

City of New Bedford Department of Public Infrastructure

Tarkiln Hill Road Drainage Improvements Notice of Intent Plans

LOCUS MAP



DRAWING INDEX

SHEET NO.	DRAWING DESCRIPTION
GENERAL	
1	TARKILN HILL ROAD COVER SHEET AND INDEX
2	TARKILN HILL ROAD GENERAL NOTES
3	TARKILN HILL ROAD LEGEND AND ABBREVIATIONS
4	TARKILN HILL ROAD EXISTING CONDITIONS PLAN
5	TARKILN HILL ROAD PROPOSED DRAINAGE PLAN
6	WETLAND REPLICATION EXISTING CONDITIONS PLAN
7	WETLAND REPLICATION GRADING PLAN
8	WETLAND REPLICATION PLANTING PLAN
9	WETLAND REPLICATION CROSS SECTION AND DETAILS
10	TARKILN HILL ROAD DETAILS SHEET 1
11	TARKILN HILL ROAD DETAILS SHEET 2

MARCH 2, 2018

APPROVALS:

NAME TITLE Date:

NAME TITLE

ISSUED FOR NOTICE OF INTENT

SHEET 1 OF 11

GENERAL

- 1. ALL EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- 2. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
- 3. WORK IMPACTING RAILROAD PROPERTY AND / OR RIGHT-OF-WAY SHALL BE COORDINATED WITH MBTA, KEOLIS, MCRR, AND CSX.
- 4. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. ALL CONSTRUCTION ACTIVITY SHALL BE IN ACCORDANCE WITH MassDOT, MBTA & OSHA STANDARDS AND LOCAL REQUIREMENTS.
- 5. THE CONTRACTOR SHALL PROVIDE 72 HOURS NOTICE TO ALL PRIVATE PROPERTY OWNERS ABUTTING CONSTRUCTION AREAS PRIOR TO COMMENCEMENT OF WORK.
- 6. ALL WORK PERFORMED WITHIN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO APPLICABLE MUNICIPAL AND / OR STATE HIGHWAY STANDARDS.
- 7. ALL SIGNAGE AND PAVEMENT MARKINGS WITH MUNICIPAL AND STATE HIGHWAY LAYOUT SHALL CONFORM TO THE 2009 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
- 8. ALL PROPOSED GRANITE BOUNDS AND ANY EXISTING MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR (PLS).
- 9. ALL EXISTING U.S.G.S DISKS, HIGHWAY BOUNDS, RAILROAD MONUMENTS, PROPERTY BOUNDS, AND CITY BOUNDS SHALL BE PROTECTED AND RAISED TO FINISHED GRADE AS REQUIRED, U.S.G.S. AND MASSDOT RESPECTIVELY. ANY DAMAGE TO U.S.G.S DISKS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND THE U.S. GEOLOGICAL SURVEY AND SHALL BE REPAIRED AT NO COST TO THE AUTHORITY. ANY DAMAGE TO TOWN BOUNDS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND MASSDOT AND SHALL BE REPAIRED AT NO COST TO THE AUTHORITY. THE CONTRACTOR SHALL INVENTORY ALL SUCH BOUNDS, DISKS, AND MONUMENTS PRIOR TO THE START OF ANY WORK.
- 10. ALL EXISTING ROADWAY SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND STACKED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- 11. CONTRACTOR SHALL INSTALL APPROVED EROSION CONTROL MEASURES PRIOR TO EARTHWORK OPERATION AND MAINTAIN EROSION CONTROL MEASURES AND SEEDED EMBANKMENTS DURING CONSTRUCTION. EROSION CONTROL SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
- 12. TEMPORARY CONSTRUCTION EASEMENT AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITIONS UNLESS OTHERWISE NOTED AT NO ADDITIONAL COST TO THE PROJECT.
- 13. AREAS OUTSIDE THE LIMIT OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
- 14. JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH HOT POURED RUBBERIZED ASPHALT SEALER AND BACKSANDED.
- 15. ALL AREAS DISTURBED DURING CONSTRUCTION EXCEPT PAVEMENT AND STRUCTURES SHALL RECEIVE LOAM AND SEEDING PER THE SPECIFICATIONS UNLESS OTHERWISE NOTED.
- 16. TREES AND SHRUBS OUTSIDE THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.

EXISTING CONDITIONS

- 1. HORIZONTAL DATUM IS REFERENCED TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM NORTH AMERICAN DATUM OF 1983(2011). LOCUS IS WITHIN THE MAINLAND ZONE. SOURCE CONTROL FOR THE TIE TO THE DATUMS IS MAINE TECHNICAL SOURCE'S REFERENCE STATIONS IN FOXBOROUGH, MA (XMTS), MASSDOT CORS STATION (MAMI) IN MILTON, MA, MASSDOT CORS STATION (MADA) IN DARTMOUTH AND COAST GUARD STATION (ACU6) IN ACUSHNET MA. COORDINATE VALUES WERE DERIVED USING STATIC METHODS BASED ON VARIOUS COMBINATIONS OF THE AFOREMENTIONED CORS STATIONS.
- 2. VERTICAL DATUM IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SOURCE CONTROL FOR THE TIE TO THE VERTICAL DATUM ARE SAME CORS STATIONS REFERRED TO IN NOTE 1.
- 3. BOUNDARY INFORMATION SHOWN (IF ANY) IS FROM GIS DATA SOURCES ONLY, UNLESS NOTED OTHERWISE. BOUNDARY SURVEY OR RETRACEMENT OF THE RIGHT OF WAY HAS NOT BEEN PERFORMED BY BRYANT ASSOCIATES OR PRIME AE GROUP.
- 4. SURVEY DATA SHOWN HAS BEEN PREPARED BY BRYANT ASSOCIATES, INC., 90 CANAL STREET, SUITE 301, BOSTON, MA 02114 (617) 248-0300 AND PRIME AE GROUP, INC., 55 CAPITAL BOULEVARD, 2ND FLOOR, ROCKY HILL, CT 06067 (860) 436-5600. GENERICALLY AND WITH SOME EXCEPTIONS, BRYANT HAS PRODUCED THE DATA NORTH OF WEIR JUNCTION AND SOUTH OF MYRICK'S JUNCTION ON THE FALL RIVER SECONDARY TO THE TERMINUS IN FALL RIVER. PRIME HAS PRODUCED THE DATA SOUTH OF WEIR JUNCTION ON THE NEW BEDFORD MAINLINE TO THE TERMINUS IN NEW BEDFORD. THE SURVEY DATA HAS BEEN COMPILED UTILIZING MANY DIFFERENT TECHNOLOGIES TO MATCH THE BEST PRACTICES AND REQUIREMENTS OF THE PROJECT. AERIAL DATA WAS PROVIDED BY COL-EAST, INC. THROUGHOUT THE PROJECT CORRIDOR BASED ON SURVEY CONTROLS PROVIDED BY BRYANT ASSOCIATES. MAPPING WAS SPECIFIED FOR 1"=20" WITH 1" CONTOUR ACCURACY. THE AERIAL SURVEY WAS SUPPLEMENTED WITH GROUND SURVEY PERFORMED USING TOTAL STATIONS AND LASER SCANNING.
- 5. THE SURFACE EVIDENCE OF THE UTILITIES SHOWN HAS BEEN LOCATED BY FIELD SURVEY, UNLESS NOTED OTHERWISE. THE LINEWORK REPRESENTING ALL UNDERGROUND STRUCTURES AND PIPES HAS BEEN SHOWN HEREON IN ITS APPROXIMATE LOCATION BASED ON AVAILABLE RECORD PLANS. THE SURVEYORS MAKE NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY DO CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. EVIDENCE OF ADDITIONAL UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT CORRIDOR.
- 6. WETLAND BOUNDARIES WERE DELINEATED AND SURVEYED IN 2012, AND SUPPLEMENTED IN 2015, 2016, AND 2017.
- THE CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS AND REPORT ALL DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE ENGINEER.

<u>UTILITIES</u>

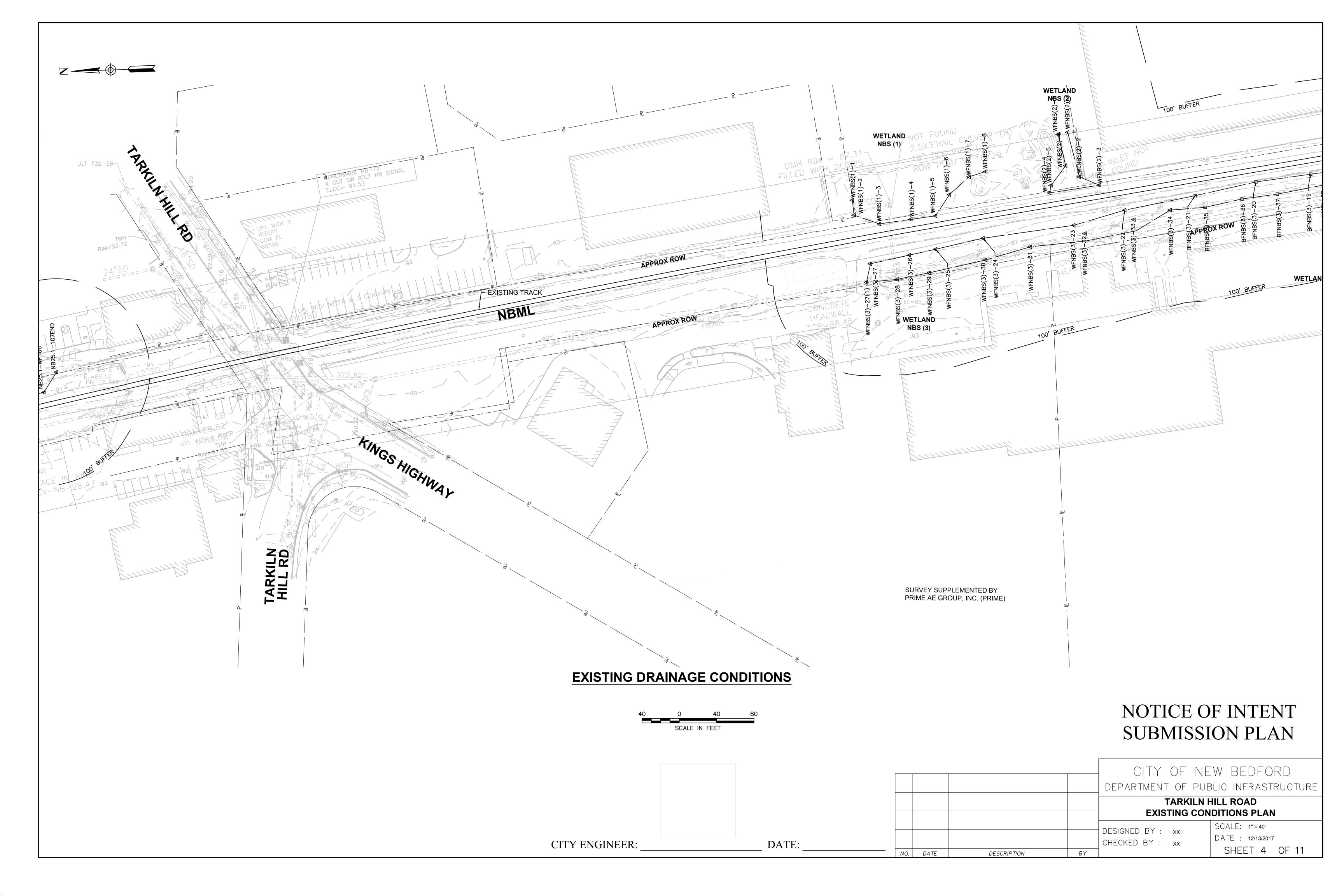
1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT "DIG SAFE" 72 HOURS PRIOR TO ANY EXCAVATION PERFORMED ON OR OFF SITE AT 1-888-344-7233 AND SHALL COORDINATE LOCATION OF NON "DIG SAFE" MEMBER UTILITIES WITHIN THE TIME FRAME SPECIFIED BY THE UTILITY OWNER.

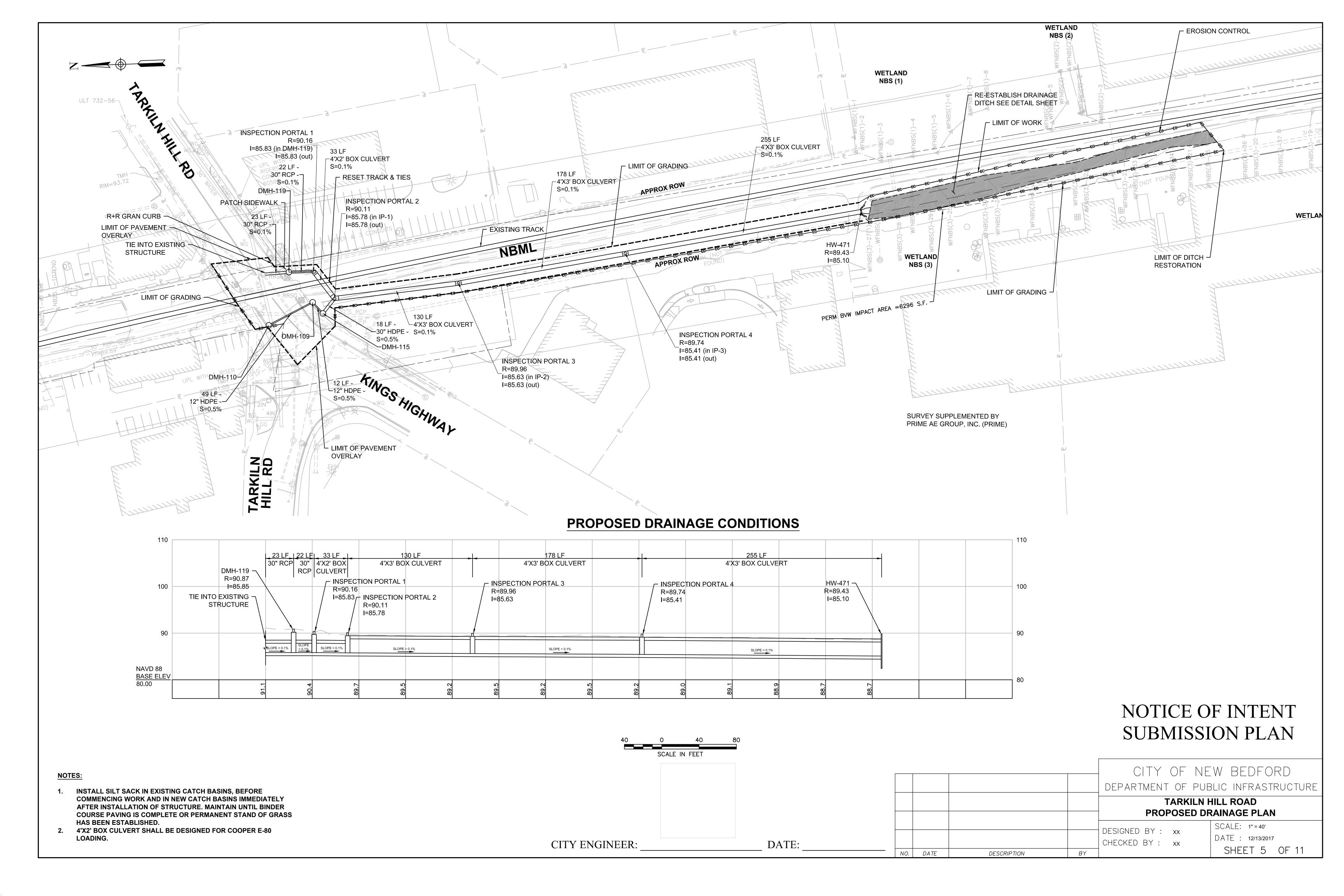
UTILITIES (CONT.)

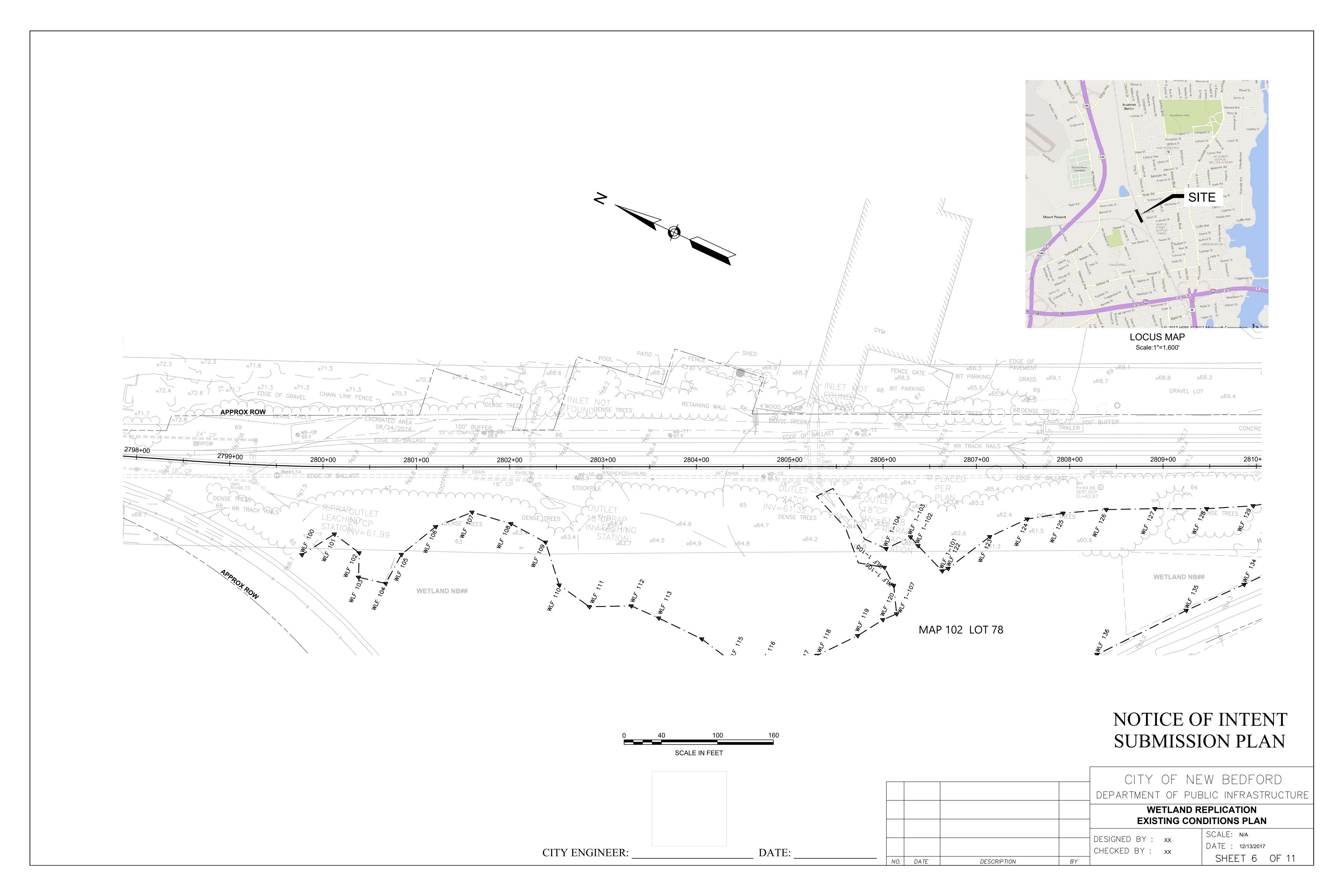
- 2. THE CONTRACTOR SHALL MAKE ARRANGEMENTS AND SHALL BE RESPONSIBLE FOR PAYING ANY FEES FOR ANY POLE RELOCATION AND FOR THE ALTERATION OR ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANY.
- 3. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, SIZE, INVERTS, AND TYPES OF EXISTING PIPES AT ALL PROPOSED POINTS OF CONNECTION PRIOR TO ORDERING MATERIALS. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE ENGINEER FOR THE RESOLUTION OF THE CONFLICT.
- 4. ALL EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE AND KEPT OPERATIONAL DURING CONSTRUCTION EXCEPT AS NOTED ON THE CONTRACT DRAWINGS. ANY NECESSARY DISRUPTION TO OR ABANDONMENT OF EXISTING UTILITIES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- 5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES AND CITIES / TOWNS THAT MAY BE AFFECTED BY ANY PORTION OF THIS CONSTRUCTION AND TO COORDINATE ALL WORK INVOLVING UTILITY COMPANIES OR CITY / TOWN FACILITIES, WHETHER THOSE FACILITIES ARE EXISTING OR PROPOSED. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPORT AND PROTECT EXISTING UTILITIES IN AND AROUND EXCAVATIONS. PROTECTION AND OR SUPPORT SHALL BE CONSIDERED INCIDENTAL WORK AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM BEING INSTALLED.
- 6. EXISTING UTILITIES CALLED FOR TO BE RELOCATED SHALL BE VERIFIED WITH RESPECTIVE CONTROLLING AUTHORITY AS TO THEIR FINAL DISPOSITION.
- 7. ALL UTILITY SURFACE CASTINGS (COVERS, GRATES, GATE BOXES, ETC.) TO REMAIN SHALL BE ADJUSTED TO THE NEW SURFACE GRADE AS REQUIRED, WHETHER OR NOT CALLED FOR ON THE PLANS.
- 8. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO M4.05.2 OF THE MASSDOT HIGHWAY STANDARD SPECIFICATIONS.
- 9. CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE, SEWER, AND UTILITY FACILITIES FROM ALL LOADS DURING CONSTRUCTION. ANY DAMAGE TO THESE FACILITIES RESULTING FROM CONSTRUCTION LOADS WILL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- 10. FIELD VERIFY EXISTING DRAINAGE MANHOLE AND CATCH BASIN INVERTS AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE ENGINEER PRIOR TO START OF ANY DRAINAGE INSTALLATION.
- 11. ALL UTILITIES SHOWN ON PLANS SHALL BE RETAINED UNLESS OTHERWISE INDICATED.
- 12. CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL, MAINTAIN, AND REMOVE APPROVED EROSION CONTROL CHECKS AROUND CATCH BASIN FRAMES AND GRATES TO PREVENT RUNOFF SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.

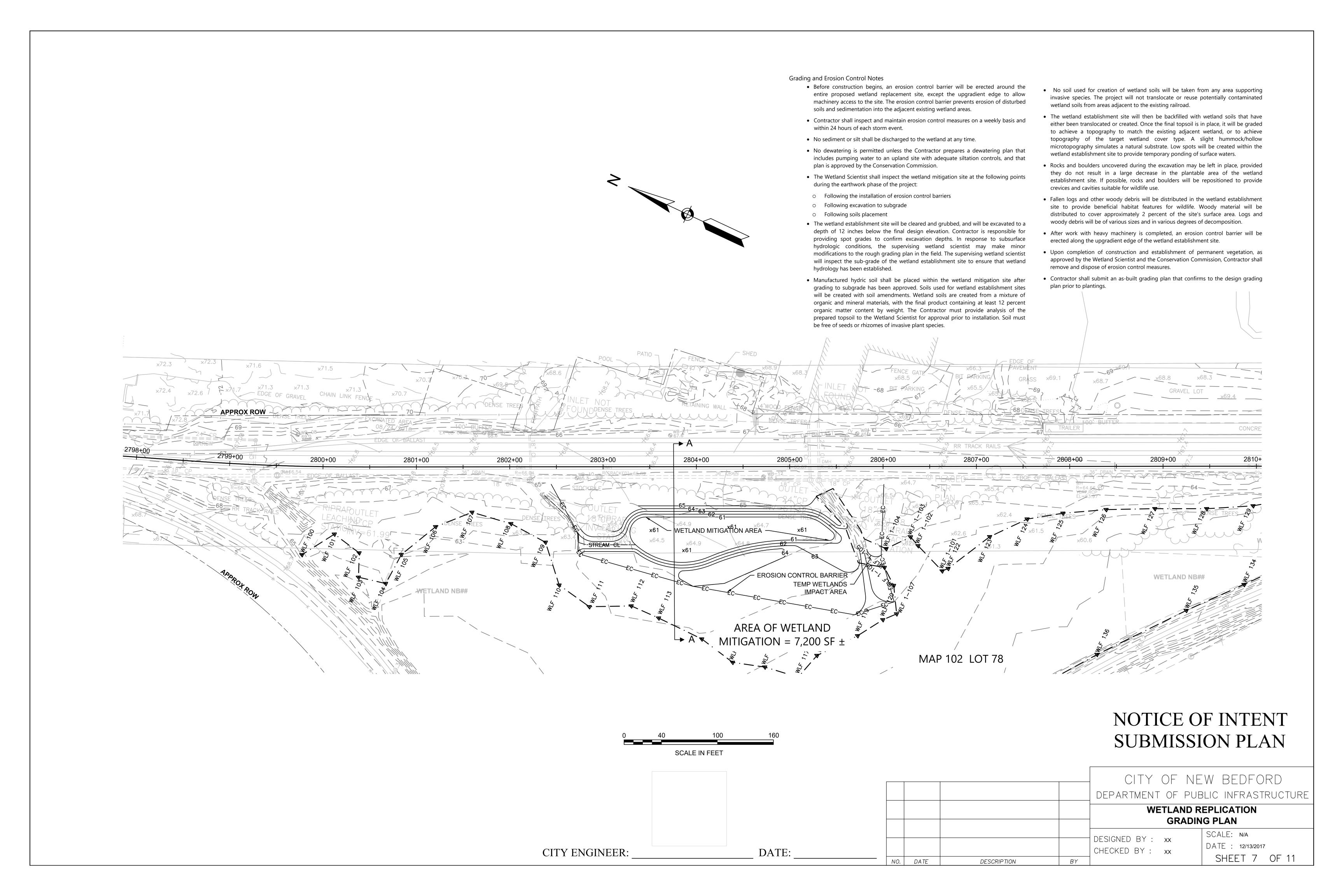
						NEW BEDFORD Public infrastructur
						N HILL ROAD ERAL NOTES
CITY ENGINEER:	DATE:	NO. DATE	DESCRIPTION	BY	DESIGNED BY: xx CHECKED BY: xx	SCALE: N/A DATE: 12/13/2017 SHEET 2 OF 11

GENERAL SY	'MBOLS		P		PROPERTY LINE OR APPROXIMATE PROPERTY LINE	ABBRE	VIATIONS	MIN	MINIMUM MANUAL ON UNIFORM TRAFFIC CON		NVIRONMENTAL
EXISTING	PROPOSED	DESCRIPTION		-	RIGHT OF WAY	GENERA	_	MUTCD	DEVICES	<u> </u>	ABBREVIATIONS
□ JB	☐ JB	JERSEY BARRIER		• — — — — — — — — — — — — — — — — — — —	- EASEMENT POINT OF SWITCH	ABD	ABANDON	NBML NIC	NEW BEDFORD MAINLINE NOT IN CONTRACT	BF	BANK FLAG
⊞⊕⊕св	СВ	CATCH BASIN		ı	CENTERLINE OF STREAM	ADJ APPROX.	ADJUST APPROXIMATE	NO.	NUMBER	BLSF	BORDERING LAND SUBJECT TO FLOODING
<u> </u>	<u>(⊞)</u> ⊗ FP	CATCH BASIN CURB INLET			- PERMANENT EASEMENT	A.C.	ASPHALT CONCRETE	ocs	OVERHEAD CONTACT SYSTEM	BVW CVP	BORDERING VEGETATED WETLANDS CERTIFIED VERNAL POOL
G GP	© GP	FLAG POLE GAS PUMP				ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE		OFFSET	LSCSF	LAND SUBJECT TO COASTAL STORM
□ MB	□ MB	MAIL BOX	TRAFFIC SY	MROLS		BIT.	BITUMINOUS	OHW	OVERHEAD WIRE OCCUPATIONAL SAFETY AND HEALT	TH	FLOWAGE
		POST SQUARE		IVIDOLO		BC — BD.	BOTTOM OF CURB BOUND	OSHA	ADMINISTRATION	H LUW RA	LAND UNDER WATER RIVERFRONT AREA
0	0	POST CIRCULAR	EXISTING	PROPOSED	DESCRIPTION	BD. BL	BASELINE	PC	POINT OF CURVATURE	WF	WETLAND FLAG
⊕ WELL □ EHH	⊕ WELL □ EHH	WELL ELECTRIC HANDHOLE	\oplus	•	PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL	BLDG	BUILDING	PCC PED	POINT OF COMPOUND CURVATURE PEDESTRIAN	WL	WETLAND
0	0	FENCE GATE POST		_	ARROW AS SHOWN) AND SADDLE EMERGENCY PREEMPTION CONFIRMATION	BM	BENCHMARK	P.G.L.	PROFILE GRADE LINE		
o GG	O GG	GAS GATE	*	*	STROBE LIGHT	BO	BY OTHERS	PI	POINT OF INTERSECTION		
BHL #	◆ BHL #	BORING HOLE	☑ RRSG	⊠ RRSG	RAILROAD SIGNAL	BOS BR.	BOTTOM OF SLOPE BRIDGE	POC	POINT ON CURVE		
→ MW # ■ TP #	→ MW # □ TD #	MONITORING WELL			SIGN AND POST	CAB.	CABINET	POT	POINT OF DEVERSE CURVATURE		
	■ TP#	TEST PIT HYDRANT	$\overline{\bigcirc}$	00	SIGN AND POST (2 POSTS)	СВ	CATCH BASIN	PRC PROJ	POINT OF REVERSE CURVATURE PROJECT		
*	*	LIGHT POLE		\bowtie	` ,	CBCI	CATCH BASIN WITH CURB INLET	PROP	PROPOSED		
□ CO.BD.	•	COUNTY BOUND		_	CONTROL CABINET, GROUND MOUNTED	CC CCM	CEMENT CONCRETE CEMENT CONCRETE MASONRY	PT	POINT OF TANGENCY		
	_	GPS POINT			CONTROL CABINET, POLE MOUNTED	CEM	CEMENT	PVC	POINT OF VERTICAL CURVATURE		
©	©	CABLE MANHOLE			PULL BOX 12"x12" (OR AS NOTED)	CI	CURB INLET	PVI	POINT OF VERTICAL TANCENCY		
(D)	(D)	DRAINAGE MANHOLE			ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)	CIP	CAST IRON PIPE	PVT PVMT	POINT OF VERTICAL TANGENCY PAVEMENT		
(E)	(E)	ELECTRIC MANHOLE GAS MANHOLE			= TRAFFIC SIGNAL CONDUIT	CLF	CHAIN LINK FENCE	PWW	PAVED WATER WAY		
(M)	<u> </u>	MISC MANHOLE			THE WILL OF STATE OF	CL (or C)	CENTERLINE CORRUGATED METAL DIDE	R (or RT)	RADIUS OF CURVATURE, RIGHT, RIM	1	
(\$)	<u>s</u>	SEWER MANHOLE	DA\/			CMP CSP	CORRUGATED METAL PIPE CORRUGATED STEEL PIPE	R&D	REMOVE AND DISPOSE		
T	①	TELEPHONE MANHOLE	PAVEMENT I	VIARKINGS S	SYMBOLS	CONC	CONCRETE	RCP	REINFORCED CONCRETE PIPE		
W MHB	₩ ■ MHB	WATER MANHOLE	EXISTING	PROPOSED	DESCRIPTION	CONST	CONSTRUCTION	RD RDWY	ROAD ROADWAY		
□ MON ■ MHR	■ MHB	MASSACHUSETTS HIGHWAY BOUND MONUMENT		SL	STOP LINE	CWK	CONCRETE WALK	REM	REMOVE		
□ SB		STONE BOUND				DI DIA (or Ø)	DROP INLET DIAMETER	RET	RETAIN		
■ TB		TOWN OR CITY BOUND		<u>cw</u>	CROSSWALK	DIP (or 9)	DIAMETER DUCTILE IRON PIPE	RET WALL	RETAINING WALL		
Δ		TRAVERSE OR TRIANGULATION STATION		SWL	_ SOLID WHITE LINE	DMH	DRAIN MANHOLE	RGS	RIGID GALVANIZED STEEL RIGHT OF WAY		
	→ TPL or GUY	TROLLEY POLE OR GUY POLE		SYL	_ SOLID YELLOW LINE	DWY	DRIVEWAY	ROW RR	RAILROAD		
_ ∘ HTP _& UFB	-6− UFB	TRANSMISSION POLE		DBWL	■ DOUBLE WHITE LINE	DYL	DOUBLE YELLOW LINE	R&R	REMOVE AND RESET		
-\$- UPDL	-∳- UPDL	UTILITY POLE W/ FIREBOX UTILITY POLE WITH DOUBLE LIGHT		DBYL	■ DOUBLE YELLOW LINE	EC ELEV/or EL	EROSION CONTROL) ELEVATION	R&S	REMOVE AND STACK		
-6- ULT	-&- ULT	UTILITY POLE W / 1 LIGHT	DVD	DVD		EMB	EMBANKMENT	S	SLOPE		
-0- UPL	-∽ UPL	UTILITY POLE	RXR	RXR	RAILROAD GRADE CROSSING	EMH	ELECTRIC MANHOLE	SB	STONE BOUND		
0		BUSH				EOP (or EP)		SD SHLD	STORM DRAIN SHOULDER		
•SIZE & TYPE		TREE	ENVIRONME	NTAL SYMB	OLS	•	() EXISTING	SMH	SEWER MANHOLE		
<u> </u>		STUMP	EVICTING	DDODOGED	DECODIDATION	EXC	EXCAVATION EDAME AND COVER	ST	STREET, STONE		
• WG	• WG	SWAMP / MARSH WATER GATE	EXISTING	PROPOSED	DESCRIPTION	F&C F&G	FRAME AND COVER FRAME AND GRATE	STA	STATION		
o PM	• PM	PARKING METER			 — LIMIT OF GRADING 	FDN.	FOUNDATION	SSD	STOPPING SIGHT DISTANCE		
		OVERHEAD CABLE/WIRE		—EC——EC——EC—	EROSION CONTROL / LIMIT OF WORK	FES	FLARED END SECTION	SHLO	STATE HIGHWAY LAYOUT LINE		
		CURBING		•	100 YR-FLOODPLAIN / BLSF	FT	FOOT	SW	SIGNAL INSTRUMENT HOUSE SIDEWALK		
		CONTOURS (ON-THE-GROUND SURVEY DATA)			RIVERFRONT AREA	GG	GAS GATE	SWEL	SOLID WHITE EDGE LINE		
		CONTOURS (PHOTOGRAMMETRIC DATA) UNDERGROUND DRAIN PIPE (DOUBLE LINE 12				GI GIP	GUTTER INLET GALVANIZED IRON PIPE	Т	TANGENT DISTANCE OF CURVE/TRU	JCK %	
		INCH AND OVER)	— · — • — · —	•	BANK	GRAN	GRANITE	TAN	TANGENT		
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 12	— · — <u>Ā</u> · — · —		BORDERING VEGETATED WETLAND	GRAV	GRAVEL	TEMP	TEMPORARY		
		INCH AND OVER) UNDERGROUND GAS MAIN (DOUBLE LINE 12 INCH			100 FT WETLAND BUFFER ZONE	GRD	GUARD	TMH	TOP OF CURB TELEPHONE MANHOLE		
		AND OVER)			200 FT RIVERFRONT AREA	HDW	HEADWALL	TOS	TOP OF SLOPE		
		UNDERGROUND SEWER MAIN (DOUBLE LINE 12			EDGE OF CHANNEL	HDPE	HIGH DENSITY POLYETHYLENE	TYP	TYPICAL		
		INCH AND OVER) UNDERGROUND TELEPHONE DUCT (DOUBLE LINE			LDOL OF GIANNEL	HH HMA	HANDHOLE HOT MIX ASPHALT	UP	UTILITY POLE		
		12 INCH AND OVER)			PERMANENT BVW / BANK IMPACT	HOR	HORIZONTAL	U.S.G.S.	UNITED STATES GEOLOGICAL SURV	ΕY	
		UNDERGROUND WATER MAIN (DOUBLE LINE 12			.	HYD	HYDRANT	VAR VERT	VARIES VERTICAL		
0000000000		INCH AND OVER) BALANCED STONE WALL			TEMPORARY BVW / BANK IMPACT	IN IN COMPANY	INCH	VEIXI	VERTICAL CURVE		
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	a== =			DEDMANICHT DI CC IMADA OT	INV (or I) JCT	INVERT JUNCTION	WCR	WHEEL CHAIR RAMP		
					PERMANENT BLSF IMPACT	L (or LT)	LEFT	WG	WATER GATE		
x	x	CHAIN LINK OR METAL FENCE			TEMPORARY BLSF IMPACT	L,	LENGTH (OF CURVE)	WIP WM	WROUGHT IRON PIPE WATER METER/WATER MAIN		
	o	WOODTENGE			777)	LB	LEACH BASIN	WMH	WATER METER/WATER MAIN WATER MANHOLE		
x		- 6' HIGH CHAIN LINK FENCE				LF · <del>-</del>	LINEAR FEET	WQS	WATER QUALITY STRUCTURE		
	_ — — — —					LP I T	LIGHT POLE LEFT	X-SECT	CROSS SECTION		
		- TOP OR BOTTOM OF SLOPE				MAX	MAXIMUM				
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE				MB	MAILBOX				
		AND OVERLAY STATE HIGHWAY LAYOUT				MBTA	MASSACHUSETTS BAY TRANSPORTATION			NOTIO	CE OF INTENT
		TOWN OR CITY LAYOUT					AUTHORITY				
		COUNTY LAYOUT				MCRR	MASSACHUSETTS COASTAL RAILROAD			CIIDIA	ISSION PLAN
		RAILROAD SIDELINE				MH MHB	MANHOLE MASSACHUSETTS HIGHWAY BOUND			SODIV	HODION I LAIN
		TOWN OR CITY BOUNDARY LINE				IVIND	MASSACHUSETTS HIGHWAY BOUND				
										CITY (	OF NEW BEDFORD
											OF PUBLIC INFRASTRUCTUR
											RKILN HILL ROAD
										LEGEN	D AND ABBREVIATIONS
										DESIGNED BY: :	SCALE: N/A
											D Δ TF · 12/13/2017
					CITY ENGINEER:		DATE:	O. DATE	DESCRIPTION BY	CHECKED BY : ;	SHEET 3 OF 11
								U.   DATE	DESOMETION BY		









### Planting Notes

- Prior to delivery to the site, the supervising wetland scientist will visit the nursery or nurseries providing the planting stock to ensure that the specimens are healthy, free from pests and any invasive plant material, and suitable for use within the wetland establishment site. Unsuitable specimens will be rejected and replaced with suitable specimens. The supervising wetland scientist must approve any planting substitutions. All woody plant stock will be either bare root stock or container grown.
- Planting within the wetland establishment site and adjacent uplands will conform to the
  plans or will be completed in accordance with directions provided in the field. Only
  plant materials native and indigenous to the region will be used. Use of cultivars will be
  prohibited. Species not specified in the final planting plan will not be used without
  written approval from the permitting agency.
- All plantings will be spaced in similar species clusters in a random distribution, at the direction of the supervising wetland scientist, to simulate natural growth patterns.
- Transplants and plant material collected from the wild is prohibited unless approved in writing by the Wetland Scientist. All plant material used shall be nursery-grown and healthy, sound and free of disease, insect pests, eggs or larvae, discolorations, leaf wilting or curling and weeds.
- Container-grown stock shall have been grown in a container long enough for the root system to have developed sufficiently to hold its soil after removal from the container. Roots shall visibly extend to the inside face of the growing container but shall not be root-bound or girdling.
- All plants shall be delivered to the site as live, actively growing, or just breaking dormancy, and arrive to the project site ready for planting. The Wetland Scientist may reject plants damaged in handling or transport. Plant material shall be installed as soon as possible after it has been delivered to the site.

- Soil and rootmass shall be watered and moist on delivery to the job site. Plants with dry soil and roots shall not be acceptable. All plant materials temporarily stored at the site prior to planting shall be stored out of direct exposure to sun and wind, shall be maintained by careful watering, and shall be protected from damage due to construction activities and adverse weather.
- Tree and shrub planting to occur between May 1 and September 15.
- Upon completion of planting, the areas around each plant or cluster or plants will be mulched with a 2 inch thick layer of leaf litter or other natural organic material (not fresh wood chips)
- The erosion control barriers will be disassembled and properly disposed of before November 1 of the third full growing season after planting of the wetland establishment site. Sediment collected by the barriers will be removed and disposed of in a manner that prevents erosion and transport to a wetland or waterway. If minor grading is required in the immediate zone around the erosion control barrier to provide surface hydrologic connection between the wetland establishment site and the existing wetland area, it will be done by hand and stabilized by mulch.
- Watering shall be required during the growing season (May 1 Nov. 1) when natural rainfall is below one inch per week, for the first month. Water shall be applied in sufficient quantity to thoroughly saturate the soil in the root zone of each plant. Following the first month of planting, watering will be limited to periods of declared drought. Water shall be provided by the Contractor.
- All plant materials shall be guaranteed for one year following date of final acceptance.

### Seeding Notes

- Seeding within the wetland establishment site and adjacent uplands will conform to
  the plans or will be completed in accordance with directions provided in the field.
  Only plant materials native and indigenous to the region will be used. Use of cultivars
  will be prohibited. Species not specified in the final seeding plan will not be used
  without written approval from the Wetland Scientist and permitting agency.
- Contractor shall supply a wetland seed mix including a majority of the species listed in the Wetland Seed Mix table. 75% of the seed mix, by weight, shall be indigenous grasses and sedges. Seeds must be from plants grown within 200 miles of the mitigation site. Contractor shall provide a written analysis of the seed mixture to the Wetland Scientist. No seeding is permitted without approval of the Wetland Scientist.
- Contractor shall supply an upland seed mix including a majority of the species listed in the Upland Seed Mix table. 75% of the seed mix, by weight, shall be indigenous grasses and. Seeds must be from plants grown within 200 miles of the mitigation site. Contractor shall provide a written analysis of the seed mixture to the Wetland Scientist. No seeding is permitted without approval of the Wetland Scientist.
- The Upland Seed Mix shall be applied to all disturbed soils within uplands adjacent to the Wetland Mitigation Area.
- The seed mixes shall be applied at a rate of 1 lb per 2,500 square feet. Seeds may be applied with a spreader or hydroseeded. If a hydroseed mulch is not used, the seeded area must be covered with a light layer of clear, seed-free straw.
- Watering shall be required during the growing season (May 1 Nov. 1) when natural
  rainfall is below one inch per week, for the first month. Water shall be applied in
  sufficient quantity to thoroughly saturate the soil in the root zone of each plant.
  Following the first month of planting, watering will be limited to periods of declared
  drought. Water shall be provided by the Contractor.

Planting Schedule						
Symbol	Common Name	Latin Name	Quantity	Size		
<b>(</b> )	Winterberry	llex verticillata	16	2-3 ft ht		
$\odot$	Highbush blueberry	Vaccinium corymbosum	16	2-3 ft ht		
×	Sweet pepperbush	Clethra alnifolia	14	2-3 ft ht		

Upland Seed Mix					
Common Name	Latin Name				
Little bluestem	Schizachyrium scoparium				
Switchgrass	Panicum virgatum				
Deertongue	Dichanthelium scoparium				
Fescue	Festuca ovina				
Kentucky bluegrass	Poa pratensis				
Rough bent-grass	Agrostis scabra				
Rough goldenrod	Soldago rugosa				
New England Aster	Aster novae-angliae				

Upland Seed Mix shall include only species on this list.
Planting Rate: 1 lb/2500 square feet

NO. DATE

DESCRIPTION

<u>LEGEND</u>	
* * * * * * * * * * * * * * * * * * *	WETLAND SEED MIX
	UPLAND SEED MIX

Wetland Seed Mix						
Common Name	Latin Name					
Sallow sedge	Carex Iurida					
Broom sedge	Carex scoparia					
Fringed sedge	Carex crinita					
Stalk-grained sedge	Carex stipata					
Bearded sedge	Carex comosa					
Tussock sedge	Carex stricta					
Fox sedge	Carex vulpinoidea					
Boneset	Eupatorium perfoliatum					
Soft rush	Juncus effusus					
Cardinal flower	Lobelia cardinalis					
Green bulrush	Scirpus atrovirens					
Woolgrass	Scirpus cyperinus					
Soft Stem bulrush	Scirpus tabernaemontani					
Rattlesnake manna-grass	Glyceria canadensis					
American manna-grass	Glyceria grandis					
Fowl meadow-grass	Poa palustris					
Rice cutgrass	Leersia oryzoides					
Virginia wild-rye	Elymus virginicus					
Riverbank wild-rye	Elymus riparius					
Grass-leaved goldenrod	Euthamia graminifolia					

DEPARTMENT OF PUBLIC INFRASTRUCTURE

WETLAND REPLICATION

**PLANTING PLAN** 

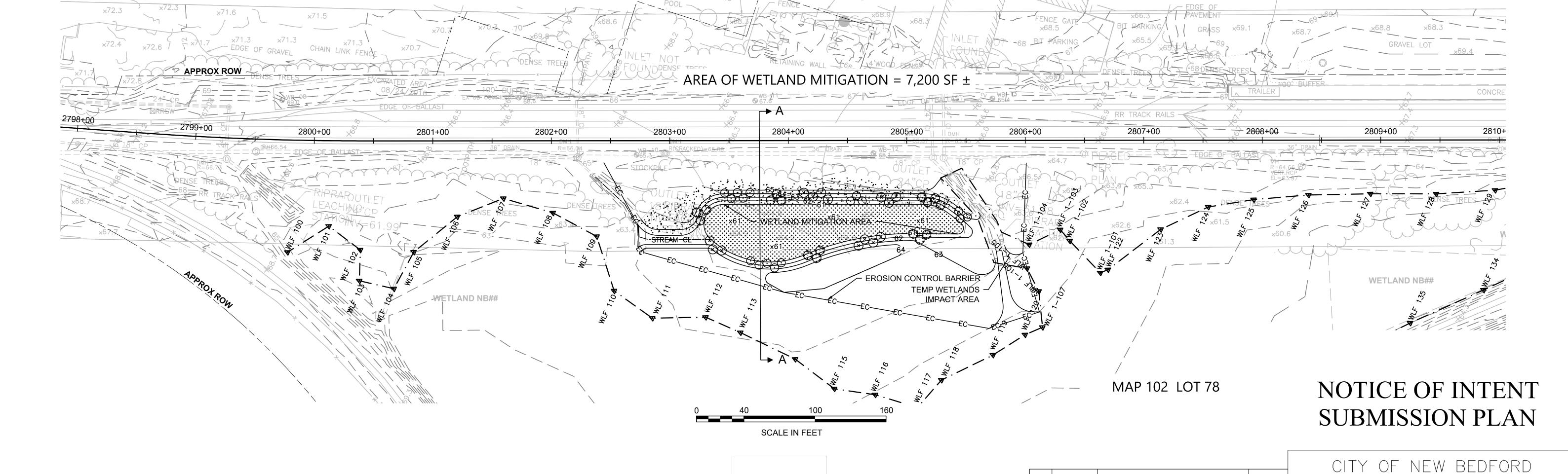
DESIGNED BY: xx

CHECKED BY: xx

SCALE: N/A

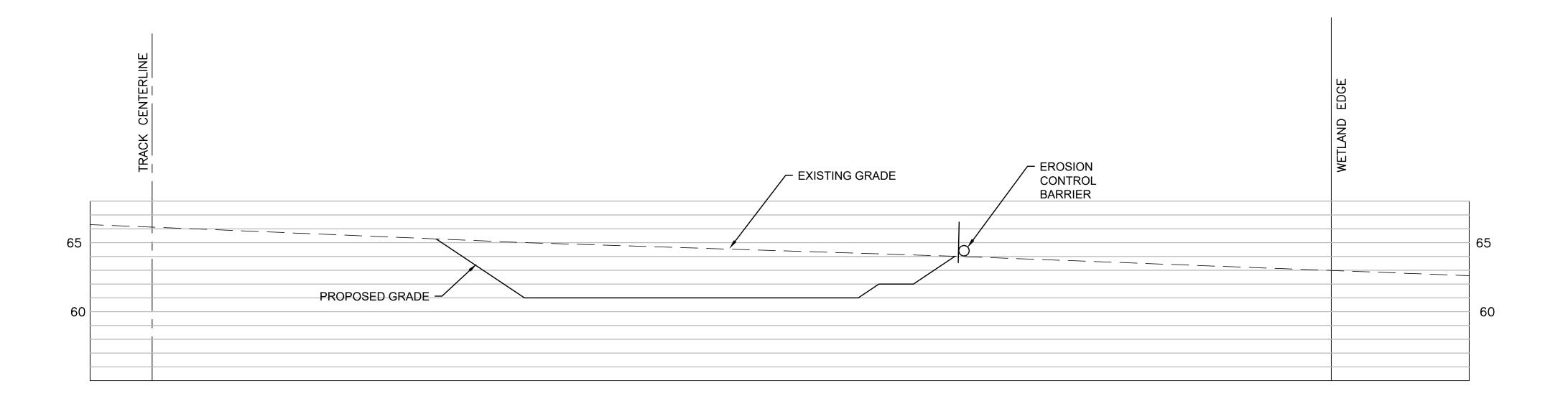
DATE : 12/13/2017

SHEET 8 OF 11



CITY ENGINEER:

DATE:



# **Cross Section A-A**

1" = 10' Horiz., 1" = 5' Vert.

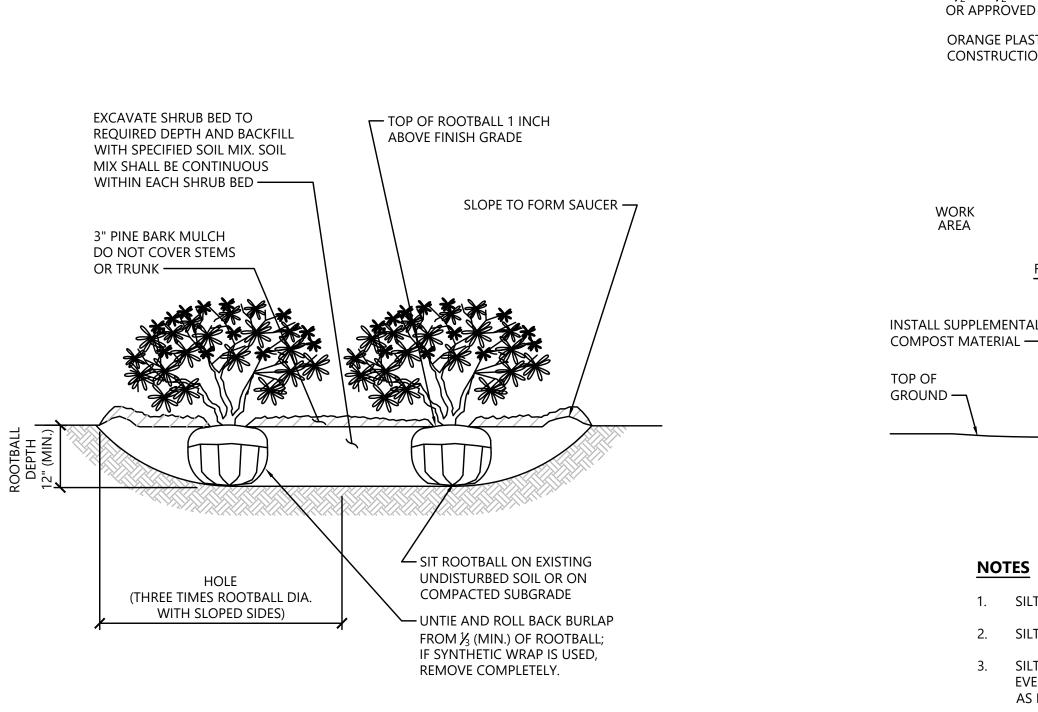
**NOTES** 

 LOOSEN ROOTS AT THE OUTER EDGE OF ROOTBALL OF CONTAINER

Source: VHB

GROWN SHRUBS.

**Shrub Bed Planting** 



1/16

LD_601

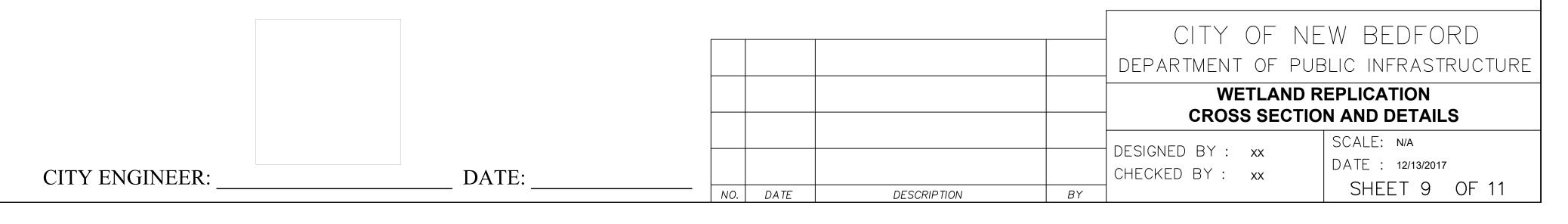
NSTALL SUPPLEMENTAL
COMPOST MATERIAL

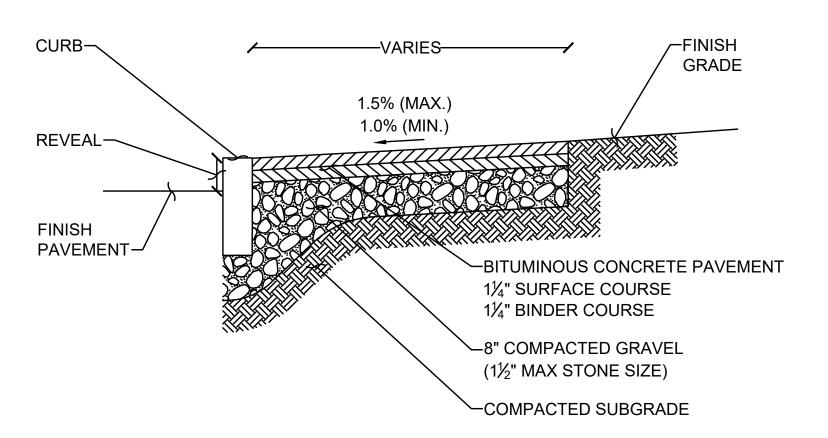
TOP OF
GROUND

### 1. SILTSOCK SHALL BE FILTREXX SILTSOXX, OR APPROVED EQUAL.

- 2. SILTSOCKS SHALL OVERLAP A MINIMUM OF 12 INCHES.
- 3. SILTSOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
- 4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.
- 5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

Dartmouth \	Nye Erosion Control	1/16
N.T.S	Source: VHB	LD_658-A

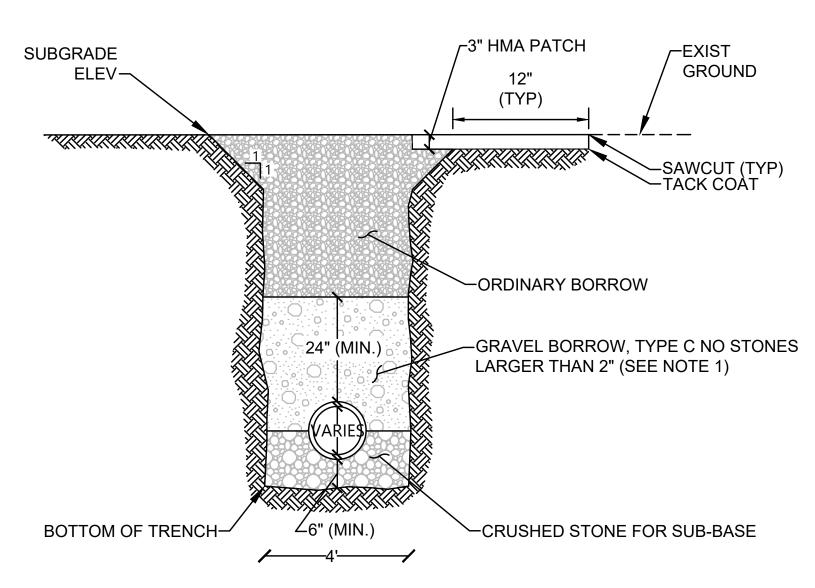




BOTH SURFACE AND BINDER MATERIAL SHALL BE DENSE MIX.

# **Bituminous Concrete Sidewalk**

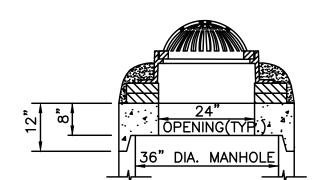
SCALE: N.T.S.



### **NOTES**

- 1. CONTROLLED DENSITY FILL TO BE USED ONLY WHEN CONVENTIONAL METHODS ARE UNUSUALLY DIFFICULT AS DETERMINED BY THE ENGINEER DUE TO
- OBSTRUCTIONS. 2. CRUSHED STONE TO BE USED DURING WET CONDITIONS AS DIRECTED BY THE

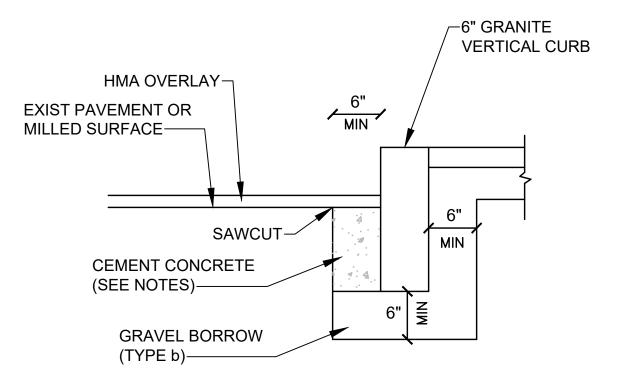
# Pipe Drainage Utility Trench



### **NOTES**

CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

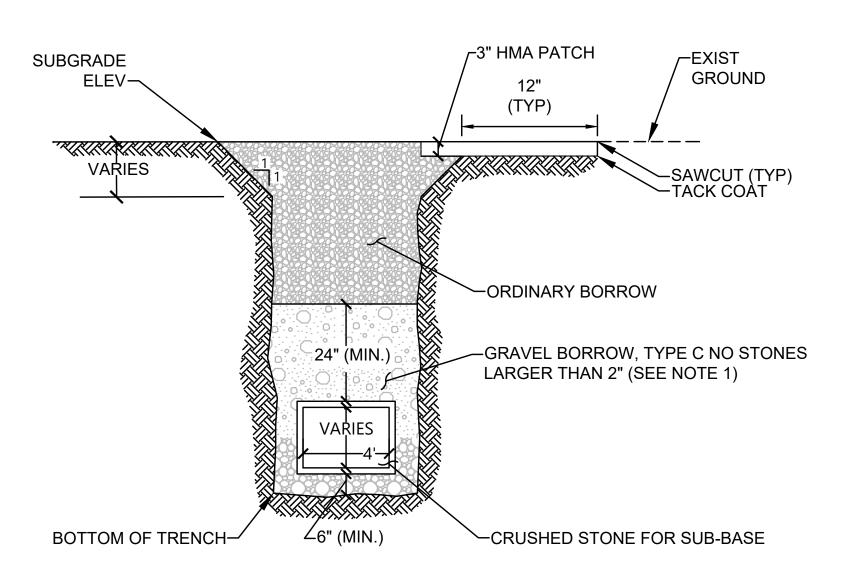
# Alternative Top Slab And/Or Beehive Grate



- CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.
- 2. SAWCUT 6" FROM CURB LINE AND REMOVE EXISTING PAVEMENT AND GRAVEL REPLACE WITH CEMENT CONCRETE.
- 3. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

# Granite Curb in Existing Pavement - with Overlay

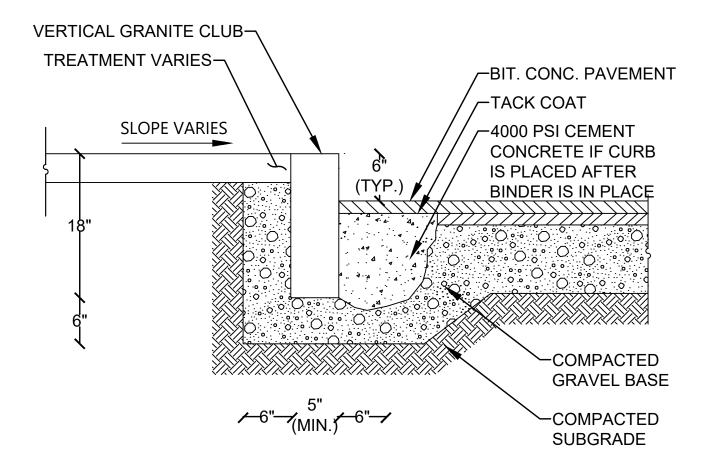
SCALE: N.T.S.



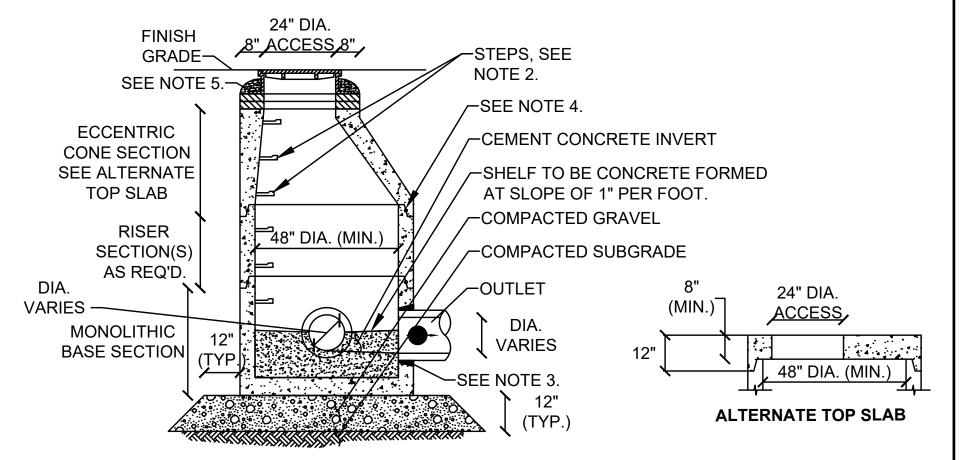
### **NOTES**

- 1. CONTROLLED DENSITY FILL TO BE USED ONLY WHEN CONVENTIONAL METHODS ARE UNUSUALLY DIFFICULT AS DETERMINED BY THE ENGINEER DUE TO OBSTRUCTIONS.
- 2. CRUSHED STONE TO BE USED DURING WET CONDITIONS AS DIRECTED BY THE

# Box Culvert Drainage Utility Trench



# Vertical Granite Curb



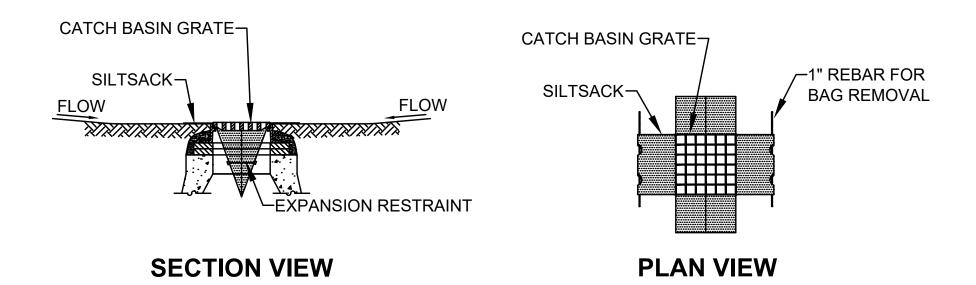
### **NOTES**

- 1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING. DIAMETER OF STRUCTURES SHALL BE COORDINATED WITH PIPE
- 2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C.
- FOR THE FULL DEPTH OF THE STRUCTURE. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO
- OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS. 4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE
- DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

# Drainage Manhole (DMH)

PREFORMED BUTYL RUBBER.

					EW BEDFORD JBLIC INFRASTRUCTURE	
				TARKILN HILL ROAD DETAILS SHEET 1		
CITY ENGINEER:	DATE:	NO. DATE DESCRIPTION	BY	DESIGNED BY: xx CHECKED BY: xx	SCALE: NTS DATE: 12/13/2017 SHEET 10 OF 11	

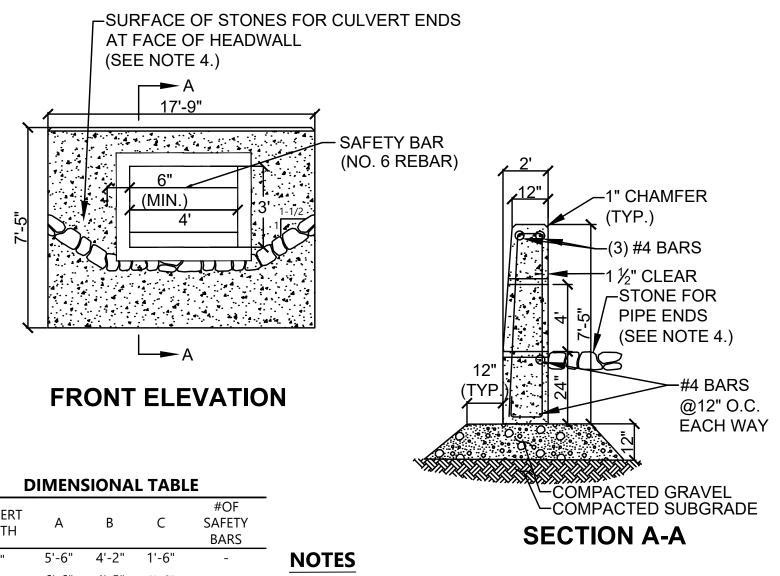


### NOTES:

- 1. INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND HAY BALES HAVE BEEN REMOVED.
- 2. GRATE TO BE PLACED OVER SILTSACK.
- SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED

### Inlet Protection - Silt Sack In Catch Basin

SCALE: N.T.S.



1. CONCRETE SHALL BE AIR ENTRAINED TYPE II CEMENT WITH

2. SAFETY BARS TO BE OMITTED WHERE INDICATED ON PLANS.

3. SAFETY BARS SHALL BE SET TO CREATE EQUAL OPENING

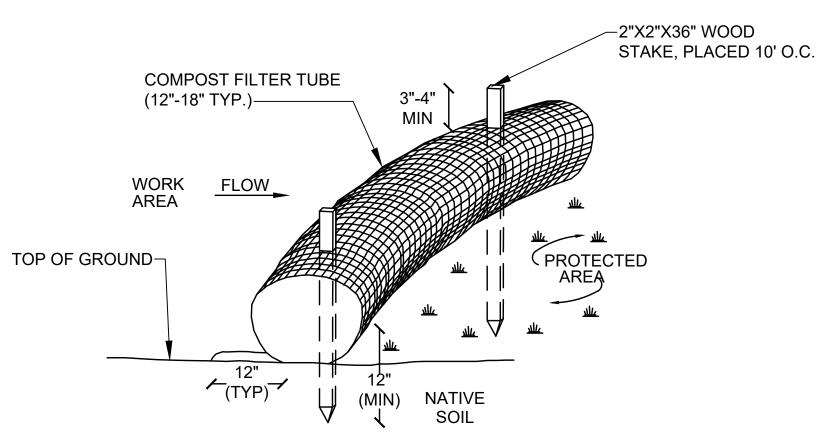
MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI

4. SEE STONE PROTECTION AT HEADWALL DETAIL.

•					
	CULVERT WIDTH	Α	В	С	#OF SAFETY BARS
•	12"	5'-6"	4'-2"	1'-6"	-
	15"	6'-6"	4'-5"	1'-6"	-
	18"	7'-6"	4'-9"	1'-6"	1
	24"	9'-0"	5'-3"	1'-6"	1
	30"	11'-0"	5'-10"	1'-6"	2
	36"	13'-0"	6'-4"	1'-9"	2
	42"	15'-9"	6'-11"	1'-9"	3
	48"	17'-9"	7'-5"	2'-0"	3
	60"	21'-9"	8'-6"	2'-6"	4
	72"	25'-9"	9'-7"	3'-0"	5

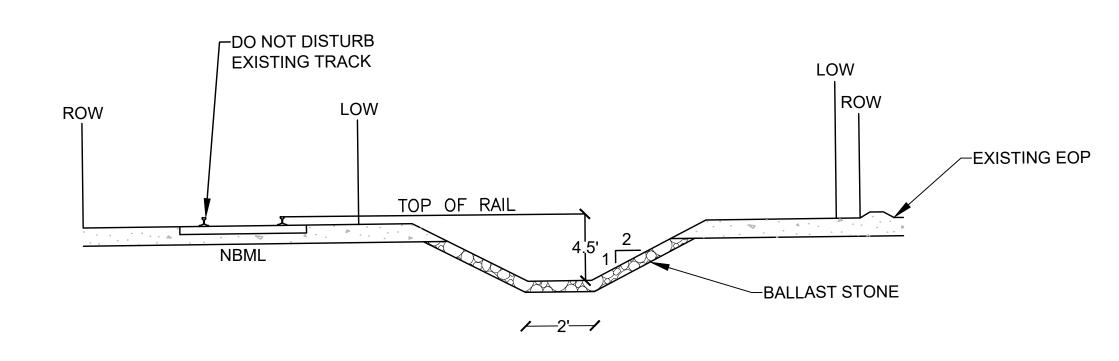
72" 25'-9" 9'-7" 3'-0" 5

# Tarkiln Hill Road Concrete Headwall (HW)

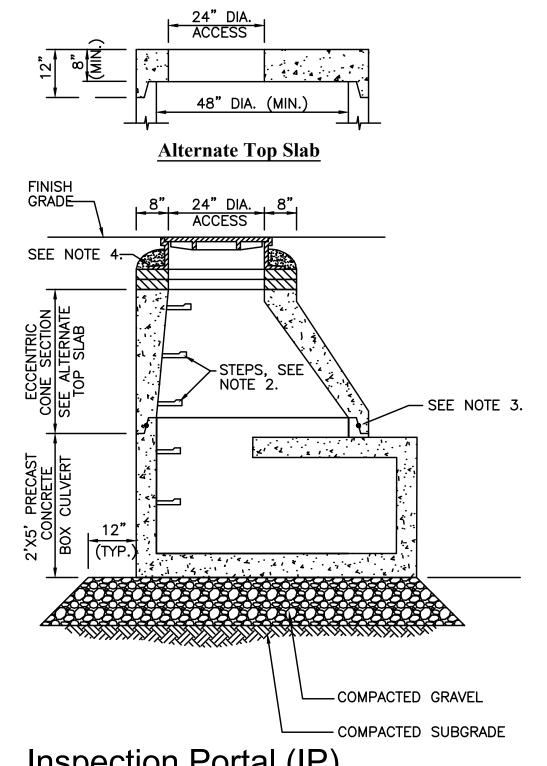


- 1. FILTER TUBE SHALL BE FILLED BY BLOWN IN ORGANIC COMPOST AND PLACED AS ILLUSTRATED ON THE PROJECT PLANS.
- COMPOST FILTER TUBES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIRED OR REPLACED AS NEEDED.
- AT COMPLETION OF PROJECT, COMPOST FILTER TUBES SHALL BE CUT OPEN AND COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.
- THE EMPTY FILTER TUBE FABRIC SHALL BE COLLECTED AND DISPOSED OF PROPERLY.

# Tarkiln Hill Road Linear Sedimentation and Erosion Control



Swale SCALE: N.T.S.



Inspection Portal (IP)

SCALE: N.T.S.

Notes: 1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING. 2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL

DEPTH OF THE STRUCTURE. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL

DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST 4. TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

