEDIATION PLAN

FOR

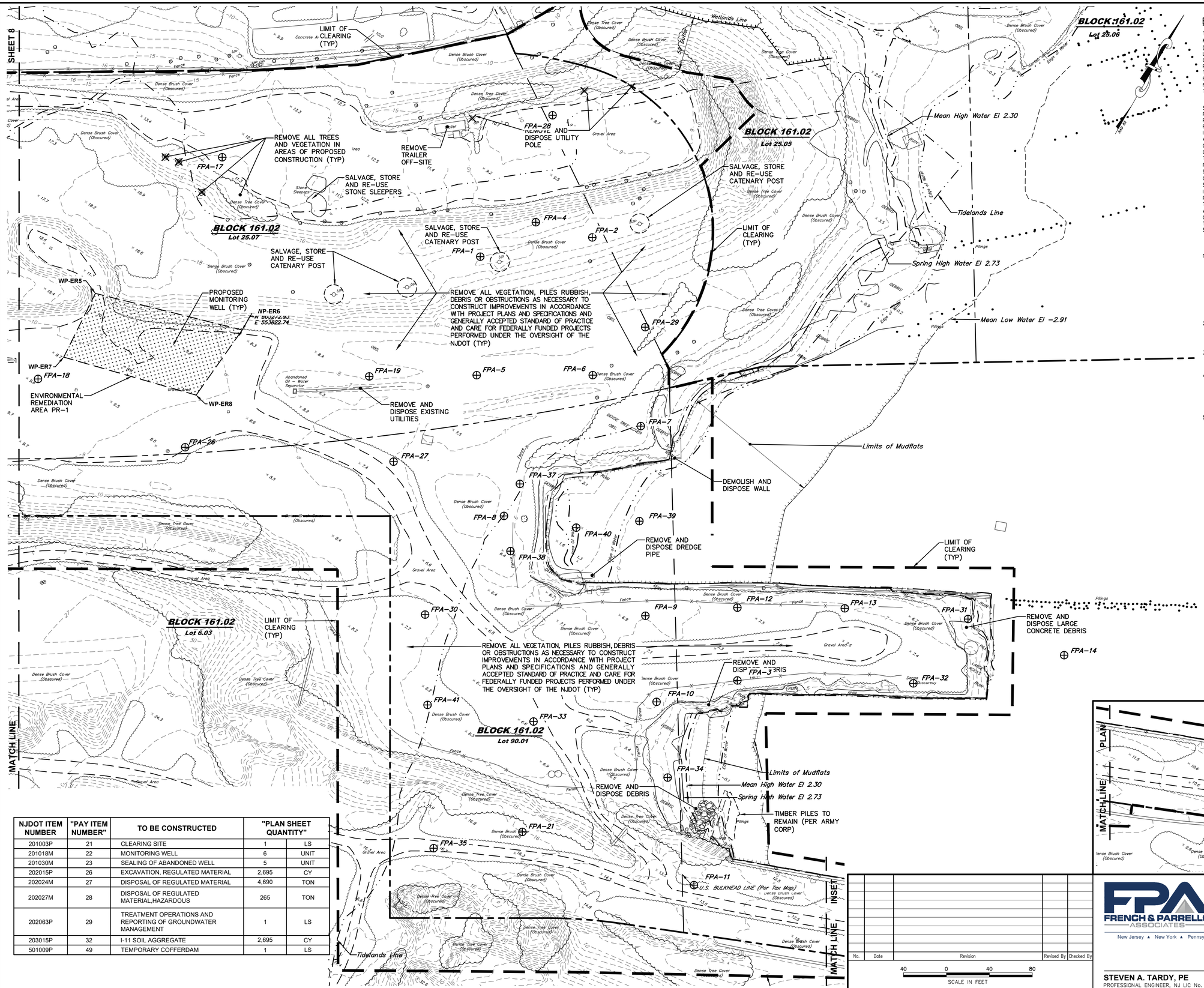
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	8 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-EC-DEM01.dwg & Site Clearing & Environmental Remediation Plan



ENVIRONMENTAL REMEDIATION NOTES:

THE SITE WAS PREVIOUSLY TWO SEPARATE PARCELS, A CONRAIL PROPERTY (AKA CONRAIL AND MCKEAN PROPERTY) AND AN INDUSTRIAL PROPERTY KNOWN AS MODERN TRANSPORTATION (AKA SPECTRASERVE, AKA OLD PENN RAILROAD COAL DOCK). BOTH PROPERTIES ARE LISTED IN THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DATABASE AS CONTAMINATED SITES WITH BOTH LISTINGS INDICATING "ACTIVE" STATUS. THE CONRAIL PROPERTY IS LISTED AS NJDEP PROGRAM INTEREST NUMBER 132954. THE MODERN TRANSPORTATION PROPERTY IS LISTED NJDEP PROGRAM INTEREST NUMBER G000000850. REMEDIATION OF THE CONRAIL PROPERTY CONTAMINATED SOIL WAS COMPLETED IN NOVEMBER 2017. NO GROUNDWATER REMEDIATION HAS OCCURRED. THE MODERN TRANSPORTATION PROPERTY HAS NOT BEEN REMEDIATED ACCORDING TO THE NJDEP DATABASE.

SUBSURFACE INVESTIGATIONS CONDUCTED IN TWO OF THE PREVIOUSLY REMEDIATED AREAS OF THE FORMER CONRAIL PROPERTY IDENTIFIED RESIDUAL SOIL CONTAMINATION AND SEPARATE PHASE HYDROCARBON PRODUCT ON THE GROUNDWATER. THIS SOIL MUST BE MANAGED AS REGULATED, CONTAMINATED NON-HAZARDOUS. ONE OF THESE AREAS, DESIGNATED AREA PR-1, IS APPROXIMATELY 8,100 SQUARE FEET AND THE OTHER, DESIGNATED PR-6, MEASURES APPROXIMATELY 400 SQUARE FEET. THE APPROXIMATE TERMINAL DEPTH OF THE REGULATED, CONTAMINATED NON-HAZARDOUS SOIL IS APPROXIMATELY 10' BELOW SURFACE GRADE. REMOVAL AND OFFSITE DISPOSAL OF REGULATED, CONTAMINATED NON-HAZARDOUS SOIL AND MATERIALS FROM THESE TWO LOCATIONS SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE NJDEP AND LOCAL REGULATIONS IS REQUIRED. ALL EXCAVATED SOIL/MATERIALS FROM DEPTHS BEGINNING AT 2' BELOW SURFACE GRADE, INCLUDING HISTORIC FILL IF ENCOUNTERED, ARE CONSIDERED TO BE REGULATED, CONTAMINATED NON-HAZARDOUS UNLESS/UNTIL TESTING CONFIRMS OTHERWISE. THE CONTRACTOR SHALL PERFORM SAMPLING AND WASTE CHARACTERIZATION ANALYSIS FOR EXCAVATED SOIL IN ACCORDANCE WITH US ENVIRONMENTAL PROTECTION AGENCY (EPA) AND NJDEP REQUIREMENTS PROPER TRANSPORT AND DISPOSAL IN ACCORDANCE WITH APPLICABLE REGULATORY REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE THE LSRP WITH COPIES OF ALL ANALYTICAL DATA SETS FOR ANY SOIL/MATERIALS TEMPORARILY OR PERMANENTLY STAGED ONSITE. UNREGULATED, NON CONTAMINATED, NON-HAZARDOUS OVERBURDEN SOIL CAN BE REUSED ON-SITE PROVIDED THE CONTRACTOR DEMONSTRATES COMPLIANCE WITH THE NJDEP FILL MATERIAL GUIDANCE FOR SITE REMEDIATION PROGRAM SITES, VERSION 3.0, APRIL 2015.

1. THE CONTRACTOR SHALL PREPARE A SITE-SPECIFIC HEALTH AND SAFETY PLAN (HASP) IN ACCORDANCE WITH THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REQUIREMENTS SET FORTH AT 29 CFR 1910.120 PRIOR TO STARTING WORK. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE HASP ONSITE AT ALL TIMES. THE CONTRACTOR SHALL PREPARE A PERIMETER AIR MONITORING PLAN IN ACCORDANCE WITH THE NJDEP TECHNICAL REQUIREMENT FOR SITE REMEDIATION, N.J.A.C. 7:26E-5.5(B)7. THE CONTRACTOR SHALL PREPARE A MATERIALS MANAGEMENT PLAN THAT ADDRESSES THE PROPER MANAGEMENT OF REGULATED, CONTAMINATED NON-HAZARDOUS AND REGULATED HAZARDOUS SOIL AND GROUNDWATER.
2. THE CONTRACTOR SHALL INSTALL SHORING, BRACING, BENCHING AND FENCING IN ACCORDANCE WITH FEDERAL OSHA 29 CFR 1926 CONSTRUCTION STANDARDS REQUIREMENTS AS WELL AS THE REQUIREMENTS OF ALL STATE AND LOCAL AUTHORITIES HAVING JURISDICTION.
3. THE CONTRACTOR SHALL MANAGE DEWATERING LIQUIDS GENERATED AS PART OF THE SOIL REMEDIATION ACTIVITIES IN ACCORDANCE WITH APPLICABLE NJDEP REQUIREMENTS.
4. EIGHT GROUNDWATER MONITORING WELLS ARE LOCATED IN, OR IN CLOSE PROXIMITY TO, THE PROPOSED EXCAVATION AREAS AND THE CONTRACTOR SHALL ABANDON THESE IN ACCORDANCE WITH APPLICABLE NJDEP REGULATIONS. THE CONTRACTOR SHALL REPLACE UP TO EIGHT OF THESE GROUNDWATER MONITORING WELLS IN ACCORDANCE WITH APPLICABLE NJDEP REGULATIONS.
5. IMPORTED CLEAN FILL, IF NEEDED, SHALL BE FREE OF CONTAMINANTS AND ALL HAZARDOUS SUBSTANCES AS LISTED BY THE NJDEP IN THE NEW JERSEY ADMINISTRATIVE CODE AND SHALL BE IN CONFORMANCE WITH THE CLEAN FILL REQUIREMENTS DEFINED IN THE NJDEP TECHNICAL REQUIREMENT FOR SITE REMEDIATION, N.J.A.C. 7:26E, AND THE NJDEP FILL MATERIAL GUIDANCE FOR SITE REMEDIATION PROGRAM SITES, VERSION 3.0, APRIL 2015. CERTIFICATION WILL BE REQUIRED THAT IMPORTED FILL MATERIAL IS FREE OF ALL CONTAMINANTS ABOVE THE NJDEP RESIDENTIAL DIRECT CONTACT SOIL REMEDIATION STANDARDS. CERTIFICATION OF COMPLIANCE AND TEST RESULTS SUBSTANTIATING COMPLIANCE SHALL BE FURNISHED TO THE LICENSED SITE REMEDIATION PROFESSIONAL BY THE CONTRACTOR NOT LESS THAN ONE WEEK PRIOR TO ITS INTENDED USE.

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
201003P	21	CLEARING SITE	1	LS
201018M	22	MONITORING WELL	6	UNIT
201030M	23	SEALING OF ABANDONED WELL	5	UNIT
202015P	26	EXCAVATION, REGULATED MATERIAL	2,695	CY
202024M	27	DISPOSAL OF REGULATED MATERIAL	4,690	TON
202027M	28	DISPOSAL OF REGULATED MATERIAL,HAZARDOUS	265	TON
202063P	29	TREATMENT OPERATIONS AND REPORTING OF GROUNDWATER MANAGEMENT	1	LS
203015P	32	I-11 SOIL AGGREGATE	2,695	CY
501009P	49	TEMPORARY COFFERDAM	1	LS

WORKING POINT DATA		
WORKING POINT	NORTHING	EASTING
WP-ER1	603022.8043	553344.2829
WP-ER2	603033.2518	553361.3373
WP-ER3	603005.7499	553354.7304
WP-ER4	603016.1974	553371.7848
WP-ER5	603240.3190	553687.0670
WP-ER6	603279.1211	553822.4831
WP-ER7	603174.1731	553691.2330
WP-ER8	603205.1629	553815.7131

LEGEND:

SEE SHEETS 6 AND 7 FOR EXISTING CONDITIONS PLAN.

- PROPOSED LIMIT OF CLEARING
- EXISTING FEATURE AND/OR STRUCTURE TO BE REMOVED
- EXISTING FEATURES TO BE REMOVED
- PROPOSED MONITORING WELL

No.	Date	Revision	Revised By	Checked By

40 0 40 80
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FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

SITE CLEARING & ENVIRONMENTAL REMEDIATION PLAN

FOR

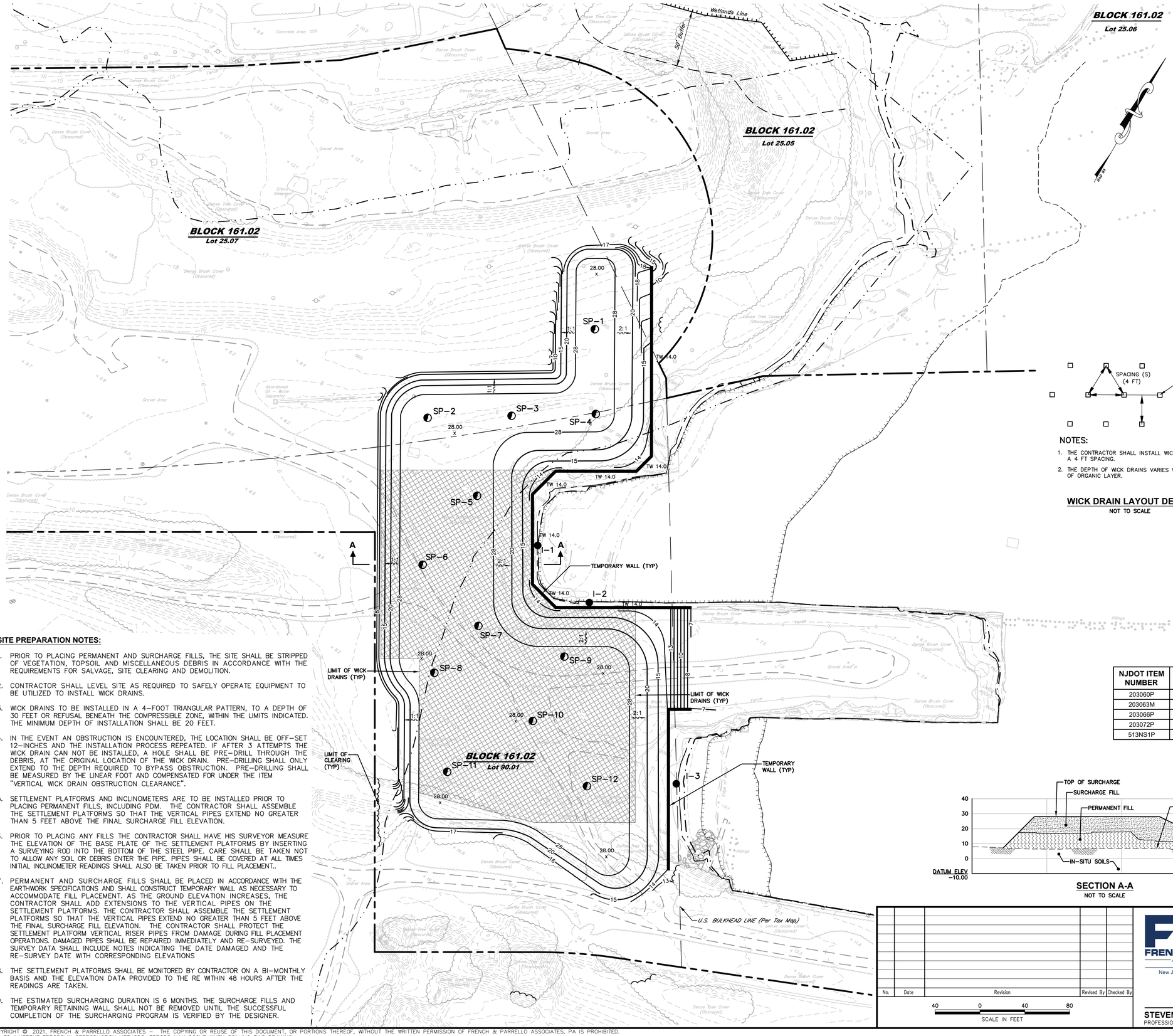
SOUTH AMBOY FERRY TERMINAL

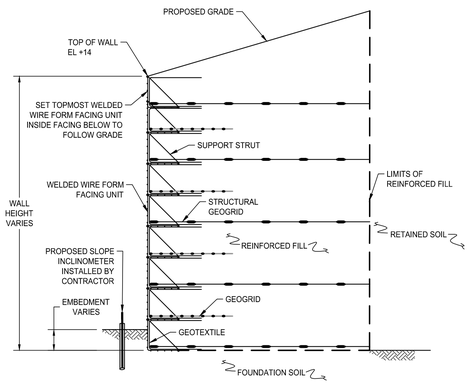
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	-----	9 of 70

Plotted by: Suzanne C. Sterman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-EC-DEM01.dwg 9 Site Clearing & Environmental Remediation Plan





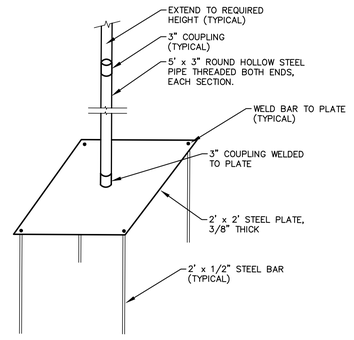
CONTRACTOR SHALL BE RESPONSIBLE FOR THE SELECTION OF TEMPORARY WALL SYSTEM AS WELL AS DESIGN, INSTALLATION AND REMOVAL AS REQUIRED TO ACCOMMODATE THE CONSTRUCTION OF PROPOSED IMPROVEMENTS

TEMPORARY WALL TYPICAL CROSS SECTION
NOT TO SCALE

NOTES:

1. THE CONTRACTOR SHALL INSTALL WICK DRAINS WITH A 4 FT SPACING.
2. THE DEPTH OF WICK DRAINS VARIES WITH THICKNESS OF ORGANIC LAYER.

WICK DRAIN LAYOUT DETAIL
NOT TO SCALE



SETTLEMENT PLATFORM DETAIL
NOT TO SCALE

SITE PREPARATION NOTES:

1. PRIOR TO PLACING PERMANENT AND SURCHARGE FILLS, THE SITE SHALL BE STRIPPED OF VEGETATION, TOPSOIL AND MISCELLANEOUS DEBRIS IN ACCORDANCE WITH THE REQUIREMENTS FOR SALVAGE, SITE CLEARING AND DEMOLITION.
2. CONTRACTOR SHALL LEVEL SITE AS REQUIRED TO SAFELY OPERATE EQUIPMENT TO BE UTILIZED TO INSTALL WICK DRAINS.
3. WICK DRAINS TO BE INSTALLED IN A 4–FOOT TRIANGULAR PATTERN, TO A DEPTH OF 30 FEET OR REFUSAL BENEATH THE COMPRESSIBLE ZONE, WITHIN THE LIMITS INDICATED. THE MINIMUM DEPTH OF INSTALLATION SHALL BE 20 FEET.
4. IN THE EVENT AN OBSTRUCTION IS ENCOUNTERED, THE LOCATION SHALL BE OFF–SET 12–INCHES AND THE INSTALLATION PROCESS REPEATED. IF AFTER 3 ATTEMPTS THE WICK DRAIN CAN NOT BE INSTALLED, A HOLE SHALL BE PRE–DRILL THROUGH THE DEBRIS, AT THE ORIGINAL LOCATION OF THE WICK DRAIN. PRE–DRILLING SHALL ONLY EXTEND TO THE DEPTH REQUIRED TO BYPASS OBSTRUCTION. PRE–DRILLING SHALL BE MEASURED BY THE LINEAR FOOT AND COMPENSATED FOR UNDER THE ITEM "VERTICAL WICK DRAIN OBSTRUCTION CLEARANCE".
5. SETTLEMENT PLATFORMS AND INCLINOMETERS ARE TO BE INSTALLED PRIOR TO PLACING PERMANENT FILLS, INCLUDING PDM. THE CONTRACTOR SHALL ASSEMBLE THE SETTLEMENT PLATFORMS SO THAT THE VERTICAL PIPES EXTEND NO GREATER THAN 5 FEET ABOVE THE FINAL SURCHARGE FILL ELEVATION.
6. PRIOR TO PLACING ANY FILLS THE CONTRACTOR SHALL HAVE HIS SURVEYOR MEASURE THE ELEVATION OF THE BASE PLATE OF THE SETTLEMENT PLATFORMS BY INSERTING A SURVEYING ROD INTO THE BOTTOM OF THE STEEL PIPE. CARE SHALL BE TAKEN NOT TO ALLOW ANY SOIL OR DEBRIS ENTER THE PIPE. PIPES SHALL BE COVERED AT ALL TIMES INITIAL INCLINOMETER READINGS SHALL ALSO BE TAKEN PRIOR TO FILL PLACEMENT..
7. PERMANENT AND SURCHARGE FILLS SHALL BE PLACED IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS AND SHALL CONSTRUCT TEMPORARY WALL AS NECESSARY TO ACCOMMODATE FILL PLACEMENT. AS THE GROUND ELEVATION INCREASES, THE CONTRACTOR SHALL ADD EXTENSIONS TO THE VERTICAL PIPES ON THE SETTLEMENT PLATFORMS. THE CONTRACTOR SHALL ASSEMBLE THE SETTLEMENT PLATFORMS SO THAT THE VERTICAL PIPES EXTEND NO GREATER THAN 5 FEET ABOVE THE FINAL SURCHARGE FILL ELEVATION. THE CONTRACTOR SHALL PROTECT THE SETTLEMENT PLATFORM VERTICAL RISER PIPES FROM DAMAGE DURING FILL PLACEMENT OPERATIONS. DAMAGED PIPES SHALL BE REPAIRED IMMEDIATELY AND RE–SURVEYED. THE SURVEY DATA SHALL INCLUDE NOTES INDICATING THE DATE DAMAGED AND THE RE–SURVEY DATE WITH CORRESPONDING ELEVATIONS
8. THE SETTLEMENT PLATFORMS SHALL BE MONITORED BY CONTRACTOR ON A BI–MONTHLY BASIS AND THE ELEVATION DATA PROVIDED TO THE RE WITHIN 48 HOURS AFTER THE READINGS ARE TAKEN.
9. THE ESTIMATED SURCHARGING DURATION IS 6 MONTHS. THE SURCHARGE FILLS AND TEMPORARY RETAINING WALL SHALL NOT BE REMOVED UNTIL THE SUCCESSFUL COMPLETION OF THE SURCHARGING PROGRAM IS VERIFIED BY THE DESIGNER.

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
203060P	36	VERTICAL WICK DRAIN	101,250	LF
203063M	37	VERTICAL WICK DRAIN OBSTRUCTION CLEARANCE	3,375	LF
203066P	38	SLOPE INCLINOMETER CASING	150	LF
203072P	39	SETTLEMENT PLATFORM	12	UN
513NS1P	73	TEMPORARY RETAINING WALL, SURCHARGE	1.0000	LS

SECTION A-A
NOT TO SCALE

LEGEND

SEE SHEETS 6 AND 7 FOR EXISTING CONDITIONS PLAN.

- 86 — PROPOSED CONTOUR
- x 28.00 — PROPOSED SPOT ELEVATION
- PROPOSED SURFACE FLOW
- SP-6 — PROPOSED SETTLEMENT PLATE LOCATION
- I-1 — PROPOSED INCLINOMETER LOCATION, INSTALLED BY CONTRACTOR

No.	Date	Revision	Revised By	Checked By

40 0 40 80
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FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

SITE PREPARATION PLAN

FOR

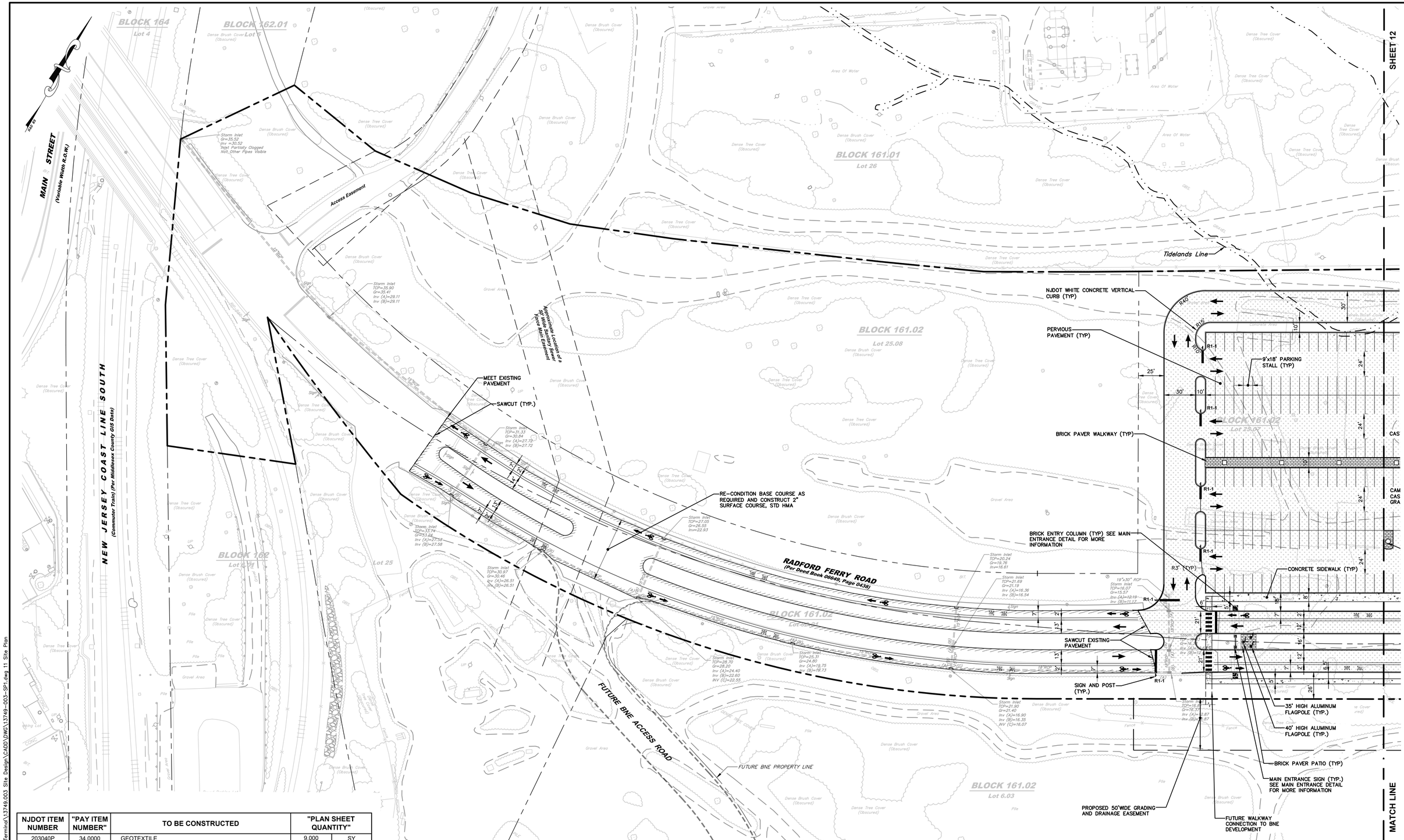
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	-----	10 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SITE-PREP1.dwg 10 Site Preparation Plan



NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
203040P	34.0000	GEOTEXTILE	9,000	SY
301NS1P	40.0000	PERVIOUS PAVEMENT SUBBASE	2,200	CY
302006P	41.0000	DENSE-GRADED AGGREGATE BASE COURSE, 4" THICK	200	SY
401009P	43.0000	HMA MILLING, 3" OR LESS	5,000	SY
401030M	44.0000	TACK COAT	500	GAL
401042M	45.0000	HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE	634	TON
402006M	47.0000	MODIFIED OPEN-GRADED 9.5 MM FRICTION COURSE	820	TON
402NS1M	48.0000	MODIFIED OPEN-GRADED 19 MM FRICTION COURSE	1,365	TON
606015P	92.0000	CONCRETE SIDEWALK, REINFORCED, 5" THICK	200	SY
606NS1P	95.0000	BRICK PAVING BLOCKS	180	SY
620NS1P	103.0000	ENTRANCE SIGN & PILLERS	1	LS

PROPOSED LEGEND

SEE SHEET "3" FOR GENERAL NOTES AND EXISTING LEGEND

- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- DC — PROPOSED DEPRESSED CURB
- FC — PROPOSED DEPRESSED FLUSH CURB
- PROPOSED CONCRETE
- PROPOSED REINFORCED CONCRETE MAINTENANCE ACCESS
- PROPOSED BUILDING OR STRUCTURE
- PROPOSED PERVIOUS PAVEMENT
- PROPOSED PAVERS
- PROPOSED DIRECTION OF TRAFFIC FLOW ARROW
- (5) PROPOSED PARKING STALL COUNT
- PROPOSED REGULATORY SIGN
- PROPOSED BOLLARDS
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED MANHOLE
- PROPOSED INLET
- CO — PROPOSED CLEANOUT
- PROPOSED HEADWALL
- WV — PROPOSED WATER VALVE
- PROPOSED HYDRANT

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FPA FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

SITE PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	-----	11 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
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SHEET 11

CONCRETE SIDEWALK (TYP)

MODULAR BLOCK RETAINING WALL (TYP)

Wetlands Line

50' Buffer

DIRECTION OF TRAFFIC FLOW ARROW (TYP)

ELECTRICAL SERVICE AREA

PERVIOUS PAVEMENT (TYP)

PROPOSED GRADING AND DRAINAGE EASEMENT

BLOCK 161.02
Lot 25.06

BLOCK 161.02
Lot 25.05

Mean High Water El 2.30

Tidelands Line

Spring High Water El 2.73

Mean Low Water El -2.91

4" WHITE STRIPE (TYP)

9'x18' PARKING STALL (TYP)

8'x18' HC PARKING STALL (TYP)

8' HIGH CHAIN LINK FENCE WITH DOUBLE 4' SWING GATE AROUND PUMP STATION (SEE DETAIL)

CAST IRON TREE GRATE (TYP)

NJDOT WHITE CONCRETE VERTICAL CURB (TYP)

BLOCK 161.02
Lot 25.07

FERRY TERMINAL
(NOT IN CONTRACT)

DECORATIVE BOLLARDS

BULKHEAD WITH RAILING (TYP)

CAMDEN AMBOY RAILROAD CAST IRON MARKER (TYP) GRAPHIC A

BRICK PAVER 2.25" THICK RUNNING BOND PATTERN (TYP)

BRICK PAVER 2.75" THICK RUNNING BOND PATTERN (TYP)

CONCRETE SIDEWALK (TYP)

CONCRETE SPLASH PAD (TYP)

NJDOT WHITE CONCRETE VERTICAL CURB (TYP)

BRICK PAVER WALKWAY (TYP)

CAMDEN AMBOY RAILROAD CAST IRON MARKER (TYP) GRAPHIC A

8'x18' HANDICAPPED PARKING STALL (TYP)

CONCRETE CURB (TYP)

RETAINING WALL WITH RAILING (TYP)

STEP

POWDER COATED ALUMINUM RAILING SYSTEM (TYP) SEE DETAIL

CONCRETE SIDEWALK (TYP)

CONCRETE STAIRS WITH 5' LANDING (TYP)

Limits of Mudflats

CONCRETE STAIRS (TYP)

BRICK PAVER 2.75" THICK RUNNING BOND PATTERN (TYP)

BIKEWAY MARKER (TYP)

BIKEWAY TEXT (TYP)

ADA COMPLIANT RAMPS WITH POWDER COATED ALUMINUM RAILING

ALUMINUM FLAGPOLE 35' TALL (TYP)

ALUMINUM FLAGPOLE 40' TALL (TYP)

CAMDEN AMBOY CAST IRON MARKER GRAPHIC B (TURNTABLE) (TYP)

PROPOSED 50'WIDE GRADING AND DRAINAGE EASEMENT

BRICK PAVER 2.75" THICK HERRINGBONE PATTERN (TYP)

ALUMINUM FLAGPOLE 35' TALL (TYP)

ADA COMPLIANT RAMPS. SEE STRUCTURAL DRAWINGS

CONCRETE STAIRS WITH 5' LANDING (TYP) SEE STRUCTURAL DRAWINGS

THERMOPLAST DIRECTIONAL ARROW (TYP)

BULKHEAD WITH RAILING (TYP)

30' X 84' FERRY TERMINAL PAVILION (TYP)

BLOCK 161.02
Lot 6.03

PLAZA

PAVILION

CROSSWALK WITH 24" WIDE STRIPES (TYP.)

CONCRETE CURB (TYP)

4" WHITE STRIPE (TYP)

24" WIDE WHITE STOP BAR (TYP)

9'x18' PARKING STALL (TYP)

CONCRETE STAIRS (TYP)

WATER METER PIT (SEE DETAIL)

FERRY WATER SERVICE

FERRY BOATS AND DOCKING AREA

Limits of Mudflats

Mean High Water El 2.30

Spring High Water El 2.73

RETAINING WALL WITH RAILING (TYP)

BULKHEAD WITH RAILING (TYP)

PERVIOUS PAVEMENT (TYP)

DECORATIVE BOLLARDS

RETAINING WALL WITH RAILING (TYP)

U.S. BULKHEAD LINE (Per Tax Map)

SOUTH RAMP PAVED ACCESS DRIVE

PROPOSED 50'WIDE GRADING AND DRAINAGE EASEMENT

Tidelands Line

MATCH LINE

MATCH LINE

INSET

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
203040P	34	GEOTEXTILE	33,560	SY
301NS1P	40	PERVIOUS PAVEMENT SUBBASE	5,850	CY
302006P	41	DENSE-GRADED AGGREGATE BASE COURSE, 4" THICK	2,900	SY
302012P	42	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	6,575	SY
401042M	45	HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE	53	TON
401096M	46	HOT MIX ASPHALT 19 M 64 BASE COURSE	133	TON
402006M	47	MODIFIED OPEN-GRADED 9.5 MM FRICTION COURSE	2,180	TON
402NS1M	48	MODIFIED OPEN-GRADED 19 MM FRICTION COURSE	6,135	TON
502006M	50	PRE-BORED HOLE	200	LF
502018M	51	DYNAMIC PILE LOAD TEST	2	UNIT
502NS1M	52	CONCRETE-FILLED STEEL PIPE PILE, 12.75" DIAMETER	800	LF
504009P	53	REINFORCEMENT STEEL, GALVANIZED	251,291	LB
504NS1M	54	CONCRETE SPLASH PAD	1,825	CY
504NS2M	55	CONCRETE PAD - PLAZA WALKWAY & PAVILION - 8 INCH	300	CY
504NS3M	56	CONCRETE SHEET PILE CAP	274	CY
504NS4P	57	CONCRETE FOUNDATION, PAVILION	127	CY
504NS5P	58	CONCRETE STAIRS, TYPE 1	2	UN
504NS6P	59	CONCRETE STAIRS, TYPE 2	1	UN
504NS7P	60	CONCRETE STAIRS, TYPE 3	1	UN
504NS8P	61	CONCRETE HANDICAP RAMPS	2	UN
504NS9P	62	CONCRETE PIPE COLLAR	1	LS
506NS1M	63	STRUCTURAL STEEL, GALVANIZED	348,280	LB
509NS3P	66	RAILING, STAIRWAYS	1	LS
509NS4P	67	RAILING, HANDICAP RAMPS	1	LS
606015P	92	CONCRETE SIDEWALK, REINFORCED, 5" THICK	2,900	SY
606140P	94	TREE GRATES	10	UN
606NS1P	95	BRICK PAVING BLOCKS	1,830	SY
615NS1P	102	PRE-ENGINEERED PAVILION	1	LS

NOTES:

1. SEE SHEETS 6 AND 7 FOR EXISTING CONDITIONS PLAN.
2. SEE SHEET 11 FOR PROPOSED LEGEND.

PLAN

END BULKHEAD

MATCH LINE

INSET

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
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SITE PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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Plotted by: Suzanne C. Sleeman 10/7/2021
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NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
606084P	93	DETECTABLE WARNING SURFACE	5	SY
607021P	96	9" X 18" CONCRETE VERTICAL CURB	2,530	LF
610003M	98	TRAFFIC STRIPES, 4"	2,736	LF
610008M	99	TRAFFIC MARKINGS, SYMBOLS	600	SF
610017M	100	TRAFFIC MARKING LINES, 24"	184	LF
612003P	101	REGULATORY AND WARNING SIGN	38	SF

PROPOSED LEGEND

SEE SHEET "3" FOR GENERAL NOTES AND EXISTING LEGEND

- PROPOSED EDGE OF PAVEMENT
- PROPOSED CURB
- DC — PROPOSED DEPRESSED CURB
- FC — PROPOSED DEPRESSED FLUSH CURB
- PROPOSED CONCRETE
- PROPOSED REINFORCED CONCRETE MAINTENANCE ACCESS
- PROPOSED BUILDING OR STRUCTURE
- PROPOSED DIRECTION OF TRAFFIC FLOW ARROW
- PROPOSED REGULATORY SIGN
- B — PROPOSED BOLLARDS
- PROPOSED RETAINING WALL
- PROPOSED FENCE
- PROPOSED MANHOLE
- PROPOSED INLET
- CO — PROPOSED CLEANOUT
- PROPOSED HEADWALL
- WV — PROPOSED WATER VALVE
- PROPOSED HYDRANT

No.	Date	Revision	Revised By	Checked By

40 0 40 80
SCALE IN FEET

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

CURBING, SIGNING AND STRIPING PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

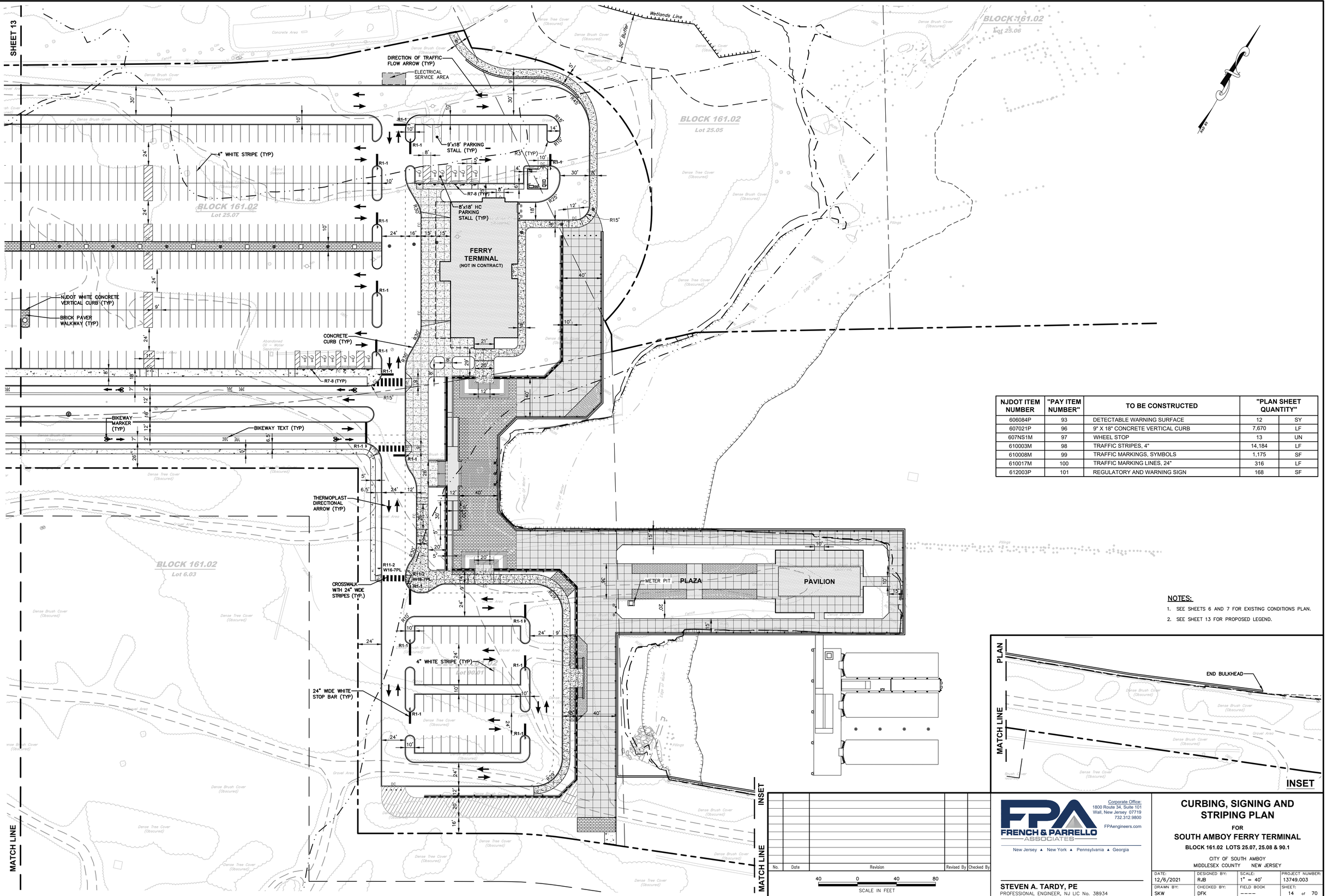
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	13 of 70

Plotted by: Suzanne C. Steenon 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749–003–SP1.dwg 13 CURBING SIGNING AND STRIPING PLAN

SHEET 13



NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
606084P	93	DETECTABLE WARNING SURFACE	12	SY
607021P	96	9" X 18" CONCRETE VERTICAL CURB	7,670	LF
607NS1M	97	WHEEL STOP	13	UN
610003M	98	TRAFFIC STRIPES, 4"	14,184	LF
610008M	99	TRAFFIC MARKINGS, SYMBOLS	1,175	SF
610017M	100	TRAFFIC MARKING LINES, 24"	316	LF
612003P	101	REGULATORY AND WARNING SIGN	168	SF

NOTES:

1. SEE SHEETS 6 AND 7 FOR EXISTING CONDITIONS PLAN.
2. SEE SHEET 13 FOR PROPOSED LEGEND.

No.	Date	Revision	Revised By	Checked By

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SCALE IN FEET

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CURBING, SIGNING AND STRIPING PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	-----	14 of 70

Plotted by: Suzanne C. Steenon 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SP1.dwg 14 CURBING SIGNING AND STRIPING PLAN

NORTH

NEW JERSEY COAST LINE SOUTH
(Commuter Train) (Per Middlesex County GIS Data)

Access Easement

Approximate Location of a 50' Wide Sanitary Sewer Force Main Easement

Lot 26

BLOCK 161.02
Lot 25.08

BLOCK 161.02
Lot 25.04

BLOCK 162
Lot 1.01

Lot 25

BLOCK 161.02
Lot 25.01

BLOCK 161.02
Lot 6.03

SAN MH S1
(FORCE MAIN CONNECTION)
RIM 27.60

SAN MH S2
RIM 28.40

SAN MH S3
RIM 25.64

SAN MH S4
RIM 23.82

RADFORD FERRY ROAD
(Per Deed Book D6049, Page 0438)

FUTURE BNE ACCESS ROAD

FUTURE BNE PROPERTY LINE

3:1 SLOPE

HW 1
INV 10.00

INLET 2, TYPE B
GR 15.98

INLET 5, TYPE B
GR 16.00

INLET 6, TYPE B
GR 15.82

INLET 7, TYPE B
GR 15.00

PRESSURE CLEANOUT VALVE MANHOLE

INLET 3, TYPE B
GR 16.60

EXISTING STORM STRUCTURES AND PIPING TO BE REMOVED

INLET 4, TYPE B
(RECONSTRUCT)
GR 16.30

INLET 8, TYPE B
GR 15.00

PROPOSED 50'WIDE GRADING AND DRAINAGE EASEMENT

BNE INLET 120
GR 25.50

BNE SAN MH S-15
RIM 21.80
INV IN 14.36
INV OUT 14.26

FUTURE BNE
SANITARY SEWER

MATCH LINE

PROPOSED LEGEND

SEE SHEETS 6 & 7 FOR EXISTING CONDITIONS PLAN.

- PROPOSED MANHOLE
- PROPOSED INLET
- CO — PROPOSED CLEANOUT
- PROPOSED HEADWALL
- 86 — PROPOSED CONTOUR
- x 86.00 — PROPOSED SPOT ELEVATION
- PROPOSED SURFACE FLOW

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
202009P	25	EXCAVATION, UNCLASSIFIED	38,715	CY
203021P	33	I-14 SOIL AGGREGATE	9,000	CY

ONLY CERTIFIED CLEAN FILL MAY BE PLACED ON PROPERTIES NOT OWNED BY THE CITY AND FOR WHICH LEGAL ACCESS IS PROVIDED THROUGH AN EASEMENT

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40 0 40 80
SCALE IN FEET

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PROFESSIONAL ENGINEER, NJ LIC No. 38934

GRADING PLAN

FOR

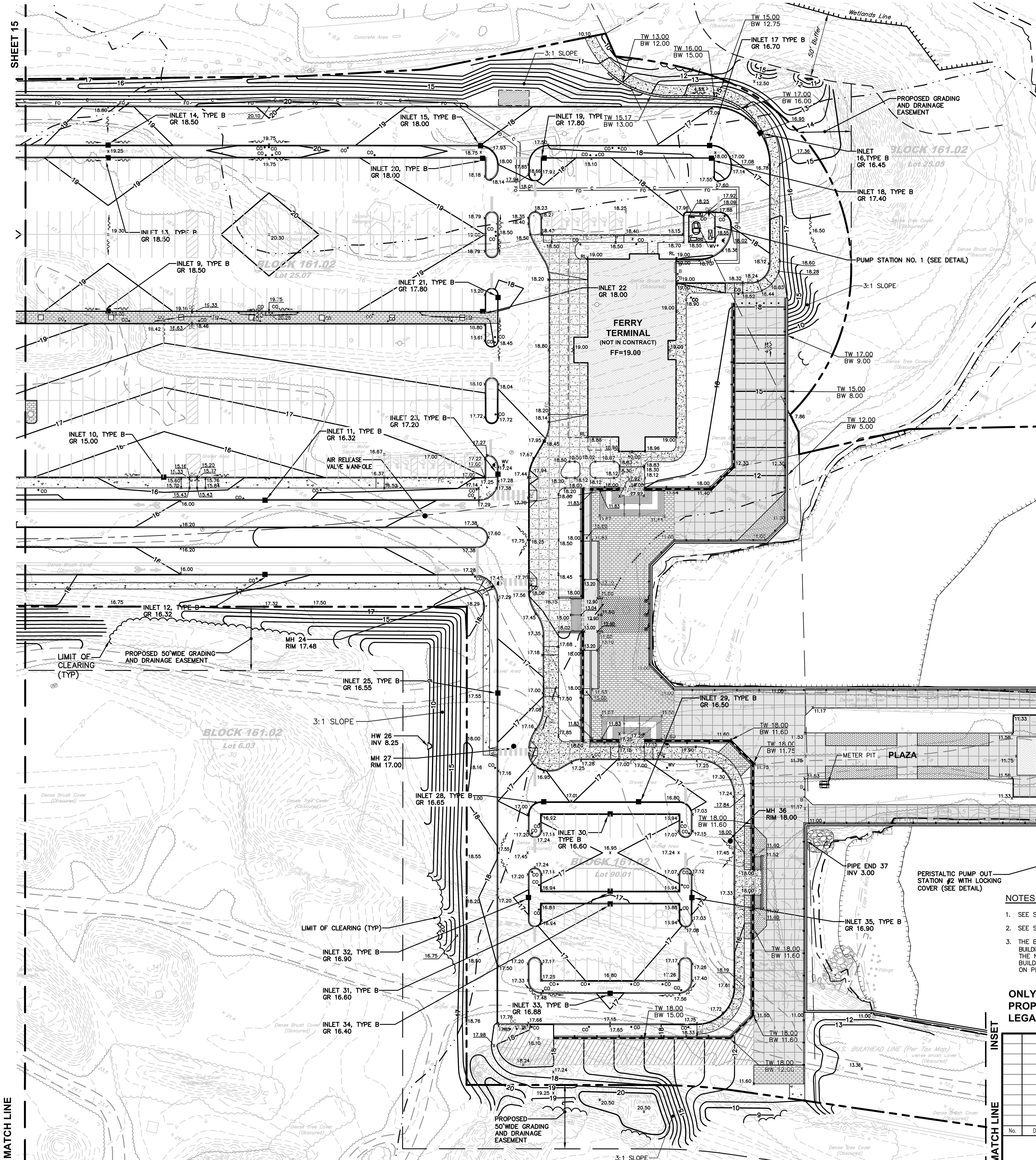
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

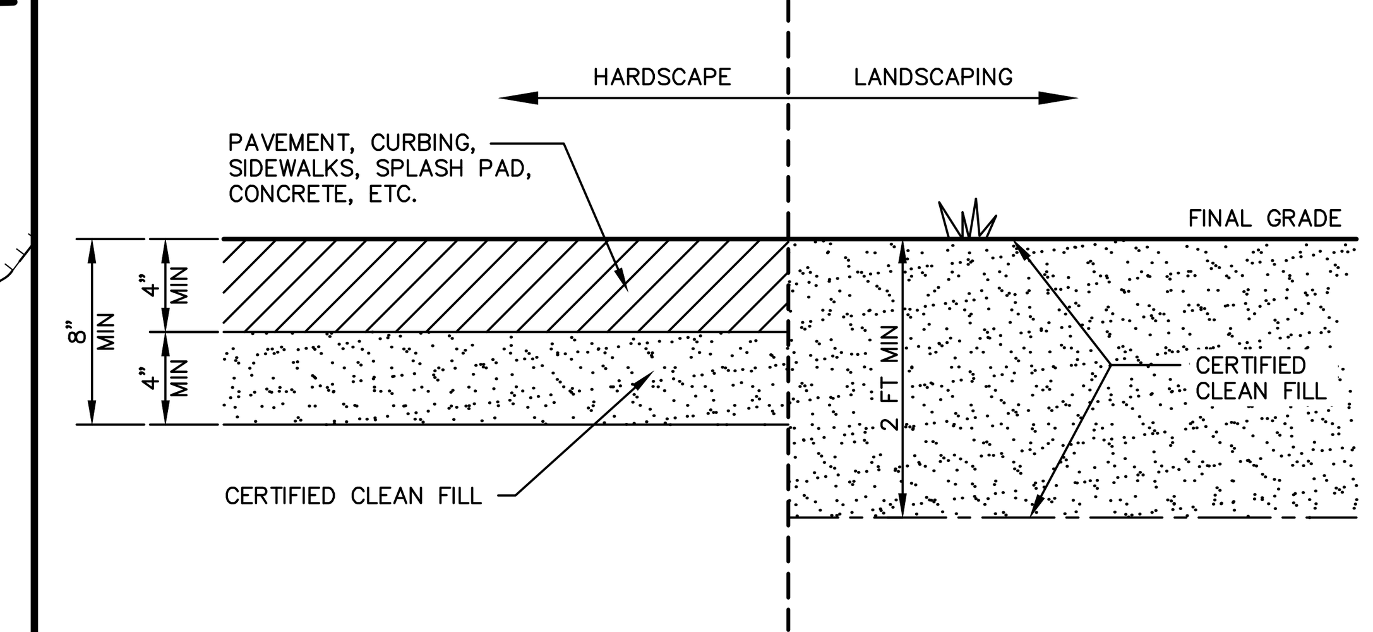
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	15 of 70

Plotted by: Suzanne C. Seeman 10/7/2021
O:\CAD\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CAD\DWG\13749-003-GR-UTI.dwg 15 Grading Plan

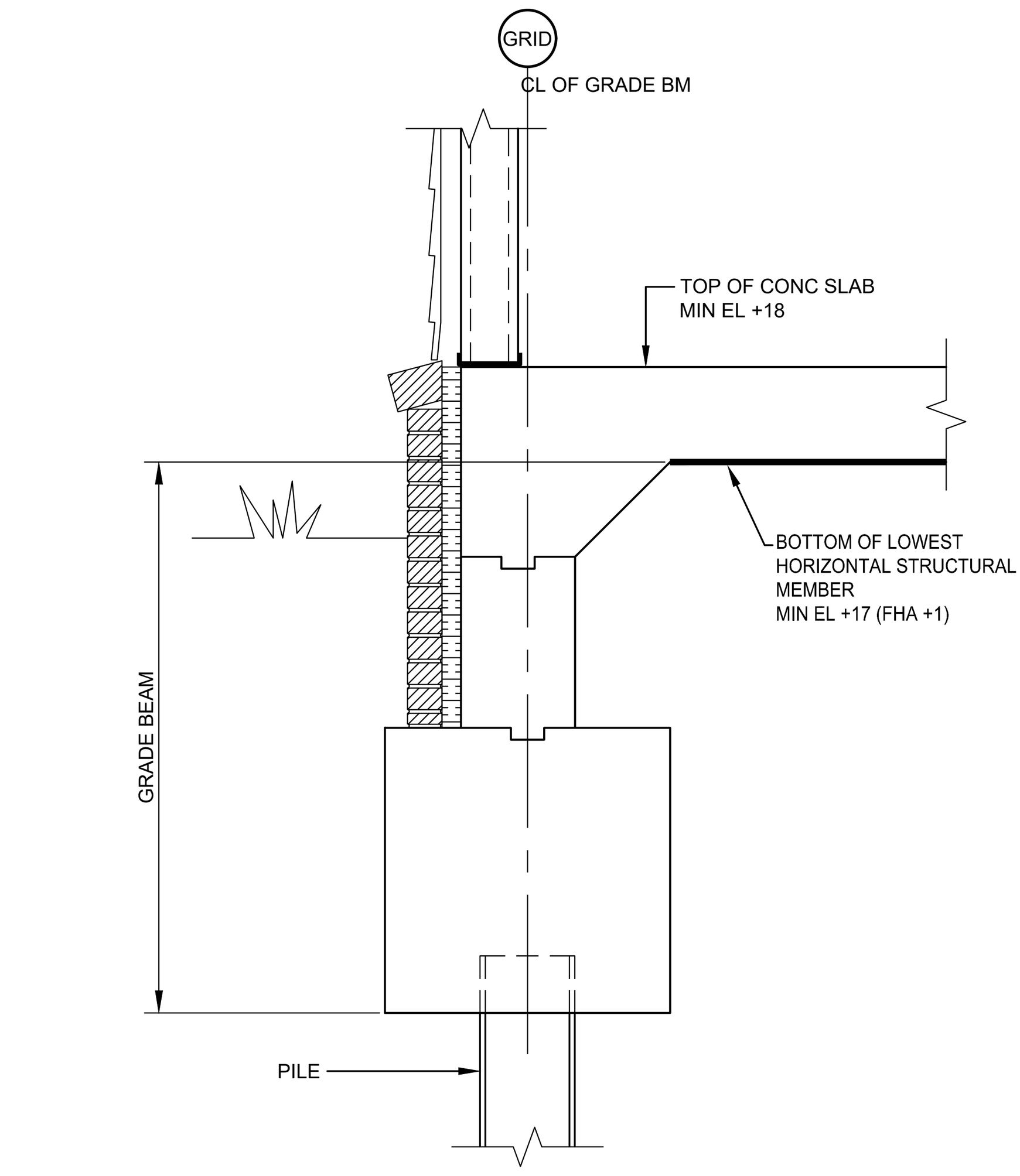


NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
202009P	25	EXCAVATION, UNCLASSIFIED	4750	CY
203009P	31	I-9 SOIL AGGREGATE	16,225	CY
203015P	32	I-11 SOIL AGGREGATE	4,335	CY
203021P	33	I-14 SOIL AGGREGATE	20,000	CY
504NS3M	56	CONCRETE SHEET PILE CAP	274	CY
504NS9P	62	CONCRETE PIPE COLLAR	1	LS
506NS1M	63	STRUCTURAL STEEL, GALVANIZED	348,280	LB
509NS1P	64	RAILING, BULKHEAD	1,350	LF
509NS2P	65	RAILING, PRECAST CONCRETE WALL	940	LF
511006P	68	STEEL SHEET PILING	87,500	SF
511NS1P	69	STEEL TIE-BACK SHEETING	19,800	SF
513003P	71	RETAINING WALL, LOCATION NO. 1	8,255	SF
513003P	72	RETAINING WALL, LOCATION NO. 2	540	SF



ENVIRONMENTAL CAP

NOT TO SCALE



TYPICAL SECTION OF PROPOSED FERRY TERMINAL BUILDING

(NOT IN CONTRACT)

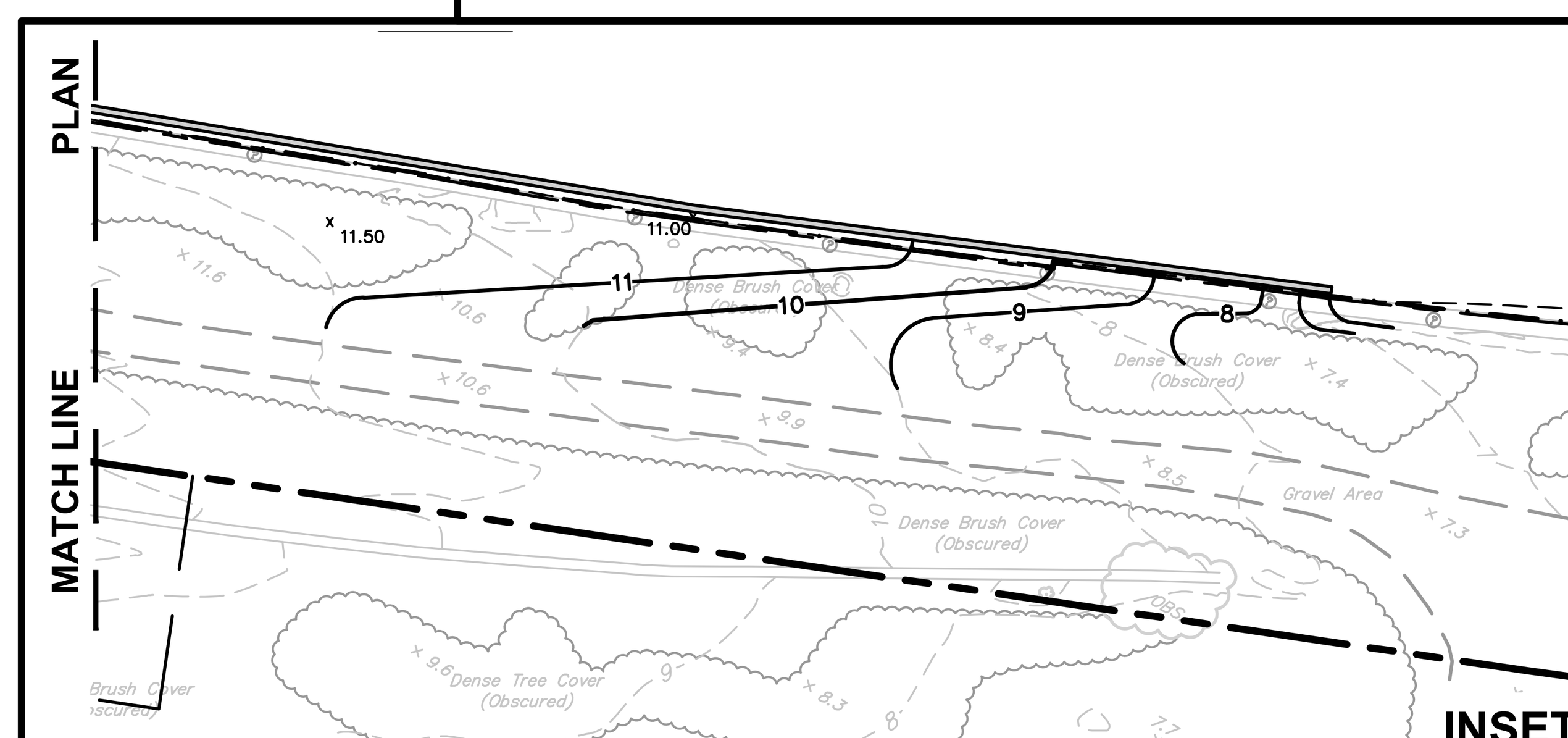
NOT TO SCALE

NOTE:
TYPICAL SECTION OF PROPOSED FERRY TERMINAL BUILDING (NOT IN CONTRACT) IS CONCEPTUAL IN NATURE AND SUBJECT TO FINAL STRUCTURAL DESIGN. THIS DETAIL IS PROVIDED TO ESTABLISH THE MINIMUM ELEVATION OF THE LOWEST HORIZONTAL STRUCTURAL MEMBER AND MINIMUM TOP OF THE FIRST FLOOR SLAB. SEE NOTE 3.

NOTES:

1. SEE SHEETS 6 AND 7 FOR EXISTING CONDITIONS PLAN.
2. SEE SHEETS 11 AND 12 FOR SITE PLAN.
3. THE BOTTOM OF THE LOWEST HORIZONTAL STRUCTURAL MEMBER OF THE PROPOSED BUILDING (NOT IN CONTRACT) SHALL BE AT ELEVATION 17 FEET, OR 1 FOOT ABOVE THE NJ FLOOD HAZARD AREA DESIGN FLOOD ELEVATION. THE FINISH FLOOR OF THE BUILDING SHALL BE 18 FEET. THE BUILDING FOUNDATIONS WILL BE CONSTRUCTED ON PILES IN ACCORDANCE WITH THE UNIFORM CONSTRUCTION CODE.

ONLY CERTIFIED CLEAN FILL MAY BE PLACED ON PROPERTIES NOT OWNED BY THE CITY AND FOR WHICH LEGAL ACCESS IS PROVIDED THROUGH AN EASEMENT



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40 0 40 80
SCALE IN FEET

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Wall, New Jersey 07719
732.312.9800
FPAengineers.com
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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

GRADING PLAN

FOR

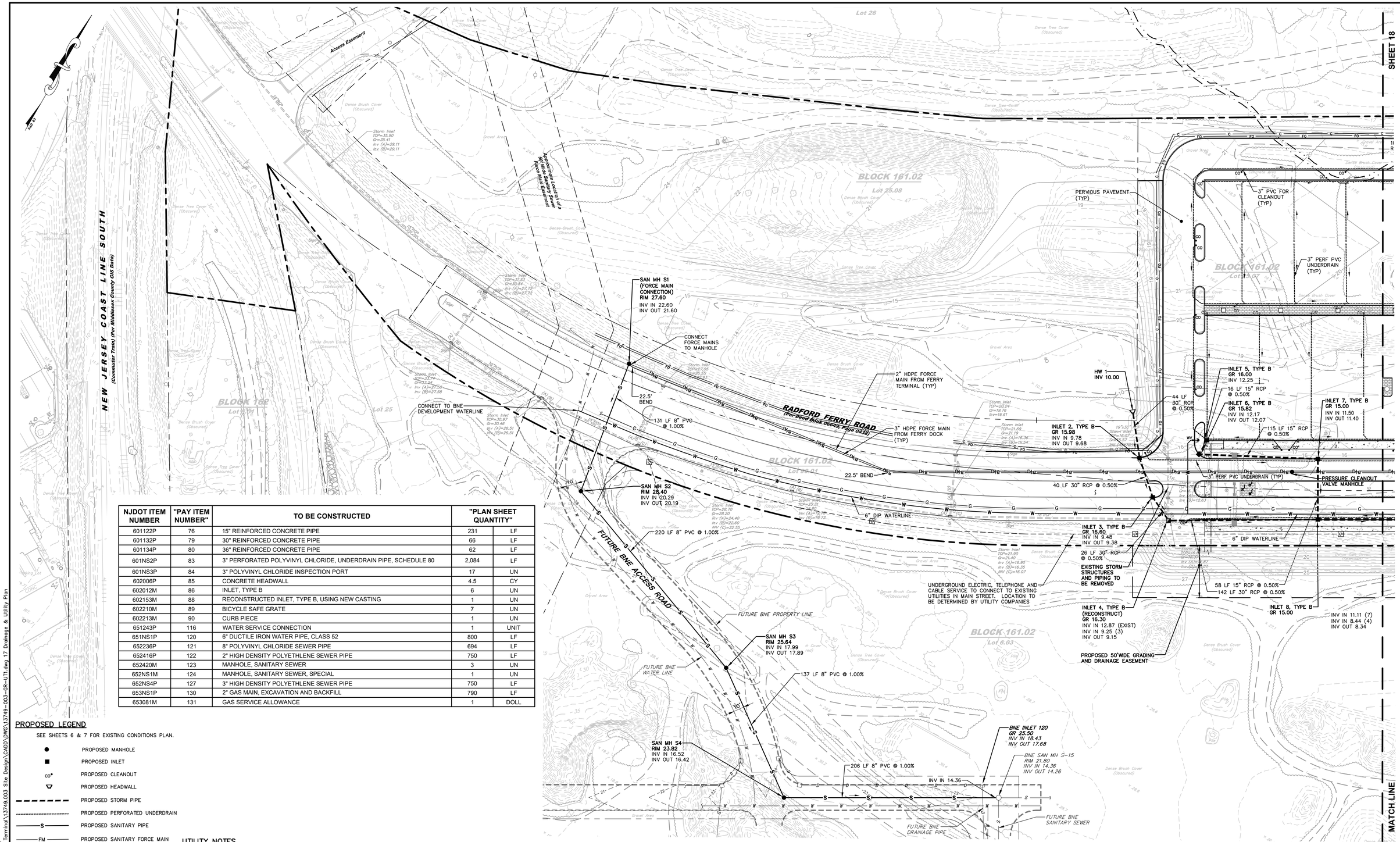
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	16 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-GR-UT1.dwg 16 Grading Plan



NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
601122P	76	15" REINFORCED CONCRETE PIPE	231	LF
601132P	79	30" REINFORCED CONCRETE PIPE	66	LF
601134P	80	36" REINFORCED CONCRETE PIPE	62	LF
601NS2P	83	3" PERFORATED POLYVINYL CHLORIDE, UNDERDRAIN PIPE, SCHEDULE 80	2,084	LF
601NS3P	84	3" POLYVINYL CHLORIDE INSPECTION PORT	17	UN
602006P	85	CONCRETE HEADWALL	4.5	CY
602012M	86	INLET, TYPE B	6	UN
602153M	88	RECONSTRUCTED INLET, TYPE B, USING NEW CASTING	1	UN
602210M	89	BICYCLE SAFE GRATE	7	UN
602213M	90	CURB PIECE	1	UN
651243P	116	WATER SERVICE CONNECTION	1	UNIT
651NS1P	120	6" DUCTILE IRON WATER PIPE, CLASS 52	800	LF
652236P	121	8" POLYVINYL CHLORIDE SEWER PIPE	694	LF
652416P	122	2" HIGH DENSITY POLYETHLENE SEWER PIPE	750	LF
652420M	123	MANHOLE, SANITARY SEWER	3	UN
652NS1M	124	MANHOLE, SANITARY SEWER, SPECIAL	1	UN
652NS4P	127	3" HIGH DENSITY POLYETHLENE SEWER PIPE	750	LF
653NS1P	130	2" GAS MAIN, EXCAVATION AND BACKFILL	790	LF
653081M	131	GAS SERVICE ALLOWANCE	1	DOLL

PROPOSED LEGEND

SEE SHEETS 6 & 7 FOR EXISTING CONDITIONS PLAN.

- PROPOSED MANHOLE
- PROPOSED INLET
- CO• PROPOSED CLEANOUT
- PROPOSED HEADWALL
- PROPOSED STORM PIPE
- PROPOSED PERFORATED UNDERDRAIN
- S PROPOSED SANITARY PIPE
- FM PROPOSED SANITARY FORCE MAIN
- W PROPOSED WATER PIPE
- G PROPOSED GAS PIPE
- ETC PROPOSED UNDERGROUND TELEPHONE ELECTRIC & CABLE
- WV• PROPOSED WATER VALVE
- PROPOSED HYDRANT
- PROPOSED PERVIOUS PAVEMENT
- 86 PROPOSED CONTOUR
- RL• PROPOSED ROOF LEADER

UTILITY NOTES

1. ALL UTILITIES ARE TO BE LOCATED UNDERGROUND AND FINAL LOCATION OF GAS, ELECTRIC, WATER, FIBER, TV CABLE TO BE COORDINATED WITH THE APPROPRIATE UTILITY PRIOR TO CONSTRUCTION.
2. ALL ROOF LEADERS TO CONNECT & DISCHARGE TO PROPOSED STORM DRAINAGE SYSTEM.
3. THE CONTRACTOR SHALL MAINTAIN AT LEAST 10' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAINS WHERE VERTICAL SEPARATION IS LESS THAN 18".
4. ALL WATER MAINS, FITTINGS, AND VALVES SHALL BE 6" CEMENT LINED DIP AS SPECIFIED UNLESS OTHERWISE NOTED ON THE PLANS. ALL WATER MAIN VALVES SHALL BE FULL SIZE GATE VALVES AS SPECIFIED.
5. ALL PRESSURE PIPE (SEWAGE FORCE MAIN & WATER MAINS) FITTINGS SHALL BE RESTRAINED WITH MEGA–LUG RETAINER GLANDS AND THRUST BLOCKS AS DETAILED ON THE PLANS AND AS SPECIFIED.
6. ALL INLETS TO BE TYPE "B" UNLESS NOTED OTHERWISE.
7. ALL WATER MAINS TO BE CONSTRUCTED WITH 4' OF COVER OVER PIPE.
8. STORM SEWER SHALL BE CLASS III AND CONFORM TO AASHTO M170 UNLESS INDICATED OTHERWISE.
9. ALL GRAVITY SEWER MAINS SHALL BE 8" SDR 35 PVC.
10. SANITARY SEWER MANHOLES WITH A DIFFERENCE IN INVERTS GREATER THAN 24" SHALL BE A DROP MANHOLE (SEE DETAIL).
11. ALL WATER SERVICE CONNECTIONS TO BE SIZED BY ARCHITECT TO MEET UNIT REQUIREMENTS AND BUILDING CODES.
12. WERE PVC PIPE IS INSTALLED, METALLIC LOCATION TAPE SHALL BE INSTALLED ADJACENT TO PIPE. PVC PIPE SHALL HAVE BELL AND SPIGOT ENDS, AND O–RING RUBBER GASKET JOINTS.
13. ALL SANITARY FORCE MAINS & SUCTION LINES TO BE 2" HDPE PIPE.

No.	Date	Revision	Revised By	Checked By

40 0 40 80
SCALE IN FEET

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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

DRAINAGE & UTILITY PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	17 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
Q:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-GR-UTI.dwg 17 Drainage & Utility Plan

SHEET 17

PERVIOUS PAVEMENT (TYP)

10 LF 15" RCP @ 0.50%

INLET 14, TYPE B
GR 18.50
INV IN 14.45
INV OUT 14.35

292 LF 18" RCP @ 0.50%

INLET 15, TYPE B
GR 18.00
INV IN 12.89
INV OUT 12.79

11 LF 18" RCP @ 0.50%

INLET 20, TYPE B
GR 18.00
INV IN 12.74 (15)
INV IN 11.22 (19)
INV OUT 11.12

3" PERF PVC UNDERDRAIN (TYP)

INLET 13, TYPE B
GR 18.50
INV 14.50

121 LF 24" RCP @ 0.50%

INLET 9, TYPE B
GR 18.50
INV 15.00

BLOCK 161.02
Lot 25.07

3" PVC FOR CLEANOUT (TYP)

INLET 21, TYPE B
GR 17.80
INV 14.30

3" PERF PVC UNDERDRAIN (TYP)

138 LF 15" RCP @ 3.00%

2" HDPE FORCE MAIN FROM PUMP STATION NO. 1 (TYP)

129 LF 24" RCP @ 0.50%

INLET 10, TYPE B
GR 15.00
INV IN 10.86
INV OUT 10.76

82 LF 24" RCP @ 0.50%

INLET 11, TYPE B
GR 16.32
INV IN 10.35
INV OUT 10.25

AIR RELEASE VALVE MANHOLE

INLET 23, TYPE B
GR 17.20
INV IN 9.77
INV OUT 9.67

45° BEND

3" PERF PVC UNDERDRAIN (TYP)

59 LF 24" RCP @ 0.50%

184 LF 42" RCP @

45° BEND

58 LF 24" RCP @ 0.50%

45° BEND

250 LF 36" RCP @ 0.50%

86 LF 24" RCP @ 0.50%

INLET 12, TYPE B
GR 16.32
INV IN 7.09 (9)
INV IN 9.96 (11)
INV OUT 6.99

MH 24
RIM 17.48
INV IN 6.07 (12)
INV IN 9.24 (23)
INV OUT 5.97

LIMIT OF CLEARING (TYP)

PROPOSED 50'WIDE GRADING AND DRAINAGE EASEMENT

86 LF 42" RCP @ 0.50%

6" DIP WATERLINE

INLET 25, TYPE B
GR 16.55
INV IN 5.54
INV OUT 5.44

44 LF 42" RCP @ 0.50%

HW 26
INV 8.25

65 LF 18" RCP @ 0.96%

MH 27
RIM 17.00
INV IN 5.22 (25)
INV IN 7.63 (26)
INV OUT 5.12

INLET 28, TYPE B
GR 16.85
INV IN 4.62
INV OUT 4.52

BLOCK 161.02
Lot 6.03

PERVIOUS PAVEMENT (TYP)

LIMIT OF CLEARING (TYP)

INLET 32, TYPE B
GR 16.90
INV 12.90

INLET 31, TYPE B
GR 16.60
INV IN 11.74
INV OUT 11.64

INLET 34, TYPE B
GR 16.40
INV IN 11.47 (31)
INV IN 11.94 (32)
INV IN 11.83 (33)
INV OUT 11.37

3" PERF PVC UNDERDRAIN (TYP)

MATCH LINE

PROPOSED 50'WIDE GRADING AND DRAINAGE EASEMENT

INLET 17 TYPE B
GR 16.70
INV IN 12.47
INV OUT 12.37

50' Buffer

Wetlands Line

41 LF 15" RCP @ 0.50%

PROPOSED GRADING AND DRAINAGE EASEMENT

ELECTRICAL SERVICE AREA

INLET 19, TYPE B
GR 17.80
INV IN 11.56
INV OUT 11.46

3" PERF PVC UNDERDRAIN (TYP)

131 LF 15" RCP @ 0.50%

10 LF 15" RCP @ 0.50%

INLET 16,TYPE B
GR 16.45
INV 12.68

48 LF 15" RCP @ 0.50%

45° BEND

6" DIP WATERLINE

45° BEND

INLET 18, TYPE B
GR 17.40
INV IN 12.32
INV OUT 12.22

6" PVC ROOF DRAIN @ 2.0% MIN

PUMP STATION NO. 1 (SEE DETAIL)

6" PVC ROOF DRAIN @ 2.0% MIN

17 LF 15" RCP @ 0.50%

INLET 22
GR 18.00
INV IN 10.52 (20)
INV IN 14.22 (21)
INV OUT 10.42

FERRY TERMINAL
(NOT IN CONTRACT)
FF=19.00

63 LF 8" PVC @ 2.00%

3" PERF PVC UNDERDRAIN (TYP)

6" PVC ROOF DRAIN @ 2.0% MIN

3" HDPE FORCE MAIN FROM FERRY DOCK (TYP)

74 LF 42" RCP @ 0.50%

2" HDPE FERRY SERVICE WATER LINE

3" HDPE SANITARY FORCE MAIN FROM FERRY (TYP)

INLET 29, TYPE B
GR 16.50
INV IN 4.15
INV OUT 4.05

CAP AND RESTRAIN

22.5° BEND

45° BEND

78 LF 42" RCP @ 1.00%

METER PIT

PLAZA

PAVILION

MH 36
RIM 18.00

INLET 30, TYPE B
GR 16.60
INV 12.65

61 LF 15" RCP @ 1.50%

3" PERF PVC UNDERDRAIN (TYP)

64 LF 15" RCP @ 1.50%

70 LF 15" RCP @ 1.50%

INLET 33, TYPE B
GR 16.88
INV 12.88

U.S. BULKHEAD LINE (Per Tax Map)

PROPOSED 50'WIDE GRADING AND DRAINAGE EASEMENT

PIPE END 37
INV 3.00

60 LF 42" RCP @ 0.61%

54 LF 15" RCP @ 1.50%

INLET 35, TYPE B
GR 16.90
INV IN 10.41
INV OUT 10.31

64 LF 15" RCP @ 1.50%

11 LF 15" RCP @ 1.50%

PERISTALTIC PUMP OUT STATION #2 WITH LOCKING COVER (SEE DETAIL)

FERRY WATER SERVICE

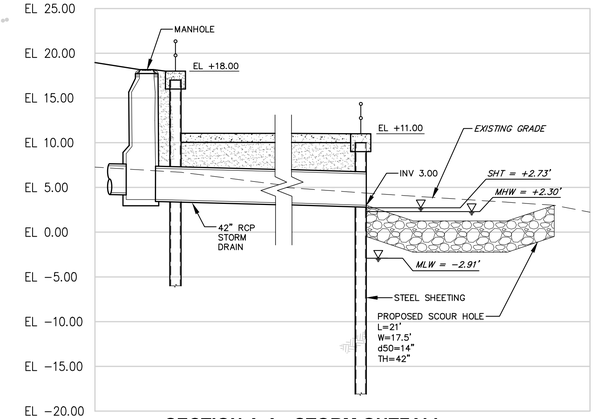
INSET

MATCH LINE

BLOCK 161.02
Lot 25.06

BLOCK 161.02
Lot 25.05

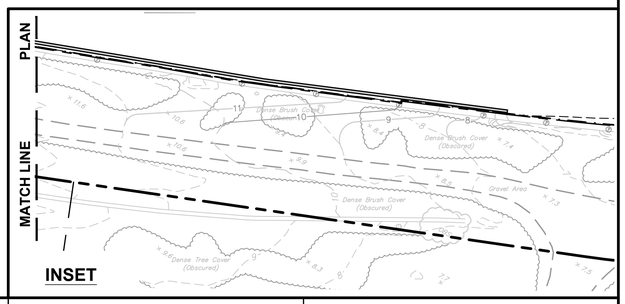
COORDINATES FOR PUMP STATIONS		
PUMP STA #1	N 603544.586	E 554035.603
PUMP STA #2	N 603271.821	E 554444.773



SECTION A-A - STORM OUTFALL

8 0 8 16
SCALE IN FEET

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
601122P	76	15" REINFORCED CONCRETE PIPE	673	LF
601124P	77	18" REINFORCED CONCRETE PIPE	365	LF
601128P	78	24" REINFORCED CONCRETE PIPE	476	LF
601132P	79	30" REINFORCED CONCRETE PIPE	186	LF
601134P	80	36" REINFORCED CONCRETE PIPE	188	LF
601136P	81	42" REINFORCED CONCRETE PIPE	576	LF
601NS1P	82	6" POLYVINYL CHLORIDE PIPE	234	LF
601NS2P	83	3" PERFORATED POLYVINYL CHLORIDE, UNDERDRAIN PIPE, SCHEDULE 80	6,628	LF
601NS3P	84	3" POLYVINYL CHLORIDE INSPECTION PORT	53	UN
602006P	85	CONCRETE HEADWALL	4.5	CY
602012M	86	INLET, TYPE B	26	UN
602060M	87	MANHOLE, 6' DIAMETER	3	UN
602210M	89	BICYCLE SAFE GRATE	26	UN
602213M	90	CURB PIECE	1	UN
651245M	117	FIRE HYDRANT	3	UNIT
651285P	118	WATER METER PIT	1	LS
651375P	119	2" HIGH DENSITY POLYETHYLENE WATER PIPE	452	LF
651NS1P	120	6" DUCTILE IRON WATER PIPE, CLASS 52	1,250	LF
652236P	121	8" POLYVINYL CHLORIDE SEWER PIPE	63	LF
652416P	122	2" HIGH DENSITY POLYETHLENE SEWER PIPE	757	LF
652NS2M	125	AIR RELEASE VALVE AND MANHOLE, SANITARY SEWER	1	UN
652NS3M	126	PRESSURE CLEAN OUT VALVE AND MANHOLE, SANITARY SEWER	1	UN
652NS4P	127	3" HIGH DENSITY POLYETHLENE SEWER PIPE	1,030	LF
652NS5M	128	PUMP STATION PACKAGE NO. 1	1	LS
652NS6M	129	PUMP STATION PACKAGE NO. 2	1	LS
653NS1P	130	2" GAS MAIN, EXCAVATION AND BACKFILL	775	LF
653081M	131	GAS SERVICE ALLOWANCE	1	DOLL



NOTES:

1. SEE SHEETS 6 & 7 FOR EXISTING CONDITIONS PLAN.
2. SEE SHEETS 11 & 12 FOR SITE PLAN.

No.	Date	Revision	Revised By	Checked By

40 0 40 80
SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

DRAINAGE & UTILITY PLAN

FOR

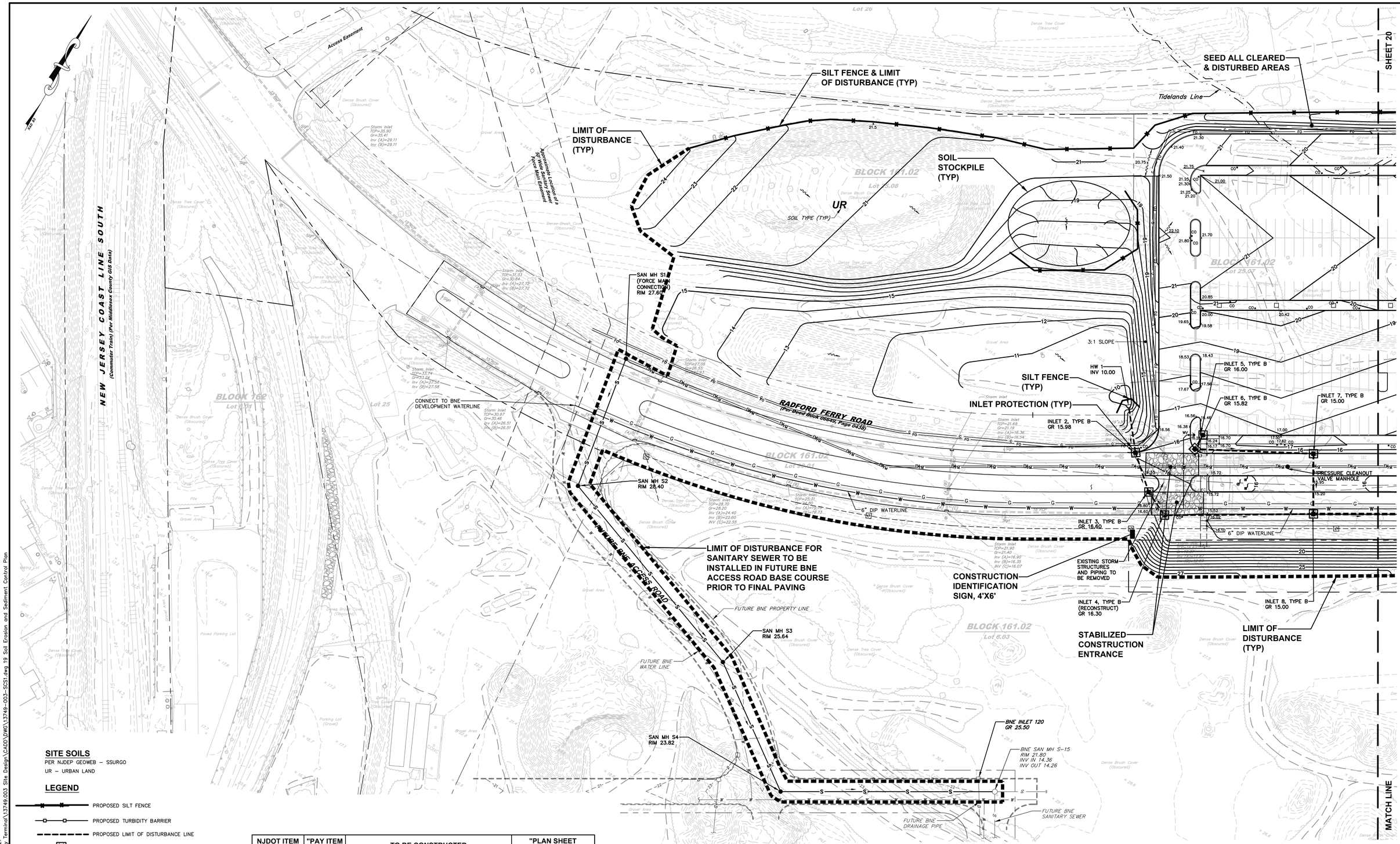
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	-----	18 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-GR-UTI.dwg 18 Drainage & Utility Plan



SITE SOILS

PER NJDEP GEOWEB – SSURGO

UR – URBAN LAND

LEGEND

- PROPOSED SILT FENCE
- PROPOSED TURBIDITY BARRIER
- PROPOSED LIMIT OF DISTURBANCE LINE
- PROPOSED INLET PROTECTION
- 450 PROPOSED CONTOUR
- x 448.23 PROPOSED SPOT ELEVATION
- PROPOSED SURFACE FLOW ARROW

LIMIT OF DISTURBANCE = 736,250 SF (16.902 AC)

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
158006M	10	SILT FENCE	680	LF
158033M	11	INLET FILTER TYPE 2, 2' X 4'	7	UN
158060M	13	CONSTRUCTION DRIVEWAY	100	TON
159015M	17	CONSTRUCTION IDENTIFICATION SIGN 4' X 6'	1	UNIT

NOTE:

1. SEE SHEETS 6 & 7 FOR EXISTING CONDITIONS PLAN.

No.	Date	Revision	Revised By	Checked By

40 0 40 80

SCALE IN FEET

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

SOIL EROSION AND SEDIMENT CONTROL PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	19 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SCS1.dwg 19 Soil Erosion and Sediment Control Plan

SHEET 19

SILT FENCE AND LIMIT OF DISTURBANCE (TYP)

SEED ALL CLEARED AND DISTURBED AREAS

3:1 SLOPE

INLET 14, TYPE B GR 18.50

INLET 15, TYPE B GR 18.00

INLET 19, TYPE B GR 17.80

INLET 20, TYPE B GR 18.00

INLET 13, TYPE B GR 18.50

INLET 9, TYPE B GR 18.50

INLET 21, TYPE B GR 17.80

INLET 22 GR 18.00

FERRY TERMINAL (NOT IN CONTRACT) FF=19.00

6" DIP WATERLINE

INLET 16,TYPE B GR 16.45

INLET 18, TYPE B GR 17.40

PUMP STATION NO. 1 (SEE DETAIL)

SILT FENCE AND LIMIT OF DISTURBANCE (TYP)

3:1 SLOPE

TW 15.00 BW 12.75

TW 13.00 BW 12.00

TW 16.00 BW 15.00

INLET 17 TYPE B GR 16.70

50' Buffer

Wetlands Line

TW 17.00 BW 16.00

TW 15.17 BW 13.00

TW 17.00 BW 9.00

TW 15.00 BW 8.00

TW 12.00 BW 5.00

BLOCK 161.02 Lot 25.06

BLOCK 161.02 Lot 25.05

BLOCK 161.02 Lot 25.07

INLET 10, TYPE B GR 15.00

INLET 11, TYPE B GR 16.32

INLET 23, TYPE B GR 17.20

AIR RELEASE VALVE MANHOLE

INLET 12, TYPE B GR 16.32

MH 27 RIM 17.48

LIMIT OF CLEARING (TYP)

INLET PROTECTION (TYP)

50' WIDE GRADING AND DRAINAGE EASEMENT

INLET 25, TYPE B GR 16.55

3:1 SLOPE

HW 26 IV 8.25

SILT FENCE

MH 27 RIM 17.00

MATCH LINE

INLET 28, TYPE B GR 16.65

LIMIT OF DISTURBANCE (TYP)

BLOCK 161.02 Lot 6.03

BLOCK 161.02 Lot 10.01

INLET 30, TYPE B GR 16.60

LIMIT OF CLEARING (TYP)

INLET 32, TYPE B GR 16.90

INLET 31, TYPE B GR 16.60

INLET 34, TYPE B GR 16.40

INLET 33, TYPE B GR 16.88

SILT FENCE AND LIMIT OF DISTURBANCE (TYP)

LIMIT OF DISTURBANCE (TYP)

3:1 SLOPE

INLET 29, TYPE B GR 16.50

CAP AND RESTRAIN

METER PIT

PLAZA

PAVILION

MH 36 RIM 18.00

PIPE END 37 INV 3.00

SCOUR HOLE (SEE DETAIL)

INLET 35, TYPE B GR 16.90

TW 18.00 BW 11.60

TW 18.00 BW 11.75

TW 18.00 BW 15.00

TW 18.00 BW 12.00

U.S. BULKHEAD LINE (Per Tax Map)

LIMIT OF DISTURBANCE (TYP)

SILT FENCE AND LIMIT OF DISTURBANCE (TYP)

RARITAN BAY
(A.K.A. SOUTH AMBOY REACH)

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
158006M	10	SILT FENCE	1840	LF
158033M	11	INLET FILTER TYPE 2, 2' X 4'	24	UN
158048M	12	FLOATING TURBIDITY BARRIER, TYPE 3	1350	LF
603NS1P	91	RIPRAP STONE CHANNEL PROTECTION, 42" THICK (D50=14")	45	SY

LEGEND

- PROPOSED SILT FENCE
- PROPOSED TURBIDITY BARRIER
- PROPOSED LIMIT OF DISTURBANCE LINE
- PROPOSED INLET PROTECTION
- 450 PROPOSED CONTOUR
- x 448.23 PROPOSED SPOT ELEVATION
- PROPOSED SURFACE FLOW ARROW

NOTE:

1. SEE SHEETS 6 AND 7 FOR EXISTING CONDITIONS PLAN.

INSET

PLAN

FLOATING TURBIDITY BARRIER (TYP)

SILT FENCE & LIMIT OF DISTURBANCE (TYP)

MATCH LINE

No.	Date	Revision	Revised By	Checked By

40 0 40 80
SCALE IN FEET

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SOIL EROSION AND SEDIMENT CONTROL PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	-----	20 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SCS1.dwg 20 Soil Erosion and Sediment Control Plan

SOIL EROSION AND SEDIMENT CONTROL NOTES:

1. THE FREEHOLD SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED FORTY–EIGHT (48) HOURS IN ADVANCE OF ANY SOIL DISTURBING ACTIVITY.

2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

3. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE–CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.

4. N.J.S.A. 4:24–39 ET. SEQ. REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT–BY–LOT OR SECTION–BY–SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.

5. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2½ TONS PER ACRE, ACCORDING TO THE STANDARD FOR STABILIZATION WITH MULCH ONLY.

6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. SOIL STOCKPILES, STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.

7. A SUB–BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB–BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF THE PRELIMINARY GRADING.

8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION SITE. AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ACCESS CONSISTING OF ONE INCH TO TWO INCH (1"–2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF.

9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHT–OF–WAYS WILL BE REMOVED IMMEDIATELY.

10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.

11. AT THE TIME THAT SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON–VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/1,000 SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.

13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.

15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.

16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE FEET IS DISTURBED.

17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6.

18. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

FREEHOLD SOIL CONSERVATION DISTRICT
4000 KOZLOSKI ROAD
FREEHOLD, NJ 07728–5033
(732) 683–8500
FAX (732) 683–9140
EMAIL: INFO@FREEHOLDSCD.ORG

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION

   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS, FOR LAND GRADING.

   B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

   C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.)

2. SEEDBED PREPARATION

   A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO–OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES. FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 S.F. OF 10–20–10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AT THE RATE AS ESTABLISHED BY SOIL TESTING. CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.

   B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.

   C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RECTIFIED IN ACCORDANCE WITH THE ABOVE.

   D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS, SEE ACID SOIL NOTES.

3. SEEDING

   A. TEMPORARY SEEDING SHALL CONSISTING OF THE FOLLOWING SEED SELECTIONS OR APPROVED EQUAL:

COOL SEASON GRASSES	
SPRING OATS	@ 2.0#/1,000 S.F., WITH OPTIMUM SEED DEPTH OF 1.0 INCH
WINTER CEREAL RYE	@ 2.8#/1,000 S.F., WITH OPTIMUM SEED DEPTH OF 1.0 INCH
WARM SEASON GRASSES	
PEARL MILLET	@ 0.5#/1,000 S.F. WITH OPTIMUM SEED DEPTH OF 1.0 INCH

   PLEASE NOTE THAT OTHER SEED SELECTIONS CAN BE USED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

   B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF ¼ TO ½ INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE ½ INCH DEEPER ON COARSE–TEXTURED SOIL.

   C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK, OR TRAILER–MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER, AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT–FINERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.

   D. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED–TO–SOIL CONTACT, RESTORE CAPILLARITY, AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

4. MULCHING

   REFER TO THE MULCH NOTES.

STABILIZATION WITH MULCH

METHODS AND MATERIALS

1. SITE PREPARATION

   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS, FOR LAND GRADING.

   B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.

2. PROTECTIVE MATERIALS

   A. UN–ROTTED SMALL–GRAIN STRAW, OR SALT HAY AT 2.0 TO 2.5 TONS PER ACRE IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, ie. THE SOIL CAN NOT BE BELOW THE MULCH.

   B. ASPHALT EMULSION IS RECOMMENDED AT THE RATE OF 600 TO 1,200 GALLONS PER ACRE. THIS IS SUITABLE FOR A LIMITED PERIOD OF TIME WHERE TRAVEL BY PEOPLE, ANIMALS OR MACHINES IS NOT A PROBLEM.

   C. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.

   D. WOOD–FIBER OR PAPER–FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYROSEEDER.

   E. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.

   F. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT.

   G. GRAVEL, CRUSHED STONE, OR SAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM–C–33) IS RECOMMENDED.

3. MULCH ANCHORING – SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.

   A. PEG AND TWINE – DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS–CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

   B. MULCH NETTING – STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.

   C. CRIMPER MULCH ANCHORING COULTER TOOL – A TRACTOR–DAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT IS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.

   D. LIQUID MULCH –BINDERS

      1. APPLICATION SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

      2. USE ONE OF THE FOLLOWING:

A. ORGANIC AND VEGETABLE BASED BINDER – NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.

   B. SYNTHETIC BINDERS – HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

ACID SOIL NOTES:

IN ORDER TO PROVIDE SUITABLE CONDITIONS FOR GROWTH AND VEGETATION AND TO PREVENT THE ACIDIFYING OF DRAINAGE WATER IN THOSE AREAS UNDERLAIN WITH ACID FORMATIONS WITH A PH BELOW 4.0 THE FOLLOWING REQUIREMENTS SHALL BE MET:

1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID–PRODUCING SOILS ARE ENCOUNTERED.

2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID–PRODUCING SOILS.

3. STOCKPILES OF HIGH ACID–PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.

4. TEMPORARILY STOCKPILED HIGH ACID–PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID–PRODUCING SOIL.

5. HIGH ACID–PRODUCING SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A PH OF 5.0 OR MORE EXCEPT AS FOLLOWS:

   a. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A PH OR 5 OR MORE.

   b. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES, AND OTHERS, TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.

6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID–PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID–PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.

7. NON–VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID–PRODUCING SOILS FROM, AROUND, OR OFF THE SITE.

8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID–PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING), MONITORING MUST CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID–PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

CONSTRUCTION SCHEDULE & PROCEDURE FOR IMPLEMENTATION OF SOIL EROSION & SEDIMENT CONTROL MEASURES

1. INSTALL SILT FENCE, CONSTRUCTION ENTRANCE, INLET PROTECTION & TURBIDITY BARRIER (2 WEEKS)
2. EXCAVATE AND DE–WATER AREA BEHIND EXISTING BULKHEAD(S). (3 WEEKS)
3. CLEAR SITE, DEMOLISH AND OR REMOVE EXISTING STRUCTURES, UTILITIES AND FEATURES WITHIN LIMIT OF DISTURBANCE AS INDICATED ON PLANS. (1 MONTH)
4. INSTALL SHEET PILE WALL AND TIE–BACK SYSTEM. BACKFILL AREA UPLAND OF THE NEWLY INSTALLED SHEET PILE WALL. (1 MONTH)
5. ESTABLISH ROUGH GRADES AS NECESSARY TO CONSTRUCT IMPROVEMENTS (6 MONTH)
6. CONSTRUCT PROPOSED DRAINAGE SYSTEM, INSTALL INLET PROTECTION (2 MONTHS)
7. CONSTRUCT PROPOSED UTILITIES, PERVIOUS PAVEMENT, UNDERDRAINS, CURBING, SIDEWALKS, BUILDING & SITE AMENITIES (6 MONTHS)
8. ESTABLISH FINISHED GRADE AND PERMANENT VEGETATIVE STABILIZATION. INSTALL FINAL PAVEMENT SURFACE COURSE (1 MONTH)
9. REMOVE SILT FENCE, TURBIDITY BARRIER, CONSTRUCTION ENTRANCE AND INLET PROTECTION (1 WEEK)

CONSTRUCTION SCHEDULE PROVIDED FOR SOIL EROSION CONTROL PURPOSES ONLY.

SOIL COMPACTION REMEDIATION NOTE

PER TECHNICAL BULLETIN 218–2.0 FROM THE NEW JERSEY DEPARTMENT OF AGRICULTURE STATE SOIL CONSERVATION COMMITTEE, THIS PROJECT FALLS WITHIN THE METROPOLITAN PLANNING AREA AS SHOWN ON THE STATE PLAN POLICY MAP AND DOES NOT CONTAIN WOODY VEGETATION AND IS THEREFORE EXCLUDED FROM THE REQUIREMENTS FOR SOIL COMPACTION REMEDIATION.

No.	Date	Revision	Revised By	Checked By

40 0 40 80
SCALE IN FEET

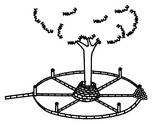
FPA FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

SOIL EROSION AND SEDIMENT CONTROL NOTES
FOR
SOUTH AMBOY FERRY TERMINAL
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB		13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	21 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
G:\CAD\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CAD\DWG\13749-003-SCS1.dwg 21 Soil Erosion and Sediment Control Notes



ISOMETRIC

SECTION

TREE PROTECTION—TILE AND GRAVEL WILL ALLOW AIR CIRCULATION TO ROOT ZONE UNDER A FILL

TREE PROTECTION IN FILL AREAS

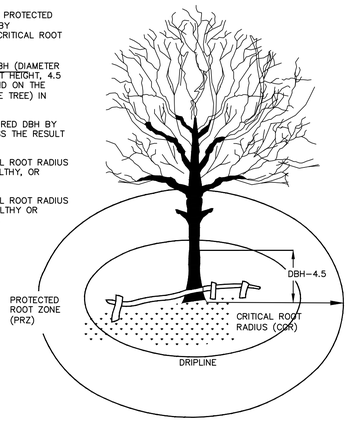
ESTIMATE A TREE'S PROTECTED ROOT ZONE (PRZ) BY CALCULATING THE CRITICAL ROOT RADIUS (CRR).

1. MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5 FEET ABOVE GROUND ON THE UPHILL SIDE OF THE TREE) IN INCHES.

2. MULTIPLY MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET.

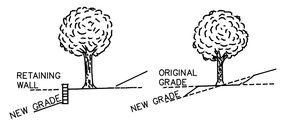
DBH x 1.5: CRITICAL ROOT RADIUS FOR OLDER, UNHEALTHY, OR SENSITIVE SPECIES.

DBH x 1.0: CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES.

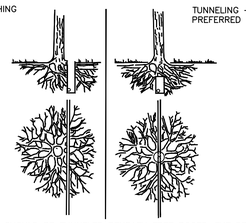


ROOT PROTECTION DURING CONSTRUCTION GUIDE

A RETAINING WALL PROTECTS A TREE FROM A LOWERED GRADE

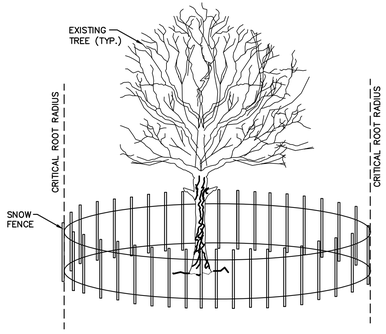


TREE PROTECTION IN CUT AREAS

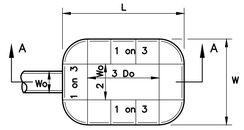


UTILITIES SHOULD BE TUNNELED BENEATH TREE ROOTS. THE DRAWINGS ON THE LEFT SHOW TRENCHING THAT WOULD PROBABLY KILL THE TREE. THE DRAWINGS ON THE RIGHT SHOW HOW TUNNELING UNDER THE TREE WILL PRESERVE MANY OF THE IMPORTANT FEEDER ROOTS.

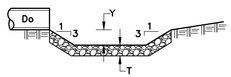
TREE PROECTION—UNDERGROUND UTILITY INSTALLATION



TREE PROTECTION FENCE



PLAN

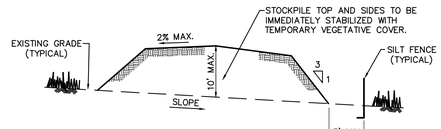


SECTION A—A

OUTLET NO.	Wo Do	L	W	Y	d_{50}	T
PIPE END 37	42"	21.0'	17.5'	21"	14"	42"

RIPRAP STONE CHANNEL PROTECTION

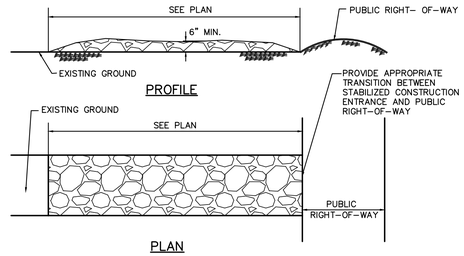
NOT TO SCALE



NOTES:
1. TOPSOIL STOCKPILES TO BE PLACED AS DETERMINED IN THE FIELD.
2. STOCKPILE NOT TO BE PLACED IN AREA WITH CONCENTRATED FLOW, WETLANDS, EXTREME SLOPE OR WITHIN 100' OF A NATURAL STREAM.

TEMPORARY STOCKPILE

NOT TO SCALE



PLAN

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COURSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FEET	100 FEET
2% TO 5%	100 FEET	200 FEET
> 5%	ENTIRE SURFACE STABILIZED WITH HOT MIX ASPHALT BASE COURSE, MIX I-2	

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – USE ASTM C-33, SIZE NO. 2 (2½ TO 1½ IN.) OR 3 (2 TO 1 IN.). USE CLEAN CRUSHED ANGULAR STONES. CRUSHED CONCRETE OF SIMILAR SIZE MAY BE SUBSTITUTED BUT WILL REQUIRE MORE FREQUENT UPGRADING AND MAINTENANCE.

2. LENGTH – 50 FEET MINIMUM WHERE SOILS ARE COURSE GRAINED (SAND OR GRAVEL), OR 100 FEET MINIMUM WHERE SOILS ARE FINE GRAINED (CLAYS OR SILTS), EXCEPT WHERE THE TRAVEL LENGTH IS LESS THAN 50 OR 100 FEET RESPECTIVELY. THESE LENGTHS MAY BE INCREASED WHERE FIELD CONDITIONS DICTATE. STORMWATER FROM UP-SLOPE AREAS SHALL BE DIVERTED AWAY FROM THE STABILIZED PAD (SEE STANDARD FOR DIVERSIONS). WHERE DIVERSION IS NOT POSSIBLE, THE LENGTH OF THE STABILIZED PAD SHALL BE SHOWN AS IN TABLE ABOVE. WHERE THE SLOPE OF THE ACCESS ROAD EXCEEDS 5%, A STABILIZED BASE OF HOT MIX ASPHALT BASE COURSE, MIX I-2, SHALL BE INSTALLED. THE TYPE AND THICKNESS OF THE BASE COURSE AND USE OF A DENSE GRADED AGGREGATE SUB-BASE SHALL BE AS PRESCRIBED BY LOCAL MUNICIPAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

   AT POORLY DRAINED LOCATIONS, SUBSURFACE DRAINAGE GRAVEL FILTER OR GEOTEXTILE SHALL BE INSTALLED BEFORE INSTALLING THE STABILIZED CONSTRUCTION ENTRANCE.

   WHERE A STABILIZED CONSTRUCTION ENTRANCE EXIT TRAVERSES BETWEEN TWO BUILDINGS, IT SHALL BE STONED THE ENTIRE LENGTH OF THE RIGHT-OF-WAY. MOUNTABLE STONE BERMS PLACED ACROSS THE WIDTH OF THE EXIT MAY ALSO BE REQUIRED AT THE TRANSITION POINT BETWEEN PAVED AND NON-PAVED AREAS TO TRAP SEDIMENTS WHICH ARE CARRIED BY STORMWATER FLOWING ALONG THE CURBLINE.

3. THICKNESS – NOT LESS THAN 6 INCHES.

4. WIDTH – NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.

5. TIRE WASHING – IF SPACE IS LIMITED, VEHICLE TIRES MAY BE WASHED WITH CLEAN WATER BEFORE ENTERING A PAVED AREA. A WASH STATION MUST BE LOCATED SUCH THAT WATER WILL NOT FLOW ONTO PAVED ROADWAYS OR INTO UNPROTECTED STORM DRAINAGE SYSTEMS.

   WHEN THE CONSTRUCTION ACCESS EXITS ONTO A MAJOR ROADWAY, A PAVED TRANSITION AREA MAY BE INSTALLED BETWEEN THE MAJOR ROADWAY AND THE STONED ENTRANCE TO PREVENT LOOSE STONES FROM BEING TRANSPORTED OUT ONTO THE ROADWAY BY THE HEAVY EQUIPMENT ENTERING OR LEAVING THE SITE.

6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS (PRIVATE OR PUBLIC) OR OTHER IMPERVIOUS SURFACES MUST BE REMOVED IMMEDIATELY.

   WHERE ACCUMULATION OF DUST/SEDIMENT IS INADEQUATELY CLEANED OR REMOVED BY CONVENTIONAL METHODS, A POWER BROOM OR STREET SWEEPER WILL BE REQUIRED TO CLEAN PAVED OR IMPERVIOUS SURFACES. ALL OTHER ACCESS POINTS WHICH ARE NOT STABILIZED SHALL BE BLOCKED OFF.

CONSTRUCTION DRIVEWAY

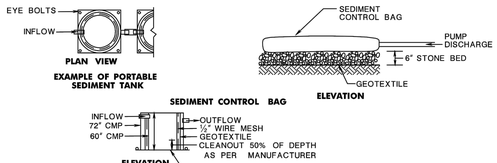
NOT TO SCALE

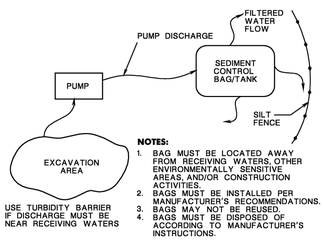
NOTES:

1. TREE PROTECTION SHALL BE PROVIDED FOR ANY AND ALL TREES TO BE PRESERVED DURING AND AFTER CONSTRUCTION AND IN ACCORDANCE WITH STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY. THE CONTRACTOR SHALL TAKE WHATEVER ADDITIONAL MEASURES NECESSARY TO PROTECT EXISTING TREES TO REMAIN AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING AND BRUISING OF BARK, SMOTHERING OF TREES AND STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIAL WITHIN DRIP LINE, EXCESS FOOT OR VEHICLE TRAFFIC OR PARKING OF VEHICLES WITHIN DRIP LINE.
2. A FOUR FOOT HIGH SNOW FENCE SHALL BE PLACED BEYOND THE CRITICAL ROOT RADIUS OF TREES DESIGNATED TO BE PRESERVED, TREE ROOT SYSTEMS COMMONLY EXTEND WELL BEYOND THE DRIP LINE. INDIVIDUAL TREES TO BE PRESERVED SHALL BE COMPLETELY ENCIRCLED WITH FENCING.
3. BOARDS OR FENCING SHALL NOT BE NAILED TO TREES DURING CONSTRUCTION.
4. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE PROTECTED ROOT ZONE (PRZ).
5. DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP, SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR LICENSED TREE EXPERT.
6. TREE LIMB REMOVAL, WHERE NECESSARY, WILL BE DONE AS NATURAL TARGET PRUNING TO REMOVE THE DESIRED BRANCH AS CLOSE AS POSSIBLE TO THE BRANCH COLLAR. THERE SHOULD BE NO FLUSH CUTS. FLUSH CUTS DESTROY A MAJOR 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 "V" CROTCH SHOULD BE CONSIDERED FOR FREE STANDING SPECIMEN TREES TO AVOID FUTURE SPLITTING DAMAGE.
7. EXISTING TREES TO REMAIN WITHIN THE LIMITS OF THE CONTRACT WORK SHALL BE REGULARLY WATERED TO MAINTAIN THEIR HEALTH.
8. UTILITIES SHALL BE TUNNELED UNDER TREES TO PREVENT CUTTING OF IMPORTANT FEEDER ROOTS.

TREE PROTECTION

NOT TO SCALE

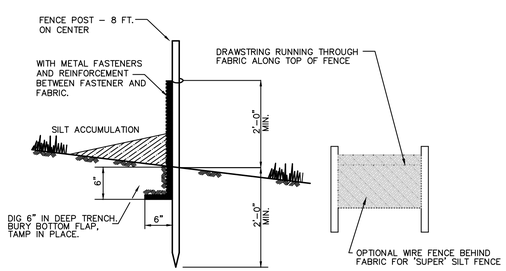




NOTES:
1. BAG MUST BE LOCATED AWAY FROM RECEIVING WATERS, OTHER ENVIRONMENTALLY SENSITIVE AREAS, AND/OR CONSTRUCTION ACTIVITIES.
2. BAGS MUST BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
3. BAGS MAY NOT BE REUSED.
4. BAGS MUST BE DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

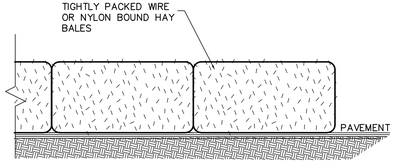
SEDIMENT CONTROL TANK OR BAG - DETAIL

NOT TO SCALE

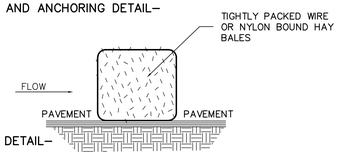


SILT FENCE

NOT TO SCALE



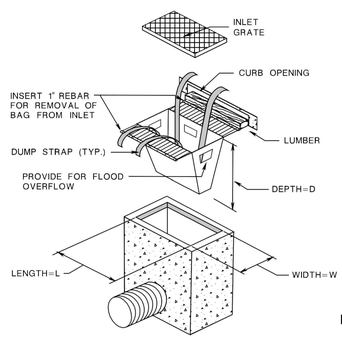
—PLACEMENT AND ANCHORING DETAIL—



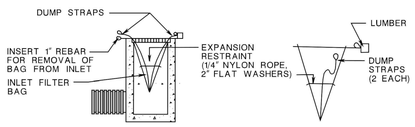
—EMBEDDING DETAIL—

HAY BALE SEDIMENT BARRIERS

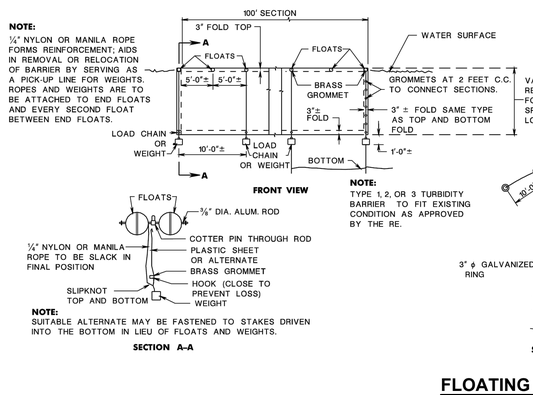
NOT TO SCALE

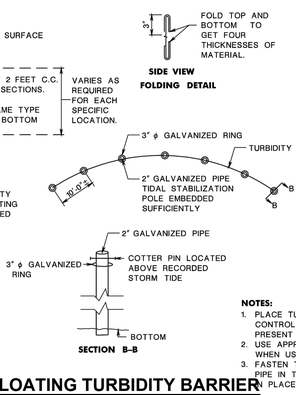


INLET FILTERS, TYPE 2



INSTALLATION DETAIL — BAG DETAIL

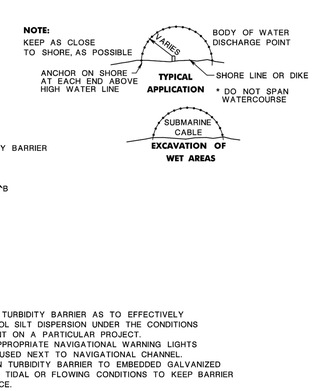




NOTES:
1. PLACE TURBIDITY BARRIER AS TO EFFECTIVELY CONTROL SILT DISPERSION UNDER THE CONDITIONS PRESENT ON A PARTICULAR PROJECT.
2. USE APPROPRIATE NAVIGATIONAL WARNING LIGHTS WHEN USED NEXT TO NAVIGATIONAL CHANNEL.
3. FASTEN TURBIDITY BARRIER TO EMBEDDED GALVANIZED PIPE IN TIDAL OR FLOWING CONDITIONS TO KEEP BARRIER IN PLACE.

FLOATING TURBIDITY BARRIER

NOT TO SCALE



No.	Date	Revision	Revised By	Checked By

40 0 40 80
SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

SOIL EROSION AND SEDIMENT CONTROL DETAILS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	22 of 70

SHEET 24

Access Easement

Approximate Location of a 60' Wide Sanitary Sewer Force Main Easement

Tidelands Line

MARITIME GRASSLAND SEED MIX (TYP.)

SAN MH S1 (FORCE MAIN CONNECTION) RIM 27.60

EXISTING GRASS ISLAND

EXISTING DECORATIVE LIGHT FIXTURE (TYP.)

17 - PX

15 - PX

NOTE: FIELD ADJUST PLANTS AS NEEDED TO AVOID CONFLICTS WITH UNDERGROUND UTILITIES

RADFORD FERRY ROAD (Per Deed Book 06648, Page 0436)

20-PS2

17 - PX

FUTURE BNE ACCESS ROAD

FUTURE BNE PROPERTY LINE

SAN MH S3 RIM 25.64

FUTURE BNE WATER LINE

7 - PA
1 - AR
3 - PA
1 - AR
1 - AR
3 - JV
7 - SJ
5 - QP
R1-1
1 - AR
12 - PH
PARKING AREA LIGHT FIXTURE (TYP.)
6 - CS
2 - CF
R1-1
DELAWARE RIVER ROCK, 4" THICK (TYP.)
10 - PH
1 - AR
2 - AD
5 - JB2
8 - PV
3 - QP
2 - CF
R1-1
5 - JB2
CAST IRON TREE GRATE (TYP.)
3:1 SLOPE
2 - CF
12 - PH
1 - AR
3 - JV
1 - AD
SEEDED LAWN MIX (TYP.)
MOW LINE (TYP.)
R1-1
6 - CS
10 - PH
1 - QP
14 - SJ
15 - PV
11 - LO
3 - PX
1 - AR
1 - CF
17 - LO
26 - HO
4 - IB
5 - VD
8 - PS
31 - LM
5 - PR
26 - HO
4 - IB
31 - LM
4 - CS
R1-1
1 - UA
3 - JV
4 - IV
6 - PA
3 - PX
ANNUAL PLANTING BED (TYP.)
1"-3" DELAWARE RIVER ROCK, 4" THICK (TYP.)
FLAG ENTRANCE PLAZA AREA - SEE DETAIL

MARITIME GRASSLAND SEED MIX (TYP.)

MATCH LINE

LEGEND:

- MARITIME GRASSLAND SEED MIX (SEE LANDSCAPE DETAIL SHEET FOR SEED MIX)
- SEEDED LAWN (SEE LANDSCAPE DETAIL SHEET FOR SEED MIX)
- 1" - 3" DELAWARE RIVER ROCK, 4" THICK
- PROPOSED LIGHT FIXTURE (TYP.)
- EXISTING DECORATIVE LIGHT FIXTURE (TYP.)

SEE SHEET 23 FOR QUANITIES

No.	Date	Revision	Revised By	Checked By

40 0 40 80
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FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

LANDSCAPE PLAN

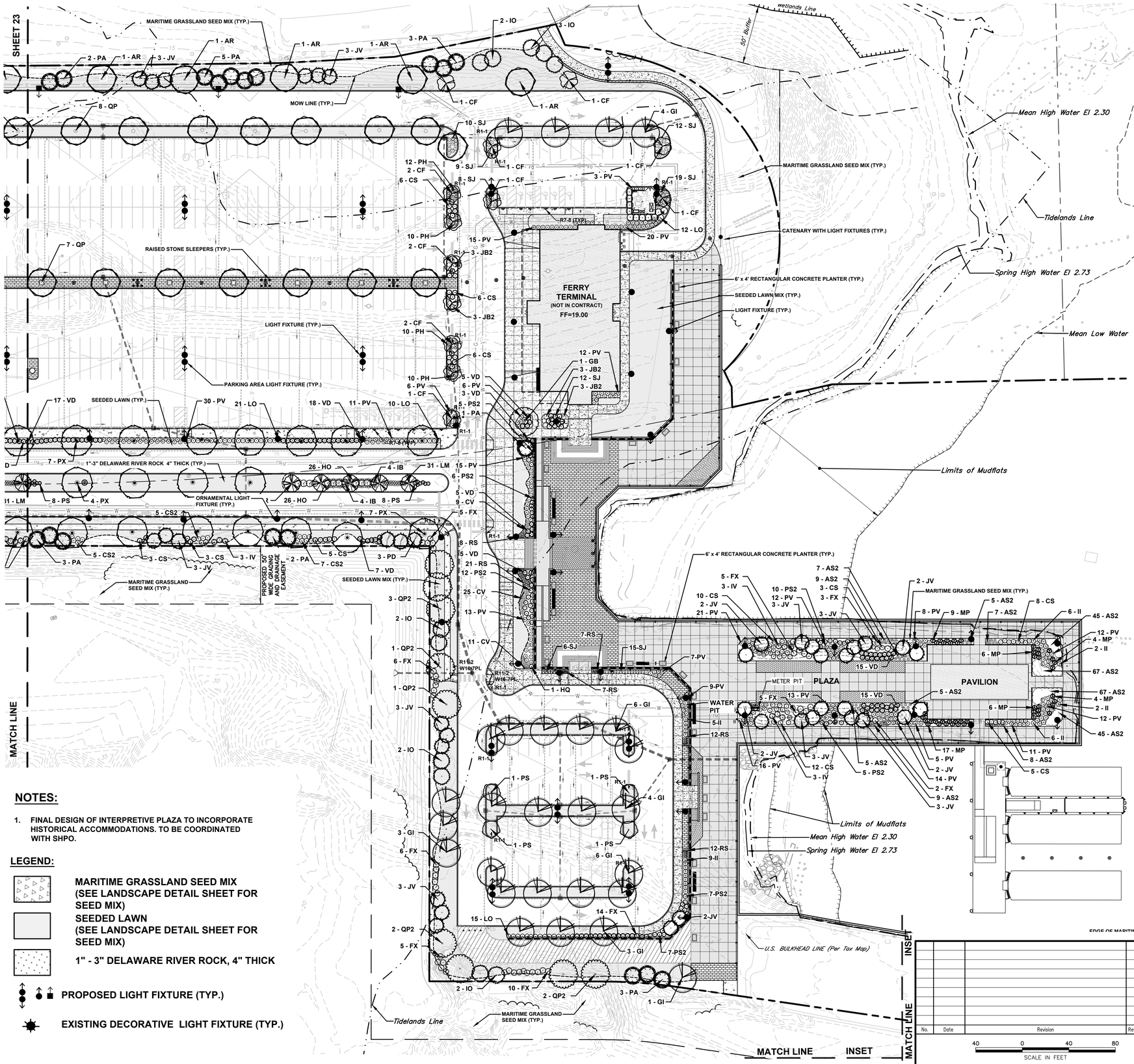
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	JB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
JB	MJP	----	23 of 70



NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
630NS3P	109	FLAGPOLE, 35 FT	4	UN
630NS4P	110	FLAGPOLE, 40 FT	2	UN
630NS5P	111	DECORATIVE BOLLARDS	10	UN
630NS6P	112	PRECAST CONCRETE PLANTERS	21	UN
630NS7P	113	TRASH RECEPTICALS	15	UN
630NS8P	114	BENCHES	32	UN
630NS9P	115	BICYCLE RACKS	3	UN
804006P	153	TOPSOIL SPREADING, 5" THICK	24,500	SY
804015P	154	BORROW TOPSOIL	3,400	CY
806NS1P	155	FERTILIZING AND SEEDING, LAWN MIX	7,808	SY
806NS2P	156	FERTILIZING AND SEEDING, MARINE GRASSLAND MIX	2,793	SY
809003M	157	TOPSOILSTABILIZATION, TYPE 2 MAT	2,000	SY
809003M	158	STRAW MULCHING	24,500	SY
809NS1M	159	STONE MULCHING, 4 " THICK	628	SY
811004M	160	LARGE DECIDUOUS TREE, 2-2 1/2" CALIPER, B&B	185	UN
811039M	161	EVERGREEN TREES, 6-7 FT HIGH, B&B	101	UN
811057M	162	DECIDUOUS SHRUB, 3-4 FT HIGH, B&B	139	UN
811060M	163	DECIDUOUS SHRUB, 24-30" HIGH, B&B	382	UN
811063M	164	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	806	UN
811069M	165	EVERGREEN SHRUB, 36-42" HIGH, B&B	20	UN
811078M	166	EVERGREEN SHRUB, 18-24" HIGH, #3 CONTAINER	16	UN
811099M	167	GROUND COVER, #1 CONTAINER	20	UN
811138M	168	PLANT ESTABLISHMENT AND MAINTENANCE PERIOD, 1 YEAR	1	LS

NOTES:

1. FINAL DESIGN OF INTERPRETIVE PLAZA TO INCORPORATE HISTORICAL ACCOMMODATIONS. TO BE COORDINATED WITH SHPO.

LEGEND:

MARITIME GRASSLAND SEED MIX (SEE LANDSCAPE DETAIL SHEET FOR SEED MIX)

SEEDED LAWN (SEE LANDSCAPE DETAIL SHEET FOR SEED MIX)

1" - 3" DELAWARE RIVER ROCK, 4" THICK

PROPOSED LIGHT FIXTURE (TYP.)

EXISTING DECORATIVE LIGHT FIXTURE (TYP.)

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DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
JB	MJP	----	24 of 70

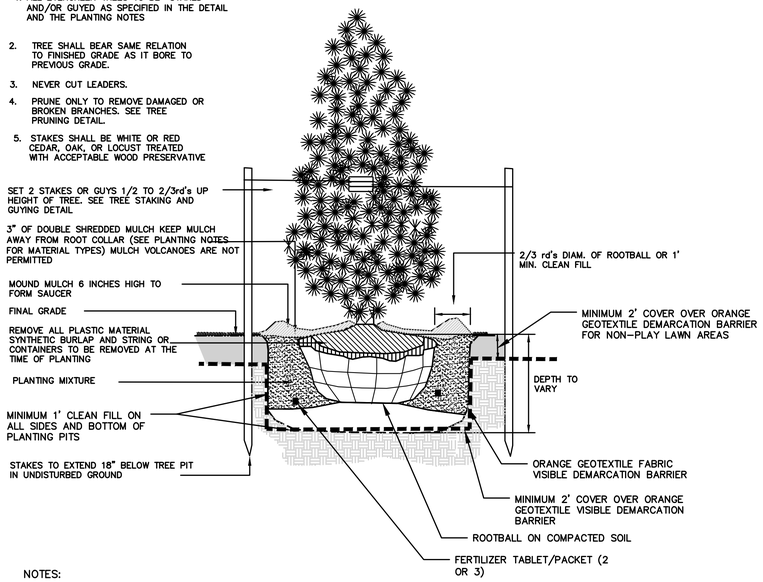
Plotted by: Suzanne C. Seeman 10/7/2021
O:\CAD\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CAD0\DWG\13749-003-LA1.dwg 24 Landscape Plan

PLANTING NOTES:

1. THIS PLAN SHALL BE USED FOR LANDSCAPE PLANTING PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES, STRUCTURES, ETC., AND NOTIFY THE PROJECT PROFESSIONAL IN REFERENCE TO ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO ANY PLANT INSTALLATION.
2. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK ANSI Z60.1, CURRENT EDITION. THE PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY AND SIZE AND BE CERTIFIED AS DISEASE AND INSECT FREE. THE PROJECT PROFESSIONAL RESERVES THE RIGHT TO REJECT PLANT MATERIAL WHEN DELIVERED TO THE SITE AND UP TO THE FINAL ACCEPTANCE.
3. NO PLANT SUBSTITUTIONS SHALL BE PERMITTED WITH REGARDS TO SIZE, SPECIES VARIETY ETC., WITHOUT WRITTEN PERMISSION OF THE PROJECT PROFESSIONAL. WRITTEN PROOF OF PANT MATERIAL UNAVAILABILITY MUST BE PROVIDED.
4. LOCATION AND SPACING FOR PROPOSED PLANT MATERIAL IS AS SHOWN ON THE LANDSCAPE PLAN.FINAL ADJUSTMENTS SHALL BE MADE IN THE FIELD AS DIRECTED BY THE PROJECT PROFESSIONAL TO REFLECT EXISTING SITE CONDITIONS.
5. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY QUANTITY DISCREPANCIES OCCUR.
6. ALL PLANT MATERIAL SHALL BE PLANTED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS AND ACCEPTED HORTICULTURAL PRACTICES. INSTALL ALL PLANT MATERIAL ON UNDISTURBED SUBGRADE. CUT AN REMOVE BURLAP FROM THE TOP ONE–THIRD OF THE ROOT BALL. NO SYNTHETIC MATERIAL IS TO REMAIN IN THE PLANTING HOLE. SEE PLANTING DETAILS.
7. PROJECT PROFESSIONAL SHALL HAVE FINAL ACCEPTANCE OF ALL PLANT MATERIAL.
8. PROVIDE PLANTING PITS AS INDICATED IN T HE PLANTING DETAILS.
9. PLANT ROOT FLAIR SHALL BE EXPOSED AT THE TIME OF PLANTING. TOP OF PLANTS SHALL BE AT FINISHED GRADE OR SLIGHTLY ABOVE (2"–3".)
10. NEWLY INSTALLED PLANT MATERIAL SHALL BE THOROUGHLY WATERED AT THE TIME OF INSTALLATION BY THE LANDSCAPE CONTRACTOR. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR REGULAR WATERINGS OF PLANT MATERIAL UNTIL PLANTS ARE ESTABLISHED.
11. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE (1) YEAR AFTER THE DATE OF FINAL ACCEPTANCE.
12. ALL DISTURBED ARES SHALL RECEIVE TEMPORARY / PERMANENT STABILIZATION DEPENDING UPON THE STAGE OF WORK AND TIME OF YEAR (REFER TO NJ SOIL EROSION REGULATIONS.
13. WIRE BASKETS ARE TO BE COMPLETELY REMOVED PRIOR TO PLANTING.
14. PROVIDE SUSTAINED RELEASE 5–10–5 FERTILIZER FOR ALL PLANT MATERIAL IN QUANTITIES AS PER MANUFACTURER'S RECOMMENDATIONS. THOROUGHLY MIX INTO TOP 12 INCHES OF ALL PLANT MATERIAL.
15. TREES SHALL BE HANDLED BY THE ROOTBALL ONLY. HANDLING OF TREES BY TRUNK OR THE PLACING OF STRAPS AROUND THE TRUNK OF THE TREE WILL BE CAUSE FOR IMMEDIATE REJECTION OF PLANT MATERIAL.
16. TREES ARE TO BE LABELED WITH A PERMANENT TAG. LABEL TO INCLUDED BOTANICAL NAME AND DATE OF INSTALLATION.
17. ALL DISTURBED AREAS ARE TO BE RESTORED TO THE SATISFACTION OF THE PROJECT PROFESSIONAL.
18. THE LANDSCAPE CONTRACTOR IS TO BE RESPONSIBLE FOR THE INITIAL PRUNING OF TREES. PRUNING TO BE LIMITED TO CROSSOVER LIMBS, CO–DOMINANT LEADERS AND BROKEN/DEAD BRANCHES. SOME INTERIOR AND LATERAL BRANCHES MAY BE PRUNED, HOWEVER, TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN SHALL NOT BE REMOVED.
19. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF THE TREE STAKES ONE (1) YEAR AFTER THE DATE OF FINAL ACCEPTANCE.

NOTES:

1. ALL EVERGREEN TREES TO BE STAKED AND/OR GUYED AS SPECIFIED IN THE DETAIL AND THE PLANTING NOTES
2. TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE.
3. NEVER CUT LEADERS.
4. PRUNE ONLY TO REMOVE DAMAGED OR BROKEN BRANCHES. SEE TREE PRUNING DETAIL.
5. STAKES SHALL BE WHITE OR RED CEDAR, OAK, OR LOCUST TREATED WITH ACCEPTABLE WOOD PRESERVATIVE



NOTES:

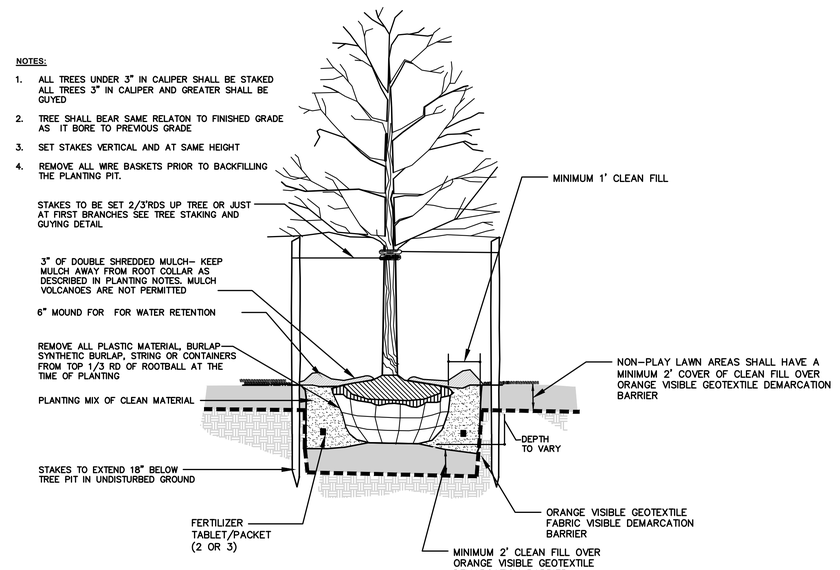
1. ALL WIRE BASKETS SHALL BE REMOVED PRIOR TO BACKFILLING THE PLANTING PIT.
2. ALL MATERIALS USED FOR THE INSTALLATION OF PLANTS (TOPSOIL, MULCH, FILL ETC.) MUST MEET NJDEP CLEAN FILL REQUIREMENTS.
3. MAINTAIN SAME GROUND LINE AS IN THE NURSERY.
4. GEOTEXTILE FABRIC FOR VISIBLE DEMARCATION BARRIER SHALL BE MIRAFI 140NL IN ORANGE COLOR BY TENCATE GEOSYNTHTETICS AMERICA, PENDERGRASS, GEORGIA 1–706–693–2226 OR SPEC@TENCATEGEO.COM.

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

NOTES:

1. ALL TREES UNDER 3" IN CALIPER SHALL BE STAKED ALL TREES 3" IN CALIPER AND GREATER SHALL BE GUYED
2. TREE SHALL BEAR SAME RELATON TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE
3. SET STAKES VERTICAL AND AT SAME HEIGHT
4. REMOVE ALL WIRE BASKETS PRIOR TO BACKFILLING THE PLANTING PIT.



NOTES:

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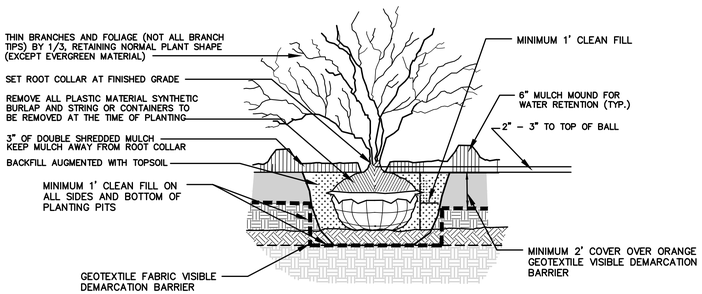
2. ALL MATERIALS USED FOR THE INSTALLATION OF PLANTS (TOPSOIL, MULCH, FILL ETC.) MUST MEET NJDEP CLEAN FILL REQUIREMENTS.
3. MAINTAIN SAME GROUND LINE AS IN THE NURSERY.
4. GEOTEXTILE FABRIC FOR VISIBLE DEMARCATION BARRIER SHALL BE MIRAFI 140NL IN ORANGE COLOR BY TENCATE GEOSYNTHTETICS AMERICA, PENDERGRASS, GEORGIA 1–706–693–2226 OR SPEC@TENCATEGEO.COM.

DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

NOTE: CONTRACTOR TO PROVED A MULCHED PLANTING BED FOR SHRUBS GROUPED TOGETHER. MULCHED BEDS MAY VARY IN SHAPE AND SIZE TO CONFORM WITH SHRUB LAYOUT.

TYPICAL PLANTING BED PLAN VIEW



NOTES:

1. **ALL WIRE BASKETS SHALL BE REMOVED PRIOR TO BACKFILLING THE PLANTING PIT.**
2. **ALL MATERIALS USED FOR THE INSTALLATION OF PLANTS (TOPSOIL, MULCH, FILL ETC.) MUST MEET NJDEP CLEAN FILL REQUIREMENTS.**
3. **DO NOT PRUNE EVERGREEN SHRUBS EXCEPT TO REMOVE DEAD AND BROKEN BRANCHES.**
4. **MAINTAIN SAME GROUND LINE AS IN THE NURSERY.**
5. **GEOTEXTILE FABRIC FOR VISIBLE DEMARCATION BARRIER SHALL BE MIRAFI 140NL IN ORANGE COLOR BY TENCATE GEOSYNTHTETICS AMERICA, PENDERGRASS, GEORGIA 1-706-693-2226 OR SPEC@TENCATEGEO.COM.**

SHRUB PLANTING DETAIL

NOT TO SCALE

LAWN SEED MIX (ATHLETIC FIELD SEED MIX)		
INGREDIENTS	SEEDING RATE	RECOMMENDED PLANTING DATE
FESTUCA ARUNDINACEA 30.00% LOLIUM PERENNE 30.00% POA PRATENSIS, 'SELWAY' 15.00% POA PRATENSIS, APPALACHIAN 15.00% LOLIUM MULTIFLORUM 10.00%	75–150 LBS. / ACRE	4/1 – 5/31 OR 8/15 – 10/15

SEED MIX SUPPLIER:

ERNST SEEDS
OR AN APPROVED EQUAL
8884 MERCER PIKE
MEADVILLE, PA 16335
TELEPHONE 800–873–3321
WEB: WWW.ERNSTSEED.COM

MARITIME GRASSLAND SEED MIX		
INGREDIENTS	SEEDING RATE	RECOMMENDED PLANTING DATE
ANDROPOGON GERARDII 12.00% ASCLEPIAS SYRIACA 6.00% CHAMAECRISTA FASCICULATA 2.00% ELYMUS VIRGINICUS 6.00% EUTHAMIA GRAMINIFOLIA 9.00% PANICUM AMARUM 15.00% PANICUM VIRGATUM 7.00% SCHIZACHYRIUM SCOPARIUM 22.00% SOLIDAGO SEMPERVIRENS 7.00% SORGHASTRUM NUTANS 6.00% SYMPHYOTRICHUM LAEVE 8.00%	15–20 LBS. / ACRE	4/1 – 5/31 OR 8/15 – 10/15

SEED MIX SUPPLIER:

PINELANDS NURSERY
OR AN APPROVED EQUAL
323 ISLAND ROAD
COLUMBUS, NJ 08022
TELEPHONE 609–291–9486
WEB: WWW.PINELANDSNURSERY.COM

NOTE REGARDING SEEDING IN SLOPED AREAS GREATER THAN 3:1:

ANY AREAS TO BE SEEDED WITH A SLOPE 3:1 AND GREATER SHALL RECEIVE IN COMBINATION WITH THE ABOVE SPECIFIED GRASS MIXTURES AN EROSION CONTROL MATTING BY BONTERRA AMERICA, MODEL #S– STRAW BLANKET OR APPROVED EQUAL.

NOTES REGARDING PLANT MATERIAL INSTALLATION FOR ALL AREAS:

1. LAWN AREAS WILL CONSIST OF VEGETATIVE COVER OVER 6" BARRIER OF TOP SOIL ON TOP OF 6" CLEAN FILL BUFFER (TOTAL OF 12") OVER ORANGE GEOTEXTILE VISIBLE DEMARCATION BARRIER.
2. LANDSCAPED AREAS SHALL CONSIST OF 1 FT CLEAN FILL BARRIER (INCLUDES TOP SOIL OR PLANTING MIX) OVER 1 FT CLEAN FILL BUFFER ON ORANGE GEOTEXTILE VISIBLE DEMARCATION BARRIER.
3. TREE AND/OR SHRUB CAN BE PLANTED WITHIN BARRIER AND/OR BUFFER LAYER BUT MUST MAINTAIN A MINIMUM OF ONE FOOT CLEAN FILL ON ALL SIDES AND BELOW EXTENT OF ROOT BAIL OR LARGER PLANT MATERIALS.

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LANDSCAPE NOTES & DETAILS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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12/6/2021	JB	AS NOTED	13749.003
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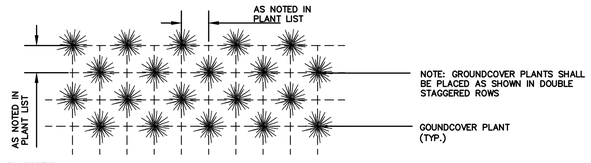
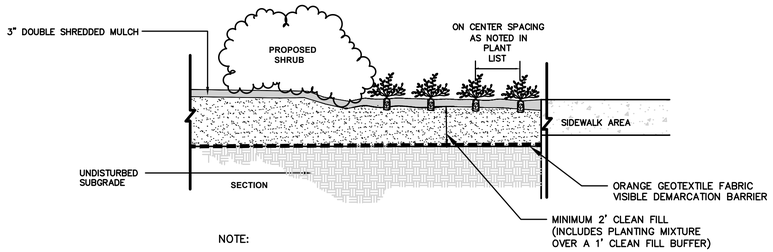


PLAN VIEW

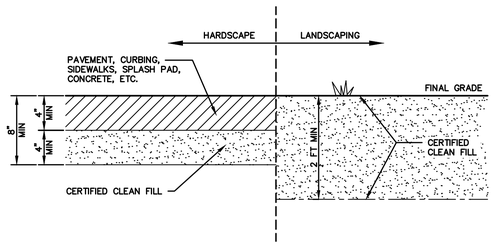


NOTE:

1. ALL MATERIALS USED FOR THE INSTALLATION OF PLANTS (TOPSOIL, MULCH, FILL ETC.) MUST MEET NJDEP CLEAN FILL REQUIREMENTS

GROUNDCOVER PLANTING DETAIL

NOT TO SCALE



ENVIRONMENTAL CAP

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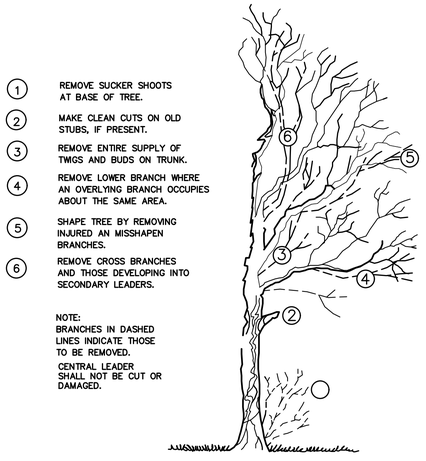
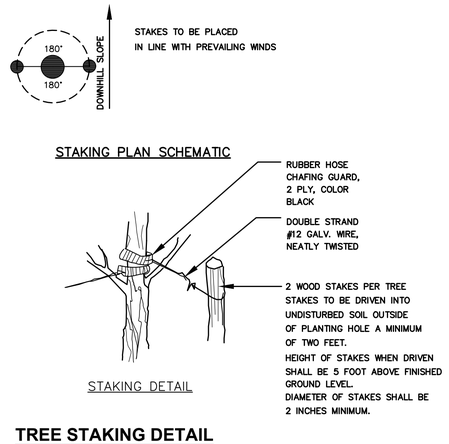
PLANT SCHEDULE

ITEM NUMBER	DESCRIPTION	TREES	BOTANICAL NAME	COMMON NAME	MATURE SIZE	UNITS	REMARKS
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	AR	ACER RUBRUM	OCTOBER GLORY RED MAPLE	40`-50` HEIGHT, 30`-40` SPREAD	12	RED FALL FOLIAGE
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	AD	AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	15`-30` HEIGHT AND SPREAD	3	WHITE FLOWERS. SPRING
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	CF	CORNUS FLORIDA	FLOWERING DOGWOOD	15`-30` HEIGHT AND SPREAD	20	WHITE FLOWERS. SPRING
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	GB	GINKGO BILOBA	MALE GINKGO	50`-80` HEIGHT, 30`-40` SPREAD	1	YELLOW FALL COLOR
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	GI	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	60`-80` HEIGHT AND SPREAD	27	YELLOW FALL FOLIAGE
811039M	EVERGREEN TREE, 6-7' HIGH, B&B	IO	FEMALE ILEX OPACA	AMERICAN HOLLY	15`-30` HEIGHT, 10`-20` SPREAD	11	RED BERRIES IN WINTER
811039M	EVERGREEN TREE, 6-7' HIGH, B&B	JV	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	30`-65` HEIGHT, 8`-25` SPREAD	46	EVERGREEN SCREEN TREE
811039M	EVERGREEN TREE, 6-7' HIGH, B&B	PA	PICEA ABIES	NORWAY SPRUCE	40`-60` HEIGHT, 25`-30` SPREAD	37	EVERGREEN SCREEN TREE
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	PX	PLATANUS X ACERIFOLIA	LONDON PLANE TREE	75`-100` HEIGHT, 60`-75` SPREAD	73	YELLOW FALL COLOR, EXFOLIATING BARK, SINGLE TRUNK
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	PR	PRUNUS X `KWANZAN`	KWANZAN FLOWERING CHERRY	25`-30` HEIGHT AND SPREAD	10	PINK FLOWERS, SPRING
811039M	EVERGREEN TREE, 6-7' HIGH, B&B	PD	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	40`-80` HEIGHT, 12`-20` SPREAD	9	EVERGREEN TREE
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	QP	QUERCUS PALUSTRIS	PIN OAK	50`-70` HEIGHT, 40`-60` SPREAD	24	RD FALL FOLIAGE
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	QP2	QUERCUS PHELLOS	WILLOW OAK	40`-75` HEIGHT, 25`-50` SPREAD	9	YELLOW-BROWN FALL FOLIAGE
811006M	LARGE DECIDUOUS TREE 2-2.5" CALIPER, B&B	UA	ULMUS AMERICANA	AMERICAN ELM	60`-80` HEIGHT, 40`-70` SPREAD	1	YELLOW FALL FOLIAGE
ITEM NUMBER	DESCRIPTION	SHRUBS/ PERENNIALS	BOTANICAL NAME	COMMON NAME	MATURE SIZE	UNITS	REMARKS
811060M	DECIDUOUS SHRUB, 24-30", B&B	AS2	ANDROPOGON SCOPARIUS	LITTLE BLUESTEM	1`-2` HEIGHT AND SPREAD	278	ORNAMENTAL GRASS, INSTALL AT 2 FT ON CENTER
811060M	DECIDUOUS SHRUB, 24-30", B&B	CS2	CORNUS SERICEA `FLAVIRAMEA`	YELLOW TWIG DOGWOOD	6`-9` HEIGHT, 8`-12` SPREAD	17	YELLOW TWIGS IN WINTER
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	CV	COREOPSIS VERTICILLATA `MOONBEAM`	THREADLEAF COREOPSIS	2`-3` HEIGHT, 1`-2` SPREAD	45	YELLOW FLOWERS
811060M	DECIDUOUS SHRUB, 24-30", B&B	CS	CORNUS SERICEA	RED TWIG DOGWOOD	6`-9` HEIGHT, 8`-12` SPREAD	83	RED TWIGS IN WINTER
811057M	DECIDUOUS SHRUB, 3-4' HIGH, B&B	FX	FORSYTHIA X INTERMEDIA	BORDER FORSYTHIA	6`-9` HEIGHT AND SPREAD	101	YELLOW FLOWERS, SPRING
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	HO	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	6"-12" HEIGHT AND SPREAD	104	SHOWY YELLOW FLOWERS
811060M	DECIDUOUS SHRUB, 24-30", B&B	HQ	HYDRANGEA QUERCIFOLIA ` SYKE`S DWARF`	OAKLEAF HYDRANGEA	6`-8` HEIGHT AND SPREAD	1	LARGE WHITE FLOWERS, SHADE TOLERANT
811078M	EVERGREEN SHRUB, 18-24" HIGH, #3 CONTAINER	II	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	3`-4` HEIGHT, 4`-6` SPREAD	29	EVERGREEN SHRUB
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	IV	ILEX VERTICILLATA	WINTERBERRY	3`-12` HEIGHT AND SPREAD	19	BRILLIANT RED/ORANGE/YELLOW FRUIT
811084M	EVERGREEN SHRUB, 36-42" HIGH, B&B	IB	ILEX X MESERVEAE 'BLUE PRINCESS'	BLUE PRINCESS HOLLY	10`-15` HEIGHT, 8`-10` SPREAD	20	EVERGREEN SHRUB
811099M	GROUND COVER, #1 CONTAINER	JB2	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	6"-18" HEIGHT, 5`-8` SPREAD	22	EVERGREEN GROUNDCOVER
811060M	DECIDUOUS SHRUB, 24-30", B&B	LO	LIGUSTRUM OVALIFOLIUM	CALIFORNIA PRIVET	10`-15` HEIGHT AND SPREAD	86	EVERGREEN HEDGE
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	LM	LIRIOPE MUSCARI ` BIG BLUE`	BIG BLUE LILYTURF	12"-18" HEIGHT, 9"-12" SPREAD	93	PURPLE FLOWERS
811057M	DECIDUOUS SHRUB, 3-4' HIGH, B&B	MP	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	5`-10` HEIGHT AND SPREAD	46	WHITE FLOWERS
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	PV	PANICUM VIRGATUM 'DALLAS BLUE'	SWITCH GRASS	3`-6` HEIGHT, 2`-3` SPREAD	295	ORNAMENTAL GRASS
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	PS2	PENNISETUM SETACEUM 'MOUDRY'	FOUNTAIN GRASS	2`-3` HEIGHT, 1`-2` SPREAD	92	ORNAMENTAL GRASS
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	PH	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	2`-3` HEIGHT, 1`-2` SPREAD	86	ORNAMENTAL GRASS
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	PS	PENNISETUM SETACEUM	FOUNTAIN GRASS	3`-4` HEIGHT, 2`-4` SPREAD	27	ORNAMENTAL GRASS
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	RS	RUDBECKIA HIRTA 'INDIAN SUMMER'	INDIAN SUMMER BLACK-EYED SUSAN	2`-3` HEIGHT, 1`-2` SPREAD	67	BRIGHT YELLOW FLOWERS
811063M	DECIDUOUS SHRUB, 18-24" HIGH, #3 CONTAINER	SJ	SPIRAEA JAPONICA `GOLDMOUND`	GOLDMOUND SPIREA	2`-3` HEIGHT, 3`-4` SPREAD	112	YELLOW FOLIAGE, PURPLE FLOWERS, MAY
811060M	DECIDUOUS SHRUB, 24-30", B&B	VD	VIBURNUM DENTATUM 'BLUE MUFFIN'	ARROWWOOD VIBURNUM	3`-5` HEIGHT AND SPREAD	95	WHITE FLOWERS, MAY, ORANGE-RED FALL COLOR



TREE PRUNING DETAIL

NOT TO SCALE



TREE STAKING DETAIL

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FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

LANDSCAPE NOTES & DETAILS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	JB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
JB	MJP	----	26 of 70

STRUCTURAL ABBREVIATIONS

NOTES:
1. ALL ABBREVIATIONS MAY NOT BE USED.
2. THESE ABBREVIATIONS APPLY TO STRUCTURAL DWGS ONLY. SEE ARCH & MEP DWGS FOR SEPARATE SYMBOLS AND ABBREVIATIONS LIST.

@	AT	JT	JOINT
ABV	ABOVE		
ACI	AMERICAN CONCRETE INSTITUTE	K	KIPS
ADH	ADHESIVE	KB	KNEE BRACE
ADDL	ADDITIONAL		
ADJ	ADJUSTABLE	MAS	MASONRY
AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MBR	MEMBER
ALT	ALTERNATE	MECH	MECHANICAL
APPROX	APPROXIMATELY	MEP	MECHANICAL, ELECTRICAL & PLUMBING
AR	ANCHOR ROD	MFR	MANUFACTURER
ARCH	ARCHITECT	MIN	MINIMUM
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	MISC	MISCELLANEOUS
ASTM	AMERICAN SOCIETY OF TESTING & MATERIALS	MO	MASONRY OPENING
AWS	AMERICAN WELDING SOCIETY	MTL	METAL
BCX	BOTTOM CHORD EXTENSION	#	NUMBER
BLDG	BUILDING	NIC	NOT IN CONTRACT
BM	BEAM	NOM	NOMINAL
BOT	BOTTOM	NS	NEAR SIDE
BPL	BEARING PLATE/ BASE PLATE	NTS	NOT TO SCALE
CANT	CANTILEVER	OA	OVERALL
CJ	CONTROL JOINT/CONSTRUCTION JOINT	OC	ON CENTER
CL	CENTER LINE	OD	OUTSIDE DIAMTER
CLR	CLEAR/CLEARANCE	O/F	OUTSIDE FACE
CMU	CONCRETE MASONRY UNIT(S)	OPH	OPPOSITE HANG
COL	COLUMN	OPNG	OPENING
CONC	CONCRETE	OPP	OPPOSITE
CONN	CONNECTION		
CONSTR	CONSTRUCTION	PAF	POWER ACTUATED FASTENER
CONT	CONTINUOUS	PART	PARTITION
COORD	COORDINATE	PC	PIECE
		PCF	POUNDS PER CUBIC FOOT
DBE	DECK BEARING ELEVATION	PEN	PENETRATION
DBL	DOUBLE	PFB	PREFABRICATE(D)
DEMO	DEMOLITION	PL	PLATE
DEG	DEGREE	PLF	POUNDS PER LINEAR FOOT
DIA	DIAMETER	PRESS	PRESSURE
DIAG	DIAGONAL	PROJ	PROJECT; PROJECTED; PROJECTION
DIM	DIMENSION	PSF	POUNDS PER SQUARE FOOT
DIR	DIRECTION	PSI	POUNDS PER SQUARE INCH
DL	DEAD LOAD		
DN	DOWN	R	RADIUS
DWG	DRAWING(S)	RC	REINFORCED CONCRETE
DWLS	DOWELS	RD	ROOF DRAIN
		RECT	RECTANGULAR
EA	EACH	REF	REFER(ENCE)
EF	EACH FACE	REINF	REINFORCING
EL	ELEVATION	REQD	REQUIRED
ELEV	ELEVATOR	REV	REVISE; REVISION
EMBED	EMBEDMENT		
EOD	EDGE OF DECK	SC	SLIP CRITICAL
EOR	ENGINEER OF RECORD	SCH	SCHEDULE
EOS	EDGE OF SLAB	SDL	SUPERIMPOSED DEAD LOAD
EQ	EQUAL	SECT	SECTION
EQUIP	EQUIPMENT	SF	STEP FOOTING
EW	EACH WAY	SHT	SHEET
EWEF	EACH WAY EACH FACE	SIM	SIMILAR
EXIST	EXISTING	SL	SLOPE
EXP	EXPANSION	SOG	SLAB ON GRADE
EXT	EXTERIOR	SPEC	SPECIFICATION
		SQ	SQUARE
FD	FLOOR DRAIN	STD	STANDARD
FDN	FOUNDATION	STGR	STAGGER
FF	FINISHED FLOOR	STIFF	STIFFERNER
FLR	FLOOR	STIRR	STIRRUP
FO	FACE OF	STL	STEEL
FS	FAR SIDE	STRUCT	STRUCTURAL
FTG	FOOTING	SWB	SHORT WAY BOTTOM
FV	FIELD VERIFY	SWT	SHORT WAY TOP
		SYM	SYMMETRICAL
GA	GAUGE, GAGE		
GALV	GALVANIZE	T	TOP
GC	GENERAL CONTRACTOR	T/	TOP OF
GR	GRADE	T&B	TOP AND BOTTOM
GYP	GYPSUM	TCX	TOP CHORD EXTENSION
		TEMP	TEMPORARY
H&V	HORIZONTAL AND VERTICAL	THK	THICK
HEF	HORIZONTAL EACH FACE	THRU	THROUGH
HI	HIGH	TOS	TOP OF STEEL
HK	HOOK	T/SL	TOP OF SLAB
HOF	HORIZONTAL OUTSIDE FACE	T/W	TOP OF WALL
HORIZ	HORIZONTAL	TYP	TYPICAL
HP	HIGH POINT		
HT	HEIGHT	UNO	UNLESS NOTED OTHERWISE
IBC	INTERNATIONAL BUILDING CODE	VEF	VERTICAL EACH FACE
ID	INSIDE DIAMTER	VERT	VERTICAL
IE	INVERT ELEVATION	VIF	VERIFY IN FIELD
I/F	INSIDE FACE	VSC	VERTICAL SLOTTED CONNECTION
INFO	INFORMATION		
INT	INTERIOR	W	WIDTH, WIDE
		W/	WITH
LAT	LATERAL	WD	WOOD
LF	LINEAR FOOT	WF	WIDE FLANGE
LL	LIVE LOAD	W/O	WITHOUT
LLH	LONG LEG HORIZONTAL	WPRF	WATERPROOF
LLV	LONG LEG VERTICAL	WP	WORKING POINT
LO	LOW	WS	WATERSTOP
LP	LOW POINT	WT	WEIGHT
LTL	LINTEL	WWF	WELDED WIRE REINFORCING

1.0 - GENERAL

1. ALL WORK SHALL CONFORM TO THE "2018 INTERNATIONAL BUILDING CODE NEW JERSEY EDITION" AND TO ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
3. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, SPECIFICATIONS, AND DETAILS, THE MOST RIGID REQUIREMENTS SHALL GOVERN.
4. WORK NOT INDICATED ON A PART OF THE DRAWINGS BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES SHALL BE REPEATED.
5. THE CONTRACTOR'S ATTENTION IS DIRECTED TO FEDERAL, STATE, AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH STANDARDS. THE CONSTRUCTION CONTRACTOR AWARDED THIS PROJECT SHALL INSURE ALL WORKING SURROUNDINGS AND CONDITIONS ARE SANITARY, AND ARE NOT HAZARDOUS OR DANGEROUS TO THE HEALTH OR SAFETY OF THE WORK CREWS OR BUILDING OCCUPANTS. PRECAUTION SHALL BE EXERCISED AT ALL TIMES FOR THE PROTECTION OF PERSONS AND PROPERTY. IT IS MANDATORY THAT THE SAFETY PROVISIONS OF APPLICABLE LOCAL LAWS, OSHA REGULATIONS AND BUILDING AND CONSTRUCTION CODES, BE OBSERVED FOR ALL CONTRACTORS.
6. ALL COSTS OF INVESTIGATION AND/OR REDESIGN DUE TO CONTRACTOR IMPROPER INSTALLATION OF STRUCTURAL ELEMENTS, SUBSTITUTION OF MATERIAL OR DESIGN, OR OTHER ITEMS NOT IN CONFORMANCE WITH THE CONTRACT DOCUMENTS SHALL BE AT THE CONTRACTOR'S EXPENSE.
7. STRUCTURAL DRAWINGS SHALL NOT BE UTILIZED FOR BUILDING LAYOUT PURPOSES. CONTRACTOR SHALL COORDINATE LOCATION OF ALL DIMENSIONS AND ELEVATIONS WITH SITE PLAN AND RESOLVE ALL CONFLICTS PRIOR TO PILE LAYOUT. A REGISTERED SURVEYOR SHALL PERFORM BUILDING LAYOUT AND LOCATION OF ALL FOUNDATIONS.
8. THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE SITE PLAN. IF THERE IS A DISCREPANCY BETWEEN DRAWINGS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENT ENGINEER PRIOR TO PERFORMING THE WORK.
9. THE CONTRACTOR SHALL VERIFY AND/OR ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. FAILURE TO NOTIFY RESIDENT ENGINEER OF UNSATISFACTORY CONDITIONS CONSTITUTES ACCEPTANCE OF UNSATISFACTORY CONDITIONS.
10. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK IN ACCORDANCE WITH THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER IMMEDIATELY AND PROVIDE A SKETCH OF THE CONDITION WITH HIS PROPOSED MODIFICATION OF THE DETAILS GIVEN ON THE CONTRACT DOCUMENTS. DO NOT COMMENCE WORK UNTIL CONDITION IS RESOLVED AND MODIFICATION IS APPROVED BY THE RESIDENT ENGINEER.
11. CONTRACTOR SHALL PREPARE WORKING DRAWINGS FOR PAVILION AND PAVILION FOUNDATIONS AND SHALL COORDINATE ALL DIMENSIONS
12. THE CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE DESIGN AND CONSTRUCTION OF FALSEWORK, FORMWORK, STAGINGS, BRACING, SHEETING, AND SHORING, ETC.
13. CONTRACTOR TO PROVIDE SHEETING, BRACING, AND UNDERPINNING AS NECESSARY TO PREVENT ANY LATERAL OR VERTICAL MOVEMENTS OF EXISTING BUILDINGS, STREETS, AND ANY EXISTING UTILITY LINES.
14. BRACING, SHEETING, SHORING, ETC, REQUIRED TO INSURE THE STRUCTURAL INTEGRITY OF THE EXISTING BUILDINGS OR NEW CONSTRUCTION, SIDEWALKS, UTILITIES, ETC, SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR. DETAILED SIGNED AND SEALED SHOP DRAWINGS SHALL BE PREPARED INDICATING ALL WORK TO BE PERFORMED. SUBMIT THE SHOP DRAWINGS IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS.
15. IN NO CASE SHALL HEAVY EQUIPMENT BE PERMITTED CLOSER THAN 8'-0" FROM ANY RETAINING WALL. IF IT IS NECESSARY TO OPERATE SUCH EQUIPMENT CLOSER THAN 8'-0" TO THE WALL, THE CONTRACTOR SHALL BE THE SOLE RESPONSIBLE PARTY AND, AT HIS OWN EXPENSE, SHALL PROVIDE ADEQUATE SUPPORTS OR BRACE THE WALL TO WITHSTAND THE ADDITIONAL LOADS SUPERIMPOSED FROM SUCH EQUIPMENT.

2.0 - EARTHWORK

1. ENGINEERED (CONTROLLED COMPACTED) FILL WITHIN THE BUILDING AREA SHALL BE CONSTRUCTED PRIOR TO GRADE BEAM EXCAVATION.
2. EXCAVATION SHALL BE PERFORMED SO AS NOT TO DISTURB EXISTING ADJACENT STRUCTURES AND UTILITY LINES. VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF WORK. HAND EXCAVATE AROUND UTILITIES AS REQUIRED.

3.0 - PILE FOUNDATIONS

1. PILES SHALL BE INSTALLED TO SUPPORT AN ALLOWABLE CAPACITY OF 60 KIPS.
2. PILE INSTALLATION SHALL BE CONTINUOUSLY INSPECTED BY A RESIDENT ENGINEER.
3. ANY DEVIATION IN PILE LOCATIONS OR ELEVATIONS SHALL BE REPORTED IMMEDIATELY TO THE RESIDENT ENGINEER.
4. PILES SHALL BE DRIVEN PLUMB WITH AN ALLOWABLE OFFSET FROM CENTERLINE NOT TO EXCEED 2".
5. PILE CAPACITY SHALL BE DETERMINED BY WAVE EQUATION ANALYSES FOR THE EQUIPMENT USED. PILE CONTRACTOR SHALL SUBMIT WAVE EQUATION ANALYSES AND NUMBER OF BLOWS PER INCH REQUIRED TO OBTAIN LOAD CAPACITY REQUIRED.
6. PILE LOAD TESTS. TWO (2) TEST PILES SHALL BE INSTALLED AND SUBJECTED TO PILE DRIVING ANALYZER TESTING (PDA) TO VERIFY CAPACITY AND SET CRITERIA DETERMINED BY WAVE EQUATION ANALYSES. ULTIMATE VERTICAL CPACITY SHALL BE 120 KIPS.

4.0 - CAST-IN-PLACE CONCRETE

1. CONCRETE SHALL BE DESIGNED AND DETAILED IN ACCORDANCE WITH THE CURRENT BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI-318), AND CONSTRUCTED IN ACCORDANCE WITH THE CRSI MANUAL OF STANDARD PRACTICE.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE (145 PCF +) WITH ALL CEMENT CONFORMING TO ASTM C150, TYPE I. MAXIMUM AGGREGATE SIZE SHALL BE 1" FOR FOOTINGS AND 3/4" FOR WALLS AND SLABS, CONFORMING TO ASTM C33.
3. READY MIX:
   *COMPLY WITH ACI-301, ACI-304 AND ASTM C-94.
   *MAXIMUM TIME BETWEEN INTRODUCTION OF WATER AND PLACING TO BE 1-1/2 HOURS.
   *ALL CONCRETE EXPOSED TO THE GROUND OR WEATHER SHALL BE AIR ENTRAINED.
   *DO NOT LOAD TRUCKS ABOVE RATED CAPACITY.
4. REINFORCING STEEL: ASTM A615 GRADE 60.
5. REINFORCING STEEL CLEAR COVER SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"

   B. CONCRETE EXPOSED TO EARTH OR WEATHER
      #6 BARS AND LARGER 2"
      #5 BARS AND SMALLER 1-1/2"

   C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND SLABS, WALLS, JOISTS
      #11 BARS AND SMALLER 3/4"
      BEAMS AND COLUMNS
      PRIMARY REINFORCEMENT, TIES, STIRRUPS, OR SPIRALS 1-1/2"

7. SUBMIT TO RESIDENT ENGINEER REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL AND MIX DESIGNS FOR REVIEW PRIOR TO PLACING ANY CONCRETE.
8. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE WHILE PLACING CONCRETE. IF REQUIRED, ADDITIONAL BARS, STIRRUPS OR CHAIRS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL BARS.
9. LAP WELDED WIRE REINFORCEMENT TWO (2) FULL WIRE SPACES AT SPLICES AND WIRE TOGETHER.
10. LAP SPLICE LENGTHS SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
11. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IN CONTACT WITH THE BOLSTERS OR CHAIRS IS EXPOSED.
12. PLACING OF CONCRETE SHALL NOT START UNTIL THE PLACEMENT OF REINFORCING HAS BEEN APPROVED BY THE RESIDENT ENGINEER.
13. BONDING AGENT SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE.
14. EPOXY ADHESIVE SHALL BE USED WHERE DOWELS ARE TO BE INSTALLED INTO EXISTING CONCRETE. SUBMIT MANUFACTURER INFORMATION FOR REVIEW BY RESIDENT ENGINEER.
15. NO SLEEVE SHALL BE PLACED THROUGH ANY CONCRETE ELEMENT UNLESS SHOWN ON THE APPROVED SHOP DRAWINGS OR SPECIFICALLY AUTHORIZED IN WRITING BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ETC AS REQUIRED FOR MECHANICAL TRADES BEFORE CONCRETE IS PLACED.
16. PIPES OR CONDUITS PLACED IN SLABS SHALL NOT HAVE AN OUTSIDE DIAMETER LARGER THAN 1/3 THE SLAB THICKNESS AND SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTER. ALUMINUM CONDUITS SHALL NOT BE PLACED IN CONCRETE. NO CONDUITS SHALL BE PLACED IN SLABS WITHIN 12 INCHES OF COLUMN FACE OR FACE OF BEARING WALL. NO CONDUITS MAY BE PLACED IN EXTERIOR SLABS OR SLABS SUBJECTED TO FLUIDS.
17. PRIOR TO PLACING CONCRETE THE CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE RESIDENT ENGINEER, A CONCRETE POUR SCHEDULE SHOWING LOCATION OF ALL PROPOSED CONSTRUCTION JOINTS AND WATERSTOPS.
18. PRIOR TO CONCRETE PLACEMENT, THE CONTRACTOR SHALL SUBMIT TO THE RESIDENT ENGINEER FOR REVIEW, CONCRETE MIX DESIGNS PREPARED IN ACCORDANCE WITH THE SPECIFICATIONS AND REQUIREMENTS INDICATED IN THE GENERAL NOTES.
19. CONCRETE SHALL NOT BE PUMPED THROUGH ALUMINUM PIPES AND SHALL NOT BE PLACED IN CONTACT WITH ALUMINUM FORMS, MIXING DRUMS, BUGGIES, CHUTES, CONVEYORS OR OTHER EQUIPMENT MADE OF ALUMINUM.
20. ALL INSERTS AND SLEEVES SHALL BE CAST-IN-PLACE WHENEVER FEASIBLE. DRILLED OR POWDER DRIVEN FASTENERS WILL BE PERMITTED WHEN PROVEN TO THE SATISFACTION OF THE RESIDENT ENGINEER THAT THE FASTENERS WILL NOT SPALL THE CONCRETE AND HAVE THE SAME CAPACITY AS CAST-IN-PLACE INSERTS.
21. WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. HOLES SHALL BE BLOWN CLEAN PRIOR TO PLACING BOLTS OR ADHESIVE ANCHORS.
22. CHAMFER ALL EXPOSED CONCRETE CORNERS.
23. CONSTRUCTION JOINTS FOR MILD-REINFORCED CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS SHALL BE SHOWN ON REINFORCING STEEL SHOP DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS, UNLESS OTHERWISE SHOWN. ALL REINFORCING IS TO BE CONTINUOUS THROUGH JOINTS.
24. EARLY DRYING OUT OF CONCRETE SLABS, ESPECIALLY DURING THE FIRST 24 HOURS, SHALL BE CAREFULLY GUARDED AGAINST. ALL SURFACES SHALL BE MOIST CURED OR PROTECTED USING A MEMBRANE CURING AGENT APPLIED AS SOON AS FORMS ARE REMOVED. IF MEMBRANE CURING AGENT IS USED, EXERCISE CARE NOT TO DAMAGE COATING.
25. COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI-306. HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI-305R.
26. THROUGHOUT CONSTRUCTION, THE CONCRETE WORK SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DUE TO EXCESSIVE LOADING, CONSTRUCTION EQUIPMENT, MATERIALS OR METHODS, ICE, RAIN, SNOW, EXCESSIVE HEAT, AND FREEZING TEMPERATURES.
27. PREPARE CONCRETE TEST CYLINDERS FROM EACH DAY'S POUR. CYLINDERS SHALL BE PROPERLY CURED AND STORED. SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172.
28. RETAIN LABORATORY TO PROVIDE TESTING SERVICE. SLUMP PER ASTM C143L AIR CONTENT PER ASTM C231 OR C173, CYLINDER TESTS PER ASTM C31 AND C39. ONE SET OF SIX (6) CYLINDERS FOR FIRST 50 CUBIC YARDS (PER ACI318, 150 CUBIC YARDS THERE AFTER) FOR EACH MIX USED, CYLINDERS TO BE LAB CURED. REPORTS OF ALL TESTS TO BE SUBMITTED TO THE ENGINEER. PROVIDE CYLINDER BREAKS AS FOLLOWS:

   A. 2 @ 7 DAY
   B. 2 @ 28 DAY
   C. 1 @ HOLD
   D. 1 @ 3 DAY

31. IMMEDIATELY AFTER REMOVAL OF FORMS, REPAIR HONEYCOMBED OR DEFECTIVE AREAS WITH HIGH STRENGTH CEMENT GROUT. GROUT SHALL BE APPROVED BY THE ENGINEER. WHEN REINFORCING IS VISIBLE IN DEFECTIVE AREA, CONTACT THE ENGINEER IMMEDIATELY.
32. CONCRETE:

1. CLASS DESIGN COMPRESSIVE STRENGTH (f'_c)

   CLASS A..... 4,600 PSI
   CLASS B..... 3,700 PSI

2. CLASS VERIFICATION COMPRESSIVE STRENGTHS

   CLASS A..... 5,400 PSI
   CLASS B..... 4,500 PSI

3. CONCRETE PROVIDED FOR THE CONCRETE SHEET PILE CAP, CONCRETE SPLASH PAD, AND CONCRETE LOAD TRANSFER BEAM SHALL BE CLASS A. ALL OTHER CONCRETE ITEMS SHALL BE CLASS B.
4. CHAMFER ALL EXPOSED CONCRETE EDGES ¾" BY ¾", UNLESS OTHERWISE NOTED.
5. ALL EXPOSED CONCRETE SURFACES SHALL HAVE A NATURAL FINISH AND SHALL NOT BE STAINED OR TINTED.
6. ALL EXPOSED CONCRETE SURFACES SHALL BE TREATED WITH A WATER REPELLENT SEAL COAT.

SNOW DESIGN LOAD SCHEDULE
INTERNATIONAL BUILDING CODE 2018 NEW JERSEY EDITION /ASCE 7-16

ITEM	SYMBOL	VALUE	REFERENCE
GROUND SNOW LOAD	Pg	25	FIGURE 1608.2
SNOW EXPOSURE FACTOR	Ce	1.0	TABLE 7-2
SNOW LOAD IMPORTANCE FACTOR	Is	1.0	TABLE 1.5-2
THERMAL FACTOR	Ct	1.0	TABLE 7-3
FLAT-ROOF SNOW LOAD	Pf	20	SECTION 7.3

LATERAL LOAD SCHEDULE IN ACCORDANCE WITH
INTERNATIONAL BUILDING CODE 2018 NEW JERSEY EDITION /ASCE 7-16

WIND CRITERIA	
RISK CATEGORY, (TABLE 1609.3)	II
BASIC WIND SPEED, Vult (3-SECOND GUST), (FIGURE 1609)	115 MPH
EXPOSURE CATEGORY, (SECT. 1609.4)	D
INTERNAL PRESSURE COEFFICIENT (GCpi)	±0.18

SEISMIC LOAD

SITE CLASS, (TABLE 20.3-1)	E
SEISMIC IMPORTANCE FACTOR (Ie), (TABLE 1.5-2)	1.00
SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS, (FIGURE 22-1) (Ss)	26.70%
SPECTRAL RESPONSE ACCELERATION AT A 1-SECOND PERIOD, (FIGURE 22-2) (S1)	5.7%g
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER, (EQUATION 11.4-4), (Sds)	0.419
DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER, (EQUATION 11.4-4), (Sd1)	0.159
SEISMIC DESIGN CATEGORY, (TABLE 11.6-1 & 11.6-2)	C

28 DAY COMPRESSIVE STRENGTH

COMPONENT	STRENGTH	W/C RATIO	SLUMP
FOOTING, SLABS, WALLS	CLASS A	0.44	4 TO 6 IN
PILE CAPS/GRADE BEAMS	CLASS A	0.44	4 TO 6 IN
PILE FILL	CLASS B	0.49	4 TO 6 IN

FLOOD DATA

FLOOD HEIGHT (BFE)	18 FT
FLOOD ZONE	VE

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

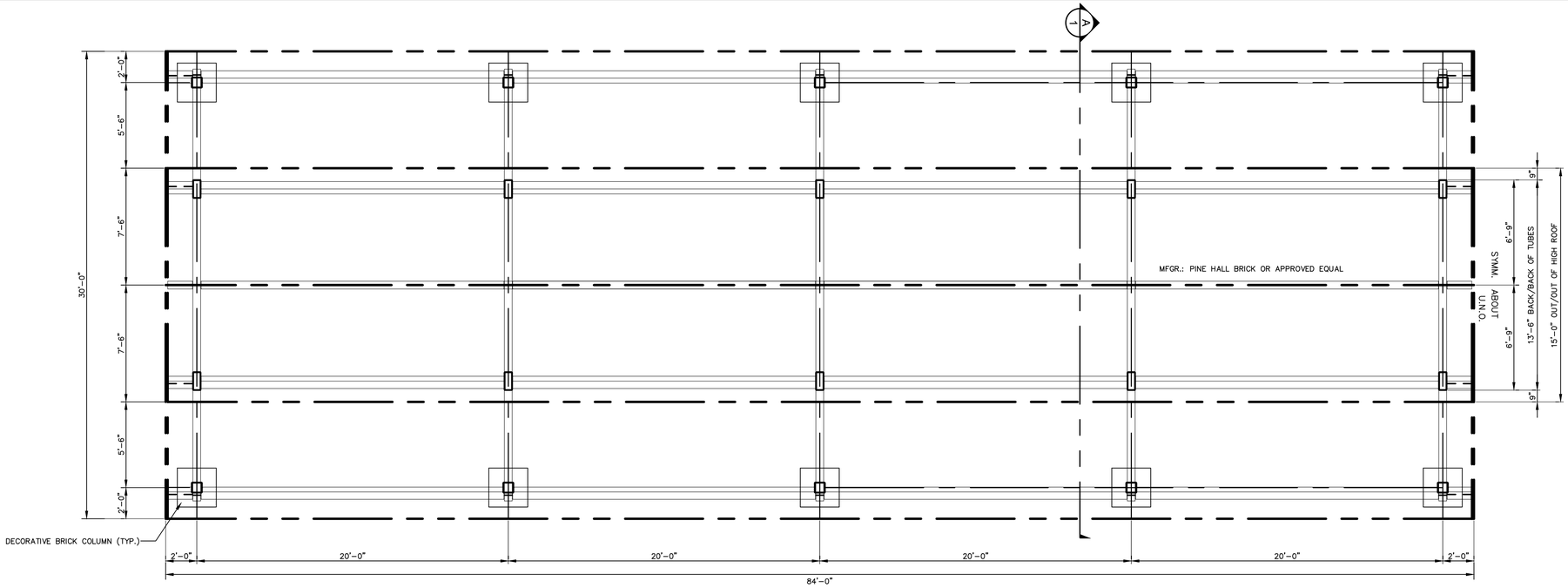
FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

PAVILION GENERAL NOTES & SCHEDULES
FOR
SOUTH AMBOY FERRY TERMINAL
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	JVC		13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
ARC	JVC	----	27 of 70



PAVILION FRAMING PLAN

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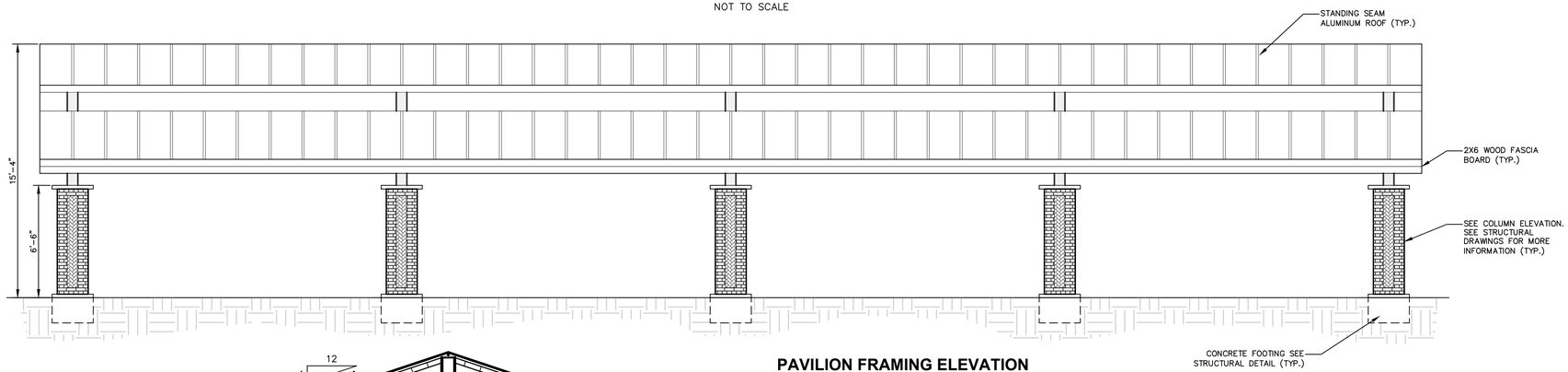
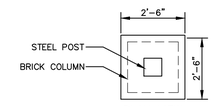
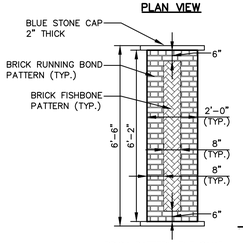


PAVILION FRAMING ELEVATION

NOT TO SCALE

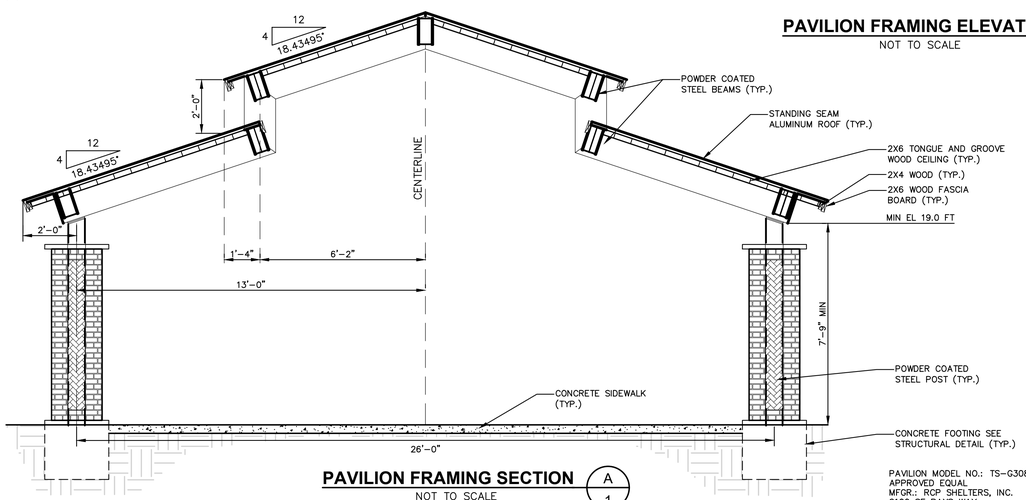


PLAN VIEW



BRICK PATTERN THE SAME ON ALL SIDES

COLUMN ELEVATION



PAVILION FRAMING SECTION

A/1

NOT TO SCALE

PAVILION MODEL NO.: TS-G3084-2T-04 OR APPROVED EQUAL
MFGR.: RCP SHELTERS, INC.
2100 SE RAYS WAY,
STUART, FL 34994
PHONE NO.: 772-288-3600
WEB: WWW.RCPSHELTERS.COM

BRICK VENEER NOTES:

1. CONTRACTOR TO SUBMIT COLOR SAMPLES OF THE ACTUAL MATERIAL FOR THE OWNERS REVIEW AND APPROVAL PRIOR TO ORDERING THE BRICK PAVER MATERIAL.

BRICK PAVER MODEL NO.: 8"X4"X 2 1/4" ENGLISH EDGE

2701 SHOREFAIR DRIVE
WINSTON-SALEM NC 27105
PHONE NO.: 336-721-7500
WEB: PINEHALLBRICK.COM

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

PAVILION ELEVATION AND SECTION

FOR

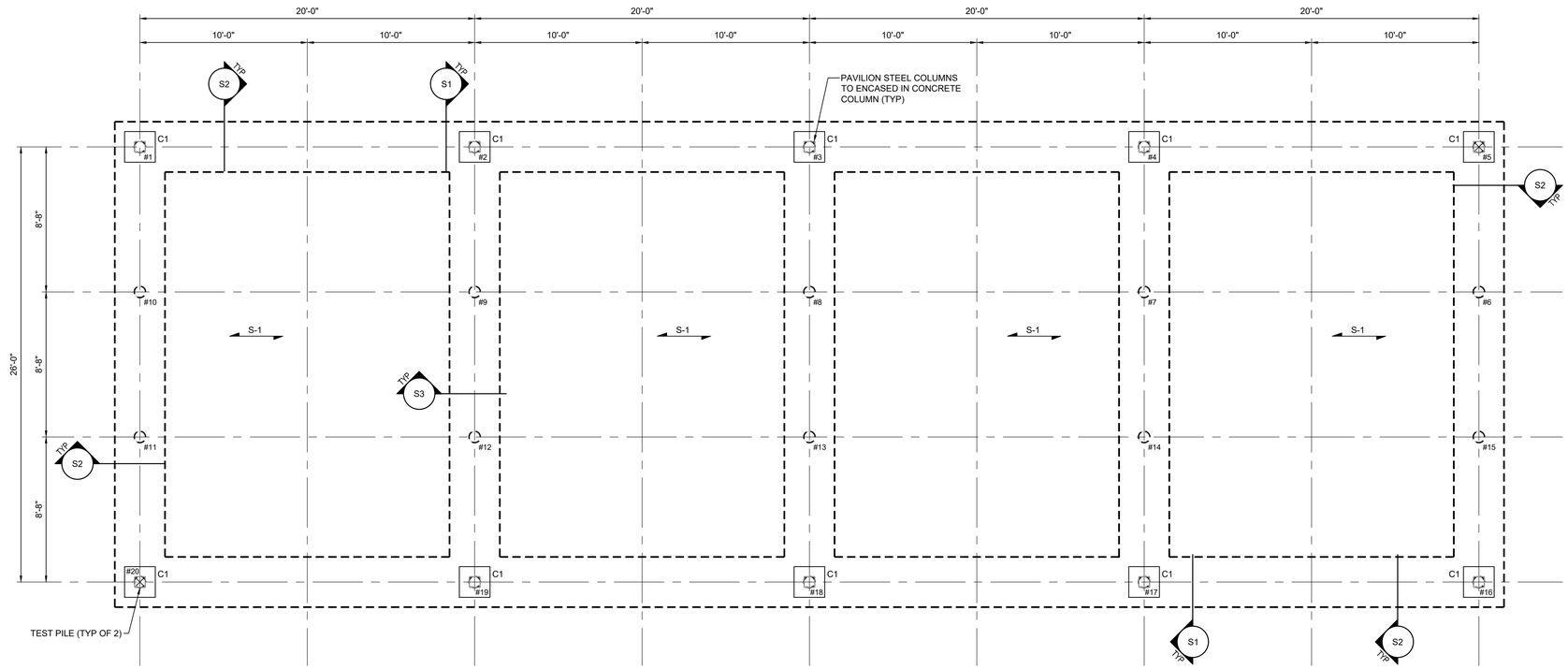
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	28 of 70

Plotted by: Suzanne C. Steenon 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-C02.dwg 28 PAVILION ELEVATION AND SECTION

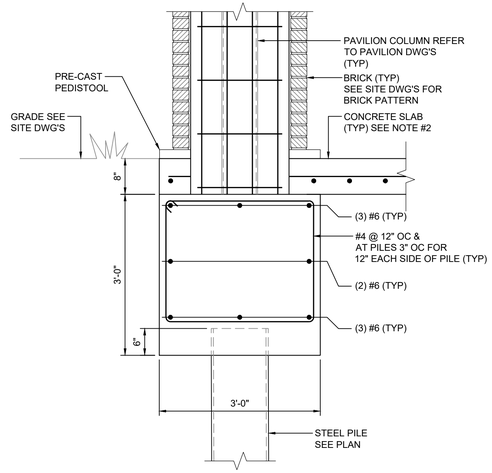


PAVILION PILE AND GRADE BEAM PLAN

SCALE: 1/4" = 1'-0"

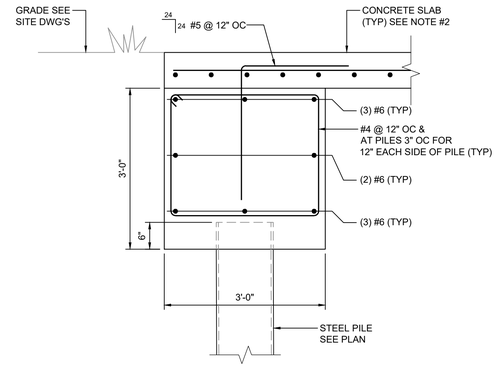
NOTES:

1. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH SITE DRAWINGS.
2. S-1 DENOTES - 8" CONCRETE SLAB WITH #5 BARS AT 8" OC EACH WAY, COORDINATE SLAB PITCH WITH SITE DRAWINGS.
3. ELEVATION TOP OF GRADE BEAM -0'-8" BELOW ADJACENT GRADE ELEVATION UNO.
4. LOCATE ALL PILES IN THE CENTER OF GRADE BEAMS UNLESS OTHERWISE NOTED.
5. FOR INFORMATION NOT SHOWN SEE SITE AND ARCHITECTURAL DRAWINGS.
6. C1 - INDICATES 22" x 22" CONCRETE COLUMN SEE DETAIL.
7. ◌ - DENOTES CONCRETE FILLED STEEL PIPE PILES (TOTAL NUMBER OF PILES = 20) SEE DETAIL.



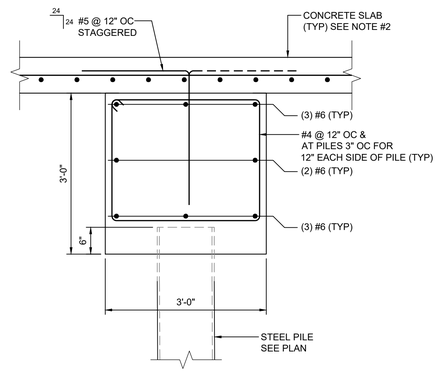
SECTION - S1

SCALE: 3/4" = 1'-0"



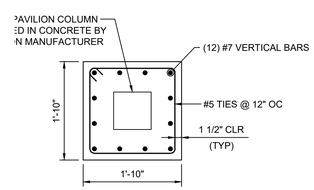
SECTION - S2

SCALE: 3/4" = 1'-0"



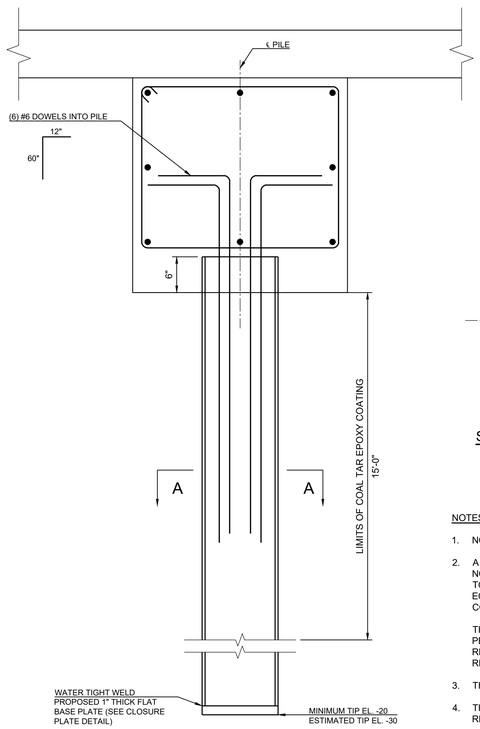
SECTION - S3

SCALE: 3/4" = 1'-0"



ONCRETE COLUMN 'C1' DETAIL

LE: 3/4" = 1'-0"



TYPICAL 12.75" DIAMETER STEEL PIPE PILE

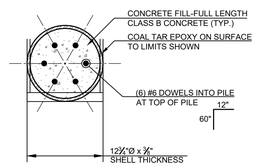
SCALE: 1" = 1'-0"

LEGEND:

TEST PILE

VERTICAL PILE

TOTAL NUMBER OF PILES = 20

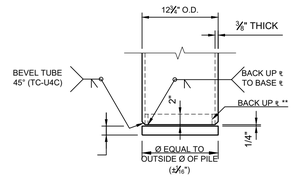


SECTION A-A

SCALE: 1" = 1'-0"

1" THICK GRADE 50 STEEL
BASE PLATE (MIN.)

** BACK UP PLATE: TO BE CUT FROM PILE AND BENT TO FIT I.D. TIGHTLY ALL AROUND. BACK UP PLATE TO BE WELDED TO BASE PLATE.



CLOSURE PLATE DETAIL FOR STEEL PIPE PILE

SCALE: 1" = 1'-0"

NOTES:

1. NO SEPARATE PAYMENT SHALL BE MADE FOR ADDITIONAL FOOTING CONCRETE THAT IS POURED OUTSIDE THE PROPOSED EDGE OF FOOTING.
2. A TOTAL OF TWO TEST PILES SHALL BE INSTALLED. THE TEST PILES WILL BE MONITORED WITH A PILE DRIVING ANALYZER (PDA) TO VERIFY THE DRIVEN NOMINAL CAPACITIES OF THE PILES. THE REQUIRED NOMINAL CAPACITY FOR ALL PILES IS 120 KIPS. A CAPWAP ANALYSIS SHALL ALSO BE PERFORMED TO VERIFY THE INPUT DATA INTO THE PDA. DRIVING OF THE TEST PILES SHALL NOT BE AUTHORIZED UNTIL WRITTEN ACCEPTANCE OF THE WAVE EQUATION ANALYSIS IS ISSUED BY THE RE. PRODUCTION PILE ORDERED LENGTHS WILL BE DETERMINED BASED ON THE DRIVEN TEST PILE RESULTS, IN CONJUNCTION WITH THE PDA/CAPWAP ANALYSIS.

   THE SUBSURFACE CONDITIONS AT THE PROJECT SITE MAY EXHIBIT SIGNIFICANT TIME-DEPENDENT STRENGTH GAINS OR LOSSES WITHIN A ONE-WEEK PERIOD AFTER A PILING IS INITIALLY INSTALLED. THE CONTRACTOR SHALL INCLUDE AN ALLOWANCE FOR A RE-STRIKE OF THE TEST PILES AT 7 DAYS, IF REQUIRED BY THE ENGINEER, UNDER THE VARIOUS PAY ITEMS. NO SEPARATE PAYMENT SHALL BE MADE FOR RE-STRIKES OR PDA TESTING FOR RE-STRIKES. PILE RE-STRIKES ARE REQUIRED ON ALL TEST PILES A MINIMUM OF 7 DAYS AFTER INSTALLATION, OR AS DIRECTED BY THE RE.
3. THE MINIMUM TIP ELEVATION OF PILES IS -20 FEET. THE ESTIMATED TIP ELEVATION OF PILES IS -30 FEET. ACTUAL LENGTHS MAY VARY ±25%.
4. THE COST OF ALL PILE TIPS, WELDING (IF REQUIRED), SPLICE PLATES (IF REQUIRED), COAL TAR EPOXY COATINGS, CONCRETE FILL AND REINFORCEMENT STEEL WITHIN AND EXTENDED FROM THE 12¾" DIAMETER STEEL PIPE PILES SHALL BE INCLUDED IN THE VARIOUS PILE PAY ITEMS.
5. FOUNDATION DESIGN CRITERIA

   THE PROPOSED PAVILION WILL BE SUPPORTED ON A CAST-IN-PLACE REINFORCED CONCRETE FOUNDATION FOUNDED ON 12¾" DIAMETER CLOSED-END CONCRETE FILLED STEEL PIPE PILES HAVING ALLOWABLE VERTICAL CAPACITY OF 60 KIPS. IT IS ANTICIPATED THAT THE PILES SHALL BE DRIVEN TO A MINIMUM TIP ELEVATION OF -20.0 FEET, WITH AN ESTIMATED TIP ELEVATION OF -30.0 FEET.

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Corporate Office:
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Wall, New Jersey 07719
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PAVILION GRADE BEAM, PILE PLAN, & SECTIONS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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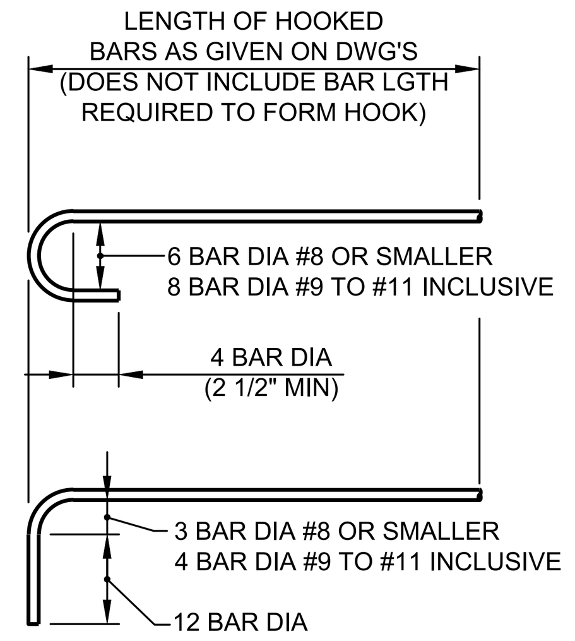
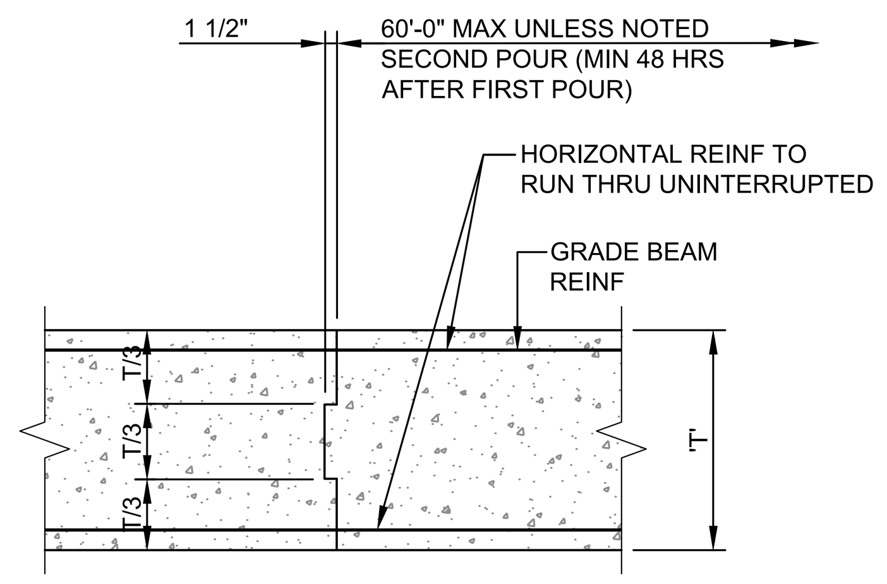
ARC	JVC	-----	29 of 70

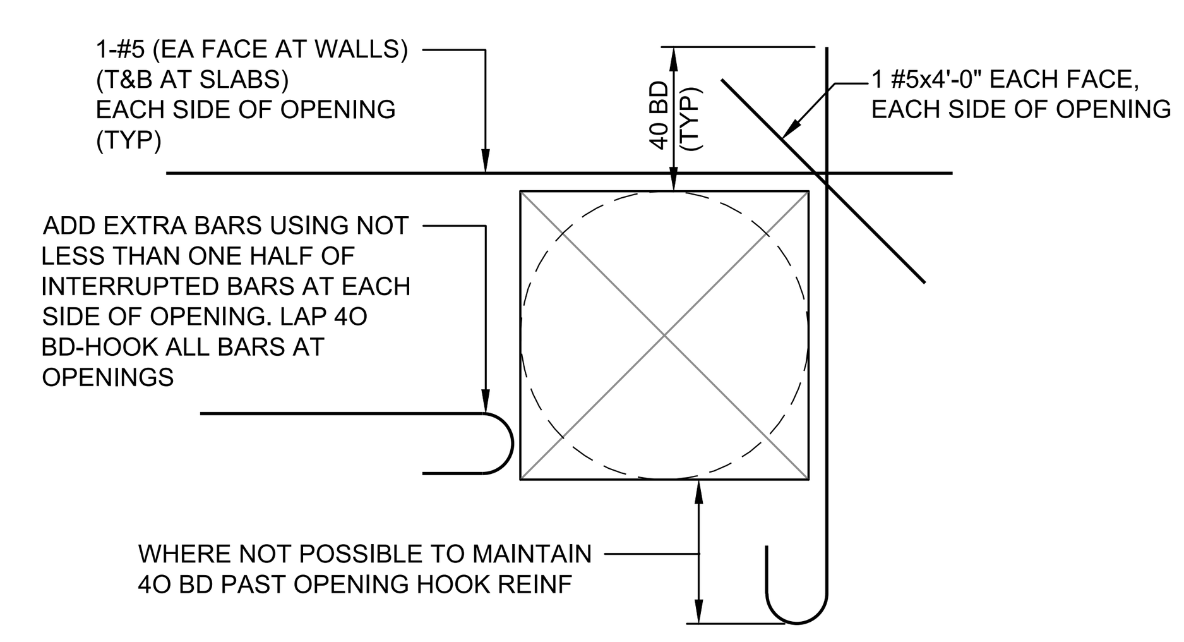
Plotted by: Suzanne C. Steenon 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749.003 - Struct Pavilion.dwg 29 Pavilion Grade Beam Pile Plan & Sections



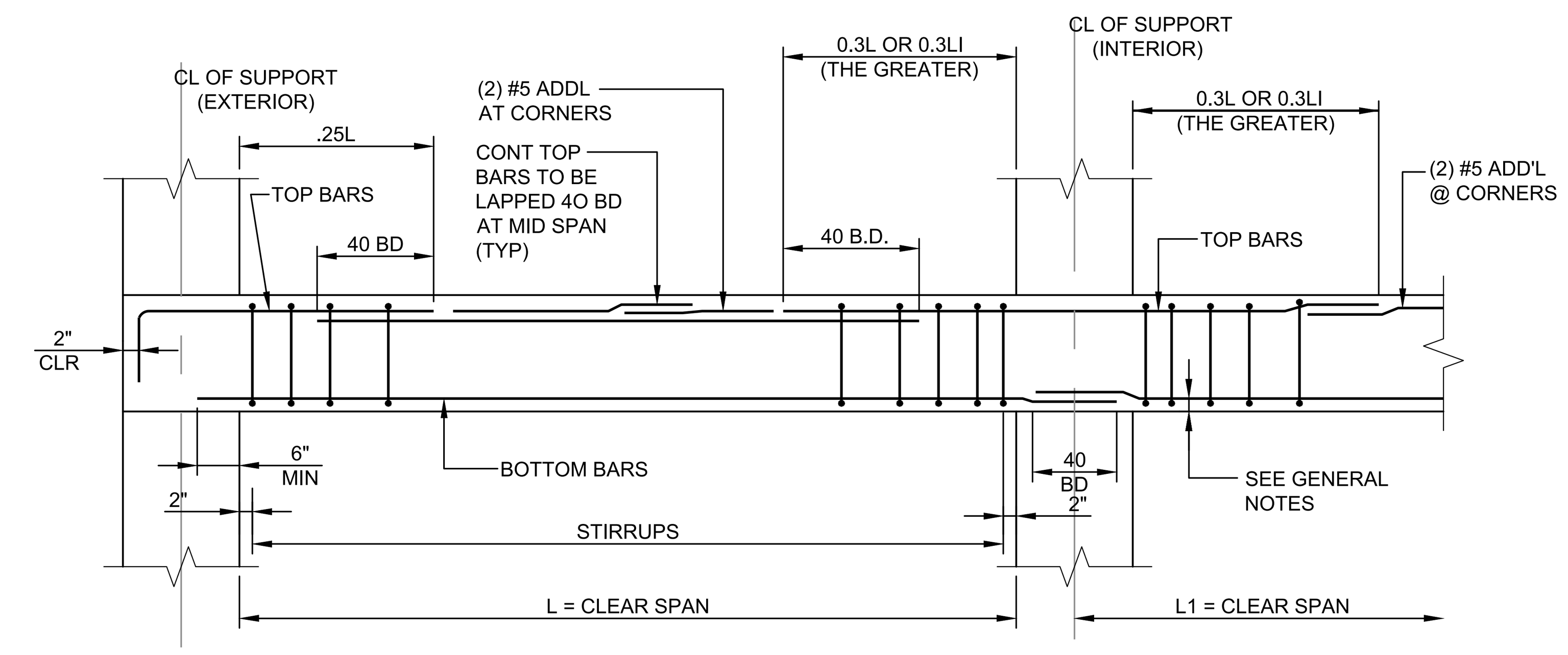
TYPICAL HOOK DETAILS
NOT TO SCALE



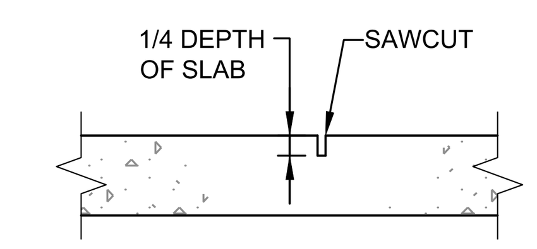
TYPICAL CONCRETE GRADE BEAM CONSTRUCTION JOINT
NOT TO SCALE



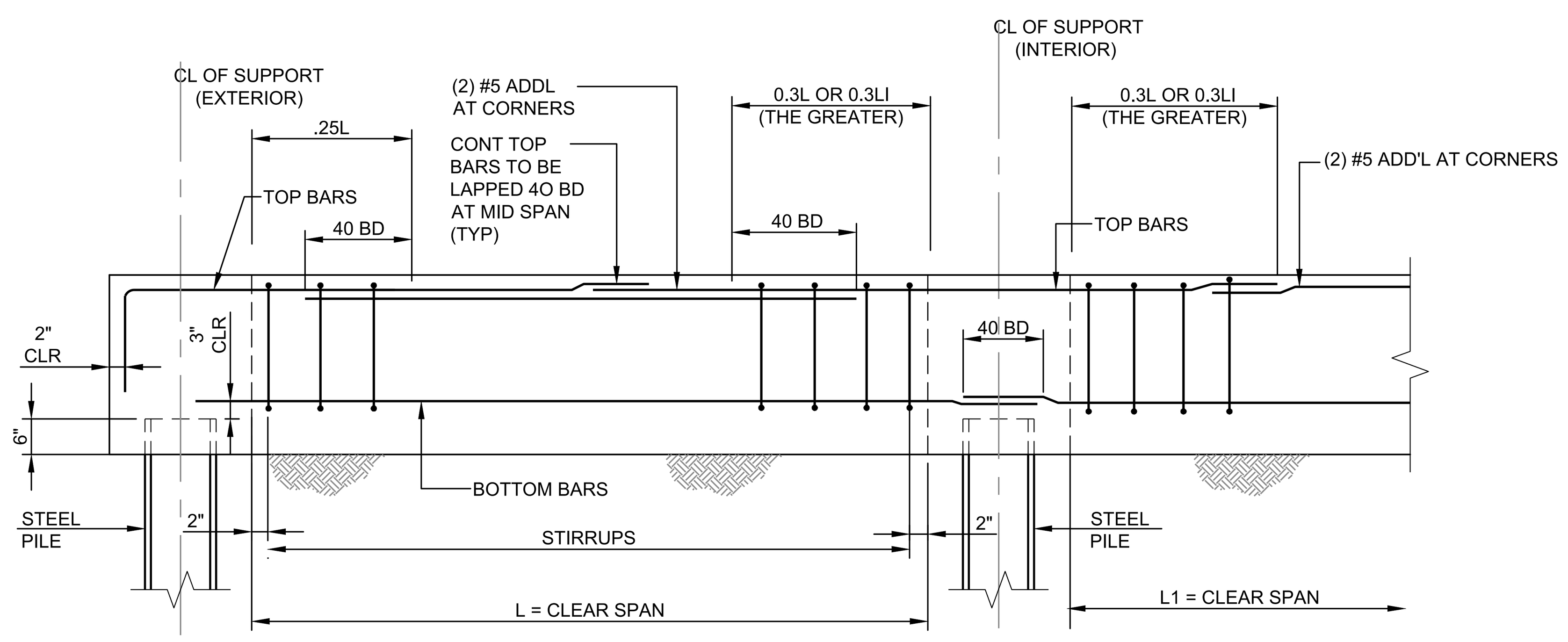
TYPICAL REINFORCING AT CONCRETE GRADE BEAM OPENINGS
NOT TO SCALE



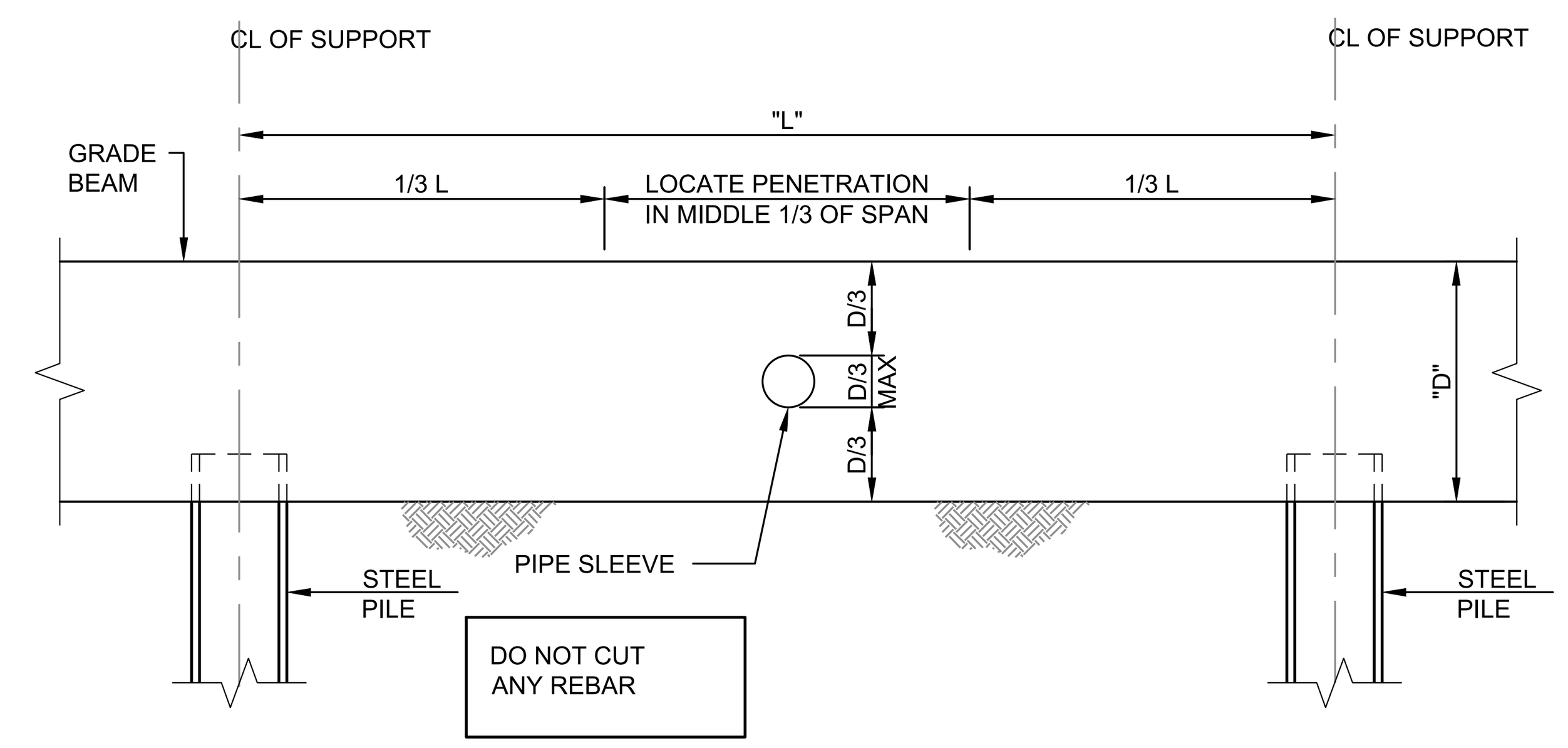
TYPICAL CONCRETE BEAM DETAIL
NOT TO SCALE



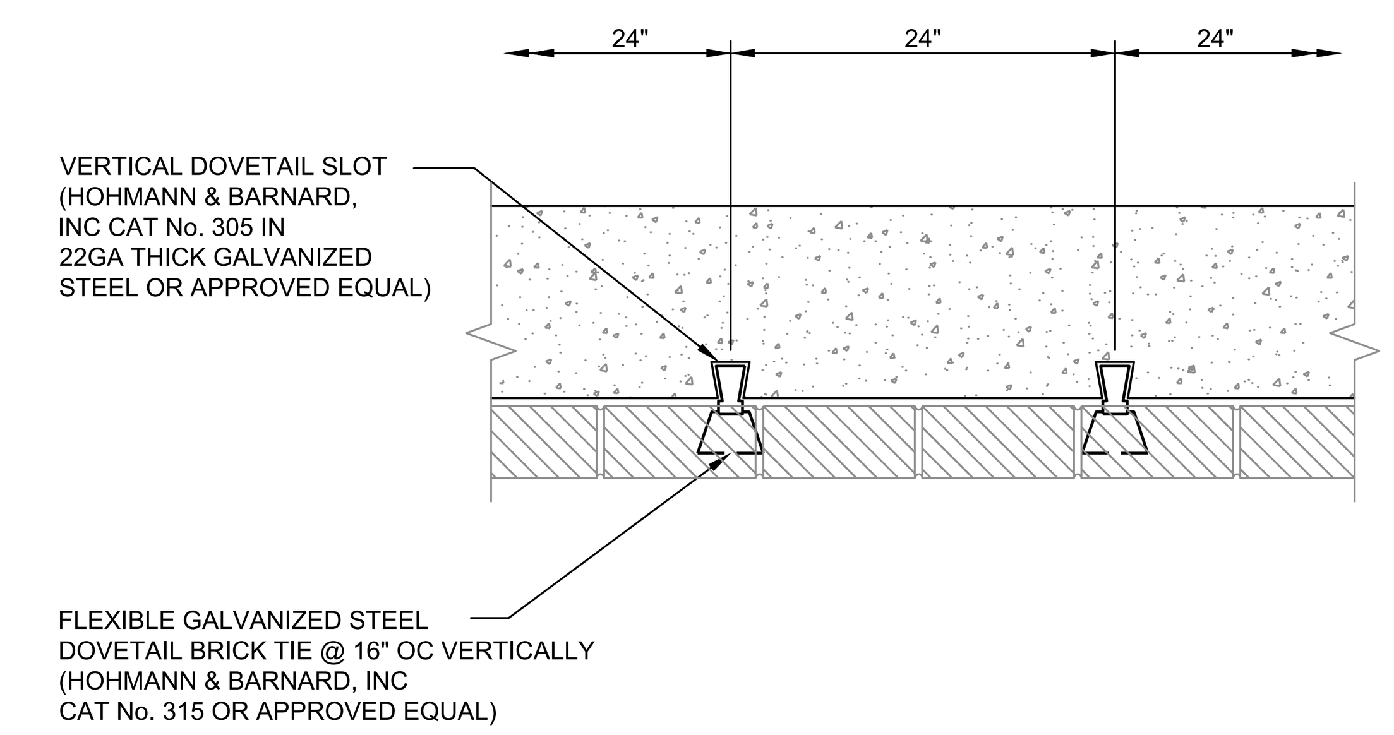
SLAB CONTROL JOINT
NOT TO SCALE



TYPICAL CONCRETE GRADE BEAM DETAIL
NOT TO SCALE



TYPICAL DETAIL FOR OPENING IN GRADE BEAMS
NOT TO SCALE

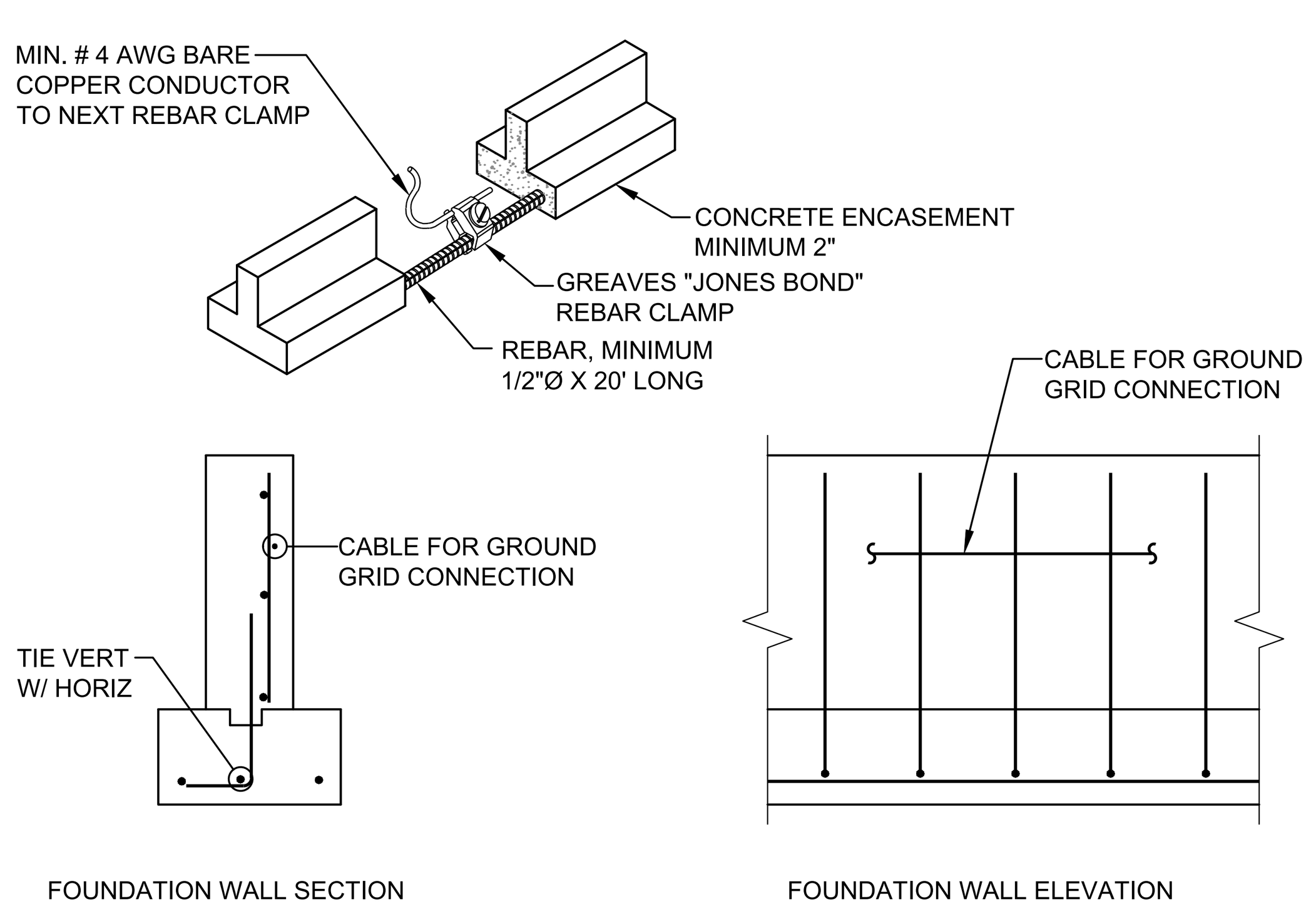


TYPICAL DETAIL OF ANCHORAGE OF BRICK VENEER TO CONCRETE WALL
NOT TO SCALE

CODE REQUIRES ALL AVAILABLE GROUNDING ELECTRODES TO BE BONDED TOGETHER TO FORM A GROUNDING ELECTRODE SYSTEM; UNDERGROUND METAL WATER PIPE, METAL FRAMES OF BUILDINGS, CONCRETE-ENCASED ELECTRODES, GROUND RINGS, AND 'MADE' ELECTRODES. THE ELECTRODES ARE TO BE CONNECTED TOGETHER WITH A CONTINUOUS BONDING JUMPER OR VIA THE ELECTRODES THEMSELVES. CONCRETE-ENCASED REINFORCING RODS MUST ALWAYS BE USED WHEN AVAILABLE.

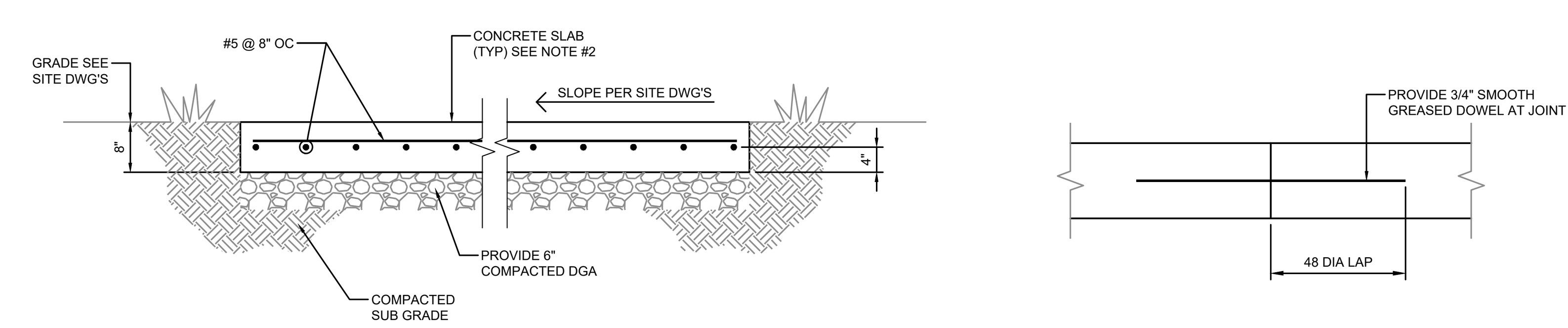
A CONCRETE-ENCASED ELECTRODE, OR "UFER GROUND", IS A 1/2 INCH SIZE REBAR OR #4 BARE COPPER CONDUCTOR AT LEAST 20 FEET LONG, LOCATED WITHIN OR NEAR THE BOTTOM OF THE FOUNDATION OR FOOTING AND ENCASED BY AT LEAST 2 INCHES OF CONCRETE. REBAR MUST BE BARE, GALVANIZED, OR OTHERWISE CONDUCTIVELY COATED STEEL; REBAR MUST NOT BE COATED WITH EPOXY OR OTHER INSULATION. LENGTHS OF REBAR MAY BE CONNECTED TOGETHER TO FORM AN EXCELLENT LOW-RESISTANCE GROUNDING ELECTRODE.

CONNECTIONS TO BURIED, DRIVEN, OR CONCRETE ENCASED ELECTRODES NEED NOT BE "ACCESSIBLE". COPPER, NOT ALUMINUM, MUST BE EMPLOYED AS GROUNDING CONDUCTOR WHERE IN EARTH OR SUBJECT TO CORROSIVE CONDITIONS. WHERE THE GROUNDING ELECTRODE IS A METAL UNDERGROUND WATER PIPE, A SUPPLEMENTAL ELECTRODE MUST BE USED.



UFER GROUND CONCRETE-ENCASED ALTERNATING CURRENT SUPPLEMENTAL GROUNDING ELECTRODE
NOT TO SCALE

NOTE:
SEE ELECTRICAL PLANS FOR INFORMATION NOT SHOWN



CONCRETE PAD - PLAZA WALKWAY AND PAVILION - 8 IN
NOT TO SCALE

NOTES:

1. PROVIDE NJDOT CLASS B CONCRETE.
2. PROVIDE BROOM FINISH.
3. PROVIDE SAWCUT JOINT AT 15 FT ON CENTER MAXIMUM. PROVIDE CONSTRUCTION JOINT AT 60 FT MAXIMUM. REFER TO SITE PLANS FOR SLAB JOINT PATTERN.
4. JOINTS SHALL BE CUT INT PAVEMENT NO MORE THAN 8 HOURS AFTER POUR AND SHALL BE 1/4 DEPTH OF THE SLAB.

SECTION VIEW OF CONCRETE PAVEMENT SLAB DETAIL
SCALE: 3/4" = 1'-0"

CONSTRUCTION JOINT SLIP JOINT
NOT TO SCALE

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Corporate Office:
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PAVILION TYPICAL DETAILS
FOR
SOUTH AMBOY FERRY TERMINAL
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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ARC	JVC	----	30 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749.003 - Struct Pavilion.dwg 30 Pavilion Typical Details

PARKING AREA LIGHT FIXTURE (TYP.)

PARKING AREA LIGHT FIXTURE (TYP.)

PARKING AREA LIGHT ON CONCRETE PEDISTAL (TYP.)

EXISTING LIGHT FIXTURE TO REMAIN (TYP.)

FIELD ADJUST LIGHT POLE FOUNDATIONS AS NEEDED TO ACCOMMODATE UNDERGROUND UTILITIES

MATCH LINE

SHEET #4

FERRY TERMINAL

DECORATIVE LIGHT FIXTURE (TYP.)

CATENARY LIGHT FIXTURES RETROFIT (TYP.) LIGHT EMISSIONS NOT CALCULATED IN PHOTO METRIC VALUES

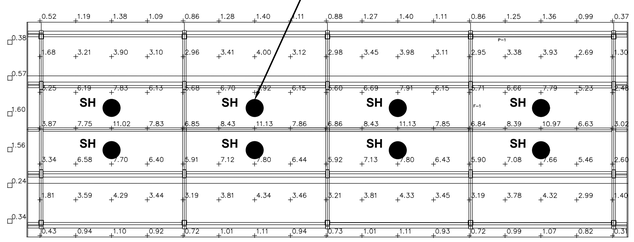
DECORATIVE LIGHT FIXTURE (TYP.)

MAINTAINED FOOTCANDLE READING AT FINISHED GRADE (TYP.)

DOUBLE POLE MOUNTED LIGHT FIXTURE (TYP.)

SEE PAVILION LIGHTING PLAN FOR LIGHTING LAYOUT PHOTOMETRIC VALUES

PAVILION CANOPY LIGHTS (TYP.)



PAVILION LIGHTING PLAN

SCALE: 1"=10'

Light Schedule						
Symbol	Label	Manufacturer	Catalog Number	Lamp	Light Loss Factor	Wattage
●	SA	Sternberg Lighting OVERALL HEIGHT = 18'	1D/A670SRLED-6ARC45T3-MDL05-990T-650P511-TBLK	84 LED'S@ 16FT AFG	0.92	142
●	SB	Sternberg Lighting OVERALL HEIGHT = 18'	1D/A670SRLED-6ARC30T5-MDL05-990T-650P511-TBLK	84 LED'S-@ 16 FT AFG	0.89	141.9
■	SF	U.S. ARCHITECTURAL LIGHTING OVERALL HEIGHT = 20'	2D/RZR-G-PLED-VSQ-W-120LED-525mA-CW-DK BZ-S170050506Y4-D2-313-VB-FBC	ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION. PRORATED BASED ON 1050mA ITL & WORSE CASE 525mA ITL. PRORATED FROM STANDARD NW-4000K TO CW-5000K. VOLTAGE (120VAC, 60Hz) TO THE DRIVERS. 20' AFG	0.9	384
■	SF1	U.S. ARCHITECTURAL LIGHTING OVERALL HEIGHT = 20' POLE HEIGHT = 17'-6" PEDESTAL HEIGHT = 2'-6"	2D/RZR-G-PLED-VSQ-W-120LED-525mA-CW-DK BZ-S170050506Y4-D2-313-VB-FBC	ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION. PRORATED BASED ON 1050mA ITL & WORSE CASE 525mA ITL. PRORATED FROM STANDARD NW-4000K TO CW-5000K. VOLTAGE (120VAC, 60Hz) TO THE DRIVERS. 20' AFG	0.9	384
●	SG1	U.S. ARCHITECTURAL LIGHTING	1D/RZR-G-PLED-III-W-120LED-525mA-CW-DKBZ-S1700050506-Y4-D1-VB-FBC	ONE HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDS), VERTICAL BASE-UP POSITION. PRORATED BASED ON 1050mA ITL & WORSE CASE 525mA ITL. PRORATED FROM STANDARD NW-4000K TO CW-5000K. VOLTAGE (120VAC, 60Hz) TO THE DRIVERS. 20' AFG	0.9	192
●	SH	BOCK LIGHTING OVERALL HEIGHT = 11'	1DP/VRT-C18-eG11-iG1 / LVFV1-2000-35K / 41F / 642-7S-G1 / GNX-1116-20-VRTWG COLOR	LED Cree CXA2530	0.9	19.3

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
BIKE-SIDEWALK PATH	×	1.84 fc	2.61 fc	0.43 fc	6.1:1	4.3:1
ENTRY 2	◇	2.04 fc	3.44 fc	1.39 fc	2.5:1	1.5:1
OPEN STAGING AREA	+	2.15 fc	4.66 fc	0.50 fc	9.3:1	4.3:1
PARKING 1	□	2.60 fc	9.56 fc	1.08 fc	8.9:1	2.4:1
PARKING 1B	+	4.12 fc	6.69 fc	2.93 fc	2.3:1	1.4:1
PARKING 2	□	3.82 fc	9.78 fc	1.15 fc	8.5:1	3.3:1
PARKING 2B	□	3.55 fc	6.17 fc	1.78 fc	3.5:1	2.0:1
PIER WALKWAY	×	1.73 fc	3.12 fc	0.85 fc	3.7:1	2.0:1
PLAZA SIDEWALK AREA	□	2.05 fc	3.05 fc	1.26 fc	2.4:1	1.6:1
PRAVILION OUTSIDE	□	0.17 fc	1.59 fc	0.02 fc	79.5:1	8.5:1
PRAVILION UNDER	+	4.13 fc	11.13 fc	0.31 fc	35.9:1	13.3:1
STAGING AREA 2	+	2.37 fc	3.19 fc	1.16 fc	2.8:1	2.0:1
TERMINAL	+	2.52 fc	4.84 fc	0.49 fc	9.9:1	5.1:1
TERMINAL 2	+	3.10 fc	4.05 fc	1.52 fc	2.7:1	2.0:1
TERMINAL PARK 3	+	2.68 fc	10.59 fc	0.55 fc	19.3:1	4.9:1
UNDER & AREA CANOPY 1	□	4.14 fc	11.99 fc	1.18 fc	10.2:1	3.5:1

LIGHTING NOTES:

1. DO NOT INSTALL PROPOSED LIGHTS DIRECTLY ON TOP OF ANY PROPOSED OR EXISTING UNDERGROUND UTILITIES. FIELD ADJUST LIGHTS AS NEEDED AS DIRECTED BY THE PROJECT PROFESSIONAL TO ACCOMMODATE ANY POTENTIAL CONFLICTS.
2. ALL U.S. ARCH LIGHTING DESIGNATED AS SF1 SHALL BE INSTALLED AT INTERSECTION OF PARKING STRIPES OR A MINIMUM OF 2'-6" FROM THE BACK OF THE CURB TO THE FACE OF THE POLE OR PEDESTAL. REFER TO LOCATIONS SHOWN ABOVE.
3. COLOR OF DECORATIVE SINGLE POLE MOUNTED LIGHT FIXTURE AND POLE SHALL MATCH EXISTING FIXTURES LOCATED ALONG RADFORD FERRY ROAD.
4. LIGHT FIXTURES NOT WITHIN CURBED AREAS SHALL HAVE A 2'-6" PEDESTAL (SF1 ONLY)

EXISTING DECORATIVE STREET LIGHT

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
625NS3P	106	CANTENARY LIGHTING STRUCTURE	3	UN
701NS4M	142	FOUNDATION, TYPE 1	59	UN
701NS5M	143	FOUNDATION, TYPE 2	11	UN
703003M	147	LIGHTING STANDARD TYPE 1, SQUARE ALUMINUM	20	UN
703010M	148	LIGHTING STANDARD TYPE 2, DECORATIVE	47	UN
703018M	149	LUMINAIRE TYPE 1, PARKING AREA	20	UN
703019M	150	LUMINAIRE TYPE 2, DECORATIVE	47	UN
703NS1M	151	PAVILION LIGHTING, DECORATIVE	8	UN

No.	Date	Revision	Revised By	Checked By

40 0 40 80
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LIGHTING PLAN

FOR

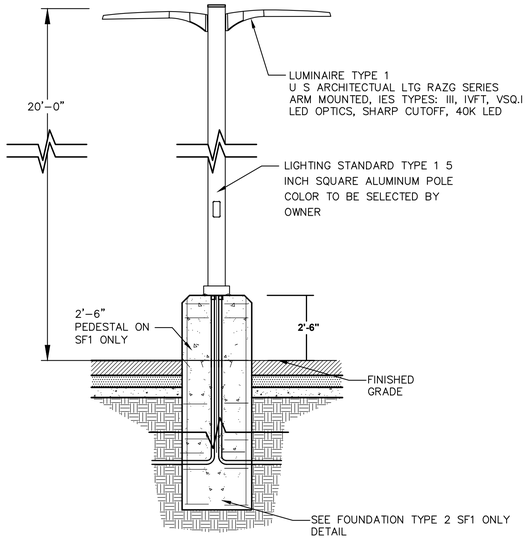
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	JB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
JB	MJP	----	31 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-LI.dwg 32 Lighting Plan



SF1

POLE MOUNTED LIGHTING NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR OWNER'S APPROVAL PRIOR TO ORDERING ANY MATERIAL AND FOR PROPOSED FOOTINGS/PEDESTALS
2. LUMINAIRE TYPE 1 PRODUCT INFO: SF1

PRODUCT: US ARCHITECTURAL LIGHTING RAZG SERIES, LED ARM ARM MOUNTED, IES TYPES: III, IVFT, VSQ.I LED OPTICS, SHARP CUTOFF, 40K LED

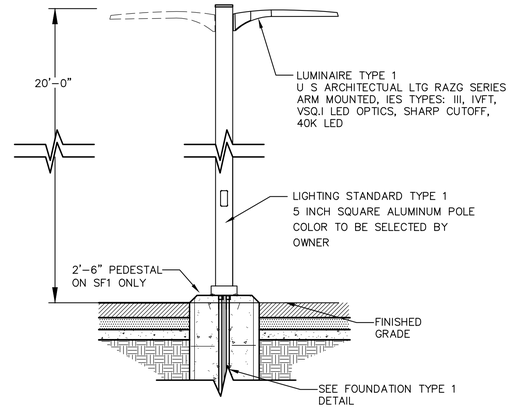
MANUFACTURER: US ARCHITECTURAL LIGHTING, PALMDALE, CALIFORNIA WWW.USALTG.COM PHONE: 800-877-6537

LIGHTING STANDARD TYPE 1 PRODUCT INFO:

PRODUCT: US ARCHITECTURAL LIGHTING SQUARE POLE, 6063-T6 STRUCTURAL GRADE ALUMINUM.

PARKING AREA LIGHT FIXTURE ON CONCRETE PEDESTAL DETAIL

NOT TO SCALE



SF, SG1

POLE MOUNTED LIGHTING NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR OWNER'S APPROVAL PRIOR TO ORDERING ANY MATERIAL AND FOR PROPOSED FOOTINGS
2. LUMINAIRE TYPE 1 PRODUCT INFO: SF, SG1

PRODUCT: US ARCHITECTURAL LIGHTING RAZG SERIES, LED ARM ARM MOUNTED, IES TYPES: III, IVFT, VSQ.I LED OPTICS, SHARP CUTOFF, 40K LED

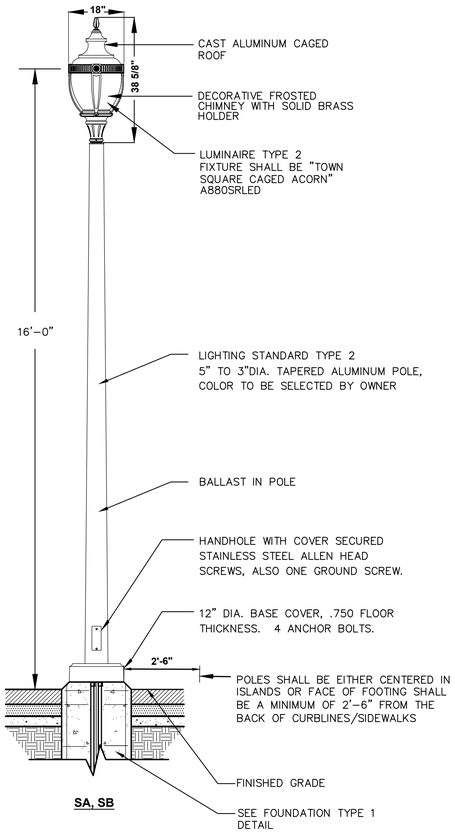
MANUFACTURER: US ARCHITECTURAL LIGHTING, PALMDALE, CALIFORNIA WWW.USALTG.COM PHONE: 800-877-6537

LIGHTING STANDARD TYPE 1 PRODUCT INFO:

PRODUCT: US ARCHITECTURAL LIGHTING SQUARE POLE, 6063-T6 STRUCTURAL GRADE ALUMINUM.

PARKING AREA LIGHT FIXTURE DETAIL

NOT TO SCALE



SA, SB

POLE MOUNTED LIGHTING NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR OWNER'S APPROVAL PRIOR TO ORDERING ANY MATERIAL AND FOR PROPOSED FOOTINGS
2. LUMINAIRE TYPE 2 PRODUCT INFO: SA, SB

PRODUCT: STERNBERG LIGHTING LUMINAIRE YALE - 1D/A670SRLED-6ARC45T3-MDL05-990T-650P511-BLK YALE - 1D/A670SRLED-6ARC30T5-MDL05-990T-650P511-BLK

MANUFACTURER: STERNBERG LIGHTING, ROSELLE, ILLINOIS WWW.STERNBERGLIGHTING.COM PHONE: 800-621-3376

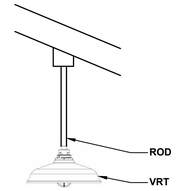
NOTE: LUMINAIRE TYPE 2 TO BE CAST ALUMINUM CAGED ROOF WITH DECORATIVE FROSTED CHIMNEY WITH SOLID BRASS HOLDER

LIGHTING STANDARD TYPE 2 PRODUCT INFO: SA, SB

PRODUCT: STERNBERG LIGHTING TAPERED POLE, 6063-T6 STRUCTURAL GRADE ALUMINUM. COLOR BLACK

DECORATIVE LIGHT FIXTURE DETAIL

NOT TO SCALE



1 VRT-C18 - VRT STYLE C - 18IN

Design: *VRT Style A Aluminum Reflector18.75in OD x 11.25in Height. Spun from heavy gauge aluminum with a rolled in bead.*
Max Wattage: *100W*
Mounting: *Top Mounted with either 3/4 or 1/2 NPT. For outdoor use, Teflon tape should be used around threads.*
Finish: *Powder Coat Finish for Outdoor use.*
Certification: *cULus for Wet Locations.*

EXTERIOR FINISH: G11 Copper

INTERIOR FINISH: G1 White

PAVILION LIGHTING, DECORATIVE FIXTURE NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR OWNER'S APPROVAL PRIOR TO ORDERING ANY MATERIAL AND FOR PROPOSED FOOTINGS/PEDESTALS
2. LIGHT FIXTURE PRODUCT INFO: SH

PRODUCT: BOCK LIGHTING VRT-C18R56, VRT STYLE A ALUMINUM REFLECTOR, POWDER COAT FINISH, COLOR TO BE SELECTED BY OWNER

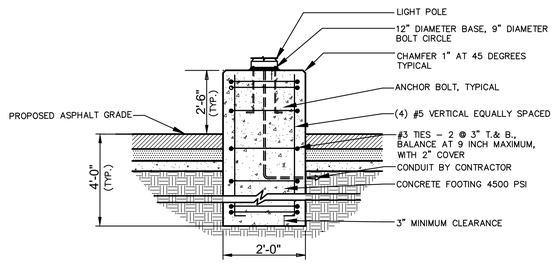
MANUFACTURER: BOCK LIGHTING, 2476 EDISON BLVD. TWINSBURG, OHIO WWW.BOCKLIGHTING.COM PHONE: 216-912-7050

PAVILION LIGHTING, DECORATIVE FIXTURE DETAILS (SH FIXTURE)

NOT TO SCALE

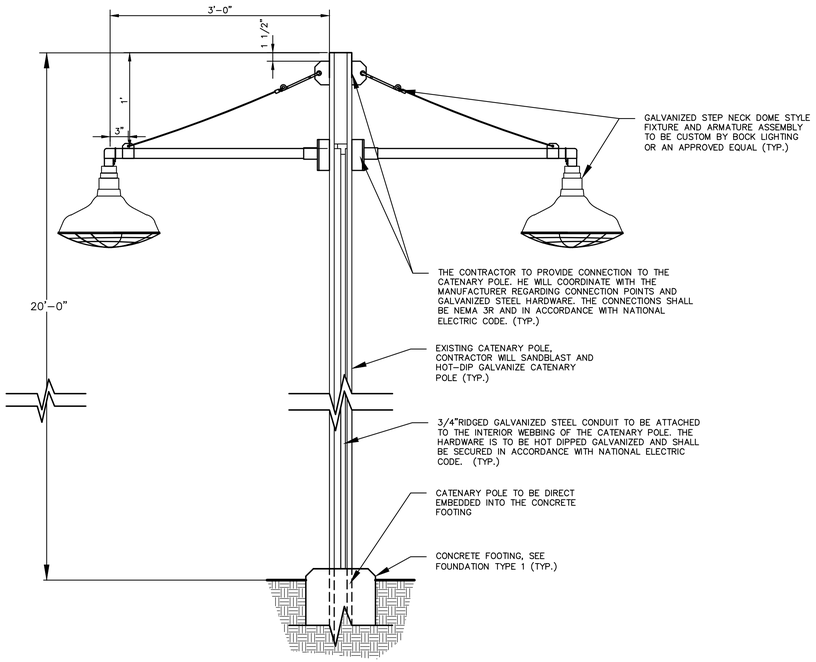
FOUNDATION TYPE 1 DETAIL

NOT TO SCALE



FOUNDATION TYPE 2 SF1 FIXTURE ONLY

NOT TO SCALE



CATENARY LIGHT FIXTURE RETROFIT DETAIL

NOT TO SCALE

CATENARY LIGHT FIXTURE NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR OWNER'S APPROVAL PRIOR TO ORDERING ANY MATERIAL AND FOR PROPOSED FOOTINGS/PEDESTALS
2. LIGHT FIXTURE PRODUCT INFO:

PRODUCT: PA24" - GALVANIZED STEP NECK DOME PA24/LAH01-1250-30K-0-10V/ 42COP/CUARXX/BC24/R56

MANUFACTURER: BOCK LIGHTING 2476 EDISON BLVD. TWINSBURG, OHIO 216-912-7050 WWW.BOCKLIGHTING.COM PHONE: 216-912-7050

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

LIGHTING DETAILS

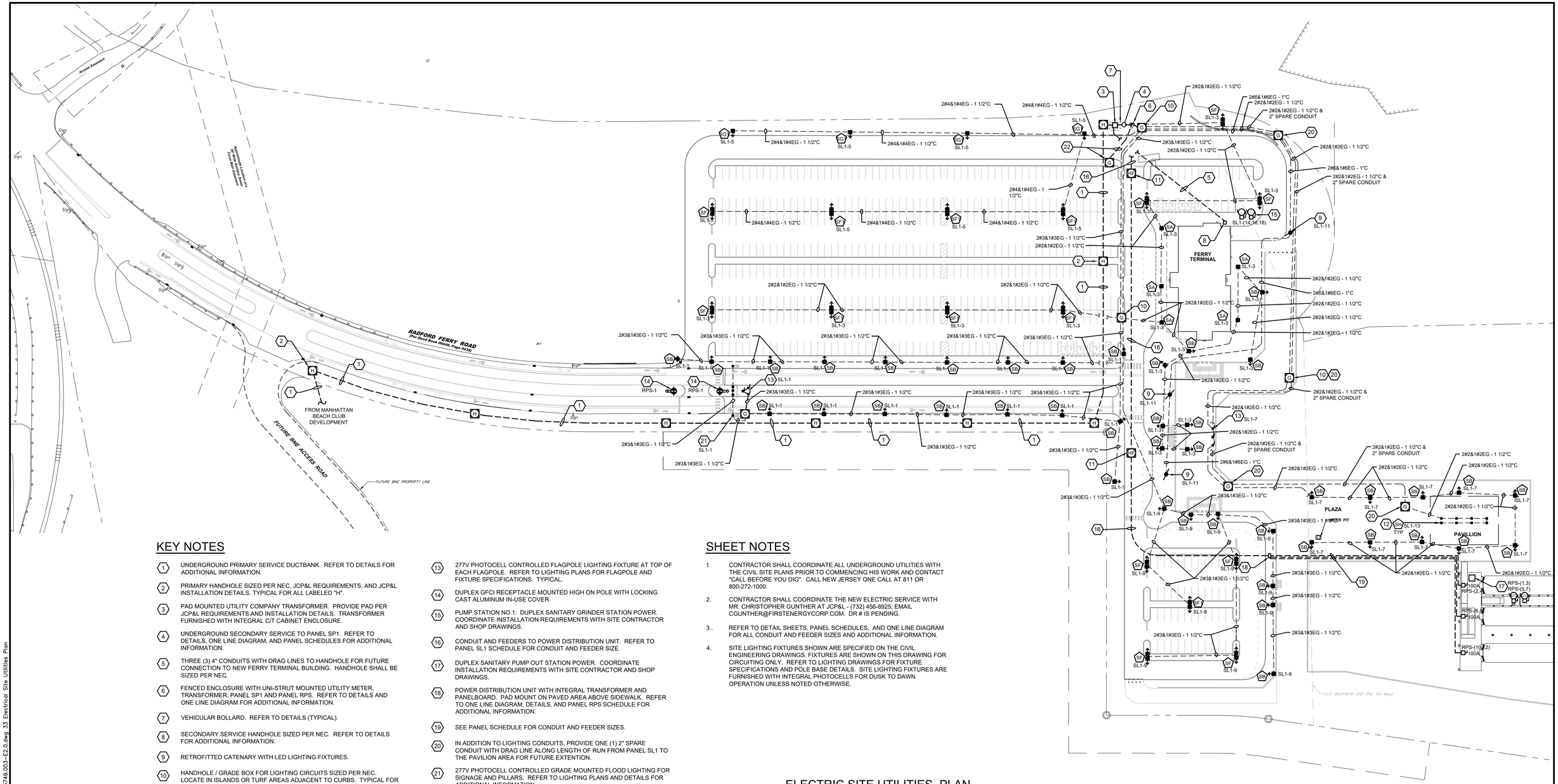
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	JB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
JB	MJP	----	32 of 70



KEY NOTES

1. UNDERGROUND PRIMARY SERVICE DUCTBANK. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
2. PRIMARY HANDHOLE SIZED PER NEC, JCP&L REQUIREMENTS, AND JCP&L INSTALLATION DETAILS. TYPICAL FOR ALL LABELED "H".
3. PAD MOUNTED UTILITY COMPANY TRANSFORMER. PROVIDE PAD PER JCP&L REQUIREMENTS AND INSTALLATION DETAILS. TRANSFORMER FURNISHED WITH INTEGRAL C/T CABINET ENCLOSURE.
4. UNDERGROUND SECONDARY SERVICE TO PANEL SP1. REFER TO DETAILS, ONE LINE DIAGRAM, AND PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
5. THREE (3) 4" CONDUITS WITH DRAG LINES TO HANDHOLE FOR FUTURE CONNECTION TO NEW FERRY TERMINAL BUILDING. HANDHOLE SHALL BE SIZED PER NEC.
6. FENCED ENCLOSURE WITH UNI-STRUT MOUNTED UTILITY METER, TRANSFORMER, PANEL SP1 AND PANEL RPS. REFER TO DETAILS AND ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.
7. VEHICULAR BOLLARD. REFER TO DETAILS (TYPICAL).
8. SECONDARY SERVICE HANDHOLE SIZED PER NEC. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
9. RETROFITTED CATENARY WITH LED LIGHTING FIXTURES.
10. HANDHOLE / GRADE BOX FOR LIGHTING CIRCUITS SIZED PER NEC. LOCATE IN ISLANDS OR TURF AREAS ADJACENT TO CURBS. TYPICAL FOR ALL LABELED "G".
11. HANDHOLE FOR SANITARY PUMP OUT STATION POWER AND FERRY BOAT POWER CIRCUITS SIZED PER NEC. TYPICAL FOR ALL LABELED "HF".
12. PAVILION CANOPY LIGHTING SHALL BE A DEDICATED CIRCUIT. CONTROL SHALL BE PHOTOCELL ON / TIMECLOCK OFF. MOUNT PHOTOCELL ON NORTH SIDE OF ROOF AND COORDINATE TIME SCHEDULE WITH THE OWNER.
13. 277V PHOTOCELL CONTROLLED FLAGPOLE LIGHTING FIXTURE AT TOP OF EACH FLAGPOLE. REFER TO LIGHTING PLANS FOR FLAGPOLE AND FIXTURE SPECIFICATIONS. TYPICAL.
14. DUPLEX GFCI RECEPTACLE MOUNTED HIGH ON POLE WITH LOCKING CAST ALUMINUM IN-USE COVER.
15. PUMP STATION NO.1: DUPLEX SANITARY GRINDER STATION POWER. COORDINATE INSTALLATION REQUIREMENTS WITH SITE CONTRACTOR AND SHOP DRAWINGS.
16. CONDUIT AND FEEDERS TO POWER DISTRIBUTION UNIT. REFER TO PANEL SL1 SCHEDULE FOR CONDUIT AND FEEDER SIZE.
17. DUPLEX SANITARY PUMP OUT STATION POWER. COORDINATE INSTALLATION REQUIREMENTS WITH SITE CONTRACTOR AND SHOP DRAWINGS.
18. POWER DISTRIBUTION UNIT WITH INTEGRAL TRANSFORMER AND PANELBOARD. PAD MOUNT ON PAVED AREA ABOVE SIDEWALK. REFER TO ONE LINE DIAGRAM, DETAILS, AND PANEL RPS SCHEDULE FOR ADDITIONAL INFORMATION.
19. SEE PANEL SCHEDULE FOR CONDUIT AND FEEDER SIZES.
20. IN ADDITION TO LIGHTING CONDUITS, PROVIDE ONE (1) 2" SPARE CONDUIT WITH DRAG LINE ALONG LENGTH OF RUN FROM PANEL SL1 TO THE PAVILION AREA FOR FUTURE EXTENTION.
21. 277V PHOTOCELL CONTROLLED GRADE MOUNTED FLOOD LIGHTING FOR SIGNAGE AND PILLARS. REFER TO LIGHTING PLANS AND DETAILS FOR ADDITIONAL INFORMATION.
22. TWO (2) 4" EMPTY CONDUITS WITH DRAG LINES FROM PANEL SL1 TO HANDHOLE IN PARKING ISLAND GRASS AREA FOR FUTURE ELECTRIC VEHICLE CHARGING STATIONS.

SHEET NOTES

1. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES WITH THE CIVIL SITE PLANS PRIOR TO COMMENCING HIS WORK AND CONTACT "CALL BEFORE YOU DIG". CALL NEW JERSEY ONE CALL AT 811 OR 800-272-1000.
2. CONTRACTOR SHALL COORDINATE THE NEW ELECTRIC SERVICE WITH MR. CHRISTOPHER GUNTHER AT JCP&L - (732) 456-8925; EMAIL CGUNTHER@FIRSTENERGYCORP.COM. DR # IS PENDING.
3.. REFER TO DETAIL SHEETS, PANEL SCHEDULES, AND ONE LINE DIAGRAM FOR ALL CONDUIT AND FEEDER SIZES AND ADDITIONAL INFORMATION.
4. SITE LIGHTING FIXTURES SHOWN ARE SPECIFIED ON THE CIVIL ENGINEERING DRAWINGS. FIXTURES ARE SHOWN ON THIS DRAWING FOR CIRCUITING ONLY. REFER TO LIGHTING DRAWINGS FOR FIXTURE SPECIFICATIONS AND POLE BASE DETAILS. SITE LIGHTING FIXTURES ARE FURNISHED WITH INTEGRAL PHOTOCELLS FOR DUSK TO DAWN OPERATION UNLESS NOTED OTHERWISE.

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
701030P	132	3" RIGID NONMETALLIC CONDUIT	25	LF
701033P	133	4" RIGID NONMETALLIC CONDUIT	3,885	LF
701195P	134	MULTIPLE LIGHTING WIRE, NO. 2 AWG	9,000	LF
701196P	135	MULTIPLE LIGHTING WIRE, NO. 4 AWG	3,350	LF
701198P	136	MULTIPLE LIGHTING WIRE, NO. 6 AWG	2,350	LF
701201P	137	MULTIPLE LIGHTING WIRE, NO. 8 AWG	200	LF
701208P	138	SERVICE WIRE, NO. 3/0 AWG	100	LF
701NS1P	139	1 1/2" RIGID NONMETALLIC CONDUIT	7,080	LF
701NS2P	140	MULTIPLE LIGHTING WIRE, NO. 3 AWG	8,500	LF
701NS3P	141	ELECTRIC SERVICE, TRANSFORMER AND METER PACKAGE	1	LS
701NS6P	144	ELECTRICAL HANDHOLE	8	UN
701NS7M	145	ELECTRIC SERVICE ALLOWANCE	1	DOLL
701NS8M	146	FIBER OPTIC AND CABLE SERVICE ALLOWANCE	1	DOLL

ELECTRIC SITE UTILITIES PLAN

SCALE: 1" = 60'-0"

No.	Date	Revision	Revised By	Checked By

60 0 60 120
SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

AMIN H. GOMAA, P.E.
PROFESSIONAL ENGINEER, N.J. LIC. No. 48421

ELECTRICAL SITE UTILITIES PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

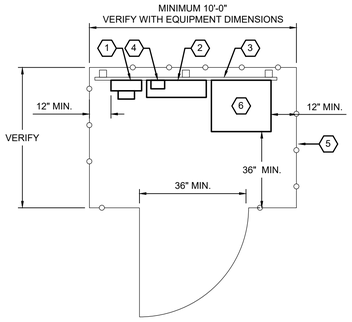
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	AMP	1" = 60'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
AMP	AHG	-----	33 of 70

Plotted by: Suzanne C. Sterman 10/7/2021
O:\CAD\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749.003-E2.0.dwg 33 Electrical Site Utilities Plan

ELECTRICAL GENERAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND DEFINE THE INTENT OF THE WORK. LOCATIONS OF EQUIPMENT, FIXTURES, DEVICES, PANELBOARDS, DUCTS, PIPING, DIFFUSERS, PARTITIONS, OPENINGS, ETC. ARE APPROXIMATE AND ARE SUBJECT TO MODIFICATIONS CAUSED BY STRUCTURAL CONDITIONS AND EQUIPMENT PROVIDED BY OTHER CONTRACTORS, SUBCONTRACTORS OR THE OWNER. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES. DETERMINE ROUGHING LOCATIONS FROM APPROVED SHOP DRAWINGS. MINOR MODIFICATIONS OF LOCATIONS REQUIRED TO EFFECT SUCH COORDINATION SHALL BE MADE AT NO COST TO THE OWNER.
2. THE DRAWINGS HAVE BEEN PRODUCED ENTIRELY ON FPA CADD SYSTEM. ANY OTHER LETTERING, LINES OR SYMBOLS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF FPA AND ARE INVALID.
3. REPRODUCTION OF ANY PORTION OF THE CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
4. SPECIFICATIONS MAY REQUIRE WORK, EQUIPMENT, SYSTEMS, METHODS, ETC. THAT IS NOT INDICATED ON THE DRAWINGS.
5. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLEMENTARY TO EACH OTHER. WHERE DISCREPANCIES OR CONFLICTS OCCUR, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY METHOD IN HIS PROPOSAL UNLESS CLARIFIED BY BULLETIN OR ADDENDUM ACKNOWLEDGED PRIOR TO RECEIPT OF BIDS.
6. DRAWINGS SHALL NOT BE SCALED. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND REQUIREMENTS OF THE WORK. ALTHOUGH SIZE AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY INFORMATION AT THE PROJECT SITE.
7. PROJECT CONDITIONS INDICATED ARE BASED ON FIELD OBSERVATION, AND ARE INTENDED TO INDICATE THE SCOPE OF THE WORK AFFECTED BY THIS PROJECT.
8. THE TERM "OTHERS" SHALL BE UNDERSTOOD TO MEAN CONTRACTORS, SUBCONTRACTORS OR TRADESMEN ON THE PROJECT PERFORMING WORK ON THIS PROJECT UNDER SECTIONS OR DIVISIONS OTHER THAN ELECTRICAL WORK.
9. VERIFY THAT FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS INDICATED.
10. PRIOR TO BIDDING VISIT THE PROJECT SITE TO DETERMINE THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. SCHEDULE SITE VISIT WITH OWNER.
11. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE INSTALLATION, RELOCATION AND CONNECTION OF THE ELECTRICAL WORK.
12. ALL MATERIAL SHALL BE UNDERWRITERS' LABORATORIES LISTED FOR ITS APPLICATION WHERE SUCH LISTING IS APPLICABLE.
13. ALL EQUIPMENT SHALL BE AS INDICATED OR AS APPROVED BY THE ENGINEER.
14. SUBMIT SHOP DRAWINGS, PRODUCT DATA SHEETS AND WIRING DIAGRAMS FOR ALL ELECTRICAL CONSTRUCTION MATERIALS, DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.
15. OBTAIN SHOP DRAWINGS AND WIRING DIAGRAMS FROM OWNER AND OTHER CONTRACTORS FOR THE PROPER INSTALLATION OF RELATED ELECTRICAL WORK AND, UNLESS OTHERWISE NOTED, WIRE ALL CONTROL DEVICES, VALVES, THERMOSTATS, ETC. REQUIRED FOR THE PROPER OPERATION OF THEIR SYSTEMS.
16. OBTAIN ALL PERMITS REQUIRED, HAVE THE WORK INSPECTED FOR CODE COMPLIANCE AND PAY ALL FEES FOR INSPECTION AND CERTIFICATION.
17. PROVIDE ADEQUATE TEMPORARY ELECTRICAL LIGHT AND POWER FOR THE PROJECT WORK OF ALL TRADES.
18. EXACT LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD.
19. REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR EQUIPMENT LOCATIONS AND CONTROLS.
20. GROUNDING AND BONDING SHALL MEET NEC AND EQUIPMENT / SYSTEM MANUFACTURER'S REQUIREMENTS.
21. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF DEBRIS GENERATED BY HIS WORK AND WORKERS AT THE END OF EACH WORKING DAY AND FOR GENERAL GOOD HOUSEKEEPING BY HIS WORKERS. CONTRACTOR SHALL PROVIDE REQUIRED REFUSE CONTAINERS.
22. ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLTS INSULATION IN METAL RACEWAY WITH APPROVED FITTINGS UNLESS OTHERWISE INDICATED.
23. FEEDERS AND BRANCH CIRCUITS UNDERGROUND IN RACEWAY: TYPE THHN-THWN 90 DEGREE C
24. FEEDERS SHALL BE MINIMUM #8 AWG; BRANCH CIRCUIT WIRING MINIMUM #12 AWG; CONTROL WIRING MINIMUM #14 AWG; UNLESS OTHERWISE INDICATED. FEEDER AND BRANCH CIRCUIT WIRING LARGER THAN #10 AWG SHALL BE STRANDED CONDUCTOR; #10 AWG AND SMALLER, STRANDED CONDUCTOR OR SOLID CONDUCTOR; CONTROL WIRING, STRANDED CONDUCTOR.
25. TAPS AND SPLICES FOR BRANCH CIRCUITS AND FEEDERS SHALL BE MADE WITH AN INSULATED TERMINAL BY ILSCO, OR APPROVED EQUAL.
26. BRANCH CIRCUIT AND FEEDER TAPS SHALL BE FULL CIRCUIT SIZE UP TO THEIR OVERCURRENT PROTECTION DEVICE.
27. STRANDED WIRING CONDUCTORS SHALL BE MADE UP TO SCREW TERMINALS WITH 3M, T&B OR PANDUIT LOCKING FORK CRIMP TERMINALS WITH NYLON INSULATED GRIPS.
28. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL 120V CONTROL POWER WIRING FEEDERS AND CIRCUIT BREAKERS REQUIRED FOR THE INSTALLATION OF SITE EQUIPMENT.
29. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION AND INSTALLATION DETAILS AND VERIFY ALL MANUFACTURER'S REQUESTS PRIOR TO ANY SUBMISSION FOR CONSIDERATION BY THE ENGINEER OR OWNER.
30. PROVIDE SEISMIC RESTRAINTS AND ANCHORS FOR EQUIPMENT, FIXTURES, RACEWAY, ETC. AS REQUIRED BY INTERNATIONAL BUILDING CODE CHAPTER 16 - STRUCTURAL DESIGN AND CHAPTER 17 - STRUCTURAL TESTING AND INSPECTIONS AND AS SPECIFIED IN SPECIFICATION SECTION "SEISMIC CONTROLS".
31. TEST ALL PANELBOARDS, CABLES, SWITCHES, CIRCUIT BREAKERS, GROUNDING SYSTEM, GROUND FAULT PROTECTION SYSTEM, SURGE ARRESTORS, AND TVSS DEVICES IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CURRENT EDITION OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION ACCEPTANCE TESTING SPECIFICATIONS FOR ELECTRIC POWER DISTRIBUTION EQUIPMENT AND SYSTEMS (NETA ATS). PERFORM EACH VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST LISTED.
32. PROVIDE TWO SETS OF OPERATION AND MAINTENANCE MANUALS, BOUND AND INDEXED, WITH INSTRUCTIONS FOR ALL ELECTRICAL DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.
33. PROVIDE ONE SET OF REPRODUCIBLE CONTRACT DRAWINGS, OR DIGITAL DATA FILES USING SAME SOFTWARE PROGRAM, VERSION, AND OPERATING SYSTEM AS CONTRACT DOCUMENTS, THAT HAVE BEEN REVISED AND ANNOTATED TO REFLECT THE AS-BUILT CONDITIONS OF THE PROJECT.
34. DELIVER CERTIFICATES OF ELECTRICAL AND OTHER INSPECTIONS, OR COPIES THEREOF, TO THE OWNER AT THE COMPLETION OF THE PROJECT WITH COPIES TO THE ENGINEER.
35. GUARANTEE ALL WORK IN WRITING TO THE OWNER AGAINST ANY AND ALL DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF TWO YEARS FROM DATE OF ACCEPTANCE AND PERFORM ALL CORRECTIVE WORK AT NO COST TO THE OWNER.
36. A CONTRACTOR MAKING A BID FOR WORK ON THIS PROJECT IS MADE AWARE BY THIS NOTE THAT IT IS THE INTENT OF THE OWNER TO HAVE A COMPLETELY INSTALLED JOB. THE CONTRACTOR MAKING A BID FOR THIS WORK WARRANTS THAT HE WILL COMPLETE AND WIRE, PROVIDING ALL NECESSARY ELECTRICAL WORK FOR EQUIPMENT SHOWN AND / OR DETAILED ON ANY PROJECT DRAWINGS OR SPECIFICATIONS AND NOT JUST THOSE COMMONLY REFERRED TO AS A SINGLE TRADE DRAWING UNLESS SPECIFICALLY IDENTIFIED ELSEWHERE AS WORK OF OTHER TRADES. WHERE EQUIPMENT REQUIRING WIRING IS SPECIFIED OR SHOWN ON DRAWINGS OTHER THAN ELECTRICAL DRAWINGS, OR INDICATED, OR IMPLIED, SUCH AS ON SHOP DRAWINGS SUBMITTED LATER, THE CONTRACTOR CAN AND SHALL REQUEST DIRECTION REGARDING CIRCUIT SIZING PROTECTION AND ROUTING WHERE NECESSARY BUT SHALL UNDERSTAND ALL NECESSARY WORK TO COMPLETE THE INSTALLATION SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER OR PROJECT.
37. ALL NEW CONSTRUCTION SHOWN ON THE DRAWINGS AND CONTAINED IN THE SPECIFICATIONS (UNLESS OTHERWISE NOTED AS "NOT IN CONTRACT" OR "N.I.C.") IS THE RESPONSIBILITY OF THE SINGLE PRIME GENERAL CONTRACTOR. REFERENCES TO SPECIFIC TRADE SUBCONTRACTORS ARE PROVIDED TO ASSIST THE SINGLE PRIME GENERAL CONTRACTOR IN THE DELINEATION OF SUBCONTRACTOR WORK. THE SINGLE PRIME GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DELINEATION OF ITS SUBCONTRACTORS' WORK AND THEREFORE SHALL NOT RELY ON SPECIFIC TRADE REFERENCES SHOWN ON THE CONTRACT DOCUMENTS.
38. CONTRACTOR SHALL PROVIDE FIELD MARKINGS ON ELECTRICAL SERVICE EQUIPMENT TO INCLUDE THE AVAILABLE SHORT CIRCUIT RATING FROM THE UTILITY PER NEC 110.24.
39. CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY CONFLICT DISCOVERED BEFORE PERFORMING ANY WORK RELATED TO SUCH CONFLICT.

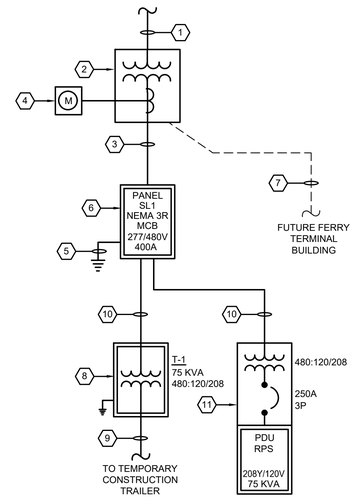


UTILITY SERVICE AREA PLAN

NOT TO SCALE

SERVICE AREA PLAN KEY NOTES

1. 200A NEMA 3R UTILITY COMPANY METER PAN. METER FURNISHED AND INSTALLED BY UTILITY COMPANY.
2. NEW NEMA 3R, 480/277V, 3 PHASE, SITE LIGHTING PANELBOARD SL1. REFER TO PANEL SCHEDULE. PROVIDE TRANSIENT VOLTAGE SURGE ARRESTOR (TVSS) INTEGRAL TO PANELBOARD.
3. UNI-STRUT MOUNTING. SEE DETAIL THIS SHEET.
4. TIMECLOCK FOR PAVILION LIGHTING CONTROL IN NEMA 3R ENCLOSURE.
5. CHAIN LINK FENCE ENCLOSURE TO ACCOMMODATE ELECTRICAL EQUIPMENT WITH 2" GRAVEL AND WEED SCREEN WITHIN ENTIRE FENCE ENCLOSURE AREA.
6. 75 KVA NEMA 3R PAD MOUNTED DRY TYPE TRANSFORMER WITH WEATHERSHIELD.



ONE LINE DIAGRAM

SCALE: NONE

ONE LINE DIAGRAM KEY NOTES

1. UNDERGROUND PRIMARY CIRCUIT. REFER TO DUCTBANK DETAILS FOR ADDITIONAL INFORMATION.
2. UTILITY COMPANY TRANSFORMER. COORDINATE WITH MR. CHRIS GUNTHER AT JCP&L COMPANY, (732) 546-8925. DESIGN REQUEST # IS PENDING.
3. NEW UNDERGROUND SECONDARY SERVICE DUCTBANK WITH 4#3/0 IN 3" SCHEDULE 80 PVC CONDUIT. REFER TO DUCTBANK DETAILS.
4. UNI-STRUT MOUNTED UTILITY COMPANY METER. REFER TO DETAILS FOR ADDITIONAL INFORMATION.
5. #4 AWG TO DRIVEN GROUND ROD.
6. UNI-STRUT MOUNTED PANEL. SEE DETAIL AND PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
7. THREE (3) 4" EMPTY CONDUITS WITH DRAG LINES FROM TRANSFORMER SECONDARY SECTION TO HANDHOLE FOR FUTURE SECONDARY SERVICE CONNECTION AT NEW FERRY TERMINAL BUILDING.
8. PAD MOUNTED 75 KVA NEMA 3R TRANSFORMER WITHIN FENCED IN AREA.
9. 4#600 KCMIL & 1#3 G IN 4" CONDUIT.
10. REFER TO PANEL SCHEDULES.
11. NEMA 3R PAD MOUNTED POWER DISTRIBUTION UNIT (PDU). UL891 SERVICE PEDESTAL. ENCLOSURE TO BE FABRICATED FROM A MINIMUM OF 14 GAUGE STEEL, STAINLESS STEEL TAMPERPROOF HINGES,3 POINT LATCH, AND OPEN BOTTOM DESIGN. ENCLOSURE COLOR TO MATCH CUSTOMER SPECIFIC CUSTOM COLOR SWATCH AND ADHERE TO THE MAXIMUM HEIGHT OF 54 INCHES. TRANSFORMER PRIMARY DISCONNECT TO HAVE A 400A LSI ELECTRONIC TRIP UNIT RATED AT 65 KAIC. TRANSFORMER COIL TO BE COPPER. SEE SCHEDULE FOR BRANCH CIRCUIT DISTRIBUTION.

   BASIS OF DESIGN PRODUCT: LAKESHORE ELECTRIC. CONTACT ANDY TOPINKA AT ANDY@TGS-INC.COM OR 201-988-3493.

POWER DEVICE LEGEND

SYMBOLS	DESCRIPTION
	SURFACE MOUNTED PANELBOARD, POWER AND LIGHTING
H	ELECTRIC HANDHOLE SIZED PER NEC AND UTILITY COMPANY STANDARDS
G	ELECTRIC GRADE BOX
J	JUNCTION BOX - WALL MOUNTED
J	JUNCTION BOX - CEILING MOUNTED
	WEATHERPROOF DUPLEX GFCI RECEPTACLE IN CAST ALUMINUM "IN-USE" COVER UNLESS NOTED OTHERWISE.
M	MOTOR
X/Y/Z	DISCONNECT SWITCH. "X" INDICATES SWITCH SIZE, "Y" INDICATES NUMBER OF POLES, "Z" INDICATES FUSE SIZE (NF = NON-FUSED).
X/Y/Z	COMBINATION MAGNETIC MOTOR STARTER AND DISCONNECT SWITCH. "X" INDICATES SWITCH SIZE, "Y" INDICATES NUMBER OF POLES, "Z" INDICATES FUSE SIZE (NF = NON-FUSED).
SM	MOTOR RATED DISCONNECT SWITCH.
SW	LIGHTING FIXTURE TYPE: REFER TO LIGHTING PLANS FOR FIXTURE SPECIFICATIONS.
CCTV X	CCTV CAMERA. "X" INDICATES TYPE OF CAMERA. REFER TO LEGEND ON CCTV SITE PLAN.

ABBREVIATIONS

A	AMPERE	GND, G	GROUND
AFF	ABOVE FINISHED FLOOR	IC	INTERRUPTING CAPACITY
AFG	ABOVE FINISHED GRADE	IG	ISOLATED GROUND
C	CONDUIT(S)	I/L	INTERLOCKED
CB	CIRCUIT BREAKER	MC	MECHANICAL CONTRACTOR
CH	COUNTER HEIGHT	MOD	MOTOR OPERATED DAMPER
CO	CONDUIT ONLY	NIC	NOT IN CONTRACT
CT	CURRENT TRANSFORMER	NL	NIGHT LIGHT
CU	COPPER	NTS	NOT TO SCALE
EC	ELECTRICAL CONTRACTOR	RGS	RIGID GALVANIZED STEEL
EG	EQUIPMENT GROUND	SPD	SURGE PROTECTIVE DEVICE
EM	EMERGENCY	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
EMT	ELECTRICAL METALLIC TUBING	T/C	TIME CLOCK
EWC	ELECTRIC WATER COOLER	UON	UNLESS OTHERWISE NOTED
FA	FIRE ALARM	V	VOLTS
FBO	FURNISHED BY OTHERS	W	WALL MOUNTED
GFI	GROUND FAULT INTERRUPTER	WP	WEATHERPROOF

SYMBOL LIST NOTES

1. SYMBOLS ARE INDICATED FOR GENERAL REFERENCE ONLY. THE PRESENCE OF A SYMBOL DOES NOT INDICATE ITS USE ON THIS PROJECT. REFER TO PLAN DRAWINGS FOR SPECIFIC SYMBOLS USED.

APPLICABLE CODES:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:

- NEW JERSEY UNIFORM CONSTRUCTION CODE (NJUCC)
- 2018 INTERNATIONAL BUILDING CODE - NJ EDITION
- 2017 NATIONAL ELECTRICAL CODE
- 2016 ASHRAE 90.1 ENERGY CONSERVATION CODE
- 2016 NFPA 13
- REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION

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FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

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AMIN H. GOMAA, P.E.
PROFESSIONAL ENGINEER, N.J. LIC. No. 48421

ELECTRICAL NOTES & SYMBOLS

FOR

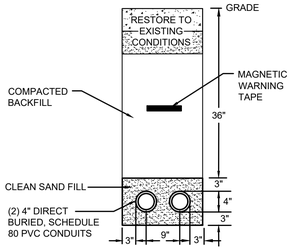
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

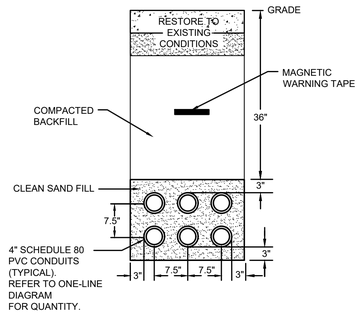
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	AMP	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
AMP	AHG	----	34 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\JOB\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749.003-E1.0.dwg 34 Electrical Notes & Symbols



PRIMARY SERVICE DUCTBANK DETAIL

NOT TO SCALE



SECONDARY SERVICE DUCTBANK DETAIL

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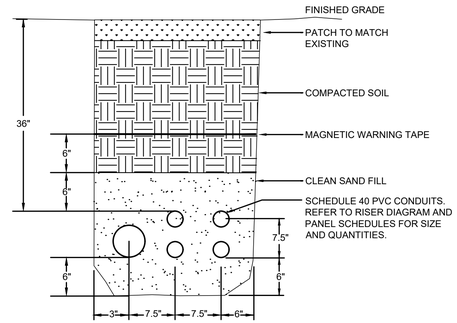
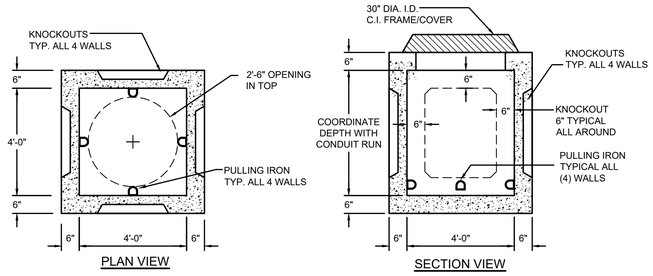


TYPICAL DIRECT BURIED CONDUIT DETAIL

NOT TO SCALE

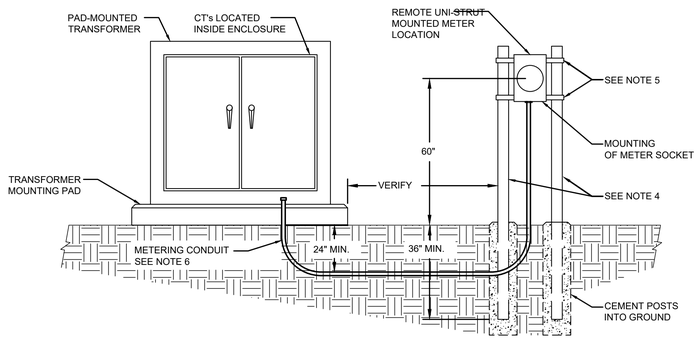


NOTES:

1. CONCRETE: 4000 PSI IN 28 DAYS, JOINTS SEALED WITH BUTYL ROPE FORM AND MORTAR.
2. REINFORCING: WALLS, BASE, AND TOP: # 4 REBAR, 8" C/C, E/W BEHIND KNOCKOUTS: 6X6, 10/10 WIRE MESH
3. REBAR: GRADE 60

ELECTRIC HANDHOLE DETAIL

NOT TO SCALE

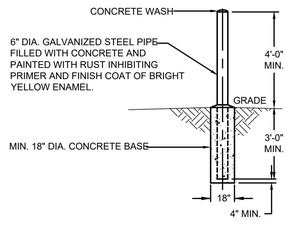


PAD-MOUNTED TRANSFORMER/METER DETAIL

NOT TO SCALE

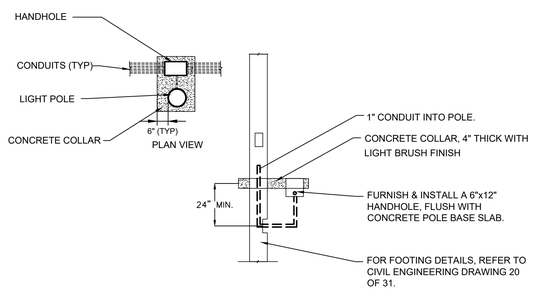
NOTES:

1. CONSULT UTILITY COMPANY FOR TRENCH TERMINATION POINT AND LENGTH OF ADDITIONAL CABLE TO BE PROVIDED FOR FINAL CONNECTION BY UTILITY COMPANY.
2. WHERE METER IS EXPOSED TO VEHICLE TRAFFIC, CONTRACTOR SHALL INSTALL PROTECTIVE BUMPER POSTS 36" FROM METER. POSTS SHALL BE 6" RIGID GALVANIZED STEEL PIPE FILLED WITH CONCRETE, AND SHALL BE PAINTED BRIGHT YELLOW.
3. ALL DIMENSIONS NOT DEFINED ARE VARIABLE TO ACCOMMODATE METERING APPARATUS.
4. SUPPORT POSTS - USE ANY OF THE FOLLOWING:
   a. (2) - 3" STEEL PIPE CAPPED AND CEMENTED IN GROUND.
   b. (2) - 4" PVC SCHEDULE 80 PIPE CEMENT FILLED AND CEMENTED IN GROUND.
   c. (2) - 3" CHANNEL IRON CEMENTED IN GROUND.
5. MOUNTING HARDWARE - (2) - 12 GAUGE 1-5/8"X 1-5/8" CONTINUOUS SLOT HOT DIPPED GALVANIZED CHANNEL (e.g. UNI-STRUT) COMPLETE WITH 1-1/4" X 5/16 DIA. 13 THD SPRING NUT (2 PER CHANNEL), 5/16 HEX NUT, AND LOCK WASHER, SECURELY MOUNTED TO SUPPORT POSTS.
6. METERING CONDUIT - USE 1-1/2" MIN. GALVANIZED RIGID METALLIC CONDUIT WITH ALL THREADED JOINTS AND INSULATED BONDING BUSHINGS ON BOTH ENDS. CONDUIT SHALL BE GROUNDED AT THE TRANSFORMER.
7. CONTRACTOR MAY BE REQUIRED TO PROVIDE A TELEPHONE LINK TO THE METER SOCKET LOCATION. CONTACT THE REGIONAL UTILITY METER DEPARTMENT FOR REQUIREMENTS.



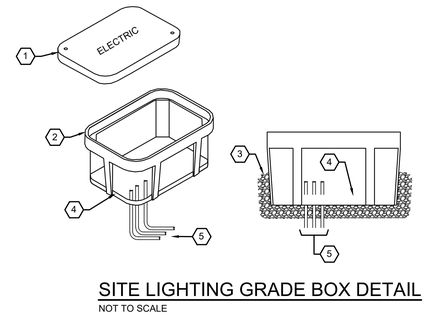
BOLLARD/BUMPER DETAIL

NOT TO SCALE



TYPICAL LIGHT POLE ELEVATION

NOT TO SCALE

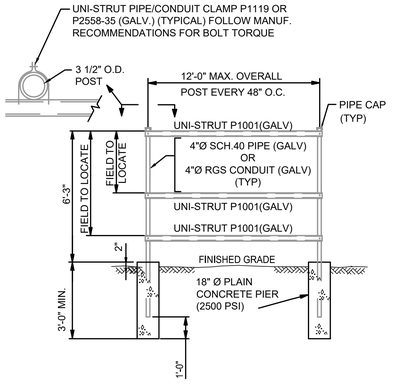


SITE LIGHTING GRADE BOX DETAIL

NOT TO SCALE

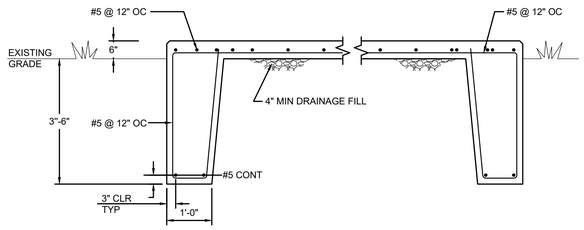
GRADE BOX DETAIL KEY NOTES

1. RECESSED QUAZITE PULLBOX, SIZED PER NEC, WITH GASKETED BOLT-ON COVER. COVER TO BE LABELED "ELECTRIC". WHERE INSTALLED IN PAVED AREAS, BOX SHALL BE VEHICULAR RATED.
2. TOP OF PULLBOX TO BE FLUSH WITH GRADE OR PAVED SURFACE.
3. MINIMUM 4" OF GRAVEL ON SIDES AND BOTTOM OF PULLBOX.
4. PROVIDE OPEN BOTTOM PULLBOX.
5. CONDUITS TO BE STUBBED UP INTO BOX. PROVIDE CAP FOR SPARE CONDUITS. REFER TO THE FLOOR PLANS, ONE-LINE DIAGRAM, AND PANEL SCHEDULES FOR QTY AND SIZE OF CONDUITS .



UNI-STRUT DETAIL

NOT TO SCALE



CONCRETE HOUSEKEEPING PAD ON GRADE

NOT TO SCALE

NOTES:

1. GENERAL: ALL MATERIALS SHALL BE IN CONFORMITY WITH "ACI (AMERICAN CONCRETE INSTITUTE) CODE REQUIREMENTS FOR REINFORCING CONCRETE"; LATEST EDITION.
   * PORTLAND CEMENT: APPROVED BRAND ASTM SPECIFICATIONS C-150 TYPE 1 TO BE 3500 PSI AT 28 DAYS
   * REINFORCING BARS TO BE ASTM A-615
   * COARSE AGGREGATE: HARD DURABLE, CLEAN UNCOATED CRUSH STONE OE GRAVEL ASTM SPECIFICATION C-33
   * SAND: CLEAN, HARD, DURABLE, UNCOATED GRAINS FREE FROM SILT, LOAM, CLAY OR BETTER DELETERIOUS SUBSTANCES. ASTM SPECIFICATION C-33
2. PAD DIMENSIONS SHALL BE SIZED ACCORDING TO EQUIPMENT MANUFACTURER'S REQUIREMENTS AND EXTEND A MINIMUM OF 6" ON ALL SIDES OF EQUIPMENT.

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

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ELECTRICAL DETAILS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

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MIDDLESEX COUNTY NEW JERSEY

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Plotted by: Suzanne C. Steeman 10/7/2021
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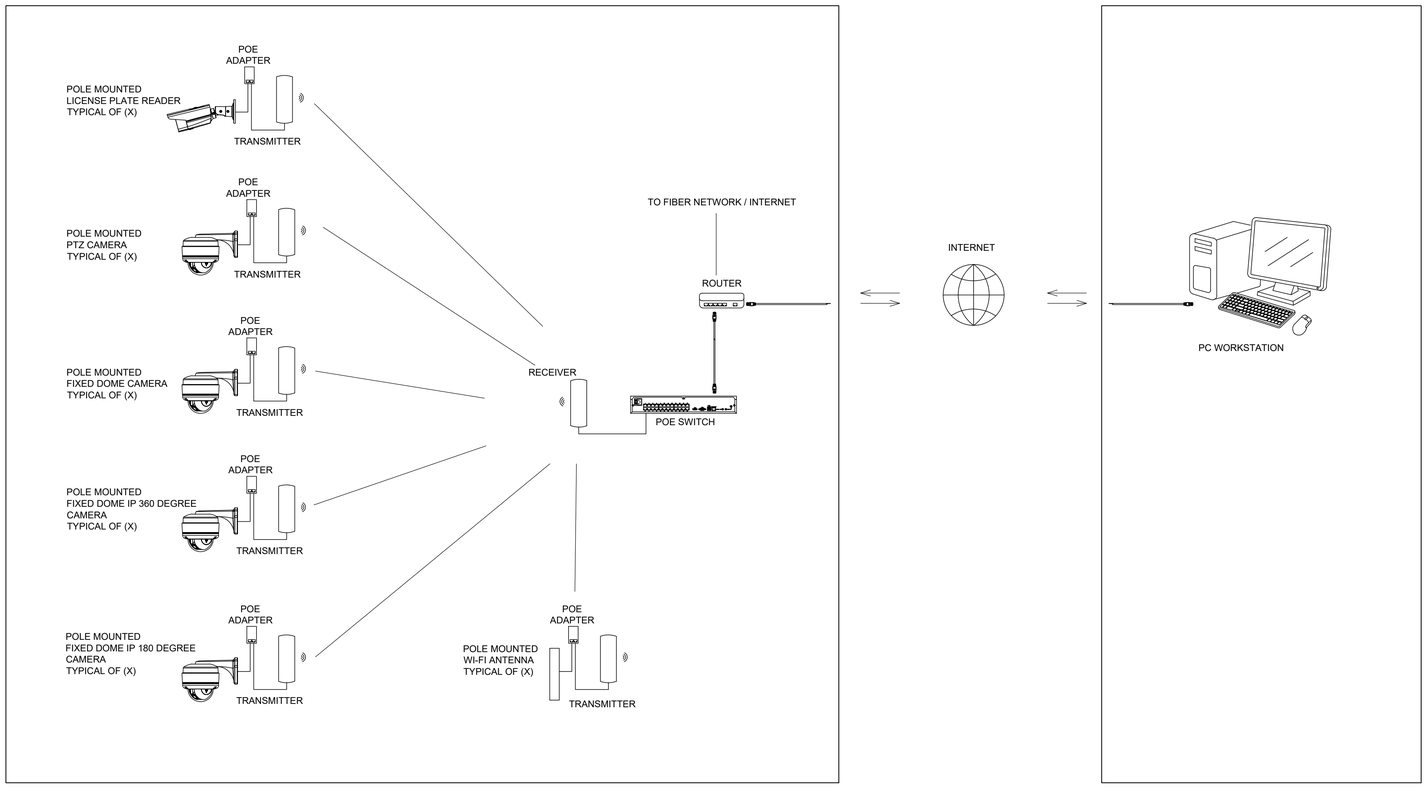

SECURITY AND WIFI SYSTEM DETAIL

NOT TO SCALE

SITE PANEL "SL1" (NEW) — JOB NO. 13749.004 — LOCATION: UNI-STRUT AT GRADE

JOB NAME: SOUTH AMBOY FERRY
RATING: 480/277V, 3 PH, 4W, 400A

CKT. NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT. NO.
1	SITE LIGHTING & FLAGPOLES	1	2.8	20	2#3 & 1#3 EG IN 1 1/2"C	22.8					20.0		POWER TO CONSTRUCTION	2
3	SITE LIGHTING	1	3.1	20	2#2 & 1#2 EG IN 1 1/2"C		23.1		4#1 & 1#8EG IN 2"C	125	20.0	3	TRAILER VIA TEMP 75 KVA	4
5	SITE LIGHTING	1	2.3	20	2#4 & 1#4 EG IN 1 1/2"C			22.3			20.0		TRANSFORMER	6
7	SITE LIGHTING	1	3.0	20	2#2 & 1#2 EG IN 1 1/2"C	22.3					19.3			8
9	SITE LIGHTING	1	1.7	20	2#3 & 1#3 EG IN 1 1/2"C		20.0		4#1 & 1#8EG IN 2"C	125	18.3	3	POWER DISTRIBUTION UNIT (PANEL RPS) - NOTE #5	10
11	SITE LIGHTING CATENARYS	1	0.3	20	2#6 & 1#6 EG IN 1"C			18.3			18.0			12
13	PAVILION CANOPY LIGHTING	1	0.6	20	2#2 & 1#2 EG IN 1 1/2"C	3.3					2.7			14
15	SPARE	1		20			2.7		4#12 & 1#12EG IN 3/4"C	15	2.7	3	DUPLEX GRINDER PUMPS (4 HP EACH)	16
17	SPARE	1		20				2.7			2.7			18
19	SPARE	1		20		0.0						1	SPACE	20
21	SPARE	1		20			0.0					1	SPACE	22
23	SPARE	1		20				0.0				1	SPACE	24
25	SPARE	1		20		0.0						1	SPACE	26
27	SPARE	1		20			0.0					1	SPACE	28
29	SPARE	1		20				0.0				1	SPACE	30
					TOTAL (PHASE):	48.4	45.8	43.3						

PANEL TYPE: NEMA 3R
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 400A
INTERRUPTING RATING: 65KA SYM.
FED FROM: UTILITY COMPANY TRANSFORMER

TOTAL CONNECTED LOAD.:	137.5	KVA
	165.5	AMPS

NOTES
1. PANEL SHALL UL SERVICE ENTRANCE LISTED, AND PROVIDED WITH INTEGRAL SURGE ARRESTOR. MAIN BREAKER SHALL BE ADJUSTABLE TRIP MIRCOLOGIC BREAKER.
2. ALL BUSSING TO BE COPPER WITH BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.
6. PROVIDE ADJUSTABLE TRIP MICROLOGIC CIRCUIT BREAKER.

POWER DISTRIBUTION UNIT PANEL "RPS" (NEW) — JOB NO. 13749.004 — LOCATION: PAD MOUNTED AT GRADE

JOB NAME: SOUTH AMBOY FERRY
RATING: 208/120V, 3 PH, 4W, 400A

CKT. NO.	CIRCUIT DESCRIPTION	POLE	LOAD KVA	BKR.	BRANCH CIRCUIT	A	B	C	BRANCH CIRCUIT	BKR.	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT. NO.
1	PUMP OUT STATION PUMP #1	2	1.4	30	3#10 & 1#10EG IN 3/4"C	9.7			3#3& 1#8EG IN 1 1/4"C	100	8.3	2	DOCK POWER #1	2
3			1.4				9.7				8.3			4
5	PUMP OUT STATION PUMP #2	2	1.4	30	3#10 & 1#10EG IN 3/4"C			9.7	3#3& 1#8EG IN 1 1/4"C	100	8.3	2	DOCK POWER #2	6
7			1.4			9.7					8.3			8
9	ENTRY AREA POLE RECEPT	1	0.4	20	2#6 & 1#6 EG IN 1"C		8.7		3#3& 1#8EG IN 1 1/4"C	100	8.3	2	DOCK POWER #3	10
11	SPARE	1		20				8.3			8.3			12
13	SPARE	1		20		0.0					20	1	SPARE	14
15	SPARE	1		20			0.0				20	1	SPARE	16
17	SPARE	1		20				0.0			20	1	SPARE	18
19	SPARE	1		20		0.0					20	1	SPARE	20
21	SPARE	1		20			0.0				20	1	SPARE	22
23	SPARE	1		20				0.0			20	1	SPARE	24
25	SPARE	1		20		0.0					20	1	SPARE	26
27	SPARE	1		20			0.0				20	1	SPARE	28
29	SPARE	1		20				0.0			20	1	SPARE	30
					TOTAL (PHASE):	19.3	18.3	18.0						

PANEL TYPE: NEMA 3R
MOUNTING: SURFACE
MAIN CIRCUIT BREAKER: 250A
INTERRUPTING RATING: 65KA SYM.
FED FROM: SITE LIGHTING PANEL SL1

TOTAL CONNECTED LOAD.:	55.7	KVA
	154.7	AMPS

NOTES
1. POWER DISTRIBUTION UNIT WITH MAIN CIRCUIT BREAKER, INTEGRAL 75 KVA TRANSFORMER AND 208Y/120V PANELBOARD. REFER TO ONE LINE DIAGRAM.
2. ALL BUSSING TO BE COPPER WITH BOLT ON BREAKERS ONLY
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE.
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

AMIN H. GOMAA, P.E.
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ELECTRICAL DETAILS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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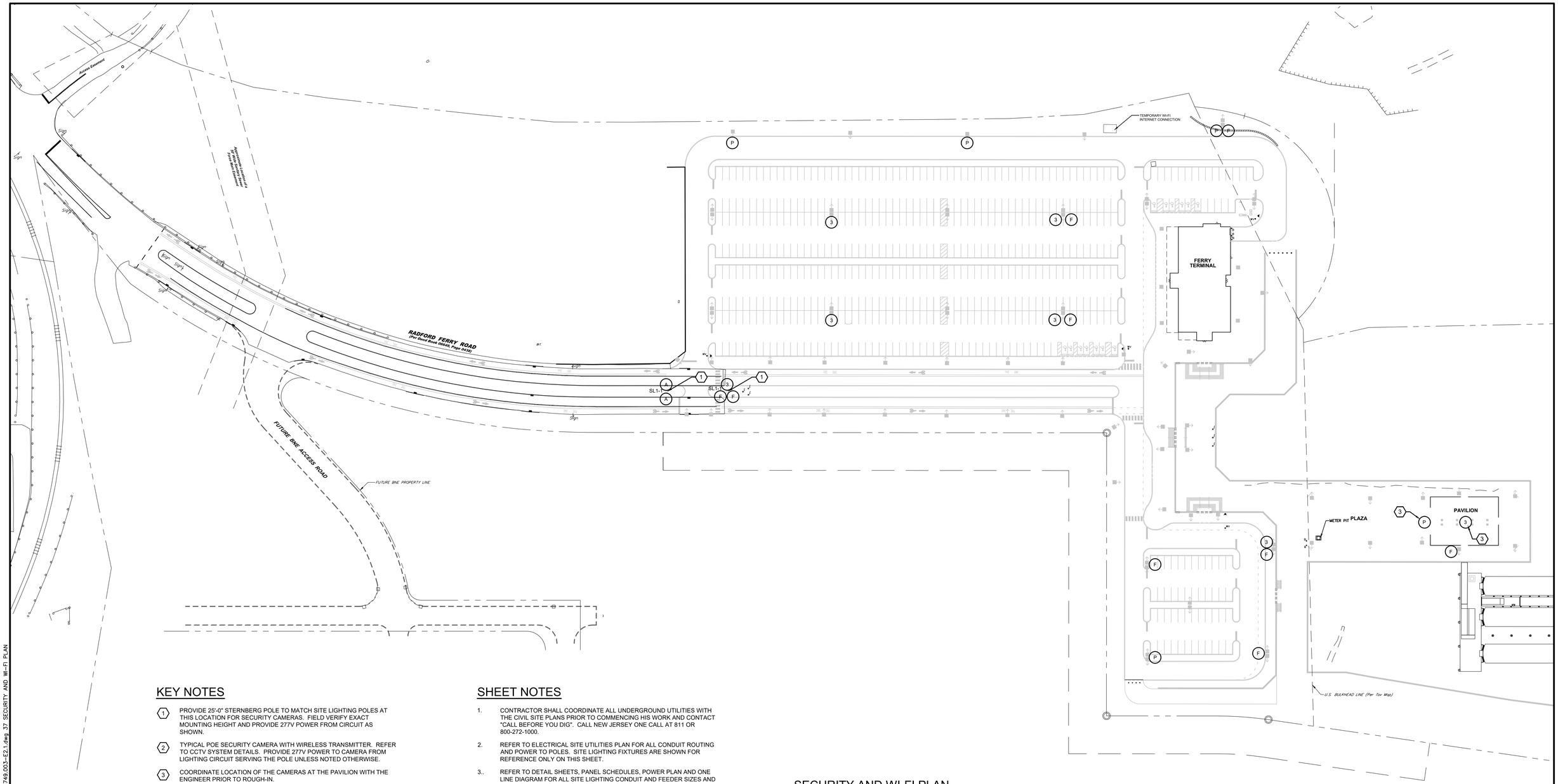

KEY NOTES

1. PROVIDE 25'-0" STERNBERG POLE TO MATCH SITE LIGHTING POLES AT THIS LOCATION FOR SECURITY CAMERAS. FIELD VERIFY EXACT MOUNTING HEIGHT AND PROVIDE 277V POWER FROM CIRCUIT AS SHOWN.
2. TYPICAL POE SECURITY CAMERA WITH WIRELESS TRANSMITTER. REFER TO CCTV SYSTEM DETAILS. PROVIDE 277V POWER TO CAMERA FROM LIGHTING CIRCUIT SERVING THE POLE UNLESS NOTED OTHERWISE.
3. COORDINATE LOCATION OF THE CAMERAS AT THE PAVILION WITH THE ENGINEER PRIOR TO ROUGH-IN.

SHEET NOTES

1. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES WITH THE CIVIL SITE PLANS PRIOR TO COMMENCING HIS WORK AND CONTACT "CALL BEFORE YOU DIG". CALL NEW JERSEY ONE CALL AT 811 OR 800-272-1000.
2. REFER TO ELECTRICAL SITE UTILITIES PLAN FOR ALL CONDUIT ROUTING AND POWER TO POLES. SITE LIGHTING FIXTURES ARE SHOWN FOR REFERENCE ONLY ON THIS SHEET.
3.. REFER TO DETAIL SHEETS, PANEL SCHEDULES, POWER PLAN AND ONE LINE DIAGRAM FOR ALL SITE LIGHTING CONDUIT AND FEEDER SIZES AND ADDITIONAL INFORMATION. CCTV CAMERAS WILL BE POWERED FROM THE SITE LIGHTING FIXTURE, AHEAD OF ALL LIGHTING CONTROLS.
4. CONTRACTOR SHALL VERIFY ALL CAMERA ANGLES WITH OWNER AND CCTV SYSTEM VENDOR PRIOR TO ROUGH IN.

SECURITY AND WI-FI PLAN

SCALE: 1" = 60'-0"

SECURITY CAMERA LEGEND	
A	POLE MOUNTED LICENSE PLATE READER CAMERA
P	POLE MOUNTED PTZ (PAN, TILT, ZOOM) CAMERA
F	POLE MOUNTED FIXED CAMERA
1	POLE MOUNTED DOME IP 180 DEGREE CAMERA
3	POLE MOUNTED DOME IP 360 DEGREE CAMERA

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
704NS1P	152	SITE SECURITY SYSTEM	1	LS

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Corporate Office:
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SECURITY AND WI-FI PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

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MIDDLESEX COUNTY NEW JERSEY

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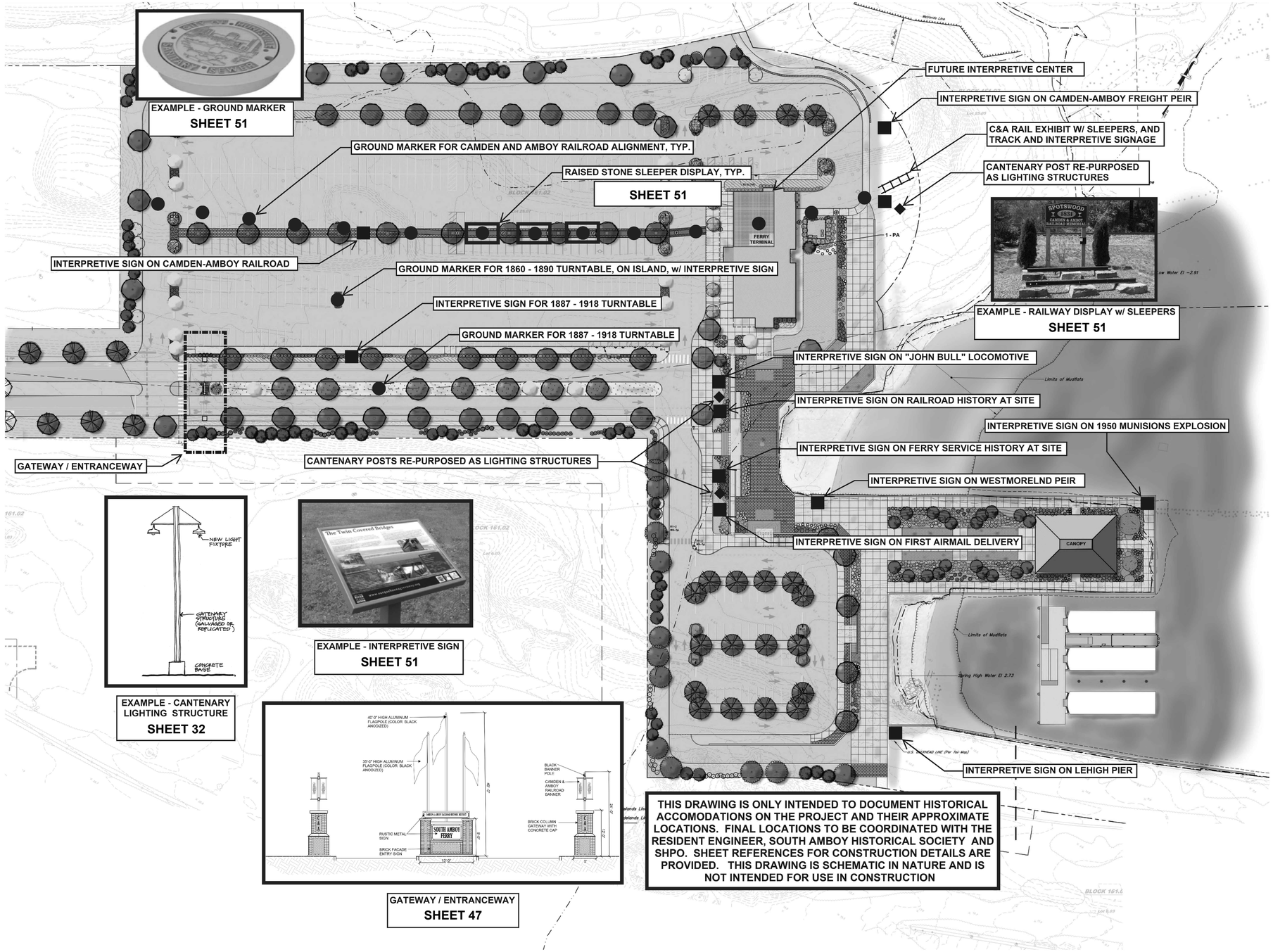
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
AMP / MJB	AHG	-----	37 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\CAD\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749.003-E2.1.dwg 37 SECURITY AND WI-FI PLAN



THIS DRAWING IS ONLY INTENDED TO DOCUMENT HISTORICAL ACCOMODATIONS ON THE PROJECT AND THEIR APPROXIMATE LOCATIONS. FINAL LOCATIONS TO BE COORDINATED WITH THE RESIDENT ENGINEER, SOUTH AMBOY HISTORICAL SOCIETY AND SHPO. SHEET REFERENCES FOR CONSTRUCTION DETAILS ARE PROVIDED. THIS DRAWING IS SCHEMATIC IN NATURE AND IS NOT INTENDED FOR USE IN CONSTRUCTION

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
620NS1P	103	ENTRANCE SIGN & PILLERS	1	LS
625NS1P	104	RAILROAD TRACK INTERPRETIVE DISPLAY	1	LS
625NS2P	105	RAISED STONE SLEEPER DISPLAY	3	UN
625NS3P	106	CANTENARY LIGHTING STRUCTURE	3	UN
630NS1P	107	INTERPRETIVE EXHIBIT PANEL	12	UN
630NS2P	108	GROUND MARKERS, HISTORICAL	17	UN

No.	Date	Revision	Revised By	Checked By

40 0 40 80
SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

HISTORICAL ACCOMMODATIONS

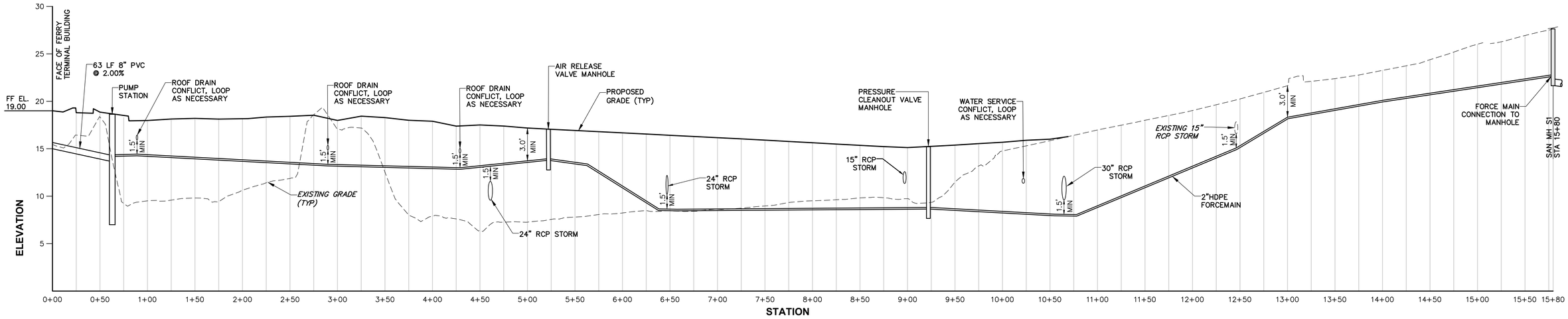
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

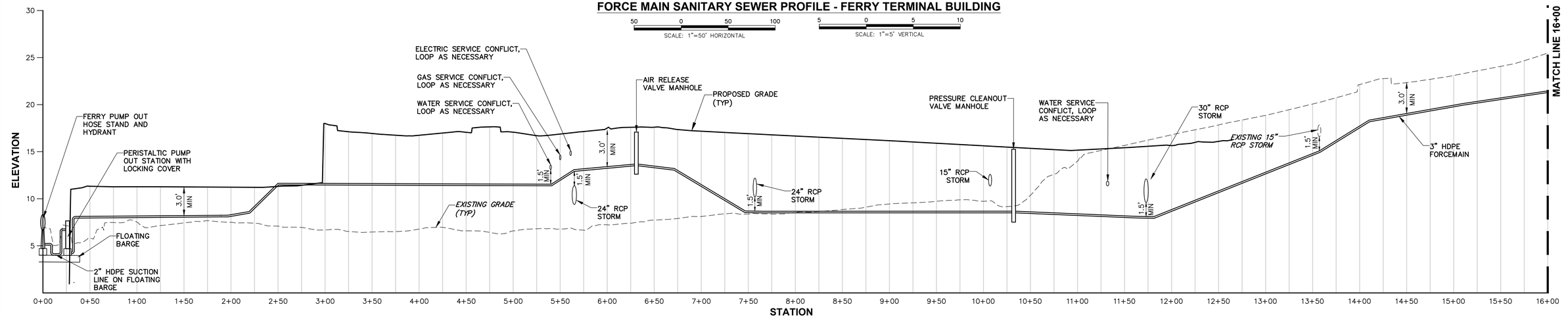
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	1" = 40'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	-----	38 of 70



FORCE MAIN SANITARY SEWER PROFILE - FERRY TERMINAL BUILDING

SCALE: 1"=50' HORIZONTAL

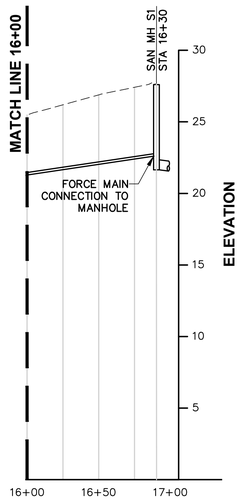
SCALE: 1"=5' VERTICAL



FORCE MAIN SANITARY SEWER PROFILE - FERRY DOCKING AREA

SCALE: 1"=50' HORIZONTAL

SCALE: 1"=5' VERTICAL



FORCE MAIN SANITARY SEWER PROFILE - FERRY DOCKING AREA

SANITARY SEWER GENERAL NOTES

1. THE DESIGNS HEREIN RENDERED ARE INTENDED TO COMPLY WITH THE NJDEP. IN CASE OF UNINTENTIONAL DEVIATION AND/OR OMISSIONS, THE NJDEP REGULATIONS WILL CONTROL.
2. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO THE START OF CONSTRUCTION TO INSURE THAT THEIR FACILITIES WILL NOT DETER THE COURSE OF CONSTRUCTION.
3. THE OWNER WILL SECURE ALL NECESSARY PERMITS FROM THE MUNICIPAL, COUNTY OR STATE AGENCIES PRIOR TO THE START OF CONSTRUCTION.
4. ALL WORK SHALL CONFORM TO THE ABOVE MENTIONED PERMITS INCLUDING BACKFILL, PAVEMENT REPAIR AND CONSTRUCTION PROCEDURES.
5. ALL CONCRETE AS NOTED IN APPURTENANT DESIGNS SHALL BE 3,700 PSI AS SPECIFIED.
6. ALL SANITARY SEWERS AND APPURTENANCES SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DETAILS.
7. ANY ADJUSTMENTS OR REPAIRS TO EXISTING SANITARY FACILITIES DAMAGED AS A RESULT OF THE CONTRACTORS OPERATIONS SHALL BE MADE AT THE CONTRACTORS EXPENSE AND SHALL BE SUBJECT TO REVIEW, INSPECTION, APPROVAL AND ACCEPTANCE BY THE AUTHORITY ENGINEER.
8. WHEN CORING A NEW CONNECTION TO EXISTING AUTHORITY MANHOLE, CORE SHALL BE MADE AT LEAST SIX (6) INCHES FROM MANHOLE BARREL JOINTS.
9. SANITARY SEWER LINES SHALL BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY OR THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE WATER MAIN. WHERE APPROPRIATE SEPARATION FROM THE WATER MAIN IS NOT POSSIBLE, THE SEWER SHALL BE ENCASED IN CONCRETE OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR AWAY FROM THE WATER LINE AS POSSIBLE.

TRENCH EXCAVATION AND BACKFILL NOTES

1. THE MAXIMUM DRY DENSITIES SHALL BE DETERMINED IN ACCORDANCE WITH ASTM DESIGNATION D1557. THE MINIMUM PERCENTAGE OF COMPACTION TO BE ACHIEVED BY THE CONTRACTOR IN THE VARIOUS ZONES IS AS FOLLOWS:

	PIPE MATERIAL	LOCATION	INITIAL COMPACTION
SURFACE ZONE:	ALL	ALL	95%
TRENCH BACKFILL ZONE:			90%
PIPE EMBEDMENT ZONE:			95%

THE MINIMUM COMPACTION IN EMBANKMENTS SHALL BE 90%.

2. THE PIPE EMBEDMENT ZONE WIDTH AND THE MAXIMUM TRENCH WIDTH SHALL NOT EXCEED THE PERMISSABLE WIDTHS SHOWN. IF THE PERMISSABLE WIDTH IS EXCEEDED, THE PIPE SHALL BE INSTALLED IN A HIGHER CLASS BEDDING THAN SHOWN ON THE DRAWINGS OR THE SPECIFIED PIPE SHALL BE REPLACED WITH PIPE OF GREATER CRUSHING STRENGTH OR BOTH, TO ACHIEVE SUITABLE CONDITIONS.
3. SUITABLE MATERIAL FROM EXCAVATIONS SHALL BE FREE FROM OBJECTIONABLE QUANTITIES OF ORGANIC MATTER, CLAYS, TREES, STUMPS, FROZEN MATERIAL, RUBBLE, REFUSE, CINDERS, ROCK AND OTHER MATERIALS CONSIDERED DELETERIOUS BY THE AUTHORITY AND SHALL NOT HAVE FINES IN EXCESS OF 10 PERCENT PASSING THE NO. 200 SIEVE NOR STONE OR GRAVEL LARGER THAN 2 INCHES.
4. BACKFILL TO BE MECHANICALLY COMPACTED IN TWELVE INCH LIFTS TO THE SATISFACTION OF THE ENGINEER.
5. THE CONTRACTOR MUST COMPLY WITH ALL STATE AND FEDERAL CONFINED SPACE RULES, AND ALL APPLICABLE O.S.H.A. REQUIREMENTS.

FORCE MAIN NOTES:

1. CONTRACTOR TO PROVIDE MECHANICAL THRUST RESTRAINTS AT ALL ENDS.
2. AIR RELEASE VALVE TO BE INSTALLED AT ALL HIGH POINTS OF FORCE MAIN.
3. MINIMUM COVER IN ROADWAY AND SIDEWALK AREAS TO BE THREE (3) FEET.
4. MINIMUM RADIUS OF CURVATURE OF PIPE SHALL BE THAT RECOMMENDED BY THE PIPE MANUFACTURER.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES ALONG THE ROUTE. CONTRACTOR SHALL UNCOVER THESE UTILITIES, DETERMINE THEIR LOCATIONS AND ELEVATIONS, AND ADJUST FORCE MAIN SO AS TO AVOID INTERFERENCE.
6. ALL FORCE MAINS ARE TO BE HDPE PIPE WITH MINIMUM PRESSURE RATING OF 150 PSI.
7. CONTRACTOR MUST SUBMIT SHOP DRAWINGS OF ALL SANITARY SEWER PIPING, MANHOLES, PRESSURE CLEANOUTS, AIR RELEASE VALVES, COVERS, AND TESTING PROCEDURES.

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
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FORCE MAIN SANITARY SEWER PROFILES

FOR

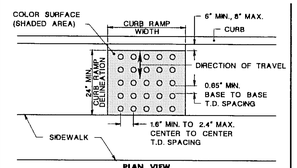
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

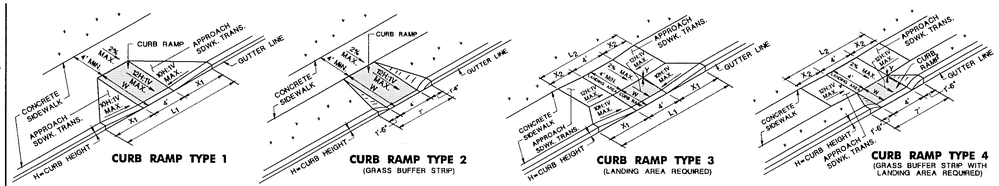
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	MS/RP	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
MS	DFK	----	39 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SAN PROFILES.dwg 39 Force Main Sanitary Sewer Profiles



DETECTABLE WARNING SURFACE

CD-606-1.1

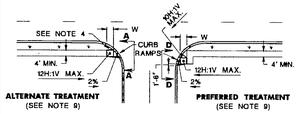


CURB RAMP TYPE 1

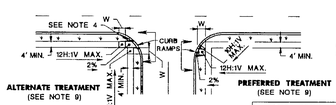
CURB RAMP TYPE 2 (GRASS BUFFER STRIP)

CURB RAMP TYPE 3 (LANDING AREA REQUIRED)

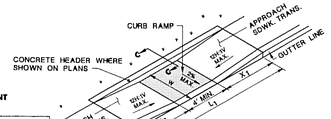
CURB RAMP TYPE 4 (GRASS BUFFER STRIP WITH LANDING AREA REQUIRED)



CURB RAMP TYPE 5
(CROSSING PARALLEL TO HIGHWAY ONLY)

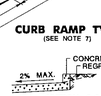


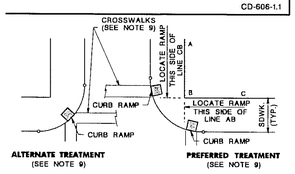
CURB RAMP TYPE 6
(CROSSING PARALLEL TO HIGHWAY ONLY)



CURB RAMP TYPE 7
(SEE NOTE 7)

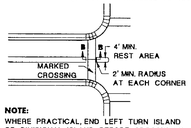
CURB RAMP TYPE 7				
W FEET	H INCHES	X1 FEET	L1 FEET	
4' MIN.	3	3	11	
6' MAX.	4	4	13	
	5	5	15	
	6	6	17	
	7	7	19	
	8	8	21	
	9	9	23	





CURB RAMP TYPE 1			
H INCHES	X1 FEET	L1 FEET	W FEET
3	2.5	9.0	3
4	3.3	10.6	4
5	4.2	12.4	5
6	5.0	14.0	6
7	5.8	15.6	7
8	6.7	17.4	8
9	7.5	19.0	9

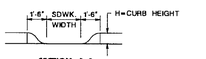
CURB RAMP TYPE 2, 5 OR 6	
H INCHES	W FEET
3	3
4	4
5	5
6	6
7	7
8	8
9	9



NOTE:
WHERE PRACTICAL, END LEFT TURN ISLAND OR DIVISIONAL ISLAND BEFORE CROSSWALK TO ELIMINATE CUT-THROUGH

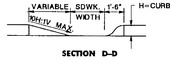
ISLAND WALKWAY OPENING AT INTERSECTIONS

1. LANDING AREA, APPROACH SIDEWALK TRANSITIONS, AND CURB RAMP SHALL BE KEPT CLEAR OF OBSTRUCTIONS.
2. DIMENSIONS SHOWN IN TABLES ARE FOR RELATIVELY FLAT SIDEWALK AREAS. CARE SHOULD BE TAKEN WHEN DETERMINING CURB RAMP SIZE BASED ON CURB HEIGHT (H) WHERE ELEVATION OF CURB AND SIDEWALK VARY DRASTICALLY IN AREA OF PROPOSED CURB RAMP.
3. CURB (DROPPED CURB) GUTTERLINE TO BE FLUSH WITH ROADWAY PAVEMENT A MINIMUM OF 4 FEET AT ALL CURB RAMPS.
4. FOR CURB RAMP TYPES 5 AND 6, IF A GRASS BUFFER DOES NOT EXIST, SLOPE CURB TO EQUAL SLOPE OF ADJACENT CURB RAMP.
5. SIDEWALK AND CURB RAMP WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS CONCRETE SIDEWALK OF THE APPROPRIATE ADJACENT THICKNESS.
6. CURB AND HEADER WITHIN AREA ENCLOSED BY HEAVY LINES TO BE PAID FOR AS VERTICAL CURB OR SLOPING CURB OF THE APPROPRIATE ADJACENT SIZE AND KIND.
7. WHERE THE DISTANCE FROM THE GUTTER LINE TO THE OUTSIDE EDGE OF SIDEWALK IS 6 FEET OR LESS, CURB RAMP TYPE 7 SHOULD BE USED, INSTEAD OF CURB RAMP TYPE 1 THROUGH 4.
8. CROSSWALKS AND STOP LINES MAY BE MARKED OR UNMARKED, SEE PLANS.
9. PREFERRED AND ALTERNATE TREATMENTS SHOULD NOT BE INTERMIXED WITHIN THE SAME INTERSECTION.
10. DIMENSIONS SHOWN IN TABLES ARE FOR 3 INCH TO 9 INCH CURB HEIGHTS. WHERE THE CURB HEIGHTS ARE OTHER THAN WHAT IS PROVIDED IN THE TABLES, THE DIMENSIONS OF THE RAMPS WILL HAVE TO BE CALCULATED BASED ON CROSS SLOPES SHOWN.

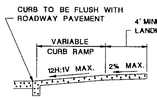


SECTION A-A

NOTE:
CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT (CURB RAMP TYPES 5 & 6).



SECTION D-D



SECTION THROUGH CURB RAMPS 1 THROUGH 6

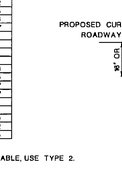
CURB RAMP TYPE 3							
W FEET	H INCHES	X1 FEET	L1 FEET	Y INCHES	X2 FEET	L2 FEET	
2.5	3	2.5	9	2.5	0.5	5	
	4	3.3	10.6	2.5	1.5	7	
	5	4.2	12.4	2.5	2.5	9	
	6	5.0	14.0	2.5	3.5	11	
	7	5.8	15.6	2.5	4.5	13	
	8	6.7	17.4	2.5	5.5	15	
	9	7.5	19.0	2.5	6.5	17	
3.0	3	*	*	*	*	*	
	4	3.3	10.6	3.0	1	6	
	5	4.2	12.4	3.0	2	8	
	6	5.0	14.0	3.0	3	10	
	7	5.8	15.6	3.0	4	12	
	8	6.7	17.4	3.0	5	14	
	9	7.5	19.0	3.0	6	16	
3.5	3	*	*	*	*	*	
	4	3.3	10.6	3.5	0.5	5	
	5	4.2	12.4	3.5	1.5	7	
	6	5.0	14.0	3.5	2.5	9	
	7	5.8	15.6	3.5	3.5	11	
	8	6.7	17.4	3.5	4.5	13	
	9	7.5	19.0	3.5	5.5	15	
4.0	3	*	*	*	*	*	
	4	*	*	*	*	*	
	5	4.2	12.4	4.0	1	6	
	6	5.0	14.0	4.0	2	8	
	7	5.8	15.6	4.0	3	10	
	8	6.7	17.4	4.0	4	12	
	9	7.5	19.0	4.0	5	14	

CURB RAMP TYPE 4							
W FEET	H INCHES	X1 FEET	L1 FEET	Y INCHES	X2 FEET	L2 FEET	
2.5	3	2.5	9	0.5	0.5	5	
	4	2.5	10.6	1.5	1.5	7	
	5	2.5	12.4	2.5	2.5	9	
	6	2.5	14.0	3.5	3.5	11	
	7	2.5	15.6	4.5	4.5	13	
	8	2.5	17.4	5.5	5.5	15	
	9	2.5	19.0	6.5	6.5	17	
3.0	3	**	**	**	**	**	
	4	3.0	10.6	1	1	6	
	5	3.0	12.4	2	2	8	
	6	3.0	14.0	3	3	10	
	7	3.0	15.6	4	4	12	
	8	3.0	17.4	5	5	14	
	9	3.0	19.0	6	6	16	
3.5	3	**	**	**	**	**	
	4	3.5	10.6	0.5	0.5	5	
	5	3.5	12.4	1.5	1.5	7	
	6	3.5	14.0	2.5	2.5	9	
	7	3.5	15.6	3.5	3.5	11	
	8	3.5	17.4	4.5	4.5	13	
	9	3.5	19.0	5.5	5.5	15	
4.0	3	**	**	**	**	**	
	4	**	**	**	**	**	
	5	4.0	12.4	1	1	6	
	6	4.0	14.0	2	2	8	
	7	4.0	15.6	3	3	10	
	8	4.0	17.4	4	4	12	
	9	4.0	19.0	5	5	14	

* TYPE 3 RAMP IS NOT APPLICABLE, USE TYPE 1.
** TYPE 4 RAMP IS NOT APPLICABLE, USE TYPE 2.

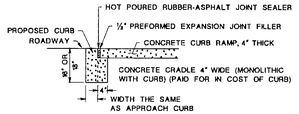
CURB RAMP DETAIL

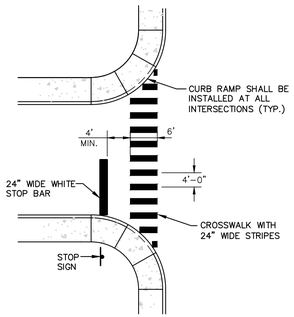
NOT TO SCALE



SECTION B-B

NOTE:
4' WIDE OPENING TO BE FLUSH WITH ROADWAY PAVEMENT



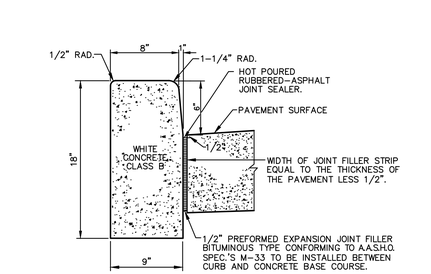


NOTE:

1. ALL STRIPING, PAVEMENT MARKINGS, AND TRAFFIC CONTROL SIGNS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
2. LONG LIFE STRIPPING AND PAVEMENT MARKINGS(THERMOPLASTIC OR EQUAL SHALL BE USED.

STOP BAR DETAIL WITH CROSSWALK

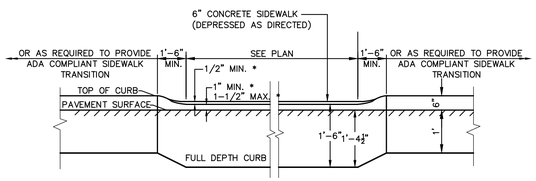
NOT TO SCALE



TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS-IMPREGNATED FIBER JOINT FILLER COMPLYING WITH THE REQUIREMENTS OF A.A.S.H.T.O. SPEC. M-213, RECESSED 1/4" IN FROM FRONT FACE AND TOP OF CURB. EXPANSION JOINTS THRU AND ADJACENT TO THE CURB SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CURB.

NJDOT WHITE CONCRETE VERTICAL CURB

NOT TO SCALE

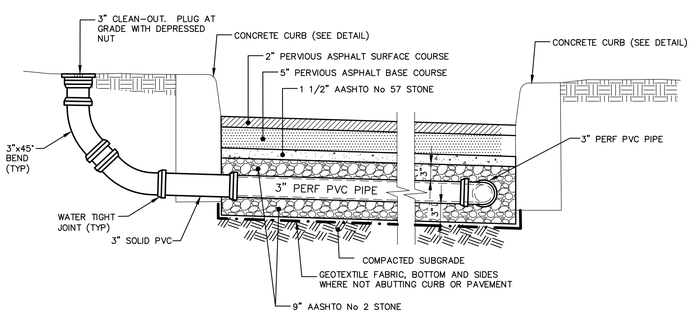


ELEVATION

* DIMENSIONS SHALL BE ZERO WHERE NOTED AS "FLUSH CURB" ON SITE PLANS

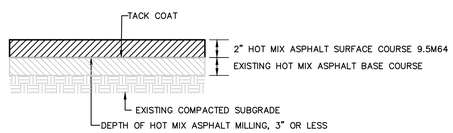
DEPRESSED CURB DETAIL

NOT TO SCALE



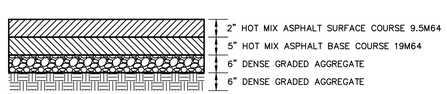
PERVIOUS PAVEMENT DETAIL

NOT TO SCALE



ROADWAY MILLING AND OVERLAY DETAIL

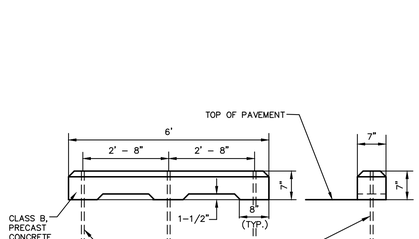
NOT TO SCALE



NOTE: REQUIRED SUB-BASE THICKNESS TO BE VERIFIED BY GEOTECHNICAL ENGINEER.

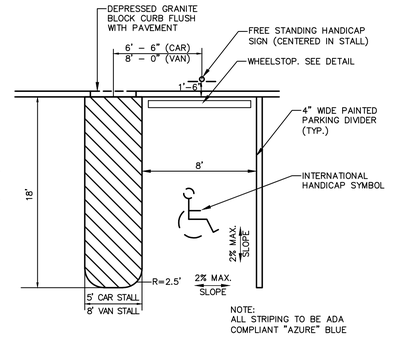
SOUTH RAMP PAVEMENT SECTION

NOT TO SCALE



WHEEL STOP DETAIL

NOT TO SCALE



NOTE:
ALL STRIPING TO BE ADA COMPLIANT "AZURE" BLUE

HANDICAPPED PARKING STALL

NOT TO SCALE

R7-1
12" X 18"

NO PARKING SIGN

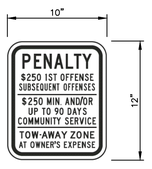
NOT TO SCALE

NOTE: ALL REGULATORY SIGNS PROPOSED SHALL BE HIGH INTENSITY REFLECTIVE SIGNS

R7-8
12" x 18"

NOTE:

1. GREEN LEGEND & BORDER ON WHITE BACKGROUND WITH WHITE WHEEL CHAIR SYMBOL ON BLUE SQUARE

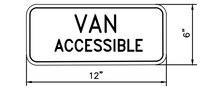


NOTES :

1. BLACK LEGEND & BORDER ON WHITE BACKGROUND
2. COMPLIES WITH N.J.A.C. 5:23-7.10(a)

PENALTY SIGN

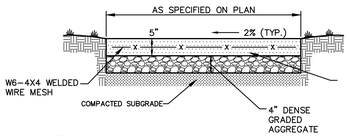
NOT TO SCALE



NOTE:
1. GREEN LEGEND AND BORDER ON WHITE BACKGROUND

HANDICAPPED PARKING SIGN

NOT TO SCALE



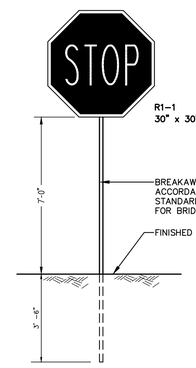
CLASS "C" CONCRETE 3000 PSI

NOTES:

1. 1/2" PREFORMED EXPANSION JOINT FILLER BITUMINOUS TYPE CONFORMING TO A.A.S.T.H.O. SPEC'S M-33 TO BE INSTALLED EVERY 24' ON CENTER
2. 1/4"W X 3/4"D SCORE JOINTS TO MATCH EXISTING SIDEWALKS
3. SIDEWALK TO HAVE BROOM FINISH

CONCRETE SIDEWALK DETAIL

NOT TO SCALE

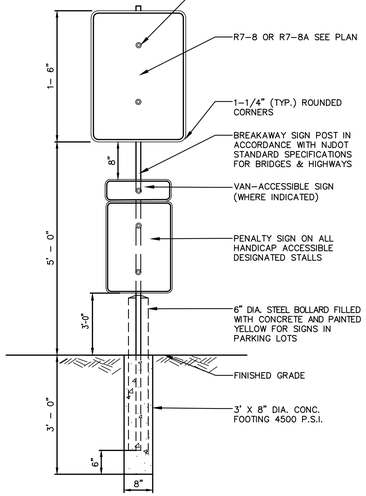


NOTES:

1. ALL SIGNS TO CONFORM TO THE 2009 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES MANUAL REVISIONS 1 AND 2 DATED MAY, 2012, OR MOST CURRENT STANDARD
2. OUTSIDE EDGE OF CLOSEST TO ROADWAY SHALL BE A MINIMUM DISTANCE OF 2'

SIGN AND SIGN POST DETAIL

NOT TO SCALE



NOTES :

1. ALL SIGNS TO CONFORM TO THE 2009 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES MANUAL REVISIONS 1 AND 2 DATED MAY, 2012
2. OUTSIDE EDGE OF CLOSEST TO ROADWAY SHALL BE A MINIMUM DISTANCE OF 2'

HANDICAPPED PARKING SIGN AND SIGN POST DETAIL

NOT TO SCALE

No.	Date	Revision	Revised By	Checked By

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FRENCH & PARRELLO ASSOCIATES
Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
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CONSTRUCTION DETAILS

FOR

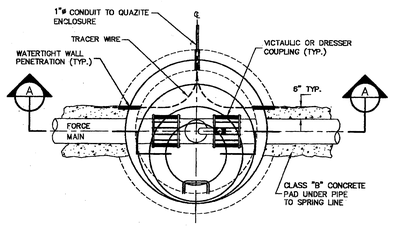
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

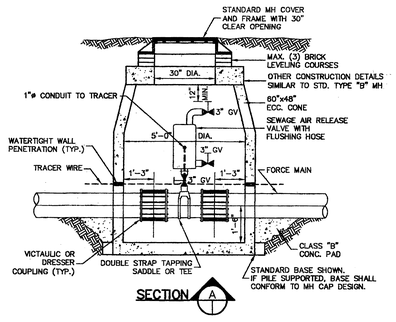
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	40 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
Q:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CAD0\DWG\13749-003-CD1.dwg 40 Construction Details



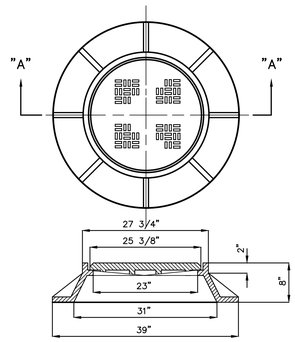
NOTES:

1. PRESSURE CLEANOUT VALVES SHALL BE PROVIDED AT ALL HIGH POINTS OF THE PROPOSED FORCE MAIN.
2. PRESSURE CLEANOUT VALVE AND APPURTENANCES SHALL BE PROTECTED FROM FREEZING INSIDE A STANDARD MANHOLE.
3. FLEXIBLE RUBBER BOOT SHALL BE USED FOR CONNECTION OF PIPE TO MANHOLE.
4. THE LOCATION OF THE CLEANOUT VALVE AND ITS APPURTENANCES SHALL NOT INTERFERE WITH THE PROPOSED MANHOLE STEPS.



FORCE MAIN AIR RELEASE VALVE AND MH DETAIL

NOT TO SCALE



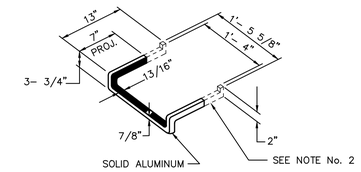
SECTION A–A

NOTES:

1. MANHOLE FRAME AND COVER SHALL CONFORM TO CAMPBELL FOUNDARY PATERN 1202 OR APPROVED EQUAL.
2. LOCKING MANHOLE SHALL BE BOLTED.

STANDARD MANHOLE FRAME AND COVER

NOT TO SCALE



NOTES:

1. ALUMINUM STEPS SHALL BE EXTRUDED ALUMINUM 6061–T6 ALLOY DROP FRONT DESIGN OR APPROVED EQUAL.
2. THE PORTION TO BE IMBEDDED IN THE CONCRETE SHALL BE COATED WITH COAL TAR PITCH OR OTHER APPROVED MATERIAL AND SHALL BE IN ACCORDANCE WITH THE LATEST O.S.H.A. STANDARDS (3" MINIMUM EMBEDMENT)
3. ALL MANHOLE STEPS TO MEET OR EXCEED ASTM AND O.S.H.A. REQUIREMENTS.

ALUMINUM STEP DETAIL

NOT TO SCALE

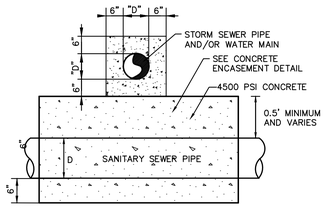
DIAMETER OF PIPE (d)	UP TO 22 1/2° BEND	UP TO 45° BEND	UP TO 90° BEND	TEE AND PLUGS	DEAD END TEE AND 90° BEND
	"A"	"A"	"A"	"A"	"A"
2"–4"	1.0	1.2	2.1	1.5	A: 1.5 B: 0.6
6"	1.2	2.4	4.5	3.3	A: 3.3 B: 1.3
8"	2.1	4.2	8.1	5.7	A: 5.7 B: 2.2
10"	3.3	6.9	12.6	8.7	A: 8.7 B: 3.6
12"	5.1	9.9	18.0	12.6	A: 12.6 B: 5.4

"A" – CONTACT BEARING AREA OF THRUST BLOCK WITH UNDISTURBED EARTH (SQUARE FEET)

CONSTRUCTION NOTES:

1. BEARING AREA FOR THRUST BLOCKS ARE BASED ON THE UNDISTURBED SOIL WITH BEARING CAPACITY OF 1000 LBS. PER SQUARE FOOT. FOR OTHER SOIL OF LESS BEARING CAPACITY, THE AREAS SHALL BE ADJUSTED ACCORDINGLY, (FIGURE 14, ASCE "PIPELINE DESIGN FOR WATER AND WASTEWATER, 1975").
2. ALL CONCRETE FOR THRUST BLOCKS SHALL BE NJDOT, CLASS C.
3. DIMENSIONS OF THRUST BLOCKS SHALL BE APPROXIMATELY SQUARE, AND THE THRUST BLOCKS SHALL BE POURED FORM FITTING SUCH THAT THEY BEAR ON THE UNDISTURBED WALL OF THE TRENCH.
4. THE TABULATED CONTACT BEARING AREAS LISTED ARE FOR HORIZONTAL AND DOWNWARD THRUST ONLY, AND ARE NOT APPLICABLE FOR UPWARD THRUST.
5. THRUST BLOCK SHALL BE USED AT ALL BENDS 11–1/4° OR GREATER.

FORCE MAIN THRUST BLOCK TABLE

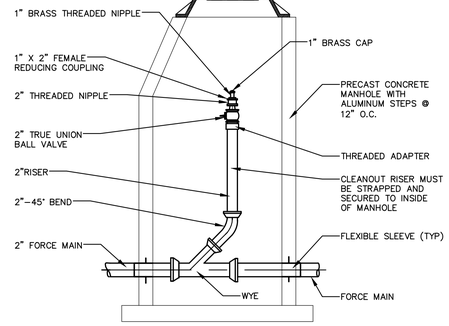


NOTE:

CONCRETE CRADLE TO BE USED WHEN THE STORM SEWER PIPE OR WATER MAIN CROSSES OVER THE SANITARY SEWER PIPE AND THE VERTICAL CLEARANCE IS 18" OR LESS.

CONCRETE CRADLE

NOT TO SCALE

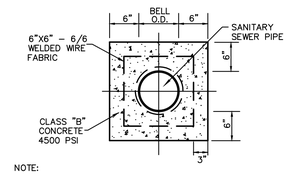


NOTES:

1. PRESSURE CLEANOUT VALVES SHALL BE PROVIDED AT ALL LOW POINTS OF THE PROPOSED FORCE MAIN.
2. PRESSURE CLEANOUT VALVE AND APPURTENANCES SHALL BE PROTECTED FROM FREEZING INSIDE A STANDARD MANHOLE.
3. FLEXIBLE RUBBER BOOT SHALL BE USED FOR CONNECTION OF PIPE TO MANHOLE.
4. THE LOCATION OF THE CLEANOUT VALVE AND ITS APPURTENANCES SHALL NOT INTERFERE WITH THE PROPOSED MANHOLE STEPS.

PRESSURE CLEANOUT VALVE

NOT TO SCALE

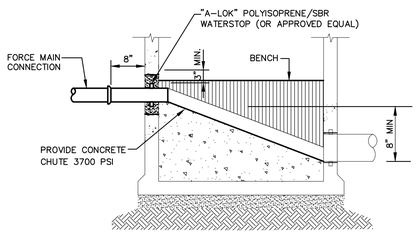


NOTE:

1. CONCRETE PIPE ENCASEMENT TO BE USED WHEN VERTICAL CLEARANCE BETWEEN WATER SYSTEM OR STORM SEWER AND THE SANITARY SEWER PIPE IS 18" OR LESS, OR WHEN HORIZONTAL CLEARANCE BETWEEN THE SANITARY SEWER AND WATER MAIN AT THE SAME ELEVATION IS LESS THAN 10'.
2. THE SANITARY SEWER SHALL BE ENCASED IN CONCRETE FOR AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER MAIN AS POSSIBLE.
3. WATER MAIN TO BE ENCASED IN CONCRETE WHERE THERE IS 1'–0" OR LESS CLEARANCE BETWEEN PIPE CROSSING.
4. CONCRETE ENCASEMENT TO BE USED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

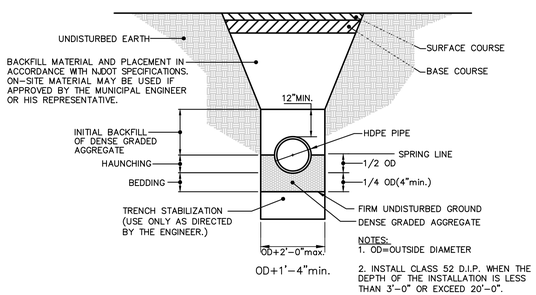
CONCRETE ENCASEMENT

NOT TO SCALE



FORCE MAIN CONNECTION TO MANHOLE

NOT TO SCALE



NOTES:
1. OD=OUTSIDE DIAMETER
2. INSTALL CLASS 52 D.I.P. WHEN THE DEPTH OF THE INSTALLATION IS LESS THAN 3'–0" OR EXCEED 20'–0".

SANITARY SEWER TRENCH DETAIL

NOT TO SCALE

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
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New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

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CONSTRUCTION DETAILS

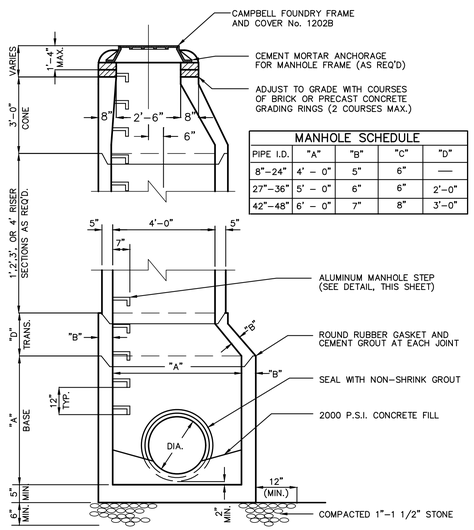
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

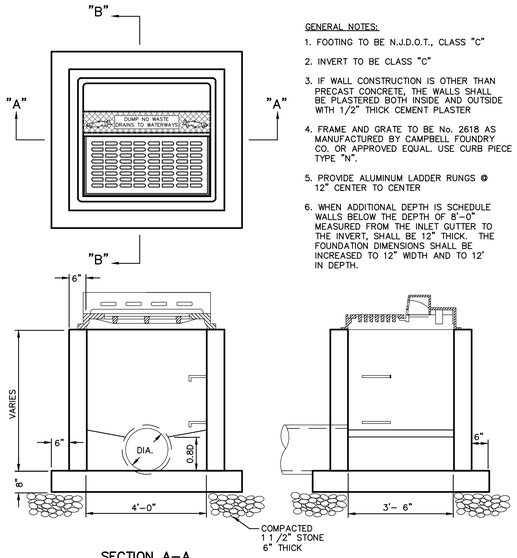
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	41 of 70



MANHOLE SCHEDULE				
PIPE I.D.	"A"	"B"	"C"	"D"
8"-24"	4' - 0"	5"	6"	—
27"-36"	5' - 0"	6"	6"	2'-0"
42"-48"	6' - 0"	7"	8"	3'-0"

PRECAST CONCRETE MANHOLE

NOT TO SCALE



GENERAL NOTES:

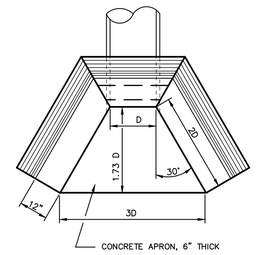
1. FOOTING TO BE N.J.D.O.T., CLASS "C"
2. INVERT TO BE CLASS "C"
3. IF WALL CONSTRUCTION IS OTHER THAN PRECAST CONCRETE, THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER
4. FRAME AND GRATE TO BE No. 2618 AS MANUFACTURED BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL. USE CURB PIECE TYPE "N".
5. PROVIDE ALUMINUM LADDER RUNGS @ 12" CENTER TO CENTER
6. WHEN ADDITIONAL DEPTH IS SCHEDULE WALLS BELOW THE DEPTH OF 8'-0" MEASURED FROM THE INLET GUTTER TO THE INVERT, SHALL BE 12" THICK. THE FOUNDATION DIMENSIONS SHALL BE INCREASED TO 12" WIDTH AND TO 12' IN DEPTH.

SECTION A-A
"THROUGH" INVERT DETAIL

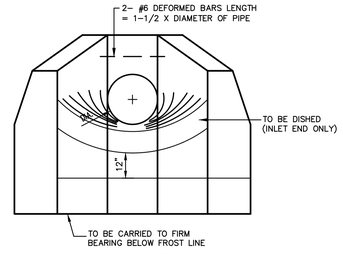
SECTION B-B
"TERMINAL" INVERT DETAIL

TYPE `B' INLET

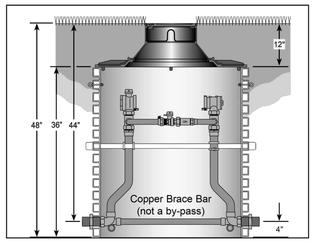
NOT TO SCALE



PLAN



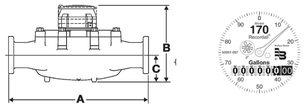
END VIEW OF INLET END ONLY



PREFABRICATED WATER METER PIT - FOR 2 INCH HDPE PIPE

NOT TO SCALE

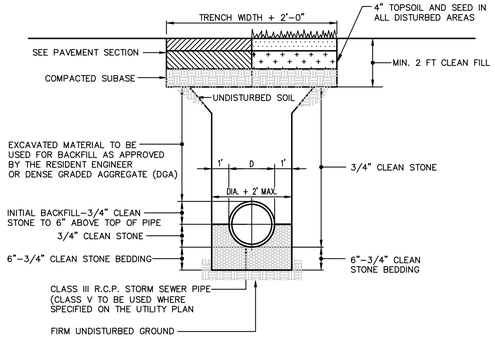
SOURCE: FORD METER BOX DOUBLE LID PIT SETTER W/WABASH COVER (OR EQUAL). THE FORD METER BOX COMPANY, INC. 775 MANCHESTER AVENUE, P.O. OX 443, WABASH, INDIANA, USA 46992, TELEPHONE: 260.563.3137 FAX: 1.800.826.3487 OVERSEAS FAX: 260.563.0167 FORDMETERBOX.COM



WATER METER - FOR 2 INCH HDPE PIPE

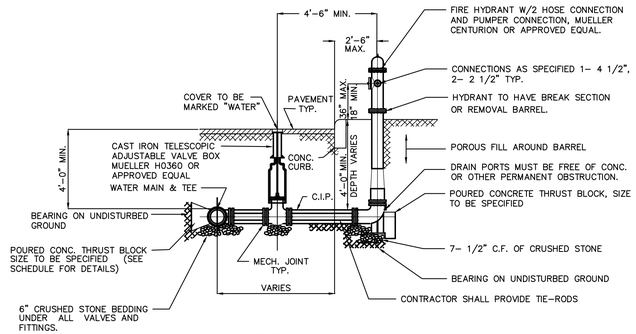
NOT TO SCALE

SOURCE: BADGER METER – MODEL 170 (OR EQUAL) WWW.BADGERMETER.COM, 4545 WEST BROWN DEER ROAD, P.O. BOX 245036, MILWAUKEE, WI 53224-9536, 800.876.3837, 414.355.0400



STORM SEWER TRENCH DETAIL

NOT TO SCALE

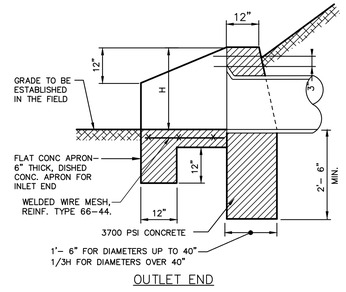


FIRE HYDRANT

NOT TO SCALE

NOTES:

1. **CONCRETE FOR THRUST BLOCKS TO BE N.J.D.O.T., CLASS "C"**
2. **SIZE AND BEARING AREA FOR THRUST BLOCKS SHALL CONFORM TO CURRENT A.W.W.A. STANDARDS OR SHALL BE DESIGNATED ON THE PLANS.**
3. **FINISH PAINTING AND MARKING SHALL BE DESIGNATED ON THE PLANS OR CONTRACT DOCUMENTS OR SHALL BE AS DIRECTED BY THE ENGINEER.**
4. **TYPICAL HYDRANT LOCATION ADJACENT TO ROADWAY, FOR SPECIAL LOCATION REFER TO PLANS.**
5. **SPECIAL HYDRANT ARRANGEMENT OR SETTINGS TO BE DETAILED BY CONTRACTOR AND SUBJECT TO THE ENGINEER'S APPROVAL**
6. **ALL CONNECTIONS TO BE MECHANICAL JOINT OR LOCK RING TYPE JOINT AS SPECIFIED**



OUTLET END

NOTES:

1. ALL EDGES TO BE CHAMFERED 1".
2. CONCRETE TO BE N.J.D.O.T., 4600 PSI
3. APRONS TO BE 6" THICK CONC. FLAT AT OUTLET END, DISHED AT INLET END
4. EXPOSED PORTIONS OF WALL TO BE RUBBED AND FLOATED
5. FOR ARCH PIPE, THE SPAN SHALL BE SUBSTITUTED FOR D.

CONCRETE HEADWALL WITH WINGWALL

NOT TO SCALE

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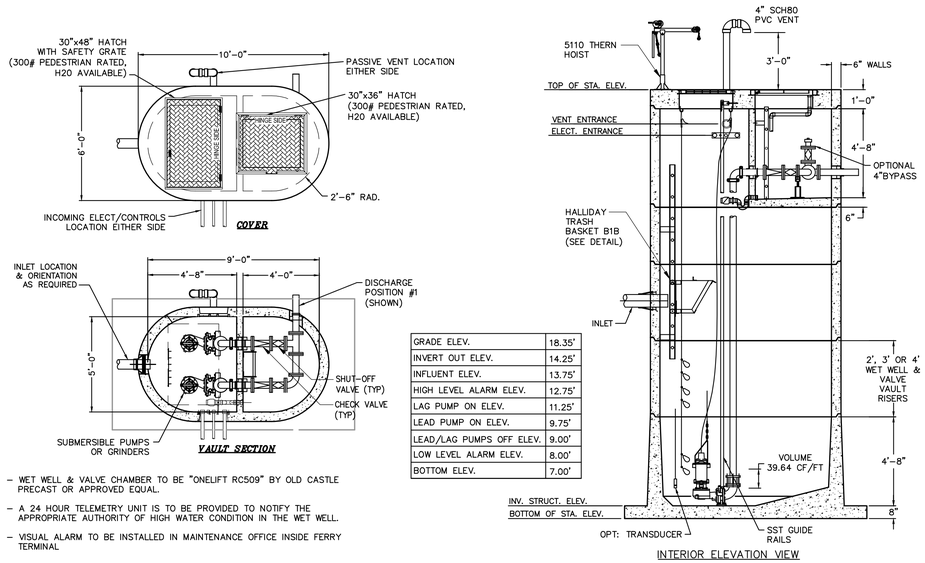
SKW	DFK	-----	42 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-CD1.dwg 42 Construction Details

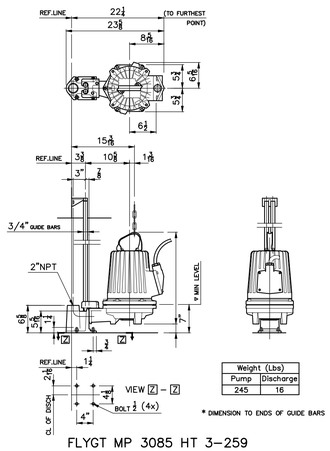


GRADE ELEV.	18.35'
INVERT OUT ELEV.	14.25'
INFLUENT ELEV.	13.75'
HIGH LEVEL ALARM ELEV.	12.75'
LAG PUMP ON ELEV.	11.25'
LEAD PUMP ON ELEV.	9.75'
LEAD/LAG PUMPS OFF ELEV.	9.00'
LOW LEVEL ALARM ELEV.	8.00'
BOTTOM ELEV.	7.00'

- WET WELL & VALVE CHAMBER TO BE "ONELIFT RC509" BY OLD CASTLE PRECAST OR APPROVED EQUAL.
- A 24 HOUR TELEMETRY UNIT IS TO BE PROVIDED TO NOTIFY THE APPROPRIATE AUTHORITY OF HIGH WATER CONDITION IN THE WET WELL.
- VISUAL ALARM TO BE INSTALLED IN MAINTENANCE OFFICE INSIDE FERRY TERMINAL

ONELIFT PUMP STATION-RC509 TYPICAL LAYOUT

NOT TO SCALE



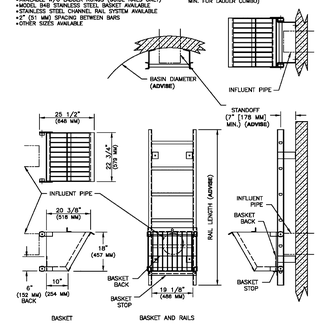
Weight (Lbs)	
Pump	Discharge
245	16

* DIMENSION TO ENDS OF GUIDE BARS

FLYGT MP 3085 HT 3-259

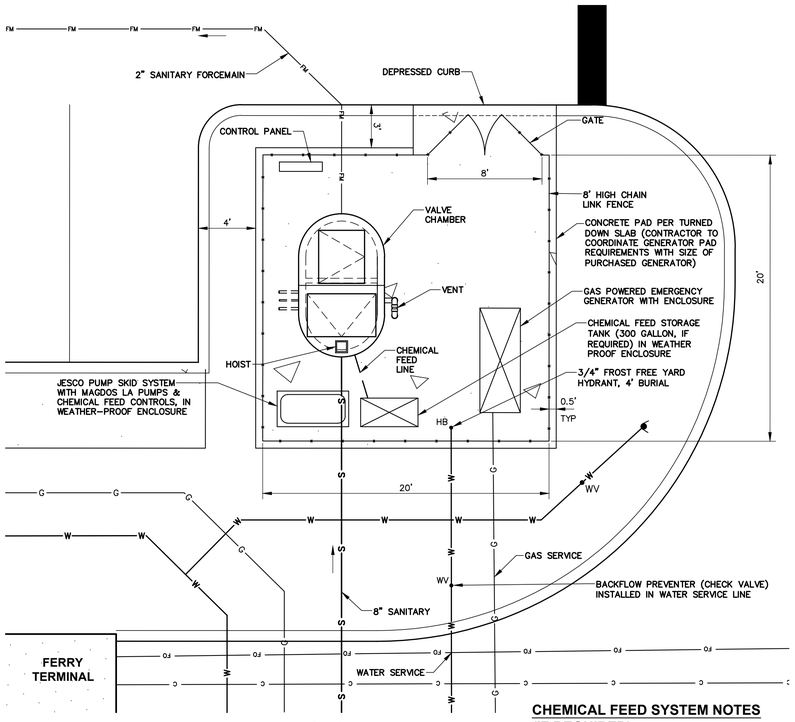
PUMP DETAIL

NOT TO SCALE



TRASH BASKET DETAIL

NOT TO SCALE

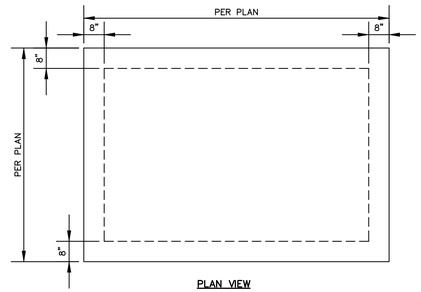


SCALE: 1" = 5'

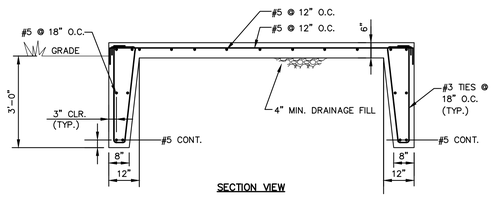
PUMP STATION "1"

CHEMICAL FEED SYSTEM NOTES (IF REQUIRED):

1. CHEMICAL FEED SYSTEM SHALL BE PROVIDED TO BE COMPATIBLE WITH A MANGANESE HYDROXIDE ADDITIVE.
2. CONTRACTOR SHALL PROVIDE A COMPLETE CHEMICAL FEED SYSTEM WITH A CHEMICAL STORAGE TANK, CONTROLS, AND CHEMICAL FEED PUMPS FOR A FULLY AUTOMATED AND ADJUSTABLE SYSTEM.
3. THE CONTRACTOR MUST SUBMIT SHOP DRAWINGS FOR THE COMPLETE CHEMICAL FEED SYSTEM FOR REVIEW AND APPROVAL.



PLAN VIEW



SECTION VIEW

TURNED DOWN SLAB DETAIL

NOT TO SCALE

CAST-IN-PLACE CONCRETE:

1. ALL CONCRETE WORK SHALL CONFORM TO THE LATEST EDITION OF THE ACI BUILDING CODE.
2. ALL CONCRETE, EXCEPT SLABS ON GRADE, SHALL ATTAIN (3000) PSI COMPRESSIVE STRENGTH AT 28 DAYS.
3. READY MIX
   - *COMPLY WITH ACI-301, ACI-304 AND ASTM C-94,
   - *MAXIMUM TIME BETWEEN INTRODUCTION OF WATER AND PLACING TO BE 1-1/2 HOURS.
   - *ALL CONCRETE EXPOSED TO THE GROUND OR WEATHER SHALL BE AIR ENTRAINED.
   - *DO NOT LOAD TRUCKS ABOVE RATED CAPACITY.
4. COLD WEATHER CONCRETE SHALL BE IN ACCORDANCE WITH ACI-306.
5. PREPARE CONCRETE TEST CYLINDERS FROM EACH DAYS POUR. CYLINDERS SHALL BE PROPERLY CURED, STORED AND TESTED. SUBMIT RESULTS TO ARCHITECT
6. THROUGHOUT CONSTRUCTION THE CONCRETE WORK SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE DUE TO EXCESSIVE LOADING, CONSTRUCTION EQUIPMENT, MATERIALS OR METHODS, ICE, RAIN, SNOW, EXCESSIVE HEAT AND FREEZING TEMPERATURES.
7. EARLY DRYING OUT OF CONCRETE, ESPECIALLY DURING THE FIRST 24 HOURS, SHALL BE CAREFULLY GUARDED AGAINST. ALL SURFACES SHALL BE PROTECTED USING MOIST CURING OR A MEMBER CURING AGENT APPLIED AS SOON AS FORMS ARE REMOVED OR FINISHING OPERATIONS ARE COMPLETE. EXERCISE CARE NOT TO DAMAGE COATING.
8. BENDING, TACK WELDING, CUTTING OR SUBSTITUTE REINFORCING OTHER THAN AS SHOWN ON THE CONTRACT DRAWING IS PROHIBITED UNLESS SPECIFIC APPROVAL FOR EACH CASE IS GIVEN BY ARCHITECT
9. CONCRETE SHALL BE CONVEYED, PLACED AND FINISHED IN A WORKMAN LIKE MANNER.
10. PRIOR TO MAKING REPAIRS, CONTRACTORS SHALL OBTAIN PERMISSION FROM ARCHITECT TO MAKE PATCHES FOR OTHER THAN MINOR HONEYCOMBING.
11. CONTRACTOR TO COORDINATE REQUIREMENTS OF STRUCTURAL, ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
12. ALL MATERIALS SHALL BE STORED TO PROTECT THEM AGAINST THE ELEMENTS.

REINFORCING:

1. ALL REINFORCING BAR DETAILS SHALL CONFORM TO THE LATEST ACI CODE AND DETAILING MANUAL.
2. ALL BARS SHALL BE ASTM A-615, GRADE 60. (WELDED WIRE FABRIC SHALL BE ASTM A-185.) (SYNTHETIC FIBER ADDITIVE SHALL BE 3/4" "FIBER AD".)
3. ALL REINFORCEMENT SHALL BE INSPECTED AND APPROVED PRIOR TO CONCRETE PLACEMENT.
4. CLEARANCE OF MAIN REINFORCING FROM ADJACENT SURFACES UNLESS SHOWN OTHERWISE SHALL BE:
   - * UNFORMED SURFACE IN CONTACT WITH GROUND OR EXPOSED TO THE WEATHER: 3"
   - * BOTTOM SURFACES OF SLABS ON GRADE: 3"
   - * FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO WEATHER: #5 BARS OR SMALLER: 1-1/2" BARS LARGER THAN #5: 2"
   - * EXTERIOR WALL SURFACES: 2"
   - * IN ALL CASES NOT LESS THAN THE DIAMETER OF BARS.
5. TOLERANCES FOR PLACING REINFORCING SHALL BE:
   - * +OR- 1/4 INCH FOR MEMBERS WITH AN EFFECTIVE DEPTH OF 24 INCHES OR LESS.
   - * +OR- 1/2 INCH FOR MEMBERS WITH AN EFFECTIVE DEPTH OF MORE THAT 24 INCHES
6. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS. LAPS SHALL BE 40 BAR DIAMETERS. BAR LAPS MAY BE OFFSET TO AVOID CONTROL OR CONSTRUCTIONS JOINTS.

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

CONSTRUCTION DETAILS

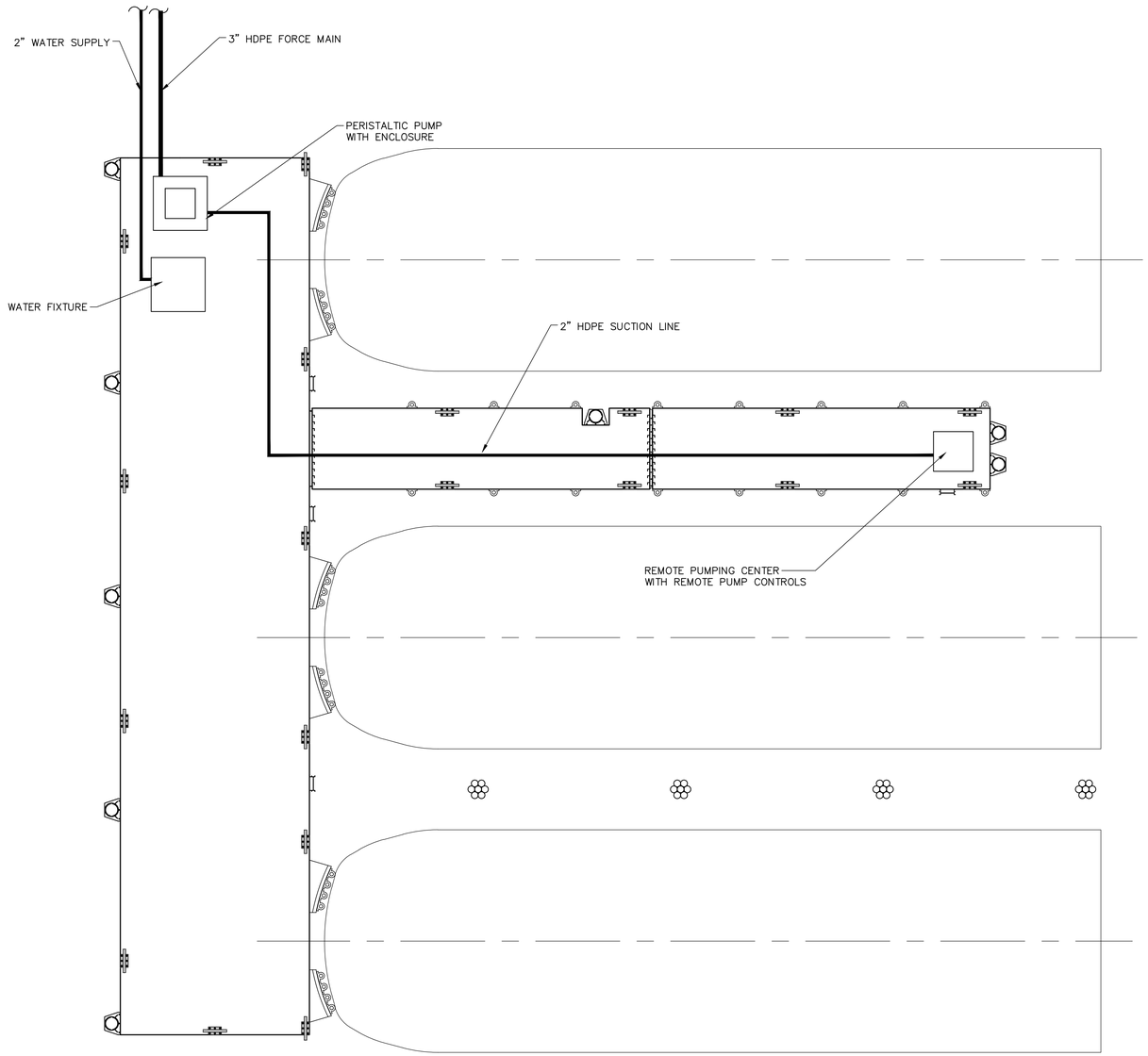
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

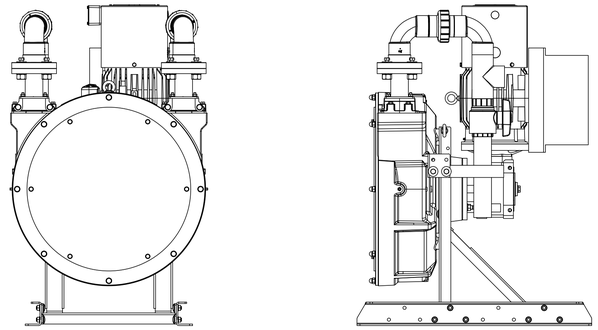
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	43 of 70



PUMP STATION No. 2 - LAYOUT PLAN

FINAL LAYOUT TO BE BASED ON FERRY OPERATOR INPUT

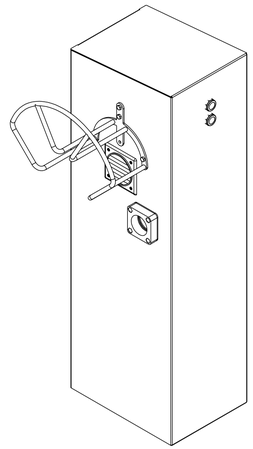


KECO MODEL 900R PUMP R – OR APPROVED EQUAL

5 HP TEFC MOTOR
PUMPOUT CONTROL PANEL TO INCLUDE REMOTE
WIRELESS OPERATION

PERISTALTIC PUMPING SYSTEM

NOT TO SCALE

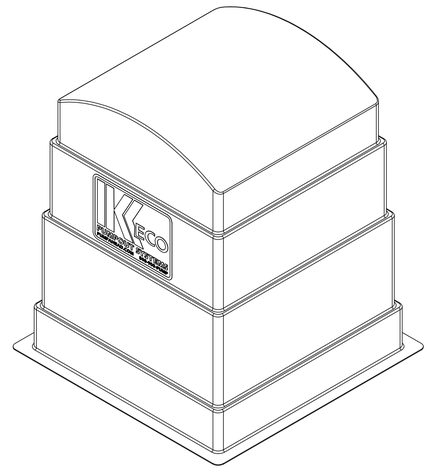


STAINLESS STEEL

INTERNAL PLUMBING AND HOSE RACK
DIGITAL WIRELESS TRANSMITTER
100' SUCTION HOSE ASSEMBLY

REMOTE PUMPING CENTER

NOT TO SCALE



40" X 40" FIBERGLASS ENCLOSURE

TO INCLUDE VENTS, LIFTING HANDLES
AND INSPECTION PORTS

PUMP ENCLOSURE

NOT TO SCALE

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10 0 10 20
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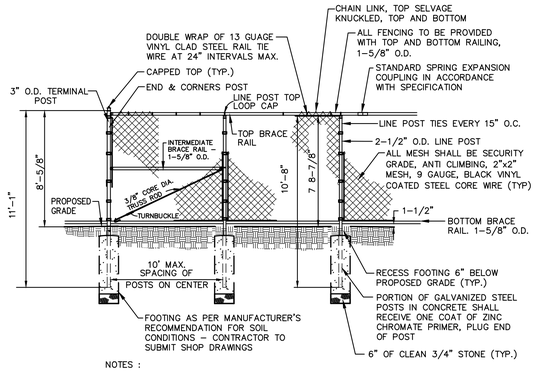
IAM	SAT	----	44 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\JK\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\Floating Docks\13749.003 – Site Plan & Float Layout.dwg 45 Construction Details

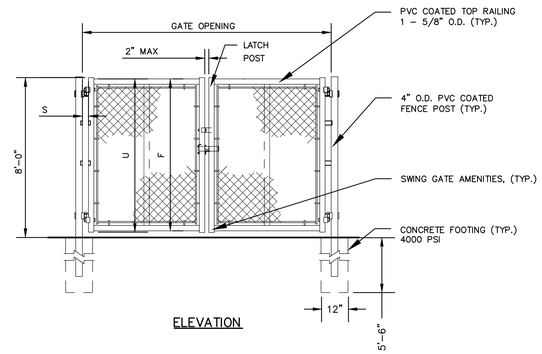


NOTES :

1. FENCE TO BE INDUSTRIAL GRADE
2. ALL FENCE FABRIC, POSTS AND RAILINGS SHALL BE GREEN VINYL CLAD HOT DIPPED GALVANIZED STEEL
3. INTERMEDIATE RAIL TO BE SET AT CORNER AND TERMINAL POSTS
4. ALL FENCE TO HAVE TOP AND BOTTOM RAIL.

8' HIGH CHAIN LINK FENCE DETAIL

NOT TO SCALE



ELEVATION

DOUBLE LEAF GATES		
GATE OPENING	GATE POST	HINGE SPACES (S)
FACE TO FACE	RND SIZES	PORT TO UPRIGHT
8' - 0"	4"-0" O.D.	ROUND GATE POSTS: 2 1/4" [57MM]

DOUBLE LEAF GATES		
NOM HEIGHT (H)	UPRIGHT HT (U)	FRAME HT (F)
NOM HT	ACTUAL DIM	ACTUAL DIM
8' - 0"	7' - 10"	7' - 8 1/2" [2654MM]

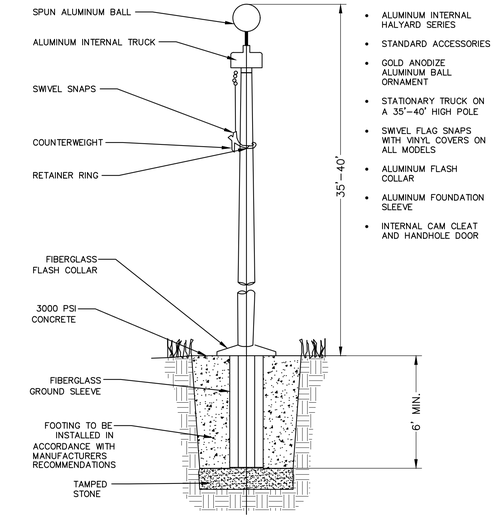
NOTES:

1. THE CONTRACTOR WILL SUBMIT SHOP DRAWINGS SHOWING ALL SWING GATE MATERIAL INCLUDING THE CHAIN LINK GATE LOCK KIT FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO ORDERING MATERIALS.
2. THE CONTRACTOR TO PROVIDE A DROP DOWN CANE ON THE LEFT SIDE GATE TO ALLOW THE FENCE TO BE SECURED.

MFGR: MASTER HALCO OR AN APPROVED EQUAL
ADDRESS: 1704 TIMBLE ROAD, EDGEWOOD, MD 21040
WEB: WWW.FENCEONLINE.COM
PHONE: 1 - 800 - 229 - 5615

8' WIDE PVC COATED DOUBLE SWING GATE, 8' HIGH DETAIL

NOT TO SCALE



- ALUMINUM INTERNAL HALYARD SERIES
- STANDARD ACCESSORIES
- GOLD ANODIZE ALUMINUM BALL ORNAMENT
- STATIONARY TRUCK ON A 35'-40' HIGH POLE
- SWIVEL FLAG SNAPS WITH VINYL COVERS ON ALL MODELS
- ALUMINUM FLASH COLLAR
- ALUMINUM FOUNDATION SLEEVE
- INTERNAL CAM CLEAT AND HANDHOLE DOOR

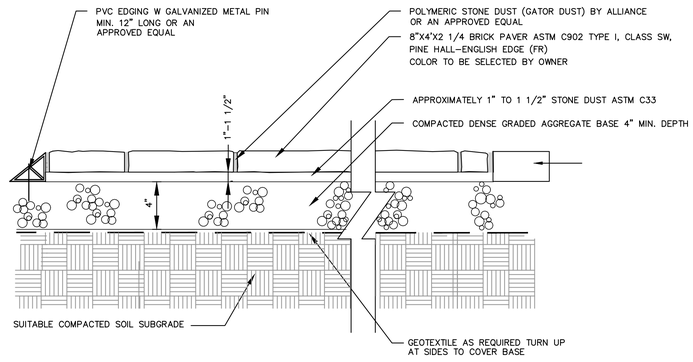
NOTES:

1. THE CONTRACTOR SHALL PROVIDE TWO (2) AMERICAN FLAGS 6' X 10' IN SIZE PER POLE
2. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY CONSTRUCTION MATERIALS.

FLAG POLE MODEL NO.: EC35IH AND EC40IH OR APPROVED EQUAL
MFGR.: EDER FLAG MANUFACTURING COMPANY, INC. 1000 W. RAWSON AVE., OAK CREEK. WI 53154
PHONE NO.: 1-800-852-2335
WEB: WWW.EDERFLAG.COM

35' AND 40' HIGH ALUMINUM FLAGPOLE DETAIL

NOT TO SCALE



BRICK PAVERS DETAIL

NOT TO SCALE

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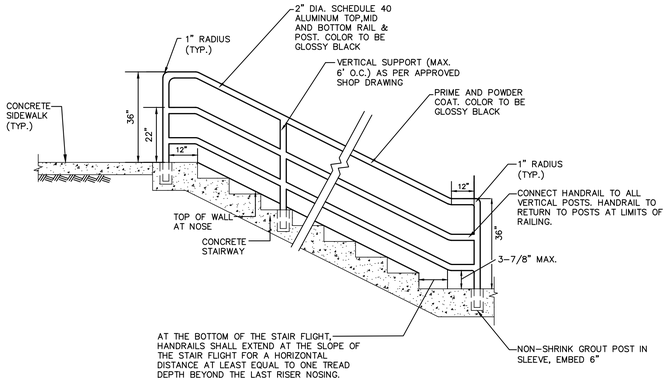


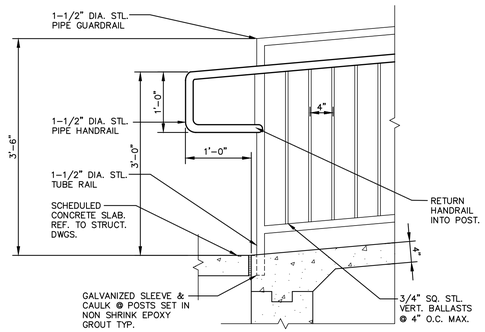
MFGR.: NATIONAL FENCE SYSTEMS, INC.
1033 ROUTE 1
AVENEL, NJ 07001
PHONE NO.: 1-800-211-2444
WEB: WWW.NATIONALFENCESYSTEMS.COM

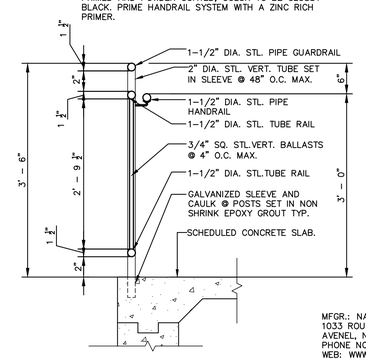
NOTES :

1. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE STAIRWAY AND RAIL FOR APPROVAL.
2. THE CONTRACTOR WILL PROVIDE HANDRAILS ON BOTH SIDES OF ALL STAIRS AS A MINIMUM OR AS SHOWN ON THE DRAWINGS. IN THE EVENT THERE IS A CONFLICT IN THE QUANTITY, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INCORPORATE ALL COST TO INSTALL THE HANDRAILS WITHIN THIS BID.
3. AT THE TOP OF STAIR FLIGHT, HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 1 FOOT MINIMUM BEGINNING DIRECTLY ABOVE THE FIRST RISER NOSING. AT THE BOTTOM OF THE STAIR FLIGHT, HANDRAILS SHALL EXTEND AT THE SLOPE OF THE STAIR FLIGHT FOR A HORIZONTAL DISTANCE AT LEAST EQUAL TO ONE TREAD DEPTH BEYOND THE LAST RISER NOSING. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF THE ADJACENT STAIR FLIGHT.
4. PROVIDE ASTM B210/A210M, ASTM B221/221M, ASTM B247/247M ASTM B429/429M, ASTM E985, STANDARD WEIGHT (SCHEDULE 40) ALUMINUM PIPE, UNLESS ANOTHER GRADE AND WEIGHT ARE REQUIRED BY STRUCTURAL LOADS.
5. WELD AND GRIND ALL JOINTS SMOOTH.
6. PROVIDE ALUMINUM TAMPER-PROOF INSERTS, SLEEVES AND OTHER ANCHORAGE DEVICES FOR CONNECTING RAILINGS TO CONCRETE OR MASONRY WORK. REFER TO ASTM E488.
7. FOR RAILINGS SET IN CONCRETE, PROVIDE SLEEVES AT LEAST 6" IN DEPTH AND ½" GREATER IN DIAMETER THAN RAILING. SET WITH NONSHRINK, NONMETALLIC GROUT DESIGNED FOR EXTERIOR APPLICATIONS. REFER TO ASTM C1107 "STANDARD FOR PACKAGE DRY, HYDRAULIC CEMENT GROUT".
8. INSTALL IN A MANNER THAT WILL PREVENT ACCUMULATION OF STANDING WATER AT THE BASE OF POSTS.
9. THE CONTRACTOR TO PRIME HANDRAIL SYSTEM WITH A ZINC RICH PRIMER. AFTER PRIMING THE HANDRAIL SYSTEM, A POWDER COATED FINISH IS TO BE APPLIED. THE POWDER COATED COLOR IS TO BE GLOSSY BLACK.

POWDER COATED ALUMINUM RAILING SYSTEM DETAIL

NOT TO SCALE





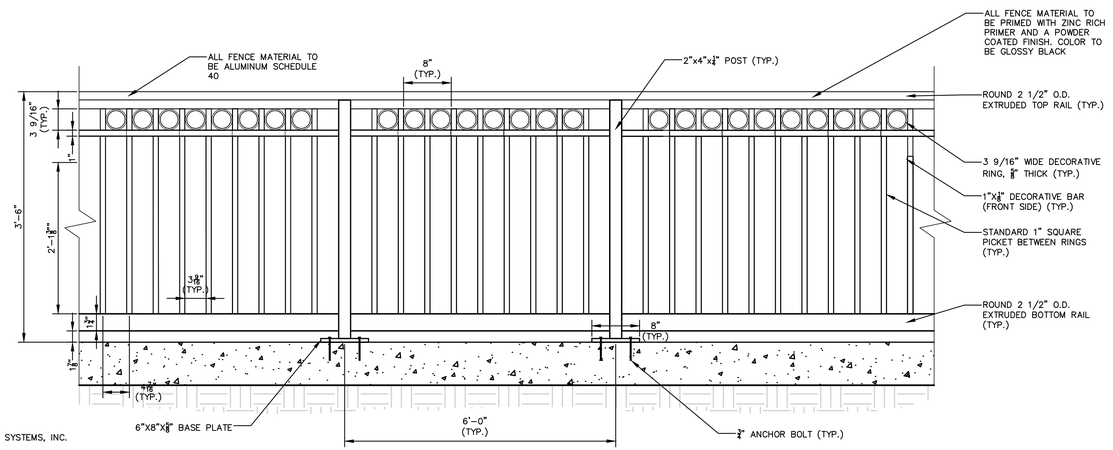
MFGR.: NATIONAL FENCE SYSTEMS, INC.
1033 ROUTE 1
AVENEL, NJ 07001
PHONE NO.: 1-800-211-2444
WEB: WWW.NATIONALFENCESYSTEMS.COM

NOTES :

1. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE ADA COMPLIANT BARRIER HANDRAIL SYSTEM FOR APPROVAL PRIOR TO THE PURCHASE OF ANY MATERIAL.
2. THE CONTRACTOR WILL PROVIDE HANDRAILS ON BOTH SIDES OF ALL RAMPS. IN THE EVENT THERE IS A CONFLICT IN THE QUANTITY, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INCORPORATE ALL COST TO INSTALL THE HANDRAILS WITHIN THIS BID.
3. AT THE TOP AND BOTTOM OF ADA COMPLIANT RAMP, HANDRAILS SHALL EXTEND HORIZONTALLY ABOVE THE LANDING FOR 1 FOOT MINIMUM. EXTENSIONS SHALL RETURN TO A WALL, GUARD, OR LANDING SURFACE, OR SHALL BE CONTINUOUS TO THE HANDRAIL OF THE ADJACENT RAMP.
4. PROVIDE ASTM B210/A210M, ASTM B221/221M, ASTM B247/247M ASTM B429/429M, ASTM E985, STANDARD WEIGHT (SCHEDULE 40) ALUMINUM PIPE, UNLESS ANOTHER GRADE AND WEIGHT ARE REQUIRED BY STRUCTURAL LOADS.
5. WELD AND GRIND ALL JOINTS SMOOTH.
6. PROVIDE ALUMINUM TAMPER-PROOF INSERTS, SLEEVES AND OTHER ANCHORAGE DEVICES FOR CONNECTING RAILINGS TO CONCRETE OR MASONRY WORK. REFER TO ASTM E488.
7. FOR RAILINGS SET IN CONCRETE, PROVIDE SLEEVES AT LEAST 6" IN DEPTH AND ½" GREATER IN DIAMETER THAN RAILING. SET WITH NON-SHRINK, NONMETALLIC GROUT DESIGNED FOR EXTERIOR APPLICATIONS. REFER TO ASTM C1107 "STANDARD FOR PACKAGE DRY, HYDRAULIC CEMENT GROUT".
8. INSTALL IN A MANNER THAT WILL PREVENT ACCUMULATION OF STANDING WATER AT THE BASE OF POSTS.
9. THE CONTRACTOR TO PRIME HANDRAIL SYSTEM WITH A ZINC RICH PRIMER. AFTER PRIMING THE HANDRAIL SYSTEM, A POWDER COATED FINISH IS TO BE APPLIED. THE POWDER COATED COLOR IS TO BE GLOSSY BLACK.
10. THE ADA HANDRAIL SYSTEM RAILING IS TO BE CONTINUOUS FROM THE TOP LANDING OF THE RAMP TO THE BOTTOM RAMP LANDING. THE RAILING IS ALSO TO BE CONTINUOUS AT THE MID-LANDINGS. THIS IS TO APPLY TO BOTH HANDRAILS ON BOTH SIDES OF THE RAMP.
11. THE ADA COMPLIANT HANDRAIL SYSTEM IS TO BE IN ACCORDANCE WITH CURRENT ADA STANDARDS. THE MANUFACTURER WILL BE RESPONSIBLE FOR CONFIRMING THAT HANDRAIL SYSTEM IS IN COMPLIANCE WITH ALL CURRENT ADA STANDARDS. ALL ADA STANDARDS ARE TO BE REFLECTED IN THE SHOP DRAWING.

TYPICAL BARRIER HANDRAIL DETAIL

NOT TO SCALE



MFGR.: NATIONAL FENCE SYSTEMS, INC.
1033 ROUTE 1
AVENEL, NJ 07001
PHONE NO.: 1-800-211-2444
WEB: WWW.NATIONALFENCESYSTEMS.COM

NOTES :

1. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE RAILING BARRIER FOR THE BULKHEAD AND RETAILING WALL FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO ORDERING ANY MATERIALS.
2. PROVIDE ASTM B210/A210M, ASTM B221/221M, ASTM B247/247M ASTM B429/429M, ASTM E985, STANDARD WEIGHT (SCHEDULE 40) ALUMINUM PIPE, UNLESS ANOTHER GRADE AND WEIGHT ARE REQUIRED BY STRUCTURAL LOADS.
3. WELD AND GRIND ALL JOINTS SMOOTH.
4. PROVIDE ALUMINUM TAMPER-PROOF INSERTS, SLEEVES AND OTHER ANCHORAGE DEVICES FOR CONNECTING RAILINGS TO CONCRETE OR MASONRY WORK. REFER TO ASTM E488.
5. INSTALL IN A MANNER THAT WILL PREVENT ACCUMULATION OF STANDING WATER AT THE BASE OF POSTS.
6. THE CONTRACTOR TO PRIME HANDRAIL SYSTEM WITH A ZINC RICH PRIMER. AFTER PRIMING THE HANDRAIL SYSTEM, A POWDER COATED FINISH IS TO BE APPLIED. THE POWDER COATED COLOR IS TO BE GLOSSY BLACK.

RAILING FOR BULKHEAD AND RETAINING WALL

NOT TO SCALE

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Corporate Office:
1800 Route 34, Suite 101
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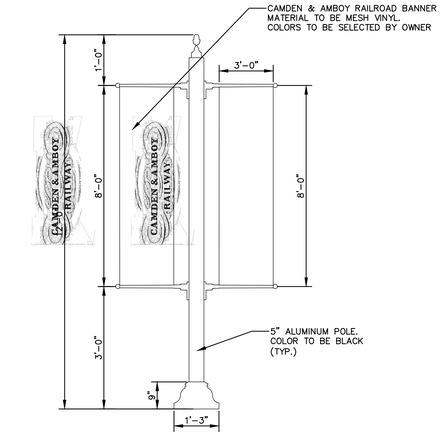
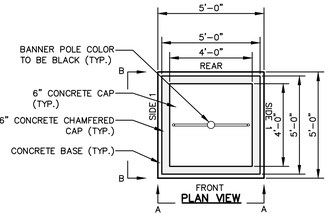


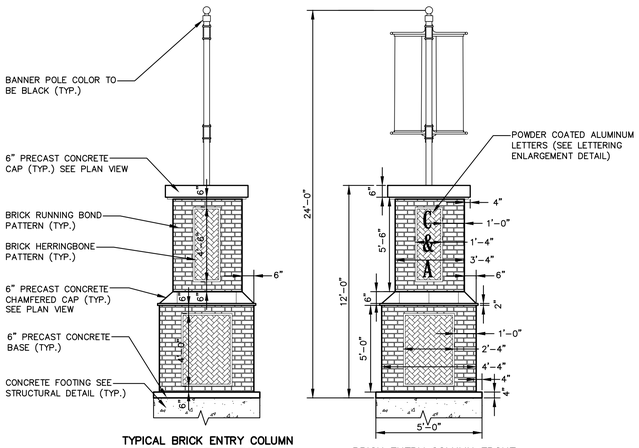
BANNER POLE AND BANNER NOTES:

1. CONTRACTOR TO SUBMIT COLOR SAMPLES OF THE ACTUAL MATERIAL FOR THE OWNERS REVIEW AND APPROVAL PRIOR TO ORDERING THE BANNERS. POLES TO BE COLOR BLACK.

   POLE MODEL NO.: STERNBERG LIGHTING 650 MILFORD. 5" SHAFT DIA.
   MFGR.: STERNBERG LIGHTING OR APPROVED EQUAL
   555 LAWRENCE AVE
   ROSELLE, ILLINOIS 60172
   PHONE NO.: 847-588-3400
   WEB: STERNBERGLIGHTING.COM

BANNER POLE DETAIL
NOT TO SCALE





TYPICAL BRICK ENTRY COLUMN ELEVATION (ELEVATION B)

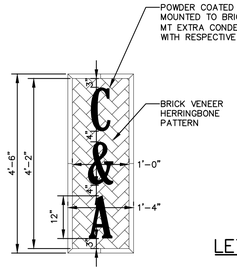
BRICK ENTRY COLUMN FRONT ELEVATION (ELEVATION A)

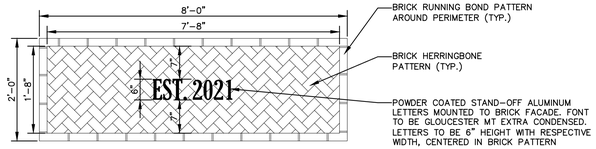
BRICK FACADE NOTES:

1. CONTRACTOR TO SUBMIT COLOR SAMPLES OF THE ACTUAL MATERIAL FOR THE OWNERS REVIEW AND APPROVAL PRIOR TO ORDERING THE BRICK PAVER MATERIAL.
2. THE CONTRACTOR IS TO REFER TO TYPICAL BRICK ENTRY COLUMN ELEVATION (ELEVATION B) FOR THE VENEER PATTERNS AND DIMENSION FOR THE TWO SIDES AND THE REAR OF COLUMN. THE CONTRACTOR TO REFER TO BRICK ENTRY COLUMN FRONT ELEVATION FOR THE BRICK VENEER DIMENSIONS, BRICK VENEER PATTERNS, POWDER COATED ALUMINUM LETTERS SIZE AND LOCATION, AND ALL OTHER REQUIRED DIMENSIONS.

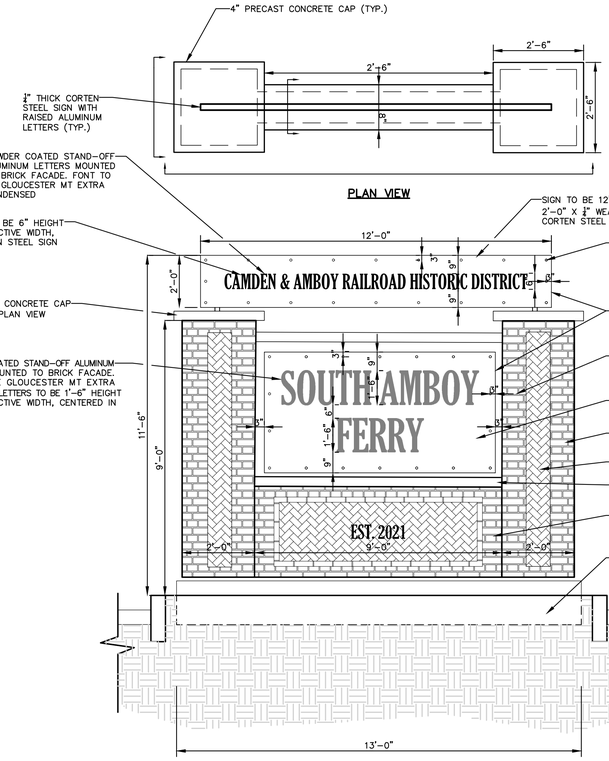
   BRICK VENEER MODEL NO.: 8"X4"X 2 1/4" SQUARE EDGE
   MFGR.: PINE HALL BRICK OR APPROVED EQUAL
   2701 SHOREFAIR DRIVE
   WINSTON-SALEM NC 27105
   PHONE NO.: 336-721-7500
   WEB: PINEHALLBRICK.COM

BRICK ENTRY COLUMN DETAIL
NOT TO SCALE

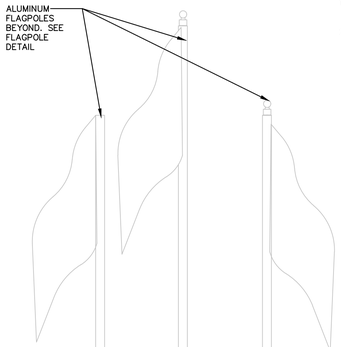


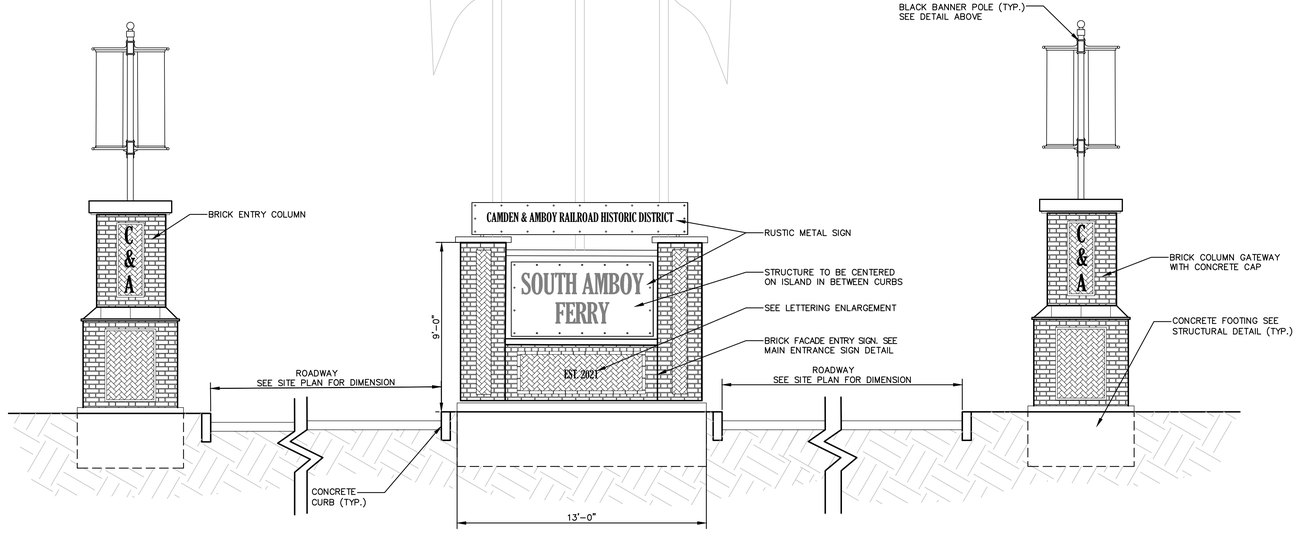


LETTERING ENLARGEMENT



MAIN ENTRANCE SIGN DETAIL
NOT TO SCALE





MAIN ENTRANCE DETAIL
NOT TO SCALE

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

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732.312.9800
FPAengineers.com
New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

CONSTRUCTION DETAILS

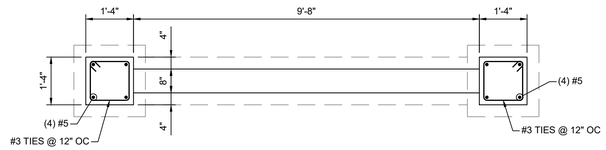
FOR

SOUTH AMBOY FERRY TERMINAL

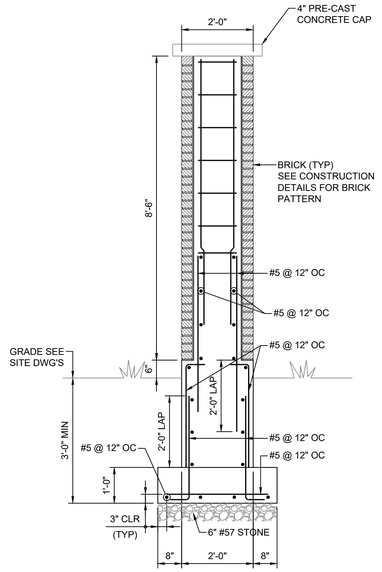
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

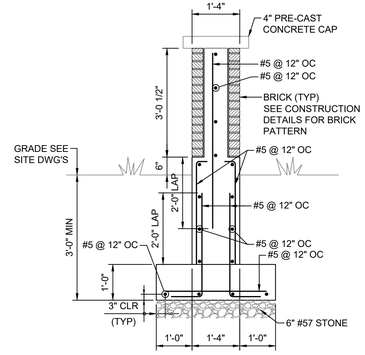
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	47 of 70



ENTRANCE SIGN - PLAN VIEW
SCALE: 1/2" = 1'-0"



SECTION - S1 @ ENTRANCE SIGN
SCALE: 1/2" = 1'-0"



SECTION - S2 @ ENTRANCE SIGN
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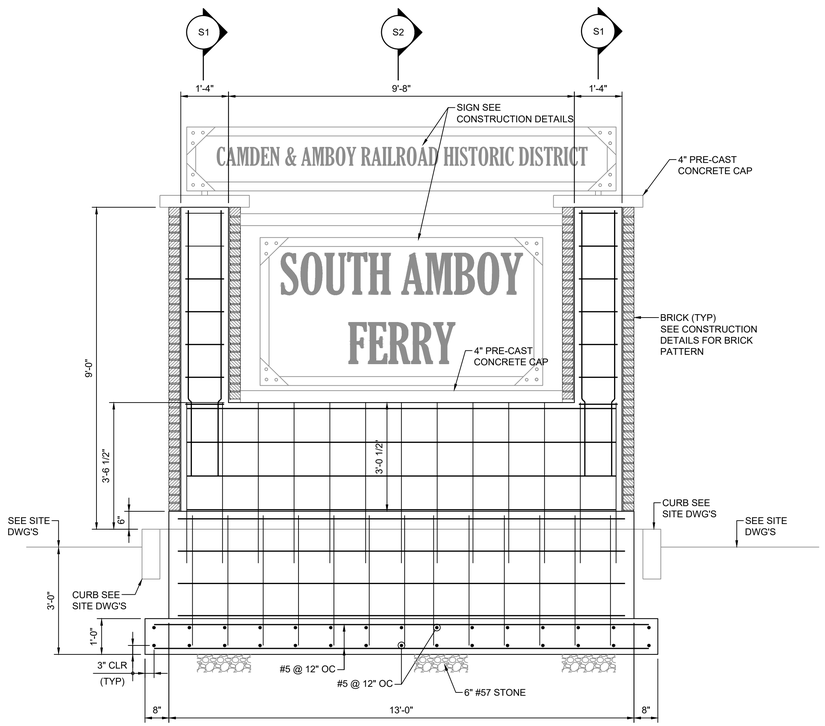

ENTRANCE SIGN - ELEVATION VIEW
SCALE: 1/2" = 1'-0"

No.	Date	Revision	Revised By	Checked By

SCALE IN FEET

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CONSTRUCTION DETAIL

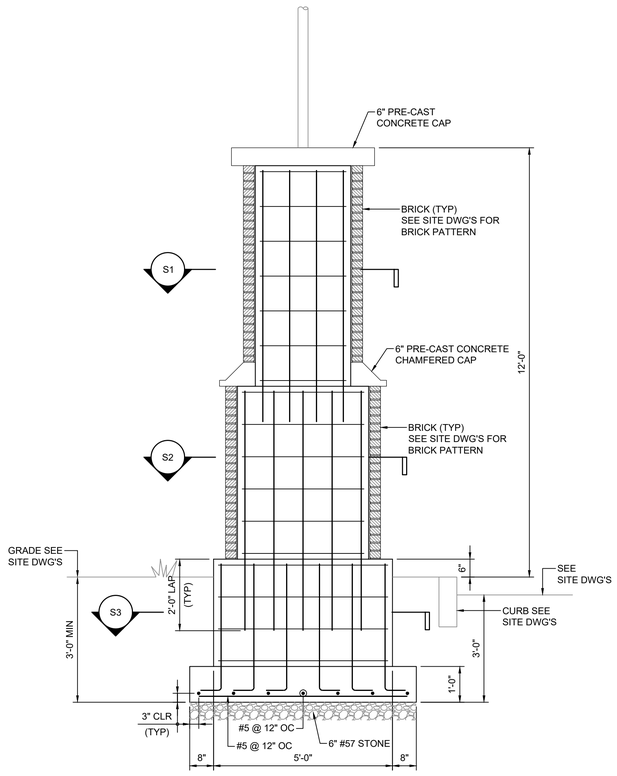
FOR

SOUTH AMBOY FERRY TERMINAL

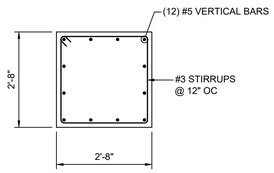
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

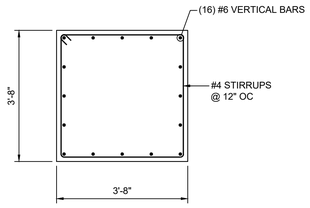
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	JVC	3/4" = 1'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
ARC	JVC	-----	48 of 70



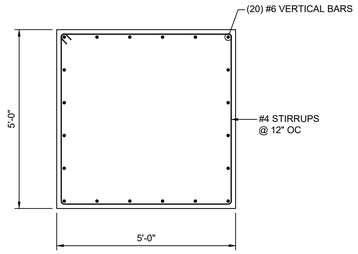
ENTRANCE PILLAR - ELEVATION VIEW
SCALE: 1/2" = 1'-0"



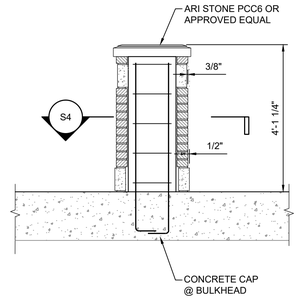
SECTION - S1 @ ENTRANCE PILLAR
SCALE: 1/2" = 1'-0"



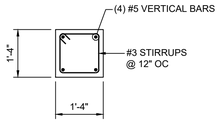
SECTION - S2 @ ENTRANCE PILLAR
SCALE: 1/2" = 1'-0"



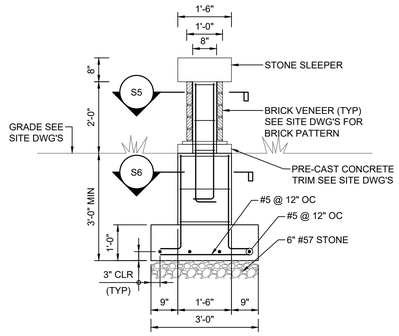
SECTION - S3 @ ENTRANCE PILLAR
SCALE: 1/2" = 1'-0"



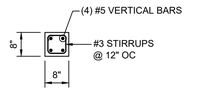
BRICK RAILING PIER ELEVATION VIEW
SCALE: 1/2" = 1'-0"



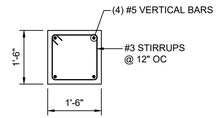
SECTION - S4 @ BRICK FENCE PIER
SCALE: 1/2" = 1'-0"



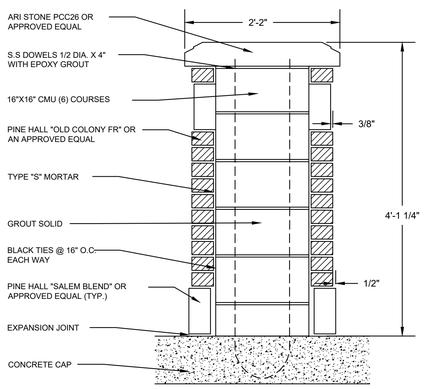
STONE SLEEPER PIER ELEVATION VIEW
SCALE: 1/2" = 1'-0"



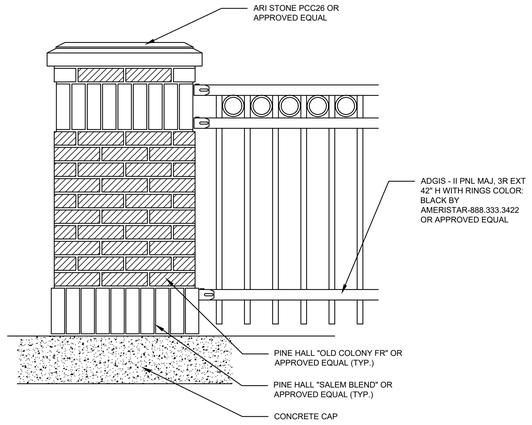
SECTION - S5 @ STONE SLEEPER PIER
SCALE: 1/2" = 1'-0"



SECTION - S6 @ STONE SLEEPER PIER
SCALE: 1/2" = 1'-0"



BRICK PIER SECTION DETAIL
NOT TO SCALE



BRICK PIER ELEVATION DETAIL
NOT TO SCALE

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CONSTRUCTION DETAILS

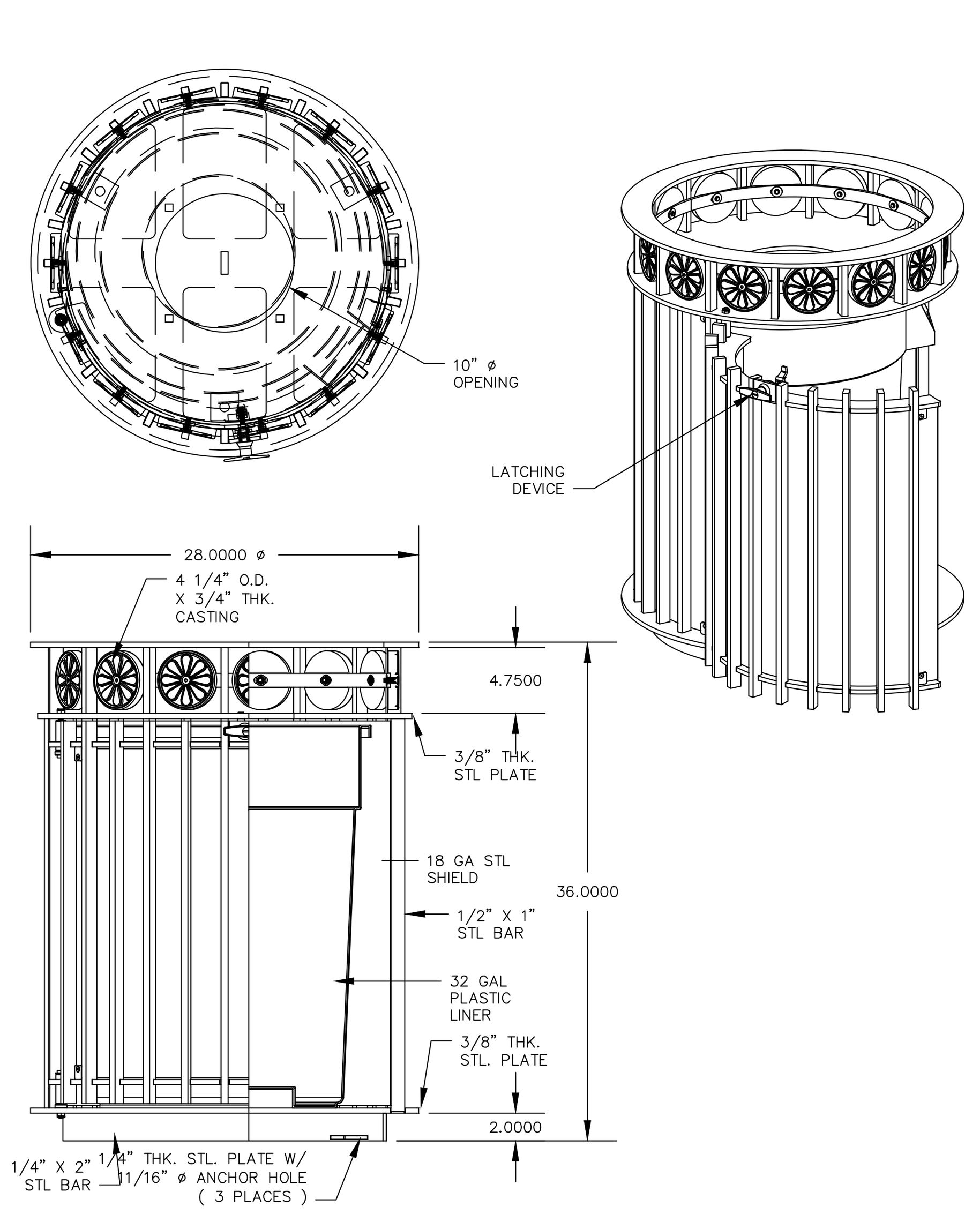
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

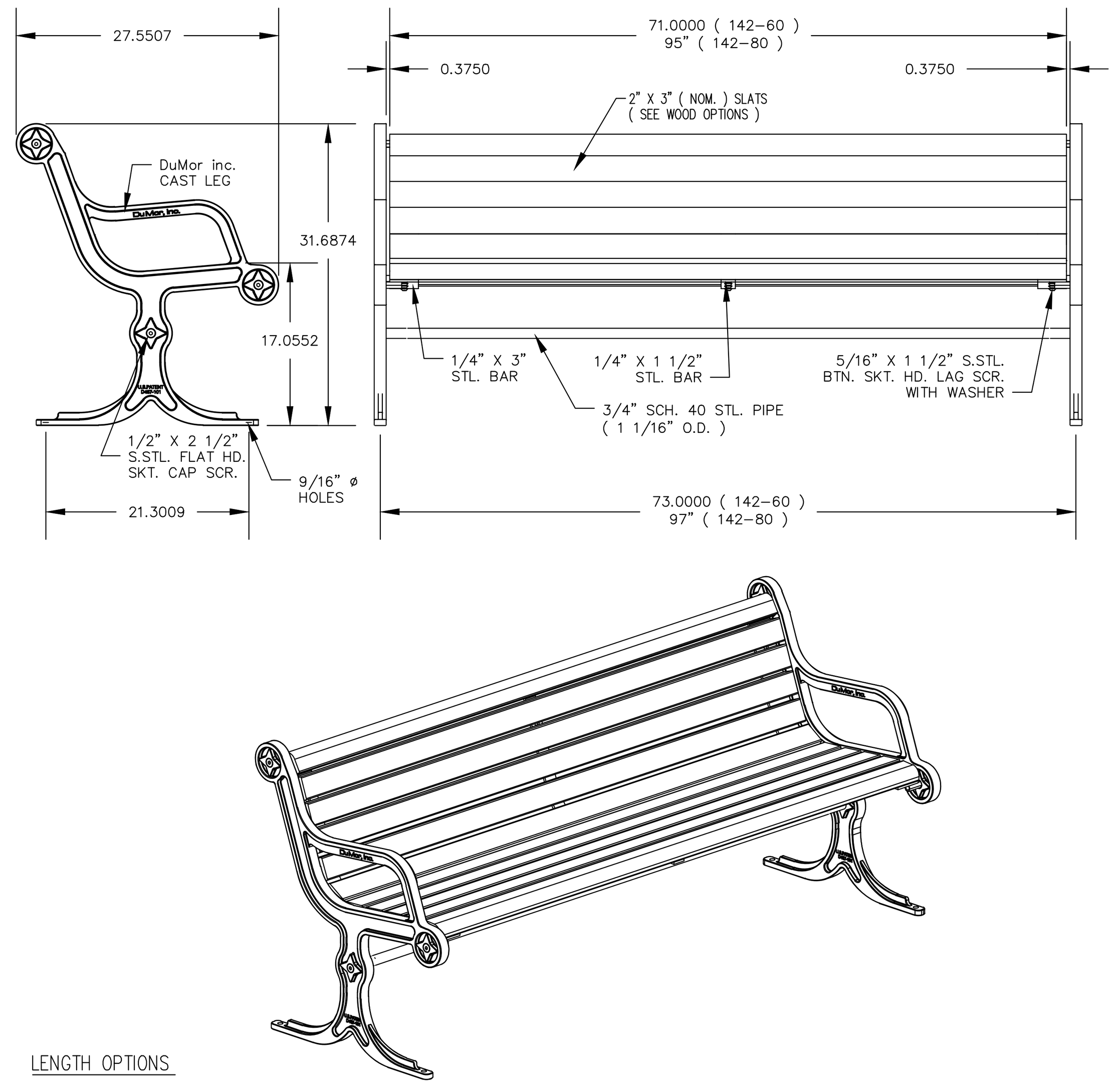
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	JVC	3/4" = 1'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
ARC	JVC	----	49 of 70



NOTES:
1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED.
3.) SIDE OF RECEPTACLE HINGES OPEN FOR REMOVAL OF LINER.
4.) LATCH PROVIDED W/ KEY, USE OF KEY OPTIONAL.
5.) RECEPTACLE FULLY ASSEMBLED AT FACTORY.

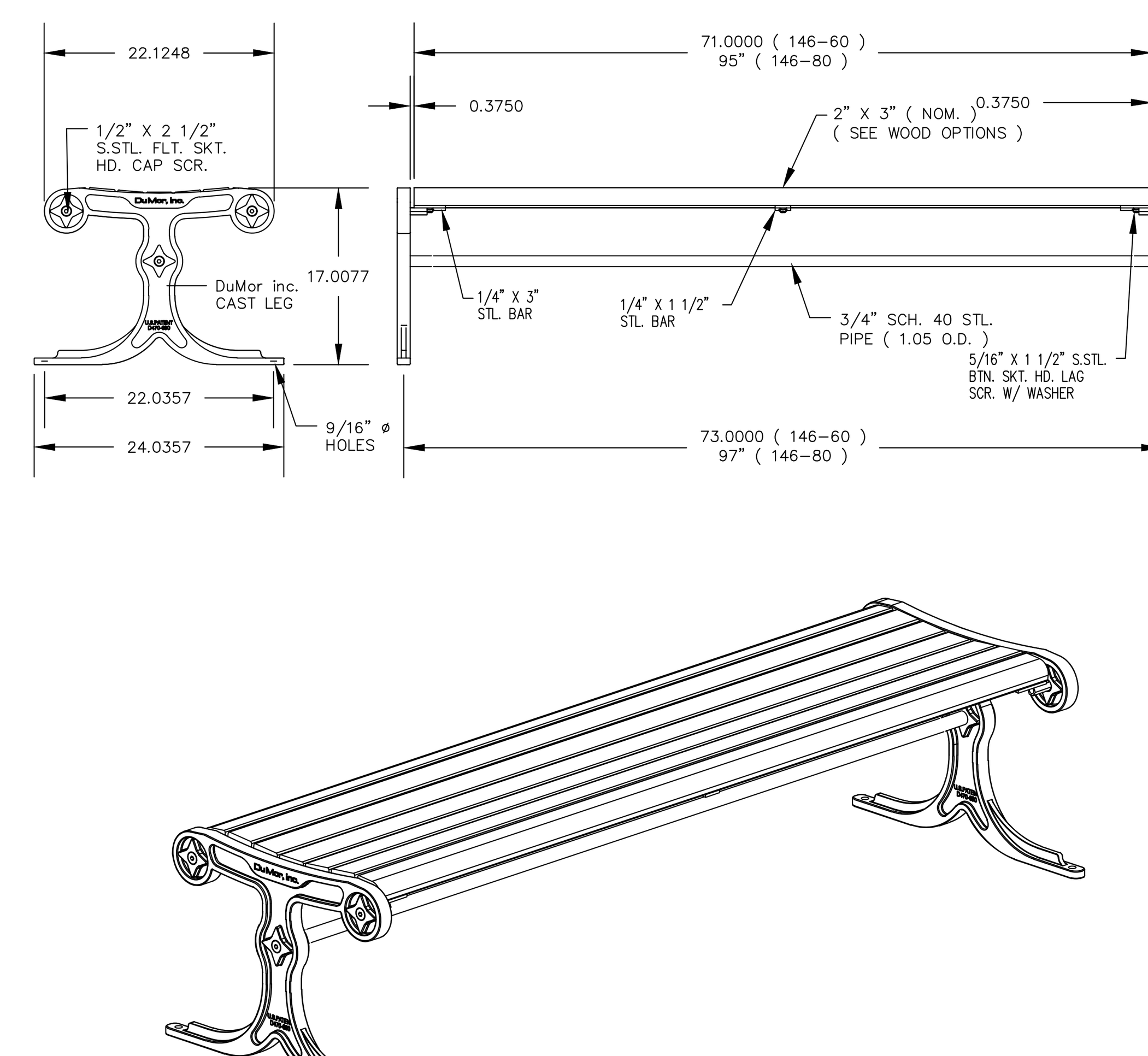
RECEPTACLE
NOT TO SCALE



LENGTH OPTIONS
☐ 6' BENCH
☐ 8' BENCH

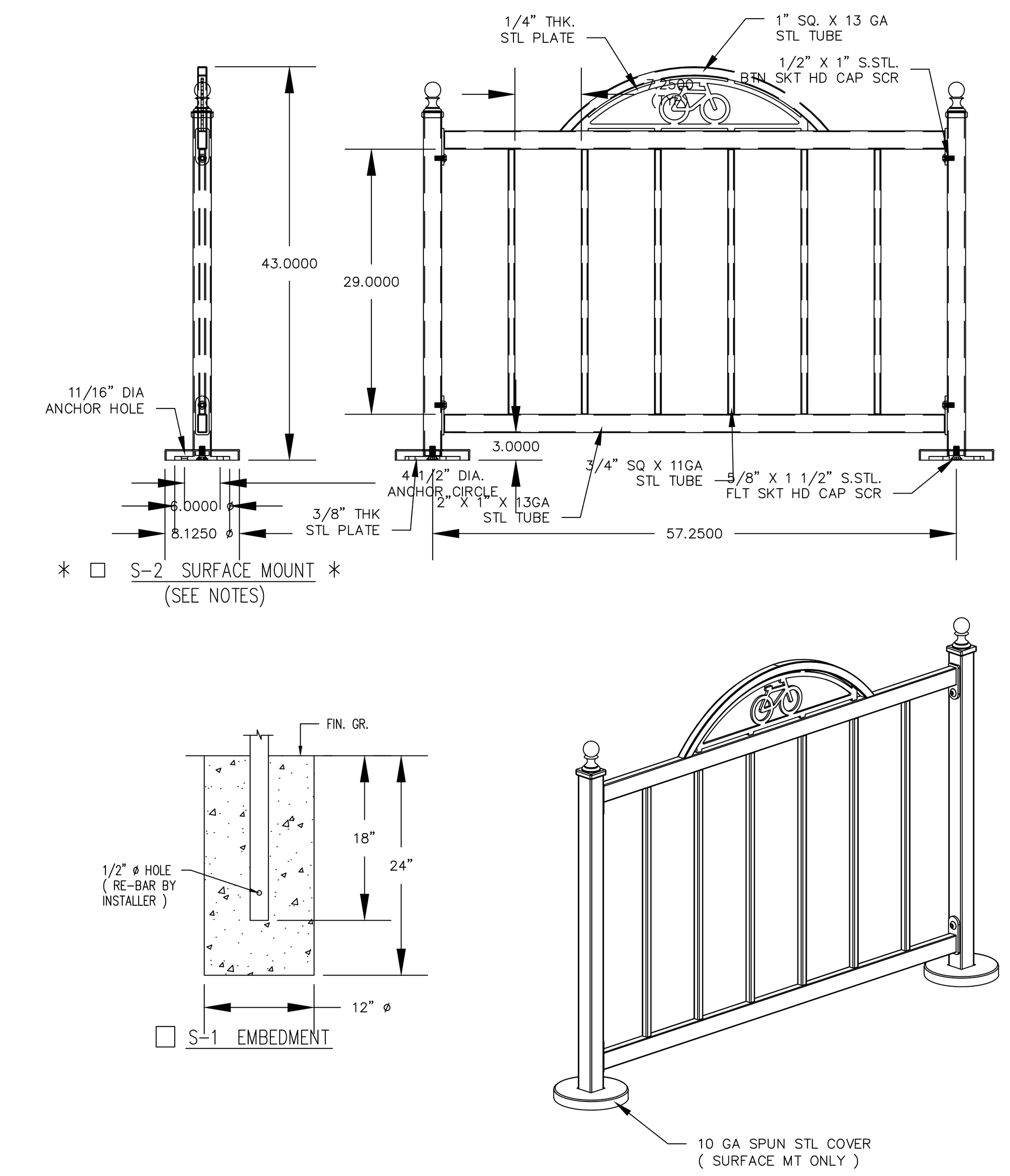
NOTES
1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED.
3.) CUSTOM LETTERING AVAILABLE FOR RECESSED SIDE PANELS (TOTAL OF 37 SPACES).

BENCH
NOT TO SCALE



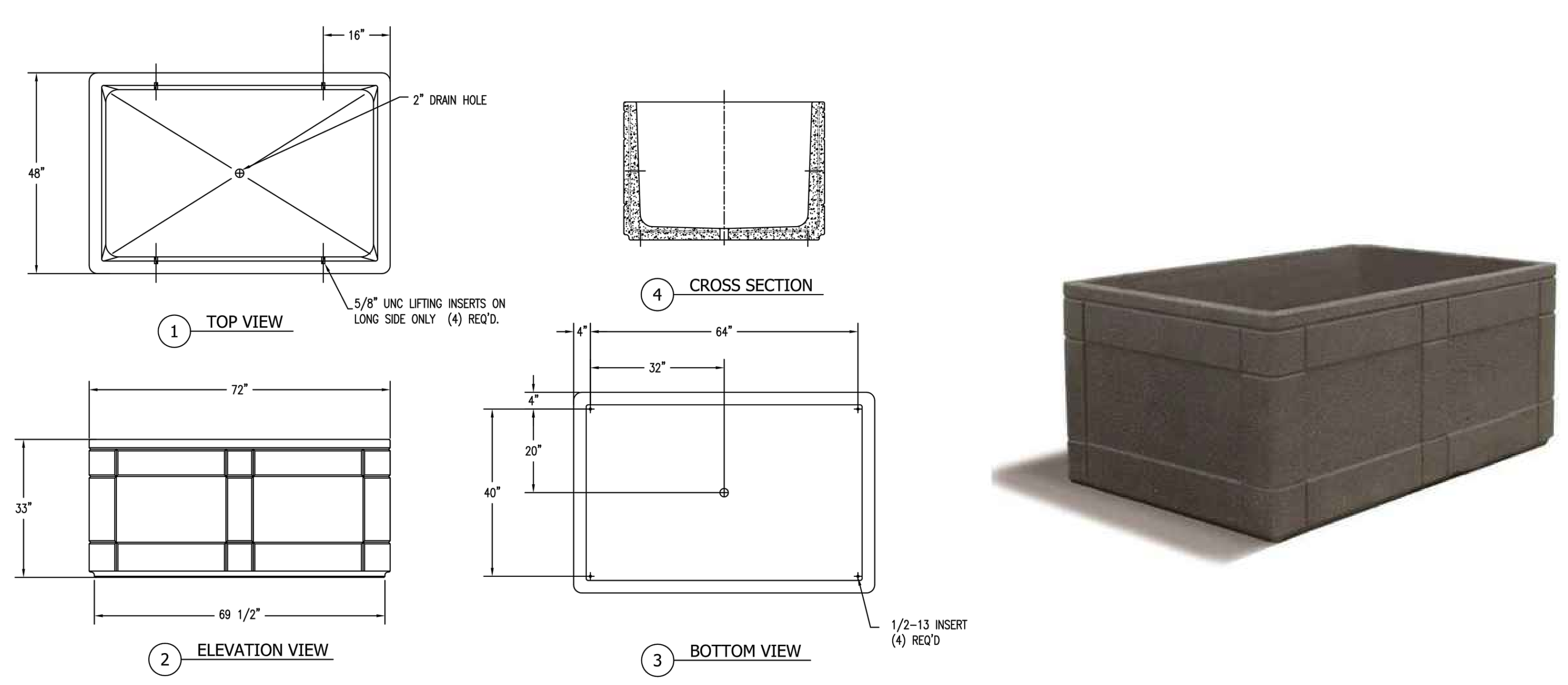
NOTES
1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN POLYESTER POWDER COATED.
2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED.

BENCH
NOT TO SCALE



NOTES:
1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED FOR OPTION S–2.
* UPCHARGE APPLIES TO SUPPORT OPTION – CONSULT YOUR LOCAL REPRESENTATIVE.

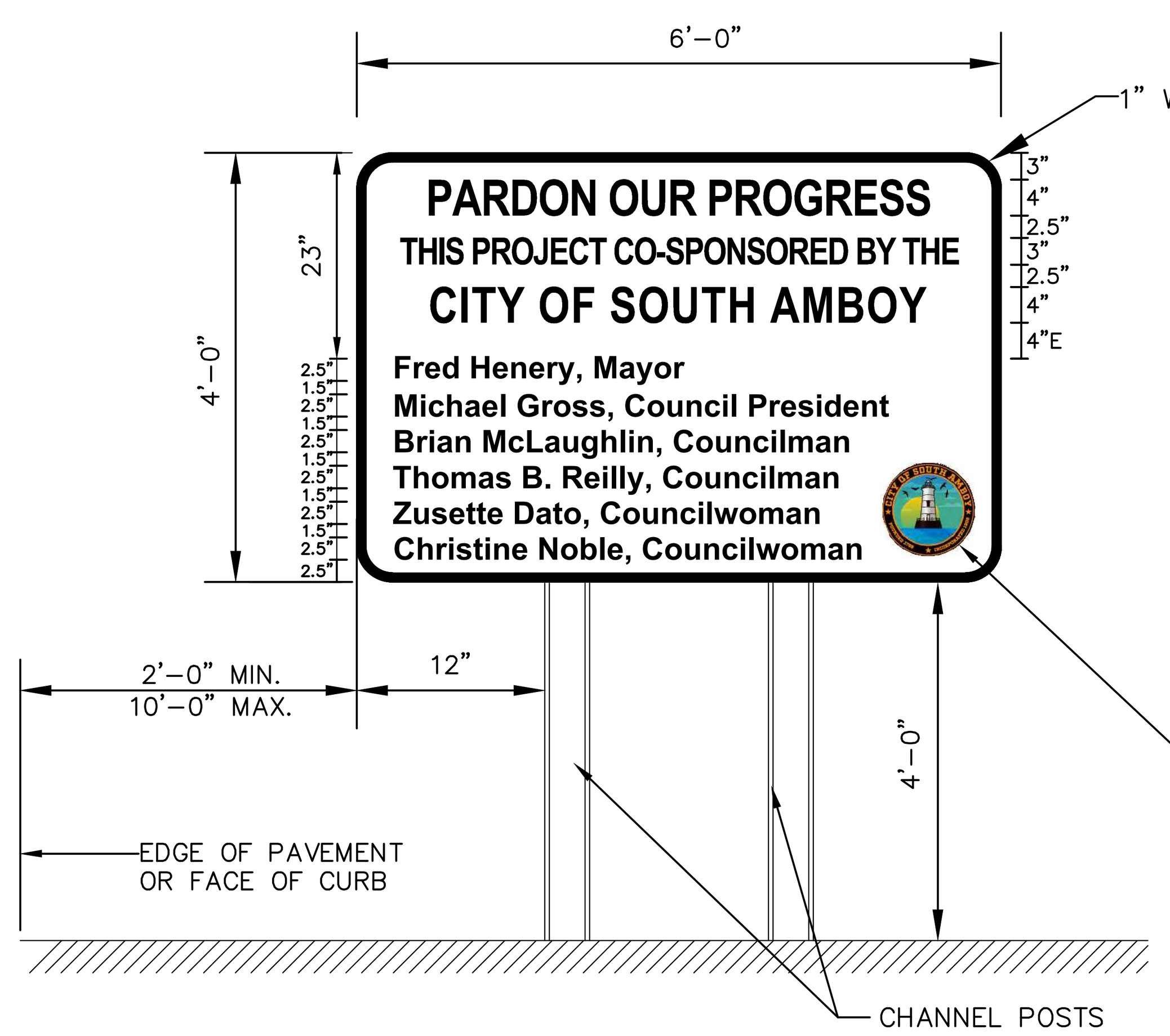
BIKE RACK
NOT TO SCALE



PLANTER MODEL NO.: TF–4183 OR APPROVED EQUAL
MFGR.: CROWD CONTROL WAREHOUSE, LLC
1525 W HOMER ST, STE 203
CHICAGO, IL 60642–1279
PHONE NO.: 847–991–9900
WEB: WWW.CROWDCONTROLWAREHOUSE.COM

NOTES:
1. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO ORDERING MATERIALS.
2. MATERIAL TO BE REINFORCED CONCRETE, FINISH TO BE WEATHERSTONE. COLOR TO BE SELECTED BY OWNER.

LARGE RECTANGULAR CONCRETE PLANTER - 72"x48"x33"
NOT TO SCALE

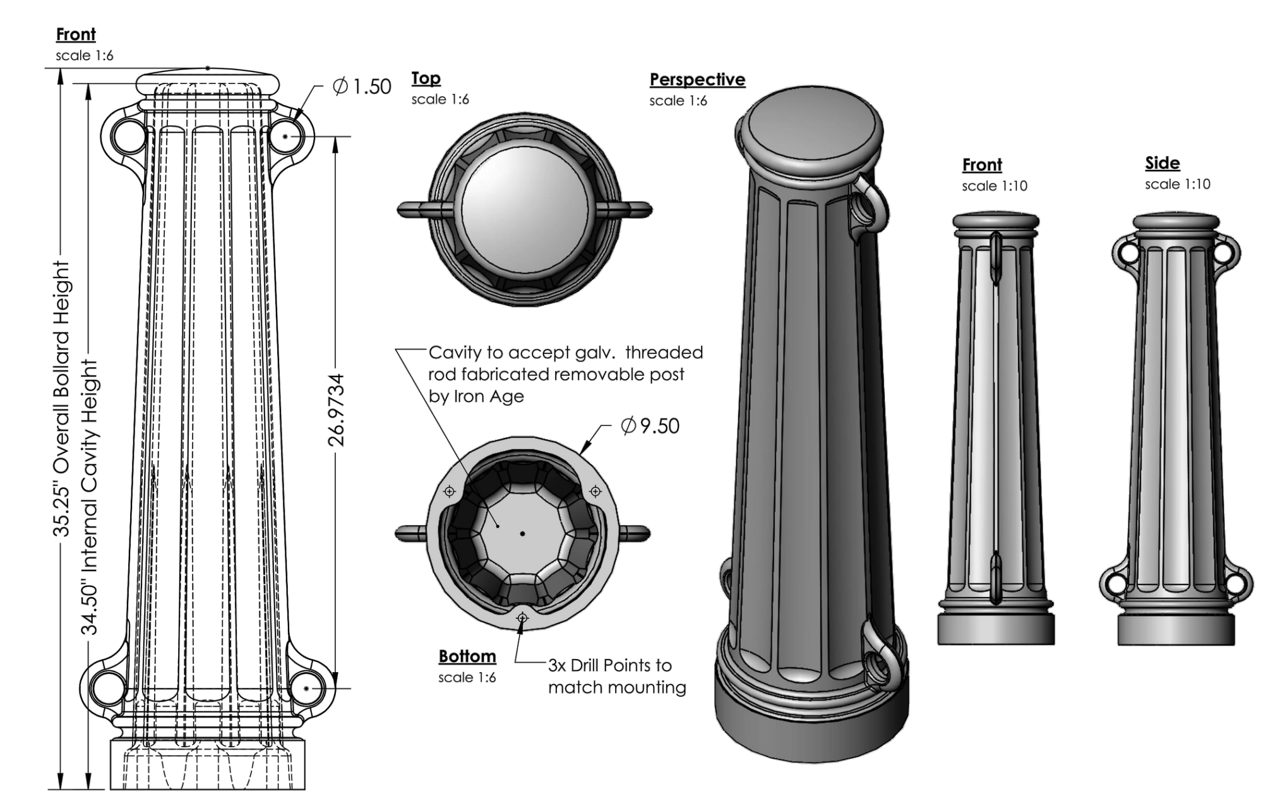


NOTES:
1. WHITE LETTERING ON BLUE BACKGROUND SHALL BE USED.
2. SIGN SUPPORT SHALL BE STEEL CHANNEL POST, 3 LBS/FT AND PROPERLY PAINTED.
3. SIGN SHEETING SHALL BE TYPE II REFLECTORIZED.

CITY OF SOUTH AMBOY EMBLEM TO BE SUPPLIED BY THE CITY OF SOUTH AMBOY AND INSTALLED BY THE CONTRACTOR.

ALL COSTS FOR MATERIAL, LABOR, AND INSTALLATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PAY ITEM ENTITLED "CONSTRUCTION IDENTIFICATION SIGN, 6'X4'". THIS ITEM SHALL BECOME THE PROPERTY OF THE CITY OF SOUTH AMBOY UPON COMPLETION OF WORK.

DETAIL FOR PROJECT SIGN
NOT TO SCALE



MODEL: MAIN STREET – POWDER COATED CAST ALUMINUM
MFGR: IRON AGE DESIGNS OR AN APPROVED EQUAL
WEB: WWW.IRONAGEGRATES.COM

METAL DECORATIVE BOLLARD
NOT TO SCALE

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CONSTRUCTION DETAILS
FOR
SOUTH AMBOY FERRY TERMINAL
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
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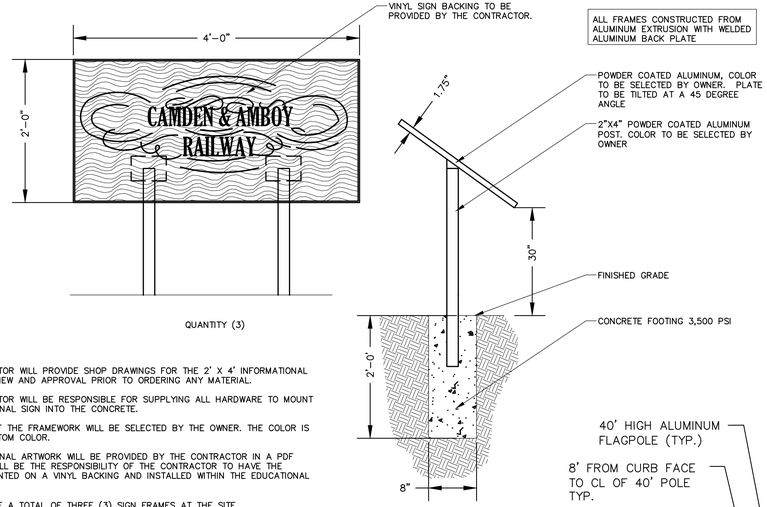
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	––––	50 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749–003–CD2.dwg 50 Construction Details



QUANTITY (3)

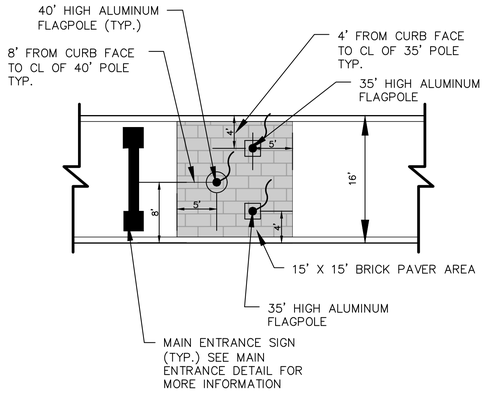
SIGN NOTES:

1. THE CONTRACTOR WILL PROVIDE SHOP DRAWINGS FOR THE 2' X 4' INFORMATIONAL SIGN FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIAL.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUPPLYING ALL HARDWARE TO MOUNT THE EDUCATIONAL SIGN INTO THE CONCRETE.
3. THE COLOR OF THE FRAMEWORK WILL BE SELECTED BY THE OWNER. THE COLOR IS TO BE A CUSTOM COLOR.
4. THE EDUCATIONAL ARTWORK WILL BE PROVIDED BY THE CONTRACTOR IN A PDF FORMAT. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THE GRAPHICS PRINTED ON A VINYL BACKING AND INSTALLED WITHIN THE EDUCATIONAL SIGN FRAME.
5. THERE WILL BE A TOTAL OF THREE (3) SIGN FRAMES AT THE SITE.

PRODUCTS: SIGN FRAME AND (2) POST WITH PLATE EXHIBIT BASE – BASE IN GROUND MOUNT – ALL ALUMINUM CONSTRUCTION
MANUFACTURER: BEST EXHIBITS–CUSTOM METAL EXHIBIT FABRICATION
820 INDUSTRIAL COURT
BARABOO, WI 53913
PHONE: 800–356–4882
EMAIL: INFO@BEST–EXFAB.COM
WEB: BEST–EXFAB.COM

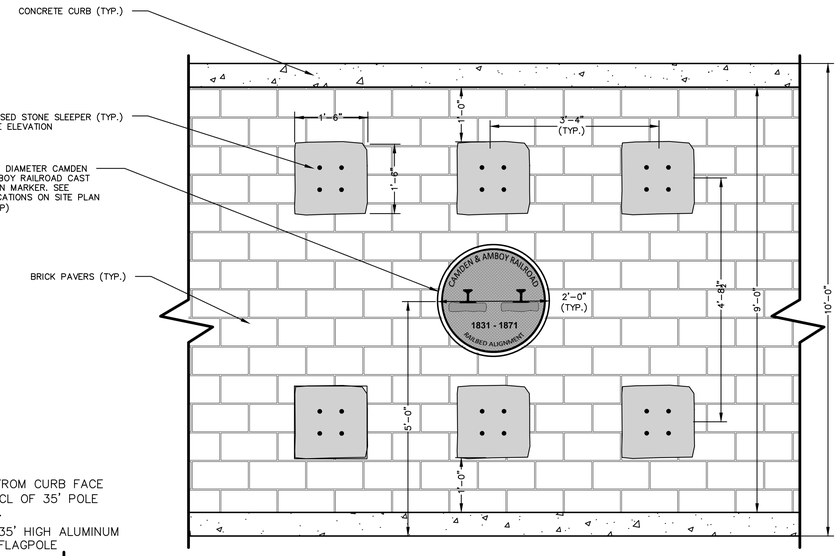
2' X 4' INFORMATIONAL SIGN DETAIL

NOT TO SCALE



FLAG ENTRANCE PLAZA AREA DETAIL

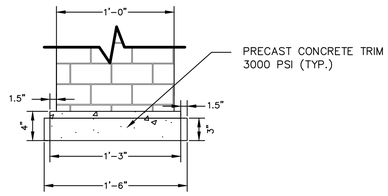
NOT TO SCALE



PLAN VIEW

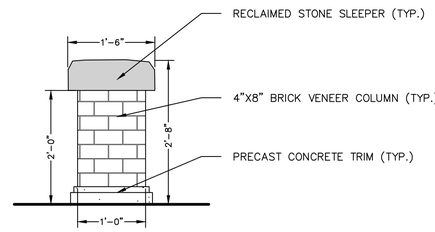
NOTES:

1. STONE SLEEPERS TO BE RECLAIMED ON SITE AND REUSED TO CREATE EXHIBIT. ALL DIMENSIONS ARE APPROXIMATE.
2. CONTRACTOR TO VERIFY MATERIALS ON SITE WITH OWNER PRIOR TO CREATING EXHIBIT.



PRECAST CONCRETE TRIM DETAIL

NOT TO SCALE



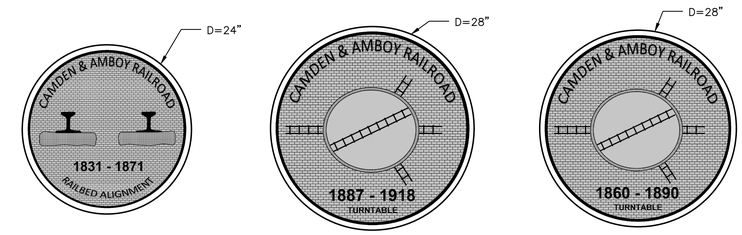
BRICK VENEER MODEL NO.: 8"X4"X 2 1/4" SQUARE EDGE
MFGR.: PINE HALL BRICK OR APPROVED EQUAL
2701 SHOREFAIR DRIVE
WINSTON–SALEM NC 27105
PHONE NO.: 336–721–7500
WEB: PINEHALLBRICK.COM

ELEVATION

NOT TO SCALE

RAISED STONE SLEEPER DISPLAY DETAIL

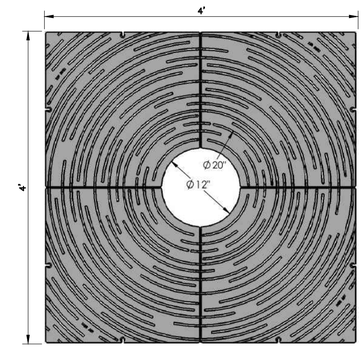
NOT TO SCALE



GRAPHIC A
GROUND MARKER AT RAILBED

GRAPHIC B
GROUND MARKER AT TURNTABLES

GRAPHIC C
GROUND MARKER AT TURNTABLES



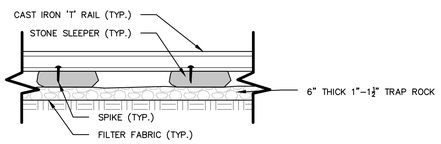
NOTES:

1. THE CONTRACTOR WILL PROVIDE SHOP DRAWINGS FOR THE 4' X 4' TREE GRATE FOR REVIEW AND APPROVAL PRIOR TO ORDERING ANY MATERIAL.
2. MATERIAL TO BE CAST IRON, COLOR AND FINISH TO BE SELECTED BY OWNER.

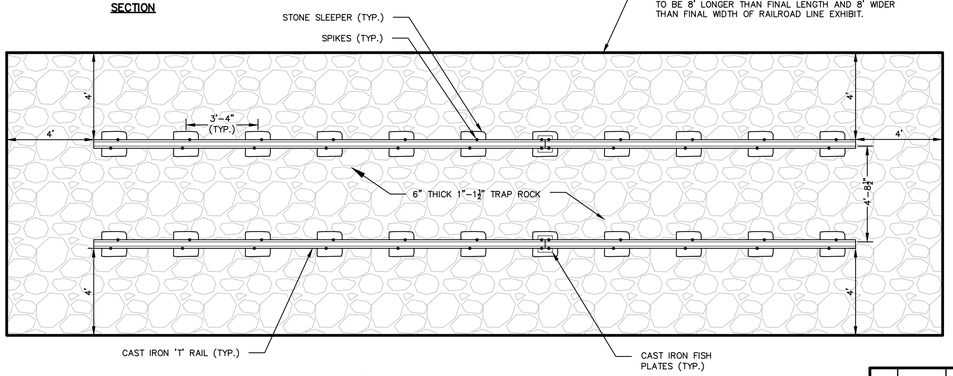
PRODUCTS: 4' X 4' CAST IRON HEEL PROOF TREE GRATE
MANUFACTURER: IRON AGE DESIGNS
2104 SW 152ND ST. SUITE #4
BURIEN, WA 98166
PHONE: 877–418–3568
EMAIL: INFO@IRONAGEGRATES.COM
WEB: IRONAGEGRATES.COM

4' X 4' CAST IRON TREE GRATE DETAIL

NOT TO SCALE



SECTION

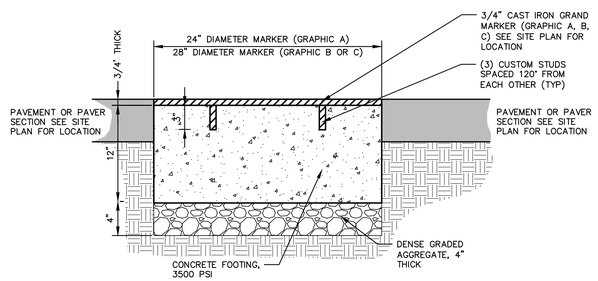


NOTES:

1. STONE SLEEPERS TO BE RECLAIMED ON SITE AND REUSED TO CREATE EXHIBIT. ALL DIMENSIONS ARE APPROXIMATE.
2. CONTRACTOR TO VERIFY MATERIALS ON SITE WITH OWNER PRIOR TO CREATING EXHIBIT.

VINTAGE RAILROAD LINE EXHIBIT

NOT TO SCALE



CAMDEN AMBOY RAILROAD CAST IRON MARKER DETAIL

NOT TO SCALE

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SCALE IN FEET

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Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com
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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

CONSTRUCTION DETAILS

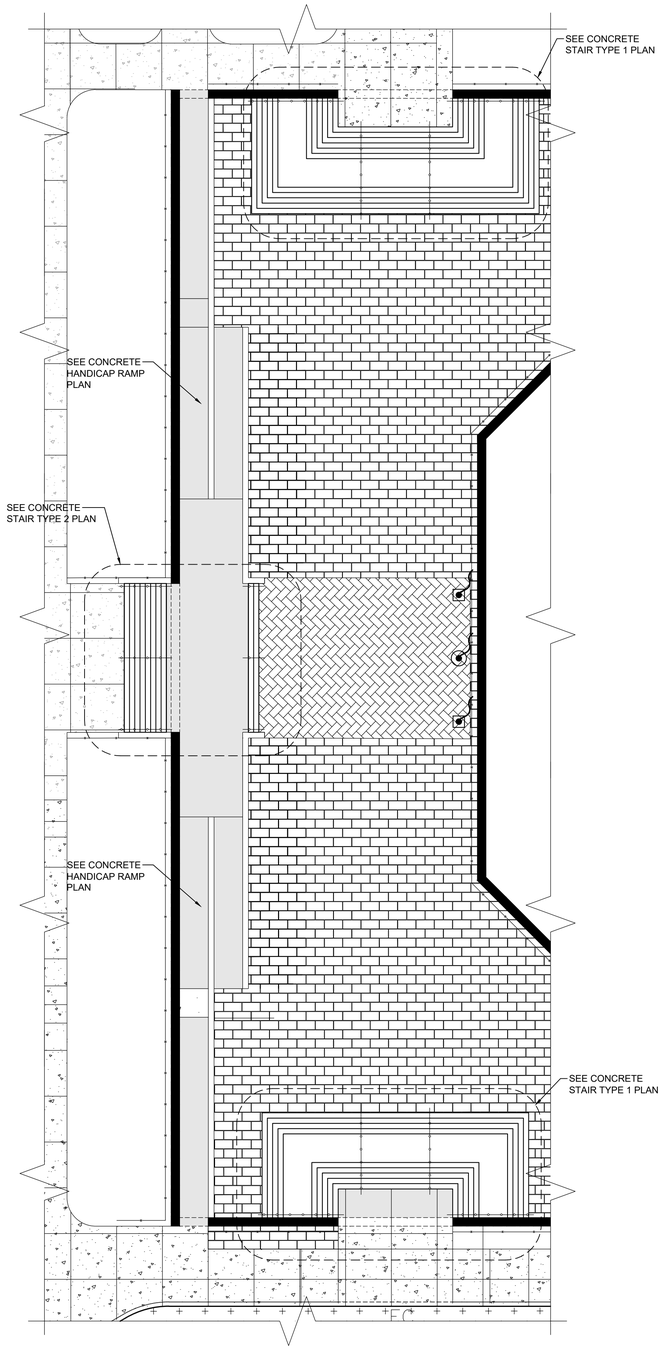
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

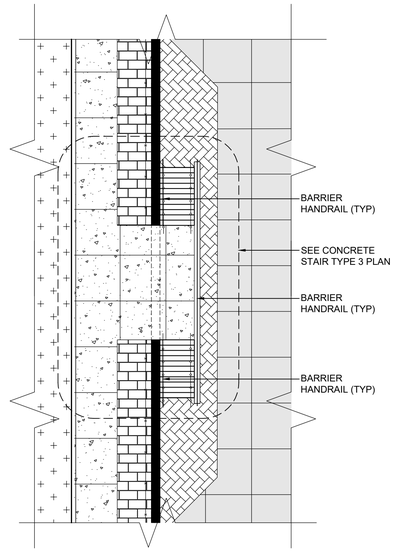
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	RJB	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
SKW	DFK	----	51 of 70



SITE STAIR AND RAMP PLAN

SCALE: 1" = 15'

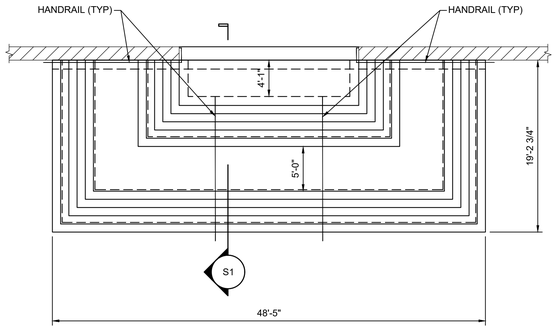
FOR OVERALL SITE PLAN REFER TO SITE DWG'S



SITE STAIR PLAN

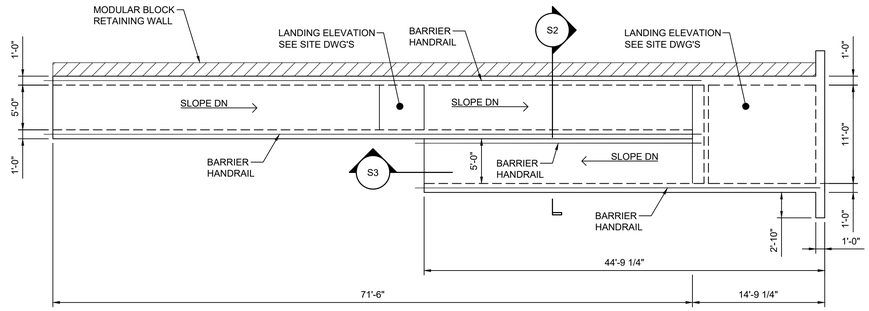
SCALE: 1" = 15'

FOR OVERALL SITE PLAN REFER TO SITE DWG'S



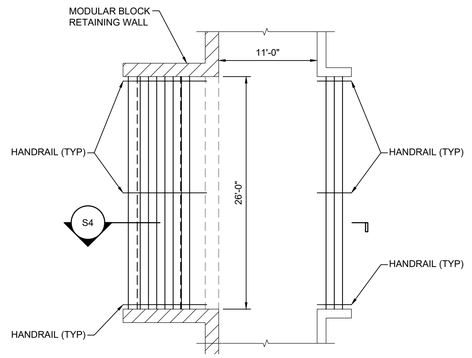
CONCRETE STAIR TYPE 1 PLAN

SCALE: 1/8" = 1'-0"



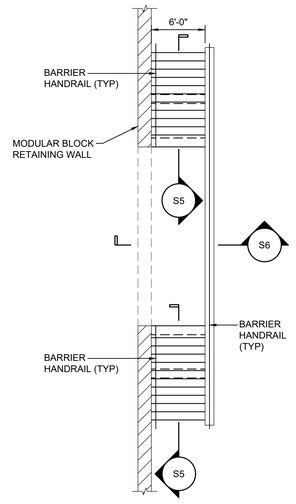
CONCRETE HANDICAP RAMP PLAN

SCALE: 1/8" = 1'-0" (SOUTH RAMP SHOWN)



CONCRETE STAIR TYPE 2 PLAN

SCALE: 1/8" = 1'-0"



CONCRETE STAIR TYPE 3 PLAN

SCALE: 1/8" = 1'-0"

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732.312.9800
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STEVEN A. TARDY, PE
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STAIR & RAMP PLANS

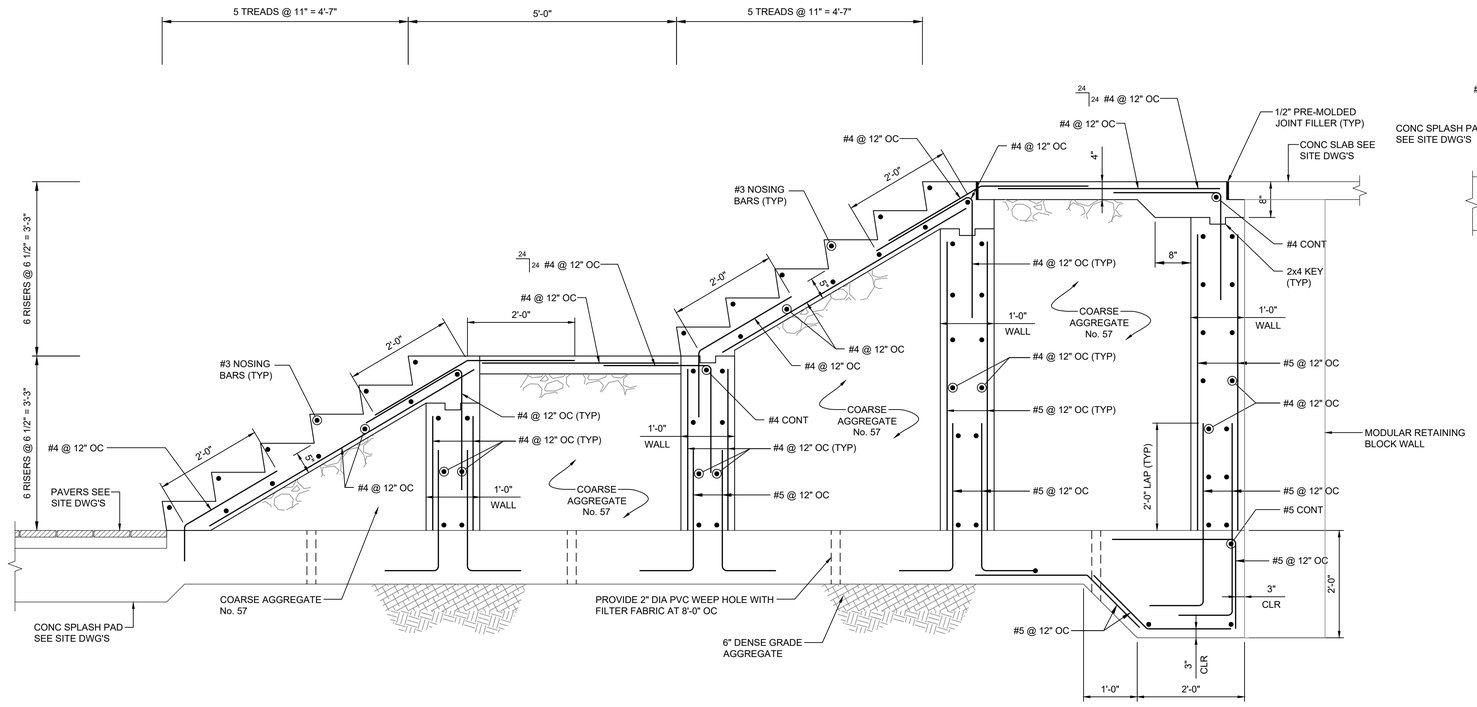
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

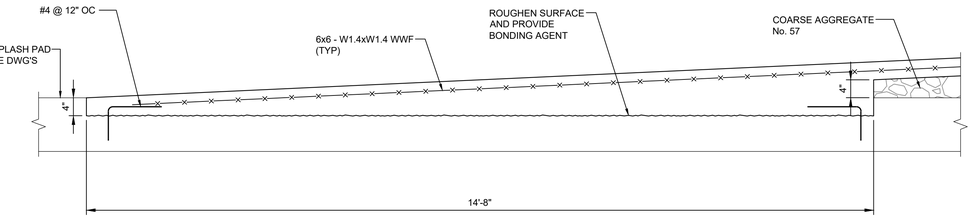
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	JVC	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
ARC	JVC	----	52 of 70



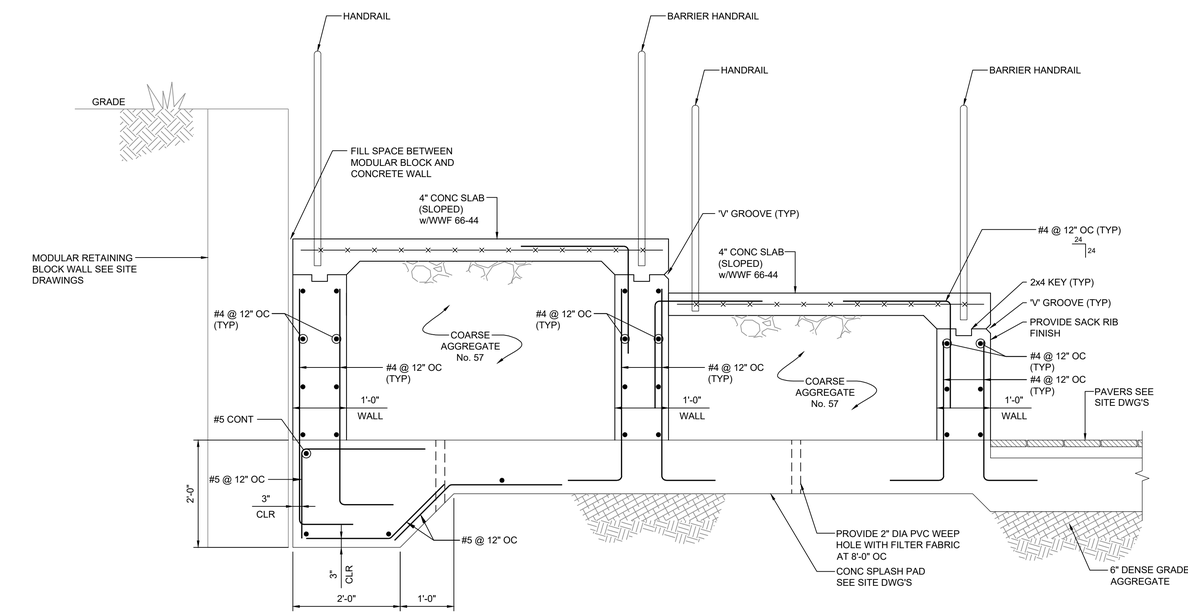
S1 - SECTION THROUGH STAIR

SCALE: 3/4" = 1'-0"



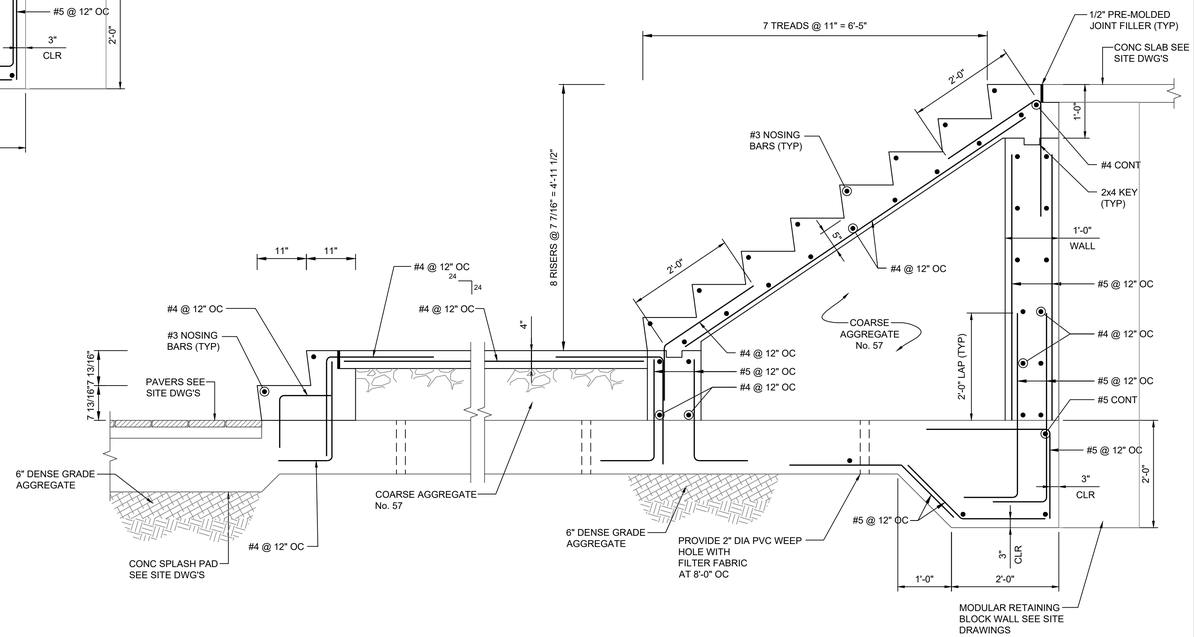
S3 - SECTION AT RAMP END

SCALE: 3/4" = 1'-0"



S2 - SECTION THROUGH RAMP

SCALE: 3/4" = 1'-0"



S4 - SECTION THRU STAIR

SCALE: 3/4" = 1'-0"

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PROFESSIONAL ENGINEER, NJ LIC No. 38934

STAIR & RAMP SECTIONS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
ARC	JVC	----	53 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
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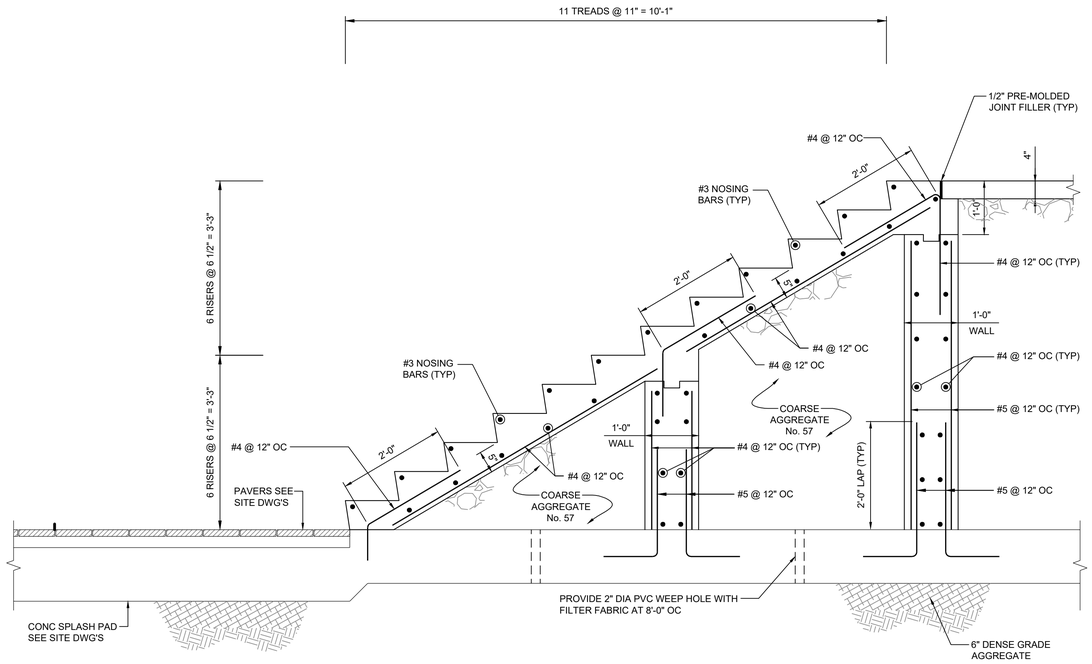
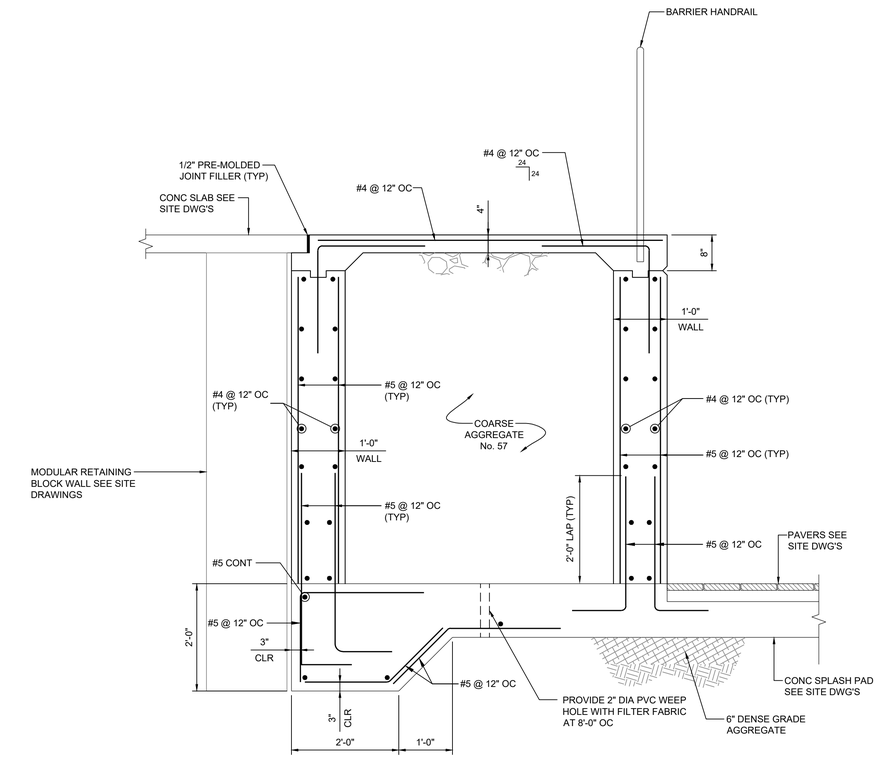


S5 - SECTION THROUGH STAIR
SCALE: 3/4" = 1'-0"



S6 - SECTION THROUGH STAIR
SCALE: 3/4" = 1'-0"

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Plotted by: Suzanne C. Sleeman 10/7/2021
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PRECAST CONCRETE BLOCK RETAINING WALL:

CONSTRUCTION

1. CONTRACTOR SHALL PREPARE WORKING DRAWINGS FOR PRECAST CONCRETE BLOCK RETAINING WALLS IN ACCORDANCE WITH THE BLOCK MANUFACTURER'S SPECIFICATIONS AND DETAILS AS MODIFIED BY THESE NOTES, PROJECT SPECIFICATIONS, DETAILS AND DRAWINGS. CONTRACTOR SHALL SUBMIT WORKING DRAWINGS FOR REVIEW AND APPROVAL.

2. CONTRACTOR SHALL CONSTRUCT PRECAST CONCRETE BLOCK RETAINING WALLS IN ACCORDANCE WITH APPROVED WORKING DRAWINGS.

3. EXCAVATIONS FOR RETAINING WALLS SHALL EXTEND TO A COMPETENT BEARING STRATUM. ADEQUATE SUBGRADE CONDITIONS SHALL BE DETERMINED BY RESIDENT ENGINEER. ANY AREAS REQUIRING OVER-EXCAVATION SHALL BE LEVELED AND/OR FILLED USING NO. 57 STONE OR OTHER APPROVED AGGREGATE.

4. PRECAST CONCRETE BLOCK UNITS AND ASSOCIATED FILLS SHALL BE PLACED AT THE LINES AND GRADES PRESENTED ON THE CONSTRUCTION DRAWINGS. PRECAST CONCRETE BLOCK UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS AND AS SPECIFIED HEREIN. THE WALL BACKFILL SHALL BE PLACED IN MAXIMUM 12-INCH LIFTS, AND MECHANICALLY COMPACTED TO A MINIMUM OF 95 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED USING ASTM TEST METHOD D-1557, THE MODIFIED PROCTER. REFER TO WORKING DRAWINGS FOR BLOCK TYPE AND SIZE, AS WELL AS TYPE OF WALL BACKFILL. THE USE OF HEAVY COMPACTION EQUIPMENT WITHIN A DISTANCE OF 5 FEET FROM THE WALL IS PROHIBITED. CARE SHALL BE EXERCISED BY THE CONTRACTOR TO AVOID DISPLACING BLOCK UNITS WHILE COMPACTING WALL BACKFILL. ANY DISPLACED UNITS SHALL BE REMOVED AND RESET.

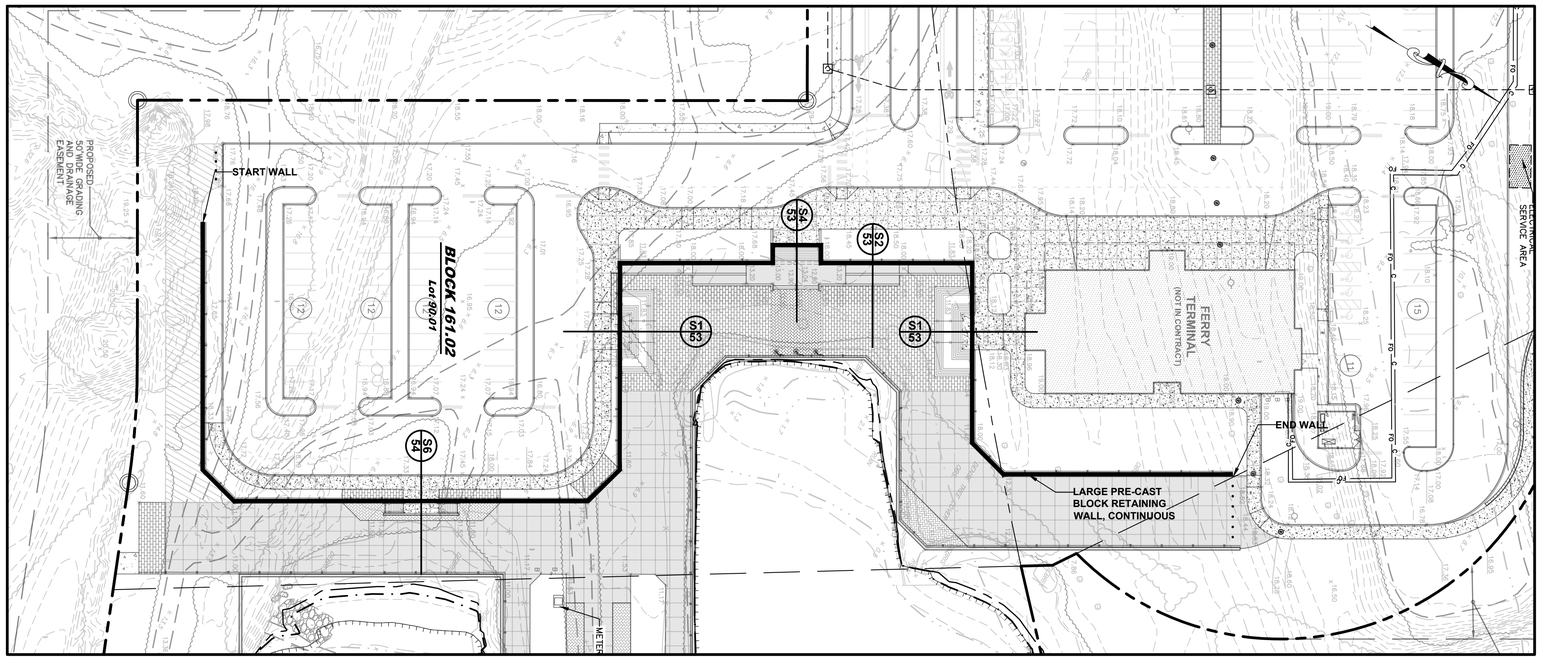
5. MATERIAL FOR THE CONSTRUCTION OF THE PRECAST CONCRETE BLOCK RETAINING WALLS PRESENTED ON THE CONSTRUCTION DRAWINGS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS.

   PRECAST CONCRET BLOCK UNITS: REDI-ROCK UNITS AS MANUFACTURED BY A CERTIFIED REDI-ROCK LICENSEE OR APPROVED EQUAL. UNIT FACE TO BE SELECTED BY THE OWNER.

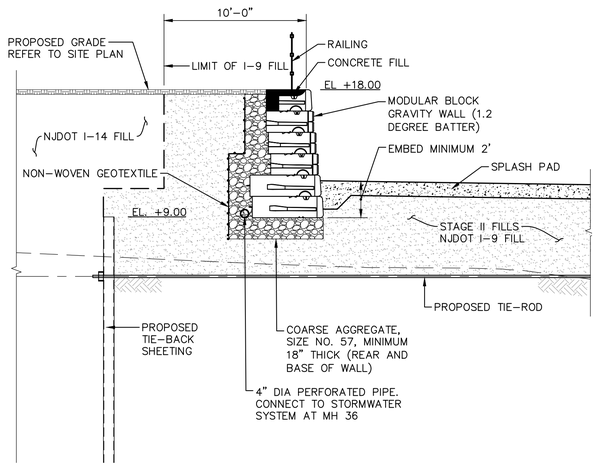
   FILTER FABRIC: SEPERATION GEOTEXTILE PER SPECIFICATION SECTION 919.01.

   RETAINED ZONE: NJDOT TYPE 1-14 FILL PER SPECIFICATION SECTION 901.11.

   NO. 57 STONE: REFER TO SPECIFICATION SECTION 901.03.

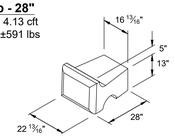


PARTIAL SITE PLAN
SCALE: 1"=40'

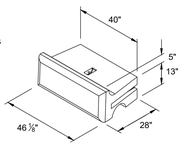


TYPICAL PRECAST BLOCK SECTION
NOT TO SCALE

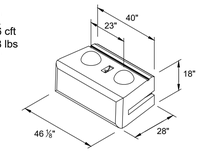
Half Top - 28"
Volume = 4.13 cft
Weight = ±591 lbs



Top - 28"
Volume = 8.55 cft
Weight = ±1223 lbs
C of G = 15.06"

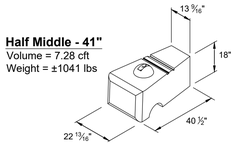


Bottom - 28"
Volume = 12.36 cft
Weight = ±1768 lbs
C of G = 14.23"

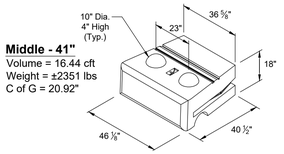


TYPICAL 28" BLOCK DETAILS

Half Middle - 41"
Volume = 7.28 cft
Weight = ±1041 lbs

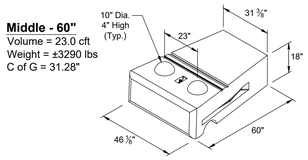


Middle - 41"
Volume = 16.44 cft
Weight = ±2351 lbs
C of G = 20.92"

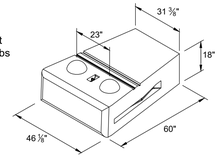


TYPICAL 41" BLOCK DETAILS
SCALE: NTS

Middle - 60"
Volume = 23.0 cft
Weight = ±3290 lbs
C of G = 31.28"

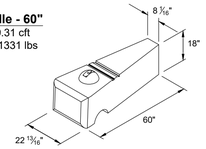


Bottom - 60"
Volume = 23.9 cft
Weight = ±3420 lbs
C of G = 31.90"

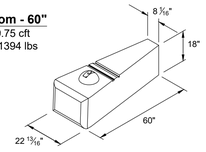


TYPICAL 60" BLOCK DETAILS
SCALE: NTS

Half Middle - 60"
Volume = 9.31 cft
Weight = ±1331 lbs



Half Bottom - 60"
Volume = 9.75 cft
Weight = ±1394 lbs



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1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
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PRECAST BLOCK RETAINING WALL PLANS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	DMR	AS SHOWN	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
DMR	RDK	----	15 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-RRWALL.dwg 55 PRECAST BLOCK RETAINING WALL PLANS

STRUCTURAL NOTES:

A. GENERAL

1. CONSTRUCTION SPECIFICATIONS: **2019 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH CURRENT SUPPLEMENTAL SPECIFICATIONS,** AS MODIFIED BY THE **SPECIAL PROVISIONS**.
2. ALL STEEL SHEET PILING AND TIE–BACK SHEETING SHALL BE INSTALLED STRAIGHT, TRUE AND PLUM TO THE SATISFACTION OF THE OWNER AND THE RE.
3. CONTRACTOR SHALL PREPARE WORKING DRAWINGS FOR APPROVAL. WORKING DRAWINGS SHALL INCLUDE SHEETING AND ANCHOR LAYOUT PLANS AND FINAL WORK POINTS.

B. DEMOLITION & SITE CLEARING

1. REMOVE ALL TREES, SHRUBS, GRASS AND OTHER VEGETATION OR OBSTRUCTIONS, AS REQUIRED, TO PERMIT INSTALLATION OF THE PROPOSED STEEL SHEET PILING AND TIE–BACK SHEETING.
2. PROTECT ALL EXISTING IMPROVEMENTS TO REMAIN.
3. DEBRIS ACCUMULATED DURING DEMOLITION AND SITE CLEARING SHALL BE DISPOSED OF OFF–SITE.

C. MATERIALS

STEEL SHEETING:

1. STEEL SHEET PILING: ASTM A690 STEEL (MARINE GRADE 50), COAL TAR EPOXY–COATED. MINIMUM PROPERTIES: WEIGHT OF 40.00 LB/FT^2, ELASTIC SECTION MODULUS OF 60.7 IN^3/FT, MOMENT OF INERTIA OF 490.85 IN^4/FT.
2. STEEL TIE–BACK SHEETING: ASTM A690 STEEL (MARINE GRADE 50, COAL TAR EPOXY–COATED. MINIMUM PROPERTIES: WEIGHT OF 22.0 LB/FT^2, ELASTIC SECTION MODULUS OF 18.1 IN^3/FT, MOMENT OF INERTIA OF 84.38 IN^4/FT.
3. THREADED TIE RODS, TURNBUCKLES: THREADED TIE RODS SHALL BE 1¾" (MIN.) DIAMETER, ASTM–A615 GRADE 75 STEEL, HOT–DIPPED GALVANIZED.
4. STEEL PLATES AND ASSOCIATED HARDWARE SHALL BE GRADE 75 OR HIGHER, HOT–DIPPED GALVANIZED.
5. STEEL CHANNELS SHALL BE GRADE 50 OR HIGHER, HOT–DIPPED GALVANIZED.
6. BACKFILL SHALL MEET THE FOLLOWING GRADATIONAL REQUIREMENTS:

NJDOT TYPE I–9

U.S. STANDARD SIEVE SIZE	PERCENT FINER BY WEIGHT
4"	100
2"	80 – 100
¾"	60 – 100
No. 4	40 – 100
No. 16	20 – 70
No. 50	5 – 35
No. 100	0 – 20
No. 200	0 – 8

NJDOT TYPE I–11

U.S. STANDARD SIEVE SIZE	PERCENT FINER BY WEIGHT
4"	100
2"	80 – 100
¾"	60 – 100
No. 4	40 – 100
No. 16	20 – 70
No. 50	0 – 75
No. 100	0 – 20
No. 200	0 – 9

I–14: ENSURE MATERIAL PASSING THE 4" SIEVE CONTAINS NO MORE THAN 35 PERCENT BY WEIGHT OF MATERIAL PASSING THE NO. 200 SIEVE. ENSURE THAT THE PROPORTION OF SOIL AGGREGATE IS SUFFICIENT TO FILL ALL VOIDS IN THE ROCK AND LARGER PIECES OF RECYCLED MATERIAL.

CONCRETE:

1. DESIGN COMPRESSIVE STRENGTH (f'c)

CLASS A..... 4,600 PSI
CLASS B..... 3,700 PSI

2. CLASS VERIFICATION COMPRESSIVE STRENGTHS

CLASS A..... 5,400 PSI
CLASS B..... 4,500 PSI

3. CONCRETE PROVIDED FOR THE CONCRETE SHEET PILE CAP, CONCRETE SPLASH PAD & CONCRETE LOAD TRANSFER BEAM SHALL BE CLASS A. ALL OTHER CONCRETE ITEMS SHALL BE CLASS B.
4. CHAMFER ALL EXPOSED CONCRETE EDGES ¾" BY ¾", UNLESS OTHERWISE NOTED.
5. ALL EXPOSED CONCRETE SURFACES SHALL HAVE A NATURAL FINISH AND SHALL NOT BE STAINED OR TINTED.
6. ALL EXPOSED CONCRETE SURFACES SHALL BE TREATED WITH A WATER REPELLENT SEAL COAT.

REINFORCEMENT STEEL:

1. REINFORCEMENT STEEL MATERIAL SHALL BE ASTM A615M (GRADE 60)
2. ALL REINFORCEMENT STEEL SHALL BE HOT–DIP GALVANIZED. THE ENDS OF ANY REINFORCEMENT STEEL BAR CUT IN THE FIELD SHALL BE PAINTED WITH 2 COATS OF A ZINC RICH REPAIR PAINT.
3. PRIOR TO REINFORCEMENT STEEL FABRICATION, THE CONTRACTOR SHALL SUBMIT FULLY DETAILED DRAWINGS FOR PROPOSED CONCRETE ELEMENTS TO THE ENGINEER FOR APPROVAL. THE DRAWING SHALL CONTAIN BAR SCHEDULE AND BAR PLACEMENT DIAGRAMS FOR ALL REINFORCEMENT STEEL.
4. REINFORCEMENT STEEL SHALL HAVE A MINIMUM OF 2" OF COVER, UNLESS OTHERWISE NOTED. ALL REINFORCEMENT BAR BENDS SHALL CONFORM TO ACI STANDARD BENDS.
5. ALL REINFORCEMENT SHALL BE SUITABLY SUPPORTED AND SECURELY HELD IN PLACE BEFORE AND DURING PLACEMENT OF CONCRETE. INSERTING DOWELS AFTER CONCRETE IS POURED WILL NOT BE PERMITTED.

D. CONSTRUCTION SEQUENCE

1. CLEAR SITE IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
2. STEEL SHEET PILING AND TIE–BACK SHEETING SHALL BE INSTALLED IN THE LOCATIONS SPECIFIED ON THE CONSTRUCTION DRAWINGS. ALL STEEL SHEET PILING AND TIE–BACK SHEETING SHALL BE TIGHTLY INTERLOCKED TO FORM A CONTINUOUS BARRIER. HORIZONTAL ALIGNMENT OF DRIVEN SHEETS SHALL NOT VARY BY MORE THAN ±3 INCHES FROM THE PROPOSED ALIGNMENT SHOWN ON THE CONSTRUCTION DRAWINGS. ALL SHEETING JOINTS SHALL BE TREATED WITH A JOINT FILLER TO REDUCE PERMEABILITY THROUGH THE SHEET PRIOR TO INSTALLATION. SHEETING SHALL BE DRIVEN TO A MINIMUM TOE ELEVATION AS SHOWN. JETTING TO ACHIEVE THE REQUIRED TO ELEVATION WILL NOT BE PERMITTED.
3. DEWATER INTERIOR AREA BETWEEN SHEETING. THE CONTRACTOR SHALL SUBMIT CALCULATIONS FROM A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY THAT SHOW THE SHEETING IS ADEQUATELY STABLE DURING ALL PHASES OF CONSTRUCTION.
4. PLACE STAGE I BACKFILL TO ELEVATION +6.00 FEET AND MONITOR BULKHEAD FOR MOVEMENT DURING BACKFILLING OPERATION. TYPE I–11 FILL SHALL BE UTILIZED TO BACKFILL THE ANNULAR SPACE BETWEEN ANY EXISTING WALLS AND THE PROPOSED BULKHEAD. I–11 FILLS SHALL BE FLOODED TO CAUSE MIGRATION INTO VOIDS AND TO DENSIFY FILLS. FLOWABLE FILL SHALL BE UTILIZED IF AND WHERE DIRECTED BY THE RE.
5. INSTALL TIE–BACK ANCHORS IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. ALL ANCHORS TO BE INSTALLED TO THE DESIGN CAPACITY WITH THE SHEETING FACE PRIOR TO FILL PLACEMENT ABOVE ANCHOR ELEVATION.
6. PLACE STAGE II I–9 BACKFILL AND MONITOR BULKHEAD FOR MOVEMENT DURING BACKFILLING OPERATION. BACKFILL SHALL BE PLACED IN MAXIMUM 8–INCH LIFTS AND MECHANICALLY COMPACTED TO A MINIMUM OF 95 PERCENT OF ITS MAXIMUM DRY DENSITY AS DETERMINED USING ASTM TEST METHOD D–1557, THE MODIFIED PROCTER. BACKFILL OF THE WALLS SHALL MEET THE REQUIREMENTS OF NJDOT TYPE I–9 FILL. THE USE OF HEAVY COMPACTION EQUIPMENT WITHIN 5 FEET OF THE WALL IS STRICTLY PROHIBITED.
7. CUT THE TOP OF THE SHEET PILING AND STEEL TIE–BACK SHEETING TO MATCH FINAL GRADE AS DEPICTED IN THE CONSTRUCTION DRAWINGS.
8. FORM AND INSTALL CONCRETE SHEET PILE CAP.

E. CONSTRUCTION MONITORING

1. MONITOR STEEL SHEET PILE BULKHEADS AS CONSTRUCTION PROGRESSES. PROMPTLY CORRECT BULGES, ROTATIONS, BREAKAGE OR OTHER EVIDENCE OF MOVEMENT TO ENSURE THAT THE FINAL WALL ALIGNMENT IS STRAIGHT AND VERTICALLY PLUMB PER SPECIFICATIONS. .

NOTES:

1. ANCHOR NUT AND WASHER SHALL BE A BALL AND SOCKET CONNECTION AND SHALL ALLOW UP TO 5 DEGREES OF MISALIGNMENT IF AND WHERE REQUIRED TO PERMIT INSTALLATION OF TIE–RODS, STRAIGHT AND TRUE, AND WITHOUT IMPARTING BENDING MOMENTS.
2. 2C15x33.9 SEPARATION SHALL BE 4", UNLESS NOTED OTHERWISE.
3. CONTRACTION JOINTS SHALL BE PROVIDED IN THE CONCRETE SHEET PILE CAP AT INTERVALS NOT EXCEEDING 30 FEET. EXPANSION JOINTS SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 90 FEET.
4. STEEL SHEET PILING SHALL BE PZ–40 OR APPROVED EQUAL SECTION. STEEL TIE–BACK SHEETING SHALL BE PZ–22 OR APPROVED EQUAL SECTION. ALL STEEL SHEETS SHALL BE A690 GRADE 50 WITH COAL TAR EPOXY TO A MINIMUM DRY COATING THICKNESS OF 20 MILS. COLD FORM SHEETING WILL NOT BE ALLOWED ON THIS PROJECT.
5. THE COST FOR ALL WALERS, CHANNELS, THREADED TIE–RODS, TURNBUCKLES, BEARING PLATES, BOLTS, HEX NUTS, SPACERS, WELDS, THREADED BAR CONNECTORS, WASHERS, AND ALL CONNECTIONS SHALL BE PAID FOR UNDER THE PAY ITEM **STRUCTURAL STEEL, GALVANIZED**. NO SEPARATE PAYMENT SHALL BE MADE FOR GALVANIZING. NO SEPARATE PAYMENT SHALL BE MADE FOR HOLES CUT IN SHEETING FOR PASSAGE OF TIE–RODS.
6. THE PAY ITEM **STEEL SHEET PILING** SHALL INCLUDE ALL PZ–40 SHEETING REQUIRED TO COMPLETE THE WORK INDICATED BY THE LIMITS ON THE PLANS. THE PAY ITEM **STEEL TIE–BACK SHEETING** SHALL INCLUDE ALL PZ–22 SHEETING REQUIRED TO COMPLETE THE WORK INDICATED BY THE LIMITS ON THE PLANS. ALL STEEL SHEETS SHALL BE DRIVEN TO THE TIP ELEVATIONS SHOWN AND CUT–OFF AT THE ELEVATIONS DEFINED ON THE PLANS.
7. TIE–RODS IN CONFLICT WITH THE RCP SHALL BE ADJUSTED ACCORDINGLY (OFFSET, SKEWED, ETC) BY THE **CONTRACTOR**.
8. PROPOSED STEEL TIE–BACK SHEETING IN PHYSICAL CONFLICT WITH RCP SHALL BE CUT 1–FOOT BELOW THE PIPE. SHEETING ABOVE THE PIPE MAY BE ELIMINATED. WALER SHALL BE CONTINUOUS AND OFFSET A MINIMUM OF 1–FOOT ABOVE THE PIPE IN THE AREA OF CONFLICT. WALERS OF DIFFERING ELEVATIONS SHALL OVERLAP A MINIMUM OF 10–FEET.
9. TIE–RODS SHALL BE SKEWED AND/OR SHIFTED ACCORDINGLY BY THE **CONTRACTOR** TO AVOID THE KNUCKLE CONNECTION OF THE TIE–BACK SHEETING.
10. TIE–RODS CUT IN THE FIELD AND ANY OTHER HARDWARE REQUIRING RENOVATION OF UNCOATED AREAS AFTER INITIAL HOT–DIP GALVANIZATION SHALL HAVE GALVANIZING REPAIRED IN ACCORDANCE WITH ASTM A780.

No.	Date	Revision	Revised By	Checked By

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Corporate Office:
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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

BULKHEAD NOTES

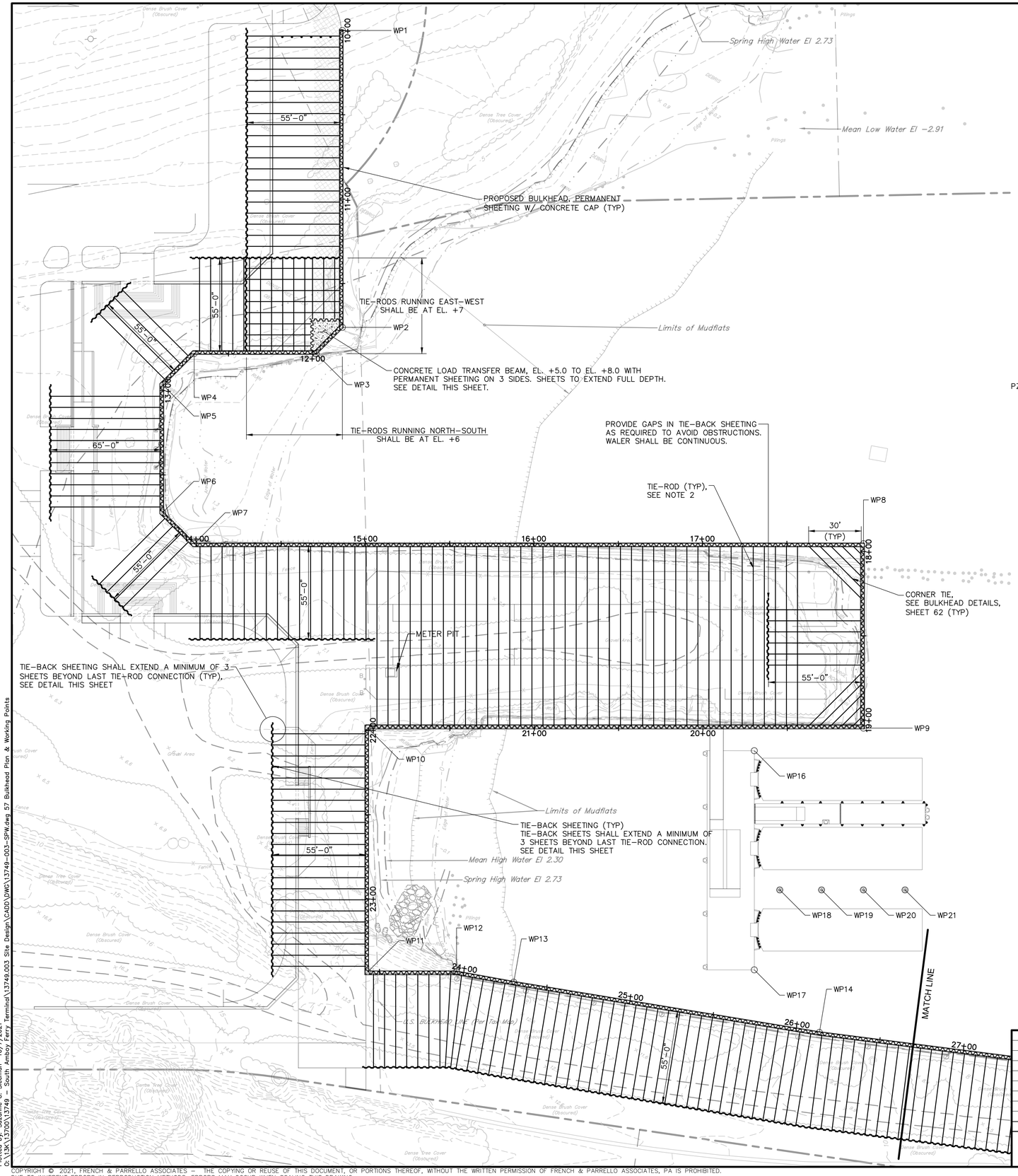
FOR

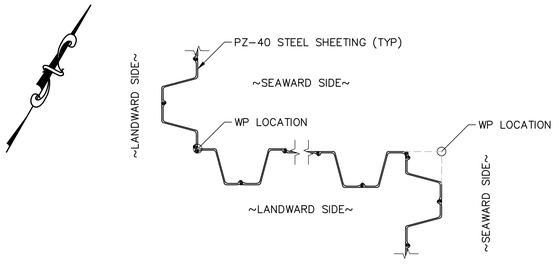
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

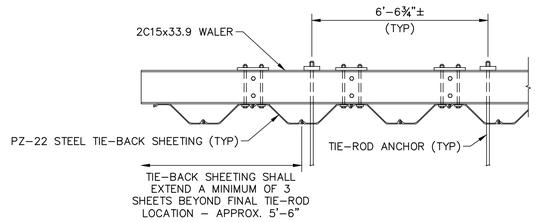
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	SAT		13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
GTB	GTB	----	56 of 70





SHEET PILE WALL WP LOCATION DETAIL

(WORKING POINTS ARE LOCATED AT THE CORNERS OF THE SEAWARD FACE OF THE PROPOSED STEEL SHEET PILING)
N.T.S.



TIE−BACK SHEETING LIMITS

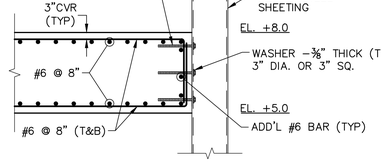
N.T.S.

WORKING POINT DATA				
WORKING POINT	CONSTRUCTION BASELINE DATA		NORTHING	EASTING
	STATION	OFFSET		
WP1	10+00.00	0.00'	603,531.4830	554,123.9636
WP2	11+76.04	0.00'	603,378.9737	554,211.8888
WP3	11+98.05	0.00'	603,357.7213	554,206.1800
WP4	12+70.36	0.00'	603,321.6016	554,143.5300
WP5	12+96.67	0.00'	603,296.1934	554,136.7048
WP6	13+72.21	0.00'	603,230.7555	554,174.4318
WP7	13+98.51	0.00'	603,223.9314	554,199.8366
WP8	17+95.41	0.00'	603,422.1687	554,543.6858
WP9	19+04.79	0.00'	603,327.4135	554,598.3153
WP10	21+98.69	0.00'	603,180.6184	554,343.6982
WP11	23+43.12	0.00'	603,055.4928	554,415.8371
WP12	23+95.70	0.00'	603,081.7556	554,461.3901
WP13	24+30.16	0.00'	603,093.3813	554,493.8243
WP14	26+13.90	0.00'	603,158.0672	554,665.8038
WP15	27+50.07	0.00'	603,210.6017	554,791.4292
WP16	--	--	603,283.5182	554,548.9253
WP17	--	--	603,170.9022	554,613.8539
WP18	--	--	603,219.5043	554,603.2337
WP19	--	--	603,231.8957	554,624.7261
WP20	--	--	603,244.2941	554,646.2308
WP21	--	--	603,256.6217	554,667.6125

*TIMBER PILE WORKING POINTS (WP18 THRU WP21) ARE LOCATED AT THE CENTER OF THE CENTRAL PILE IN THE ARRAY. SEE DETAIL ON SHEET 64

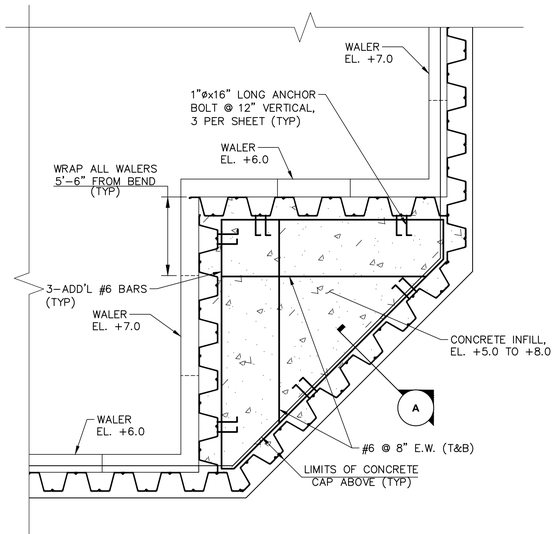
NOTES:

1. WORKING POINTS ON BULKHEAD REPRESENT APPROXIMATE PERMIT LIMITS. WHERE EXISTING WALLS ARE PRESENT, PROPOSED BULKHEAD SHALL BE LOCATED WITHIN 2 FEET, AS MEASURED FACE−TO−FACE.
2. CONTRACTOR SHALL PREPARE WORKING DRAWINGS FOR APPROVAL. WORKING DRAWINGS SHALL IDENTIFY SHEETING AND ANCHOR LAYOUT PLANS AND FINAL WORK POINTS.
3. NO SEPARATE PAYMENT SHALL BE MADE FOR CUTTING OF HOLES IN STEEL SHEETING FOR PASS THROUGH OF TIE−RODS, ANCHOR BOLTS OR REINFORCEMENT STEEL.



SECTION A

SCALE: ⅜" = 1'−0"



CONCRETE LOAD TRANSFER BEAM

(TIE−RODS NOT SHOWN FOR CLARITY)
SCALE: 1" = 5'

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30 0 30 60
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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

BULKHEAD PLAN & WORKING POINTS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
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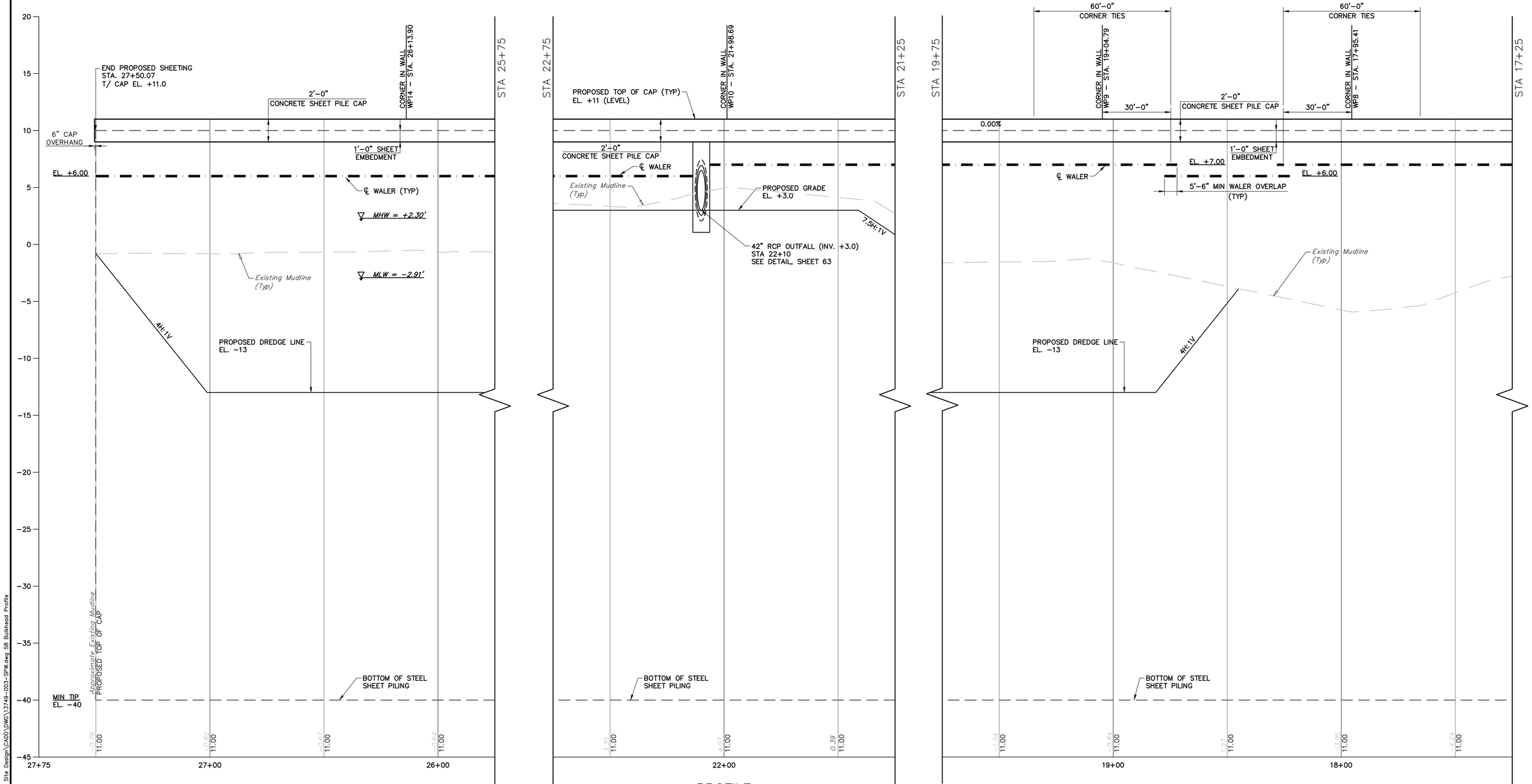

PROFILE

SCALE: 1" = 20' (HORIZONTAL)
¼" = 1'-0" (VERTICAL)

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20 0 20 40
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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

BULKHEAD PROFILE

FOR

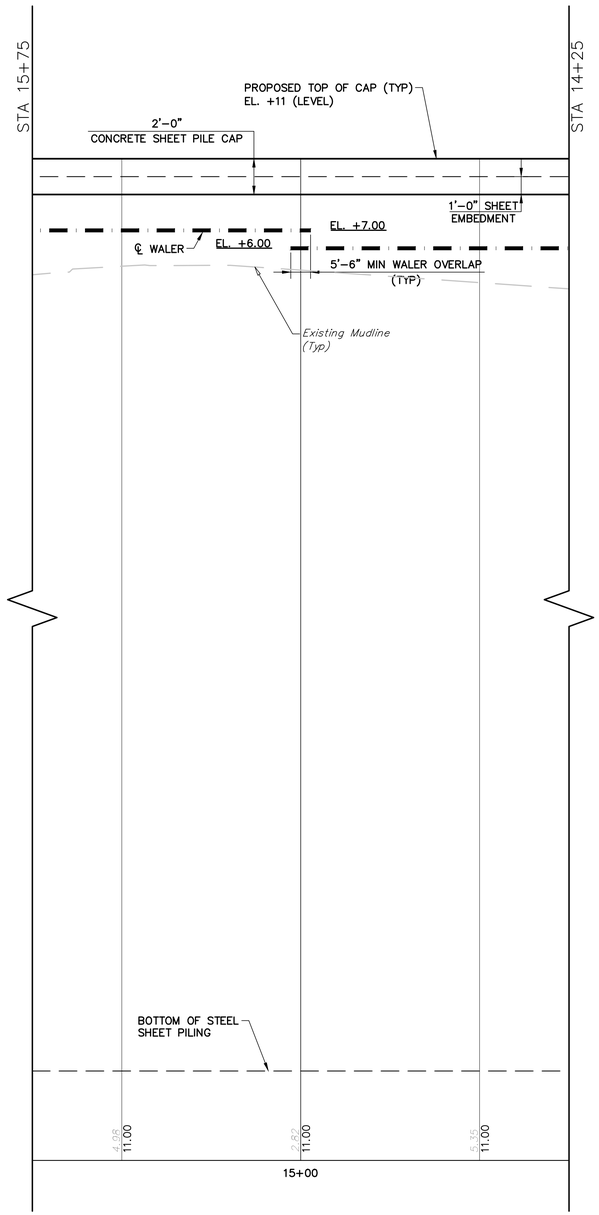
SOUTH AMBOY FERRY TERMINAL

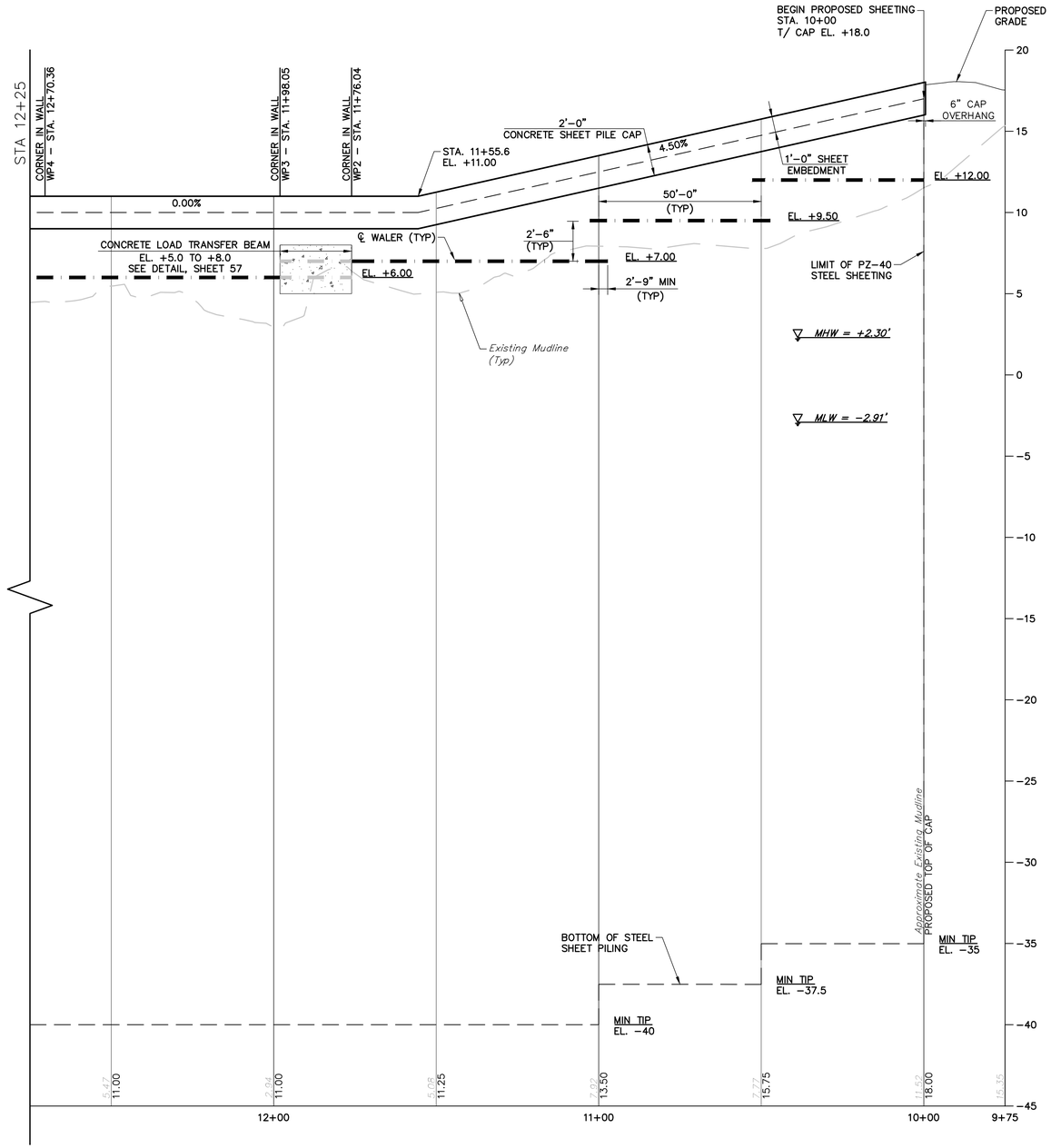
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	SAT	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
GTB	GTB	----	58 of 70

Plotted by: Suzanne C. Steenon 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SPW.dwg 58 Bulkhead Profile





PROFILE

SCALE: 1" = 20' (HORIZONTAL)
¼" = 1'-0" (VERTICAL)

No.	Date	Revision	Revised By	Checked By

20 0 20 40
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BULKHEAD PROFILE

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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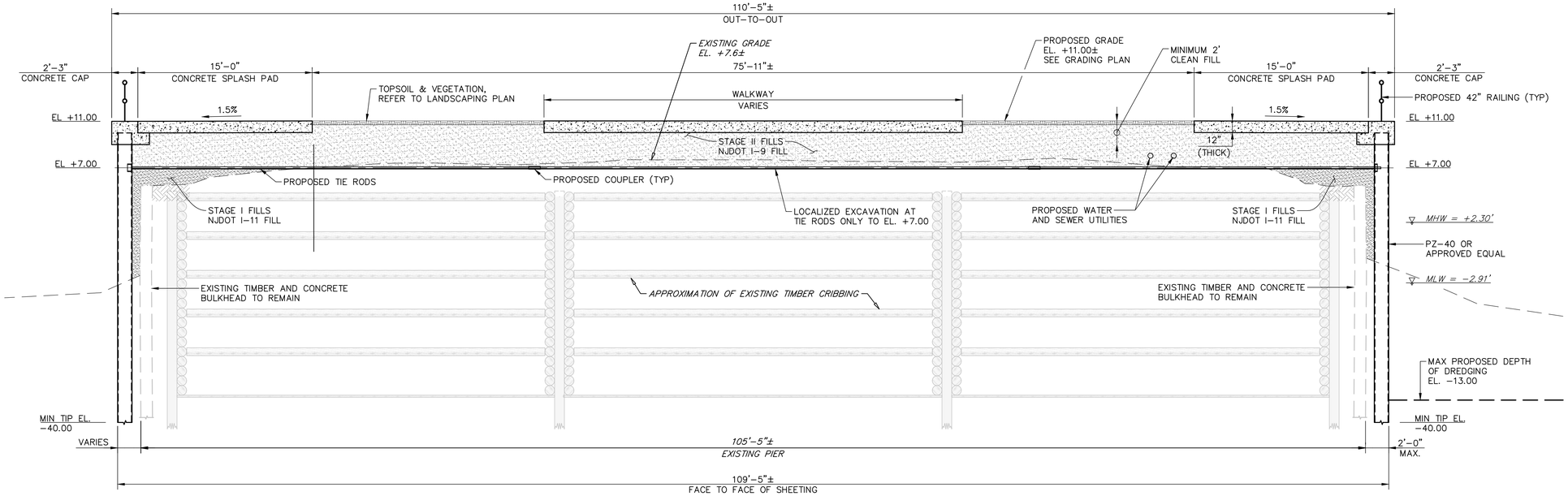
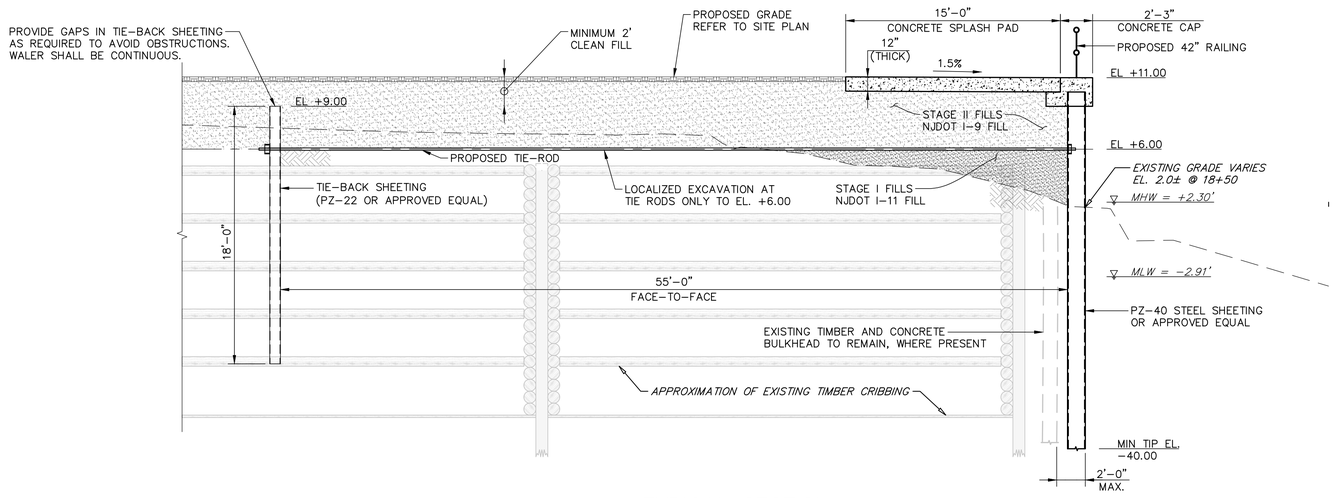
GTB	GTB	----	59 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SPW.dwg 59 Bulkhead Profile



TYPICAL SECTION AT PIER (LOOKING EAST)

SCALE: 1" = 5'-0"



TYPICAL SECTION
(WP8 THRU WP9, LOOKING NORTH)

STATION 18+50 SHOWN
SCALE: 1" = 5'-0"

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5 0 5 10
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PROFESSIONAL ENGINEER, NJ LIC No. 38934

BULKHEAD TYPICAL SECTIONS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	GTB	1" = 5'	13749.003
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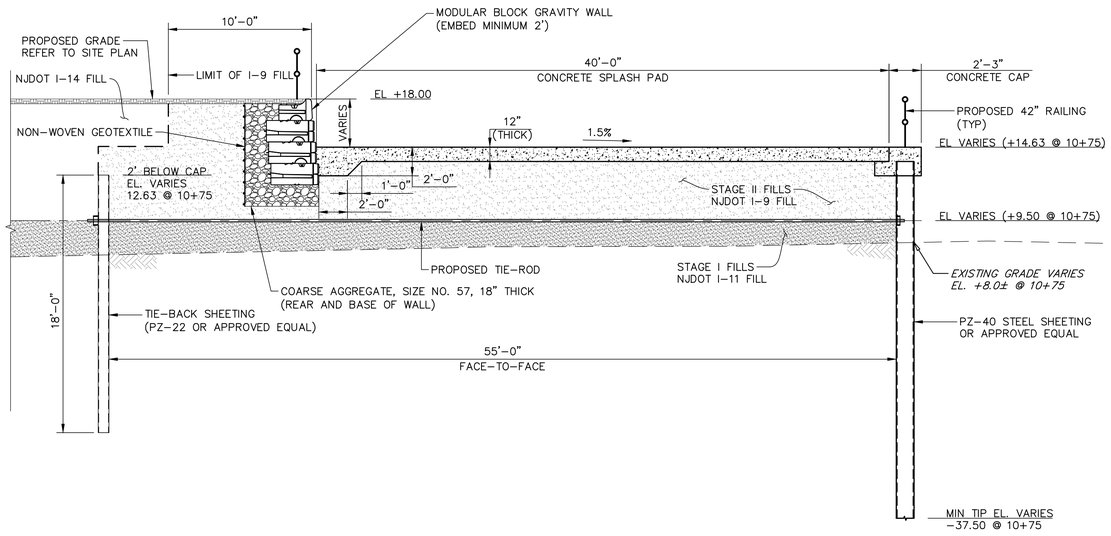
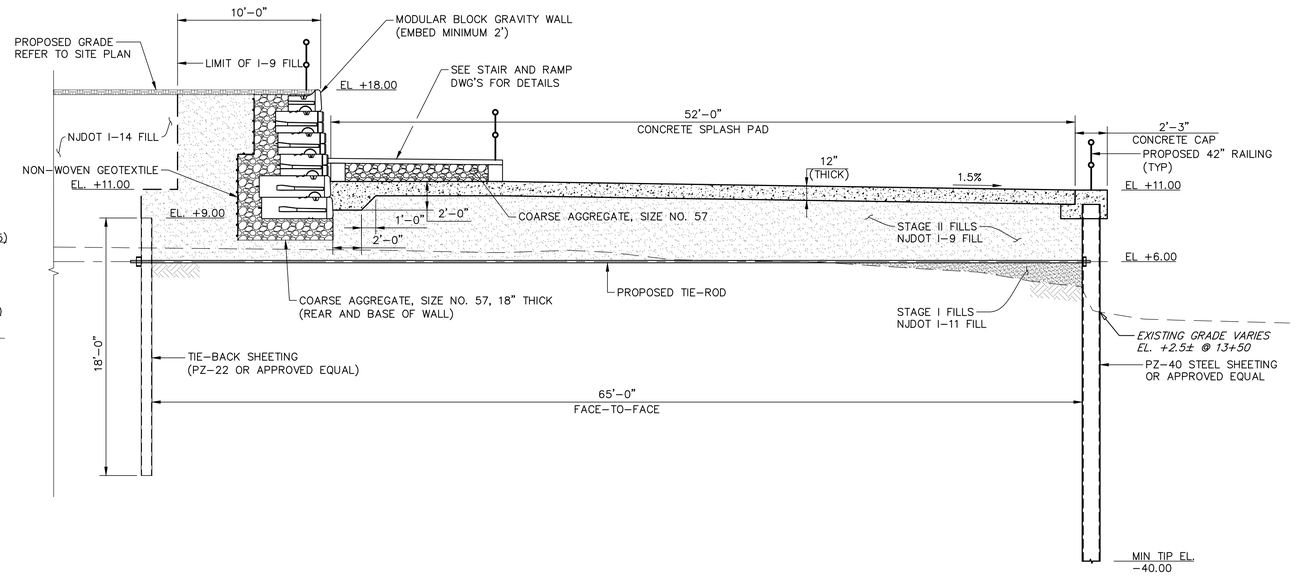
GTB	GTB	----	60 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CAD\DWG\13749.003 - TS.dwg 60 Bulkhead Typical Sections



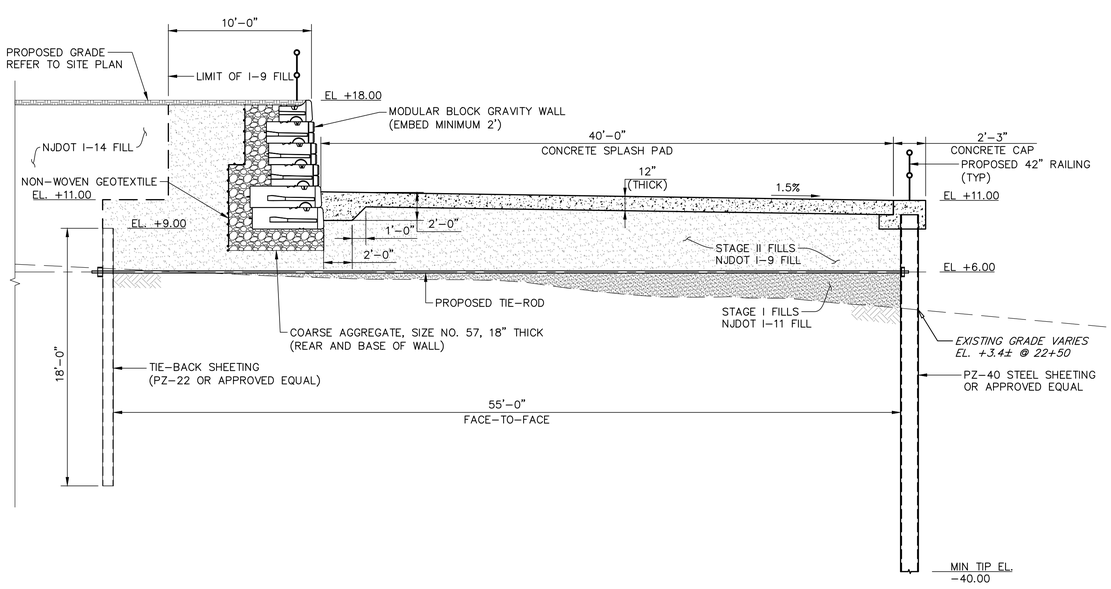
TYPICAL SECTION
(WP1 THRU WP2, LOOKING NORTH)

STATION 10+75 SHOWN
SCALE: 1" = 5'-0"



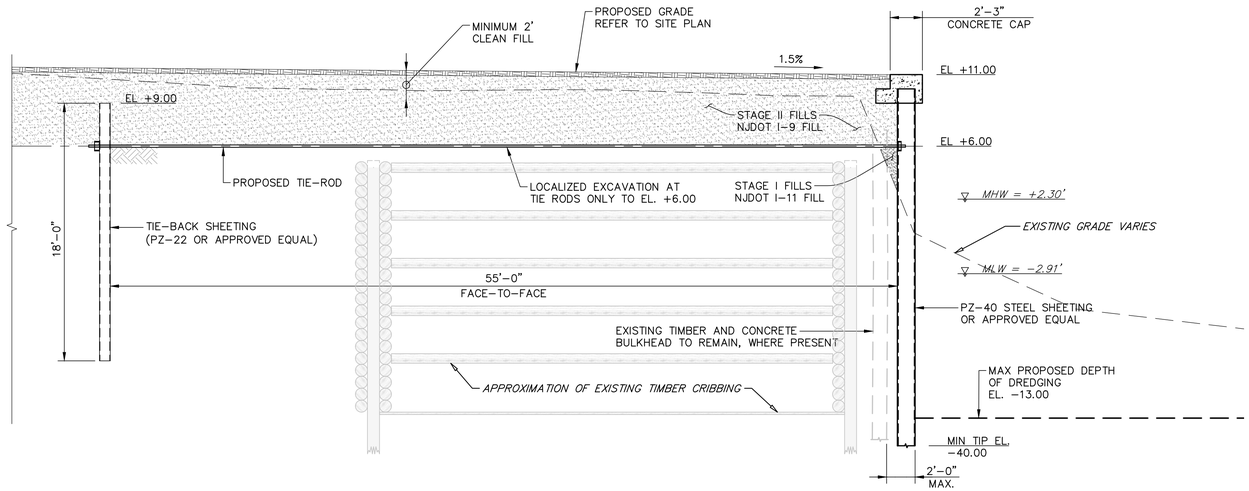
TYPICAL SECTION
(WP5 THRU WP6, LOOKING NORTH)

STATION 13+50 SHOWN
SCALE: 1" = 5'-0"



TYPICAL SECTION
(WP10 THRU WP11, LOOKING NORTH)

STATION 22+50 SHOWN
SCALE: 1" = 5'-0"



TYPICAL SECTION
(WP11 THRU WP15, LOOKING WEST)

STATION 26+00 SHOWN
SCALE: 1" = 5'-0"

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5 0 5 10
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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

BULKHEAD TYPICAL SECTIONS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

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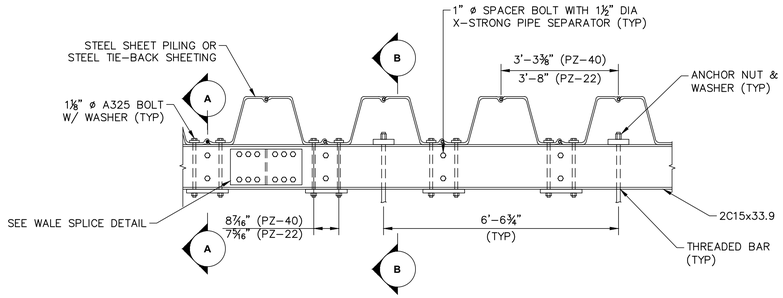
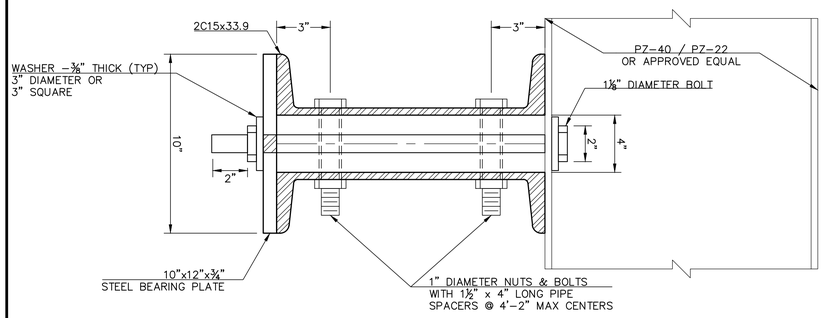


TYPICAL WALE CONNECTION

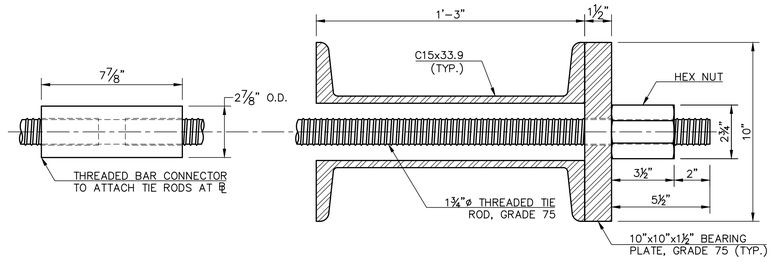
SCALE: ½" = 1'-0"

NOTE:
WHERE WALER IS LOCATED ON BACK SIDE OF THE PZ-22 TIE-BACK SHEETING, HOLES SHALL BE CUT IN PZ-22 SHEETS TO ALLOW PASS THROUGH OF #14 TIE-RODS.



SECTION A-A

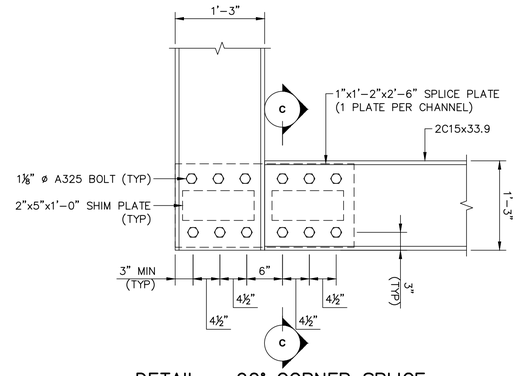
SCALE: 3" = 1'-0"



SECTION B-B

SCALE: 3" = 1'-0"

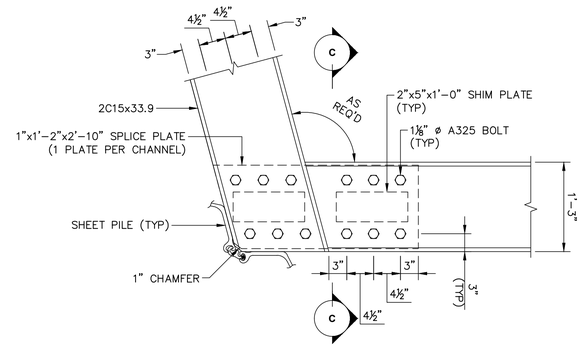
NOTE:
BEARING PLATE AND NUT SHALL BE A BALL AND SOCKET AND SHALL ALLOW 5 DEGREES OF MISALIGNMENT, IF AND WHERE REQUIRED TO PERMIT INSTALLATION OF TIE-RODS STRAIGHT AND TRUE, AND WITHOUT IMPARTING BENDING MOMENTS.



DETAIL - 90° CORNER SPLICE

SCALE: 1" = 1'-0"

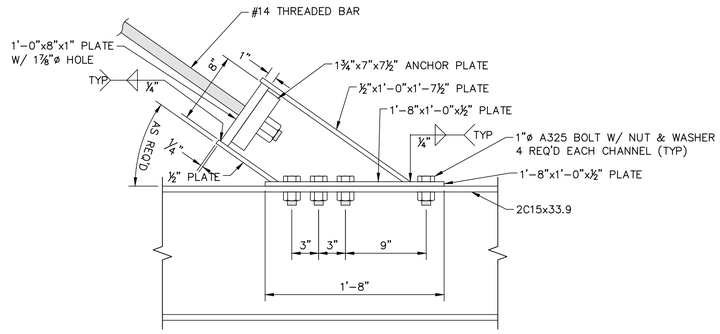
NOTE:
SPLICE PLATES SHALL HAVE 2" SLOTTED HOLES LONGITUDINAL TO THE WALE FOR ADJUSTMENT



DETAIL - FLARED CORNER SPLICE

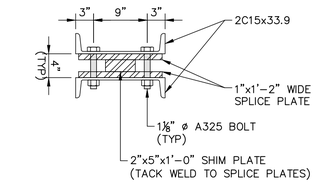
SCALE: 1" = 1'-0"

NOTE:
SPLICE PLATES SHALL HAVE 2" SLOTTED HOLES LONGITUDINAL TO THE WALE FOR ADJUSTMENT



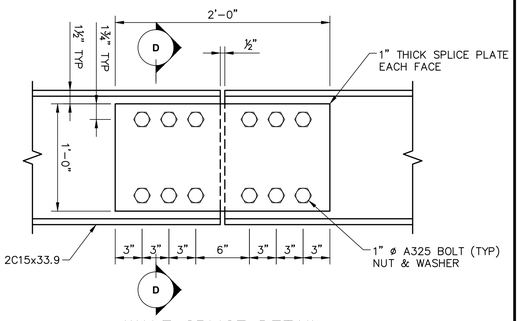
DETAIL - CORNER TIE CONNECTION

SCALE: 1½" = 1'-0"



SECTION C-C
CORNER SPLICE

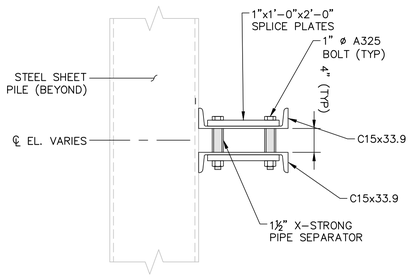
SCALE: 1" = 1'-0"



WALE SPLICE DETAIL

SCALE: 1½" = 1'-0"

NOTE:
SPLICE PLATES SHALL HAVE 2" SLOTTED HOLES LONGITUDINAL TO THE WALE FOR ADJUSTMENT



SECTION D-D
WALE SPLICE

SCALE: 1" = 1'-0"

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1 0 1 2
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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

BULKHEAD DETAILS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

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MIDDLESEX COUNTY NEW JERSEY

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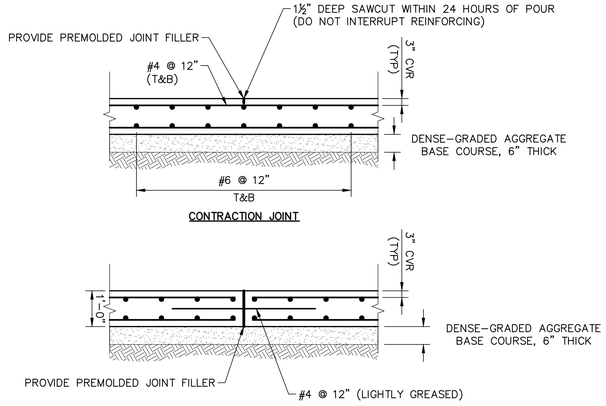
12/6/2021	SAT	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
GTB	GTB	-----	62 of 70

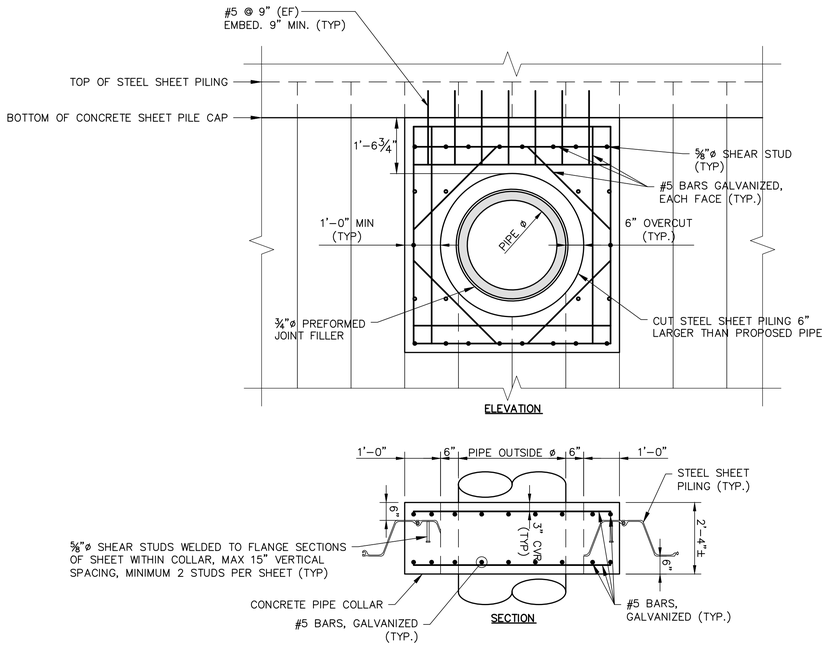
Plotted by: Suzanne C. Steeman 10/7/2021
O:\JOB\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-SPW DETAILS.dwg 62 Bulkhead Details



TYPICAL CONCRETE SPLASH PAD DETAIL

(SECTION LOOKING SEAWARD)
NOT TO SCALE

NOTES:
1. ALL REINFORCEMENT SHALL BE HOT DIP GALVANIZED
2. CONTRACTION JOINTS/CONSTRUCTION JOINTS SHALL CREATE PANELS OF 400 SQ. FEET (MAXIMUM)
3. STOP DOWELS WITHIN 4'-0" OF END OF PANELS
4. USE PNA DOWEL ALIGNMENT DEVICE OR APPROVED EQUAL FOR FORMED CONSTRUCTION JOINTS

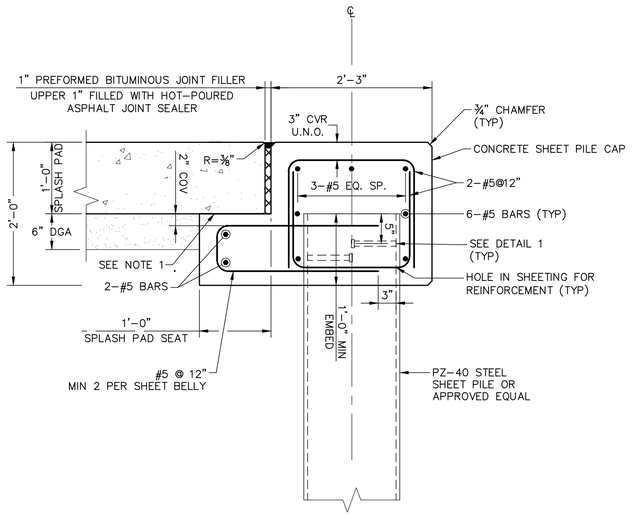


CONCRETE PIPE COLLAR DETAIL

NOT TO SCALE

NOTES FOR CONCRETE PIPE COLLAR:

1. ALL COSTS ASSOCIATED WITH CUTTING SHEETING, FORMING CONCRETE PIPE COLLAR, GALVANIZED REINFORCEMENT STEEL, SHEAR STUDS AND CAST-IN-PLACE CONCRETE SHALL BE INCLUDED IN THE ITEM, CONCRETE SHEET PILE CAP.
2. CONTRACTOR TO SUBMIT WORKING DRAWINGS WITH BAR LISTS PRIOR TO FABRICATION OF REINFORCEMENT STEEL

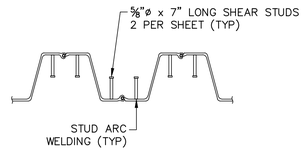


TYPICAL SECTION
CONCRETE SHEET PILE CAP

SCALE: 1" = 1'-0"

NOTES FOR CONCRETE SHEET PILE CAP:

1. A ¼" THICK PIECE OF PREFROMED BITUMINOUS JOINT FILLER SHALL BE LAID IN AND COVERED WITH ASPHALT ROOFING CEMENT ON THE SURFACE WHERE THE SPLASH PAD SHALL REST.



DETAIL 1 – SHEAR STUDS

SCALE: ½" = 1'-0"

No.	Date	Revision	Revised By	Checked By

1 0 1 2
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Corporate Office:
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PROFESSIONAL ENGINEER, NJ LIC No. 38934

BULKHEAD DETAILS

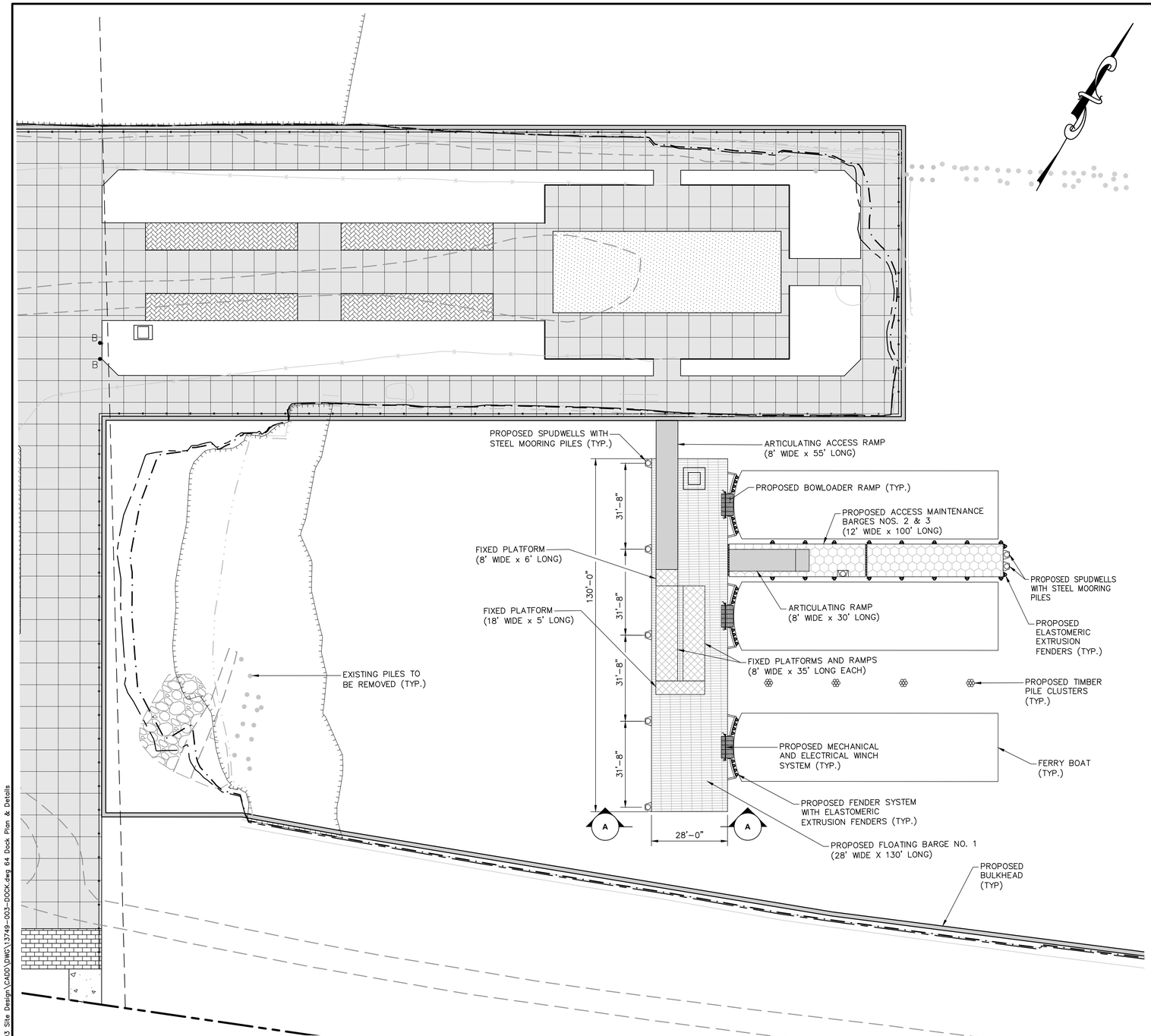
FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

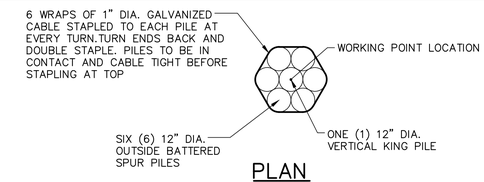
CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	SAT	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
GTB	GTB	----	63 of 70

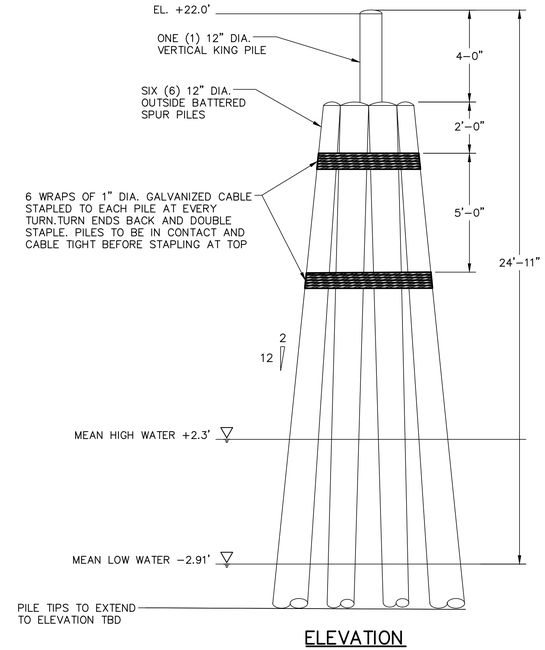


FLOATING DOCK PLAN

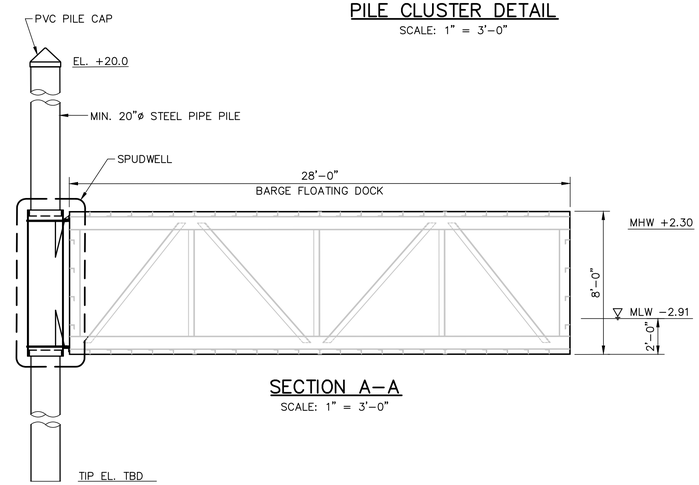
SCALE: 1" = 20'-0"



PLAN



ELEVATION



PILE CLUSTER DETAIL

SCALE: 1" = 3'-0"

SECTION A-A

SCALE: 1" = 3'-0"

NJDOT ITEM NUMBER	"PAY ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
511NS2P	70	7-PILE DOLPHIN CLUSTER	4	UNIT
515NS1P	74	FLOATING DOCK SYSTEM	1	LS
516NS1P	75	ALUMINUM GANGWAYS, RAMPS, PLATFORMS, RAILINGS AND DECKING	1	LS

NOTES:

1. FINAL DESIGN OF THE FLOATING BARGE SYSTEM, GANGWAYS, RAMPS, PLATFORMS AND RAILINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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20 0 20 40
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Corporate Office:
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PROFESSIONAL ENGINEER, NJ LIC No. 38934

DOCK PLAN & DETAILS

FOR

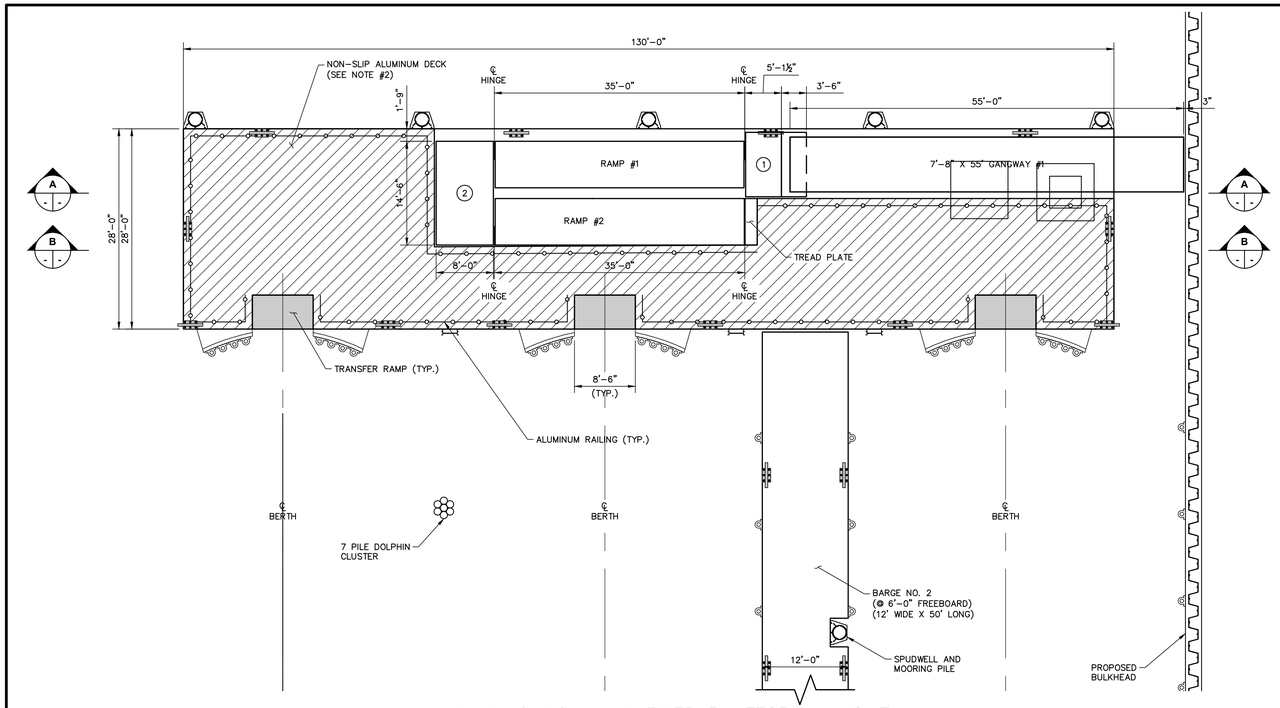
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

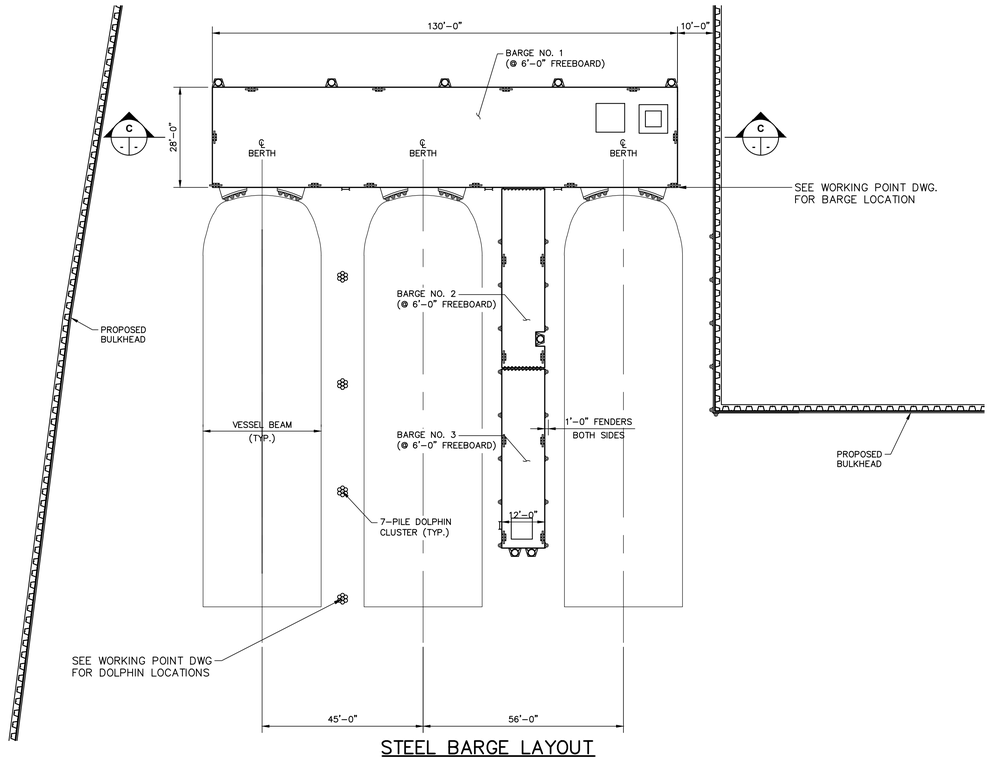
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	SAT	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
IAM	IAM	-----	64 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
O:\JOK\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003-DOCK.dwg 64 Dock Plan & Details



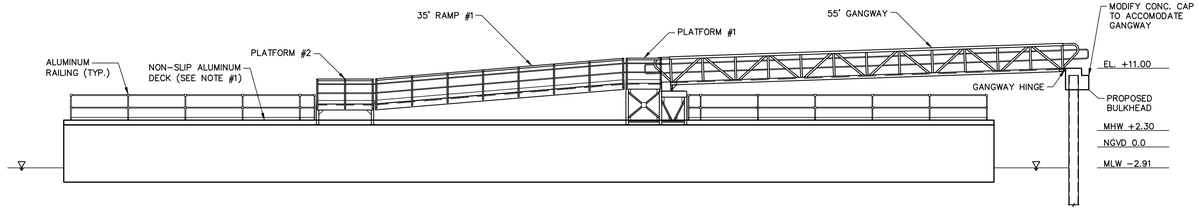
ALUMINUM GANGWAY & FIXED PLATFORM LAYOUT

SCALE: 1" = 10'-0"



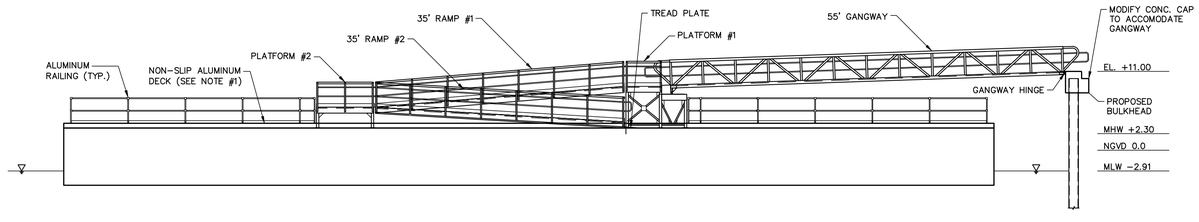
STEEL BARGE LAYOUT

SCALE: 1" = 20'-0"



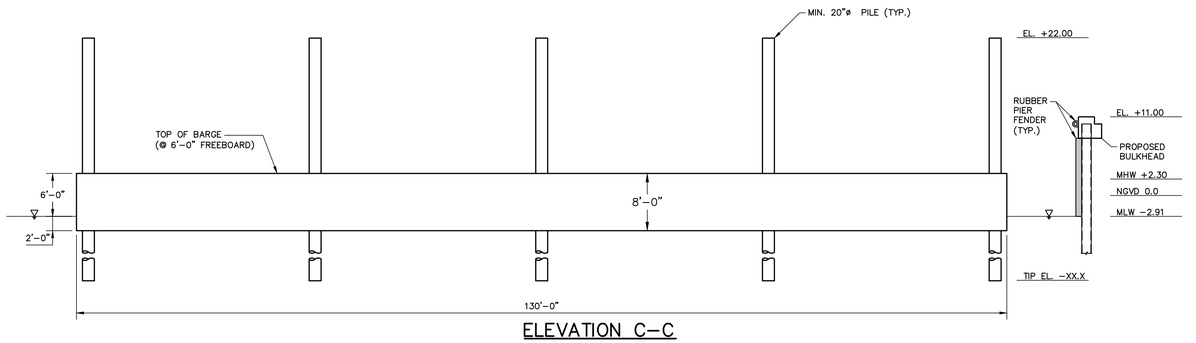
ELEVATION A-A

(MEAN LOW WATER SHOWN)
SCALE: 1" = 10'-0"



ELEVATION B-B

(MEAN LOW WATER SHOWN)
SCALE: 1" = 10'-0"



ELEVATION C-C

SCALE: 1" = 10'-0"

NOTES:

1. FINAL DESIGN OF THE FLOATING BARGE SYSTEM, GANGWAYS, RAMPS, PLATFORMS AND RAILINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. FINAL DECK HEIGHT OF NON-SLIP ALUMINUM DECK TO BE BASED ON FERRY OPERATOR PROVIDED INPUT DURING PREPARATION OF WORKING DRAWINGS. MINIMUM HEIGHT: 2-INCH. MAXIMUM HEIGHT: 18-INCH.
3. THE LUMP SUM UNIT PRICE BID FOR THE ITEM ENTITLED "STRUCTURAL ALUMINUM" SHALL INCLUDE, BUT IS NOT LIMITED TO, DESIGN, FABRICATION, AND INSTALLATION OF ALUMINUM GANGWAYS, RAMPS, PLATFORMS, RAILINGS, FENDERS ON BULKHEAD. AND CONNECTION TO BULKHEAD. THE GANGWAY AND RAMP SUPPLIER(S) SHALL BE APPROVED BY THE RE.
4. THE LUMP SUM UNIT PRICE BID FOR THE ITEM ENTITLED "FLOATING DOCK SYSTEM" SHALL INCLUDE, BUT IS NOT LIMITED TO, DESIGN, FABRICATION, AND INSTALLATION OF STEEL SECTIONAL FLOATING BARGE, CLEATS, REMOVABLE BALLAST, WATERTIGHT HATCHES, FENDER CONNECTION, TACTILE WARNING STRIP, GALVANIC CATHODIC PROTECTION, INTERCONNECTION PINS, SPUDWELLS, FENDER SYSTEM, HOIST SYSTEM, MANUAL HOIST, AND SAFETY LADDERS. THE BARGE SUPPLIER(S) SHALL BE APPROVED BY THE RE.

No.	Date	Revision	Revised By	Checked By

10 0 10 20
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Corporate Office:
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DOCK PLAN & DETAILS

FOR

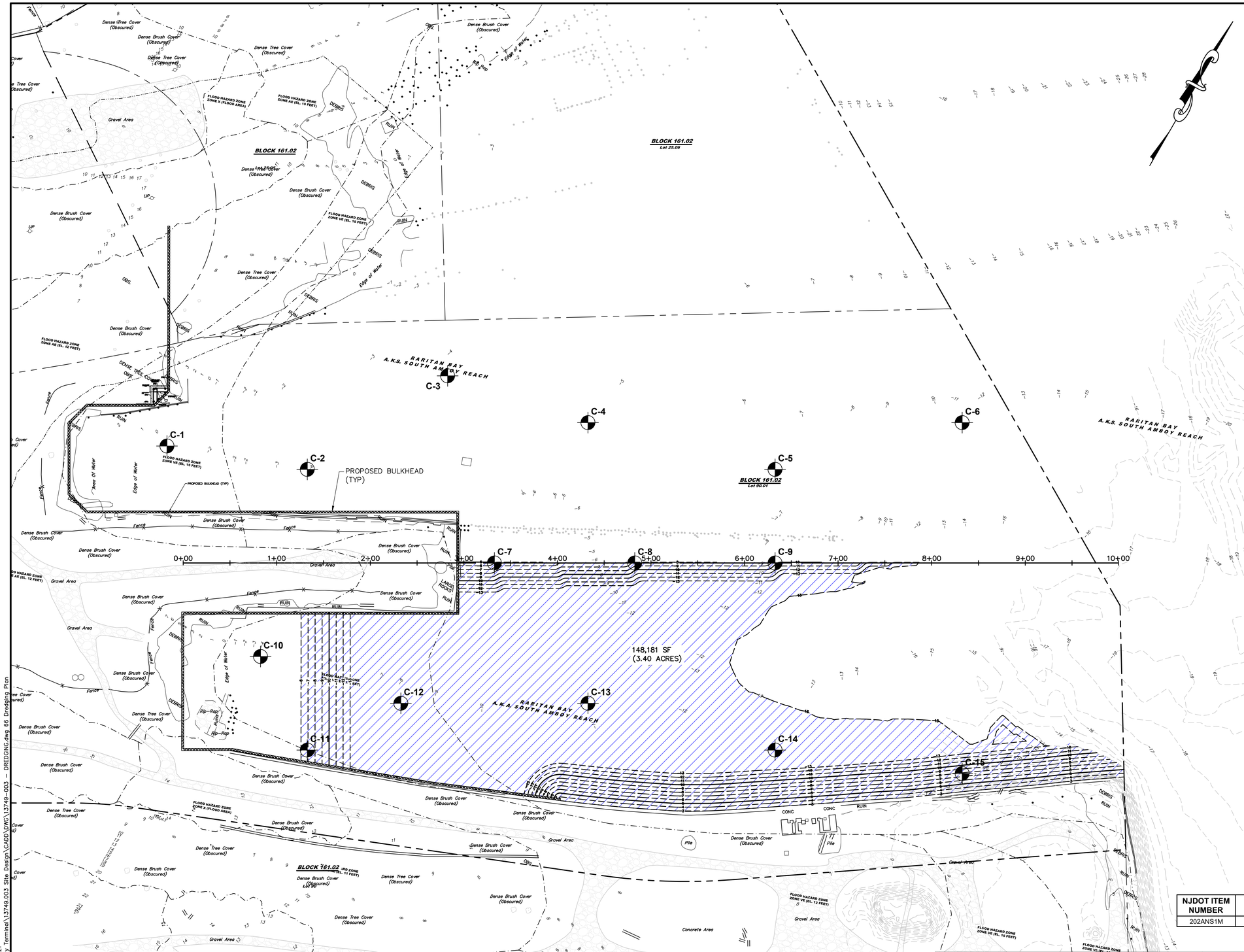
SOUTH AMBOY FERRY TERMINAL

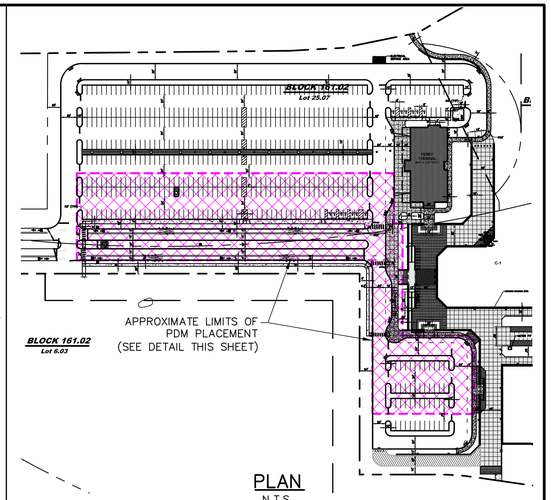
BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

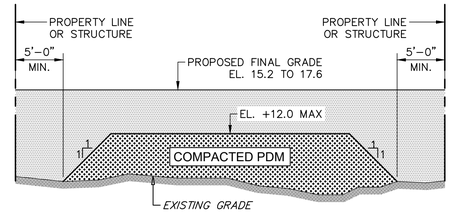
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	IAM	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
IAM	SAT	----	65 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13K\13700\13749 - South Amboy Ferry Terminal\13749.003 Site Design\CAD\DWG\Floating Docks\13749.003 - Site Plan & Float Layout.dwg 66 Dock Plan & Details





PLAN
N.T.S.



TYPICAL SECTION
N.T.S.

LIMITS OF COMPACTED PROCESSED DREDGE MATERIAL

NJDOT ITEM NUMBER	"BID ITEM NUMBER"	TO BE CONSTRUCTED	"PLAN SHEET QUANTITY"	
202ANS1M	30	DREDGING, PROCESSING, TRANSPORT AND PLACEMENT	14,400	CY

LEGEND:

C-# SEDIMENT CORE LOCATIONS

PROPOSED MECHANICAL DREDGING

NOTES:

1. THE VERTICAL DATUM OF THE BATHYMETRIC CONTOURS SHOWN ON THIS PLAN ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
2. TO CONVERT FROM NAVD88 TO MEAN LOWER LOW WATER (MLLW), ADD 3.1 FEET. TO CONVERT FROM NAVD88 TO MEAN LOW WATER (MLW), ADD 2.91 FEET.
3. EXISTING CONDITIONS ARE BASED UPON A BATHYMETRIC SURVEY PERFORMED BY BORBAS SURVEYING AND MAPPING, L.L.C. ON DECEMBER 7, 2018.

No.	Date	Revision	Revised By	Checked By

50 0 50 100
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PROFESSIONAL ENGINEER, NJ LIC No. 38934

DREDGING PLAN

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	CWM	AS NOTED	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
DS	SAT	-----	66 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
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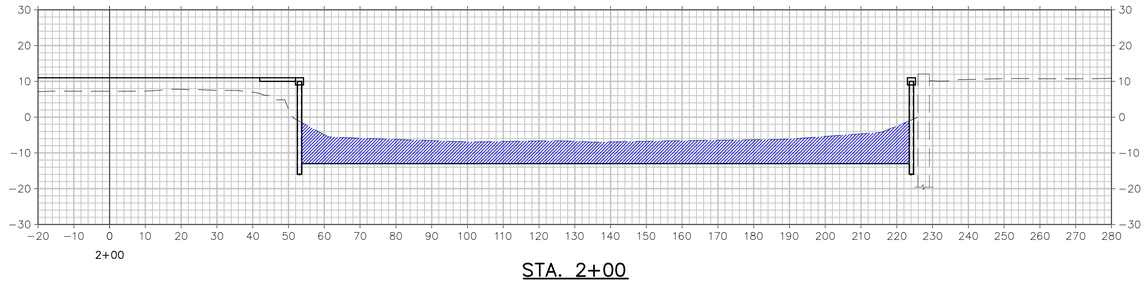
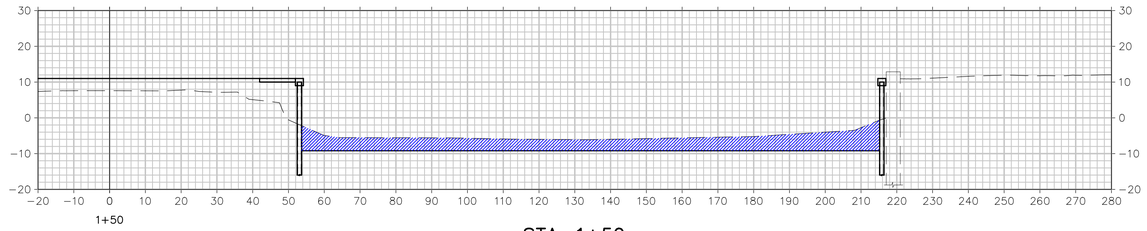


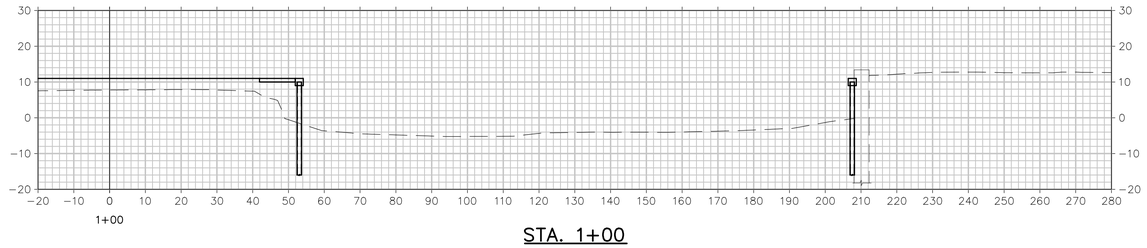
STA. 2+00

Material(s) at Station 2+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	1183.35	1688.03	2280.36



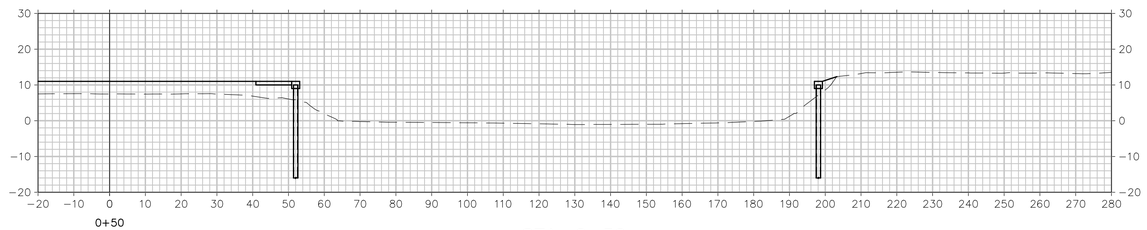
STA. 1+50

Material(s) at Station 1+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	639.72	592.33	592.33



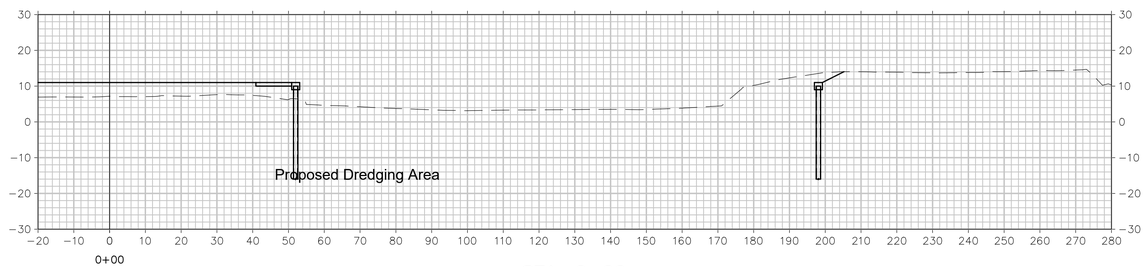
STA. 1+00

Material(s) at Station 1+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	0.00	0.00	0.00



STA. 0+50

Material(s) at Station 0+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	0.00	0.00	0.00



STA. 0+00

Material(s) at Station 0+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	0.00	0.00	0.00

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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

DREDGING CROSS SECTIONS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	CWM	1" = 20'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
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Plotted by: Suzanne C. Steeman 10/7/2021
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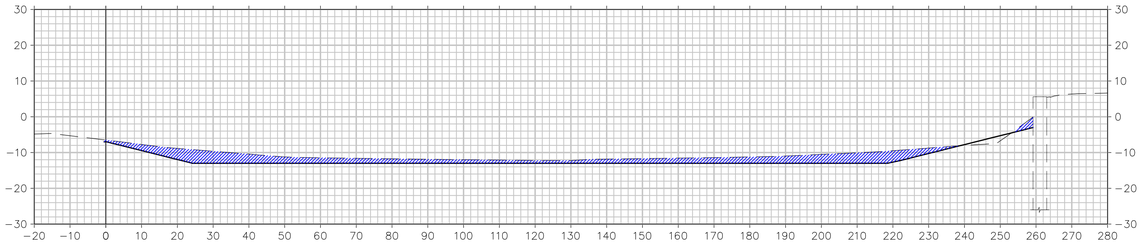
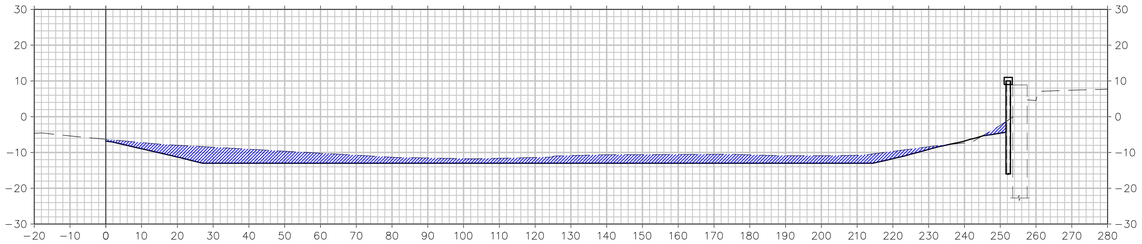


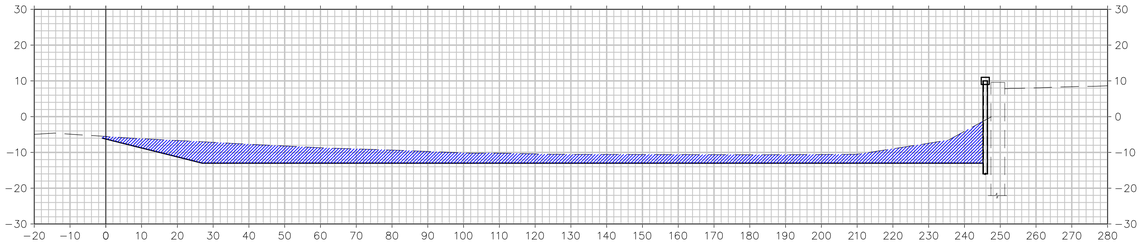
STA. 4+50

Material(s) at Station 4+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	421.90	890.97	10800.06



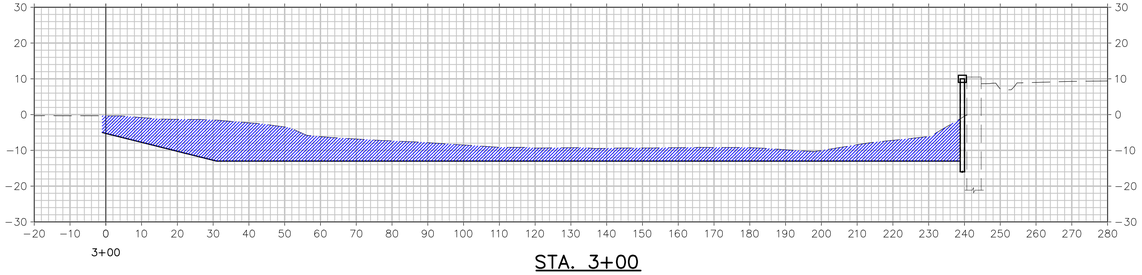
STA. 4+00

Material(s) at Station 4+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	540.35	1312.94	9909.09



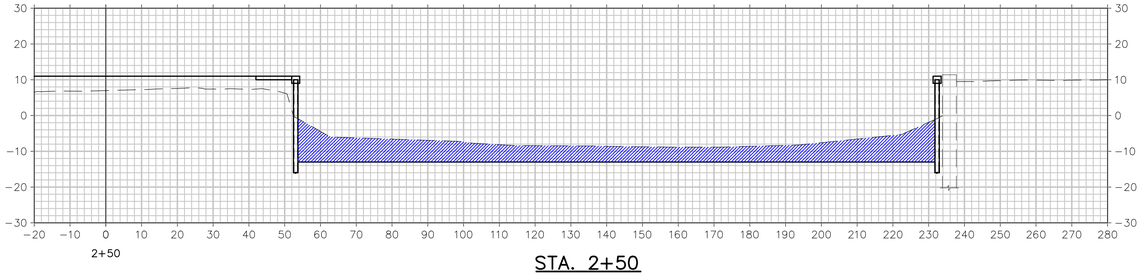
STA. 3+50

Material(s) at Station 3+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	877.62	2077.07	8596.16



STA. 3+00

Material(s) at Station 3+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	1365.61	2203.74	6519.09



STA. 2+50

Material(s) at Station 2+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	1014.43	2034.98	4315.34

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STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

DREDGING CROSS SECTIONS

FOR

SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	CWM	1" = 20'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
DS	SAT	----	68 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
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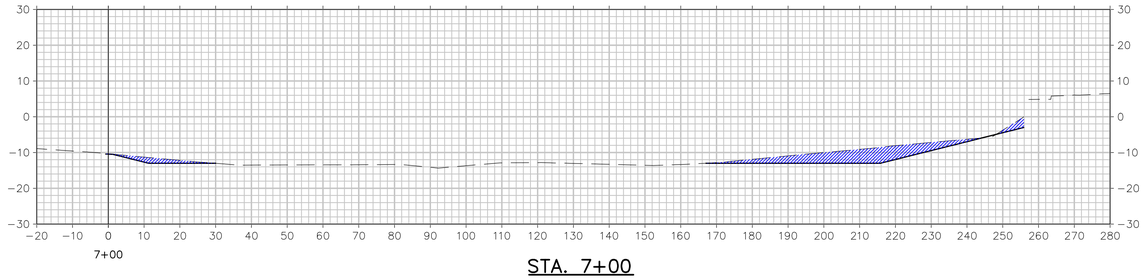
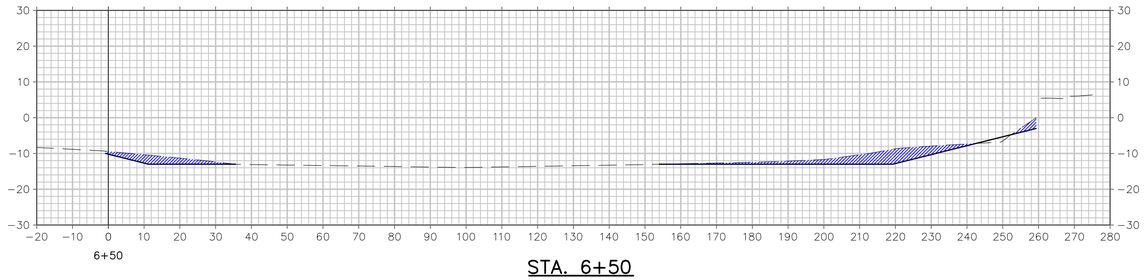


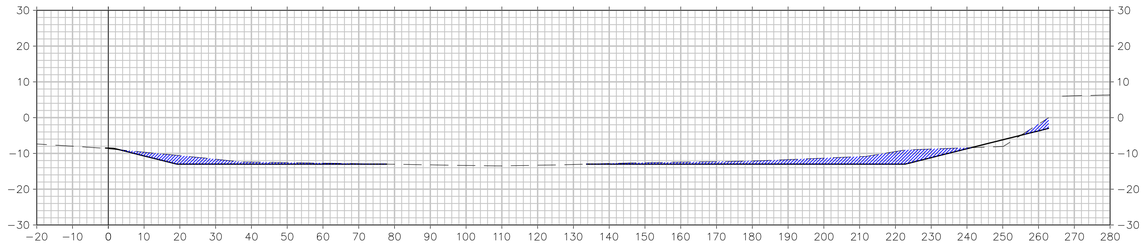
STA. 7+00

Material(s) at Station 7+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	204.39	363.22	13463.66



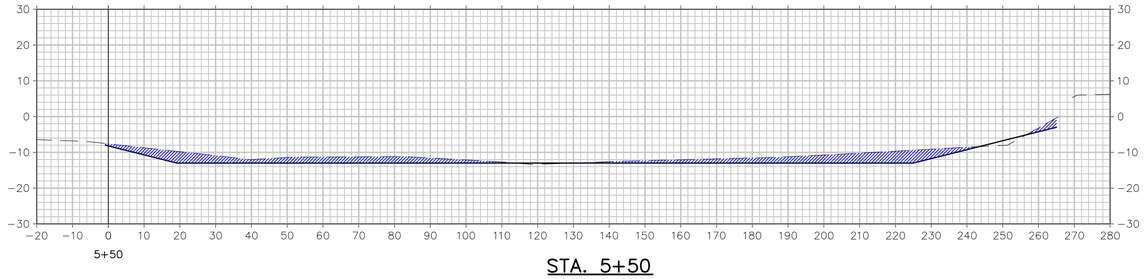
STA. 6+50

Material(s) at Station 6+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	187.90	370.99	13100.44



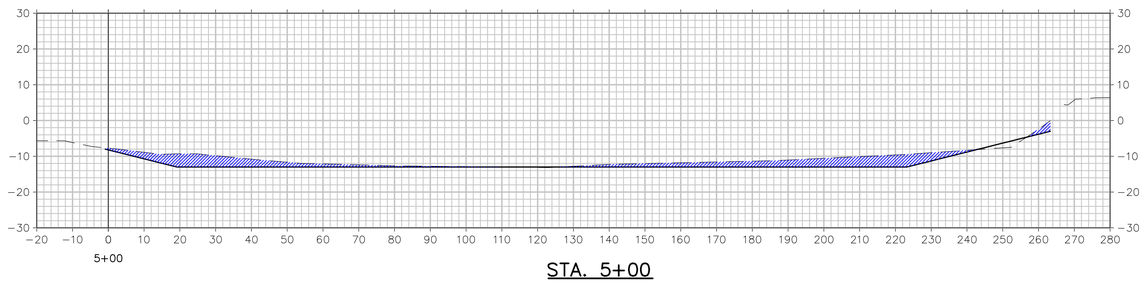
STA. 6+00

Material(s) at Station 6+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	212.77	542.53	12729.45



STA. 5+50

Material(s) at Station 5+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	373.16	670.87	12186.92



STA. 5+00

Material(s) at Station 5+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	351.38	715.99	11516.05

No.	Date	Revision	Revised By	Checked By

20 0 20 40
SCALE IN FEET

FRENCH & PARRELLO ASSOCIATES

Corporate Office:
1800 Route 34, Suite 101
Wall, New Jersey 07719
732.312.9800
FPAengineers.com

New Jersey ▲ New York ▲ Pennsylvania ▲ Georgia

STEVEN A. TARDY, PE
PROFESSIONAL ENGINEER, NJ LIC No. 38934

DREDGING CROSS SECTIONS

FOR

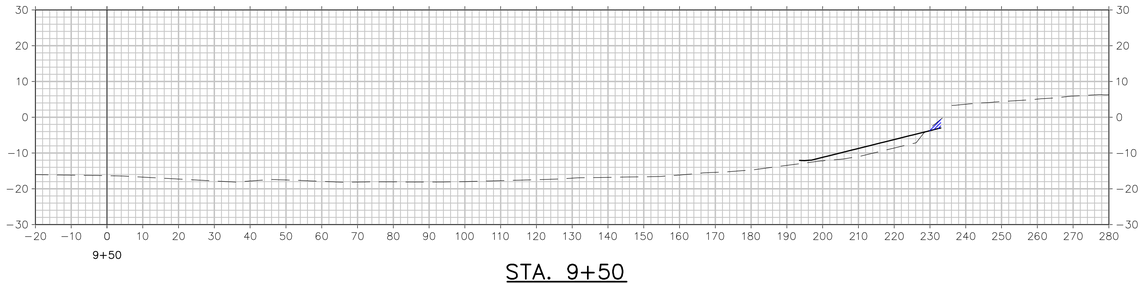
SOUTH AMBOY FERRY TERMINAL

BLOCK 161.02 LOTS 25.07, 25.08 & 90.1

CITY OF SOUTH AMBOY
MIDDLESEX COUNTY NEW JERSEY

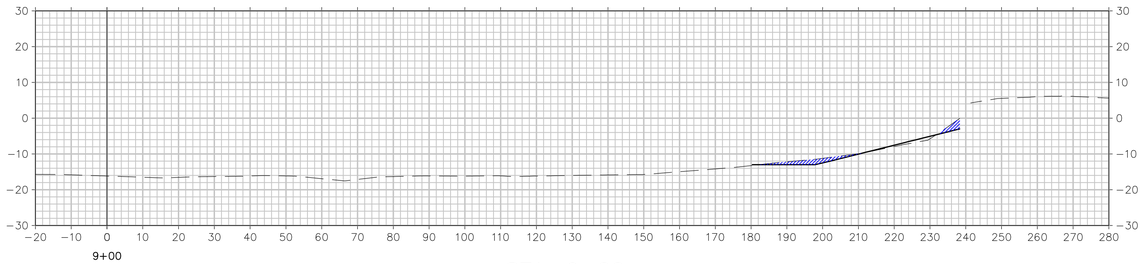
DATE:	DESIGNED BY:	SCALE:	PROJECT NUMBER:
12/6/2021	CWM	1" = 20'	13749.003
DRAWN BY:	CHECKED BY:	FIELD BOOK	SHEET:
DS	SAT	----	69 of 70

Plotted by: Suzanne C. Sleeman 10/7/2021
O:\13A\13700\13749 – South Amboy Ferry Terminal\13749.003 Site Design\CADD\DWG\13749-003 – DREDGING.dwg 69 Dredging Cross Sections



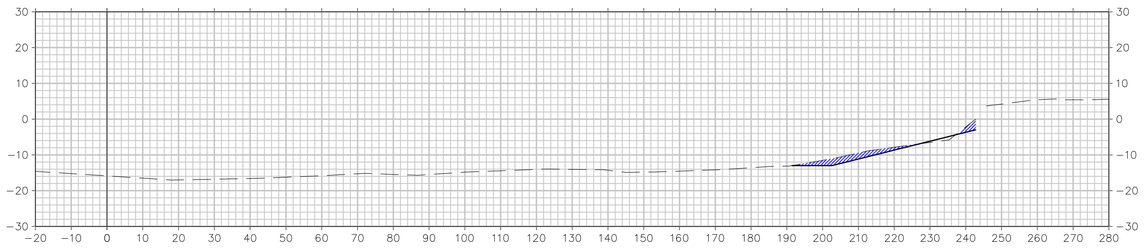
STA. 9+50

Material(s) at Station 9+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	5.25	33.90	14398.97



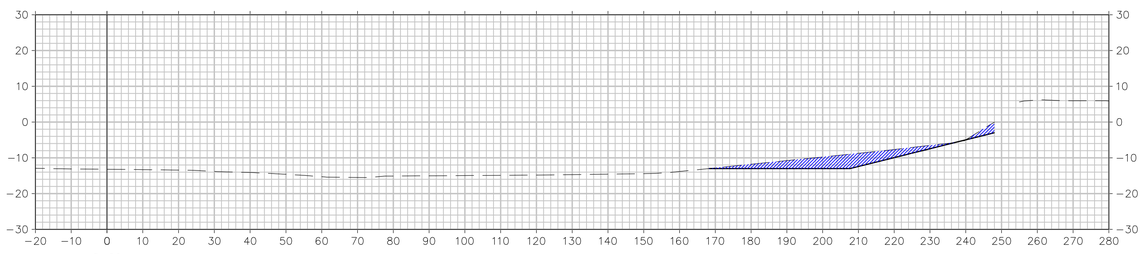
STA. 9+00

Material(s) at Station 9+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	31.37	73.79	14365.06



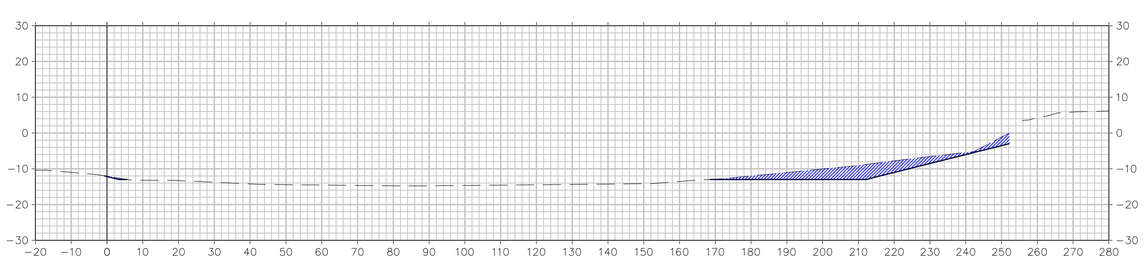
STA. 8+50

Material(s) at Station 8+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	48.33	181.78	14291.27



STA. 8+00

Material(s) at Station 8+00.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	148.00	296.81	14109.49



STA. 7+50

Material(s) at Station 7+50.00			
Material Name	Area (SF)	Volume (CY)	Cumulative Volume (CY)
Dredging	172.56	349.02	13812.68

No.	Date	Revision	Revised By	Checked By

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Wall, New Jersey 07719
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DREDGING CROSS SECTIONS

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12/6/2021	CWM	1" = 20'	13749.003
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DS	SAT	----	70 of 70

Plotted by: Suzanne C. Steeman 10/7/2021
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