

SITE PLAN FOR 79 PARKER STREET IN NEWBURYPORT, MA

JANUARY 2019

RECORD OWNER
 PLUM ISLAND LLC
 28 PLUM ISLAND BLVD
 NEWBURY, MA 01951
 BK. 36010 PG. 174

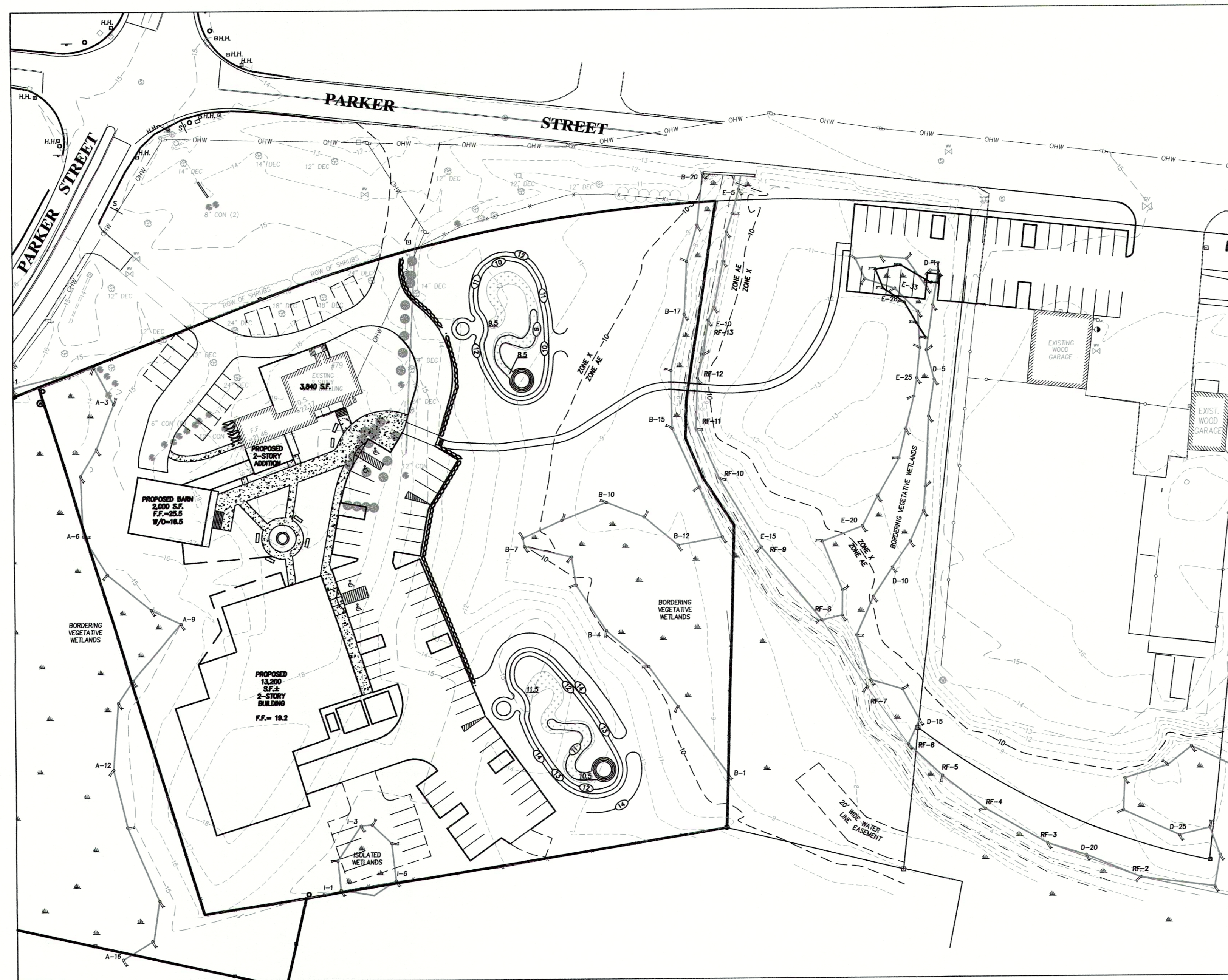
TOTAL AREA
 173,585 S.F. ±
 3.98 ACRES ±

PLAN INDEX

SHEET NO.	TITLE
1	COVER SHEET
2	EXISTING CONDITIONS PLAN
3	SITE PLAN
4	UTILITY PLAN
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6	LIGHTING PLAN
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8	UTILITY DETAILS
9	DRAINAGE DETAILS
10	DRAINAGE/SEWER DETAILS
11	EROSION CONTROL DETAILS
A1-A7	ELEVATIONS
L-1	LANDSCAPE PLAN

WAIVERS

SECTION	REGULATION	WAIVER REQUESTED
XV-E b. 3.	ENVIRONMENTAL AND COMMUNITY IMPACT ANALYSIS	NO ANALYSIS PROVIDED.
XV-E b. 4.	TRAFFIC IMPACT STUDY	NO STUDY PROVIDED.



ZONING TABLE

79 PARKER STREET – ASSESSORS MAP 78 LOT 3
ZONING DISTRICT I1B – USE 602 (LIGHT MANUFACTURING)

	REQUIRED	EXISTING	PROPOSED
LOT AREA:	50,000 S.F.	173,585± S.F.	173,585± S.F.
LOT FRONTAGE:	200 FT	504.71 FT	504.71 FT
FRONT SETBACK:	50 FT	48.6 FT	186.9 FT
SIDE SETBACK:	50 FT	30.5 FT	23.6 FT
REAR SETBACK:	50 FT	261.0 FT	52.4 FT
LOT COVERAGE:	40%	2.3%	7.7%
OPEN SPACE:	N.A.	N.A.	N.A.

79 PARKER STREET – ASSESSORS MAP 78 LOT 3
ZONING DISTRICT I1B – USE 416 (PROFESSIONAL/OFFICE)

	REQUIRED	EXISTING	PROPOSED
LOT AREA:	20,000 S.F.	173,585± S.F.	173,585± S.F.
LOT FRONTAGE:	90 FT	504.71 FT	504.71 FT
FRONT SETBACK:	20 FT	48.6 FT	43.1 FT
SIDE SETBACK:	20 FT	30.5 FT	121.7 FT
REAR SETBACK:	20 FT	261.0 FT	294.2 FT
LOT COVERAGE:	50%	2.3%	2.2%
OPEN SPACE:	N.A.	N.A.	N.A.

79 PARKER STREET – ASSESSORS MAP 78 LOT 3
ZONING DISTRICT I1B – USE 421 (MEETING SPACE/FUNCTION HALL)

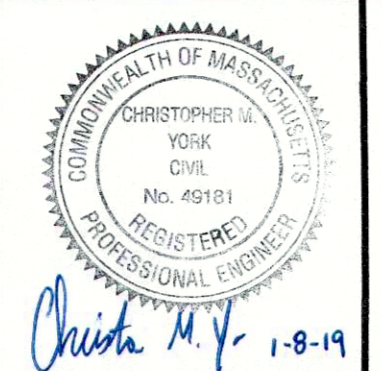
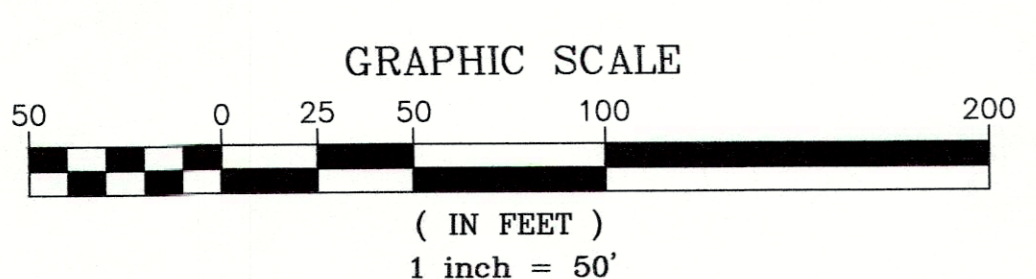
	REQUIRED	EXISTING	PROPOSED
LOT AREA:	20,000 S.F.	173,585± S.F.	173,585± S.F.
LOT FRONTAGE:	90 FT	504.71 FT	504.71 FT
FRONT SETBACK:	20 FT	48.6 FT	86.8 FT
SIDE SETBACK:	20 FT	30.5 FT	29.7 FT
REAR SETBACK:	20 FT	261.0 FT	256.1 FT
LOT COVERAGE:	30%	2.3%	1.1%
OPEN SPACE:	N.A.	N.A.	N.A.

79 PARKER STREET – ASSESSORS MAP 78 LOT 3
ZONING DISTRICT I1B – USE 501 (RESTAURANT)

	REQUIRED	EXISTING	PROPOSED
LOT AREA:	20,000 S.F.	173,585± S.F.	173,585± S.F.
LOT FRONTAGE:	120 FT	504.71 FT	504.71 FT
FRONT SETBACK:	25 FT	48.6 FT	186.9 FT
SIDE SETBACK:	25 FT	30.5 FT	23.6 FT
REAR SETBACK:	25 FT	261.0 FT	52.4 FT
LOT COVERAGE:	30%	2.3%	7.7%
OPEN SPACE:	N.A.	N.A.	N.A.

79 PARKER STREET – ASSESSORS MAP 78 LOT 3
ZONING DISTRICT I1B – USE 407 (ENTERTAINMENT/CLUBS)

	REQUIRED	EXISTING	PROPOSED
LOT AREA:	20,000 S.F.	173,585± S.F.	173,585± S.F.
LOT FRONTAGE:	90 FT	504.71 FT	504.71 FT
FRONT SETBACK:	20 FT	48.6 FT	186.9 FT
SIDE SETBACK:	20 FT	30.5 FT	23.6 FT
REAR SETBACK:	20 FT	261.0 FT	52.4 FT
LOT COVERAGE:	30%	2.3%	7.7%
OPEN SPACE:	N.A.	N.A.	N.A.



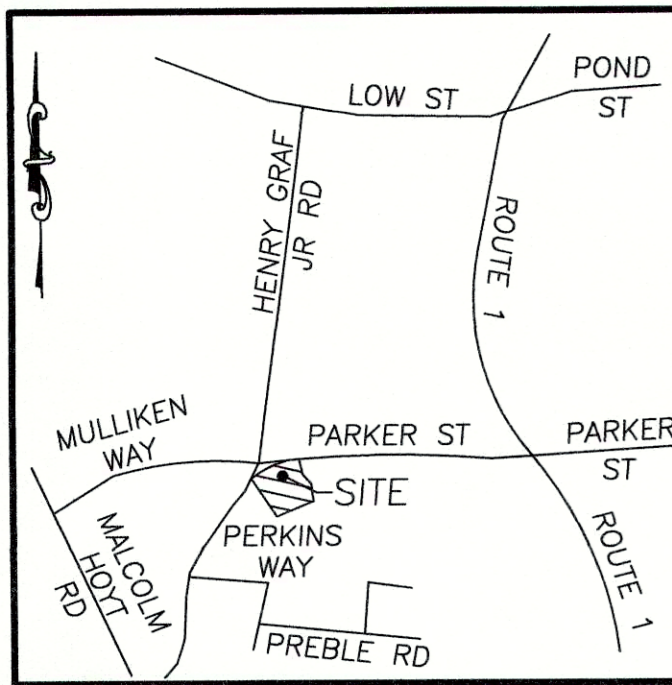
PREPARED FOR
PLUM ISLAND LLC
79 PARKER STREET
NEWBURYPORT, MA 01950

MILLENNIUM ENGINEERING, INC.
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

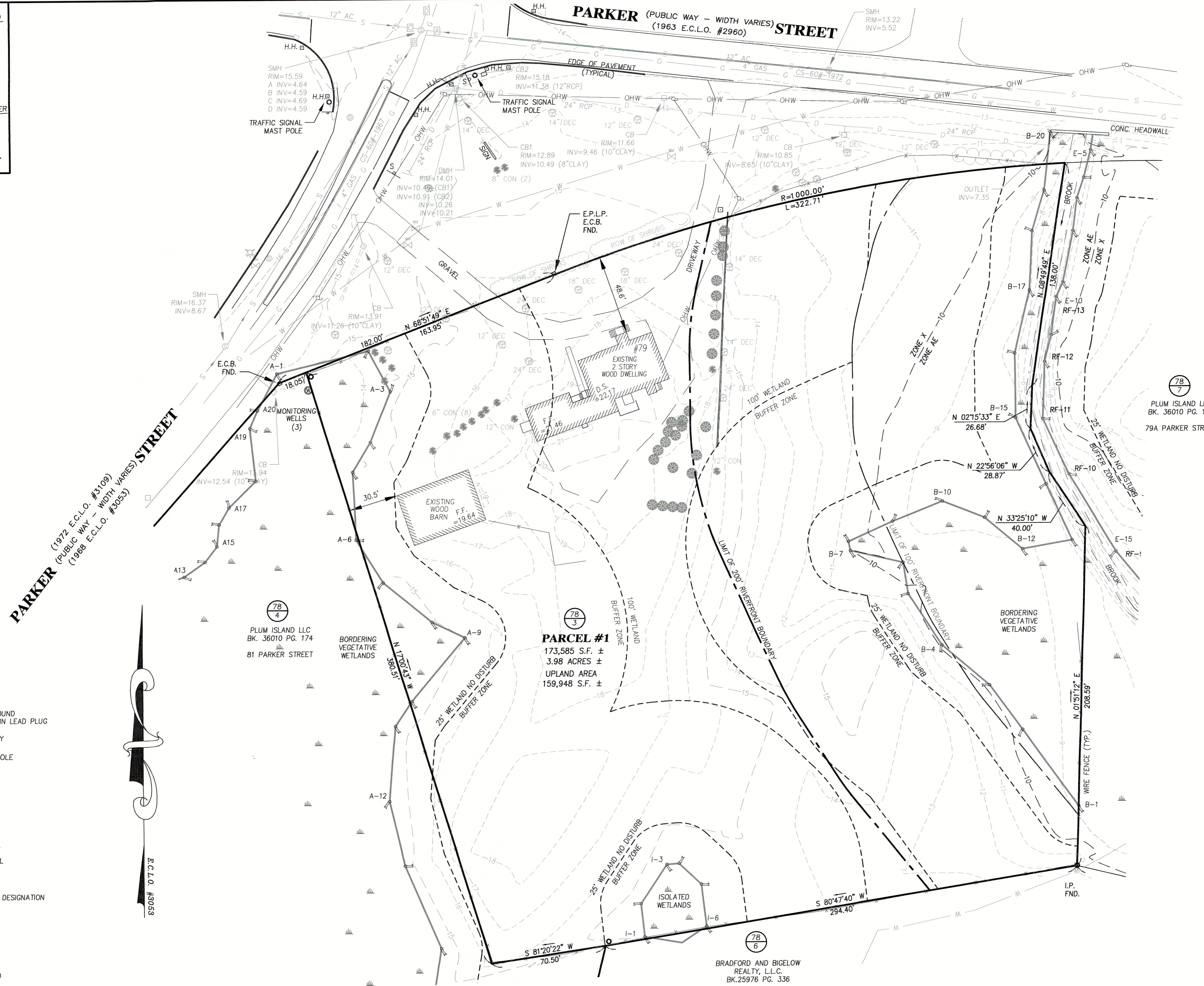
PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
79 PARKER STREET

COVER SHEET
SHEET: 1 OF 11

NO.	DATE	DESCRIPTION	BY
	JAN. 8, 2019	SCALE: 1"=50'	DESIGNER: C.M.Y.
		DATE: JAN. 8, 2019	CHKD. BY: E.W.B.
			PROJECT: M173238



LOCUS MAP
N.T.S.



NOTE:
WETLANDS DELINEATION DONE BY SEEKAMP ENVIRONMENTAL, KINGSTON, N.H., LOCATION BY MILLENNIUM ENGINEERING, INC.

BASIS OF BEARINGS

1968 ESSEX COUNTY LAYOUT #3053

OWNER OF RECORD

ASSESSORS MAP 7B LOT 3
PLUM ISLAND LLC
DEED BK 36010 PG 174

PLAN REFERENCES

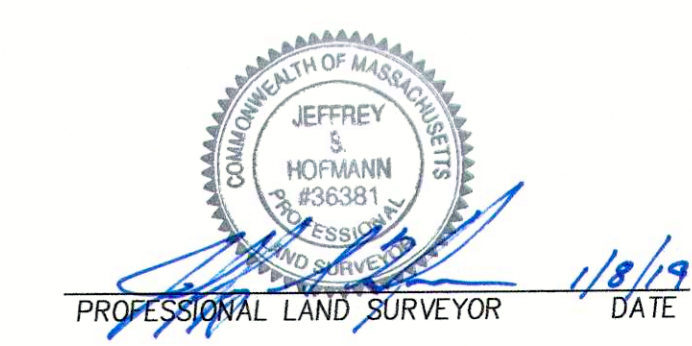
PLAN BK 350 PLAN 11
PLAN BK 256 PLAN 34
PLAN BK 107 PLAN 85
1963 ESSEX COUNTY LAYOUT #2960
1968 ESSEX COUNTY LAYOUT #3053
1972 ESSEX COUNTY LAYOUT # 3109

NOTES:
THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT, VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.

RECORD UTILITY INFORMATION HAS BEEN OBTAINED FOR LOCUS. VISIBLE SURFACE STRUCTURES HAVE BEEN LOCATED AND ARE SHOWN HEREON.

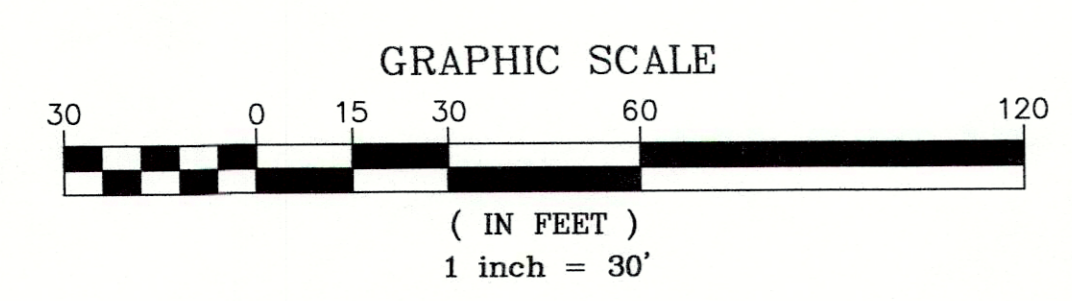
THE CERTIFICATIONS SHOWN HEREON ARE NOT INTENDED AS CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT CITY OF NEWBURYPORT ASSESSORS RECORDS.

I CERTIFY:
THAT THIS ACTUAL SURVEY WAS MADE ON THE GROUND FEBRUARY 25, 2016, AND UPDATED NOVEMBER 10, 2017, AND THAT THE STRUCTURES AND PHYSICAL FEATURES ARE LOCATED AS SHOWN TO THE BEST OF MY ABILITY AND BELIEF.



LEGEND

- E.C.B. ESSEX COUNTY BOUND
- E.P.L.P. ESCUTCHEON PIN IN LEAD PLUG
- I.P. IRON PIPE
- N/F. NOW OR FORMERLY
- FND. FOUND
- H.H. ELECTRIC HANDHOLE
- UTILITY POLE
- DRAINAGE
- WATER
- SEWER
- GAS
- OHW. OVERHEAD WIRE
- CB. CATCH BASIN
- DMH. DRAIN MANHOLE
- SMH. SEWER MANHOLE
- MONITORING WELL
- HYDRANT
- A-9. WATER VALVE
- WETLAND FLAG & DESIGNATION
- UTILITY POLE
- WETLANDS
- F.F. FIRST FLOOR
- D.S. DOOR SILL
- TREES
- HEDGE
- SIGN
- ASSESSORS MAP#
- PARCEL#



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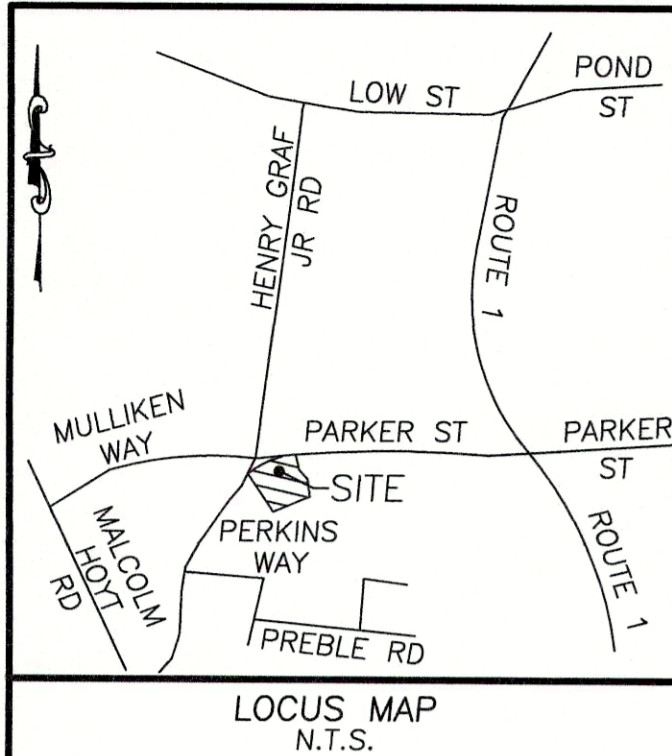
MILLENNIUM ENGINEERING, INC.
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62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
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PLAN OF LAND
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AT
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EXISTING CONDITIONS PLAN
SHEET: 2 OF 11

NO.	DATE	DESCRIPTION	BY

SCALE: 1"=30'
DATE: JAN. 8, 2019
CALC. BY: P.D.B.
CHKD. BY: J.S.H.
PROJECT: M173238



PARKING SPACE CALCS.

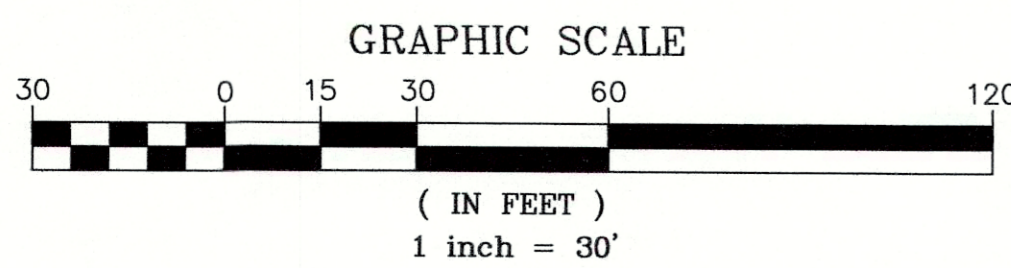
USE	# OF SPACES REQUIRED
501 RESTAURANT (407 ENTERTAINMENT CLUB OPERATING IN SAME SPACE)	1 PER 4 SEATS OF THE OCCUPANCY RATING
602 LIGHT MANUFACTURING	.75 PER EMPLOYEE + 1 PER COMPANY VEHICLE
416 PROFESSIONAL/OFFICE	1 SPACE PER 300 S.F. GFA
421 MEETING SPACE/FUNCTION HALL	1 SPACE PER 100 S.F. GFA
PROFESSIONAL/OFFICE (HOUSE)	
6,406 S.F. GFA	# OF SPACES REQUIRED = 22
MEETING SPACE/FUNCTION HALL/ENTERTAINMENT CLUB (BARN)	
100 SEATS - IF CALCULATED AS RESTAURANT	# OF SPACES REQUIRED = 25
2,500 S.F. GFA - IF CALCULATED AS MEETING SPACE/FUNCTION HALL	# OF SPACES REQUIRED = 25
LIGHT MANUFACTURING	
9,700 S.F. GFA	# OF SPACES REQUIRED = 6 EMPLOYEES = 6
RESTAURANT/ENTERTAINMENT CLUB (TAPROOM)	
175 SEATS	# OF SPACES REQUIRED = 44
TOTAL # OF SPACES REQUIRED	= 97
TOTAL # OF SPACES PROVIDED	= 74 + 38 OVERFLOW = 112

79 PARKER STREET RESOURCE AREA IMPACTS

TOTAL 100' BUFFER AREA ON LOT	= 117,727 S.F.
TOTAL BUFFER ZONE IMPACT	= 47,000 S.F. (39.9%) (NOT INCL. DRAINAGE)
TOTAL 100' RIVERFRONT AREA ON LOT	= 34,953 S.F.
TOTAL 200' RIVERFRONT AREA ON LOT	= 80,871 S.F.
TOTAL RIVERFRONT IMPACT	= 7,900 S.F. (9.9%) (NOT INCL. DRAINAGE)

LEGEND

— W —	EXISTING WATER MAIN
— S —	EXISTING SEWER MAIN
— G —	EXISTING GAS MAIN
— D —	EXISTING DRAIN LINE
— — —	PROP. BIT. CONC. SIDEWALK
— — —	PROP. RETAINING WALL
▽	PROP. VERTICAL GRAN. CURB
▽	PROP. SLOPED GRAN. EDGING
☆	PROP. LIGHT FIXTURE
□	EXIST. CATCH BASIN
○	EXIST. UTILITY POLE
■	WETLANDS



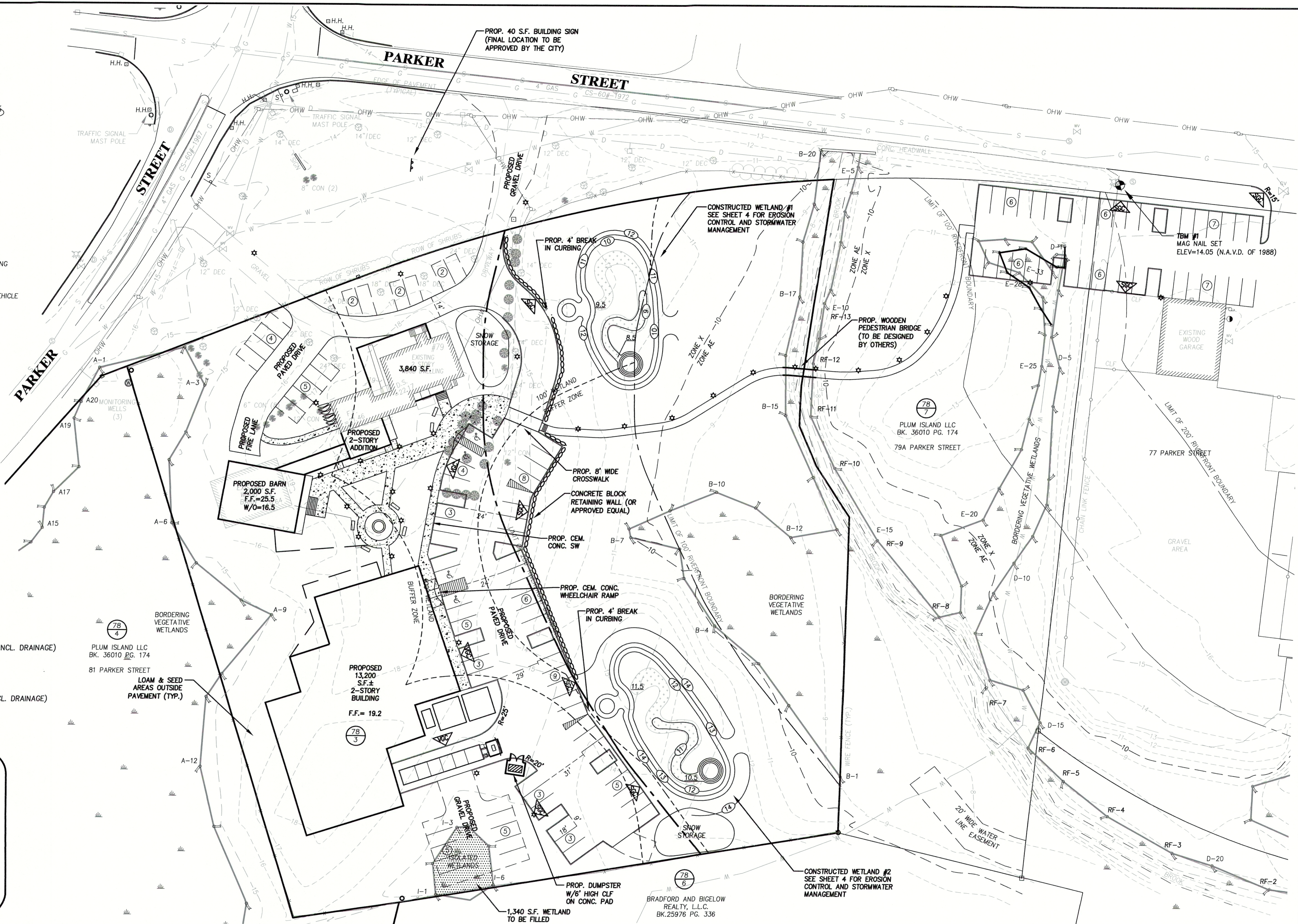
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PLAN OF LAND
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SITE PLAN

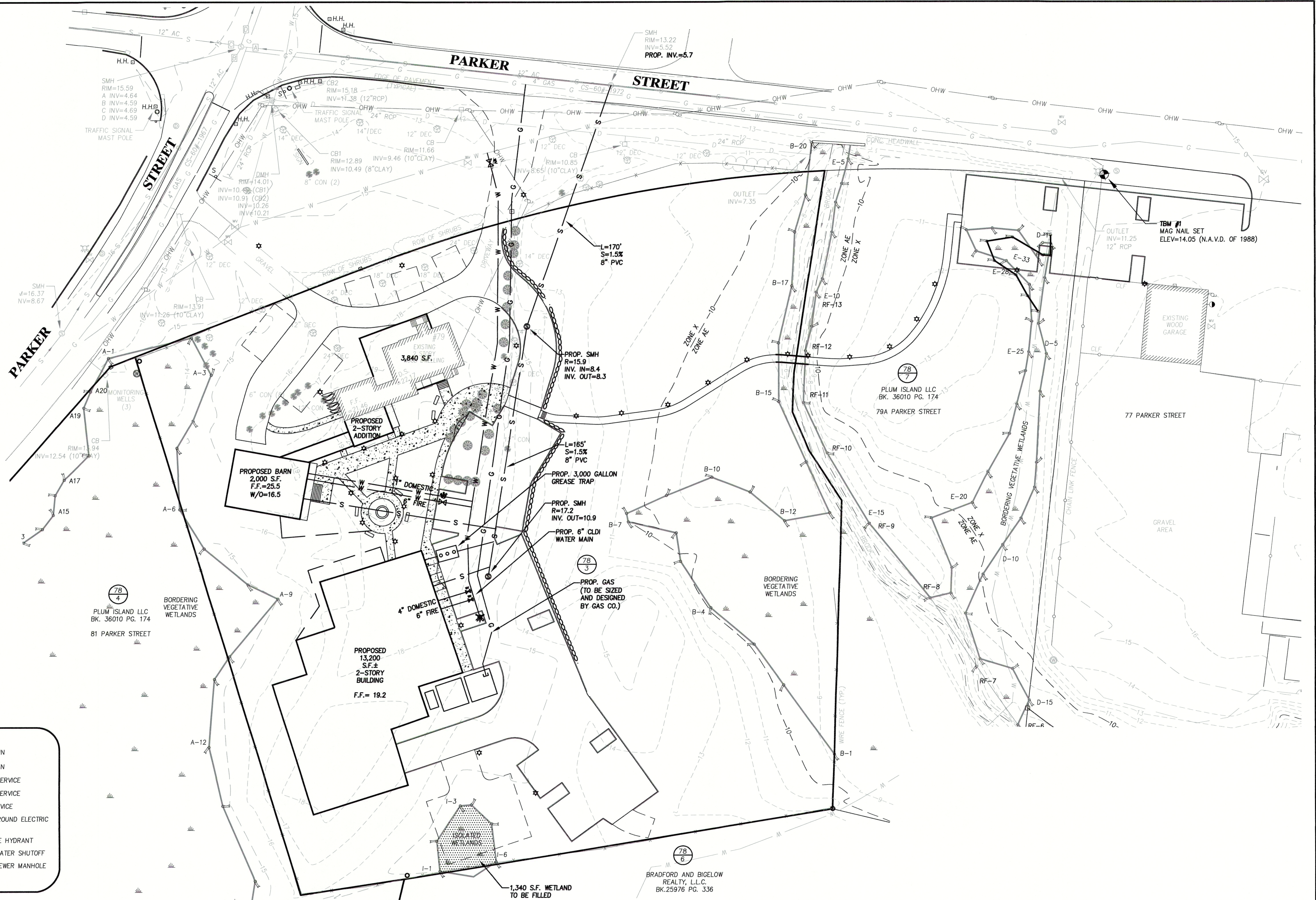
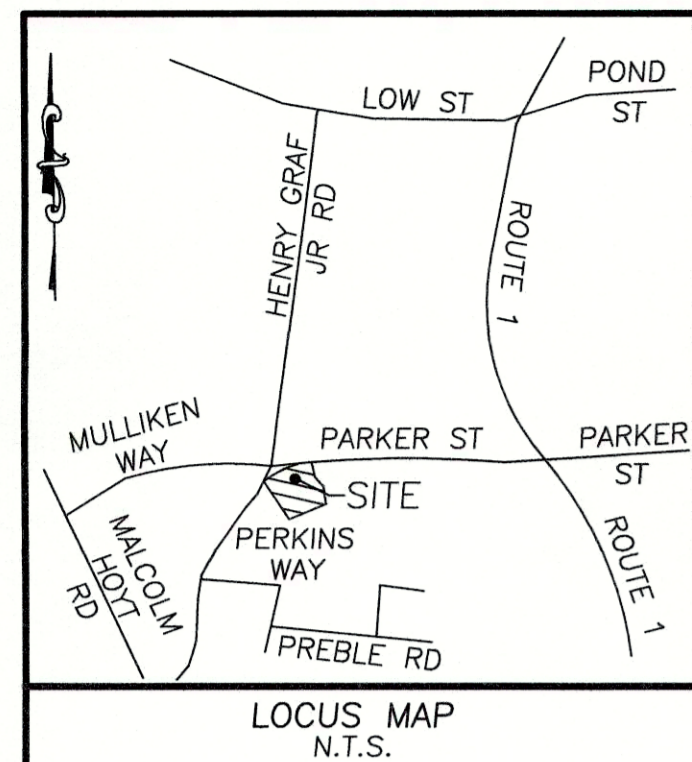
SHEET: 3 OF 11



NO.	DATE	DESCRIPTION	BY

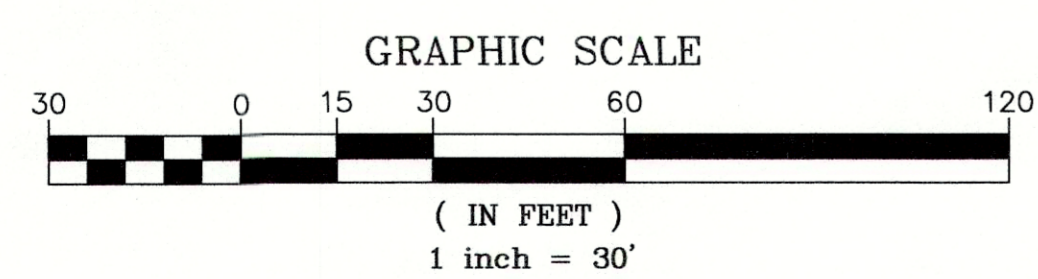
SCALE: 1"=30'
 DATE: JAN. 8, 2019
 DESG. BY: C.M.Y.
 CHKD. BY: E.W.B.
 PROJECT: M173238

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LEGEND

— W —	EXISTING WATER MAIN	— S —	EXISTING SEWER MAIN
— W —	PROPOSED WATER SERVICE	— SS —	PROPOSED SEWER SERVICE
— G —	PROPOSED GAS SERVICE	— UE —	PROPOSED UNDERGROUND ELECTRIC
⊗	PROPOSED WATER GATE	⊗	EXISTING FIRE HYDRANT
★	PROPOSED STREET LIGHT	⊕	PROPOSED WATER SHUTOFF
◀	PROPOSED BUILDING LIGHT	⊙	PROPOSED SEWER MANHOLE



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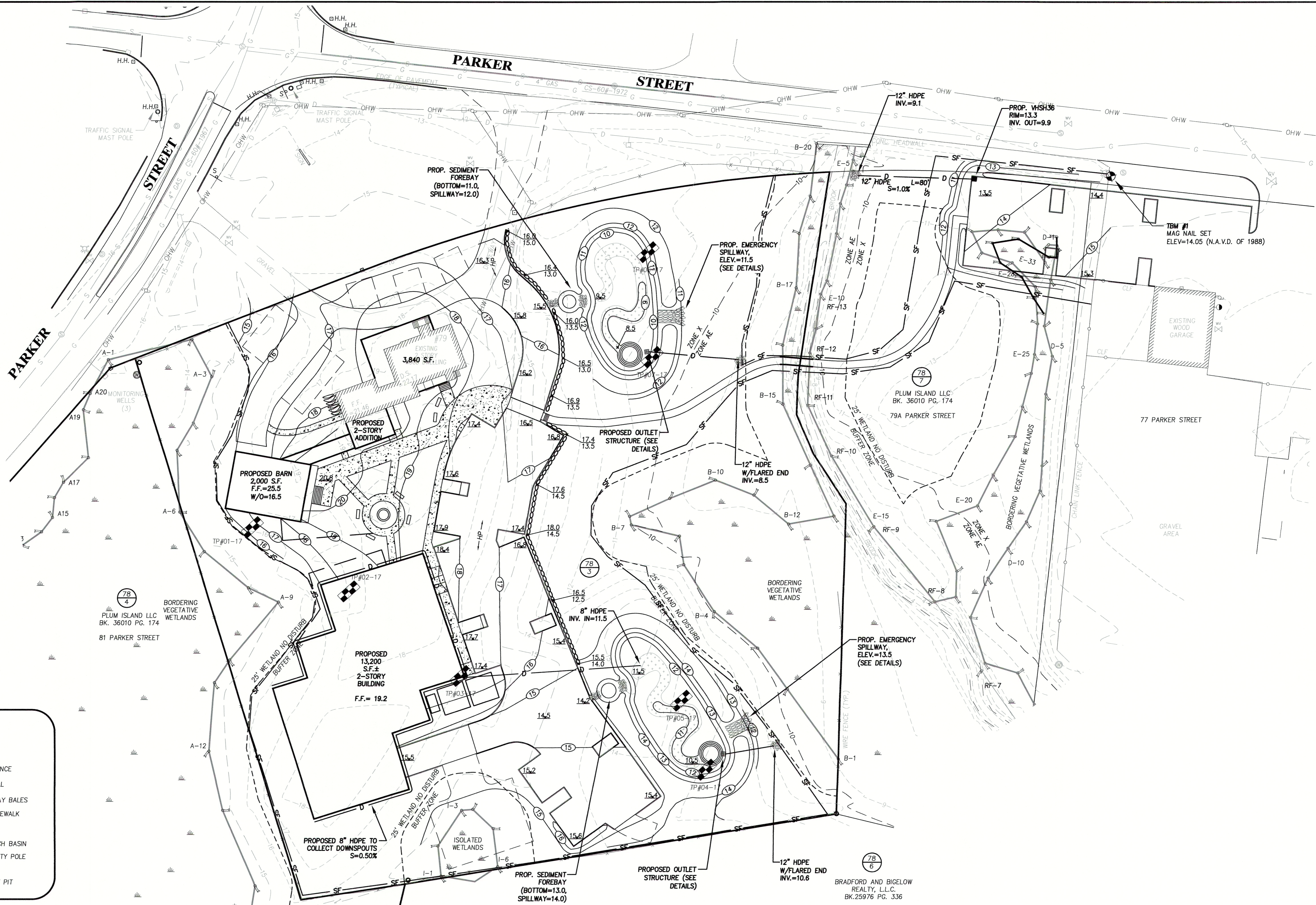
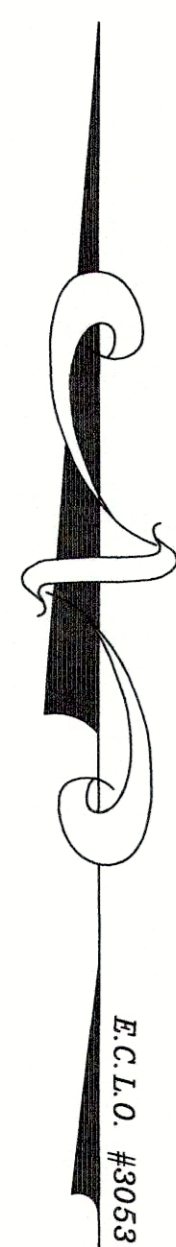
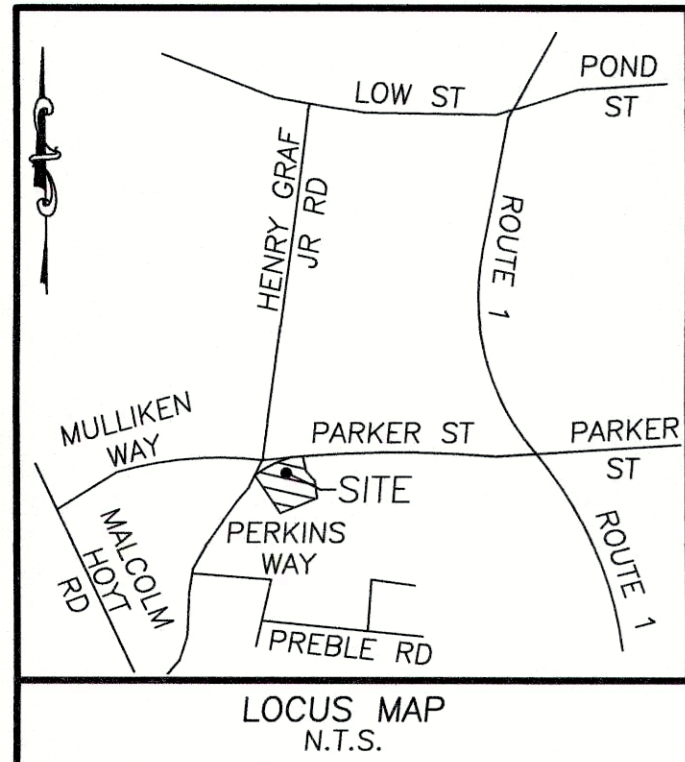
NO.	DATE	DESCRIPTION	BY

MEI **MILLENNIUM ENGINEERING, INC.**
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

SCALE: 1"=30'
DATE: JAN. 8, 2019
DES. BY: C.M.Y.
CHKD. BY: E.W.B.
PROJECT: M173238

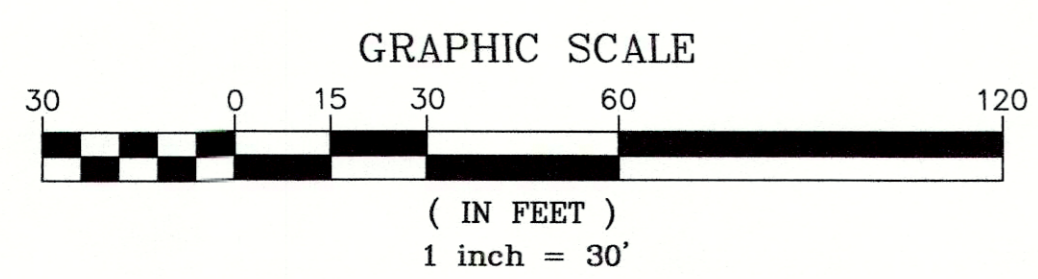
PLAN OF LAND
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AT
79 PARKER STREET

UTILITY PLAN
SHEET: 4 OF 11



LEGEND

	EXIST. CONTOUR
	PROP. CONTOUR
	PROP. CHAIN LINK FENCE
	PROP. RETAINING WALL
	PROP. SILT FENCE/HAY BALES
	PROP. BIT. CONC. SIDEWALK
	PROP. SWALE
	PROP. CATCH BASIN
	EXIST. CATCH BASIN
	PROP. SPOT GRADE
	EXIST. UTILITY POLE
	PROP. OUTLET STRUCTURE
	WETLANDS
	EXIST. TEST PIT



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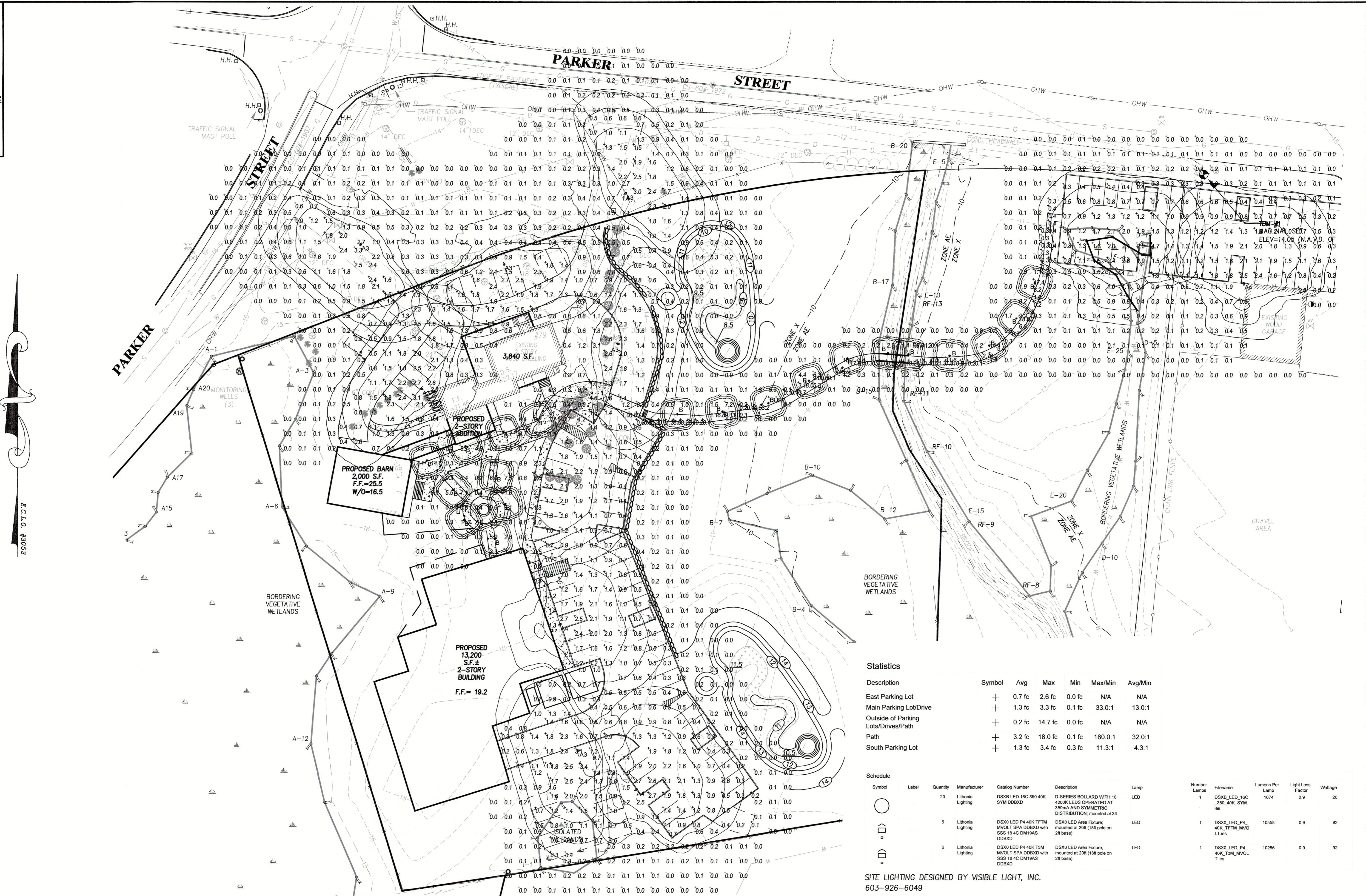
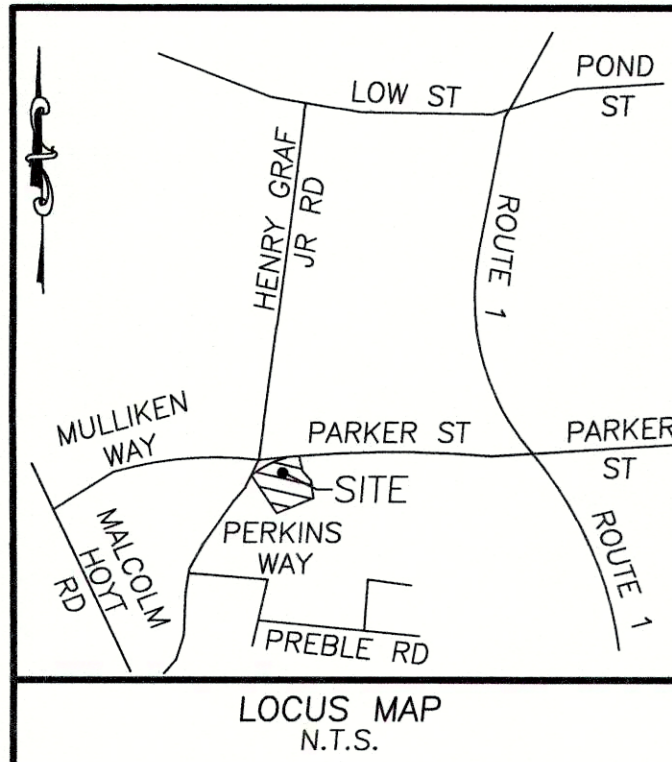
PLAN OF LAND
 IN
NEWBURYPORT, MA
 SHOWING
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 AT
79 PARKER STREET

GRADING PLAN

NO.	DATE	DESCRIPTION	BY

SCALE: 1"=30' DESC. BY: C.M.Y.
 DATE: JAN. 8, 2019 CHKD. BY: E.W.B. PROJECT: M173238

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E.C.L.O. #8083

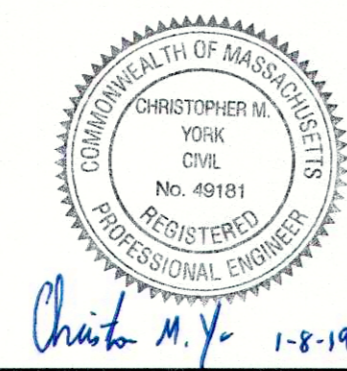
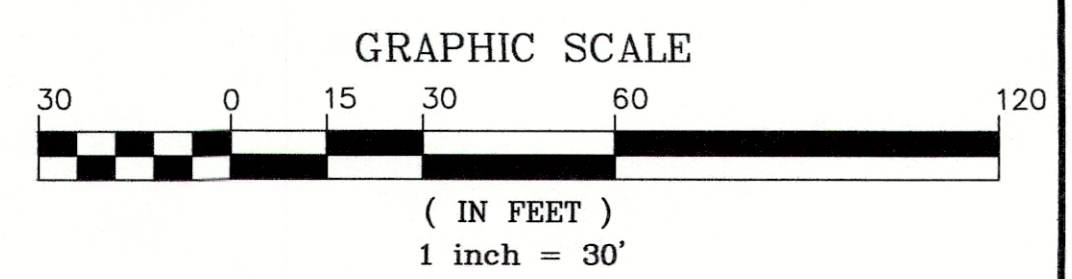
Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
East Parking Lot	+	0.7 fc	2.6 fc	0.0 fc	N/A	N/A
Main Parking Lot/Drive	+	1.3 fc	3.3 fc	0.1 fc	33.0:1	13.0:1
Outside of Parking Lots/Drives/Path	+	0.2 fc	14.7 fc	0.0 fc	N/A	N/A
Path	+	3.2 fc	18.0 fc	0.1 fc	180.0:1	32.0:1
South Parking Lot	+	1.3 fc	3.4 fc	0.3 fc	11.3:1	4.3:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
○		20	Lithonia Lighting	DSXB LED 16C 350 40K SYM DBBXD	D-SERIES BOLLARD WITH 16 4000K LEDS OPERATED AT 350mA AND SYMMETRIC DISTRIBUTION, mounted at 3ft	LED	1	DSX0_LED_16C_350_40K_SYM ies	1674	0.9	20
□		5	Lithonia Lighting	DSX0 LED P4 40K TTFM MVOLT SPA DBBXD with SSS 18 4C DM19AS DBBXD	DSX0 LED Area Fixture, mounted at 20ft (18ft pole on 2ft base)	LED	1	DSX0_LED_P4_40K_TTFM_MVOLT ies	10558	0.9	92
□		6	Lithonia Lighting	DSX0 LED P4 40K TFM MVOLT SPA DBBXD with SSS 18 4C DM19AS DBBXD	DSX0 LED Area Fixture, mounted at 20ft (18ft pole on 2ft base)	LED	1	DSX0_LED_P4_40K_TFM_MVOLT ies	10258	0.9	92

SITE LIGHTING DESIGNED BY VISIBLE LIGHT, INC.
603-926-6049



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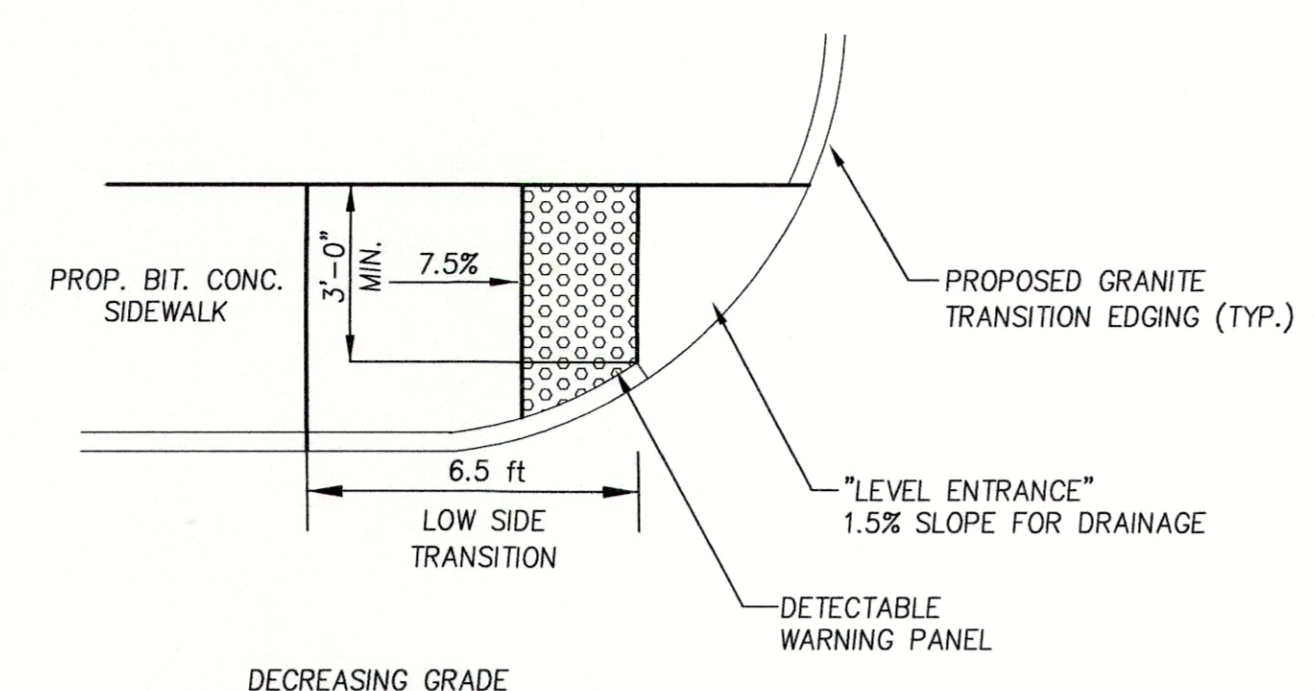
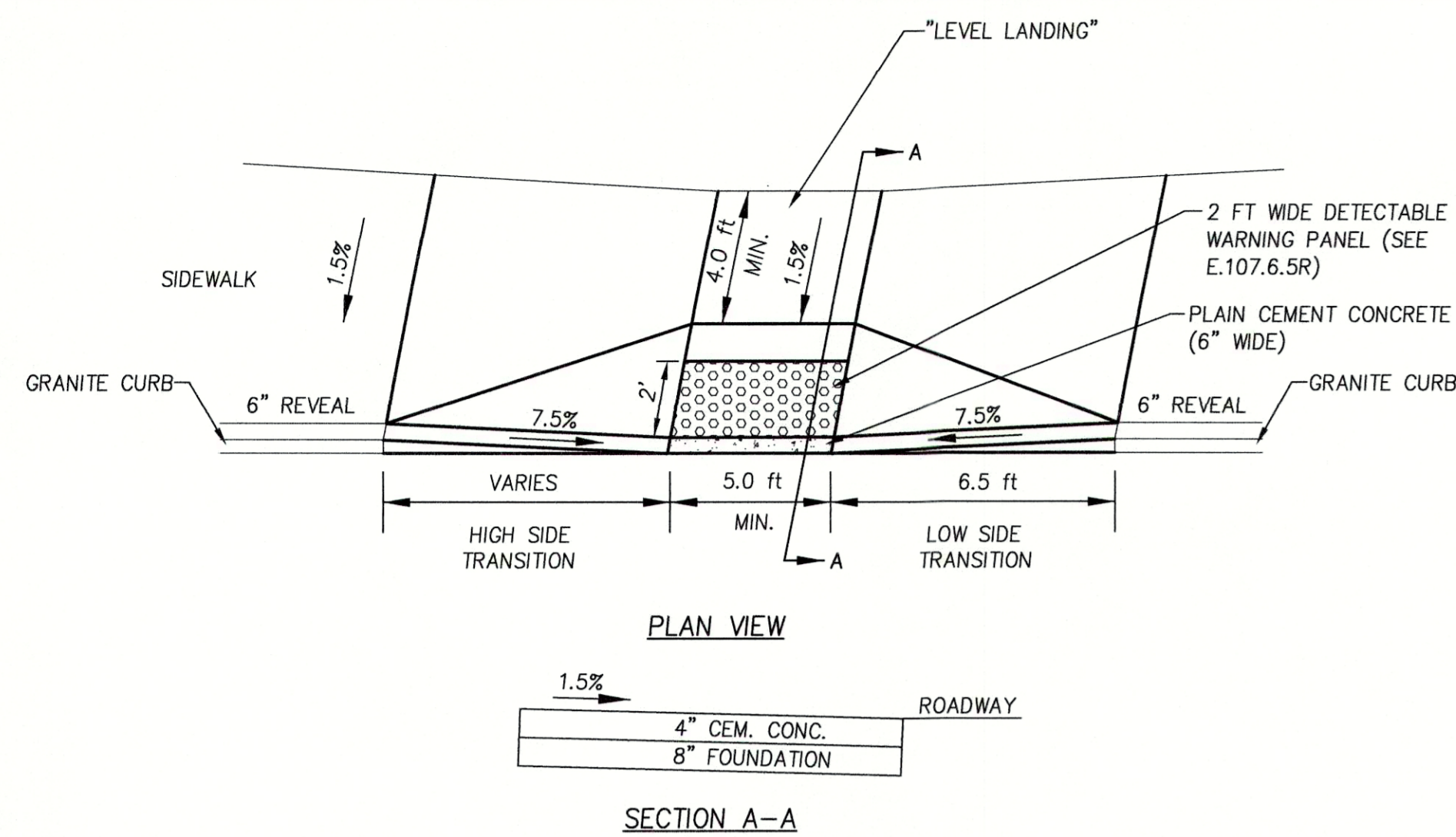
PLAN OF LAND
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LIGHTING PLAN

NO.	DATE	DESCRIPTION	BY

SCALE: 1"=30'
DATE: JAN. 8, 2019
DESC. BY: C.M.Y.
CHKD. BY: E.W.B.
PROJECT: M173238

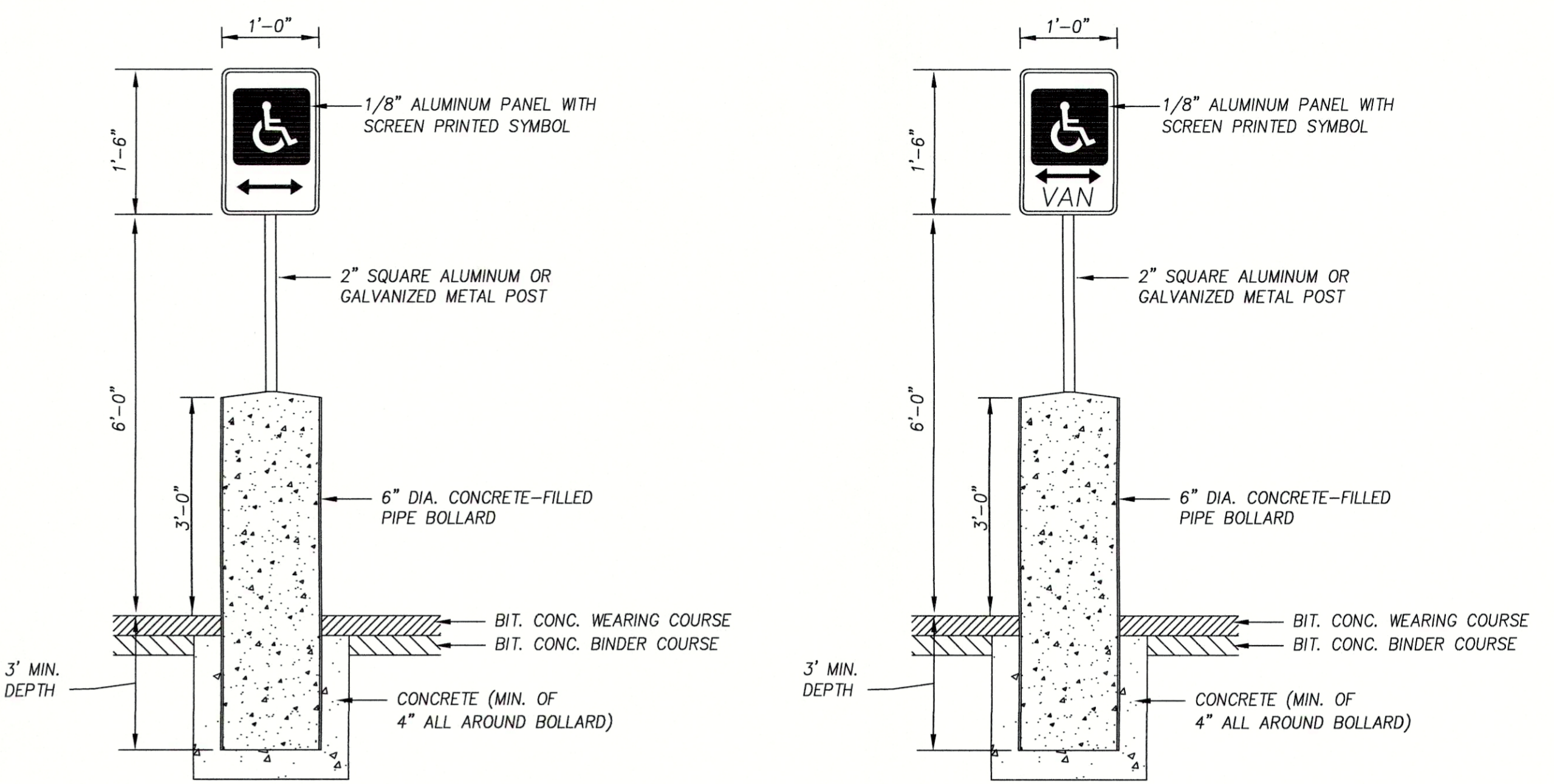
SHEET: 6 OF 11



ROADWAY PROFILE GRADE	HIGH SIDE TRANSITION LENGTH
%	G
0	0.00
1	0.01
2	0.02
3	0.03
4	0.04
>4	>0.04

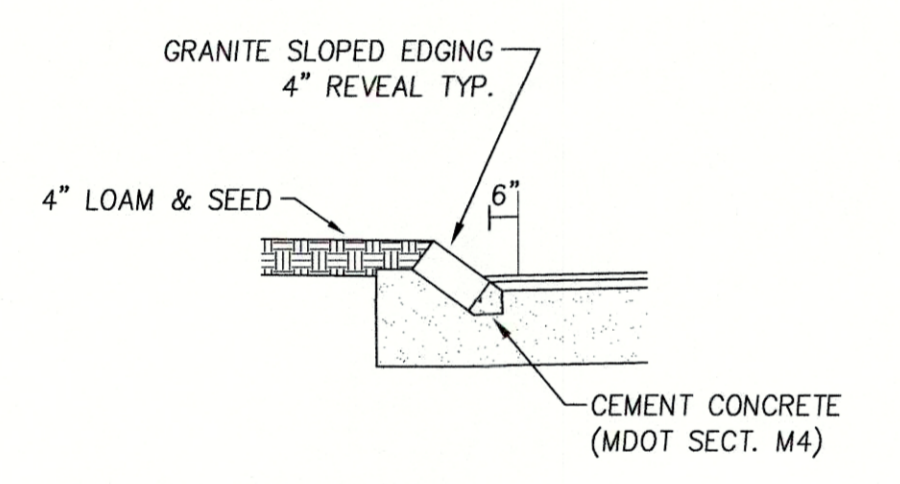
ENGLISH UNITS
6'-6"
7'-8"
9'-0"
11'-0"
14'-0"
15'-0" MAX

- NOTES:
- RAMP CROSS SECTION TO BE SAME AS SIDEWALK; I.E. DEPTH OF SURFACE AND FOUNDATION.
 - PORTLAND CEMENT CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
 - BASE OF RAMP SHALL MEET PAVEMENT GUTTER SUCH THAT THERE IS NO DIFFERENCE IN ELEVATION. RAMP SHALL BE CONSTRUCTED SUCH THAT WATER DOES NOT "PUDDLE" AT THE BASE OF THE RAMP.
 - THE PAVEMENT AT THE BASE OF THE RAMP SHALL BE PART OF THE CONTINUOUS TOP COURSE. THE USE OF A "PAVEMENT PATCH" TO COMPLY WITH THE CONDITIONS IN NOTE 3, ABOVE IS PROHIBITED.
 - RAMPS SHALL CONFORM TO MASS DOT WHEELCHAIR RAMP STANDARDS - LATEST REVISION.

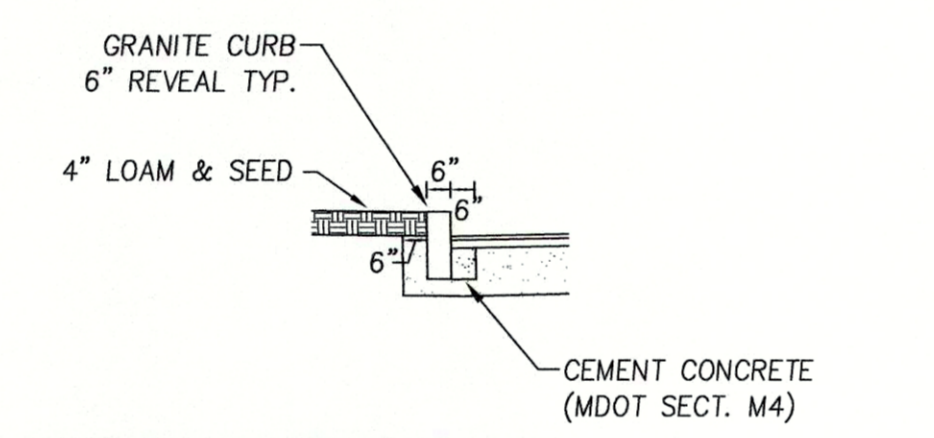


HANDICAP PARKING SIGN DETAIL N.T.S.
HANDICAP PARKING VAN-ACCESSIBLE SIGN DETAIL N.T.S.

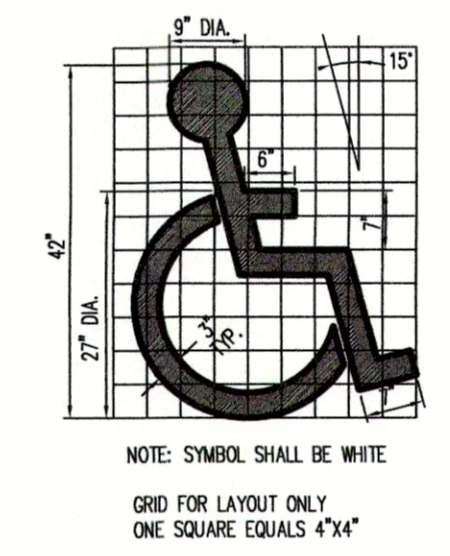
A.D.A. ACCESS RAMP DETAIL N.T.S.



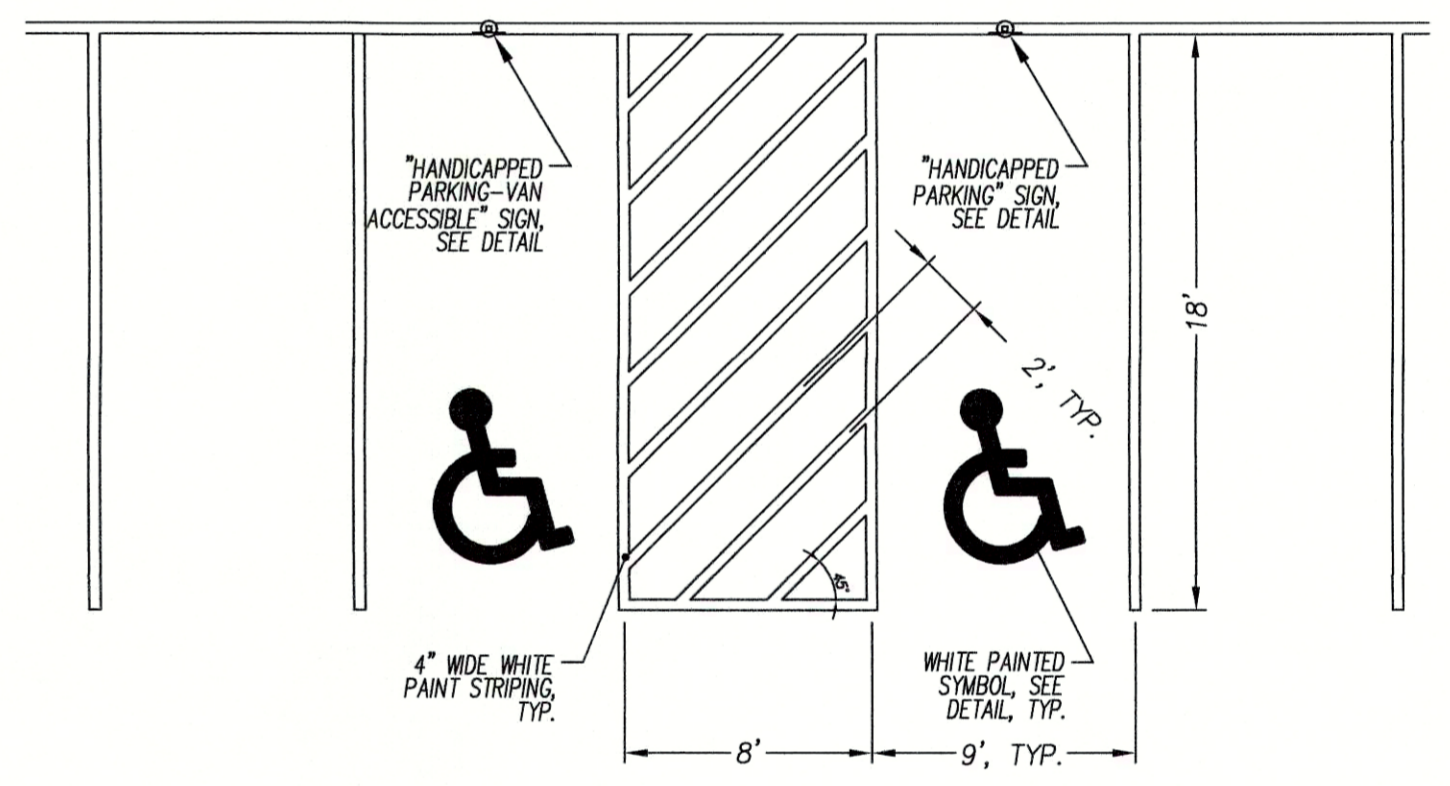
TYPICAL SLOPED EDGING DETAIL N.T.S.



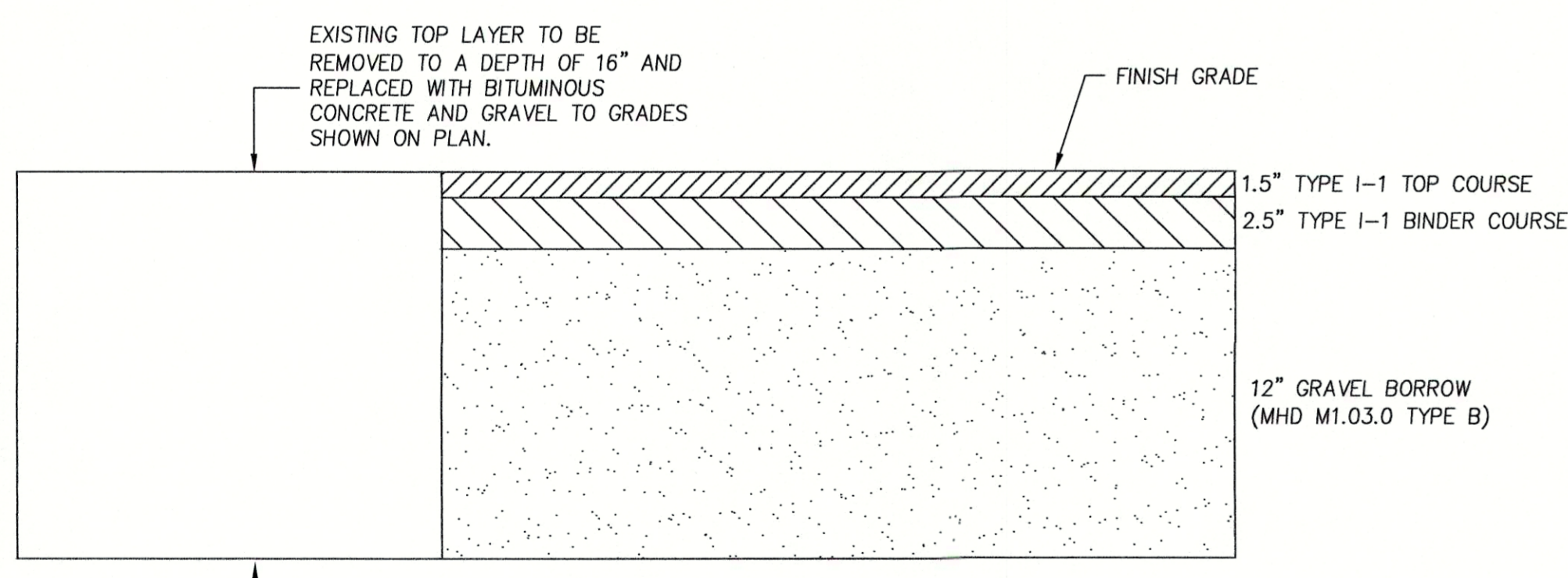
TYPICAL GRANITE CURB INSTALLATION N.T.S.



PAINTED HANDICAP PARKING SYMBOL N.T.S.



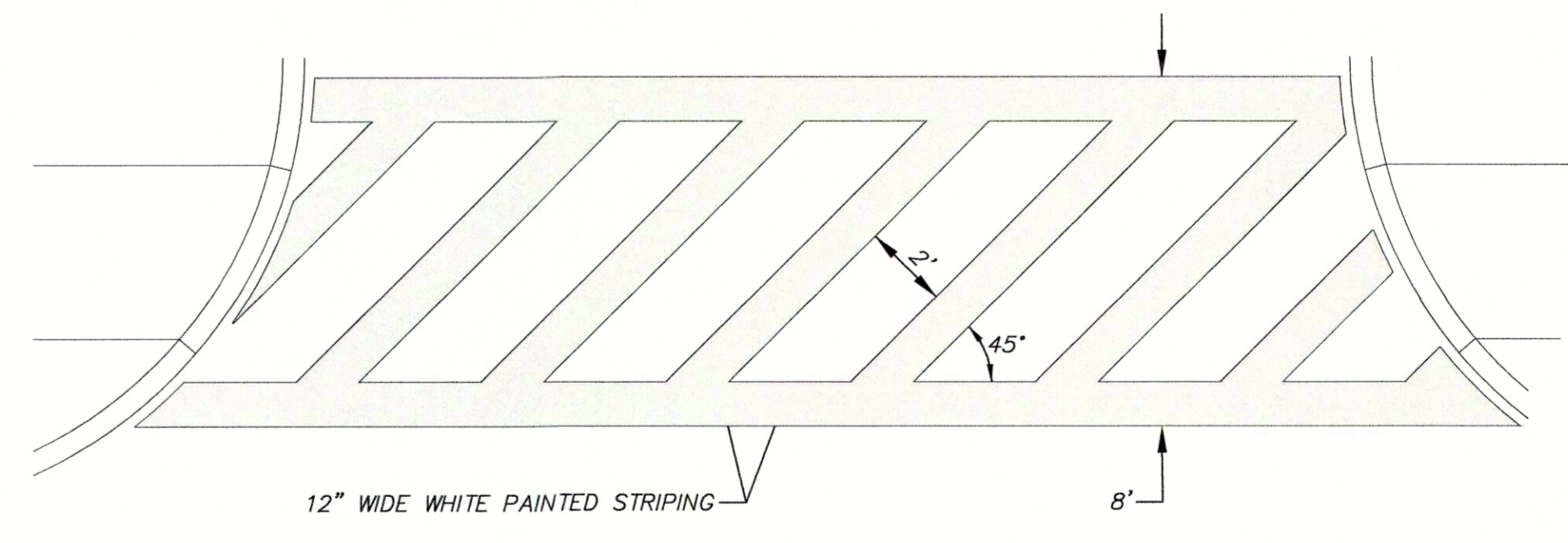
HANDICAP PARKING DETAIL N.T.S.



PAVEMENT DETAIL N.T.S.

PAVEMENT NOTES

- ALL STUMPS, ROCKS AND LEDGE WITHIN THE LIMITS OF THE PROPOSED PAVED WAY SHALL BE REMOVED. ALL LEDGE SHALL BE REMOVED TO A MINIMUM DEPTH OF 2' BELOW FINISHED PAVEMENT GRADE.
- ROADWAY SHALL NOT BE CONSTRUCTED DURING FREEZING WEATHER OR ON WET OR FROZEN SUBGRADE.
- GRADING AND ROLLING SHALL BE REQUIRED TO PROVIDE A SMOOTH, EVEN, AND UNIFORM COMPACTED BASE WHICH IS COMPACTED TO A MINIMUM DRY DENSITY OF 95 PERCENT.
- ALL UNSUITABLE MATERIAL SHALL BE EXCAVATED AND REPLACED WITH SATISFACTORY MATERIAL AND BROUGHT UP TO GRADE WITH GRAVEL BORROW CONTAINING NO STONES GREATER THAN 6" DIAMETER.
- AT ALL TIMES DURING CONSTRUCTION, THE SUB-GRADE AND ALL DITCHES SHALL BE CONSTRUCTED AND MAINTAINED SO THAT THE ROADWAY WILL EFFECTIVELY BE DRAINED.
- THE CONTRACTOR SHALL REFER TO THE NEWBURYPORT RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND SECTION 6 AND APPENDIX I.



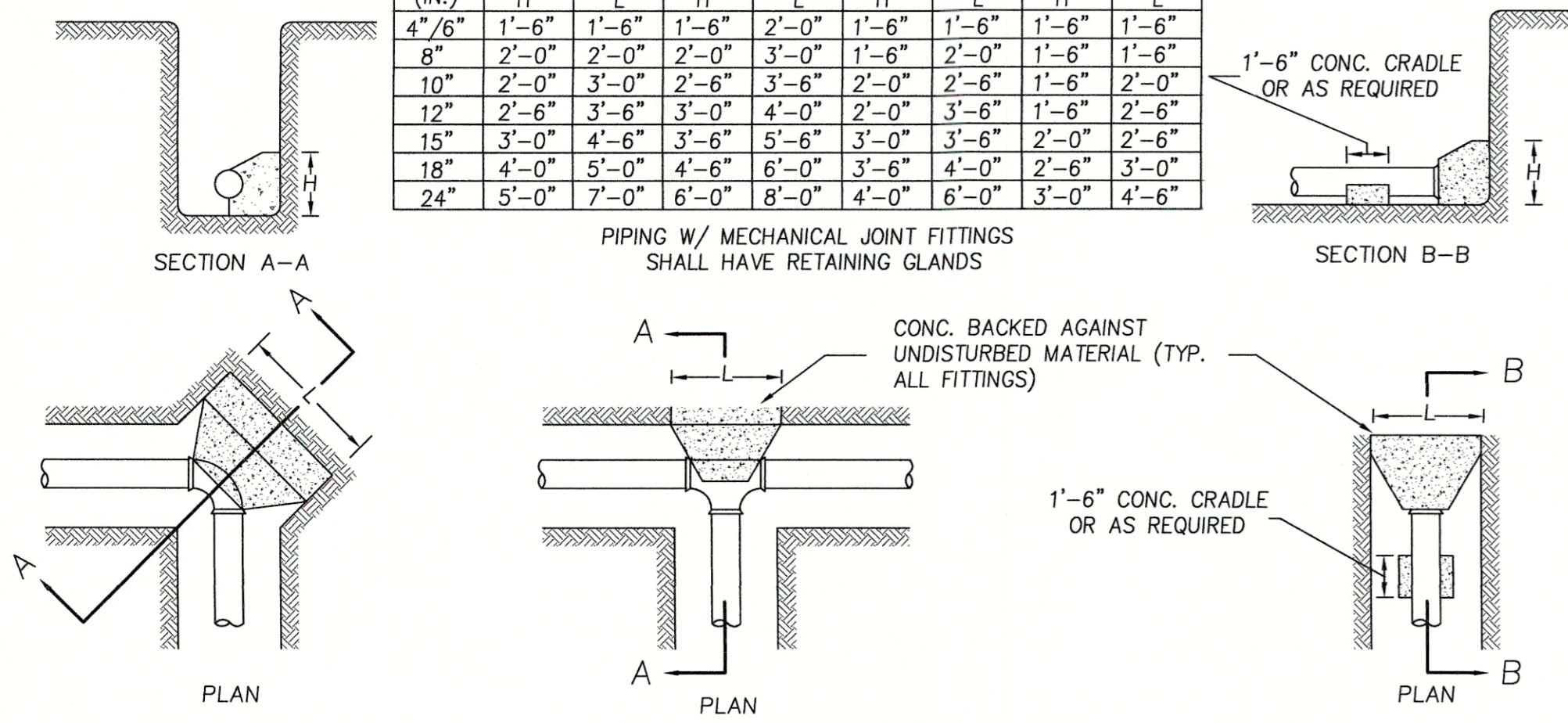
PAINTED CROSSWALK DETAIL N.T.S.

MATERIAL NOTES

- ALL MATERIALS OF THE ELEMENTS IN THE SITE PLAN MUST CONFORM TO THE FOLLOWING STANDARDS:
- SPECIFICATIONS BY THE CITY OF NEWBURYPORT AS SET FORTH BY SECTION 6 AND APPENDICES I-IX IN THE RULES AND REGULATIONS GOVERNING THE SUBDIVISION OF LAND
 - NEWBURYPORT DPS SEWER SPECIFICATIONS
 - COMMONWEALTH OF MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES
 - AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
 - AMERICAN WATER WORKS ASSOCIATION (AWWA)
 - 521 CMR RULES AND REGULATIONS OF THE ARCHITECTURAL ACCESS BOARD (AAB) AND THE AMERICANS WITH DISABILITIES ACT (ADA)

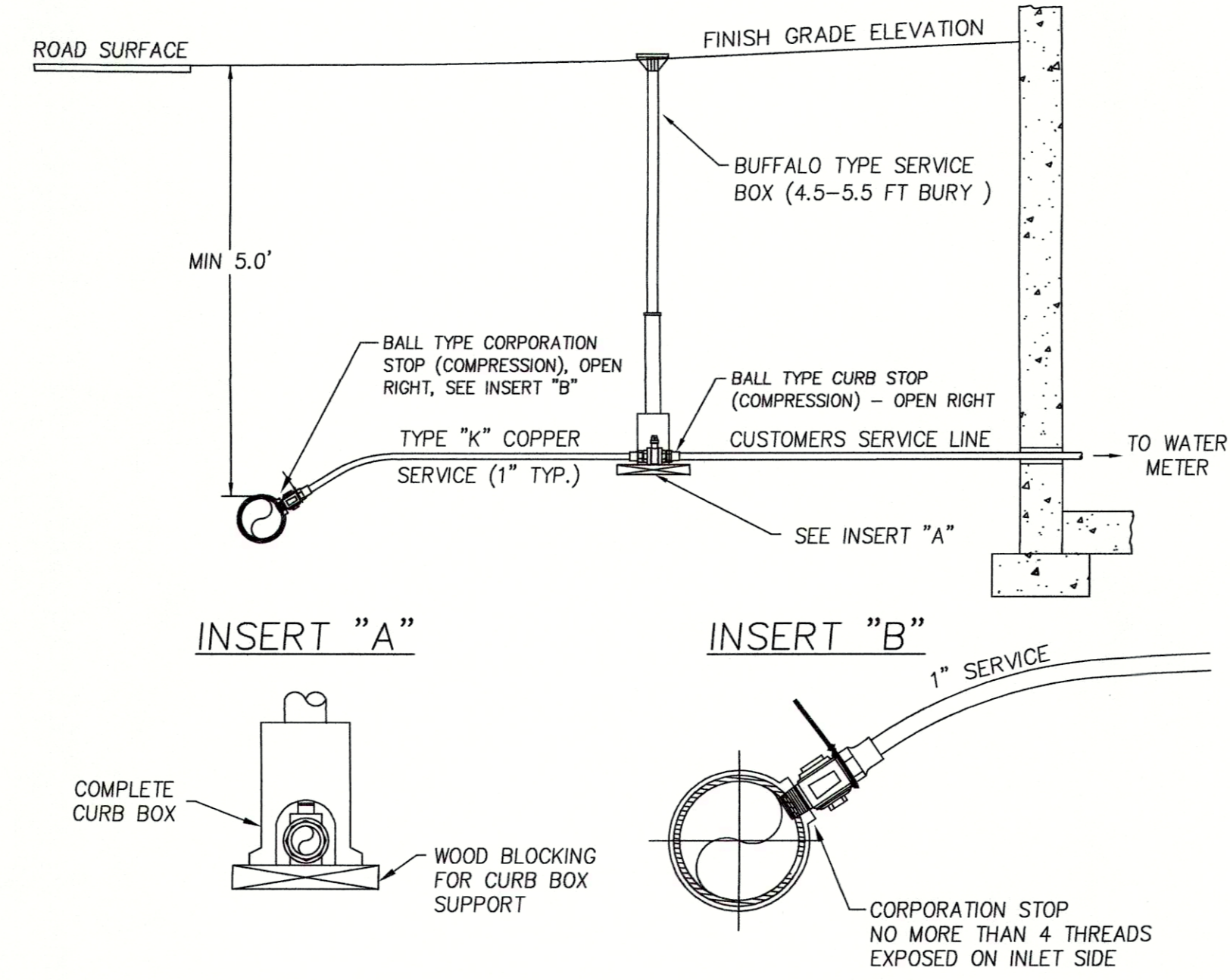
	PREPARED FOR PLUM ISLAND LLC 79 PARKER STREET NEWBURYPORT, MA 01950	MILLENNIUM ENGINEERING, INC. ENGINEERING AND LAND SURVEYING 62 ELM ST. SALISBURY, MA 01952 (978) 463-8980 13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528	PLAN OF LAND IN NEWBURYPORT, MA SHOWING PROPOSED SITE IMPROVEMENTS AT 79 PARKER STREET		SITE DETAILS SHEET: 7 OF 11
			SCALE: AS NOTED DATE: JAN. 8, 2019	DESG. BY: C.M.Y. CHKD. BY: E.W.B.	

PIPE DIA. (IN.)	CONCRETE THRUST BLOCK DIMENSIONS			
	TEE	90° BEND OR STUB	45° BEND	22.5° BEND
4"/6"	1'-6"	1'-6"	2'-0"	1'-6"
8"	2'-0"	2'-0"	3'-0"	2'-0"
10"	2'-0"	3'-0"	3'-6"	2'-0"
12"	2'-6"	3'-6"	4'-0"	2'-6"
15"	3'-0"	4'-6"	5'-6"	3'-0"
18"	4'-0"	5'-0"	6'-0"	3'-0"
24"	5'-0"	7'-0"	8'-0"	4'-6"



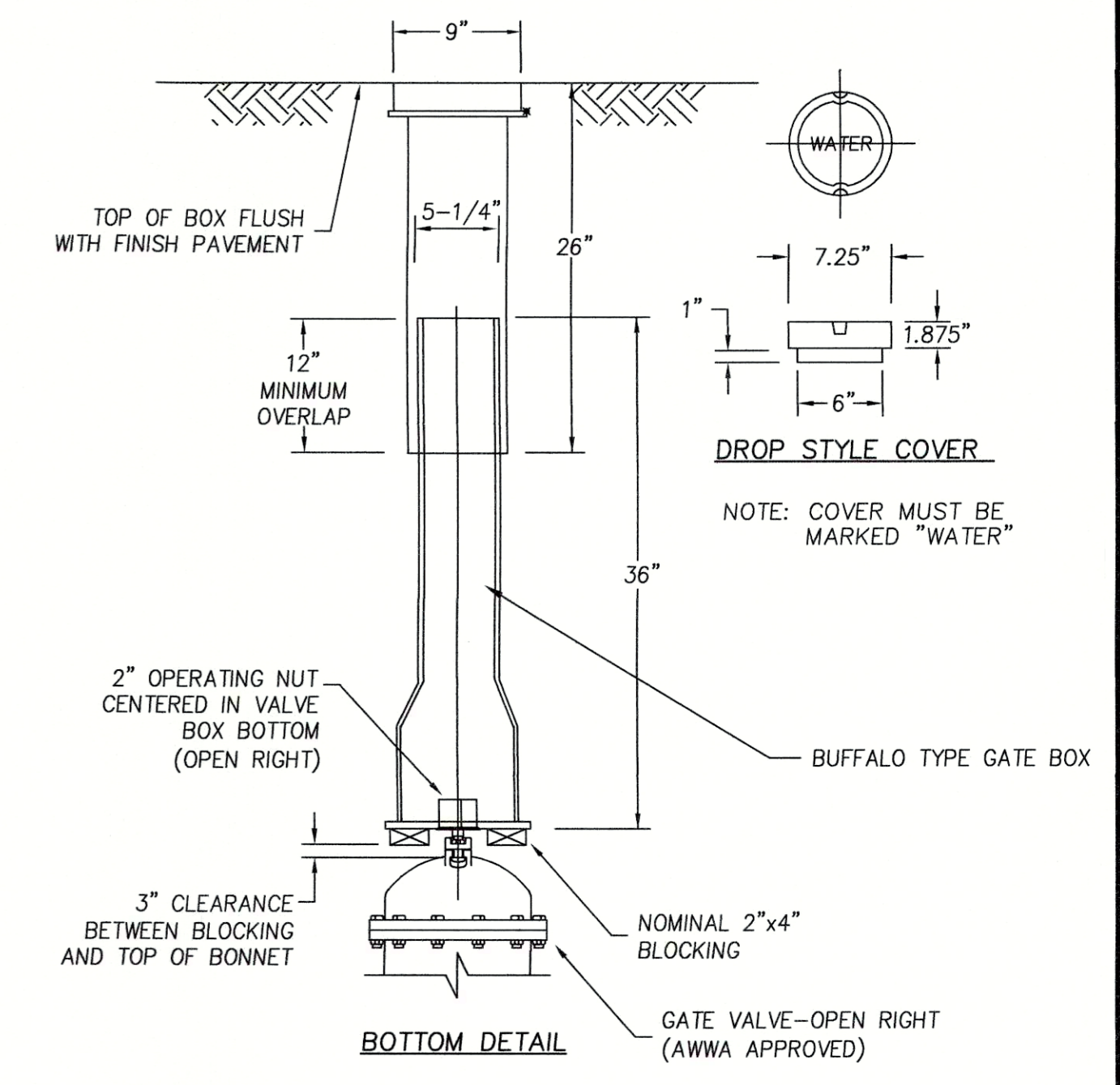
- NOTES**
- VALUES SHOWN ARE FOR TEST PRESSURE OF 150 PSI WITH A 100 PSI SURGE ALLOWANCE.
 - THRUST BLOCKS SHALL NOT BE PLACED AGAINST THE FOLLOWING SOILS: PEAT, ORGANIC SILT AND ORGANIC SOILS, SOFT CLAY, RUBBISH FILL AND OTHER UNSUITABLE ARTIFICIAL FILL, SHATTERED SHALE, INORGANIC SILT AND VERY FINE SANDS.
 - POURED CONCRETE THRUST BLOCKS SHALL NOT COVER ANY JOINTS, CLAMPS, NUTS, BOLTS, ETC.

THRUST BLOCK DETAILS N.T.S.

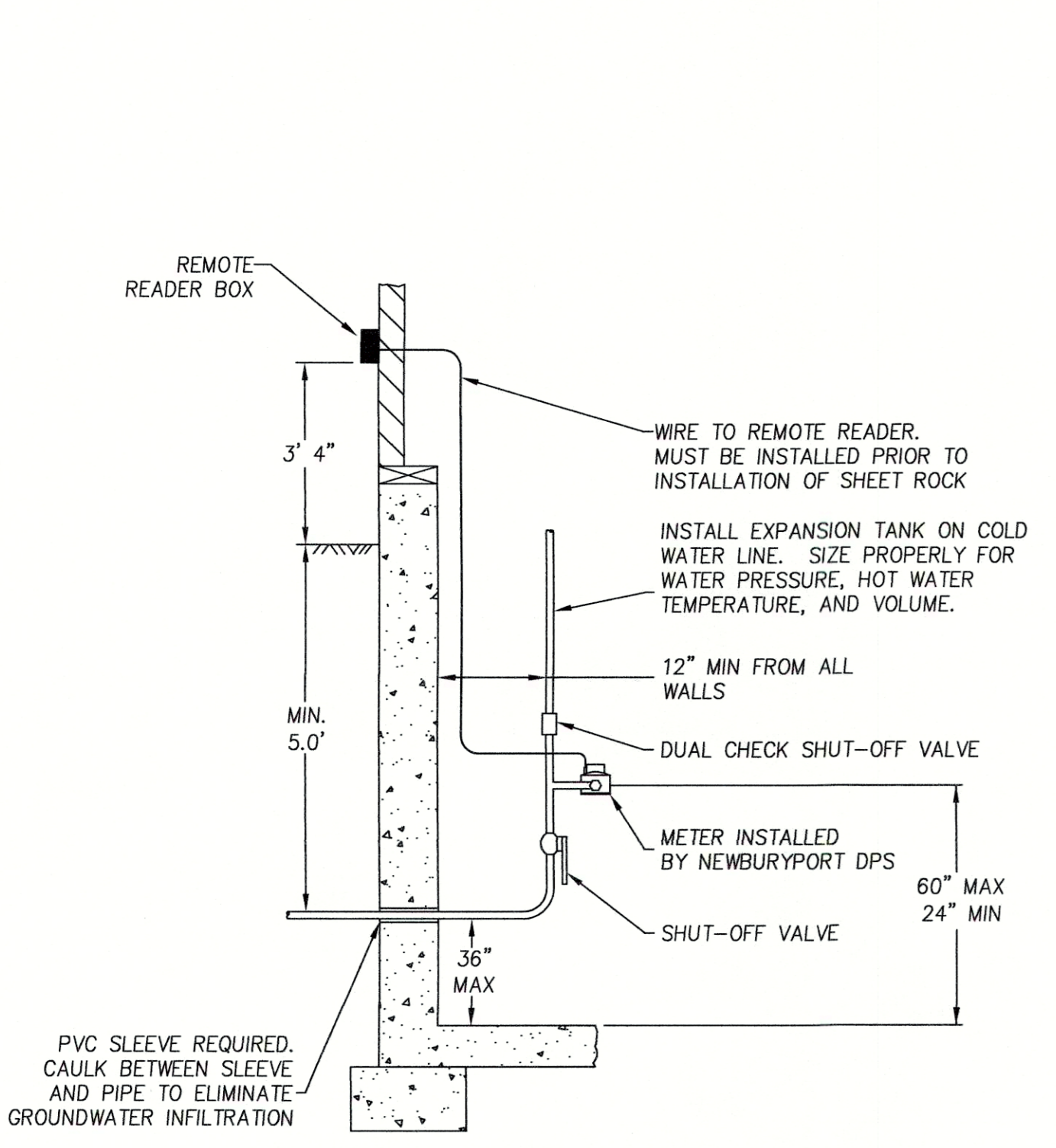


- CORPORATION AND CURB STOPS SHALL BE BRASS & MEET ALL APPLICABLE DEP STANDARDS.

TYPICAL COPPER SERVICE CONNECTION N.T.S.

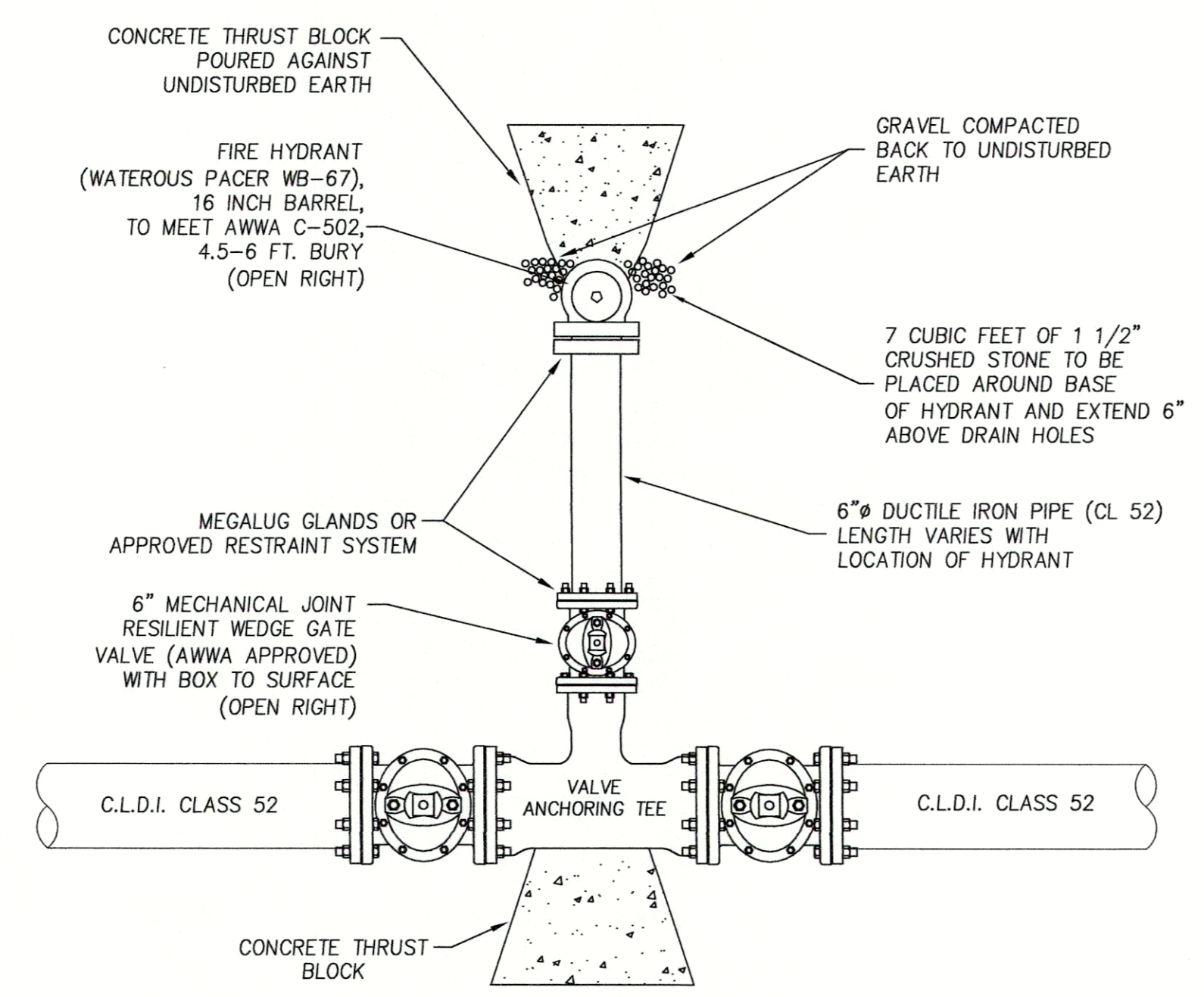


TYPICAL GATE VALVE BOX DETAIL N.T.S.



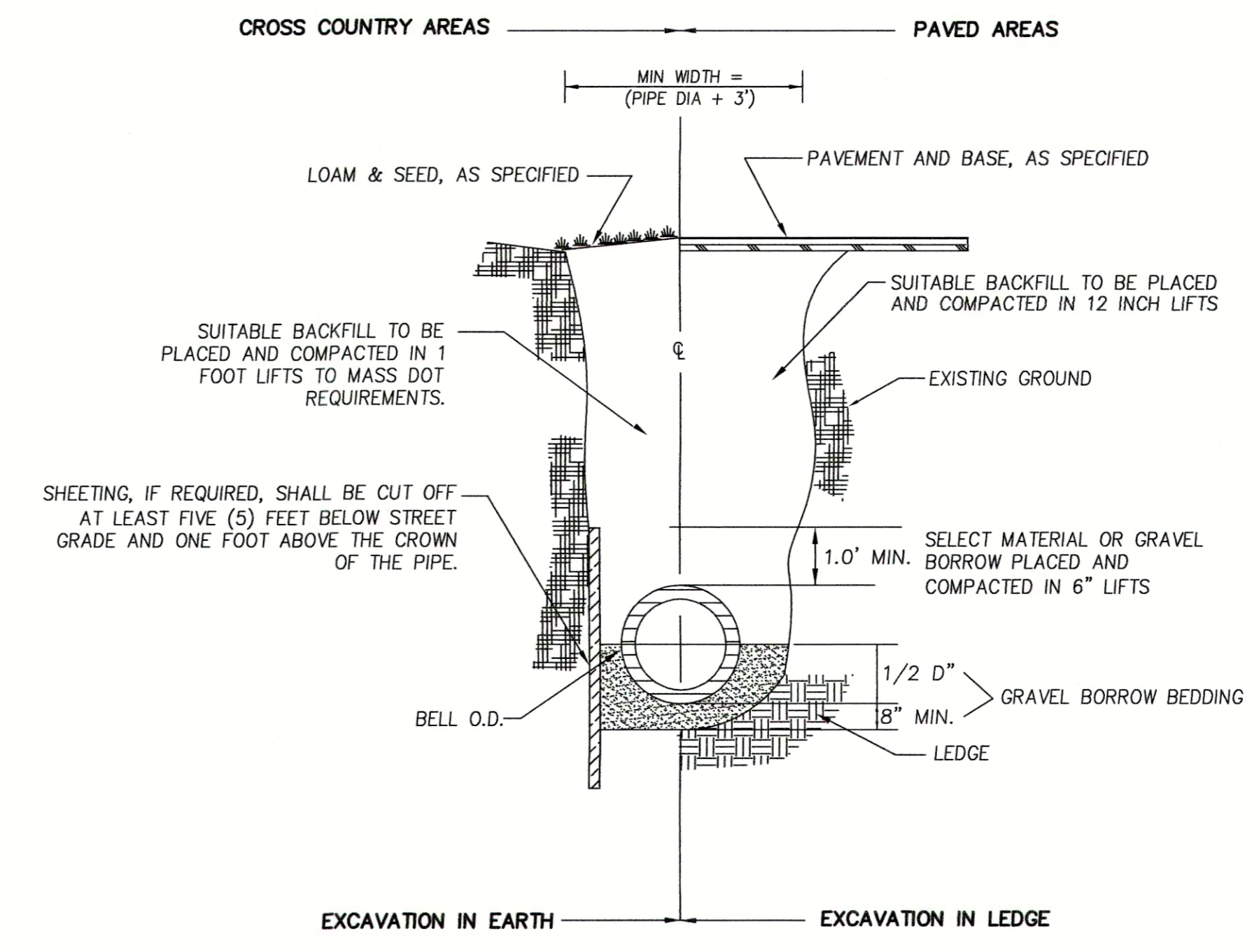
- ALL WATER METERS MUST BE PURCHASED FROM THE CITY AND INSTALLED BY AN EMPLOYEE OF THE NEWBURYPORT DPS-WATER DIVISION.

WATER METER DETAIL N.T.S.



- HYDRANT SHALL BE INSTALLED USING MECHANICAL RESTRAINT AND THRUST BLOCKS.
- HYDRANTS THAT ARE NON-DRAINING SHALL BE PAINTED SAFETY RED WITH ONLY THE STEAMER NOZZLE CAP PAINTED SAFETY YELLOW. OBSERVATIONS DURING CONSTRUCTION SHALL BE MADE TO DETERMINE IF THE WATER TABLE IS ABOVE OR BELOW THE ESHWT.

TYPICAL FIRE HYDRANT INSTALLATION N.T.S.



TYPICAL TRENCH DETAIL N.T.S.

WATER NOTES:

- ALL WATER MAIN AND SERVICE COMPONENTS SHALL MEET AWWA STANDARDS.
- ALL MECHANICAL JOINT COMPONENTS SHALL BE INSTALLED USING APPROVED RETAINING GLANDS (GRIP RING, MEGA LUG, STAR GRIP).
- METAL WEDGES SHALL BE USED AT ALL BELL JOINTS TO ENSURE CONTINUITY FOR TRACING.
- GATE VALVES SHALL BE DUCTILE IRON EPOXY COATED (AWWA C550), WITH O-RING SEALS, URETHANE COATED WEDGE, STAINLESS STEEL NUTS AND BOLTS, AND ANTIROTATION SEATS TO PREVENT T-BOLTS FROM TURNING. VALVES SHALL OPEN RIGHT USING 2-INCH OPERATING NUT WITH ARROW CAST IN THE METAL.
- WATER MAINS SHALL BE PRESSURE TESTED TO 150 PSI AND WITNESSED BY THE NEWBURYPORT WATER WORKS CONSTRUCTION FOREMAN OR HIS DESIGNEE. ALL INSTALLATIONS MUST BE INSPECTED BY THE CONSTRUCTION FOREMAN OR HIS DESIGNEE.
- CHLORINATION SHALL MEET AWWA STANDARDS (ANSI/AWWA C651-05). BACTERIA SAMPLES SHALL BE TESTED BY AN APPROVED LAB WITH RESULTS SENT DIRECTLY TO NEWBURYPORT WATER WORKS THROUGH CERTIFIED MAIL, AND RECEIVED WITHIN 5 WORKING DAYS OR RESAMPLING MUST BE DONE. IF BACTERIA TEST IS POSITIVE THE WATER MAIN SHALL BE FLUSHED AND RECHLORINATED PRIOR TO RESAMPLING.
- NEWBURYPORT WATER WORKS PERSONNEL SHALL OPERATE ALL GATE VALVES AND HYDRANTS AND SHALL WITNESS AND INSPECT THE WATER MAIN AND APPURTENANCES PRIOR TO BURIAL. THEY SHALL ALSO PERFORM ALL TAPS UNLESS OTHERWISE APPROVED BY THE CONSTRUCTION FOREMAN. IF CONSENT IS GIVEN, AN APPROVED CONTRACTOR MUST DO THE TAPPING, AND THE CITY'S CONSTRUCTION FOREMAN OR HIS DESIGNEE MUST BE PRESENT DURING THE TAP.
- WATER MAINS AND SERVICES SHALL HAVE A MINIMUM 6" CLEARANCE FROM UNDERGROUND ROCK/LEDGE.
- NO WATER SHALL BE SUPPLIED TO THE CONTRACTOR OR BUILDER THROUGH A WATER SERVICE THAT HAS NOT BEEN PLACED "IN-SERVICE" BY THE NEWBURYPORT WATER DEPT.
- ALL WATERMANS, VALVES, AND EXPOSED IRON SHALL BE ENCASED IN POLYETHYLENE FOR CORROSION RESISTANCE. A MIN. 4 MIL THICK EPOXY LAYER SHALL BE APPLIED IN ACCORDANCE WITH ANSI/AWWA C105/A21.5
- ALL BOLTS USED FOR INSTALLATION OF THE WATERMANS, HYDRANTS, WATER GATES, WATER SHUTOFFS, AND OTHER WATER ASSOCIATED STRUCTURES SHALL BE STAINLESS STEEL

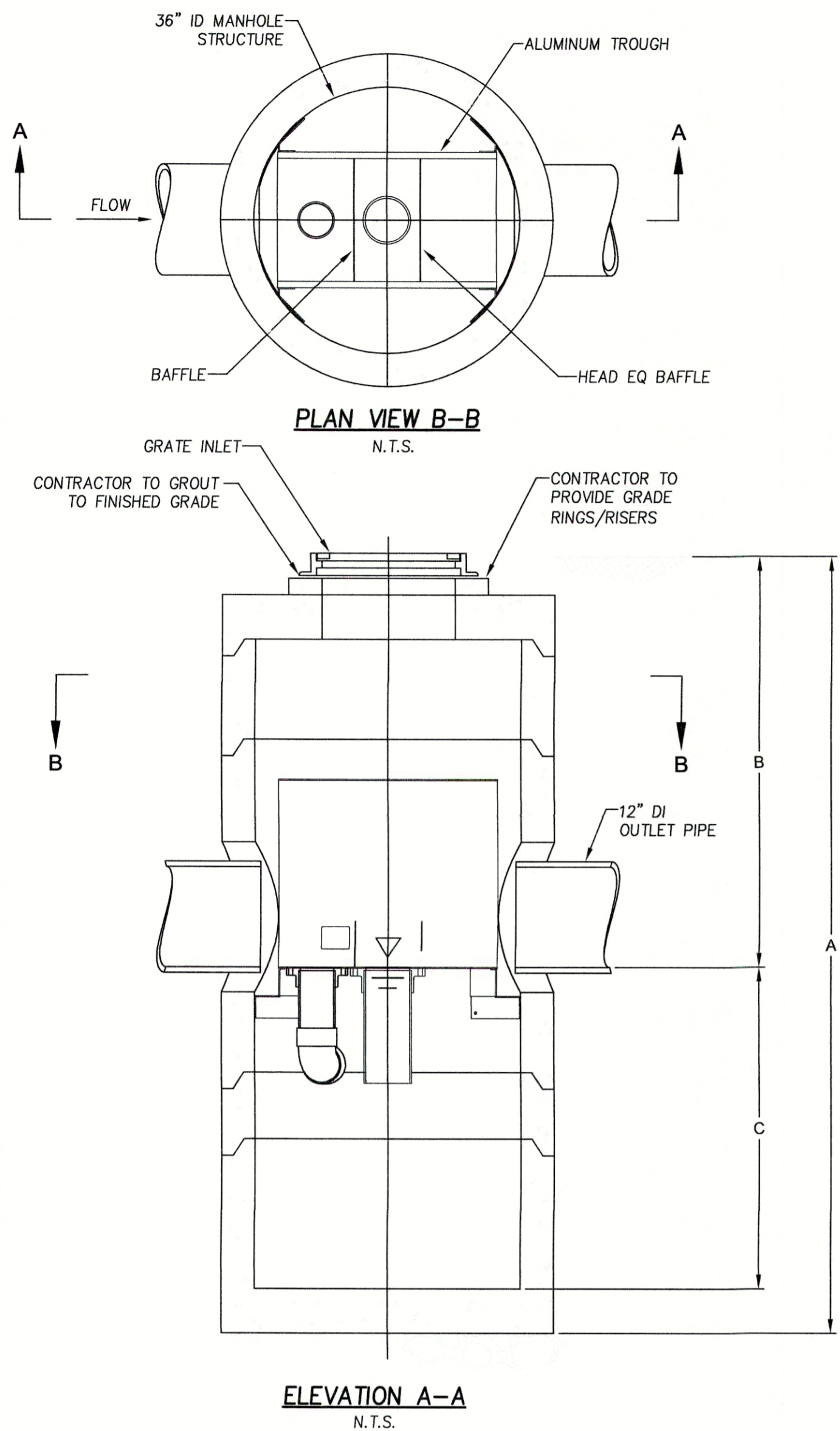


PREPARED FOR
PLUM ISLAND LLC
79 PARKER STREET
NEWBURYPORT, MA 01950

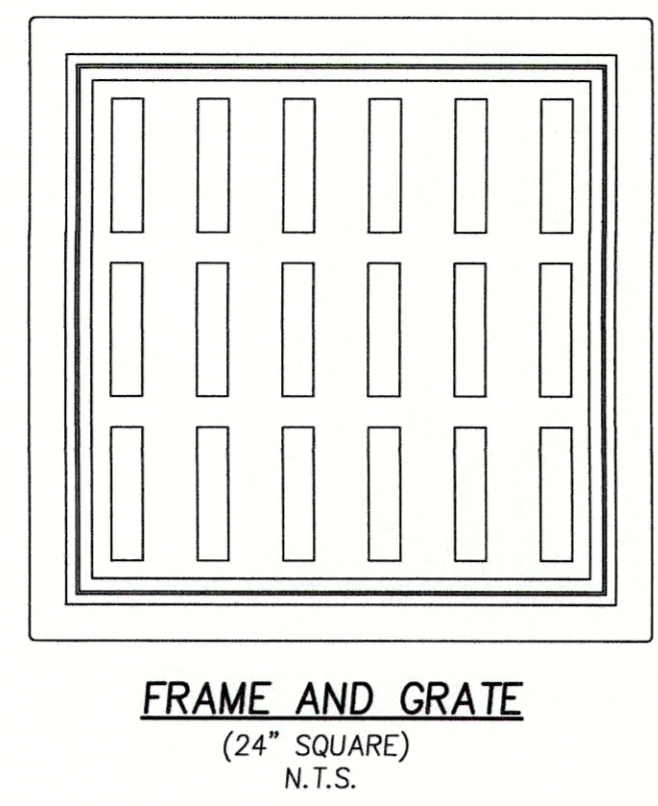
MILLENNIUM ENGINEERING, INC.
ENGINEERING AND LAND SURVEYING
62 ELM ST. SALISBURY, MA 01952 (978) 463-8980
13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528

PLAN OF LAND
IN
NEWBURYPORT, MA
SHOWING
PROPOSED SITE IMPROVEMENTS
AT
79 PARKER STREET

UTILITY DETAILS

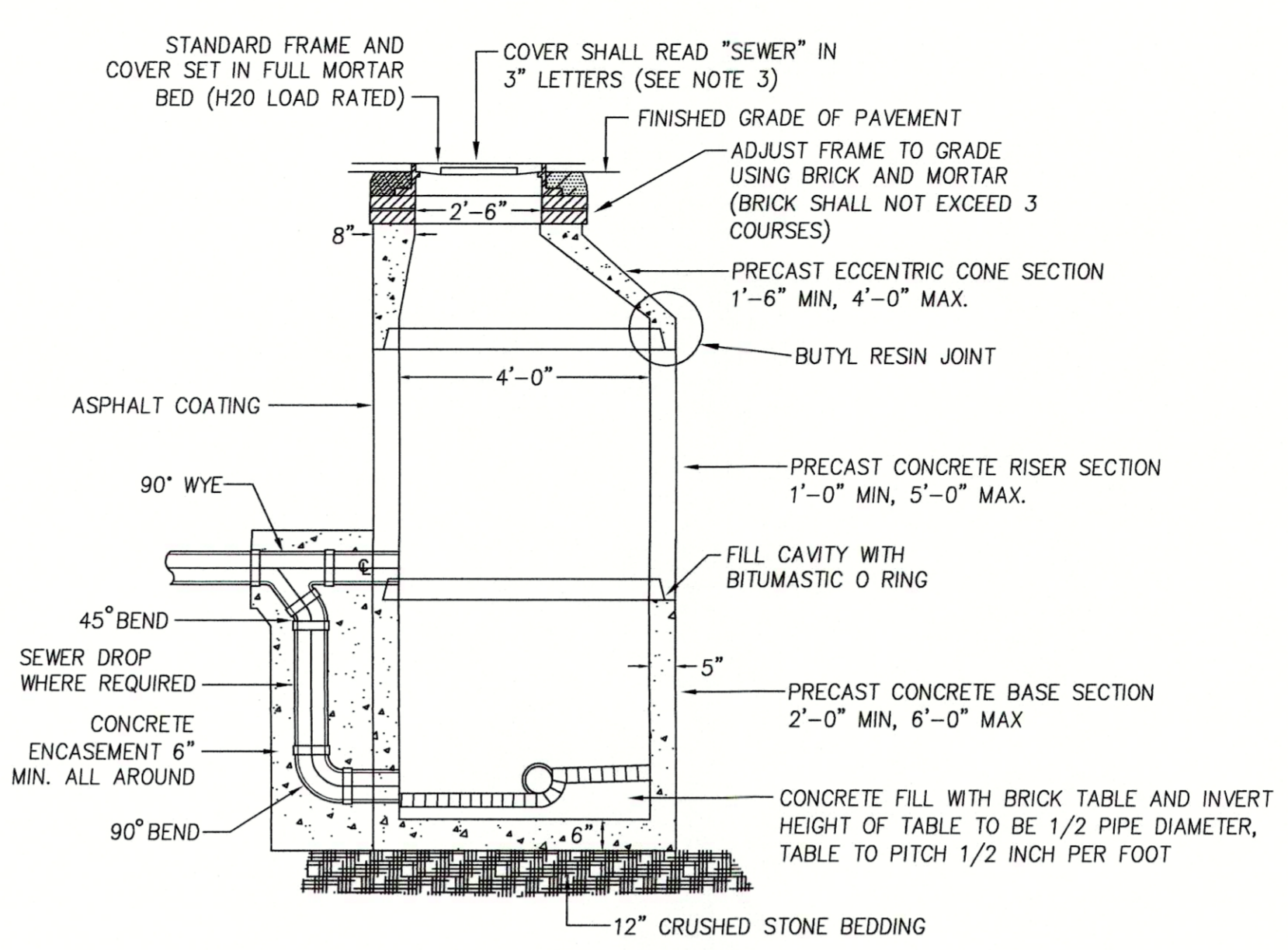


VORTENSITY VSHS36
DETAIL N.T.S.



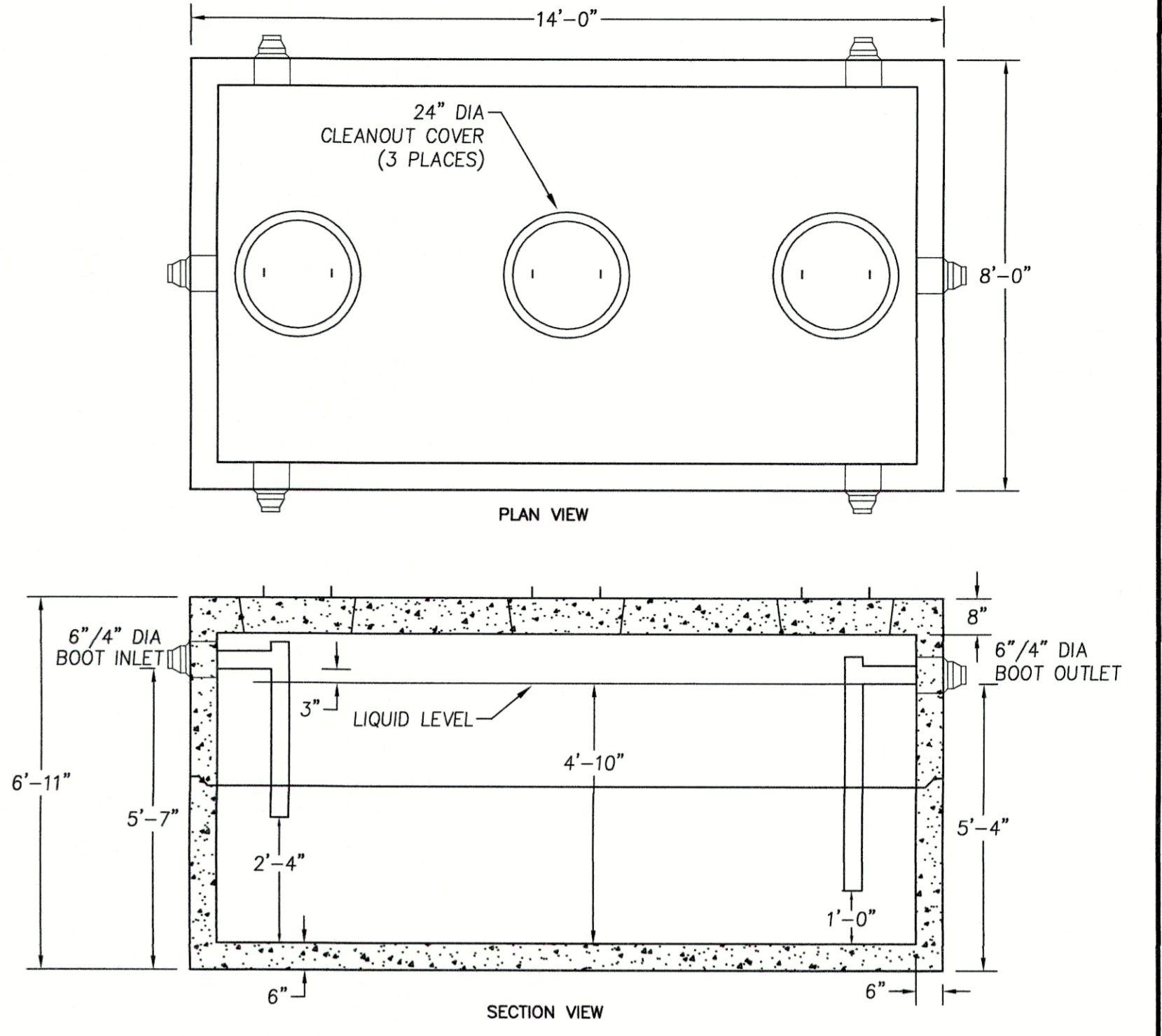
FRAME AND GRATE
(24" SQUARE)
N.T.S.

- GENERAL NOTES**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
 - FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH CONSTRUCTION PRODUCTS REPRESENTATIVE. www.contech-cpi.com
 - VORTENSITY HS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
- INSTALLATION NOTES**
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE VORTENSITY HS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
 - CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
 - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
 - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.



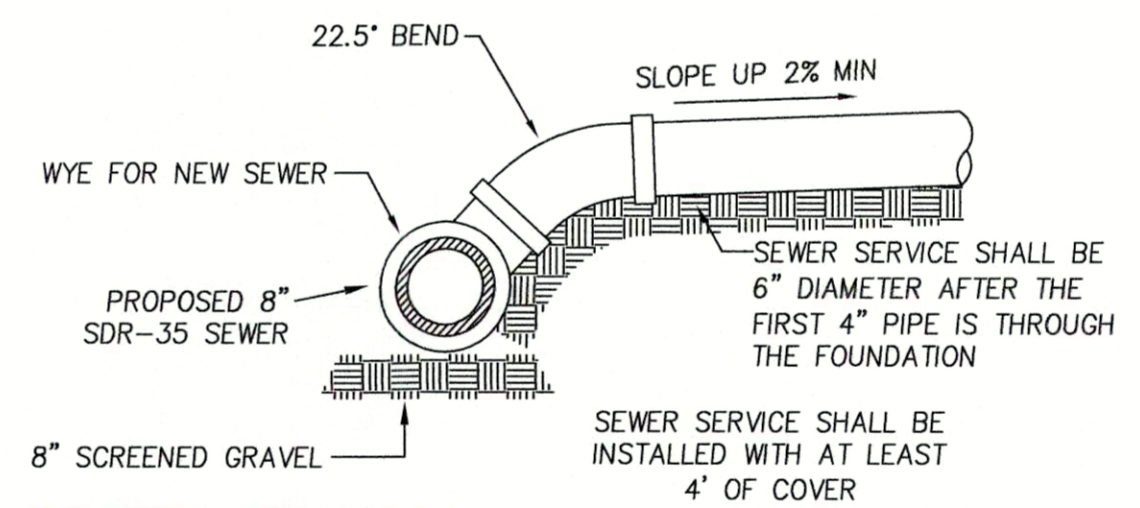
- NOTES:**
- SEWER MANHOLES SHALL CONFORM TO ASTM C478 AND ASTM C185
 - COVER SHALL BE LEBARON FOUNDRY (MODEL NO. LA246), MECHANICS IRON FOUNDRY, NEEHAN FOUNDRY, OR EQUAL.
 - ALL PENETRATIONS IN THE MANHOLE FOR INSERTION OF PIPING SHALL BE SEALED WITH KOR-N-SEAL FLEXIBLE PIPE CONNECTION.

PRECAST SEWER
MANHOLE DETAIL N.T.S.

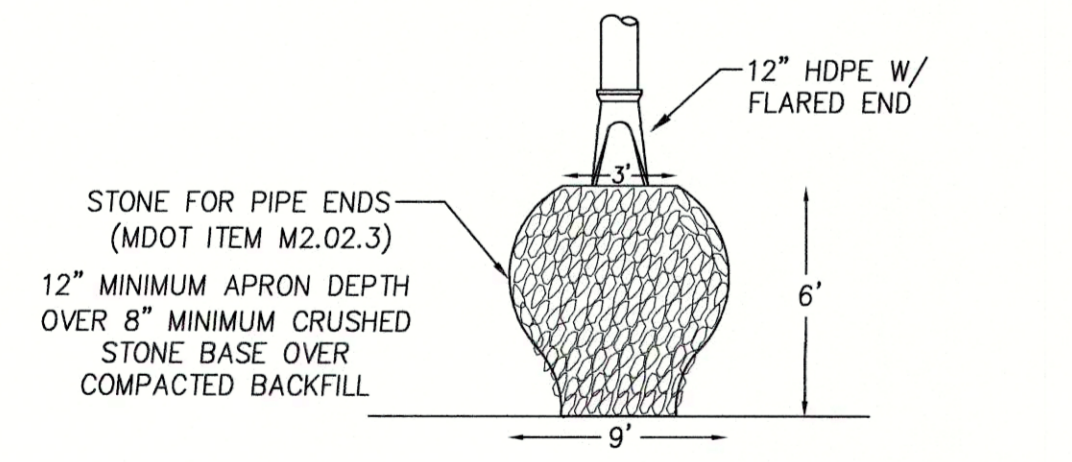


- NOTES:**
- CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
 - DESIGN CONFORMS WITH 310 CMR 15.00, DEP TITLE 5 REGS, FOR GREASE TRAPS
 - ALL REINFORCEMENT PER ASTM C1227.
 - DESIGNED FOR AASHTO HS-20 LOADING, 1 TO 5 FT COVER.
 - TONGUE & GROOVE JOINT SEALED WITH BUTYL RESIN
 - TEES AND BAFFLES SOLD SEPARATELY

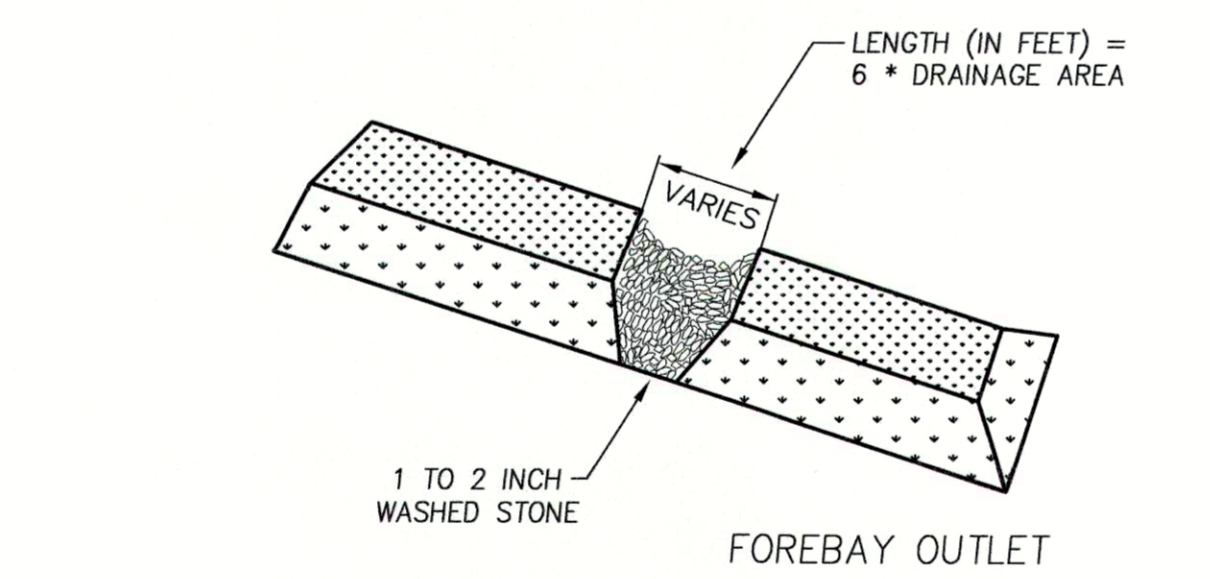
3000 GALLON
GREASE TRAP N.T.S.



SEWER SERVICE
DETAIL N.T.S.

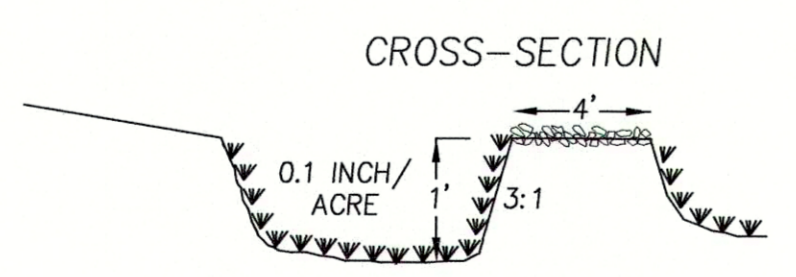


TYPICAL RIP-RAP
APRON DETAIL N.T.S.

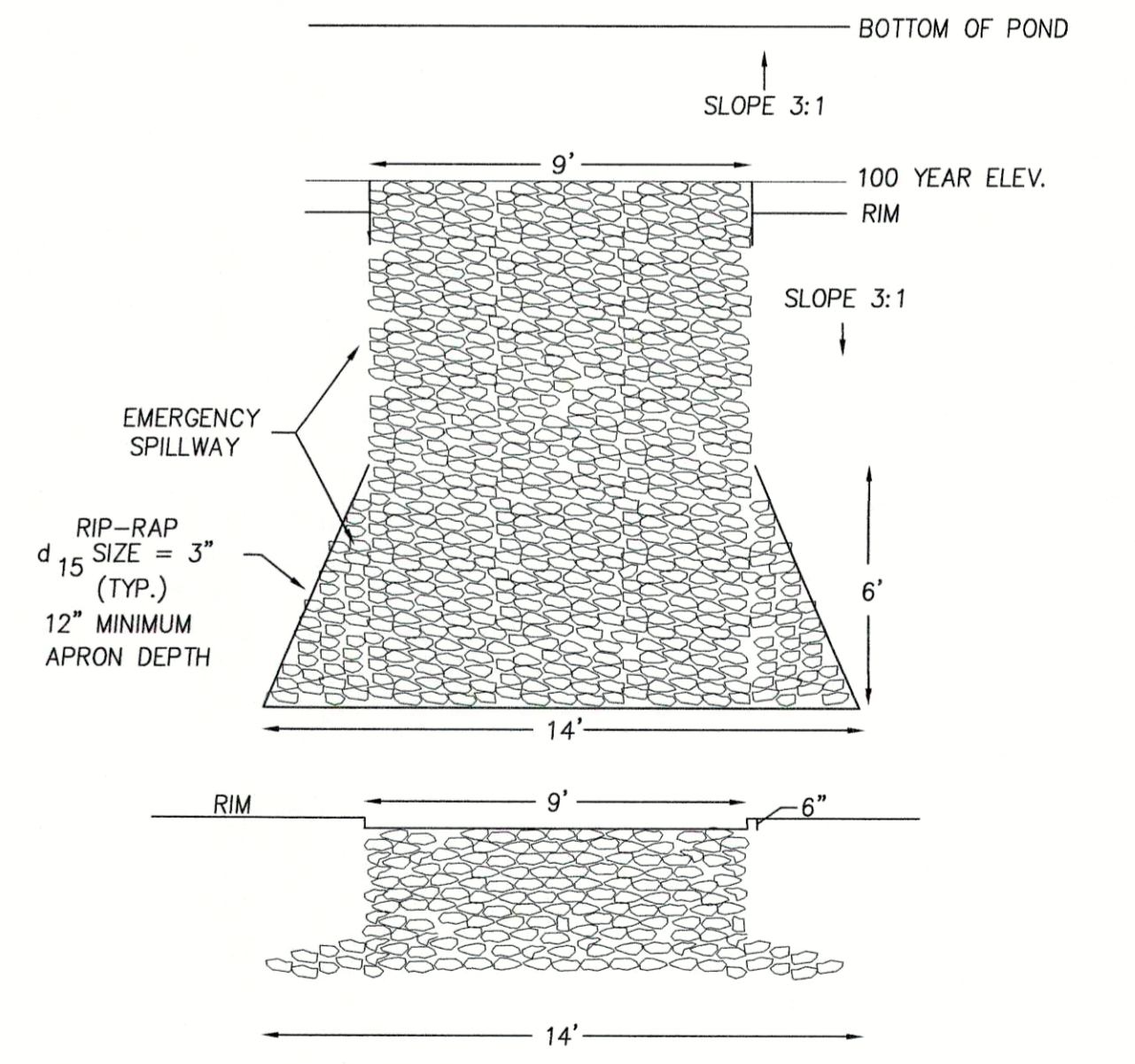


VOLUME OF SEDIMENT FOREBAY

FOREBAY #	DRAINAGE AREA (ACRES)	VOLUME (CU. YD)	VOLUME (CU. FT)	DIMENSIONS (L x W x H)	OUTLET LENGTH
FOREBAY #1	0.37	5.0	135	12'x12'x1.0'	6.0'
FOREBAY #2	0.64	8.7	234	16'x16'x1.0'	6.0'

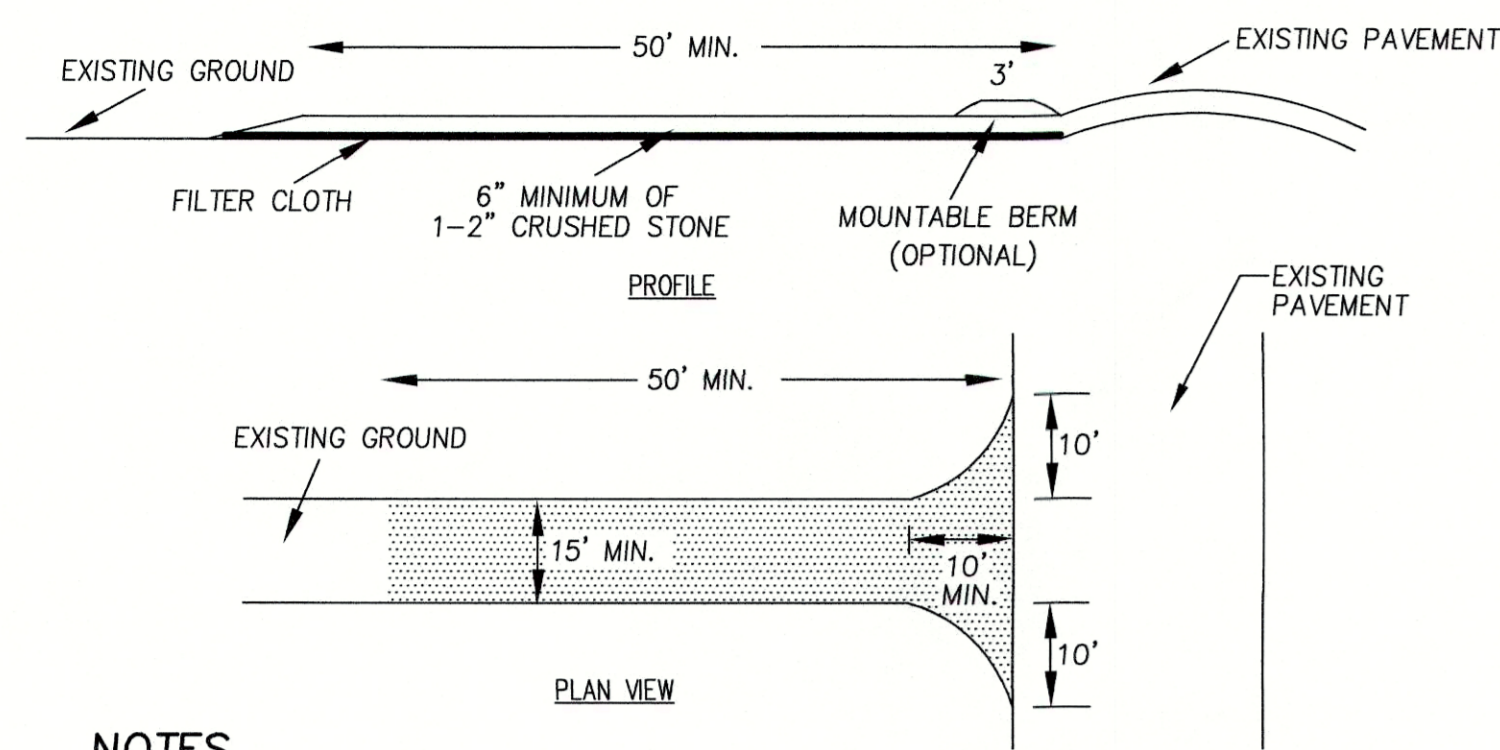


SEDIMENT FOREBAY
DETAIL N.T.S.



TYPICAL SPILLWAY
PLAN VIEW N.T.S.

	<p>PREPARED FOR</p> <p>PLUM ISLAND LLC</p> <p>79 PARKER STREET NEWBURYPORT, MA 01950</p>		<p>MEI MILLENNIUM ENGINEERING, INC.</p> <p>ENGINEERING AND LAND SURVEYING 62 ELM ST. SALISBURY, MA 01952 (978) 463-8980 13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528</p>	<p>PLAN OF LAND IN NEWBURYPORT, MA</p> <p>SHOWING PROPOSED SITE IMPROVEMENTS AT 79 PARKER STREET</p>	<p>DRAINAGE/ SEWER DETAILS</p>													
		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	BY					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>SCALE: AS NOTED</td> <td>DESIGN BY: C.M.Y.</td> <td rowspan="2">PROJECT: M173238</td> </tr> <tr> <td>DATE: JAN. 8, 2019</td> <td>CHKD. BY: E.W.B.</td> </tr> </table>	SCALE: AS NOTED	DESIGN BY: C.M.Y.	PROJECT: M173238	DATE: JAN. 8, 2019	CHKD. BY: E.W.B.		
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- NOTES**
- STONE SHALL BE 1-2" STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
 - THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50'.
 - THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6".
 - GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
 - ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
 - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP-DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED PROMPTLY.
 - WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

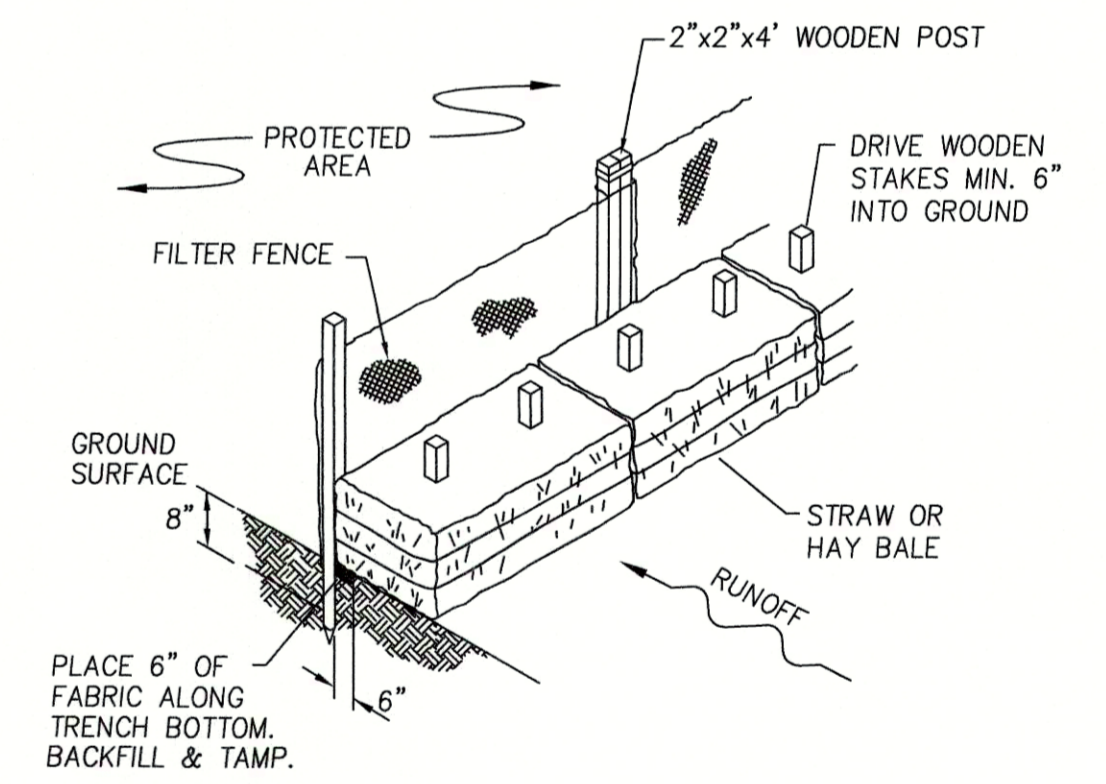
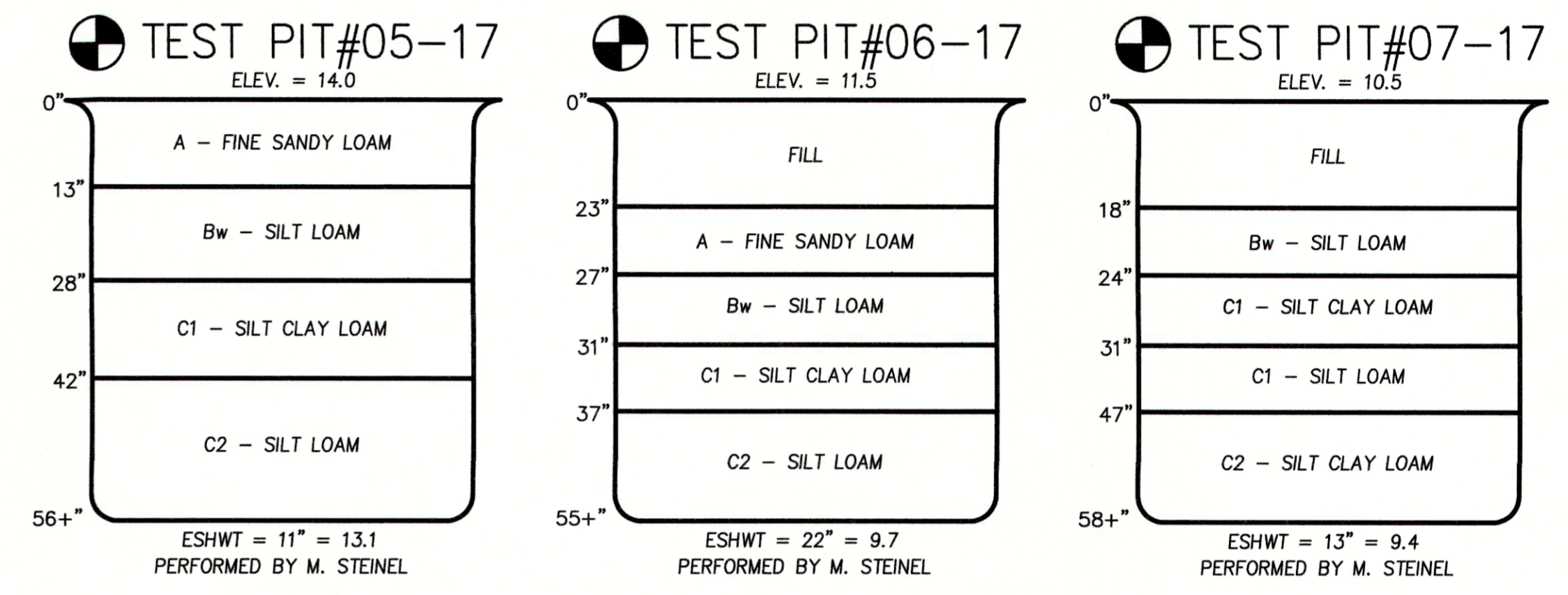
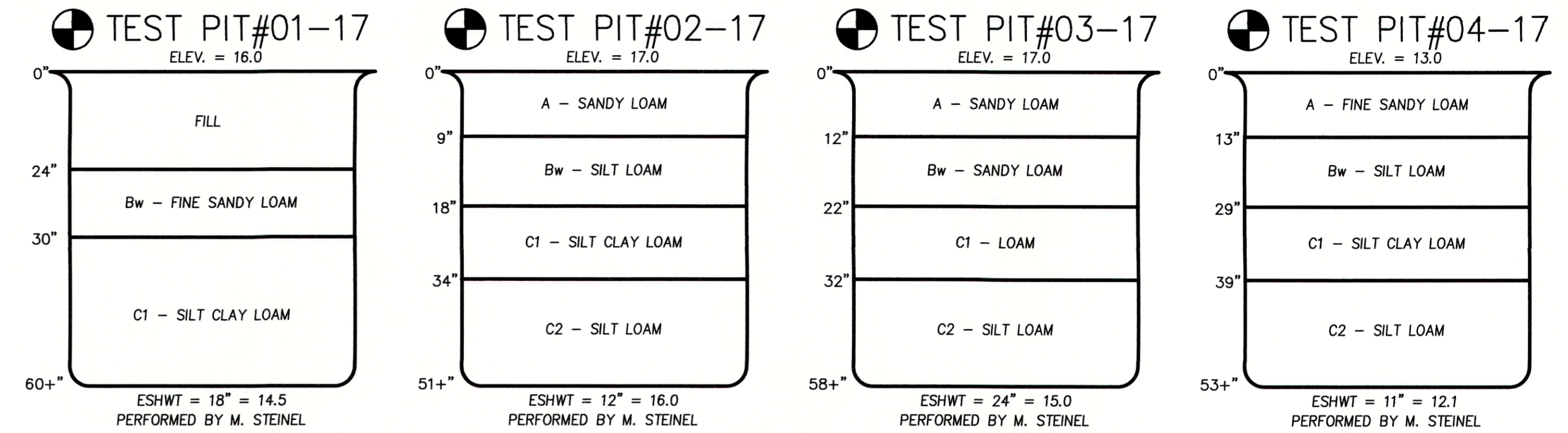
STABILIZED CONSTRUCTION ENTRANCE N.T.S.

GENERAL EROSION CONTROL NOTES

- ALL SILT FENCE SHALL BE INSTALLED BEFORE THE START OF CONSTRUCTION. SILT FENCE SHALL BE REMOVED UPON COMPLETION OF THE PROJECT AND STABILIZATION OF ALL SOIL.
- ALL FILL SHALL BE FREE OF STUMPS AND LARGE STONES.
- ANY STANDING BODIES OF WATER CREATED DURING EXCAVATION SHALL BE ELIMINATED.
- EROSION CONTROL BARRIERS SHALL BE INSPECTED WEEKLY AND AFTER EVERY 0.5" OF RAINFALL AND PROMPTLY REPAIRED OR REPLACED AS NECESSARY.
- ACCUMULATED SEDIMENT DEPOSITS UPSTREAM OF BARRIERS SHALL BE PROPERLY DISPOSED OF ON A REGULAR BASIS.
- AREAS OUTSIDE THE LIMITS OF WORK (EROSION CONTROL/SILT FENCE LOCATIONS) DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION AND/OR SEDIMENT CONTROLS DURING CONSTRUCTION. HE/SHE SHALL INSPECT CONTROLS WEEKLY AND AFTER ALL STORM EVENTS. REPAIRS, IF REQUIRED, SHALL BE MADE IMMEDIATELY.
- TEMPORARY GROUND COVER SHALL BE ESTABLISHED IN AREAS OF CONSTRUCTION WHERE REQUIRED BY THE NEWBURYPORT PLANNING BOARD.
- ANY DISTURBED AREAS OF THE SITE NOT USED FOR ROADWAY OR UTILITY CONSTRUCTION SHALL BE STABILIZED WITH LOAM AND SEED UNTIL FURTHER DISTURBANCE IS REQUIRED FOR BUILDING CONSTRUCTION.
- THE CONTRACTOR SHALL IDENTIFY TO THE CITY HIS/HER TOPSOIL STOCKPILING OPERATIONS AND LOCATIONS. NO TOPSOIL SHALL LEAVE THE SITE IN ACCORDANCE WITH THE NEWBURYPORT EARTH REMOVAL BYLAW, UNLESS APPROVED BY CITY OFFICIALS.
- PROVIDE GRAVEL AND WIRE MESH SEDIMENT FILTER AT ALL CATCH BASINS.
- A MINIMUM OF 6" OF LOAM SHALL BE INSTALLED ON ALL DISTURBED UNPAVED SURFACES.
- SEED MIX SHALL BE 20 LBS./ACRE OF TALL FESCUE, 20 LBS./ACRE OF CREEPING RED FESCUE AND 10 LBS./ACRE OF BIRDSFOOT TREFLOIL. LIME SHALL BE APPLIED AT A RATE OF 2 TONS/ACRE.
- NO MORE THAN 3 ACRES SHALL BE DISTURBED AT ONE TIME. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
- WHERE PLACEMENT OF FILL IS REQUIRED FOR STORM WATER CONTROL, FILL SHALL BE PLACED IN AN UNFROZEN STATE UPON UNFROZEN GROUND. UNDER NO CIRCUMSTANCES SHALL FILL BE PLACED FROM NOVEMBER THROUGH JANUARY.

CONSTRUCTION SEQUENCE

- INSTALL SILT FENCE AT LIMIT OF WORK & STAKE OUT STORMWATER AREAS.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AS DEPICTED.
- CUT TREES.
- CLEAR AND GRUB DEBRIS AND DISPOSE OF PROPERLY.
- STRIP, SCREEN AND STOCKPILE TOPSOIL. TOPSOIL CAN BE TEMPORARILY STOCKPILED ON SITE PROVIDING THAT THE PERIMETER OF THE STOCKPILES ARE PROPERLY STAKED WITH SILT FENCE AT THE TOE OF SLOPE.
- ROUGH GRADE & COMPACT CONSTRUCTED WETLANDS.
- GRADE PAVEMENT TO TOP OF SUBGRADE ELEVATIONS. ROADWAY MUST BE STABILIZED IMMEDIATELY AFTER GRADING.
- INSTALL UTILITIES/DRAINAGE STRUCTURES.
- PLACE RIPRAP WHERE SHOWN ON PLANS. LOAM AND HYDROSEED SIDESLOPES AND ALL DISTURBED AREAS WITHIN 72 HOURS.
- CONSTRUCT REMAINING UTILITIES.
- SPREAD, SHAPE, AND COMPACT PAVEMENT SUBBASE AS PER TYPICAL ROADWAY SECTION TO ATTAIN FINAL DESIGN ELEVATIONS.
- COMPLETE BINDER COURSE PAVING.
- LOAM AND HYDROSEED ANY DISTURBED SURFACES ALONG EDGES OF PAVEMENT AS REQUIRED. ADD PLANTS AND SEED MIX TO CONSTRUCTED WETLAND.
- PERFORM FINAL PAVING (TOP COURSE).
- REMOVE EROSION CONTROL.



- NOTES**
- POSTS SHALL BE DOUBLED AND COUPLED AT FILTER CLOTH SEAMS.
 - FILTER CLOTH TO BE FASTENED SECURELY TO SUPPORT NETTING WITH TIES SPACED EVERY 24" AT TOP, MID SECTION, AND BOTTOM.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
- MAINTENANCE**
- SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
 - IF THE FABRIC ON THE SILT FENCE SHALL DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
 - SEDIMENT DEPOSITS SHALL BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHALL BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

SILT FENCE/HAYBALE INSTALLATION N.T.S.

	PREPARED FOR PLUM ISLAND LLC 79 PARKER STREET NEWBURYPORT, MA 01950	MILLENNIUM ENGINEERING, INC. ENGINEERING AND LAND SURVEYING 62 ELM ST. SALISBURY, MA 01952 (978) 463-8980 13 HAMPTON RD. EXETER, NH 03833 (603) 778-0528	PLAN OF LAND IN NEWBURYPORT, MA SHOWING PROPOSED SITE IMPROVEMENTS AT 79 PARKER STREET	DRAINAGE/ EROSION CONTROL DETAILS SHEET: 11 OF 11
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