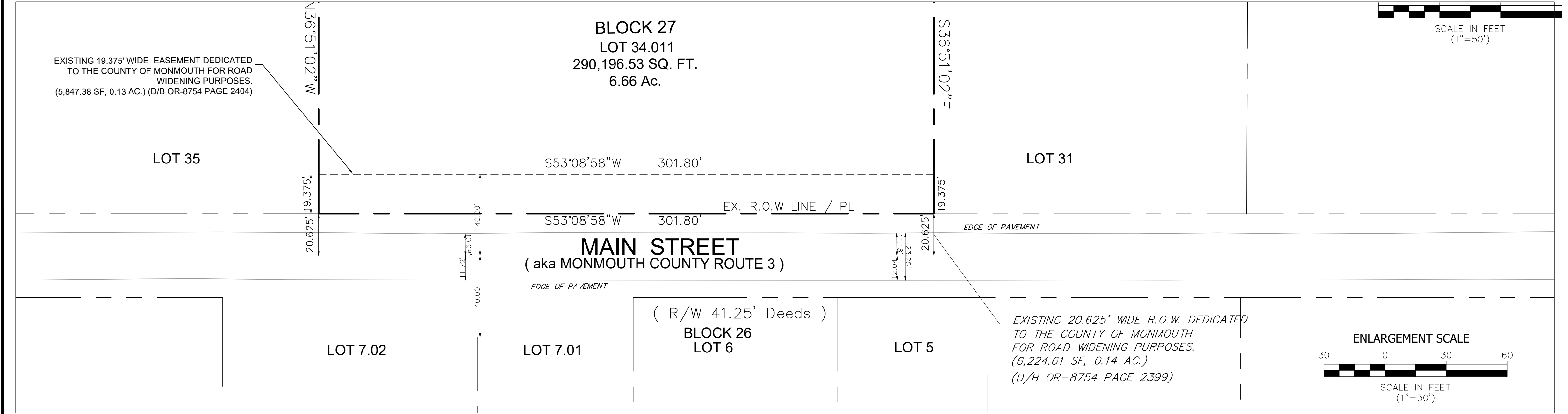
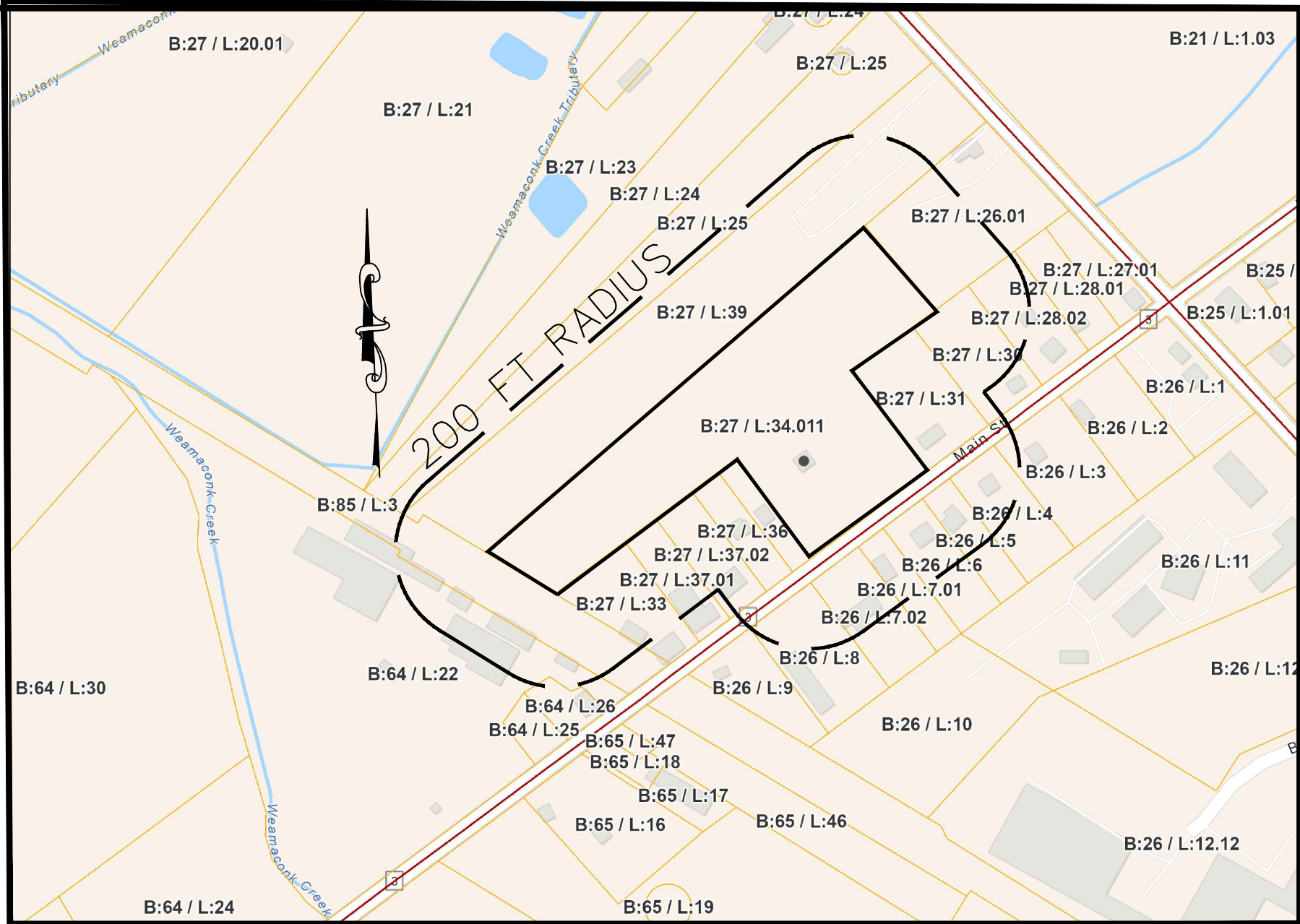
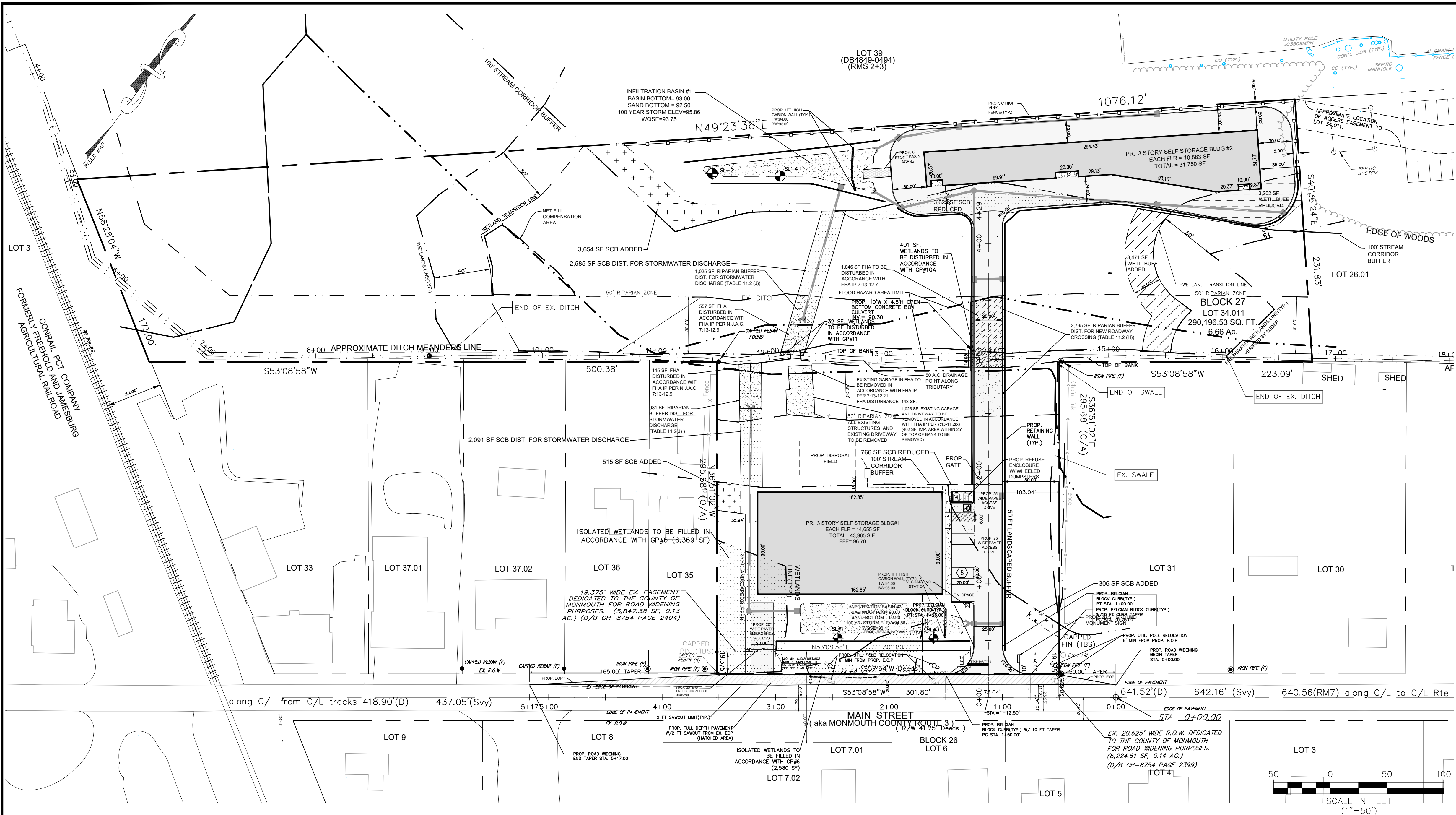


- NOTES:
1. WETLANDS DELINEATION CONDUCTED BY DuBOIS ENVIRONMENTAL CONSULTANTS ON 12/7/20 AND FIELD LOCATED BY CREST ENGINEERING ASSOCIATES INC., ON 12/30/2020.
 2. ELEVATIONS BASED ON NAVD 1988.
 3. EXISTING CONDITIONS PLANS SHOWN BASED ON "WETLANDS LOCATION PLAN" FOR BLOCK 27 LOT 34.011 BY CREST ENGINEERING ASSOCIATES INC. DATED 12/30/2021

- LEGEND**
- R.O.W. RIGHT OF WAY
 - AKA ALSO KNOWN AS
 - SQ. FT. SQUARE FEET
 - O/A OVERALL
 - RR RAILROAD
 - (TYP.) TYPICAL
 - CONC. CONCRETE
 - EX. EXISTING
 - (F) FOUND
 - WETLANDS FLAG/NUMBER
 - OVERHEAD WIRES
 - CONTOUR ELEVATION



EXISTING CONDITIONS AND DEMOLITION PLAN				DATE	
"TRIPLET SQUARE LLC"				06-06-22	
BLOCK 27 , LOT 34.011				SCALE	
				AS SHOWN	
SITUATED ON:				DRAWN BY:	
LOCATED ON 405 MAIN STREET AS SHOWN ON TAX				ON:	
MAP OF TOWNSHIP OF MANALAPAN SHEET 20,				CHECKED BY:	
MONMOUTH COUNTY, NJ				CAD FILE	
CONCEPT ENGINEERING CONSULTANTS, P.A.				FIELD BK: N/A	
123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726				PAGE N/A	
PHONE 732-732-2750 OR 732-792-2740				SHEET 2 OF 15	
PROFESSIONAL ENGINEERS - LAND SURVEYORS				JOB NO. 32094	
JOHN J. PLOSKONKA P.E.				DATE	
LEO A. KALIETA P.L.S.				DATE	



KEY/TAX MAP

SCALE: 1" = 300'

PROPERTY NOTES:

- PROPERTY IS KNOWN AND DESIGNATED AS BLOCK 27 LOT 34.011 AS SHOWN ON THE OFFICIAL TAX MAPS OF MANALAPAN TOWNSHIP SHEET 20.
- THE PROPERTY CONTAINS APPROXIMATELY 290,196.53 SF., 6.66 AC AND IS LOCATED IN THE LIMITED BUSINESS TENNENT (LB-TENNENT) ZONE.
- PLANS ARE BASED ON "WETLANDS LOCATION PLAN" FOR BLOCK 27 LOT 34.011 BY CREST ENGINEERING ASSOCIATES INC. DATED 12/30/2021.
- THIS PROJECT HAS RECEIVED THE FOLLOWING:
FRESHWATER WETLANDS/WATER BOUNDARY LINE AS VERIFIED BY NJDEP LOI FILE NO. 1326-07-0005.1.
FLOOD HAZARD AREA VERIFICATION APPROVAL FILE NO. 1326-07-0005.1 LUP 210001

ZONE LB-TENNENT DEVELOPMENT REGULATIONS

AREA	REQUIRED	PROPOSED
MIN. AREA (INTERIOR)	40,000 SF.	290,196.53
INTERIOR LOT REQUIREMENTS		
MIN LOT FRONTAGE	200 FT	301.80 FT
MIN LOT WIDTH	200 FT	301.80 FT
MIN LOT DEPTH	200 FT	+/- 503 FT
YARD REQUIREMENTS		
MIN FRONT SETBACK	50 FT	70.35 FT
MIN INTERIOR SIDE SETBACK	25 FT	35.94 FT
MIN REAR SETBACK	25 FT	29 FT
MAX LOT COVERAGE		
MAX BUILDING COVERAGE	18%	8.70% (25,248 SF)
MAX BUILDING AND STRUCTURE	50%	19.68% (57,118 SF)
MAX BUILDING HEIGHT	35 FT	<35 FT
MIN GROSS FLOOR AREA	2,500 SF	>10,583 SF
MAX FLOOR AREA RATIO (F.A.R.)	0.5	0.42
IMPROVABLE AREA		
MINIMUM IMPROVABLE AREA	0.7 AC.	>0.7 AC
MINIMUM IMPROVABLE DIAMETER	150 FT	>150 FT
MIN LANDSCAPED BUFFER TO RESIDENTIAL	50 FT	25 FT*
* VARIANCE REQUIRED		

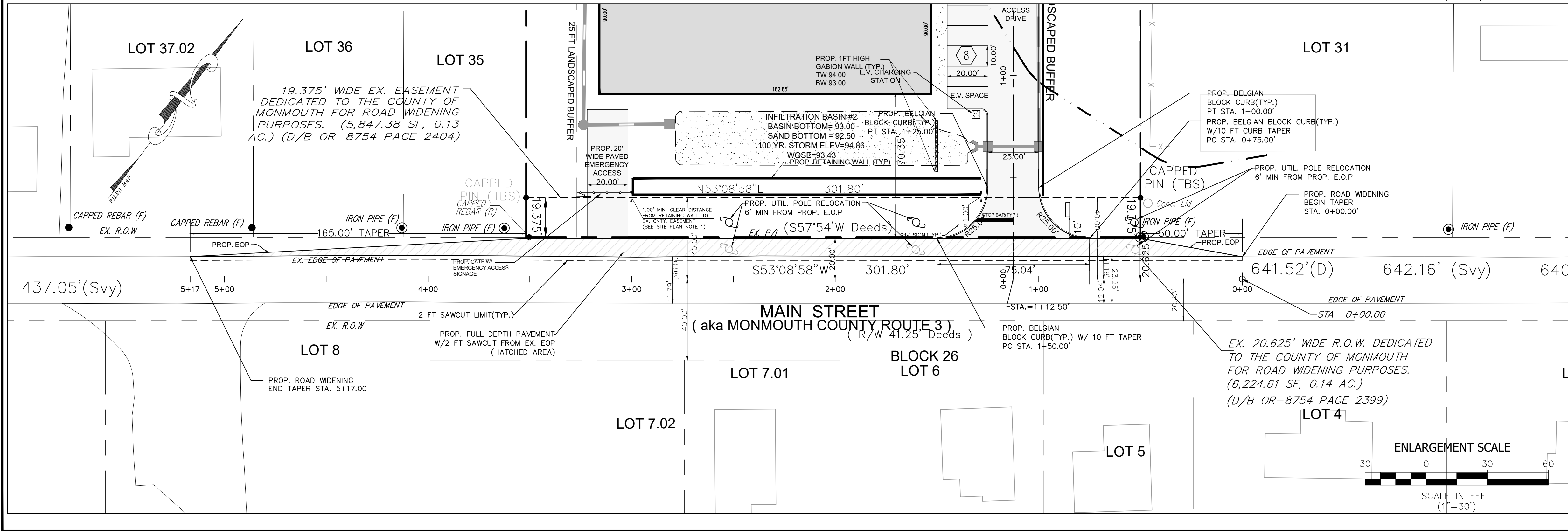
PARKING CALCULATIONS

- 8 TOTAL PARKING SPACES PROVIDED
- 1 HANDICAP SPACE PROVIDED
- 1 ELECTRIC VEHICLE SPACE PROVIDED
- PARKING SPACES DIMENSIONS - 10'X 20'
- 25' WIDE ACCESS DRIVE PROVIDED

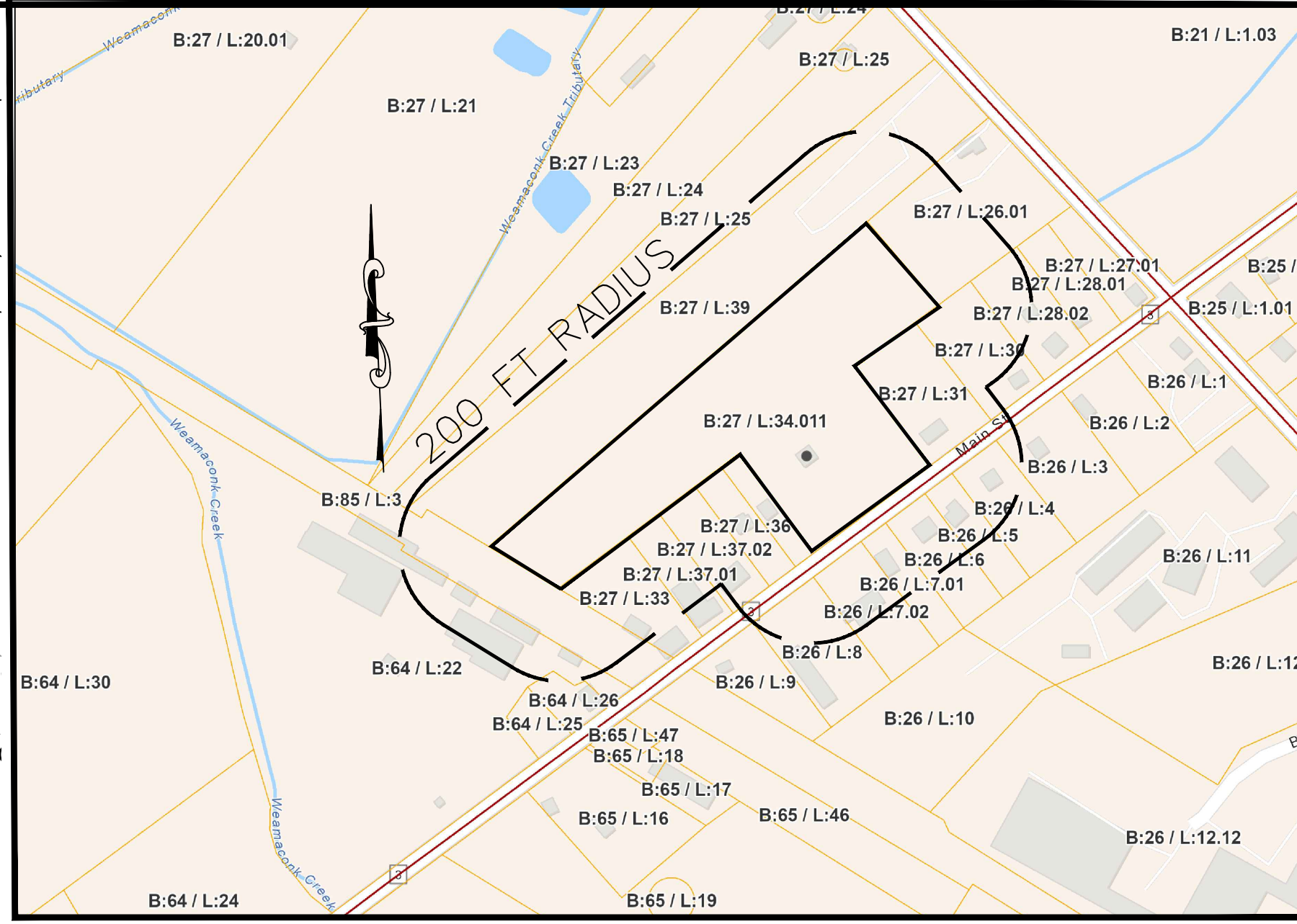
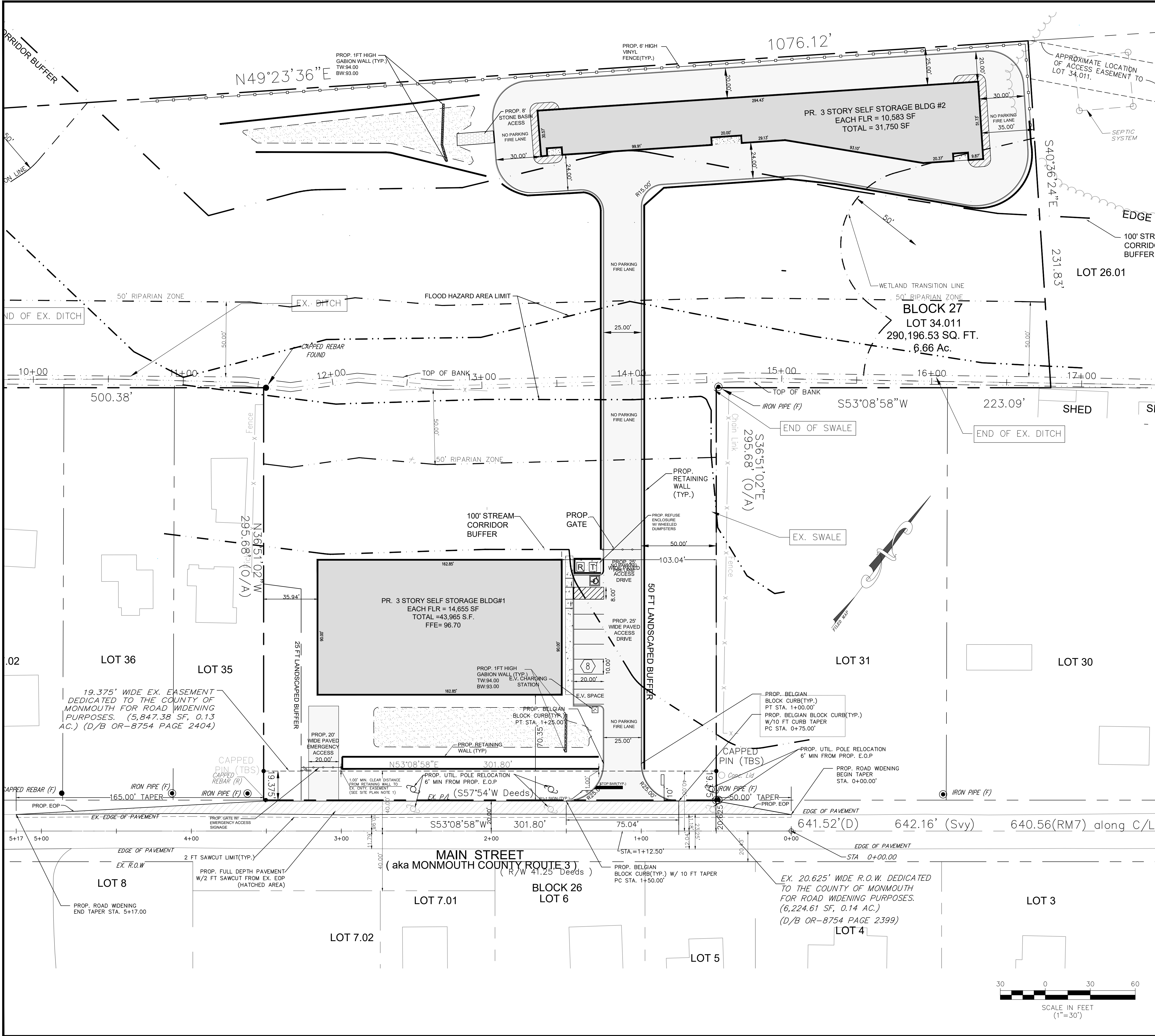
VARIANCES/DESIGN WAIVERS

- USE VARIANCE FOR SELF STORAGE FACILITY. SELF STORAGE IS NOT A PERMITTED USE IN THE LB-TENNENT ZONE.
- NO SIDEWALK IS PROVIDED ALONG PROPERTY FRONTAGE.

SHALL BE AT THE CONTRACTOR'S EXPENSE.

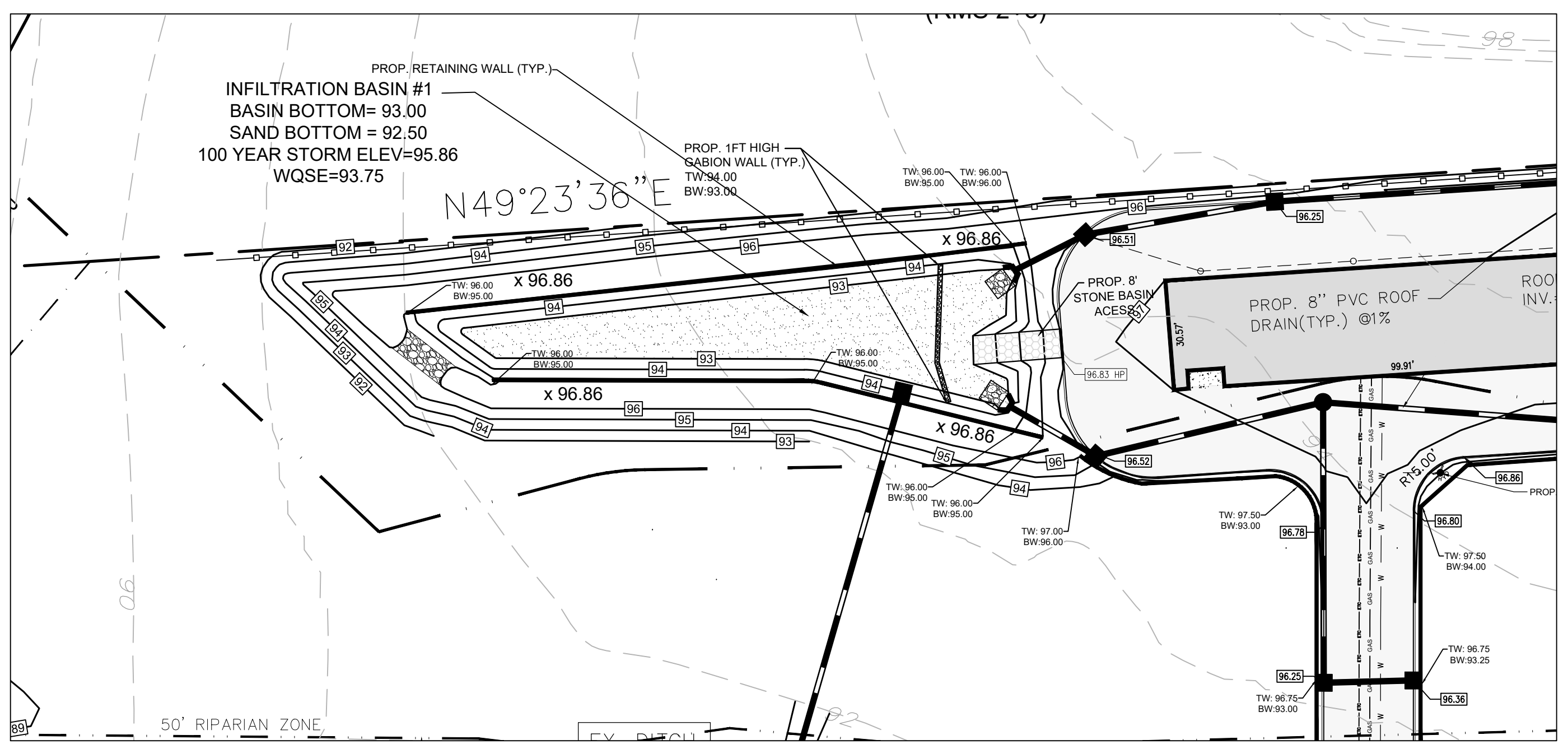
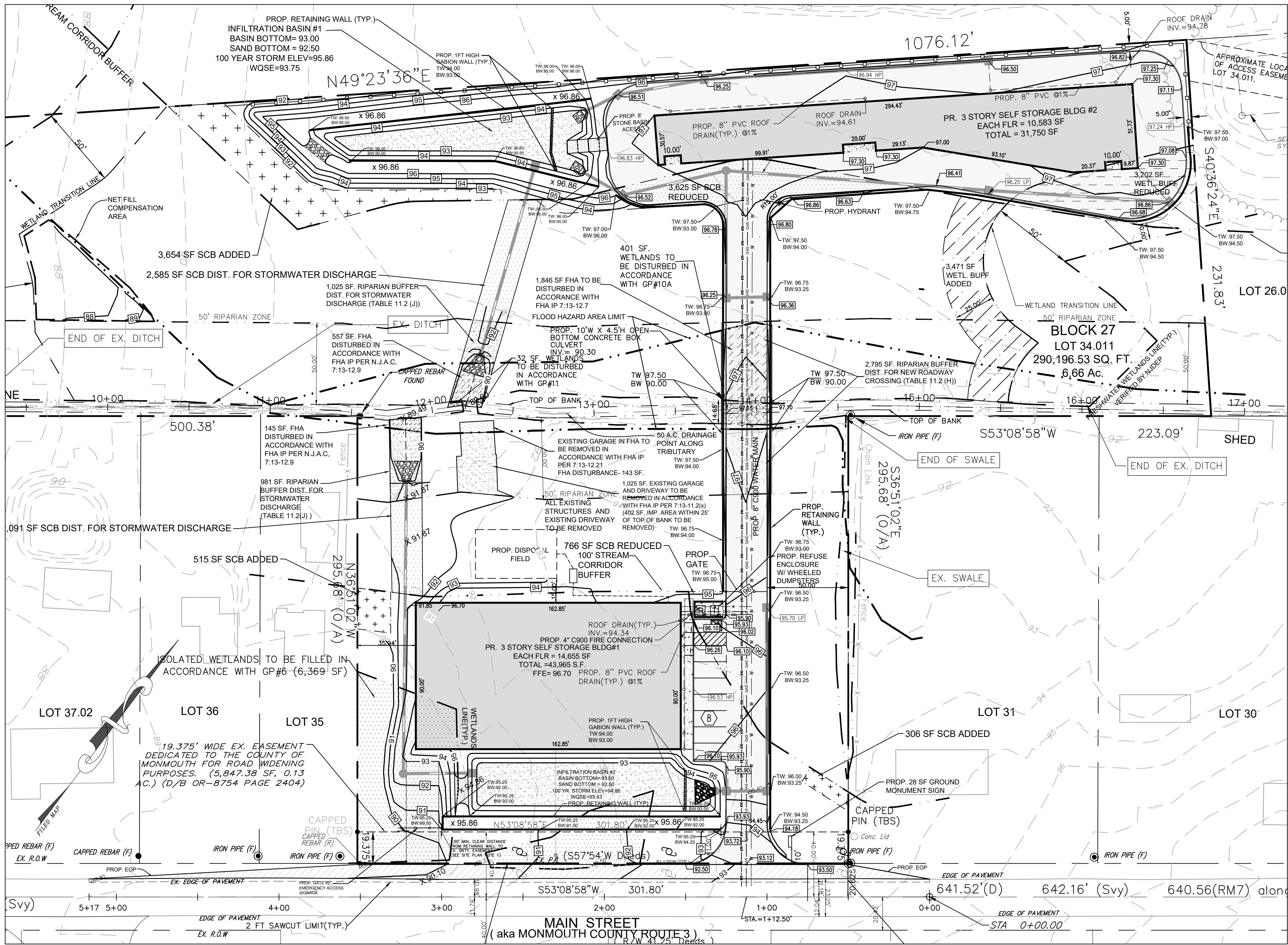


SITE PLAN "TRIPLET SQUARE LLC" BLOCK 27, LOT 34.011		DATE 06-06-22	
SITUATED ON: LOCATED ON 405 MAIN STREET AS SHOWN ON TAX MAP OF TOWNSHIP OF MANALAPAN SHEET 20, MONMOUTH COUNTY, NJ		SCALE AS SHOWN	
CONCEPT ENGINEERING CONSULTANTS, P.A. 123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726 PHONE 732-792-2750 OR 732-792-2740 PROFESSIONAL ENGINEERS - LAND SURVEYORS		DRAWN BY: ON: CHECKED BY: DATE:	
JOHN J. PLOSKONKA P.E. PROFESSIONAL ENGINEER - NJ LIC NO. 3584		LEO A. KALIETA P.L.S. PROFESSIONAL LAND SURVEYOR - NJ LIC NO. 31288	
DATE		DATE	
SHEET 3 OF 15		JOB NO. 32094	



KEY/TAX MAP
SCALE: 1" = 300'

STRIPING PLAN "TRIPLET SQUARE LLC" BLOCK 27, LOT 34.011		13	DATE	06-06-22	
SITUATED ON:		12	SCALE	AS SHOWN	
LOCATED ON 405 MAIN STREET AS SHOWN ON TAX MAP OF TOWNSHIP OF MANALAPAN SHEET 20, MONMOUTH COUNTY, NJ		11	DRAWN BY:	ON	
CONCEPT ENGINEERING CONSULTANTS, P.A. 123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726 PHONE 732-792-2750 OR 732-792-2740 PROFESSIONAL ENGINEERS - LAND SURVEYORS		10	CHECKED BY:	DATE	
		9	DATE	06-10-22	
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JOHN J. PLOSKONKA P.E. PROFESSIONAL ENGINEER - NJ LIC. NO. 10818		4	DATE	06-10-22	
LEO A. KALIETA P.L.S. PROFESSIONAL LAND SURVEYOR - NJ LIC. NO. 3028		3	DATE	06-10-22	
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SITE PLAN NOTES:

1) ALL UNDERGROUND, GROUND LEVEL OR ABOVE GROUND ELEMENTS OF THE PROPOSED RETAINING WALL SHALL BE LOCATED A MINIMUM OF 1 FT CLEAR DISTANCE FROM THE EXISTING RIGHT OF WAY EASEMENT SHOWN ON THE PLAN. IF COUNTY INSPECTION OR FUTURE COUNTY WORK REVEALS LESS THAN 1-FT CLEAR DISTANCE, RELOCATION OF THE RETAINING WALL SHALL BE AT THE OWNERS EXPENSE.

2) ALL UNDERGROUND, GROUND LEVEL OR ABOVE GROUND ELEMENTS OF THE PROPOSED STORMWATER MANAGEMENT SYSTEMS SHALL BE LOCATED A MINIMUM OF 1 FT CLEAR DISTANCE FROM THE EXISTING RIGHT OF WAY EASEMENT SHOWN ON THE PLAN. IF COUNTY INSPECTION OR FUTURE COUNTY WORK REVEALS LESS THAN 1-FT CLEAR DISTANCE, RELOCATION OF THESE ELEMENTS OF THE STORMWATER SYSTEM SHALL BE AT THE OWNERS EXPENSE.

3) UTILITIES POLES TO BE RELOCATED SIX(6) FT. MINIMUM FROM FACE OF PROPOSED FACE OF CURB OR EDGE OR PAVEMENT. IF INSPECTION REVEALS LESS THAN SIX(6) FT. CLEAR DISTANCE BETWEEN CURB/E.O.P AND UTILITY POLE, ALL SUBSEQUENT RELOCATIONS SHALL BE AT THE CONTRACTOR'S EXPENSE.

LOT COVERAGE CALCULATIONS

PROP. BUILDING #1- 14,665 SF.
PROP. BUILDING #2- 10,583 SF.
PROP. PAVEMENT+ SIDEWALKS - 31,870 SF **R.O.W AREA DISCOUNTED
PROP. GRASS PAVERS- 3,101 SF **R.O.W AREA DISCOUNTED

FAR CALCS - TOTAL FAR - 121,155 SF
BLDG #1- 43,995 SF
BLDG#2- 31,750 SF
PAVEMENT+SIDEWALKS - 31,870 SF
INFILTRATION BASINS - 13,540 SF

TOWNSHIP STREAM CORRIDOR AVERAGING
T.S.C.B. REDUCED = 3,968 S.F.
T.S.C.B. ADDED = 4,293 S.F.
T.S.C.B. DIST. FOR ROAD CROSSING- 8,556 SF
T.S.C.B. DIST. FOR STORMWATER DISCHARGES - 4,676 SF

SOIL LOGS		
LOG	ELEV	S.H.W.T
LOG#1	91.00	88.91
LOG#2	92.50	90.33
LOG#3	92.50	90.33
LOG#4	93.00	90.42

GRADING AND UTILITY PLAN
"TRIPLE SQUARE LLC"
BLOCK 27, LOT 34.011

SITUATED ON:
LOCATED ON 405 MAIN STREET AS SHOWN ON TAX
MAP OF TOWNSHIP OF MANALAPAN SHEET 20,
MONMOUTH COUNTY, NJ

CONCEPT ENGINEERING CONSULTANTS, P.A.
123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726
PHONE 732-732-2750 OR 732-792-2740
PROFESSIONAL ENGINEERS - LAND SURVEYORS

JOHN J. PLOSKONKA P.E.
PROFESSIONAL ENGINEER - NJ LIC. NO. 3584

LEO A. KALIETA P.L.S.
PROFESSIONAL LAND SURVEYOR - NJ LIC. NO. 31288

DATE: 06-06-22

SCALE: AS SHOWN

DRAWN BY: ON

CHECKED BY: ON

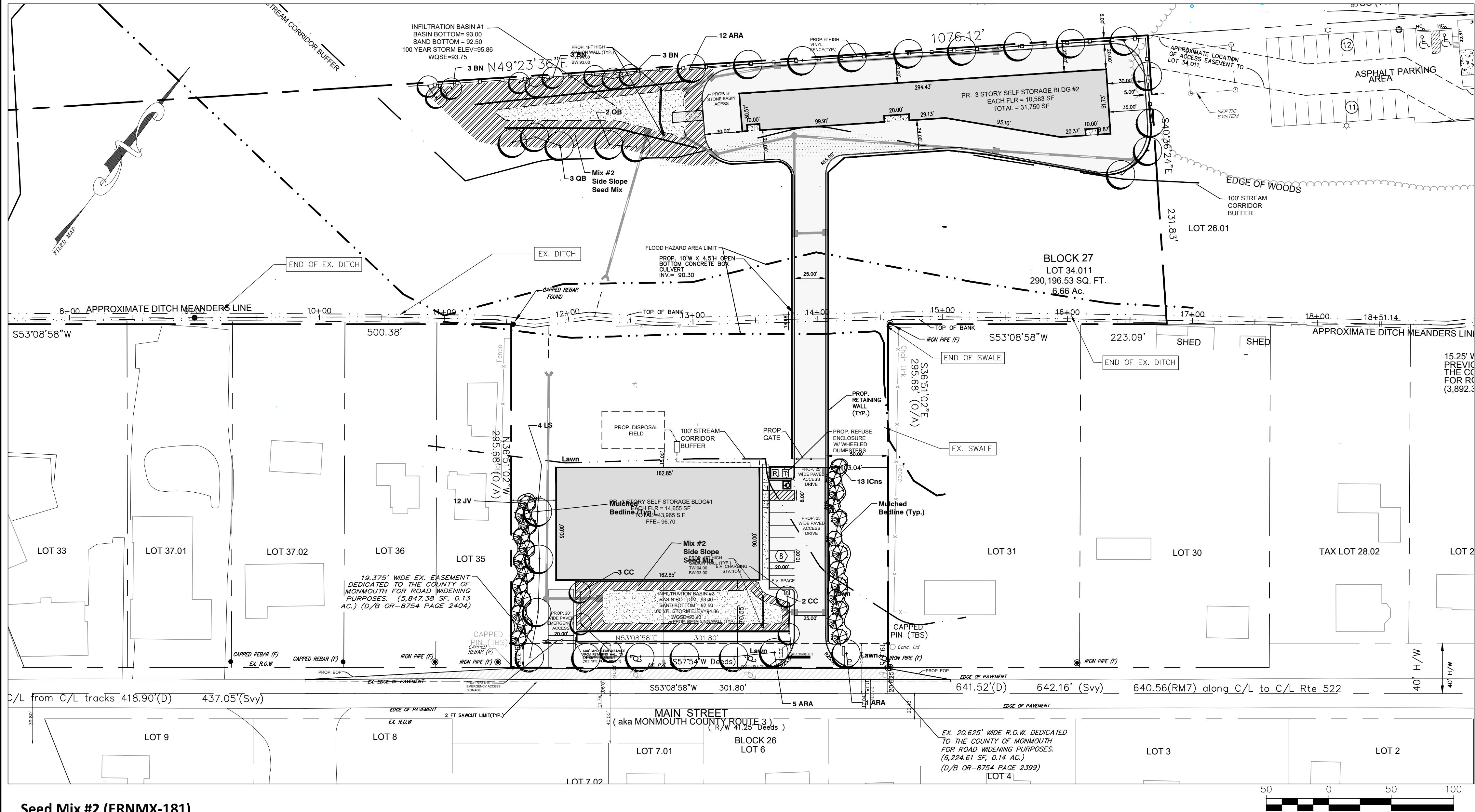
CAD FILE: ON

FIELD BK: N/A

PAGE: N/A

SHEET: 5 OF 15

JOB NO: 32094



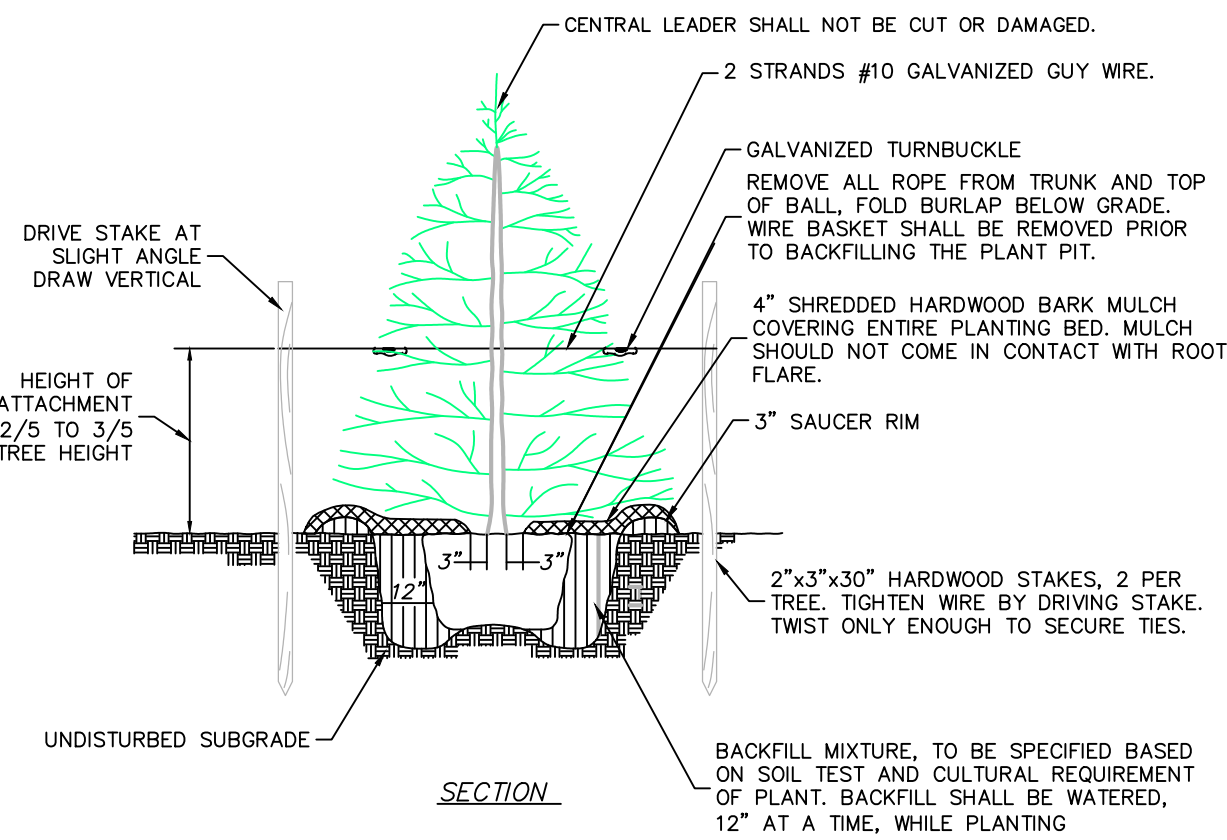
Seed Mix #2 (ERNMX-181)

Native Steep Slope Mix w/Annual Ryegrass Mix

- Mix Composition**
- 31.1% Sorghastrum nutans, NY4 Ecotype (Indiangrass, NY4 Ecotype)
 - 20.0% Lolium multiflorum (Annual Ryegrass)
 - 14.0% Andropogon gerardi, 'Niagara' (Big Bluestem, 'Niagara')
 - 10.0% Elymus canadensis (Canada Wildrye)
 - 7.0% Elymus virginicus, Madison-NY Ecotype (Virginia Wildrye, Madison-NY Ecotype)
 - 4.0% Agrostis perennans, Albany Pine Bush-NY Ecotype (Autumn Bentgrass, Albany Pine Bush-NY Ecotype)
 - 4.0% Panicum virgatum, 'Shawnee' (Switchgrass, 'Shawnee')
 - 3.0% Panicum clandestinum, Tioga (Deertongue, Tioga)
 - 1.5% Echinacea purpurea (Purple Coneflower)
 - 1.3% Chamaecrista fasciculata, PA Ecotype (Partridge Pea, PA Ecotype)
 - 1.2% Helopsis helianthoides, PA Ecotype (Oxeye Sunflower, PA Ecotype)
 - 1.0% Coreopsis lanceolata (Lanceleaf Coreopsis)
 - 1.0% Rudbeckia hirta (Blackeyed Susan)
 - 0.3% Monarda fistulosa, Fort Indiantown Gap-PA Ecotype (Wild Bergamot, Fort Indiantown Gap-PA Ecotype)
 - 0.2% Asclepias syriaca (Common Milkweed)
 - 0.2% Solidago rugosa, PA Ecotype (Wrinkleleaf Goldenrod, PA Ecotype)
 - 0.1% Aster lateriflorus (Calico Aster)
 - 0.1% Aster pilosus, PA Ecotype (Heath Aster, PA Ecotype)

Seeding Rate: 60 lb per acre, or 1.5 lb per 1,000 sq ft.

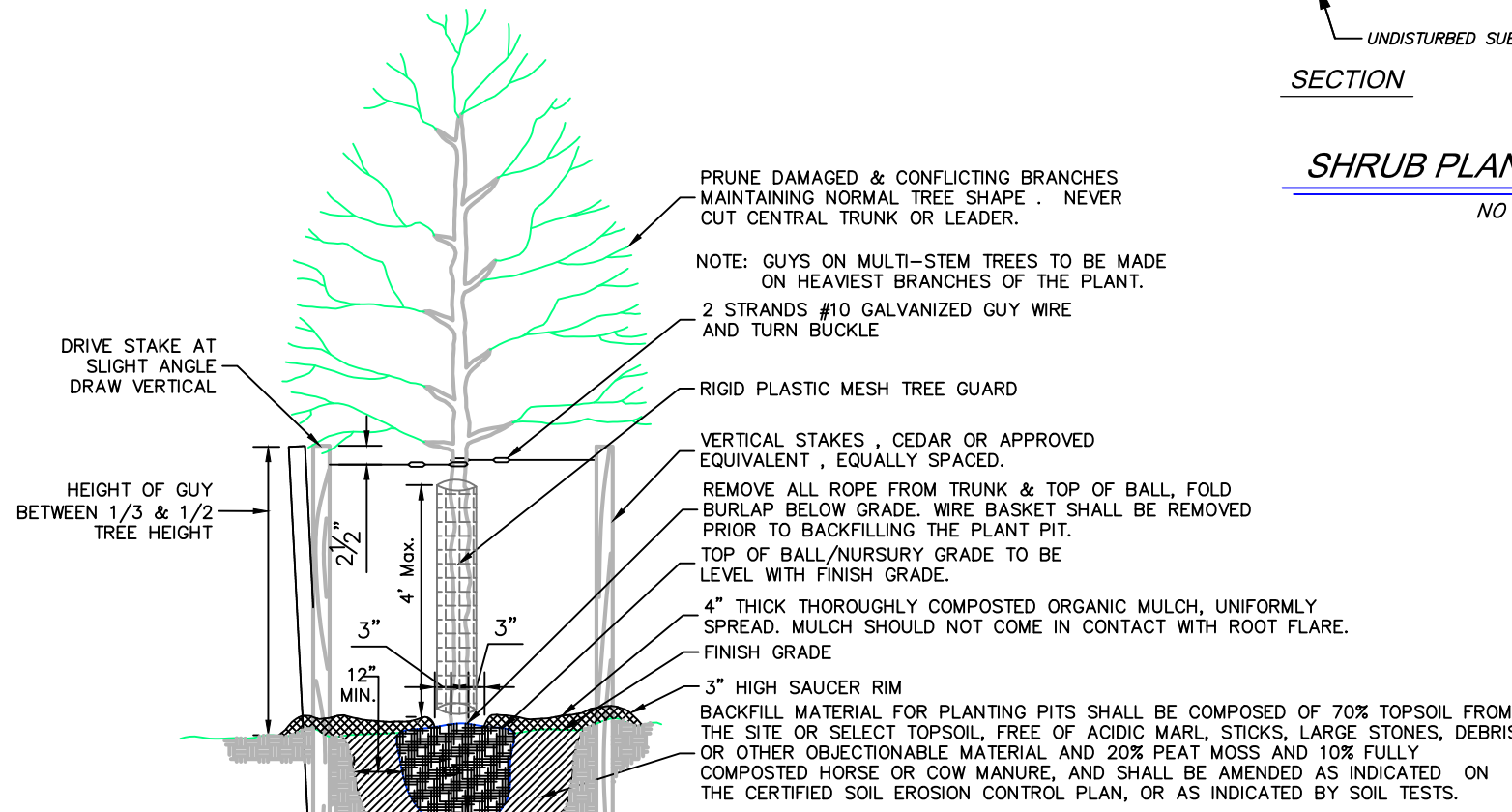
Ernst Conservation Seeds, Inc.
8884 Mercer Pike, Meadville PA 16335
(800) 873-3321



- NOTES:
- CONTRACTOR SHALL PARTIALLY FILL WITH WATER A REPRESENTATIVE NUMBER OF PITS IN EACH AREA OF THE PROJECT PRIOR TO PLANTING TO DETERMINE IF THERE IS ADEQUATE PERCOLATION. IF PIT DOESN'T PERCOLATE, MEASURES MUST BE TAKEN TO ASSURE PROPER DRAINAGE BEFORE PLANTING.
 - CONTRACTOR SHALL REMOVE STAKING, GUYING AND WRAP AT END OF GUARANTEE PERIOD. ALL PLANTING MUST BE GUARANTEED FOR ONE FULL GROWING SEASON FROM THE TIME OF FINAL ACCEPTANCE BY THE TOWNSHIP LANDSCAPE ARCHITECT OR ENGINEER.
 - ALL PLANTING MUST BE GUARANTEED FOR ONE FULL GROWING SEASON FROM TIME OF FINAL ACCEPTANCE BY THE TOWNSHIP LANDSCAPE ARCHITECT OR ENGINEER.
 - THE TREE ROOT FLARE MUST BE EXPOSED AND NOT COME INTO CONTACT WITH MULCH.
 - STAKES AND GUY WIRE SHALL ONLY BE USED WHEN CONDITIONS MERIT.

EVERGREEN TREE PLANTING DETAIL

NO SCALE



- NOTES:
- CONTRACTOR SHALL PARTIALLY FILL WITH WATER A REPRESENTATIVE NUMBER OF PITS IN EACH AREA OF THE PROJECT PRIOR TO PLANTING TO DETERMINE IF THERE IS ADEQUATE PERCOLATION. IF PIT DOES NOT PERCOLATE, MEASURES MUST BE TAKEN TO ASSURE PROPER DRAINAGE BEFORE PLANTING.
 - CONTRACTOR SHALL REMOVE STAKING, GUYING & WRAP AT END OFF GUARANTEE PERIOD.
 - ALL PLANTING MUST BE GUARANTEED FOR ONE FULL GROWING SEASON FROM TIME OF FINAL ACCEPTANCE BY THE TOWNSHIP LANDSCAPE ARCHITECT OR ENGINEER.
 - THE TREE ROOT FLARE MUST BE EXPOSED AND NOT COME INTO CONTACT WITH MULCH.
 - STAKES AND GUY WIRE SHALL ONLY BE USED WHEN CONDITIONS MERIT.

DECIDUOUS TREE PLANTING DETAIL

NO SCALE

Planting Schedule

Shade Trees

Key	Quan.	Common Name
ARA	19	'Armstrong' Red Maple
LS	8	Sweetgum
QB	5	Swamp White Oak

Botanical Name	Size	Root	Comments
Acer rubrum 'Armstrong'	2 -2 1/2" Cal.	B&B	Full Specimen
Liquidambar styraciflua	2 -2 1/2" Cal.	B&B	Full Specimen
Quercus bicolor	2 -2 1/2" Cal.	B&B	Full Specimen

Ornamental Trees

Key	Quan.	Common Name
AC	4	Shadblow Serviceberry
BN	9	River Birch
CC	5	Eastern Redbud

Botanical Name	Size	Root	Comments
Amelanchier canadensis	8-10'	B&B	Multi-stem
Betula nigra	8-10'	B&B	Multi-stem
Cercis canadensis	8-10'	B&B	Full Specimen

Evergreen Trees

Key	Quan.	Common Name
IC ns	13	Nellie Stevens Holly
JV	15	Eastern Red Cedar

Botanical Name	Size	Root	Comments
Ilex Crenata "Nellie Stevens"	7-8'	B&B	Full Specimen
Juniperus virginiana	7-8'	B&B	Full Specimen

Shrubs

Key	Quan.	Common Name
CA	12	Summersweet
CS	16	Red Twig Dogwood
IV	9	Winter Red Winterberry Holly
VD	12	Arrowwood Viburnum

Botanical Name	Size	Root	Comments
Clethra alnifolia 'Hummingbird'	24-30"	2 Gal	Full Specimen
Cornus stolonifera	24-30"	2 Gal	Full Specimen
Ilex verticillata "Winter Red"	24-30"	2 Gal	Full Specimen
Viburnum dentatum	30-36"	B&B	Full Specimen

GENERAL PLANTING NOTES

- This plan is for landscape and lighting purposes only. Refer to engineer's drawings for grading & drainage.
- The final location of all plant material to be determined in the field under the direction of the landscape architect and approved by the municipal engineer.or the township landscape architect.
- All plant material shall conform to the standards of the American Association of Nurserymen. All plants shall be typical of their species or variety. All plants shall have normal, well-developed branches and vigorous root system. they shall be healthy, vigorous, free from defects, disfiguring knots, abrasion of the bark, sunscald injuries, plants diseases, insect eggs, borers and all other forms of infection. All plants shall be nursery grown.
- The contractor shall provide 4" shredded hardwood bark mulch in all continuous planting beds.
- All plant material shall be property staked, wrapped and planted in conformance with the typical planting details.
- Typical prepared backfill mix shall consist of two parts native soil, one part topsoil, one part moistened peat moss, and 2 lbs. bone meal or equivalent.
- All lawn areas indicated on the plan shall be stabilized with sod or seed (see seed specification) as indicated on the plans. Sod shall consist of a New Jersey certified mixture or an approved equal. Fine grade, lime and fertilize all lawn areas prior to installation.
- All trees, shrubs or ground cover to be preserved on the property shall be protected against damage during construction operations by fencing. The tree protection shall be placed before any excavation or grading has begun and shall be maintained in repair for the duration of the construction.
- All vegetation being preserved shall be selectively thinned and pruned, to remove any dead or diseased limbs or stumps, areas of possible insect infestation, etc.
- All plant material and sizes shall be as specified on the approved landscape plan(s). No substitutions shall be made without prior written permission from the appropriate municipal agency. All substitutions shall be submitted to the township engineer for review and approval prior to installation.
- Landscape contractor shall remain responsible for watering and care of plant material stockpiled or installed until such time as final inspection by Township arborist and/or Township engineer. At such time as final approval is given, responsibility shall revert to the Owner.
- In the event that plant quantity discrepancies or material omissions occur in the planting schedule, the plan shall supercede.
- All wire baskets are to be removed completely from the plant ball prior to backfilling.
- Refer to the Soil Erosion and Sediment Control Plan for seeding specifications.
- All dead or dying landscape plant material within the project site shall be replaced as part of the site improvement.
- Shade trees to be set back a minimum of 3 feet from face of curb.
- Mulch shall not be installed around the base of any tree.

LANDSCAPE PLAN "TRIPLET SQUARE LLC" BLOCK 27 , LOT 34.011		13 _____ DATE 06-06-22
SITUATED ON:		SCALE
LOCATED ON 405 MAIN STREET AS SHOWN ON TAX MAP OF TOWNSHIP OF MANALAPAN SHEET 20, MONMOUTH COUNTY, NJ		AS SHOWN
DRAWN BY:		ON
CHECKED BY:		DATE
CAD FILE		FIELD BK. N/A
PAGE N/A		SHEET 7 OF 15
JOB NO.		32094

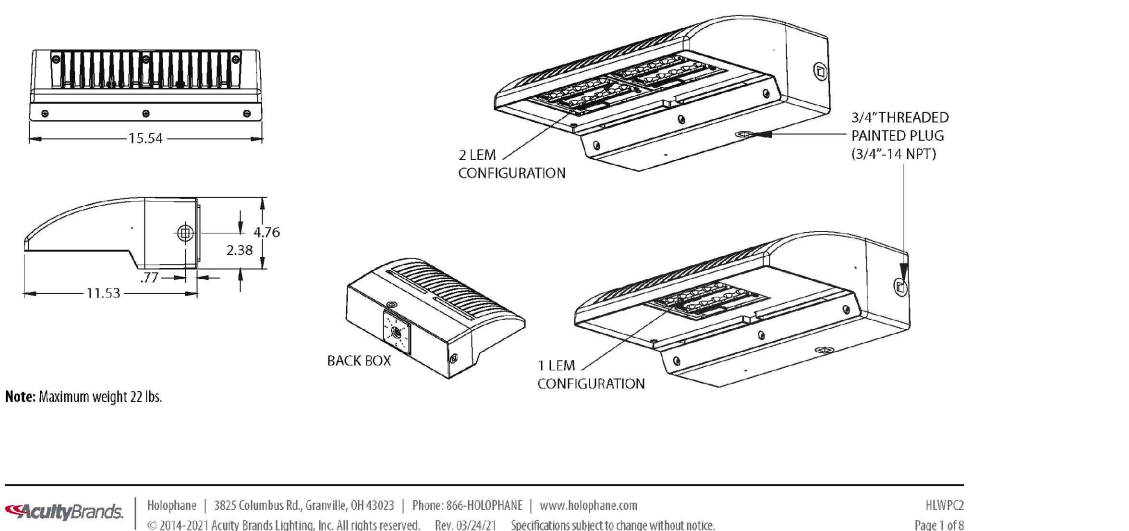
CONCEPT ENGINEERING CONSULTANTS, P.A.
123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726
PHONE 732-792-2750 OR 732-792-2740
PROFESSIONAL ENGINEERS - LAND SURVEYORS



LEO A. KALIETA P.L.S.
PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 31288

JOHN J. PLOSKONKA P.E.
PROFESSIONAL ENGINEER N.J. LIC. NO. 3584

DATE _____

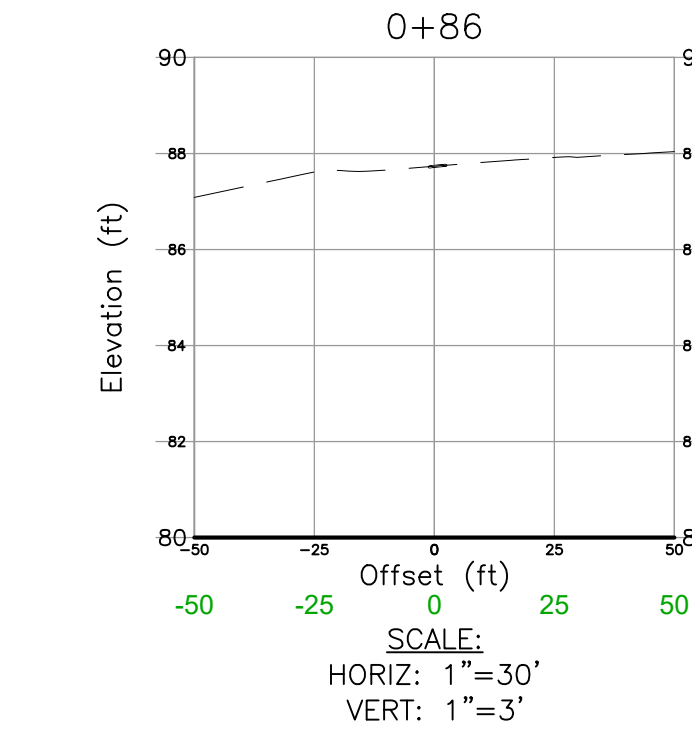
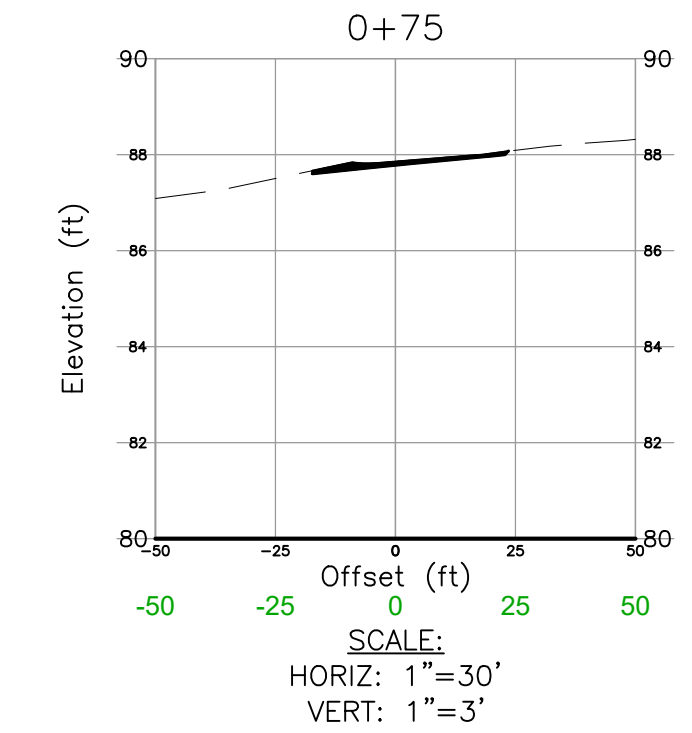
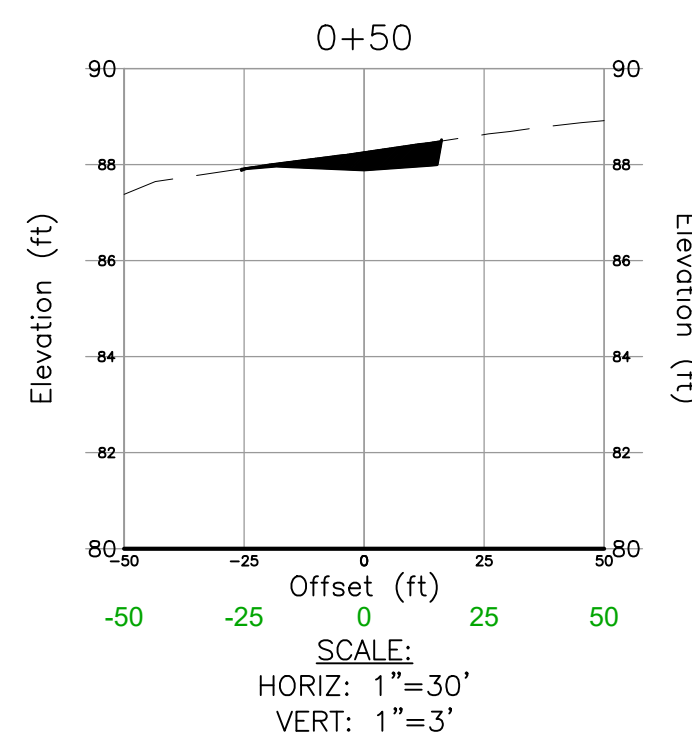
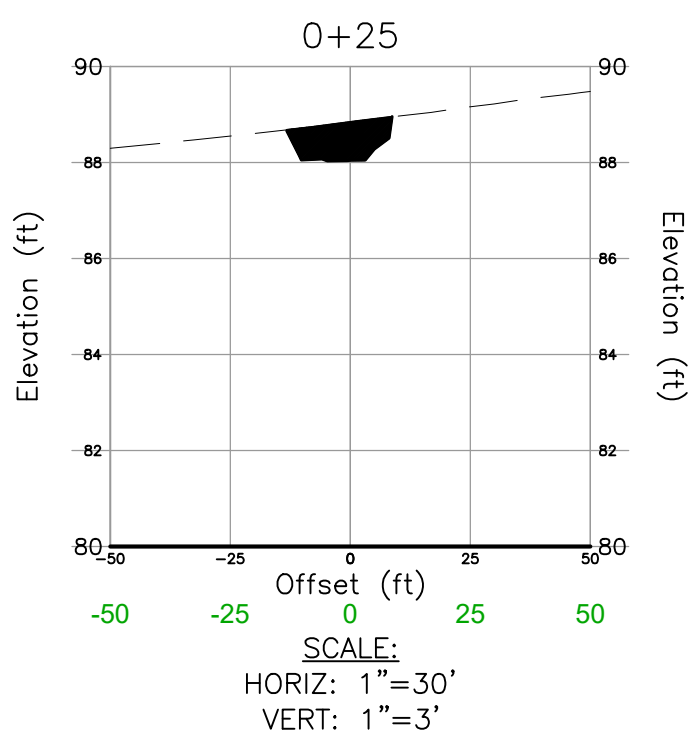
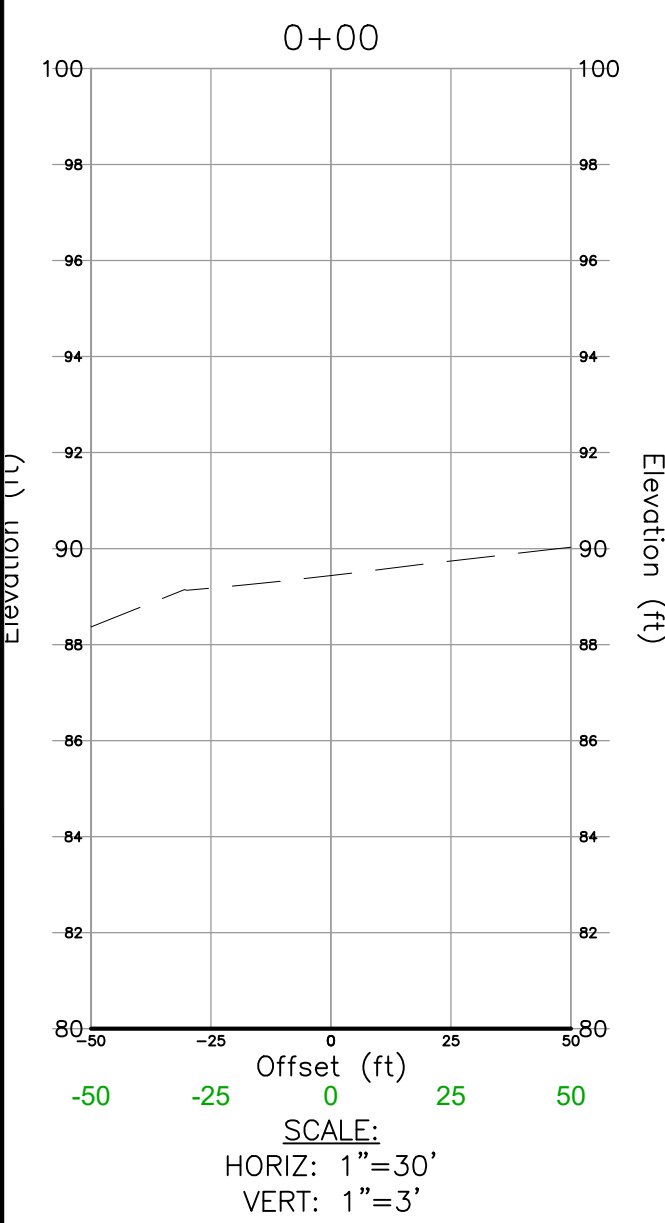
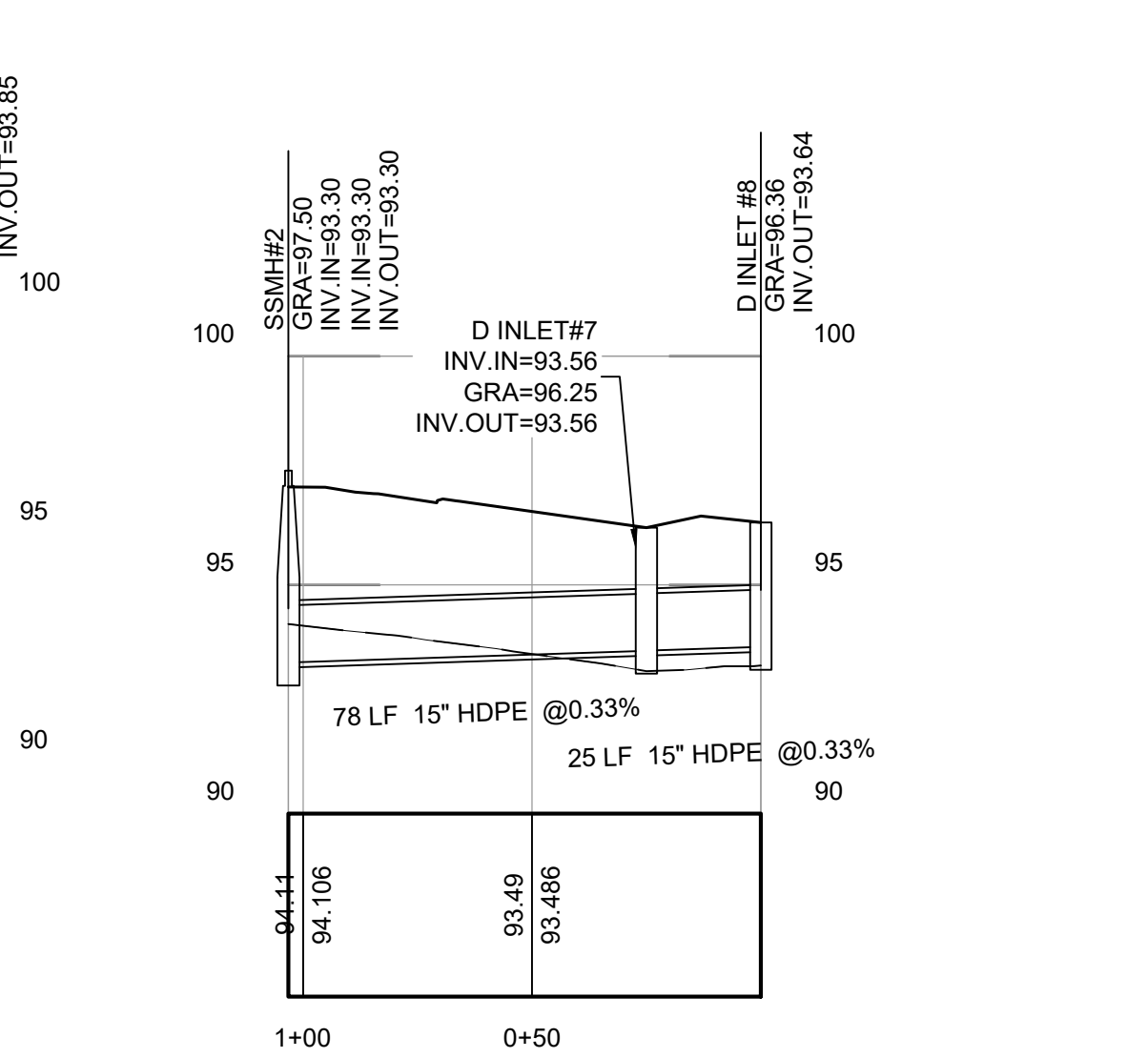
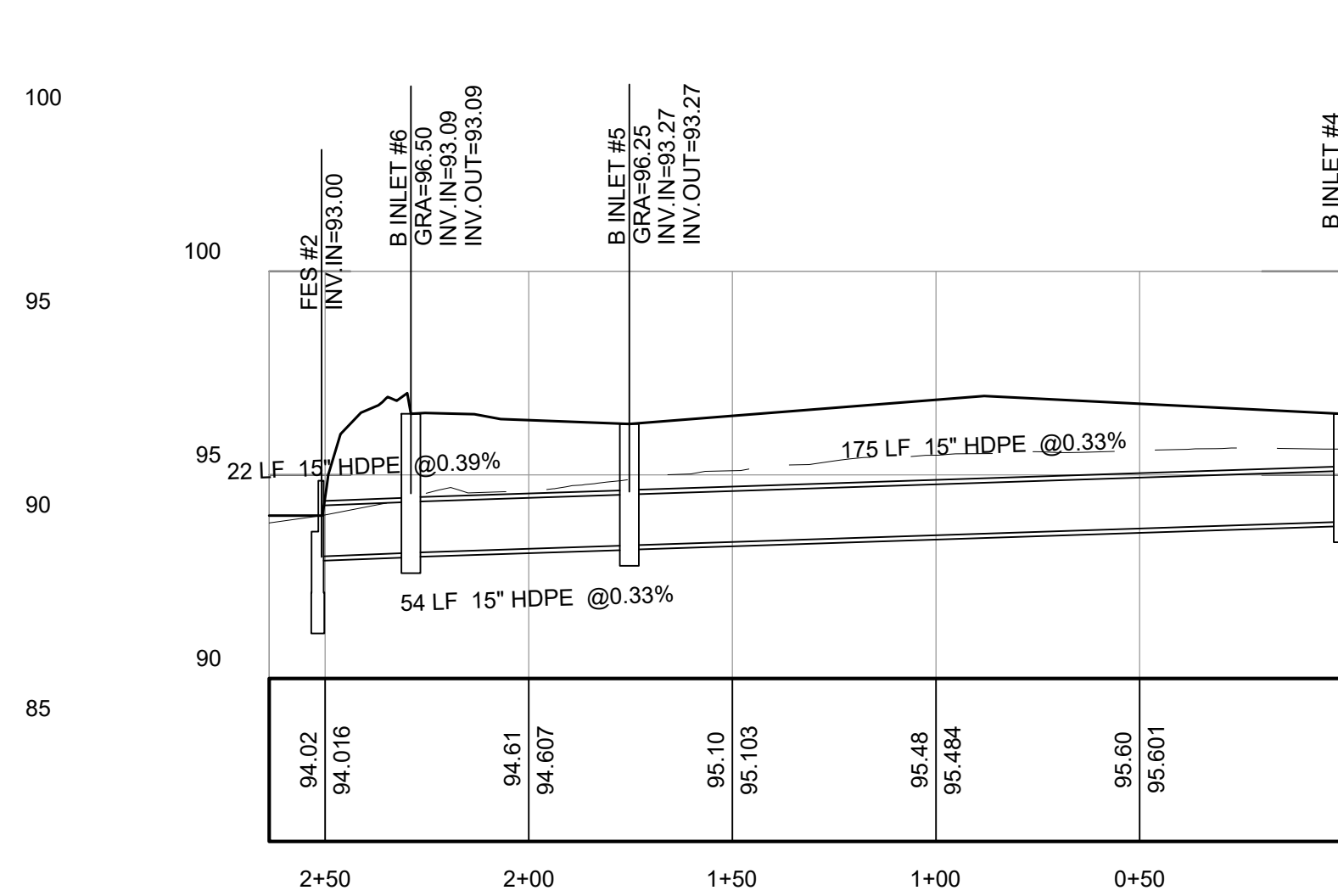
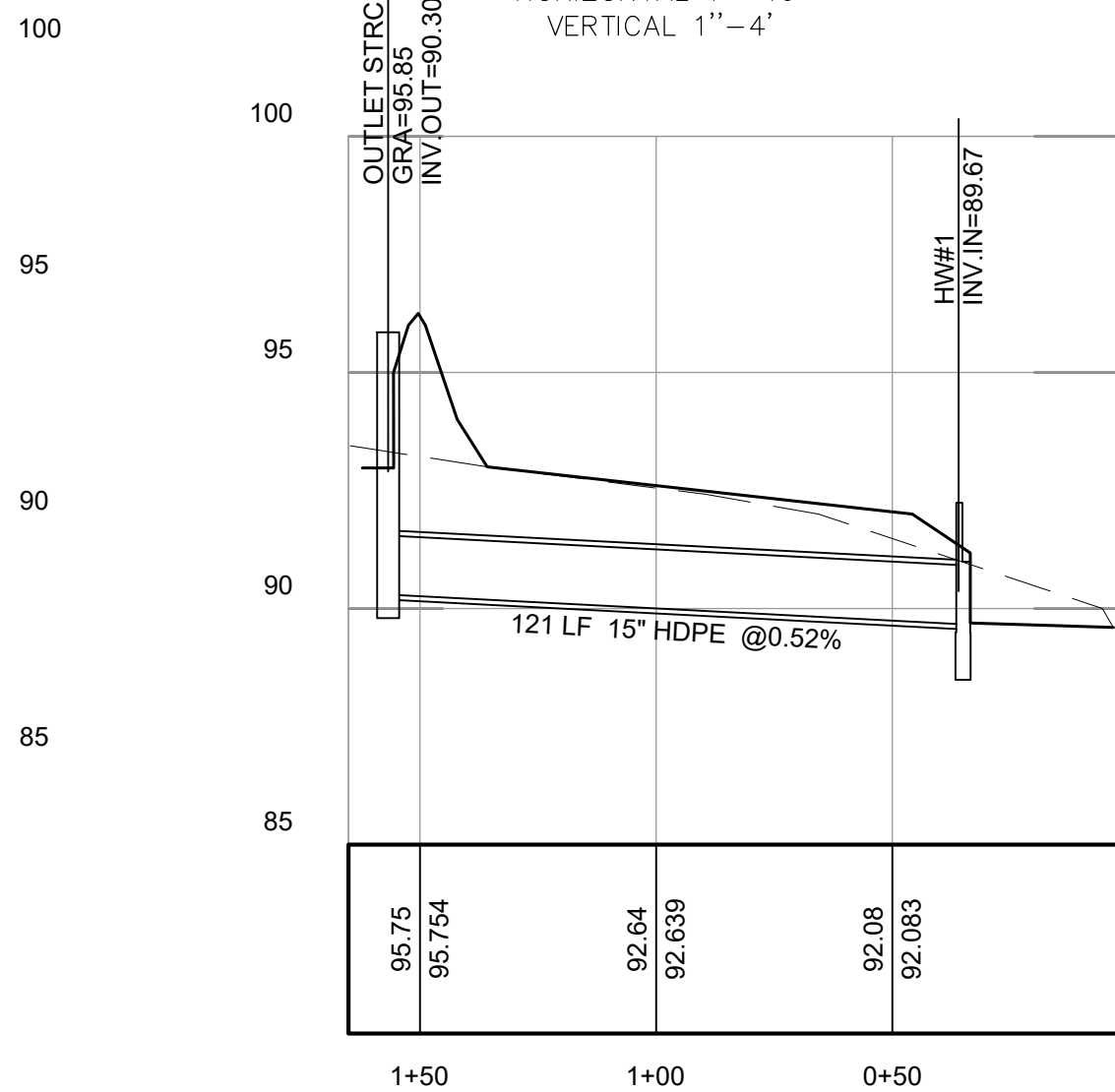
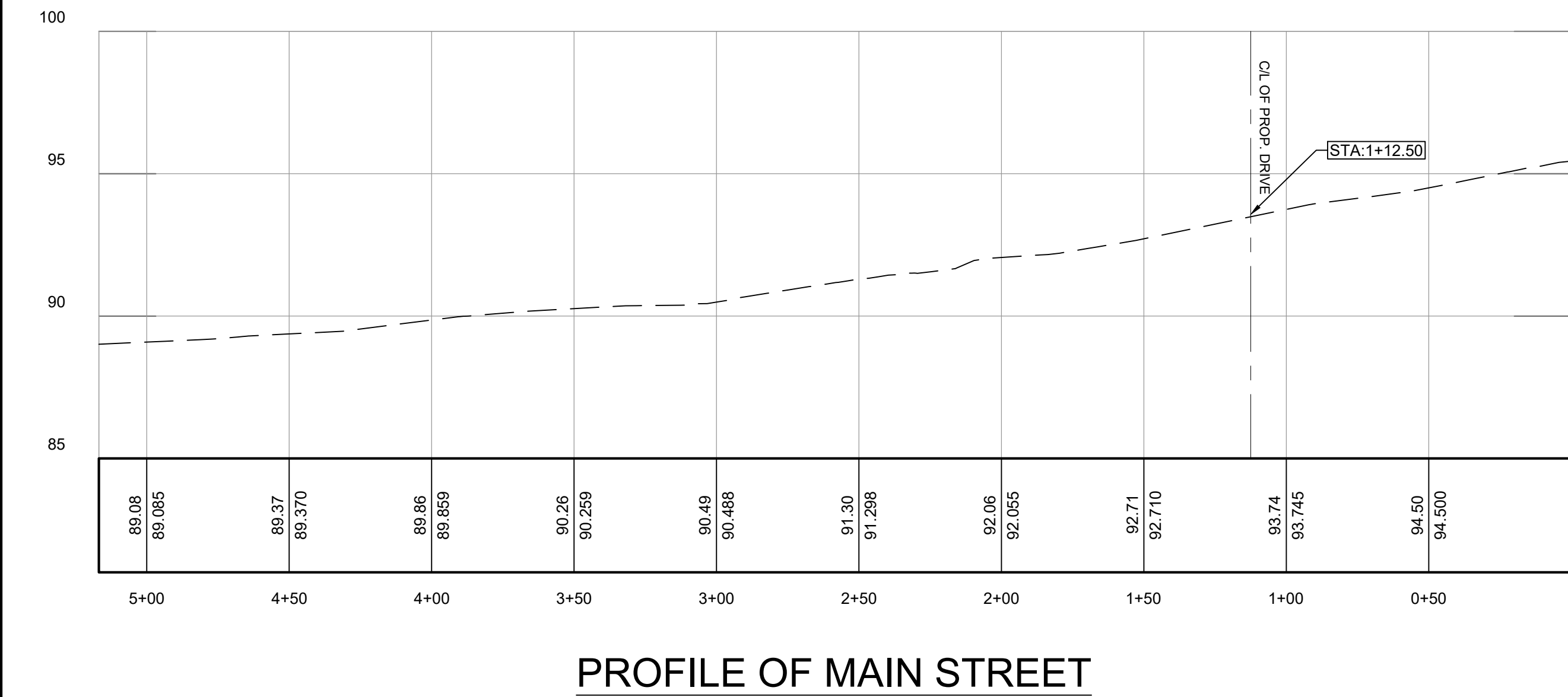
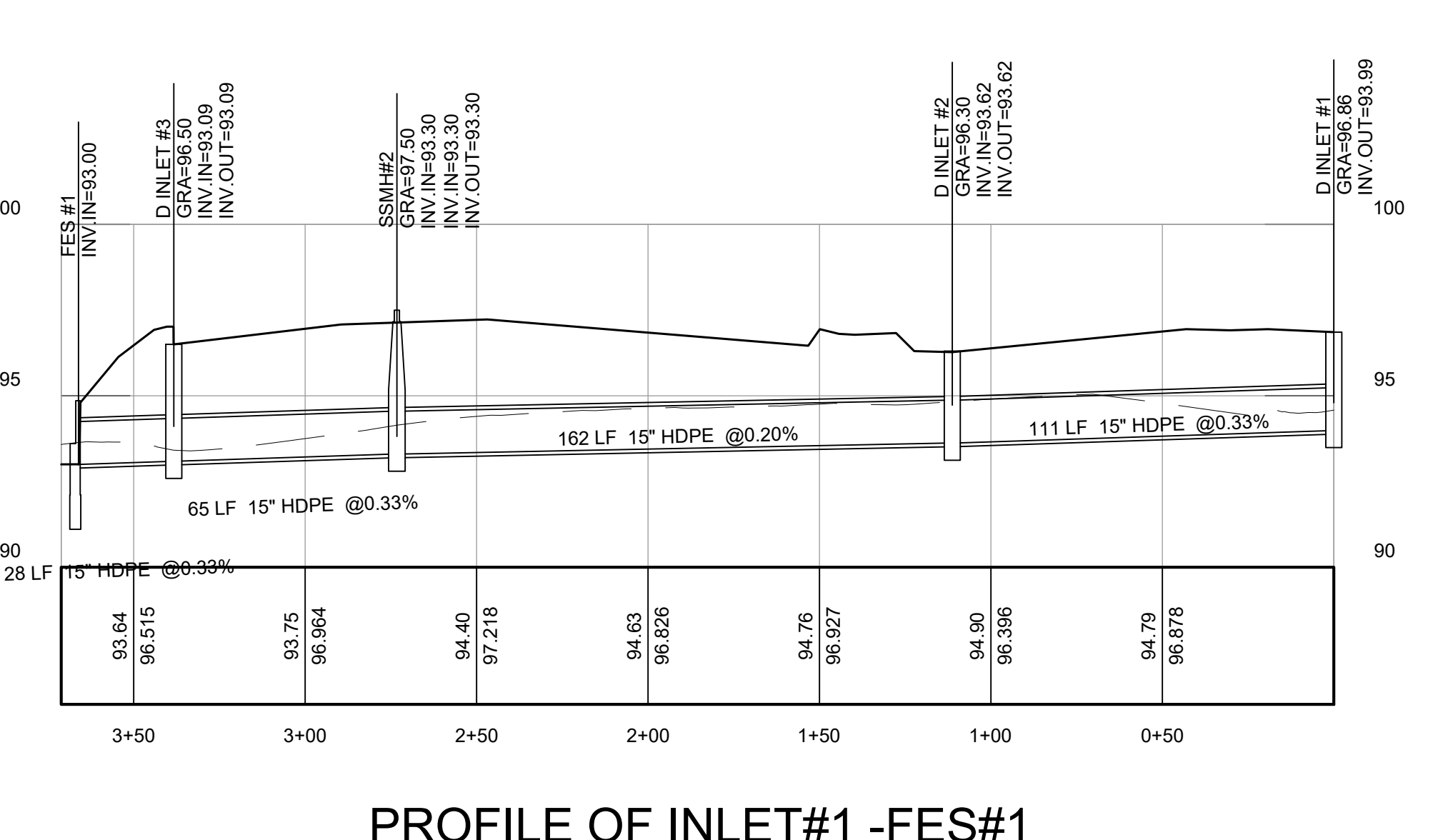
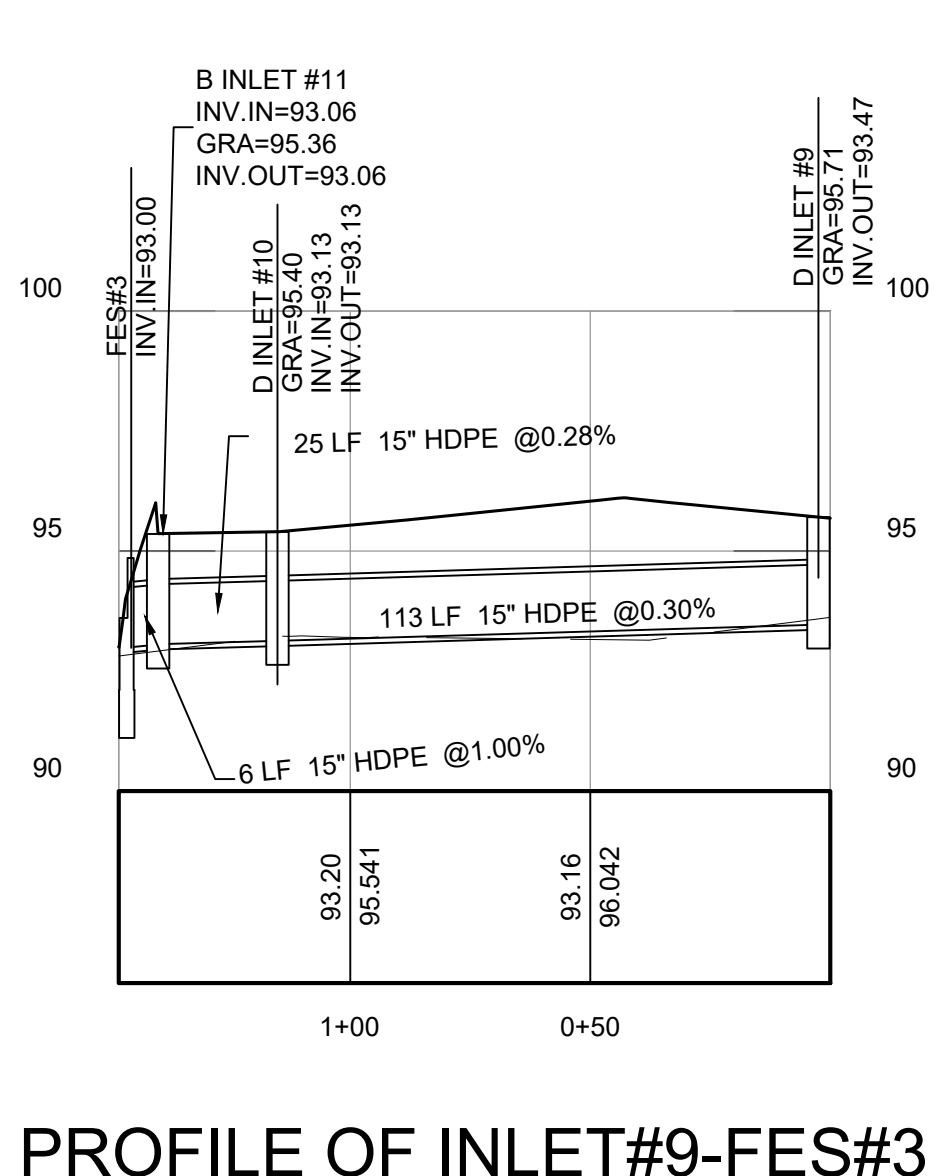
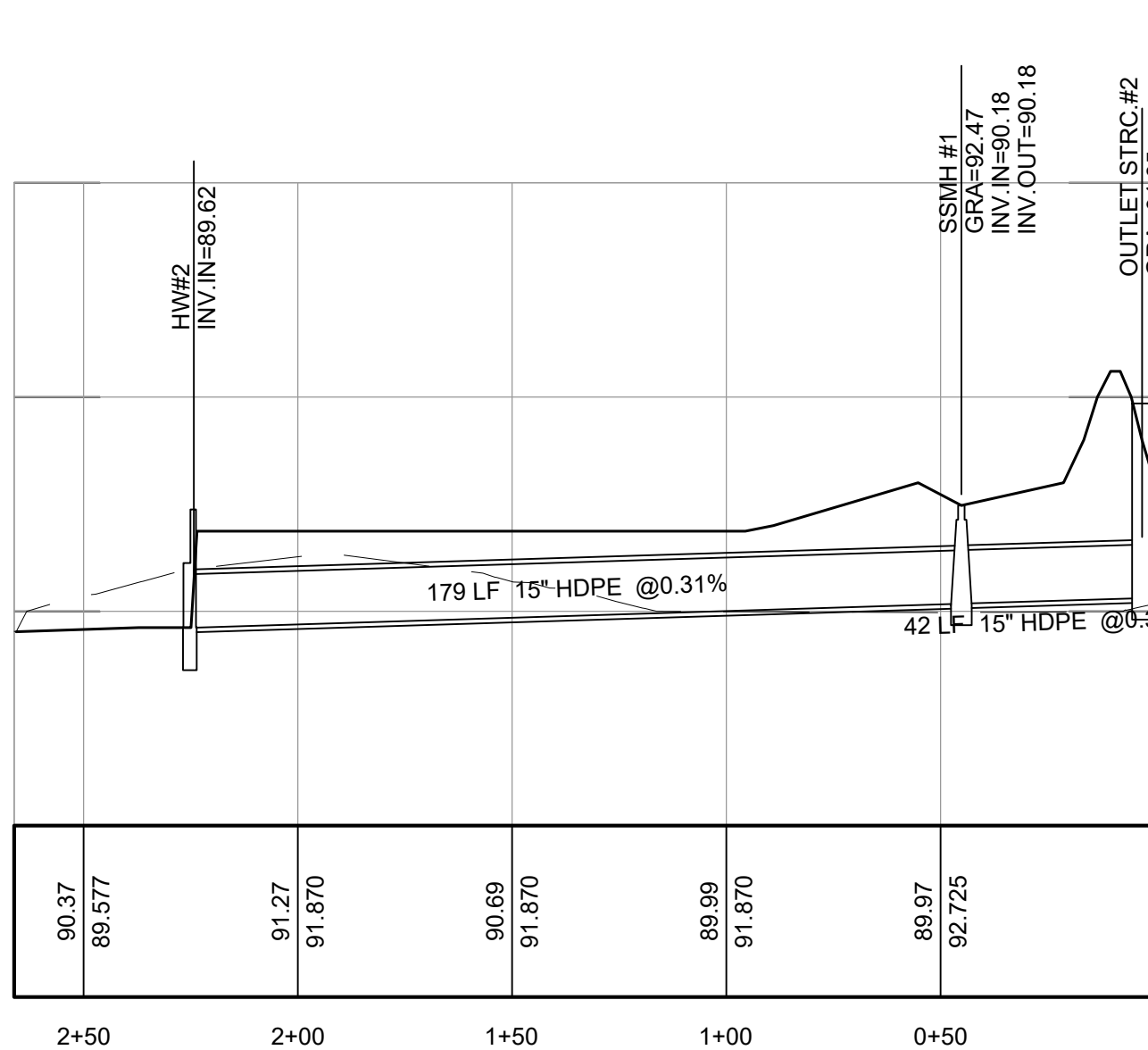
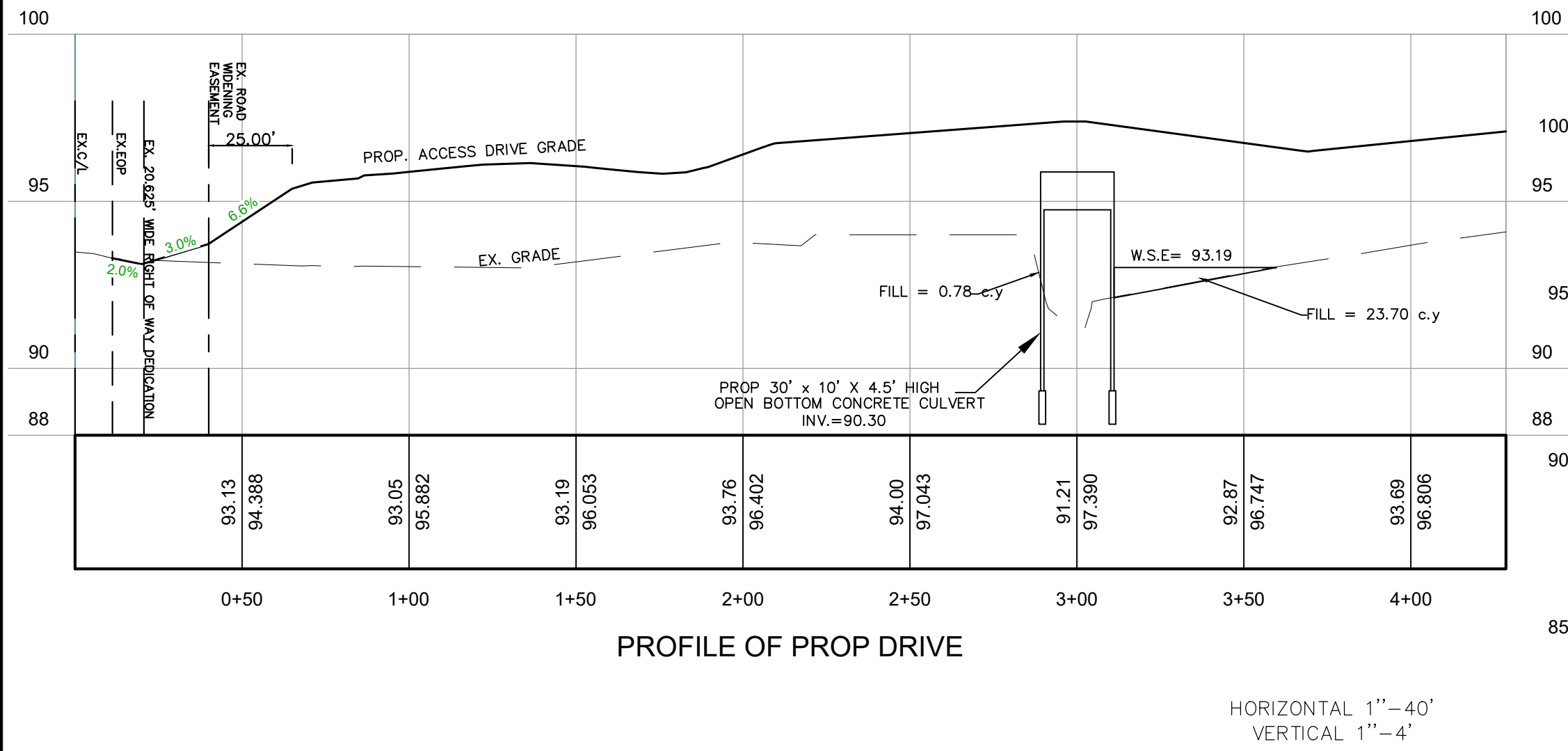
DATE _____



Schedule										
Symbol	Label	Quantity	Manufacturer	Catalog Number	Number Lamps	Lumens Per Lamp	Light Loss Factor	Description	Wattage	Distribution
	A	15	Hopaphane	HLWPC2 P10 40K XX T3M	1	3017	0.95	Wallpack Full Cutoff LED, LED Performance Package P10, 4000 series CCT, Voltage Type III Medium	28	TYPE IV, MEDIUM, BUG RATING: B1 - U0 - G1
	B	4	American Electric Lighting	ATB0 P201 R3 4K	1	5553	0.92	Autobahn Small P201 Package Roadway Type III 4000K/5000K	36	TYPE III, SHORT, BUG RATING: B1 - U0 - G1

DIMENSIONS

The drawing shows a top view (circle) and a side view (trapezoid) of a container. The top view has a diameter labeled $\phi 100$ and a radius line labeled R_1 . The side view shows a trapezoid with a top width of $\phi 100$, a bottom width of $\phi 150$, and a height of 100 . The side view also shows a vertical line labeled R_1 and a horizontal line labeled R_2 . The text "See technical drawing" is at the bottom.



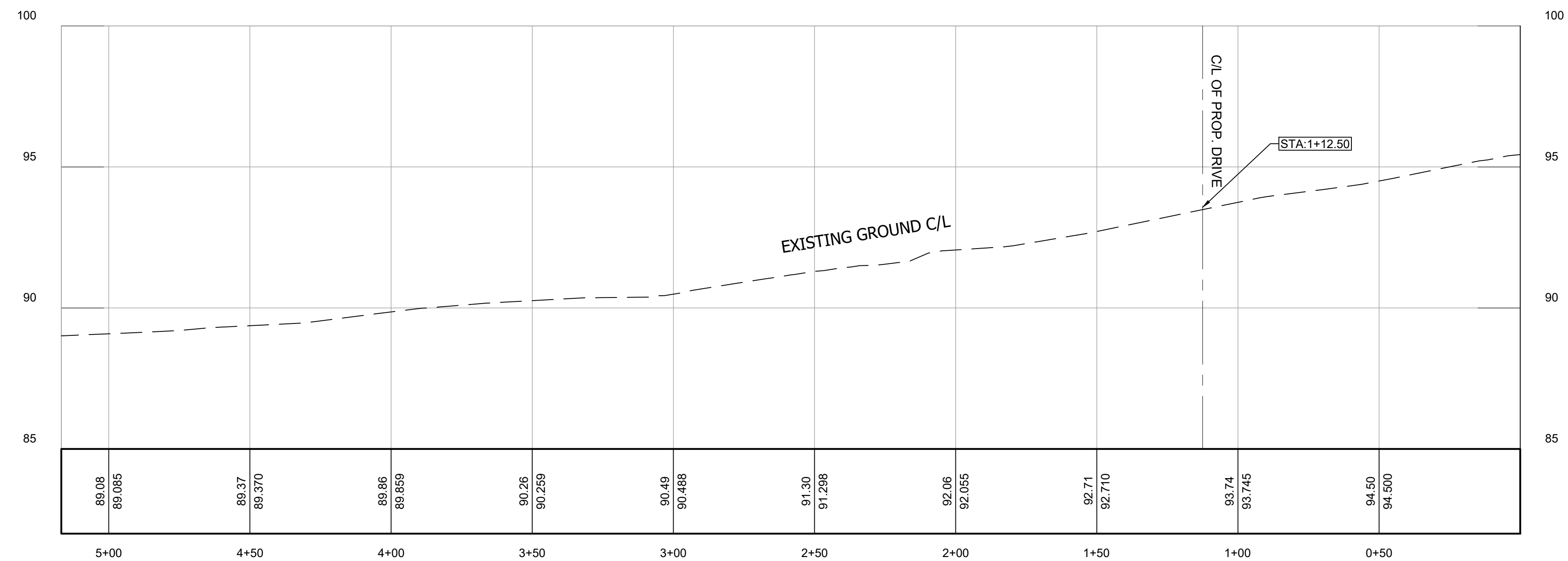
FHA FLOOD STORAGE COMPENSATION CROSS SECTIONS AND VOLUME



Volume Report

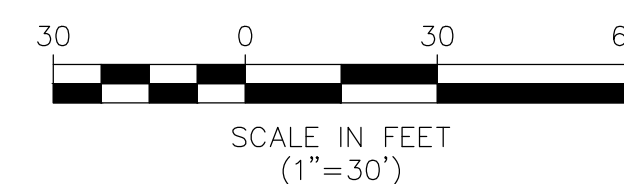
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Alignment: FHA NET FILL
Sample Line Group: SL Collection - 5
Start Sta: 0+00.000
End Sta: 0+86.000

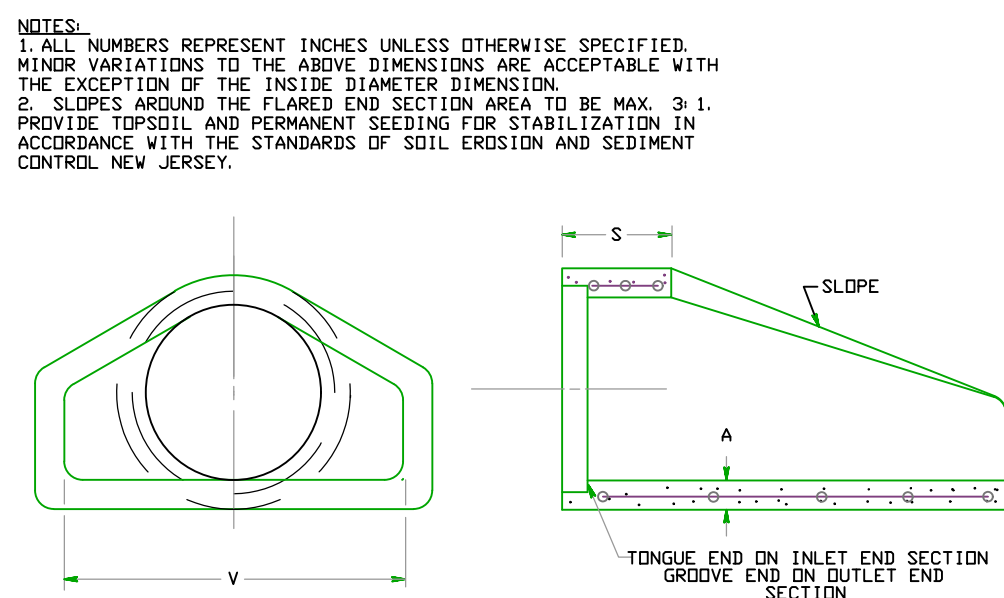
Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Reusable Volume (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Cum. Reusable Vol. (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)	Cum. Net Vol. (Cu.yd.)
0+00.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0+25.000	14.15	6.55	6.55	0.00	0.00	6.55	6.55	0.00	6.55
0+50.000	10.67	11.49	11.49	0.00	0.00	18.04	18.04	0.00	18.04
0+75.000	3.19	6.42	6.42	0.00	0.00	24.45	24.45	0.00	24.45
0+86.000	0.01	0.65	0.65	0.00	0.00	25.10	25.10	0.00	25.10

PROFILES AND CROSS SECTIONS		DATE	
"TRIPLET SQUARE LLC"		06-06-22	
BLOCK 27, LOT 34.011		SCALE	
LOCATED ON 405 MAIN STREET AS SHOWN ON TAX		AS SHOWN	
MAP OF TOWNSHIP OF MANALAPAN SHEET 20,		DRAWN BY:	
MONMOUTH COUNTY, NJ		ON:	
SITUATED ON:		CHECKED BY:	
CONCEPT ENGINEERING CONSULTANTS, P.A.		CAD FILE	
123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726		FIELD BK: N/A	
PHONE 732-732-2750 OR 732-792-2740		PAGE: N/A	
PROFESSIONAL ENGINEERS - LAND SURVEYORS		SHEET 9 OF 15	
JOHN J. PLOSKONKA P.E.		JOB NO. 32094	
LEO A. KALIETA P.L.S.			

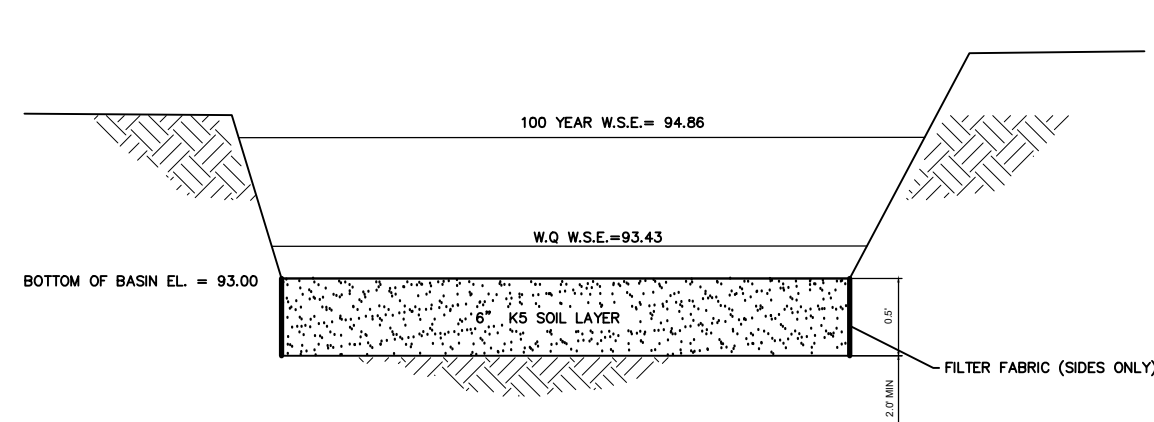
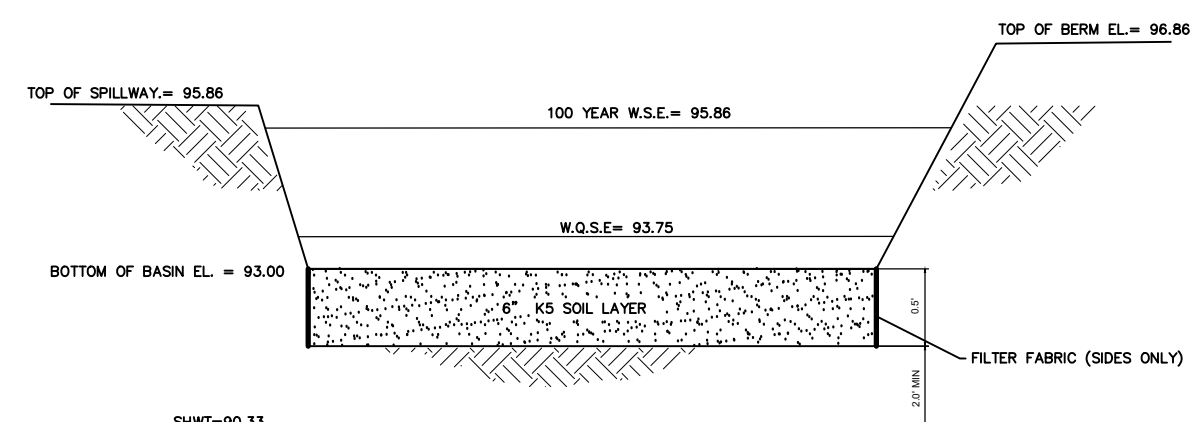


PROFILES AND CROSS SECTIONS II "TRIPLT SQUARE LLC" BLOCK 27 , LOT 34.011		DATE 06-06-22 SCALE AS SHOWN	
<i>SITUATED ON</i> LOCATED ON 405 MAIN STREET AS SHOWN ON TAX MAP OF TOWNSHIP OF MANALAPAN SHEET 20, MONMOUTH COUNTY, NJ		DRAWN BY: ON: CHECKED BY:	
	CONCEPT ENGINEERING CONSULTANTS, P.A. 123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ.07726 PHONE: 732-742-2750 OR 732-792-2740 PROFESSIONAL ENGINEERS – LAND SURVEYORS		1 <u>DATE</u> 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 <u>DATE</u> 8 _____ 9 _____ 10 _____ 11 _____ 12 _____ 13 _____ 14 _____ 15 _____ 16 _____ 17 _____ 18 _____ 19 _____ 20 _____ 21 _____ 22 _____ 23 _____ 24 _____ 25 _____ 26 _____ 27 _____ 28 _____ 29 _____ 30 _____ 31 _____ 32 _____ 33 _____ 34 _____ 35 _____ 36 _____ 37 _____ 38 _____ 39 _____ 40 _____ 41 _____ 42 _____ 43 _____ 44 _____ 45 _____ 46 _____ 47 _____ 48 _____ 49 _____ 50 _____ 51 _____ 52 _____ 53 _____ 54 _____ 55 _____ 56 _____ 57 _____ 58 _____ 59 _____ 60 _____ 61 _____ 62 _____ 63 _____ 64 _____ 65 _____ 66 _____ 67 _____ 68 _____ 69 _____ 70 _____ 71 _____ 72 _____ 73 _____ 74 _____ 75 _____ 76 _____ 77 _____ 78 _____ 79 _____ 80 _____ 81 _____ 82 _____ 83 _____ 84 _____ 85 _____ 86 _____ 87 _____ 88 _____ 89 _____ 90 _____ 91 _____ 92 _____ 93 _____ 94 _____ 95 _____ 96 _____ 97 _____ 98 _____ 99 _____ 100 _____
JOHN J. PLOSKONKA P.E. PROFESSIONAL ENGINEER N.J. LIC. NO. 12549		LEO A. KALIETA P.L.S. PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 31268	
DATE _____		DATE _____	





I. D.	15' "
A	2-1/4
R	7-1/2
S	24
T	24
U (FEET)	4
V	28
WT/FT POUNDS	480



NOTE:
FOUNDATION AND INVERT TO BE CONSTRUCTED IN 2 STAGES
THE TOP SURFACE OF STAGE 1 TO BE LEFT ROUGH.

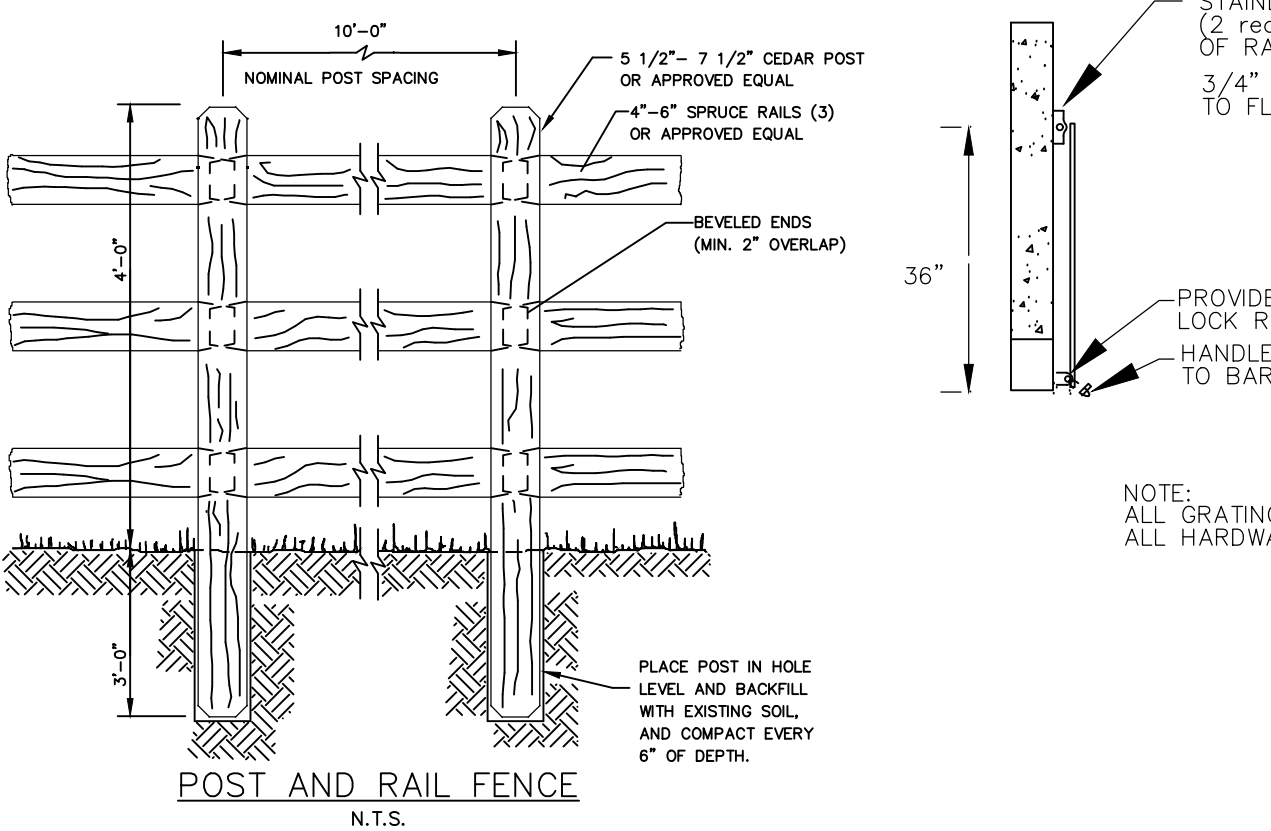
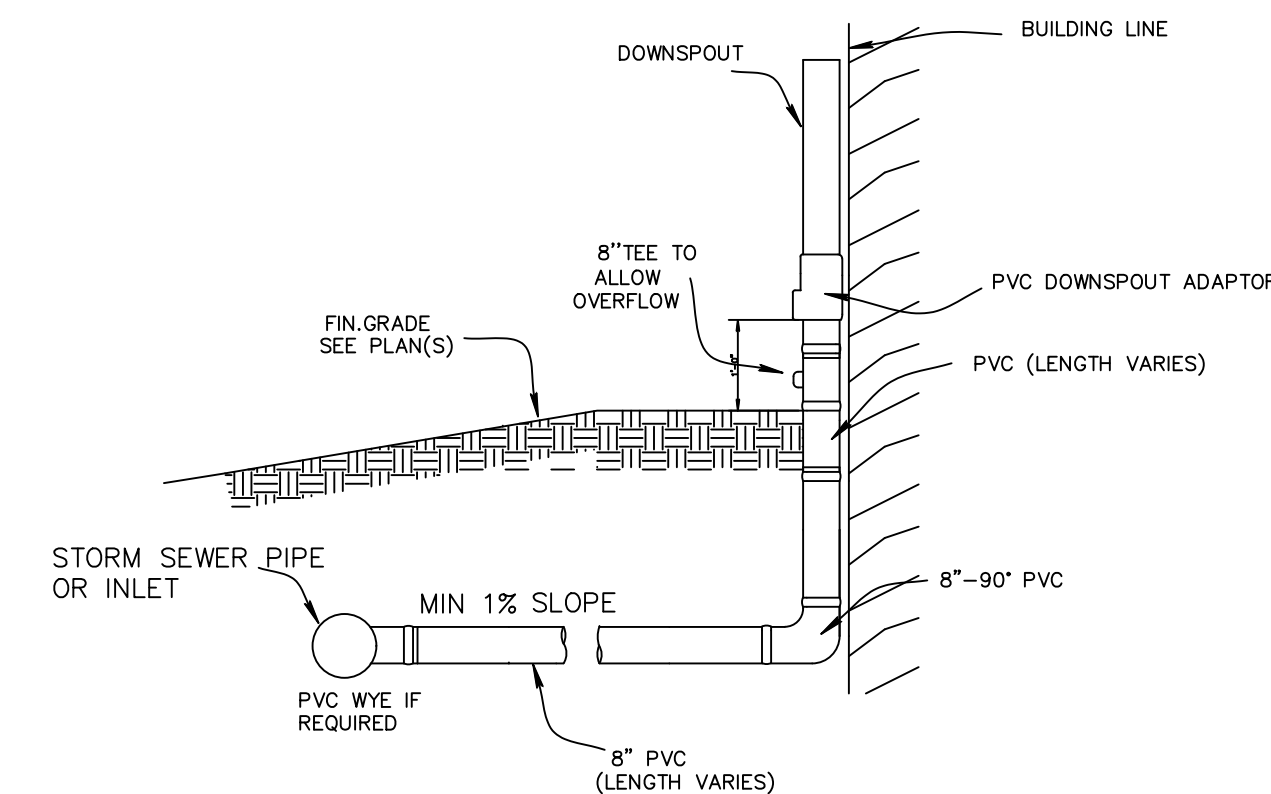
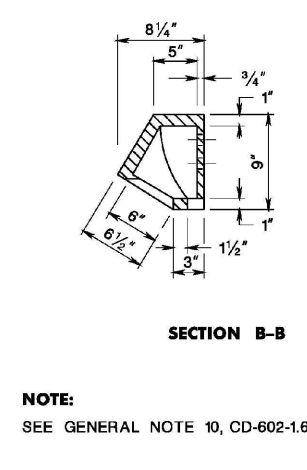
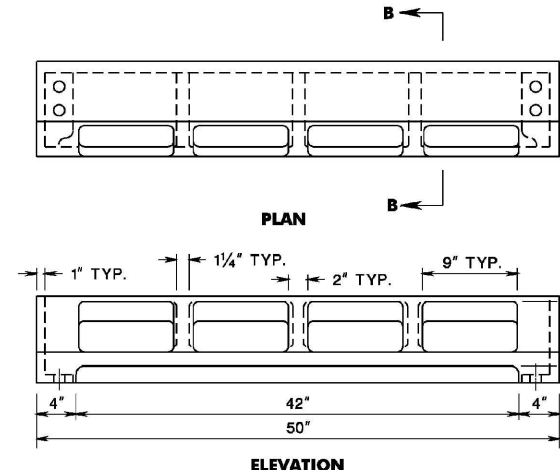
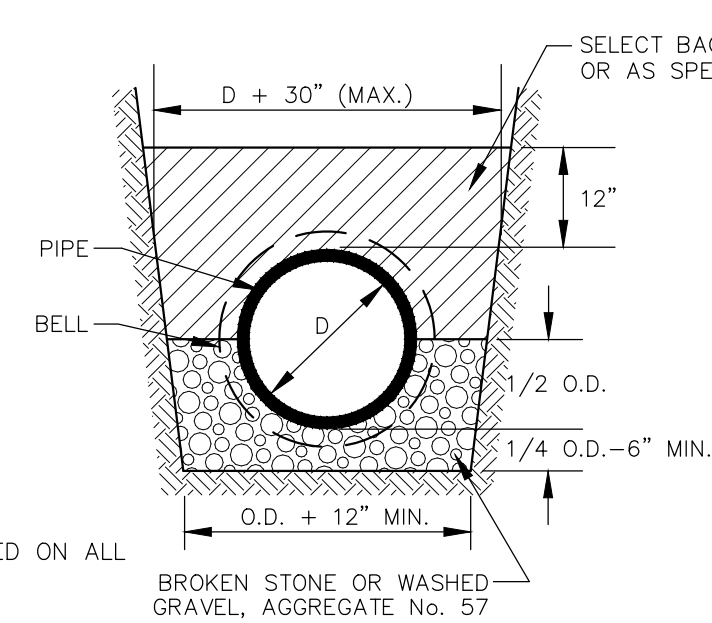


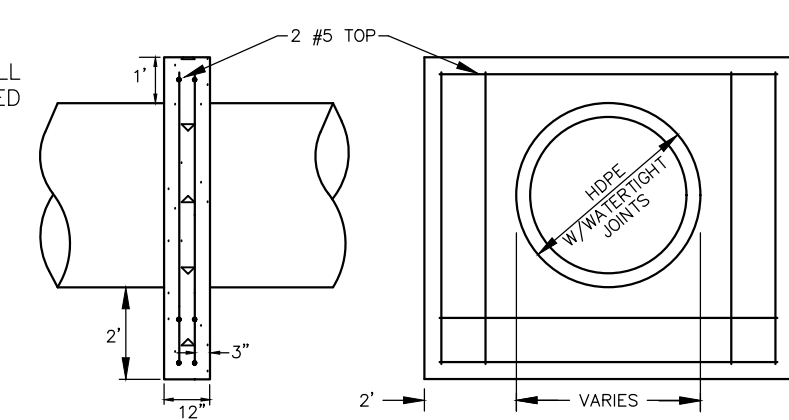
Diagram illustrating a cross-section of a concrete slab with vertical reinforcement bars. The diagram shows a grid of vertical bars. Labels include: "HINGES OR CLAMPS", "RAISING TENANCE", "WELDED (N.T.S.)", and "WELDED (N.T.S.)".

NOTE:
ALL GRATING AND BAR MATERIAL TO BE 6061-T6 ALUMINUM
ALL HARDWARE TO BE TYPE 304 STAINLESS STEEL

(N.T.S.)



N.T.



NOTES: BACKFILLING AROUND ANTI-SEEPAGE COLLARS SHALL BE TYPE "SC" MATERIAL AND SHALL BE DEPOSITED AND MECHANICALLY COMPACTED TO A MINIMUM STANDARD PROCTOR DENSITY TEST IN LAYERS NOT EXCEEDING 6" IN DEPTH (LOOSE MEASURE). SMALLER LIFTS SHALL BE REQUIRED IF MINIMUM DENSITY IS NOT OBTAINED.

CLASS 'B' CONCRETE SHALL BE UTILIZED FOR COLLAR CONSTRUCTION.

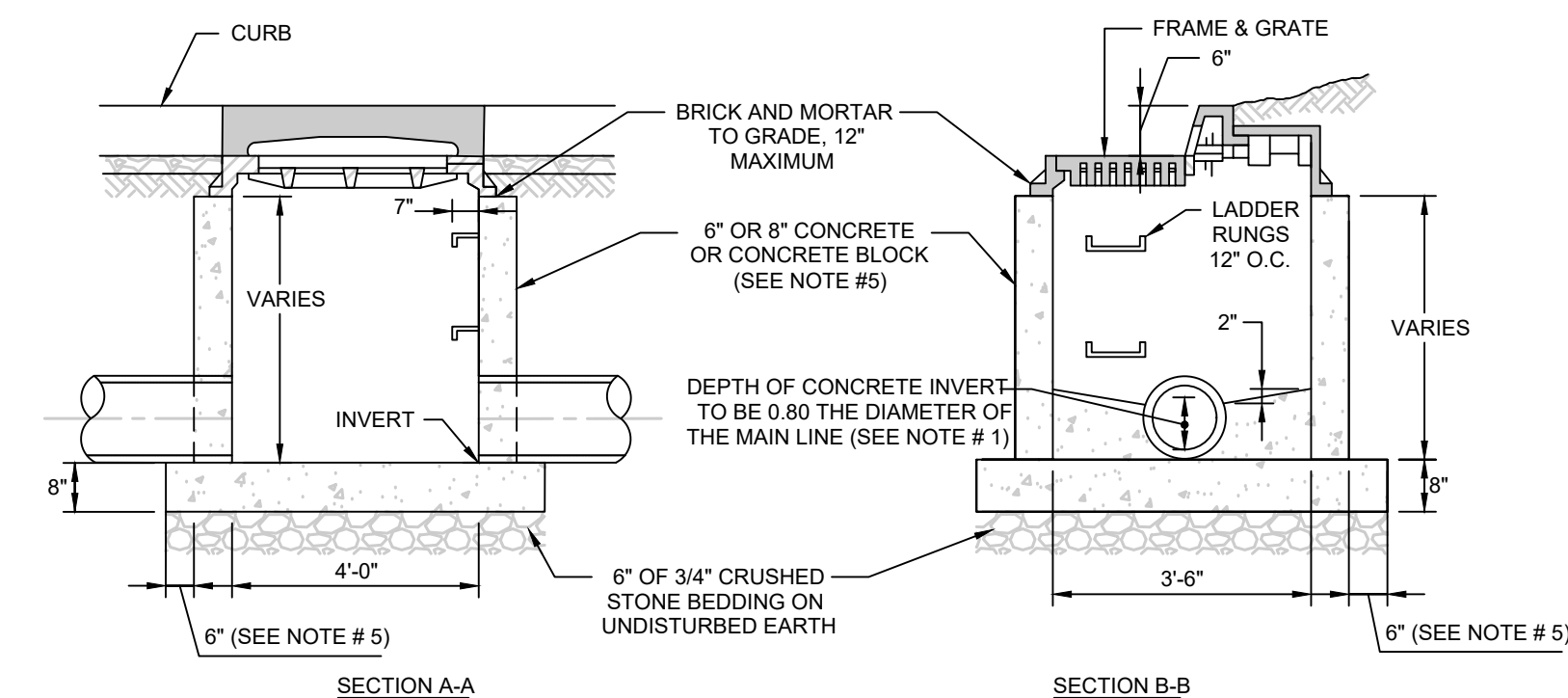
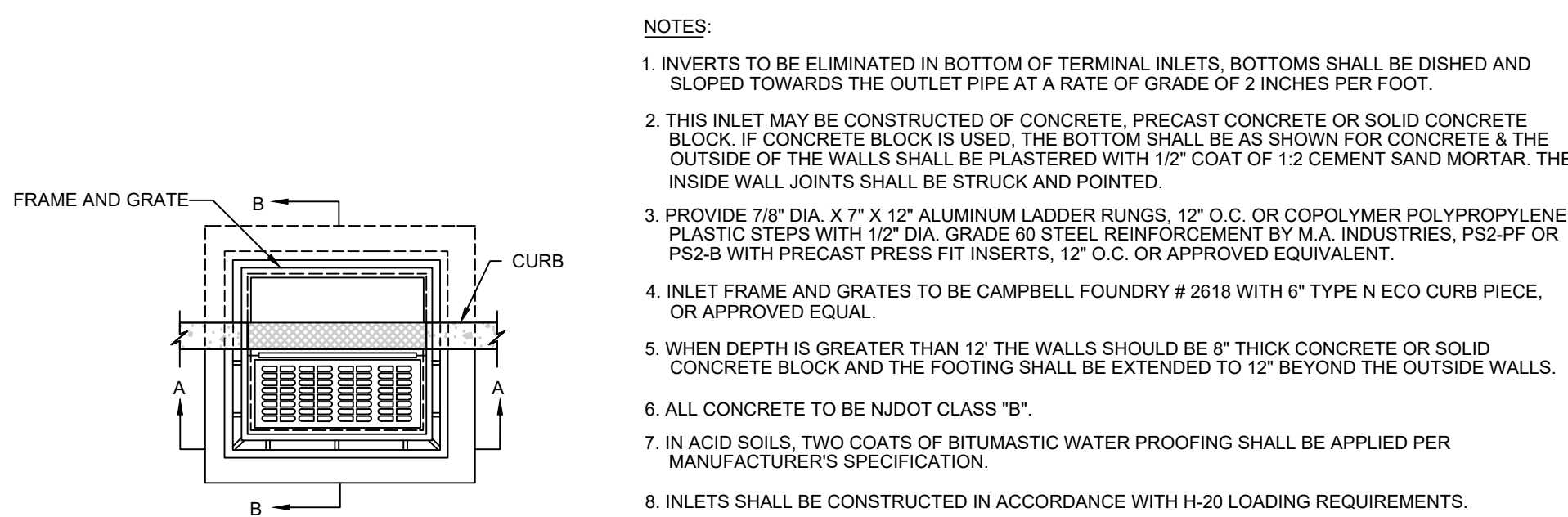
REINFORCEMENT STEEL SHALL BE AT 12" BOTH WAYS WITH BOTH FACES (MINIMUM).

N.T.S.

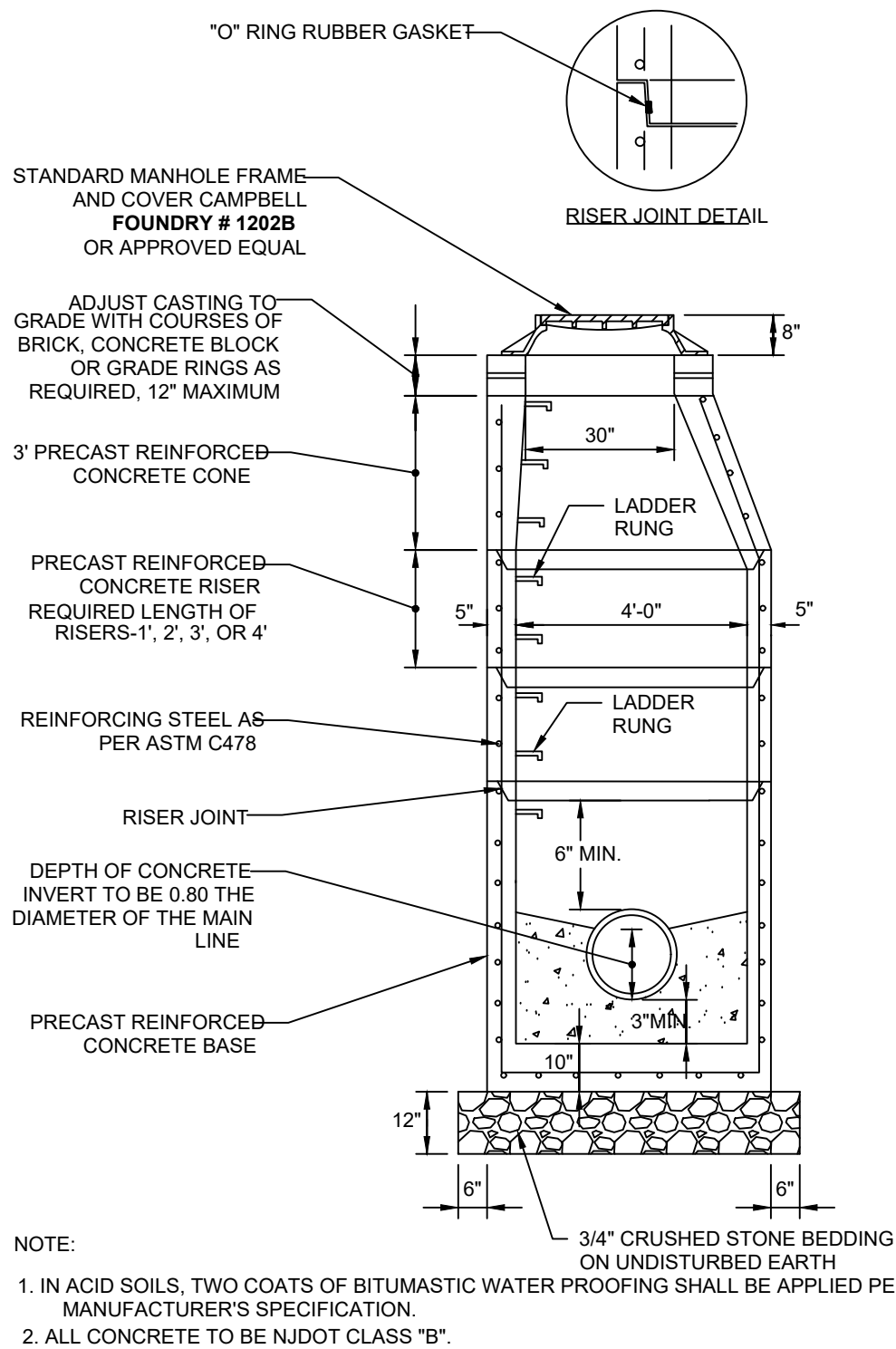
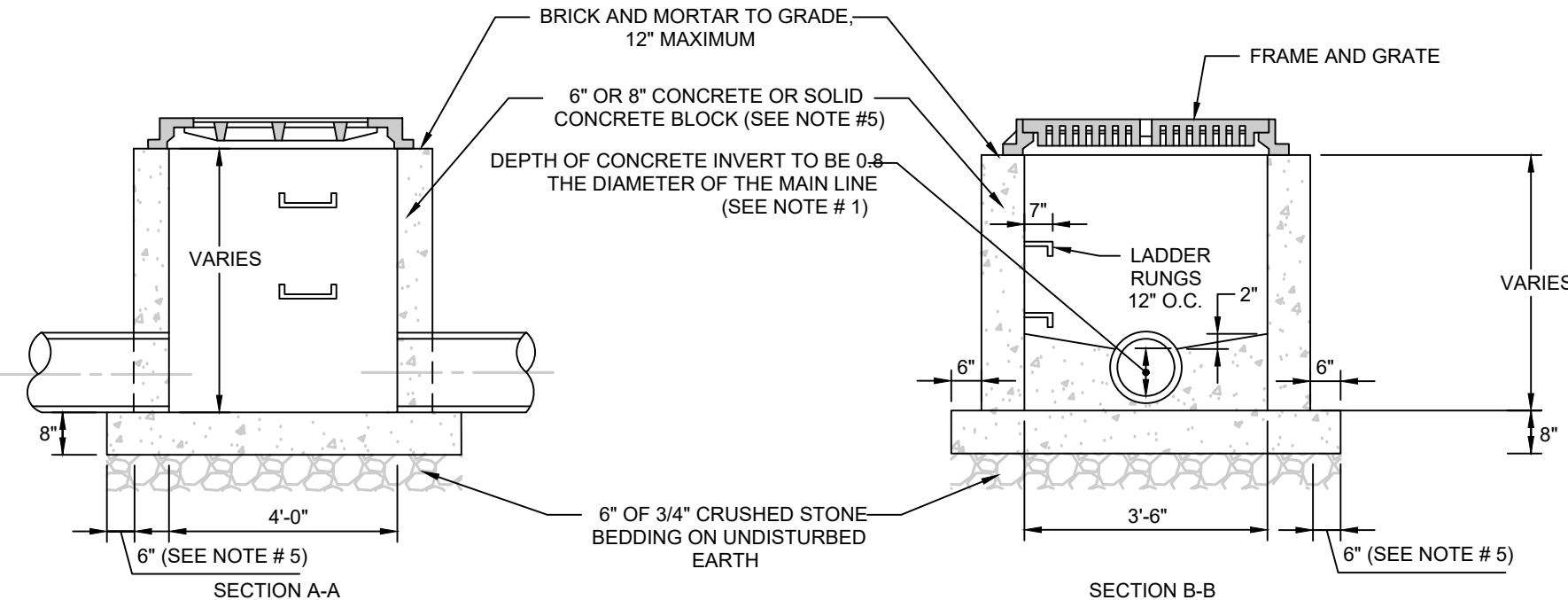
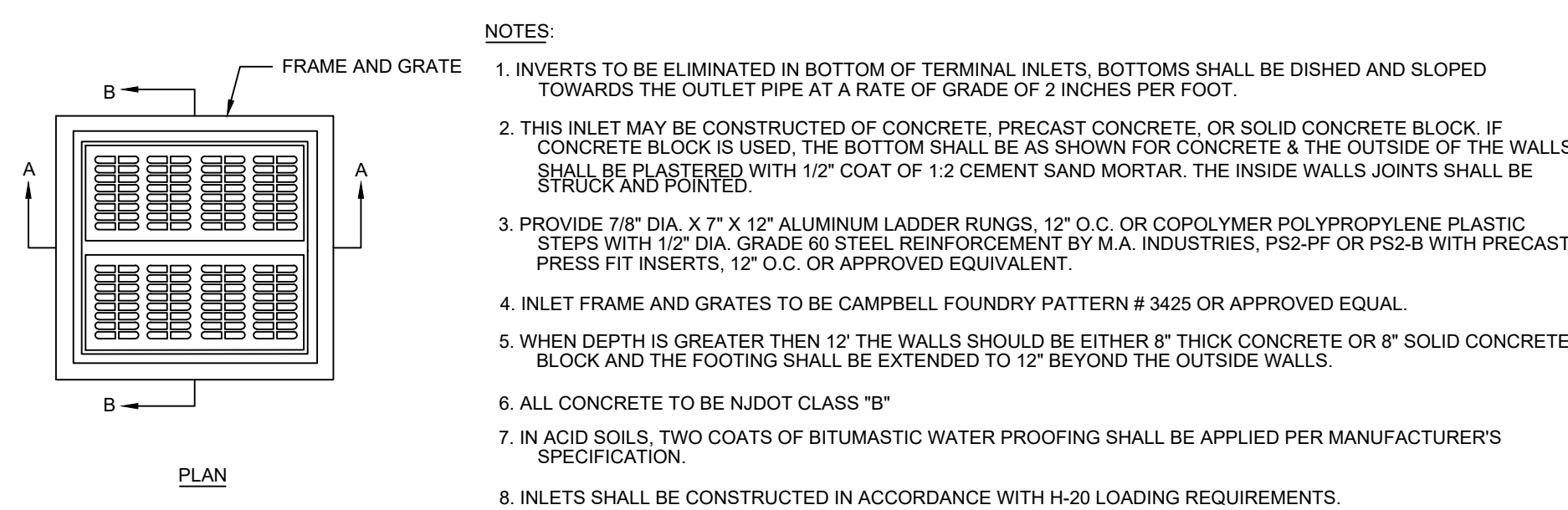
The diagram shows a cross-section of a manhole. The top opening has a diameter labeled 'D'. The walls are shown with a thickness indicated by a dimension line and the label '2x' (representing 2 inches). The bottom of the manhole is labeled 'CONCRETE APRON RICK OR RIP RAP'. The top edge of the wall is labeled 'TOP OF WALL (TW)'. The inner vertical surface is labeled 'INV.'. A note at the bottom right states 'HEADWALL DIMENSIONS ARE NONSTANDARD.'.

NOTES

1. ALL EDGES TO BE CHAMFERED 1 INCH.
2. CONCRETE TO BE NJDOT CLASS "B".
3. THE TERMINUS FOR OUTLET AND INLET APRONS SHALL BE SET BY EXTENDING THE PIPE GRADE ABOVE AND BACK RESPECTIVELY.
4. FOR ARCH PIPE, THE SPAN SHALL BE SUBSTITUTED FOR "D".
5. EXPOSED PORTIONS OF WALL TO BE RUBBED AND FLOATED TO REMOVE FORM MARKS.
6. FOR MORE THAN ONE PIPE, CONTRACTOR TO SET THE PIPES AT A MINIMUM OF ONE FOOT APART (OUTSIDE OF PIPE TO OUTSIDE OF PIPE). THERE SHALL BE 12" ABOVE THE TOP OF A PIPE IN A WINGWALL. THE TERMINUS OF THE WALL SHALL BE 1/2" X 1/2" FROM THE CENTERLINE OF THE PIPE IN A WINGWALL.
7. CONTRACTOR TO PROVIDE SITE SPECIFIC SHOP DRAWINGS FOR EACH HEADWALL, PREPARED BY A STATE LICENSED PROFESSIONAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
8. HEADWALL DIMENSIONS ARE NONSTANDARD.



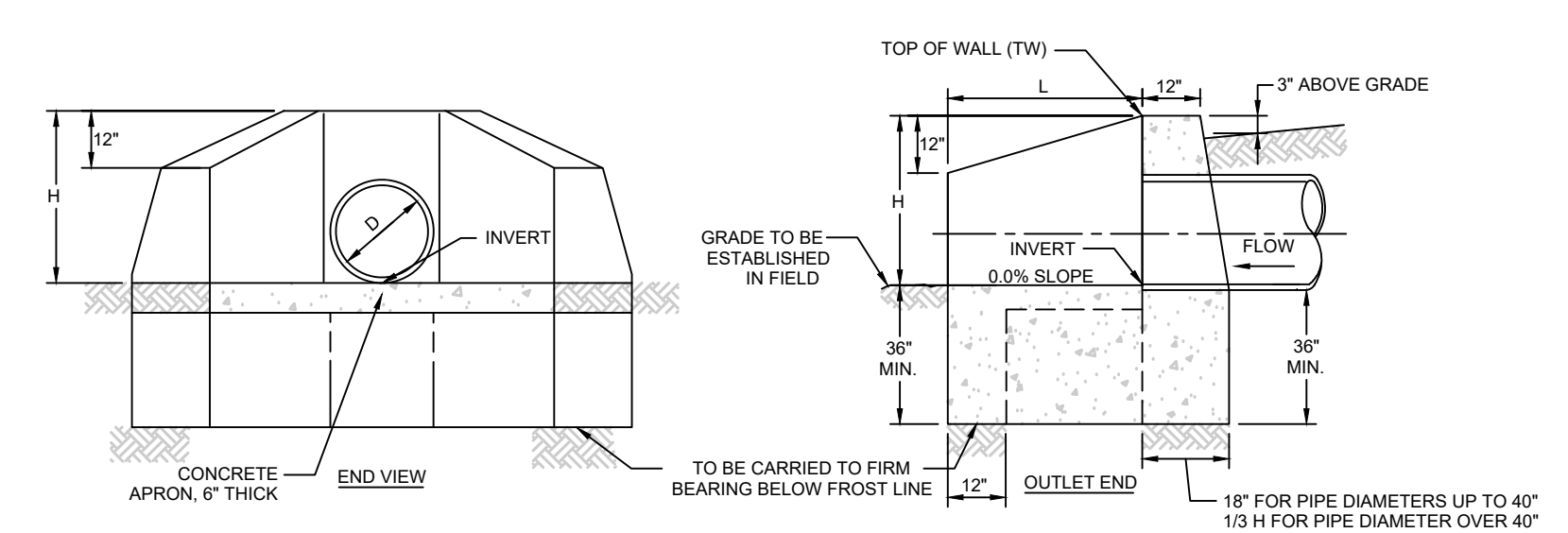
SECTION B-B



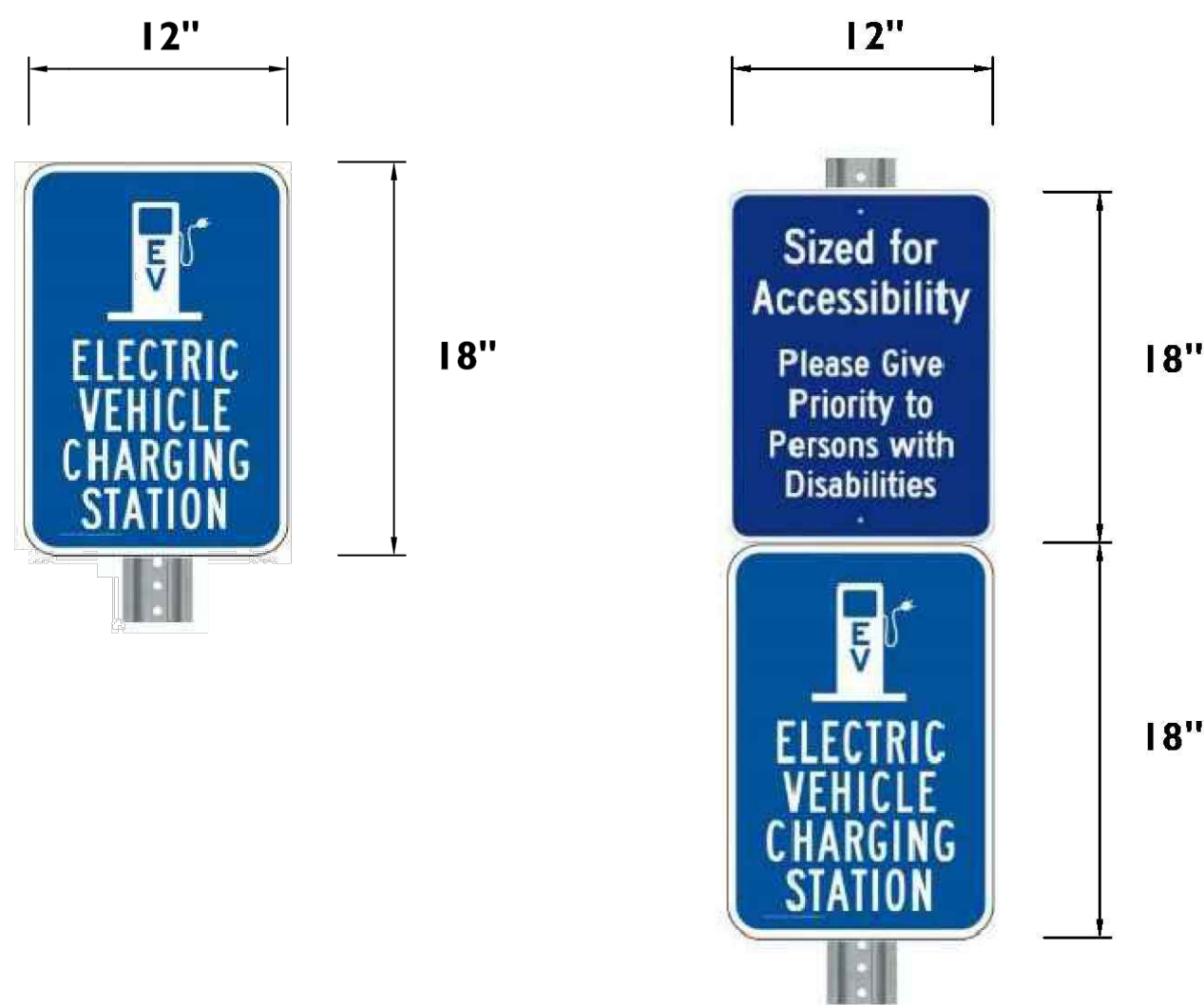
NOTE: 3/4" CRUSHED STONE BEDDING
ON UNDISTURBED EARTH

1. IN ACID SOILS, TWO COATS OF BITUMASTIC WATER PROOFING SHALL BE APPLIED PER
MANUFACTURER'S SPECIFICATION.

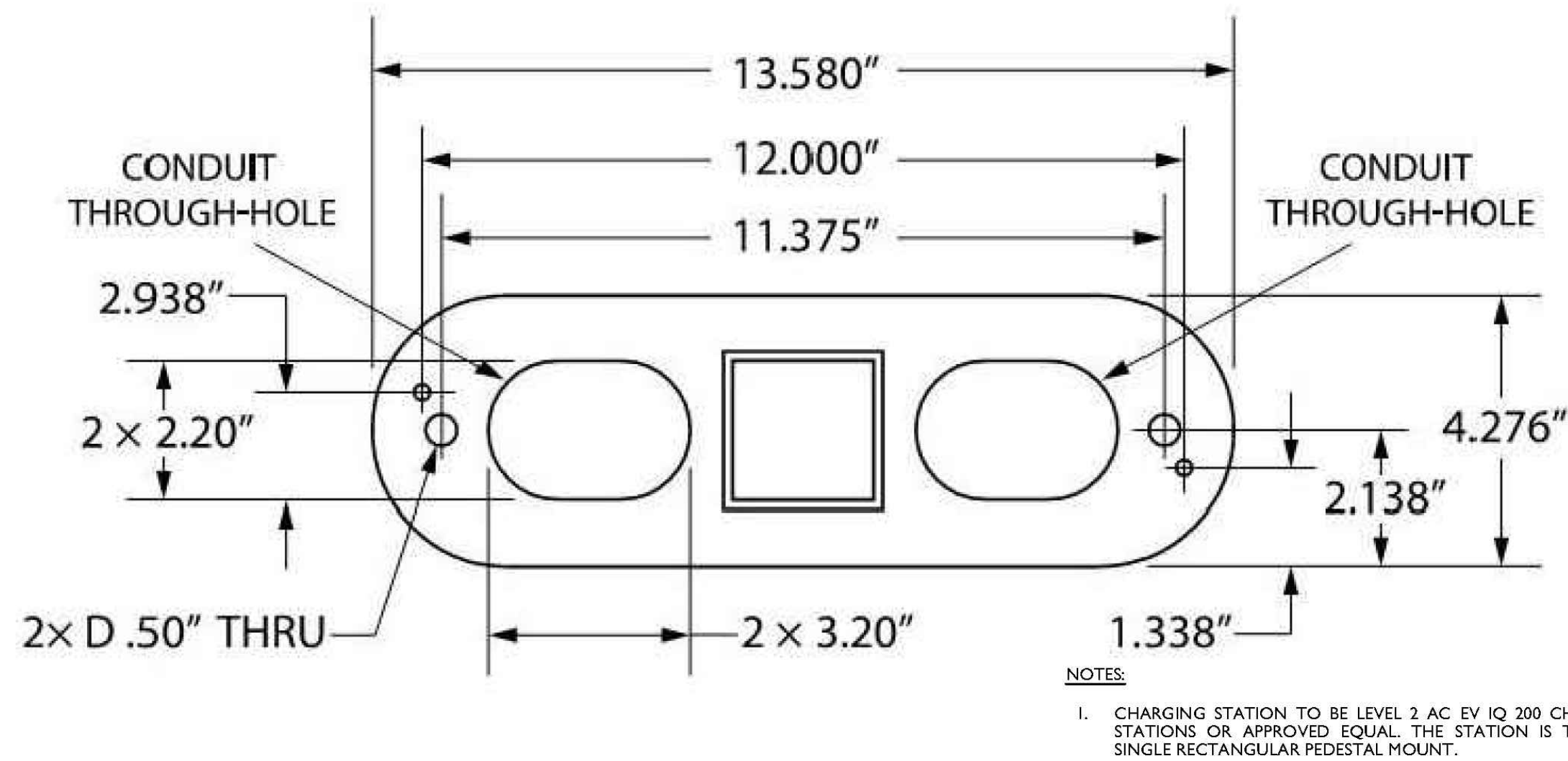
2. ALL CONCRETE TO BE NJDOT CLASS "B".



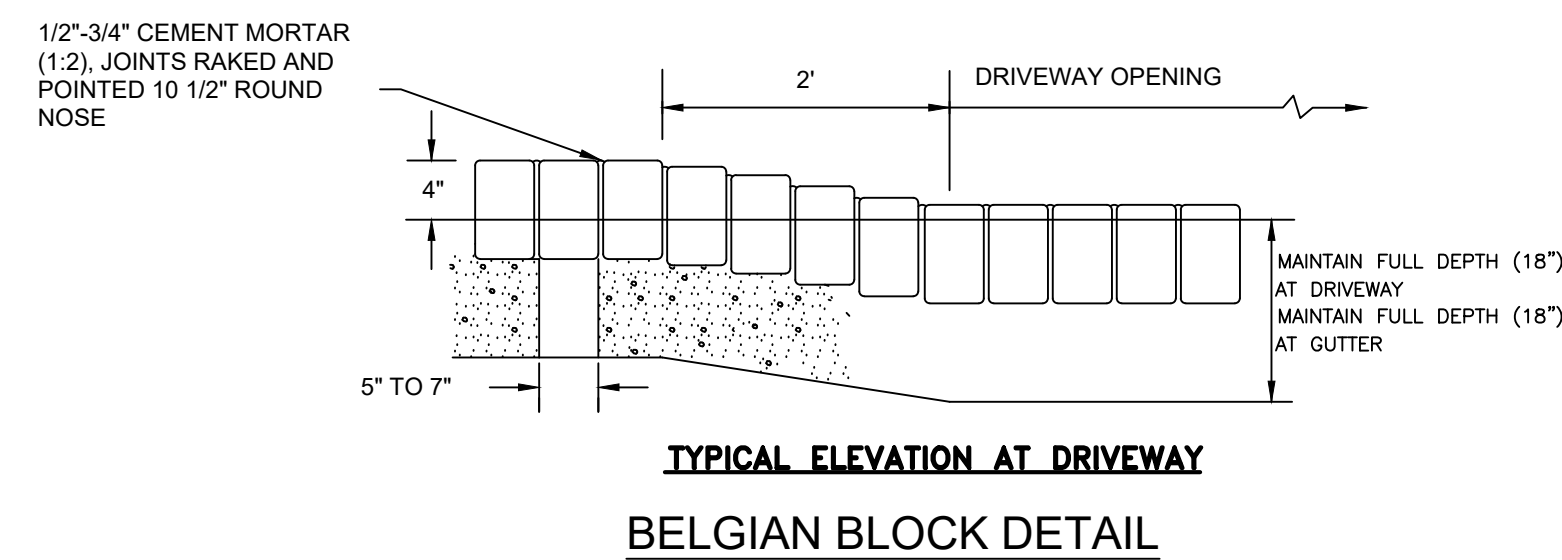
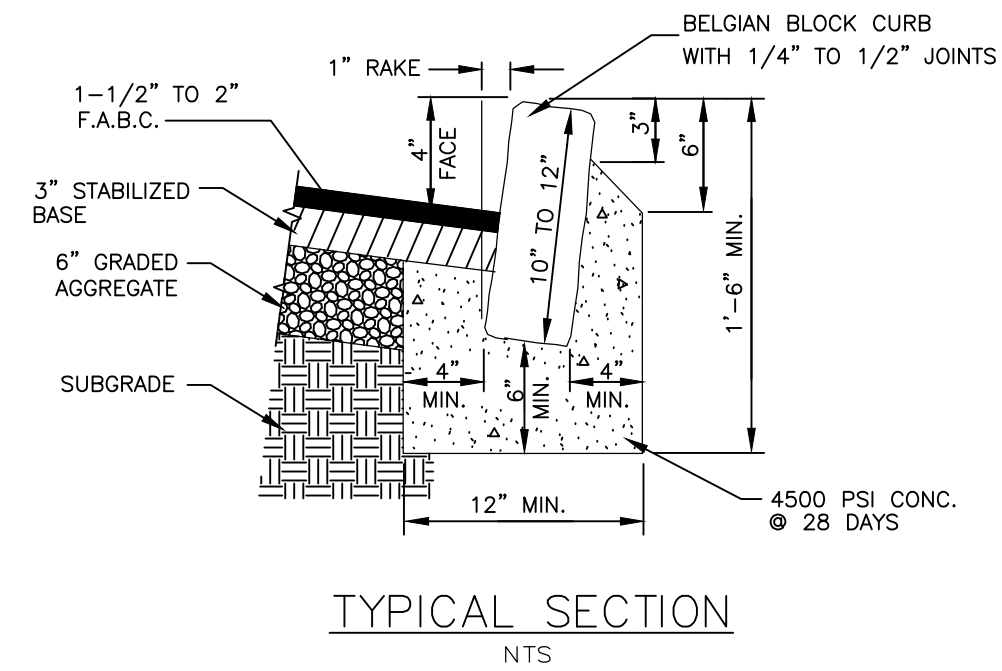
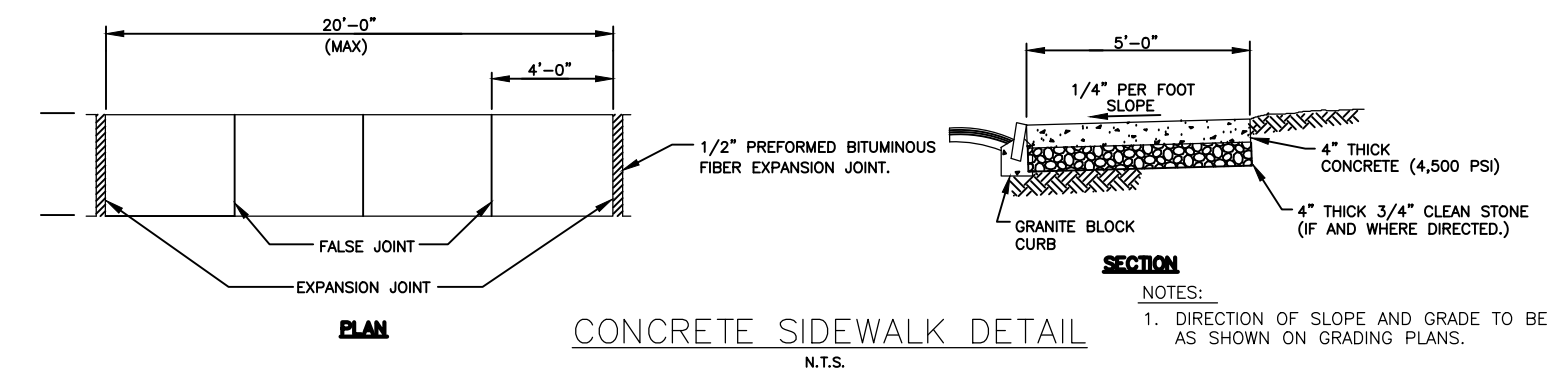
STANDARD CONSTRUCTION DETAILS I "TRIPLET SQUARE LLC" BLOCK 27, LOT 34.011		DATE 06-06-22	
SITUATED ON: LOCATED ON 405 MAIN STREET AS SHOWN ON TAX MAP OF TOWNSHIP OF MANALAPAN SHEET 20, MONMOUTH COUNTY, NJ		SCALE AS SHOWN	
 CONCEPT ENGINEERING CONSULTANTS, P.A. 123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726 PHONE 732-792-2750 OR 732-792-2740 PROFESSIONAL ENGINEERS - LAND SURVEYORS			
JOHN J. PLOSKONKA P.E. PROFESSIONAL ENGINEER N.J. LIC. NO. 1594		LEO A. KALIETA P.L.S. PROFESSIONAL LAND SURVEYOR N.J. LIC. NO. 1528	
DATE _____		DATE _____	



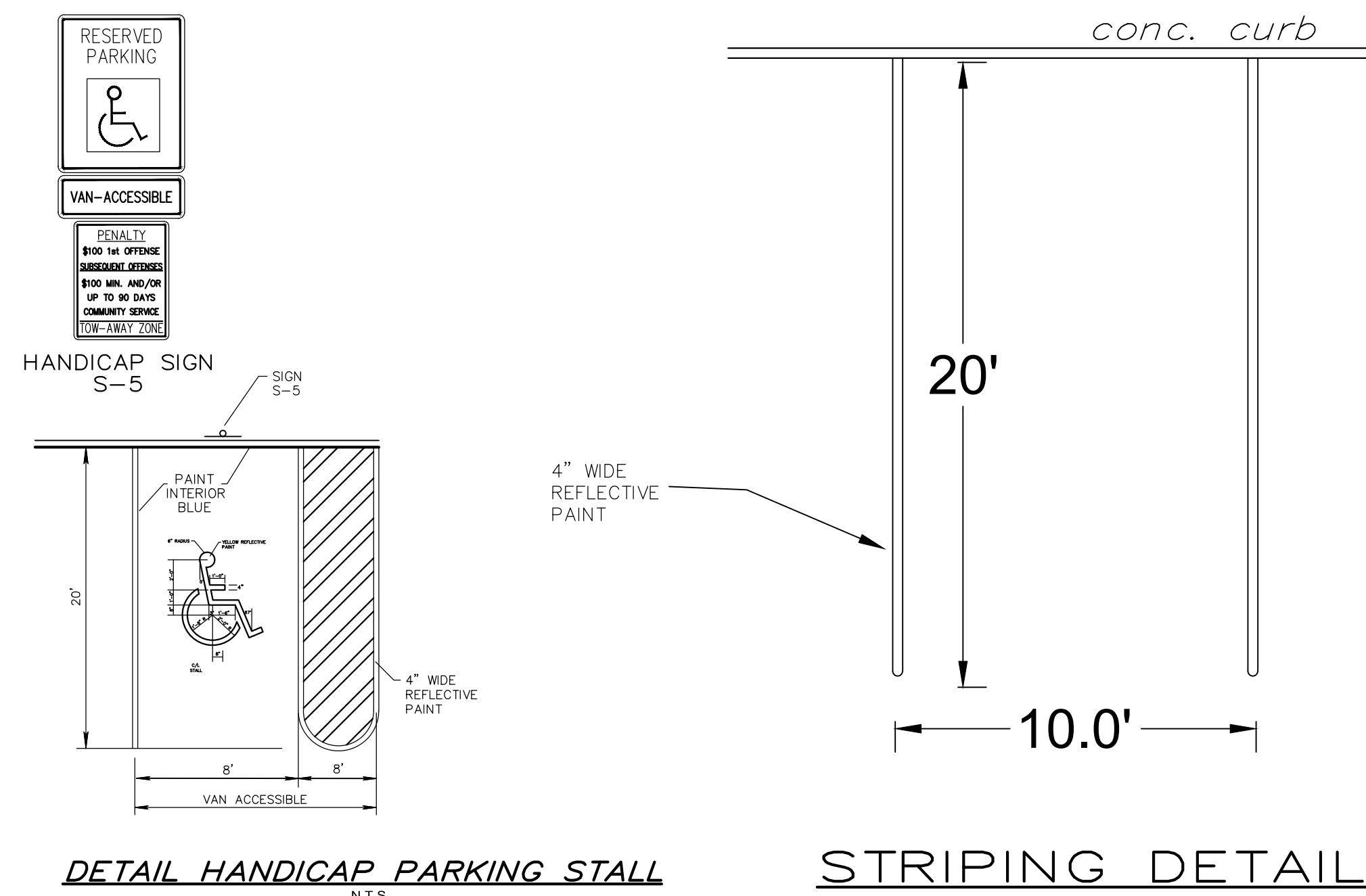
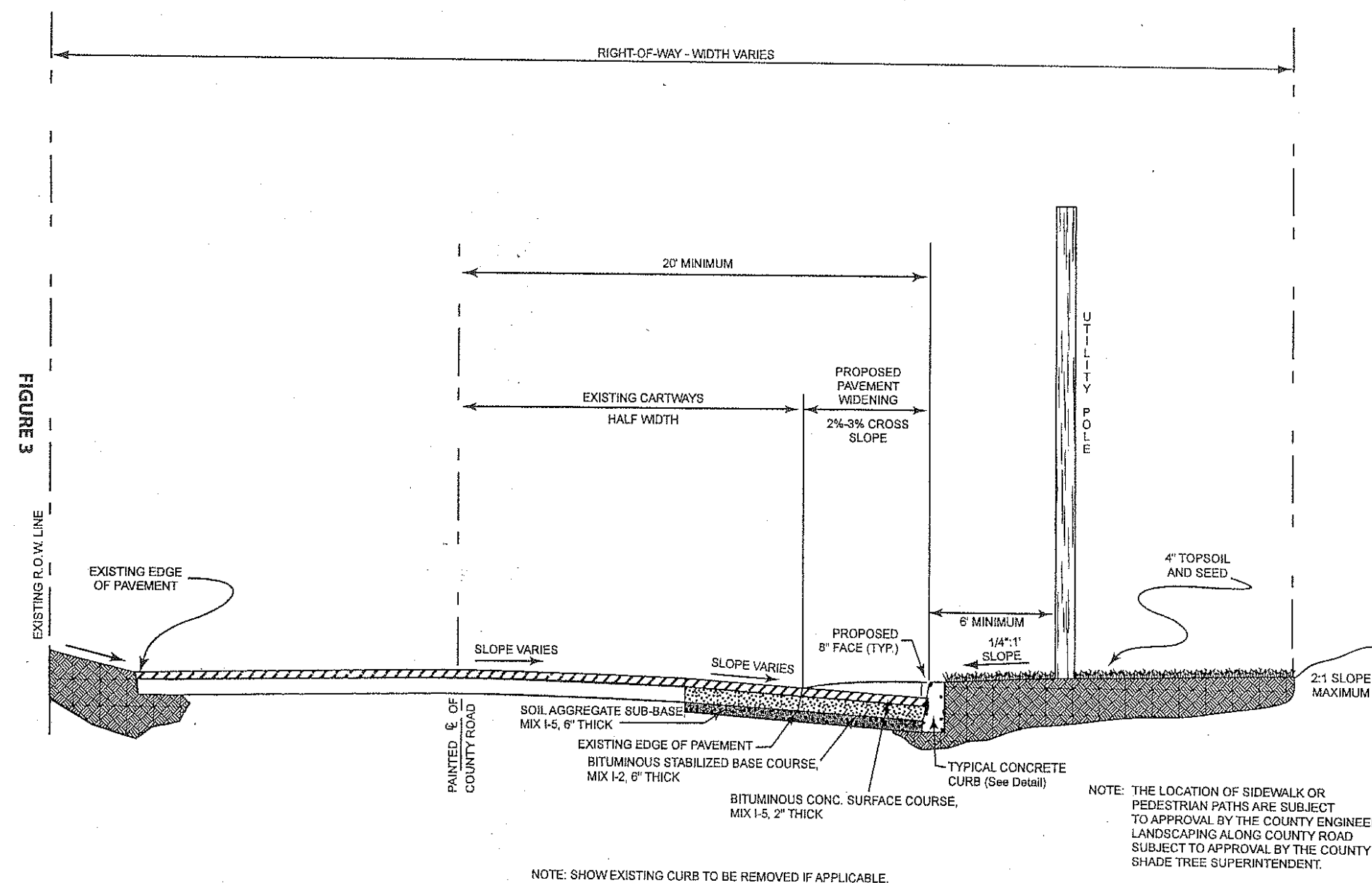
EV CHARGING SIGN DETAIL N.T.S. ADA EV CHARGING SIGN DETAIL N.T.S.



ELECTRIC VEHICLE CHARGING STATION PEDESTAL BASE HOLE PATTERN DETAIL N.T.S.

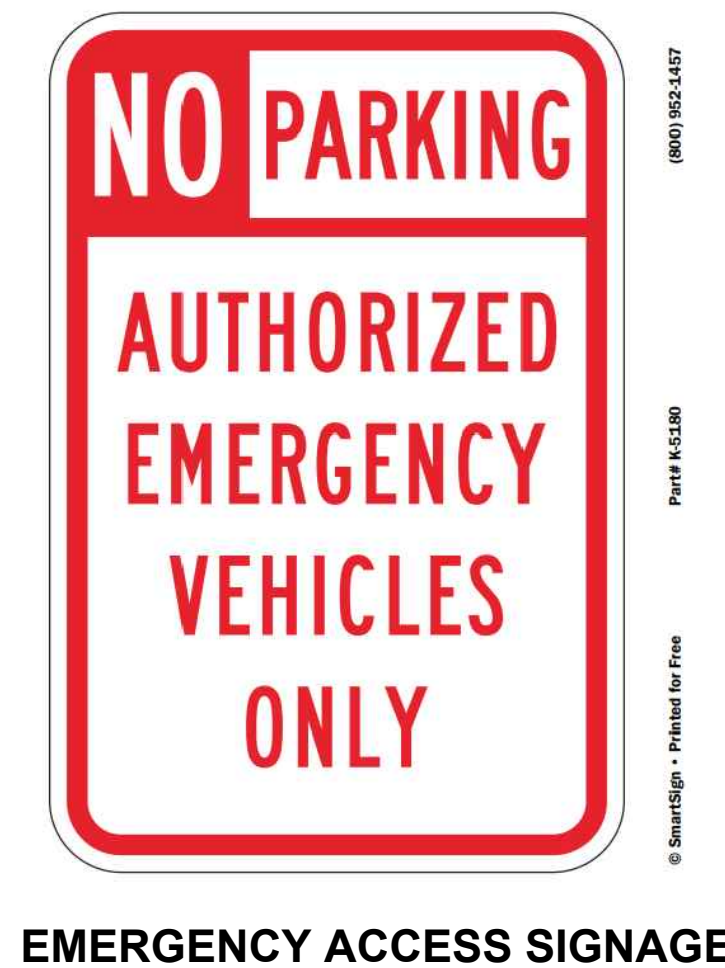
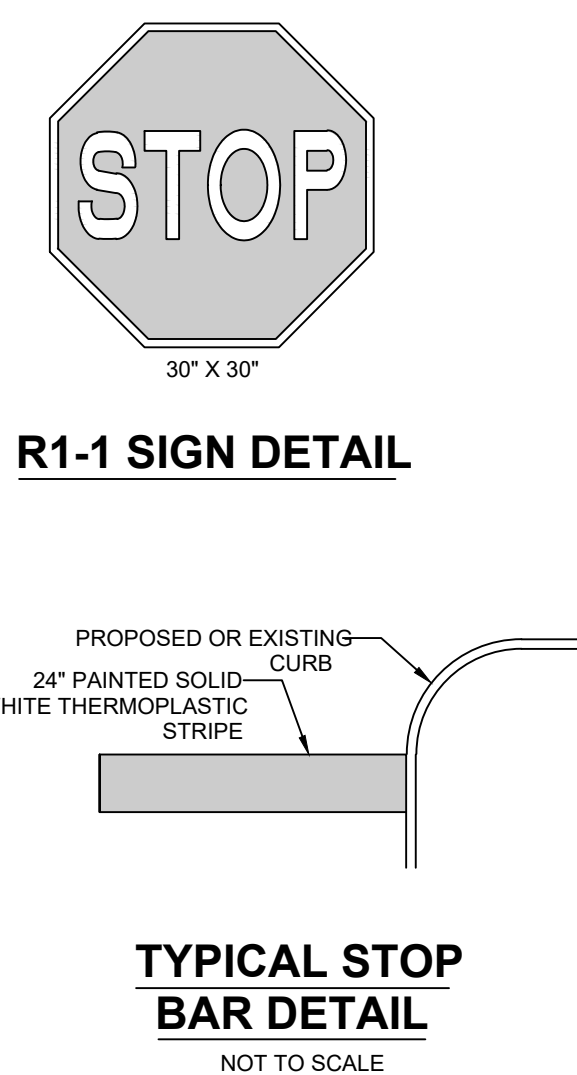
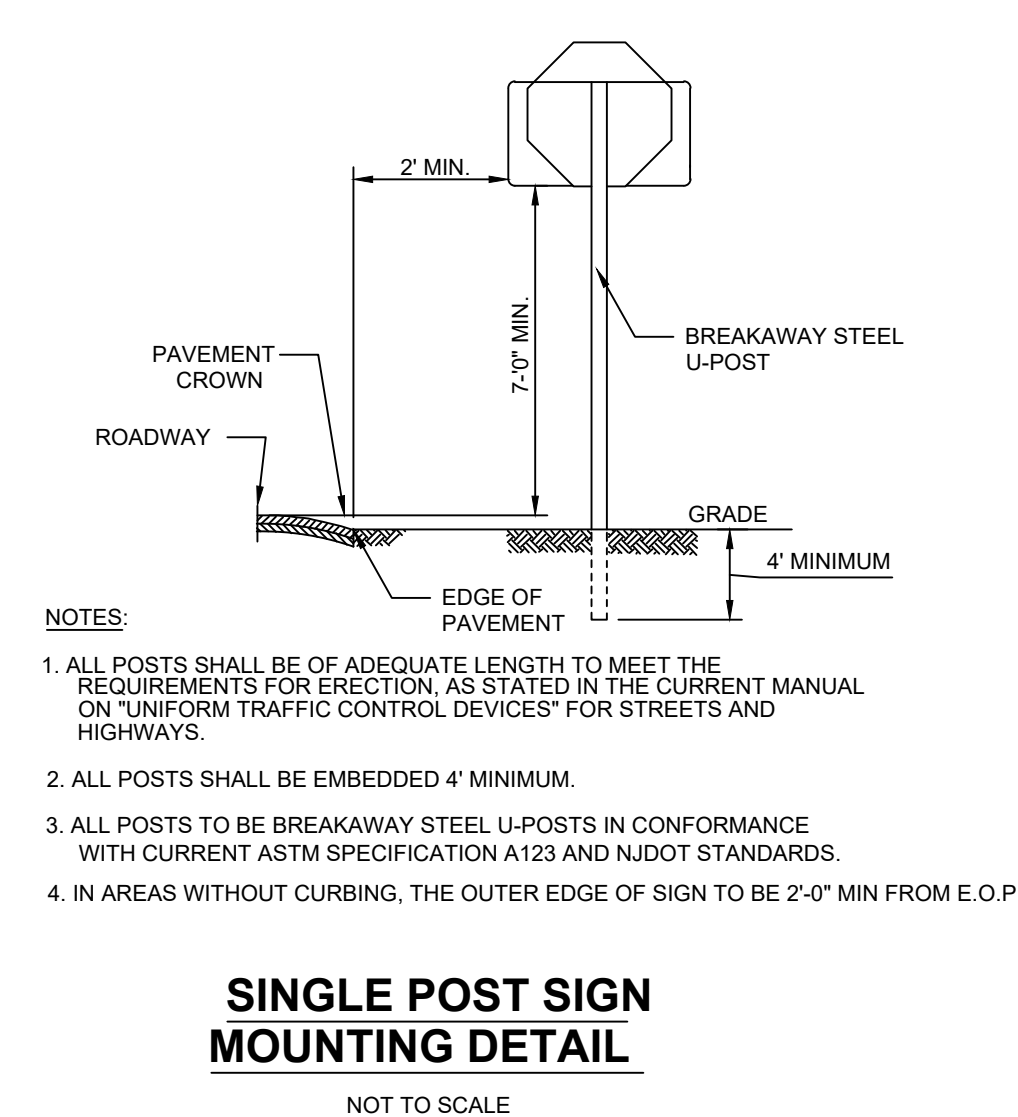
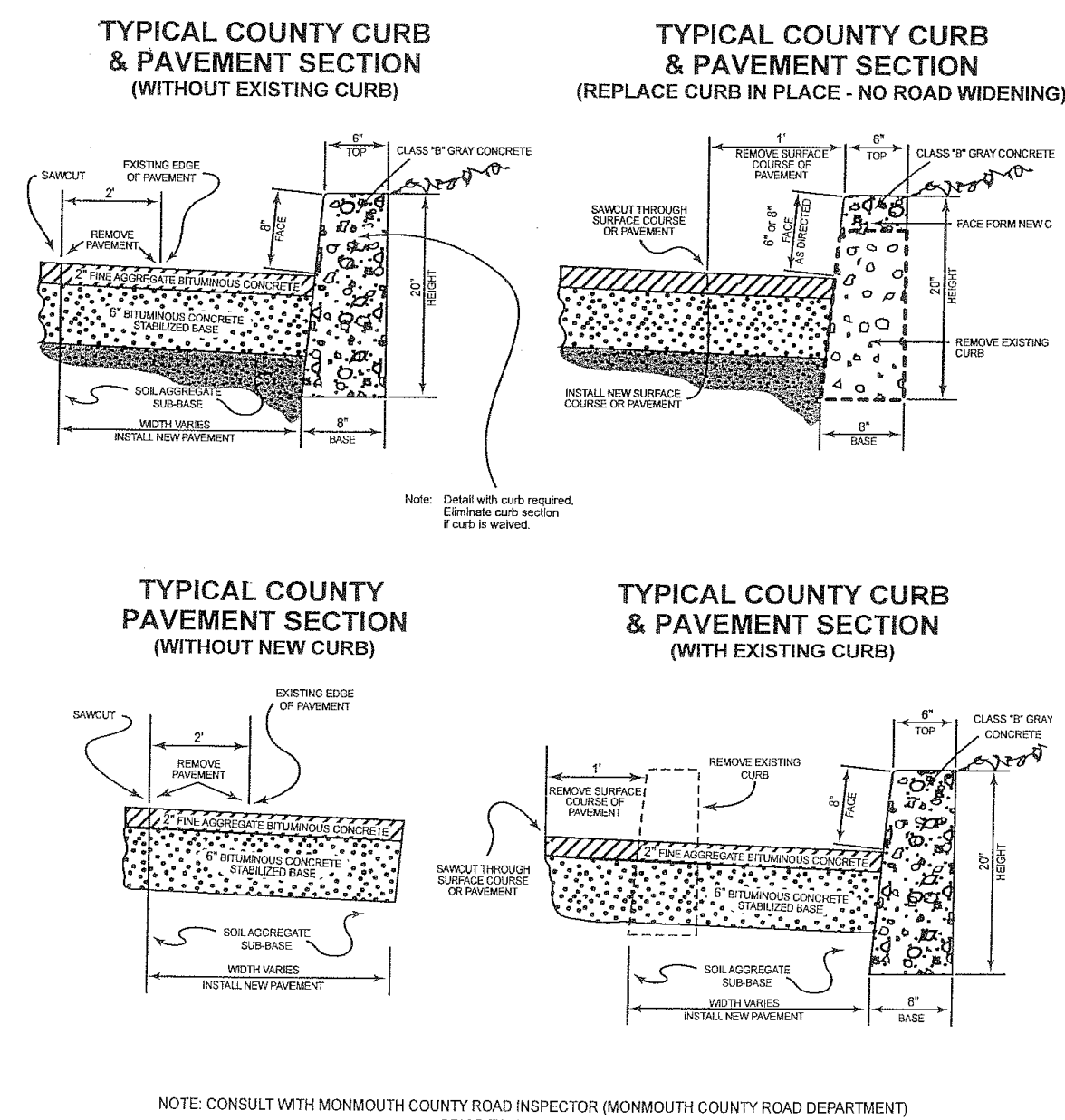


TYPICAL COUNTY ROAD SECTION



DETAIL HANDICAP PARKING STALL N.T.S.

TYPICAL COUNTY CURB AND PAVEMENT SECTION DETAILS

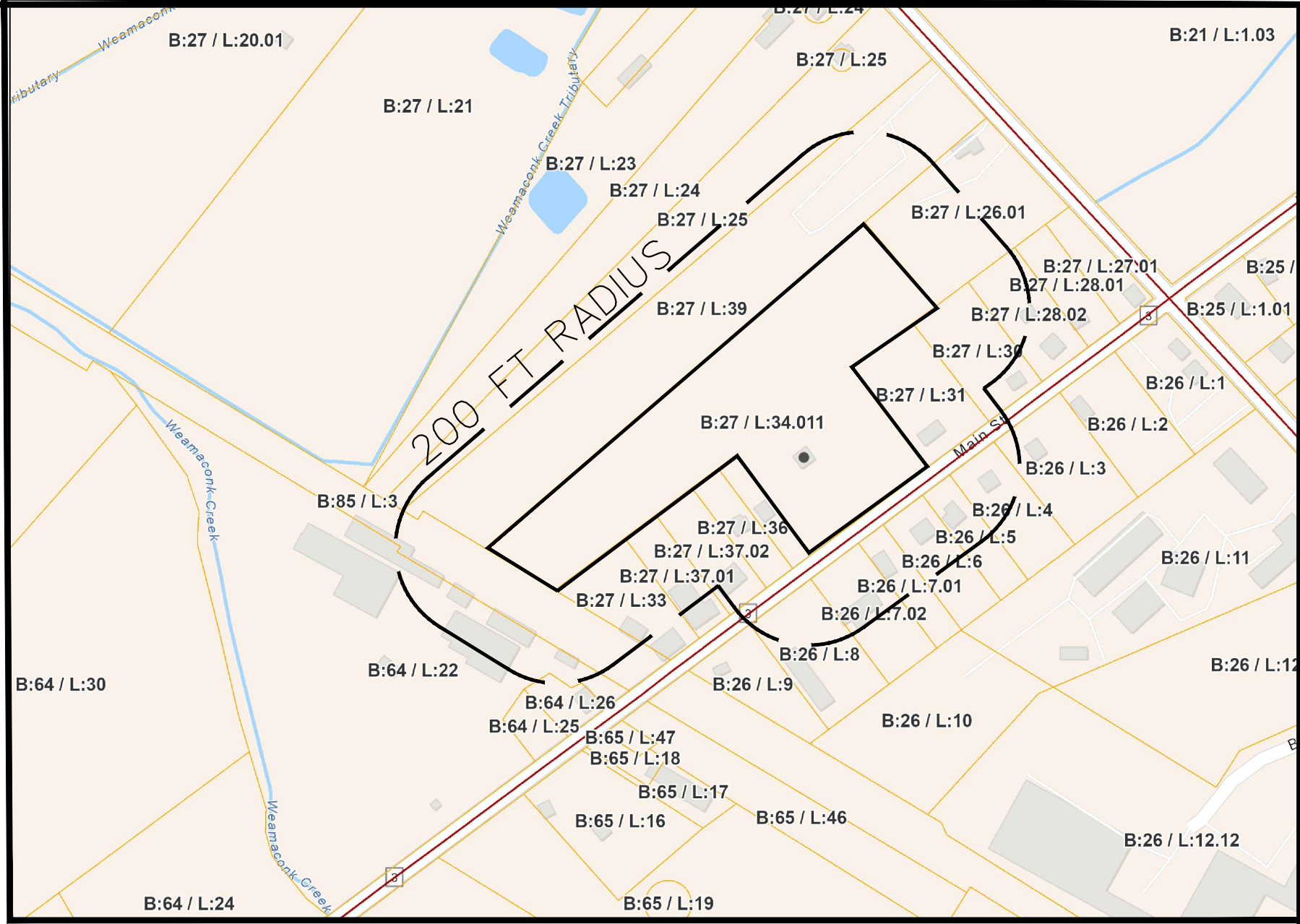
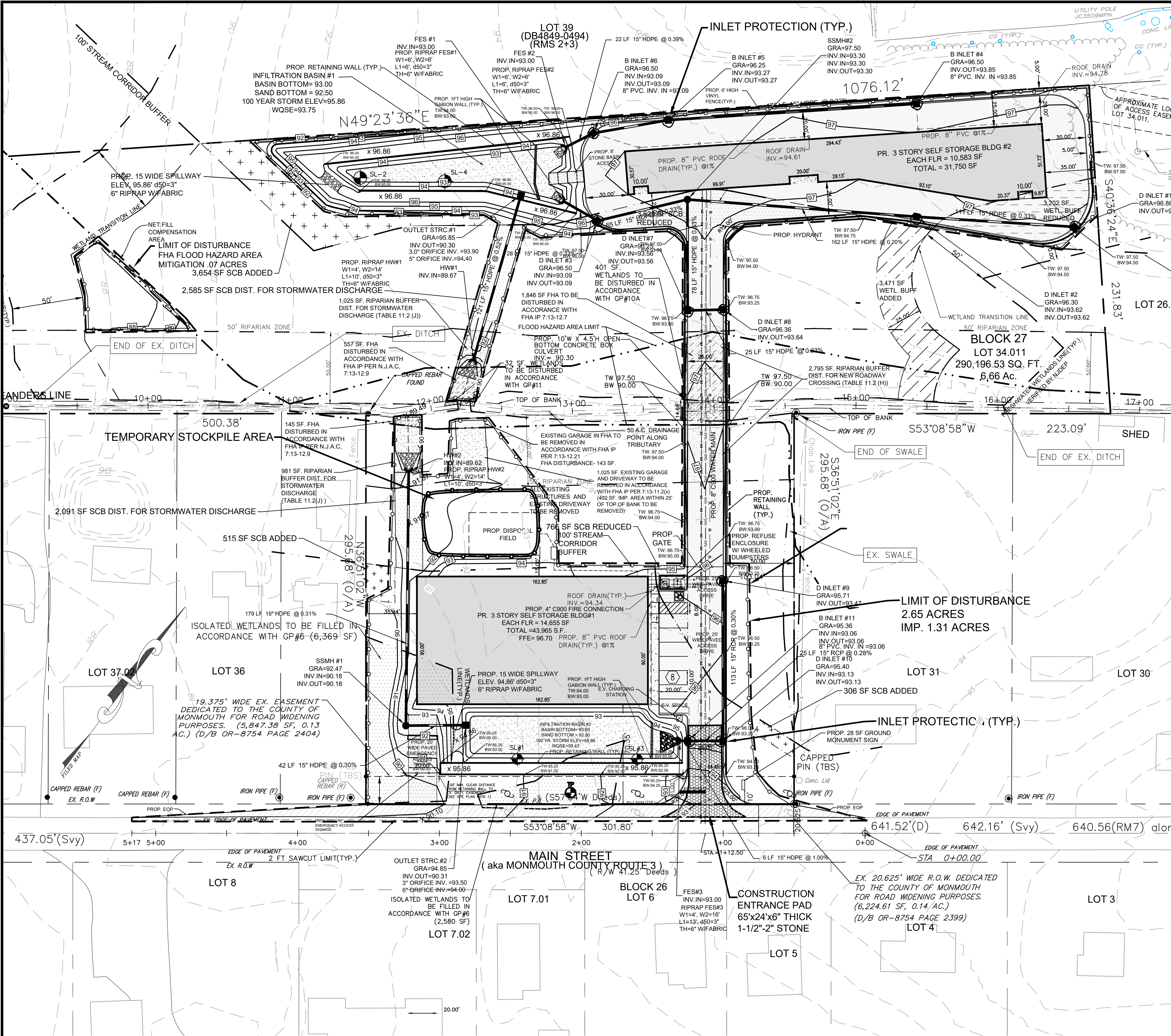


CONSTRUCTION NOTES:

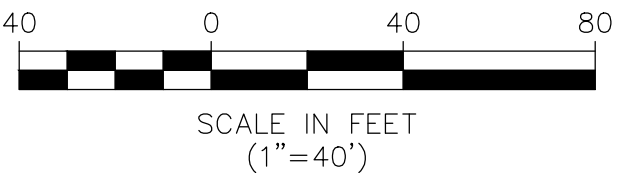
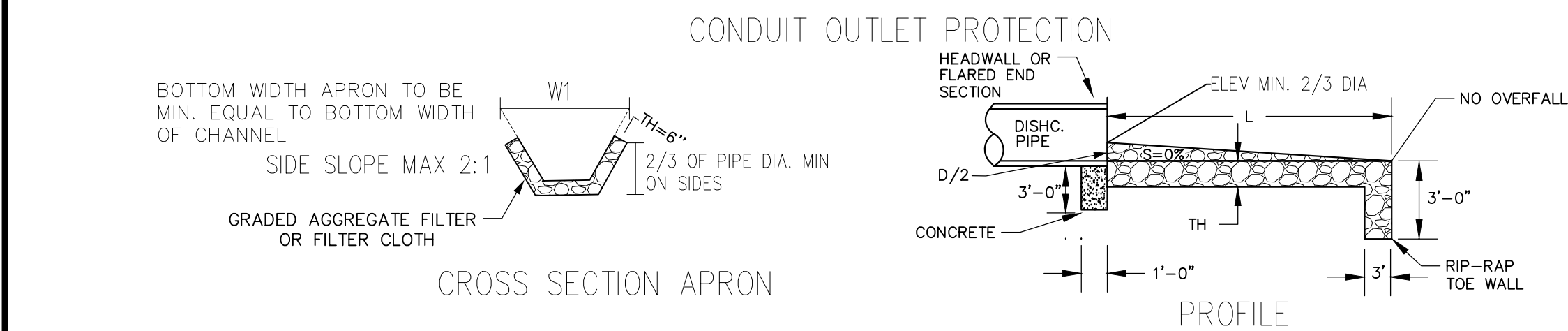
- ENCASEMENT TO BE CONSTRUCTED WHEN VERTICAL CLEARANCE UNDER WATER SYSTEM OR STORM SEWER IS 18" OR LESS, OR WHEN HORIZONTAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN AT THE SAME ELEVATION IS LESS THAN 10'.
- CONCRETE TO BE N.J.D.O.T. CLASS C.
- FULL ENCASEMENT TO BE USED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ENCASEMENT SHALL EXTEND A MINIMUM OF TEN FEET (10') ON EITHER SIDE OF CROSSING.

CONCRETE ENCASEMENT N.T.S.

STANDARD CONSTRUCTION DETAILS II				DATE
"TRIPLET SQUARE LLC"				06-06-22
BLOCK 27, LOT 34.011				SCALE
SITUATED ON:				AS SHOWN
LOCATED ON 405 MAIN STREET AS SHOWN ON TAX MAP OF TOWNSHIP OF MANALAPAN SHEET 20, MONMOUTH COUNTY, NJ				DRAWN BY:
CONCEPT ENGINEERING CONSULTANTS, P.A.				ON
123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726				CHECKED BY:
PHONE: 732-275-0000 FAX: 732-275-0001				CAD FILE
PROFESSIONAL ENGINEERS - LAND SURVEYORS				FIELD BK
JOHN J. PLOSKONKA P.E. LEO A. KALIETA P.L.S.				N/A
PROFESSIONAL ENGINEER - N.J. LIC. NO. 15510 PROFESSIONAL LAND SURVEYOR - N.J. LIC. NO. 31281				N/A
DATE				SHEET
				13 OF 15
				JOB NO.
				32094



KEY/TAX MAP
SCALE: 1" = 300'



SOIL EROSION AND SEDIMENT CONTROL PLAN				DATE	
"TRIPLET SQUARE LLC"				06-06-22	
BLOCK 27, LOT 34.011				SCALE	
				AS SHOWN	
SITUATED ON:				DRAWN BY:	
LOCATED ON 405 MAIN STREET AS SHOWN ON TAX				ON	
MAP OF TOWNSHIP OF MANALAPAN SHEET 20,				CHECKED BY:	
MONMOUTH COUNTY, NJ				CAD FILE	
CONCEPT ENGINEERING CONSULTANTS, P.A.				FIELD BK	
123 HIGHWAY #33 EAST, SUITE #204, MANALAPAN, NJ 07726				PAGE	
PHONE 732-732-2750 OR 732-792-2740				SHEET	
PROFESSIONAL ENGINEERS - LAND SURVEYORS				14	
				OF	
				15	
				JOB NO.	
				32094	

SOIL EROSION AND SEDIMENT CONTROL NOTES

- The Freehold Soil Conservation District shall be notified forty-eight (48) hours in advance of any soil disturbing activity.
- All Soil Erosion and Sediment Control practices are to be installed prior to site disturbance, or in their proper sequence, and maintained until permanent protection is established.
- In addition 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.
- N.J.A.C. 42-44-39 no Certificates of Occupancy be issued until a Report of Compliance has been submitted. Upon written approval, 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.
- 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. Temporary seeding prevents the establishment of temporary cover, the disturbed areas will be mulched with straw, or equivalent material, at a rate of 2 to 2 1/2 tons per acre, according to the Standard for Stabilization with Mulch only.
- 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.
- A sub-topsoil layer 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.
- 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" to 2") stone with a length of ten feet (10') equal to the lot entrance width. All other access points shall be blocked off.
- All soil washed, dropped, spilled, or tracked outside the limit of disturbance or onto public right-of-way must be removed immediately.
- Permanent vegetation is to be seeded or sodded on all exposed areas within ten (10) days after final grading.
- 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 vegetation 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.
- 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 a 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.
- Conduit Outlet Protection must be installed at all required outfalls prior to the drainage system becoming operational.
- 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.
- 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.
- 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 a revised Soil Erosion and Sediment Control Plan. The revised plan shall be submitted to the District and approved. Soil Erosion and Sediment Control Plan may be required for these activities if an area greater than 5,000 square feet is disturbed.
- All soil stockpiles are to be temporarily stabilized in accordance with Soil Erosion and Sediment Control note #6.
- The property owner shall be responsible for any erosion or sedimentation that may occur below steeper outlet of construction of the project.

TEMPORARY STABILIZATION SPECIFICATIONS

- Site Preparation**
 - 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, pg. 19-1.
 - Install needed erosion control practices or facilities such as diversions, grade stabilization through 42.
- 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.).
- Seeded Preparation**
 - Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mallets 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 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at the rate determined via 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.
 - Work time and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc, springtooth 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.
 - Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above.
 - Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1-1.
- Liming Rates shall be established via soil testing.
- Apply seed mixtures as follows:

ZONE	Seed Mix
Zone 6a	Cool Season Mix
	Perennial ryegrass at 100 pounds per acre or 1 pound per 1,000 square feet, March 1 thru May 15 and August 15 thru October 1, to a depth of 0.5 inches, OR;
	Spring oats at 86 pounds per acre or 2 pound per 1,000 square feet, March 1 thru May 15 and August 15 thru October 1, to a depth of 1 inch, OR;
	Winter barley at 96 pounds per acre or 2.2 pound per 1,000 square feet, August 15 thru October 1, to a depth of 1 inch, OR;
	Annual ryegrass at 100 pounds per acre or 1 pound per 1,000 square feet, March 15 thru June 1 and August 1 thru September 15, to a depth of 0.5 inches, OR;
	Winter cereal rye at 112 pounds per acre or 2.8 pound per 1,000 square feet, August 1 thru November 15, to a depth of 1 inch, OR;
	Warm Season Mix
	Pearl millet at 20 pounds per acre or 0.5 pound per 1,000 square feet, May 15 thru August 15, to a depth of 1 inch, OR;
	Millet (Sudanese or Hungarian) at 30 pounds per acre or 0.7 pound per 1,000 square feet, May 15 thru August 15, to a depth of 1 inch, OR;

- Mulch with unrattled salt hay or small grain straw immediately after seeding at a rate of 1.5 to 2 tons per acre or 70 to 90 pounds per 1,000 square feet and secure with peg and twine, mulch netting, crimpers or liquid mulch-binders.
- Where the season and other conditions may not be suitable for growing an erosion resistant cover or where stabilization is needed for a short period until more suitable protection can be applied, stabilization with mulch only may be utilized.

PERMANENT STABILIZATION SPECIFICATIONS

- Site Preparation**
 - 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 Standard for Land Grading.
 - Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading.
 - Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling.
 - Install needed erosion control practices or facilities such as diversions, grade-stabilization structures, channel stabilization measures, sediment basins, and waterways.
- Seeded Preparation**
 - Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample mallets are available from the local Rutgers Cooperative Extension offices (http://njnes.rutgers.edu/county/). Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-10-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.
 - Work time 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.
 - High acid producing soil. Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed preparation. See Standard for Management of High Acid-Producing Soils for specific requirements
- Apply seed mixtures as follows:

ZONE	Seed Mix
ZONE 6a, RESIDENTIAL AND COMMERCIAL AREAS;	
	Perennial ryegrass at 45 pounds per acre or 1.0 pound per 1,000 square feet, March 1 thru October 15, to a depth of 0.25 to 0.5 inches, AND;
	Hard fescue at 175 pounds per acre or 4.0 pound per 1,000 square feet, March 1 thru October 15, to a depth of 0.25 to 0.5 inches, AND;
	Kentucky bluegrass (blend) at 45 pounds per acre or 1.0 pound per 1,000 square feet, March 1 thru October 15, to a depth of 0.25 to 0.5 inches, AND;
ZONE 6b, DETENTION BASINS, SWALES, DITCHES, POND AND CHANNEL BANKS, BERMS;	
	Strong creeping red fescue at 130 pounds per acre or 3 pound per 1,000 square feet, March 1 thru October 15, to a depth of 0.25 to 0.5 inches, AND;
	Kentucky bluegrass at 50 pounds per acre or 1 pound per 1,000 square feet, March 1 thru October 15, to a depth of 0.25 to 0.5 inch, AND;
	Perennial ryegrass at 20 pounds per acre or 0.5 pound per 1,000 square feet, March 1 thru October 15, to a depth of 0.25 to 0.5 inches, OR;
	Redtop at 10 pounds per acre or 0.25 pound per 1,000 square feet, March 1 thru October 15, to a depth of 0.25 to 0.5 inch, PLUS;
	White clover at 5 pounds per acre or 0.1 pound per 1,000 square feet, March 1 thru October 15, to a depth of 0.25 to 0.5 inch, AND;
	Mulch with unrattled salt hay or small grain straw immediately after seeding at a rate of 1.5 to 2 tons per acre or 70 to 90 pounds per 1,000 square feet and secure with peg and twine, mulch netting, crimpers or liquid mulch-binders.
	Where the season and other conditions may not be suitable for growing an erosion resistant cover or where stabilization is needed for a short period until more suitable protection can be applied, stabilization with mulch only may be utilized.

STABILIZATION WITH MULCH ONLY

- Site Preparation**
 - 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.
 - 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.
- Protective Materials**
 - Unsettled small-grain straw, 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, i.e. the soil cannot be seen below the mulch.
 - Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.
 - 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 hydroseeder.
 - Mulch netting, such as paper jute, excelsior, cotton, or plastic, may be used.
 - Woodchips applied uniformly to a minimum depth of 2 inches may be used. Woodchips will not be used on areas where flowing water could wash them into an inlet and plug it.
 - Gravel, crushed stone, or slag 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.
 - Mulch Anchoring** - should be accomplished immediately after placement of hay or straw mulch 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.
 - 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 criss-cross and a square pattern. Secure twine around each peg with round turn and two half hitches.
 - Mulch Nettings - Staple paper, cotton, or plastic nettings over mulch. Use degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and up to 300 feet long.
 - Crimper Mulch Anchoring Coupler Tool - A tractor-drawn implement especially designed to punch and anchor mulch into the soil surface. This practice affords maximum erosion control, but its 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.
 - Liquid Mulch-Binders
 - Applications should be heavier at edges where wind catches the mulch, in valleys, and the rate of 10 tons/acre, (or 450 lbs/1,000 sq. ft. of surface area) should be uniform in appearance.
 - Use one of the following:
 - Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials that mixed with water formulates a gel and when applied to much under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel 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.
 - 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 detrimental to the soil. It shall be applied at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.

STANDARDS FOR DUST CONTROL

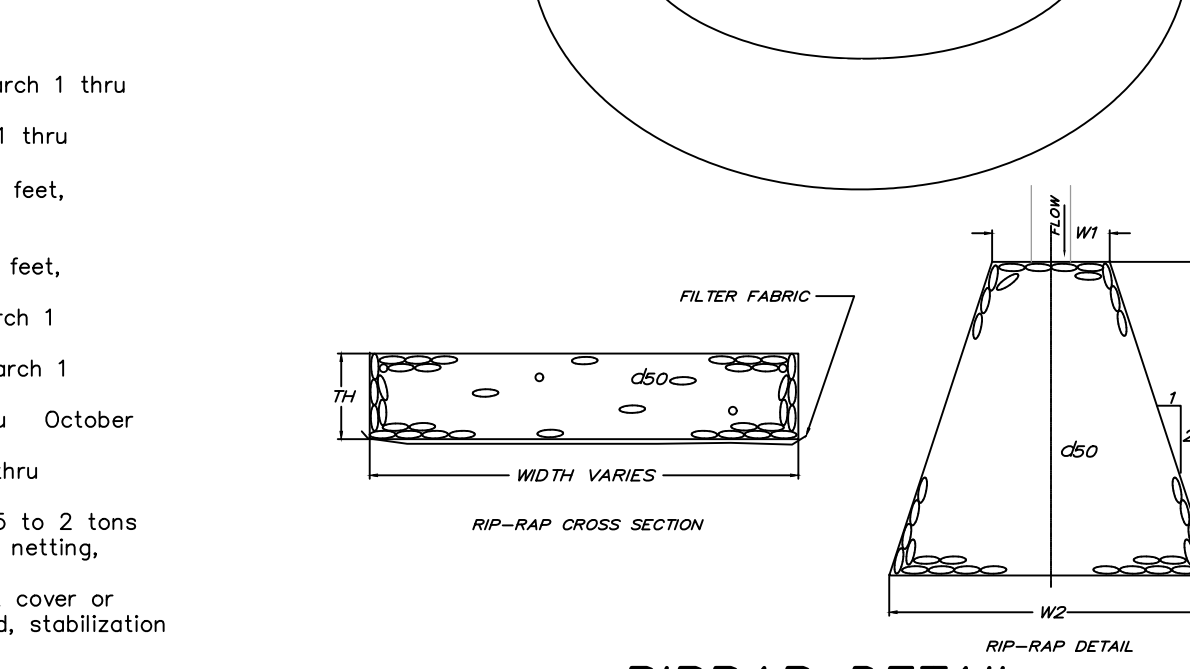
- To be utilized on exposed soil surfaces to prevent blowing and movement of dust to minimize on and off site damage and improve traffic safety.
- The following methods should be considered to control dust:
 - Mulches - see the standard for stabilization with mulch.
 - Vegetative cover - see the standard for temporary vegetative cover and permanent cover.
 - Spay on adhesives - for use on mineral soils only. Not to be used on mulch soils. Traffic must be kept off these areas.
 - Tillage - this is a temporary emergency measure to roughen the surface and bring clods to the surface. This method should be used before soil starts blowing. Begin plowing on windward side of site. Chisel type plows with 12" spacing and spring toothed harrows may produce the desired effect.
 - Sprinkling - the site is sprinkled with water until damp as necessary to control dust.
 - Barriers - solid board fences, snow fences, burlap fences, crate walls, hay bales, and similar materials can be used to control air currents & soil blowing.
 - Calcium Chloride - shall be in the form of loose dry granules or flakes fine enough to feed through commonly used spreaders at a rate that will keep surfaces moist but not cause pollution or plant damage. If used on steeper slopes, then used other practices to prevent washing into streams or accumulation around plants.
 - Stone - Cover surface with crushed stone or loose gravel.

TOPSOIL STOCKPILE PROTECTION

- Construct temporary diversion berm and/or hay bale barriers around stockpile area as required.
 - Apply limestone (NOTE: Lime stone rate to be determined by the soiltesting in the field)
 - Apply fertilizer (10-20-10) at a rate of 11 lbs/1000 SF.
 - Apply Perennial Ryegrass at a rate of 1 lb/1000 SF.
 - Mulch with unrattled salt hay or small grain straw immediately after seeding. Apply at a rate of 80 lbs/1000 SF.

PROPOSED SEQUENCE OF DEVELOPMENT

- Provide tree protection fencing then perform site clearing operation. (5 day)
- Install temporary gravel pads at all construction entrances, as shown on the plans. (2 day)
- Install dug-in and staked hay bales or sediment barrier fencing as shown on the plans. (2 day)
- Grade lot. (1 week)
- Install sanitary sewer, waterlines and any other utilities. (3 weeks)
- Construct, stabilize and install Stormwater structures. (2 weeks)
- Begin building construction. (6 months)
- Final grade driveway and other undisturbed areas. (5 days)
- Pave driveway. (2 day)
- Perform soil compaction testing. (2 day)
- Apply permanent seeding as per standards. (5 day)
- Finish building construction. (24 weeks)
- Install landscaping. (10 days)
- Remove silt/tree protection fence and inlet filters once permanent seeding is established. (5 day)



MANAGEMENT OF HIGH ACID PRODUCING SOIL

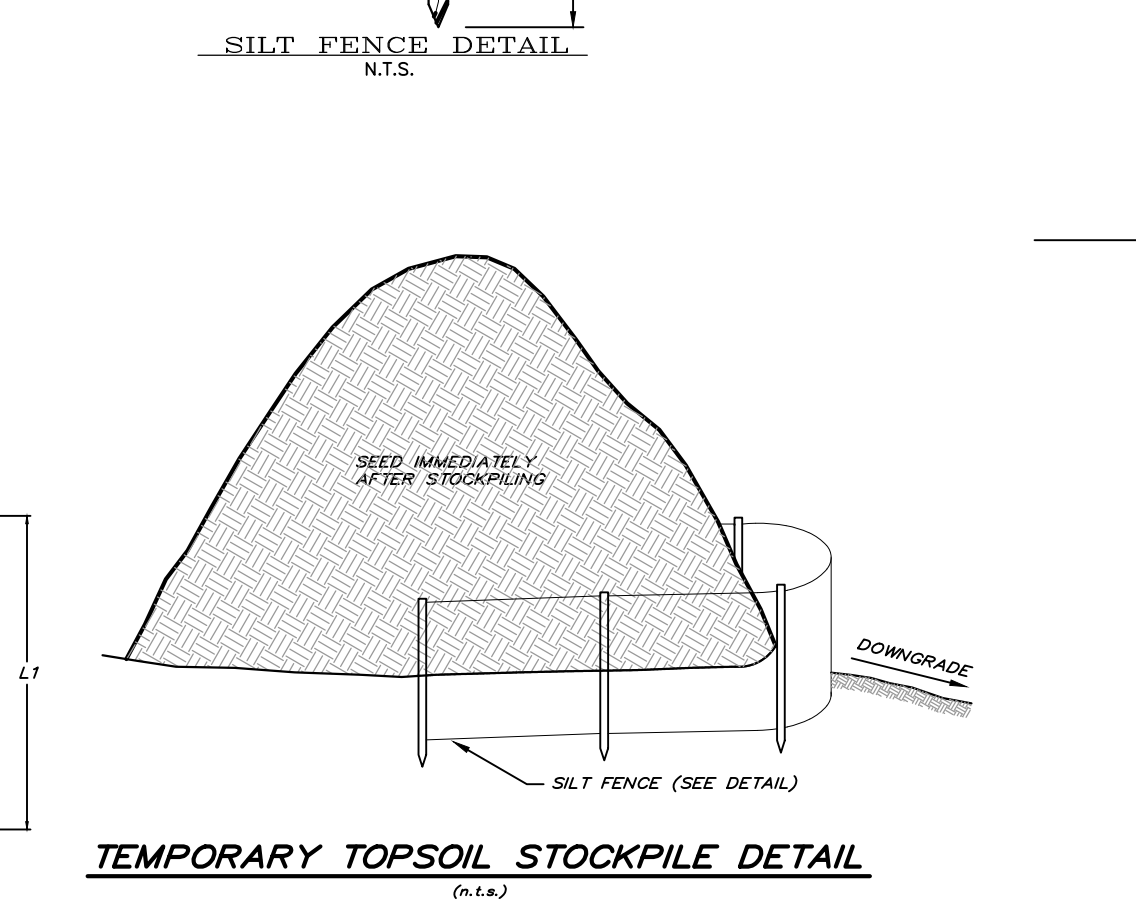
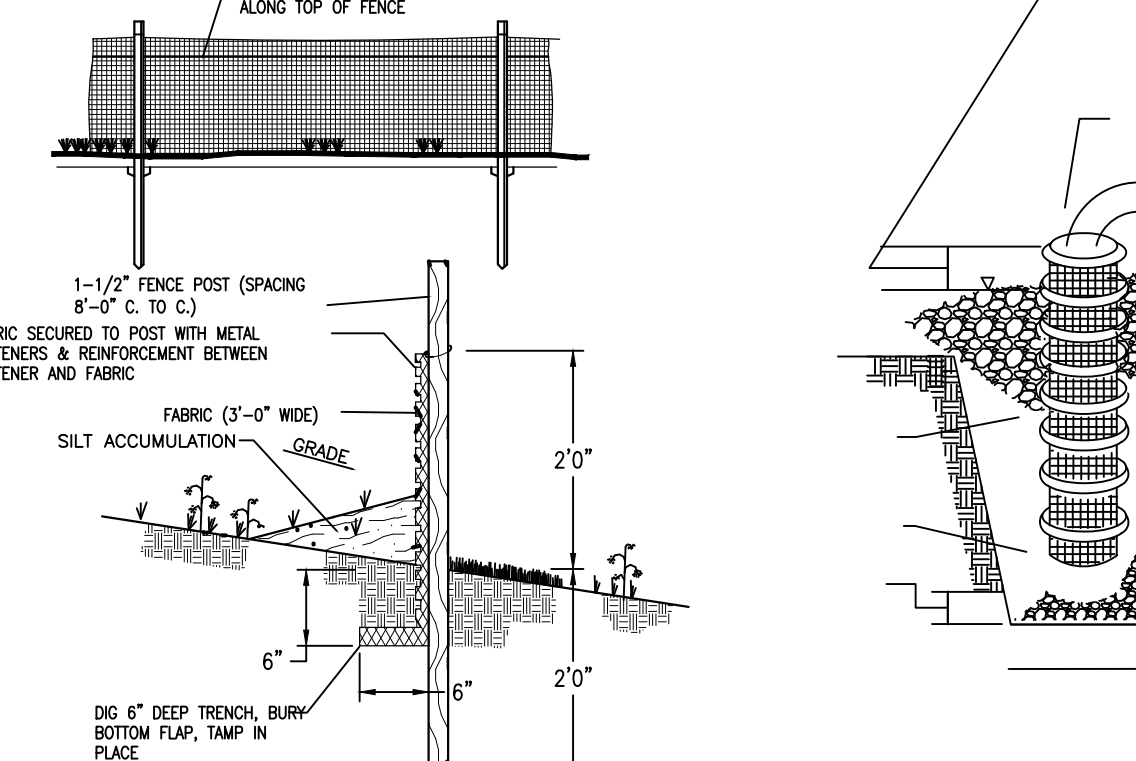
- Limit the excavation area and exposure time when high acid producing soils are encountered.
- Topsoil stripped from the site shall be stored separately from temporarily stockpiled high acid producing soils.
- Stockpiles of high acid producing soil should be located on level land to minimize its movement, especially when this material has a high clay content.
- Temporarily stockpiled high acid producing soil material to be exposed more than 30 days 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 8 inches of wood chips to minimize erosion of the stockpile.
- Silt fence shall be installed at the toe of 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.
- High acid producing soils with a pH of 4 or less, or containing iron sulfide, (including borrow from cuttings) shall be ultimately placed or buried with limestone applied at the rate of 6 tons per acre (or 275 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 or more except as follows:
 - Areas where trees or shrubs are to be planted shall be covered with a minimum of 24 inches of soil with a pH of 5 or more.
 - 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.
- Equipment used for movement of high acid producing soils should be cleaned at the end of each day to prevent spreading of high acid soil materials to other parts of the site, into streams or stormwater conveyances and to protect machinery from accelerated rusting.
- Non vegetative erosion control practices (stone tracking pads, strategically placed limestone check dam, silt fence, wood chips) should be installed to limit the movement of high acid producing soils from, around or off the site.
- Following burial or removal of high acid producing soil, topsoiling and seeding of the site, (see Temporary Vegetative Cover for Soil Stabilization, pg. 7-1), Permanent Vegetative Cover for Soil Stabilization , pg. 4-1 and Topsoiling, pg. 8-1) monitoring should continue for approximately 6 to 12 months to assure there is adequate stabilization and that no high acid soil problems emerge. If problems still exist the affected area must be treated as above.
- Monitoring of areas where high acid producing soil has been placed or buried should be performed for at least 2 years or longer if problems occur, to assure there is no migration of potential acid leachate.

METHODS AND MATERIALS FOR TOPSOILING

- Materials
 - Topsoil should be friable, loamy, free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Soluble salts should not be excessive (conductivity less than 0.5 millimhos per centimeter. More than 0.5 millimhos may desiccate seedlings and adversely impact growth). Imported topsoil shall have a minimum organic matter content of 2.75 percent. Organic matter content may be raised by additives.
 - Topsoil substitute is a soil material which may have been amended with sand, silt, clay, organic matter, fertilizer or lime and has the appearance of topsoil. Topsoil substitutes must be utilized on sites with insufficient topsoil for establishing permanent vegetation. All topsoil substitute materials shall meet the requirements of topsoil noted above. Soil tests shall be performed to determine the components of sand, silt, clay, organic matter, soluble salts and pH level.
 - Stripping and Stockpiling
 - Field exploration should be made to determine whether quantity and/or quality of surface soil justifies stripping or lime and has the appearance of topsoil. Topsoil substitutes must be utilized on sites with insufficient topsoil for establishing permanent vegetation. All topsoil substitute materials shall meet the requirements of topsoil noted above. Soil tests shall be performed to determine the components of sand, silt, clay, organic matter, soluble salts and pH level.
 - Stockpiles of topsoil should be situated so as not to obstruct natural drainage or cause off-site environmental damage.
 - Stockpiles should be vegetated in accordance with standards previously described herein; see Standards for Permanent (pg. 4-1) or Temporary (pg.7-1) Vegetative Cover for Soil Stabilization. Weeds should not be allowed to grow on stockpiles.

- Site Preparation**
 - Grade at the onset of the optimal seeding period so as to minimize the duration and area of exposure of disturbed soil to erosion. Immediately proceed to establish vegetative cover in accordance with the specified seed mixture. Time is of the essence.
 - Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance.
 - See the Standard for Land Grading, pg. 19-1.
 - As guidance for ideal conditions, subsoil should be tested for lime requirement. Limestone, if needed, should be applied to bring soil to a pH of approximately 6.5 and incorporated into the soil as nearly as practical to a depth of 4 inches.
 - Prior to topsoiling, the subsoil shall be in compliance with the Standard for Land Grading, pg. 19-1.
 - Employ needed erosion control practices such as diversions, grade stabilization structures, channel stabilization measures, sedimentation basins, and waterways. See Standards 11 through 42.
 - Applying Topsoil
 - Topsoil should be handled only when it is dry enough to work without damaging soil structure; i.e., less than field capacity (see glossary).
 - A uniform application to an average depth of 5.0 inches, minimum of 4 inches, firmed in place is required. Alternative depths may be considered where special regulatory and/or industry design standards are appropriate such as on golf courses, sports fields, landfill capping, etc. Soils with a pH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 12 inches of soil having a pH of 5.0 or more, in accordance with the Standard for Management of High Acid Producing Soil (pg. 1-1).
 - Pursuant to the requirements in Section 7 of the Standard for Permanent Vegetative Stabilization, the contractor is responsible to ensure that permanent vegetative cover becomes established on at least 80% of the soils to be stabilized with vegetation. Failure to achieve the minimum coverage may require additional work to be performed by the contractor to include some or all of the following: supplemental seeding, re-application of lime and fertilizers, and/or the addition of organic matter (i.e. compost) as a top dressing. Such additional measures shall be based on soil tests such as those offered by Rutgers Cooperative Extension Service or other approved laboratory facilities qualified to test soil samples for agronomic properties.

- Apply limestone (NOTE: Lime stone rate to be determined by the soiltesting in the field)
- Apply fertilizer (10-20-10) at a rate of 11 lbs/1000 SF.
- Apply Perennial Ryegrass at a rate of 1 lb/1000 SF.
- Mulch with unrattled salt hay or small grain straw immediately after seeding. Apply at a rate of 80 lbs/1000 SF.



SOIL DE-COMPACTION AND TESTING REQUIREMENTS

- Soil Compaction Testing Requirements**
 - Subgrade soils prior to the application of topsoil (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.
 - Areas of the site which are subject to compaction testing and/or mitigation are graphically denoted on the certified soil erosion control plan.
 - Compaction testing locations are denoted on the plan. A copy of the plan portion of the plan shall be used to mark locations of tests, and attached to the compaction remediation form, available from the local soil conservation district. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.
 - In the event that testing indicates compaction in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the option to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

- Compaction Testing Methods**
 - Subgrade soils, prior to the application of topsoil (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.
 - Areas of the site which are subject to compaction testing and/or mitigation are graphically denoted on the certified soil erosion control plan.
 - Compaction testing locations are denoted on the plan. A copy of the plan or portion of the plan shall be used to mark locations of tests, and attached to the compaction remediation form, available from the local soil conservation district. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.
 - In the event that testing indicates compaction in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the option to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

- Compaction Testing Methods**
 - Probing Wire Test (see detail)
 - Hand-held Penetrometer Test (see detail)
 - Tube Bulk Density Test (licensed professional engineer required)
 - Nuclear Density Test (licensed professional engineer required)

Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to District approval.

Soil compaction testing is not required if/when subsoil compaction remediation (scarification/tillage (6" minimum depth) or similar) is proposed as part of the sequence of construction.

Procedures for Soil Compaction Mitigation
Procedures shall be used to mitigate excessive soil compaction prior to placement of topsoil and establishment of permanent vegetative cover.

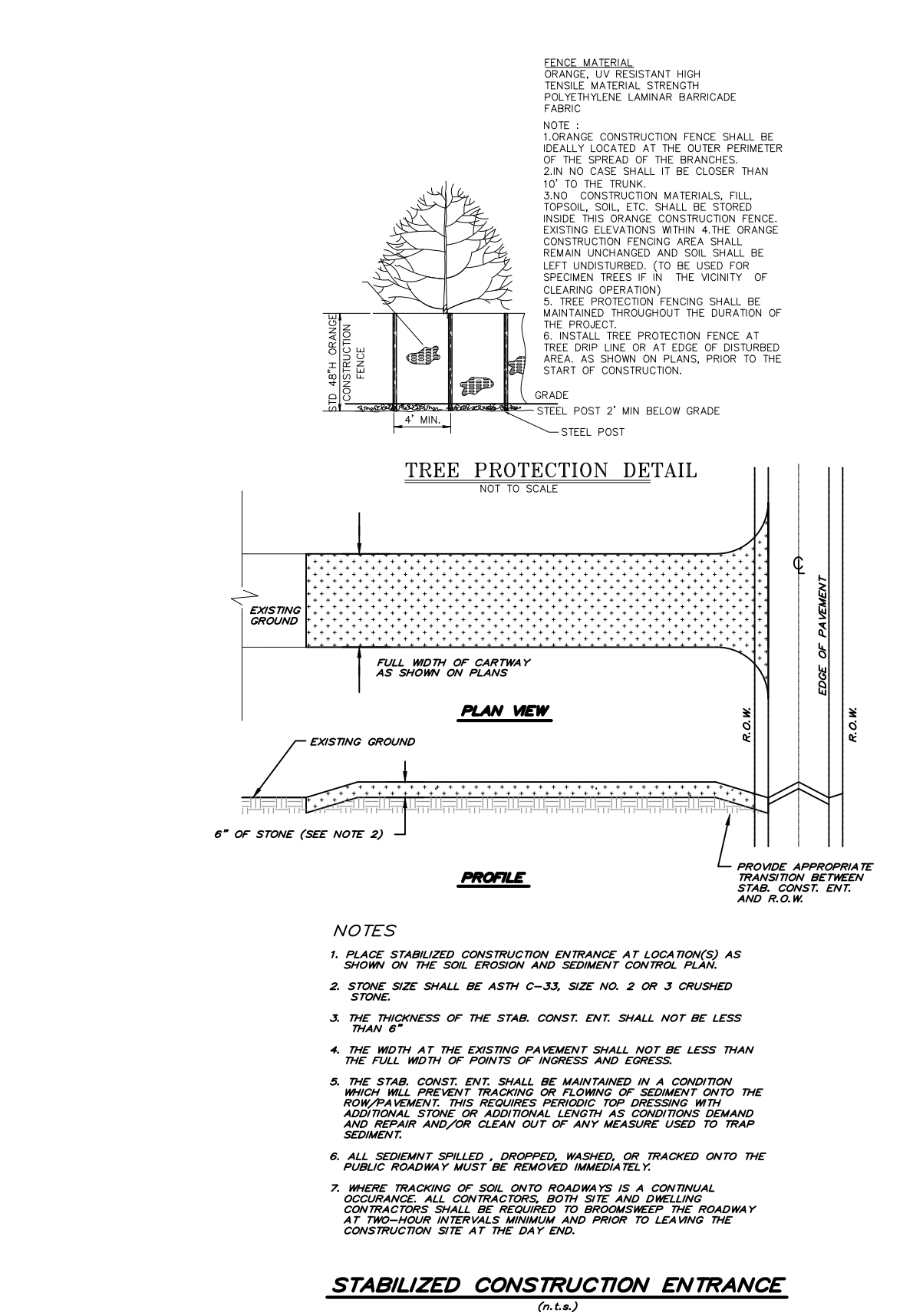
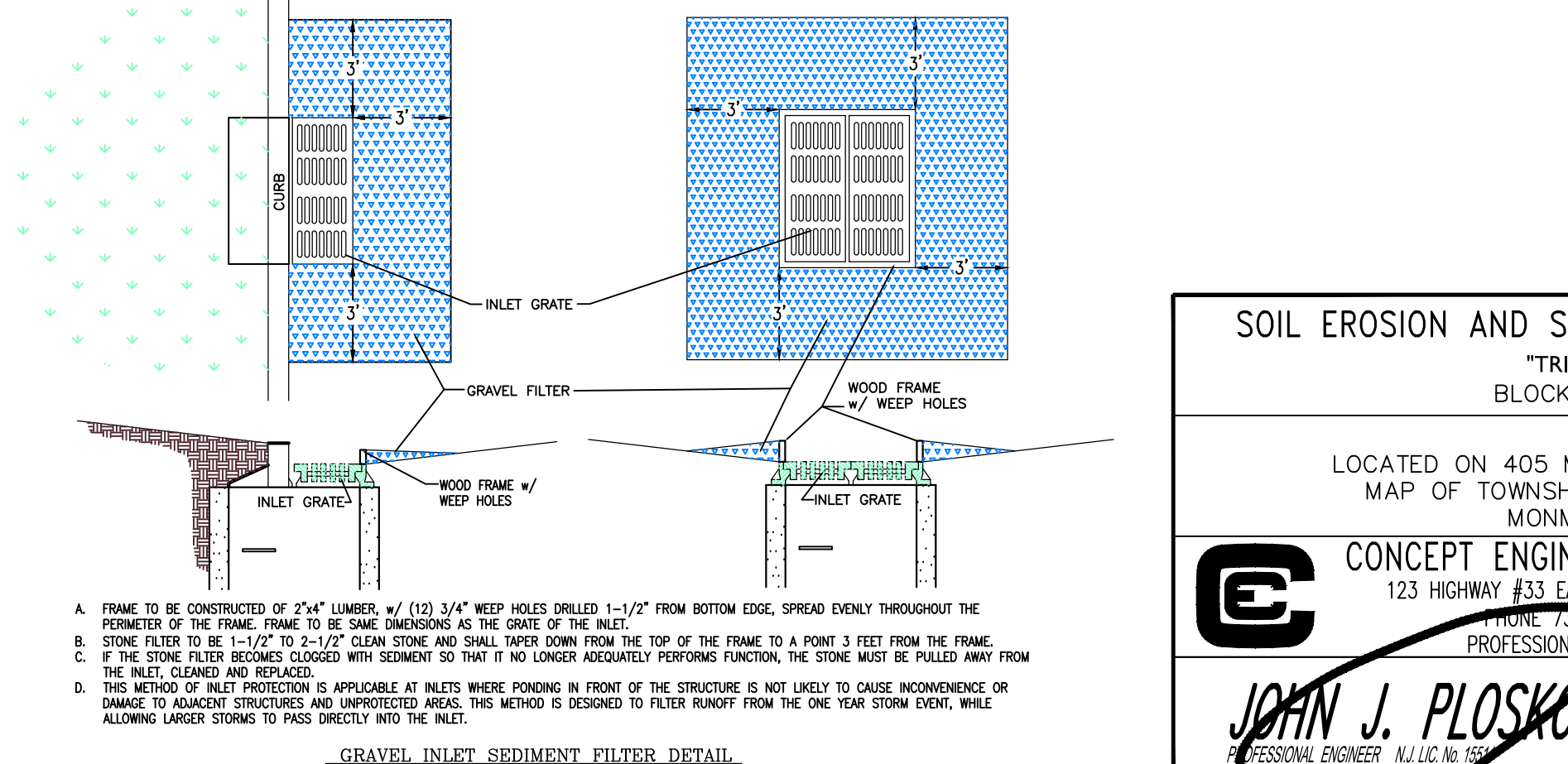
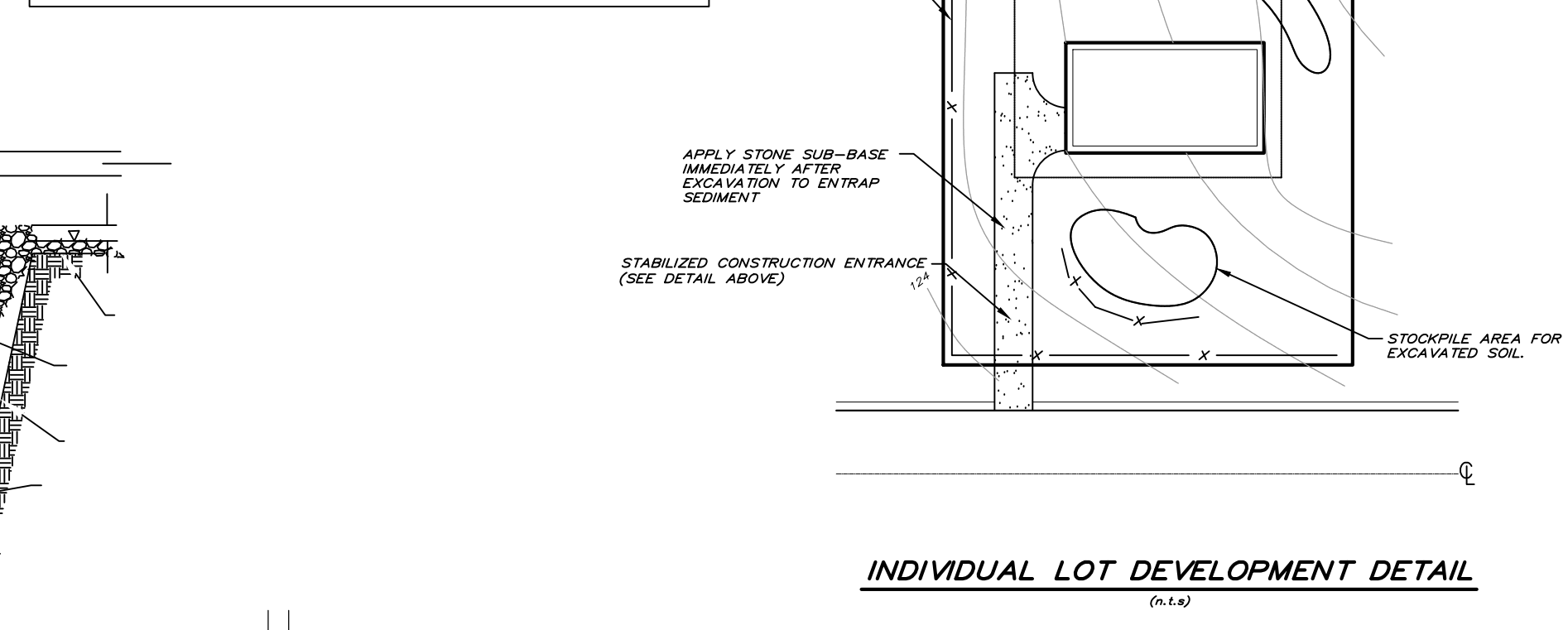
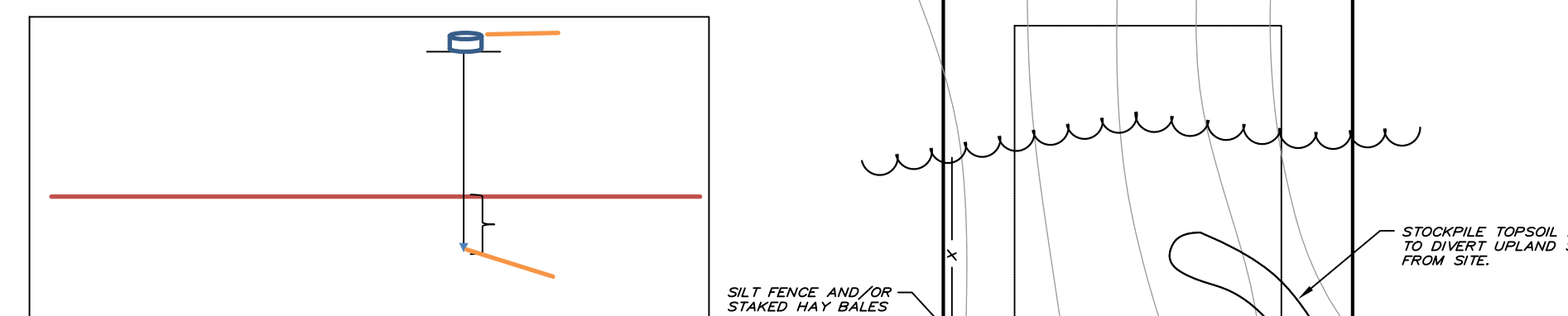
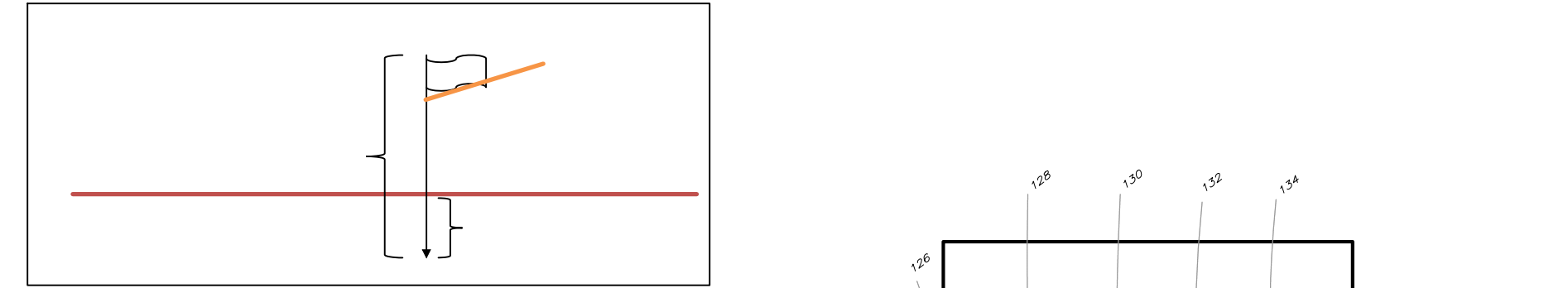
Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer maybe substituted subject to District Approval.

Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to District approval.

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