

2021 DRAINAGE & PAVING IMPROVEMENTS

HAMILTON
BRIDGE ST, MILES RIVER RD,
ESSEX ST, FOREST ST, APPALOOSA LANE,
VILLAGE LANE, BEECH ST, & LAKE SHORE AVE
TITLE SHEET & INDEX
SHEET 1 OF 16

PLAN OF

BRIDGE STREET, MILES RIVER ROAD, ESSEX STREET, APPALOOSA LANE, FOREST STREET, LAKE SHORE AVE, VILLAGE LANE, & BEECH STREET

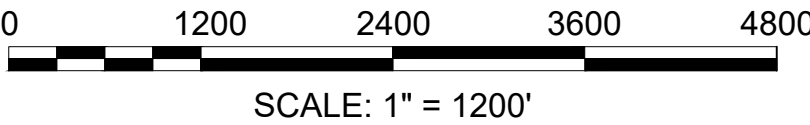
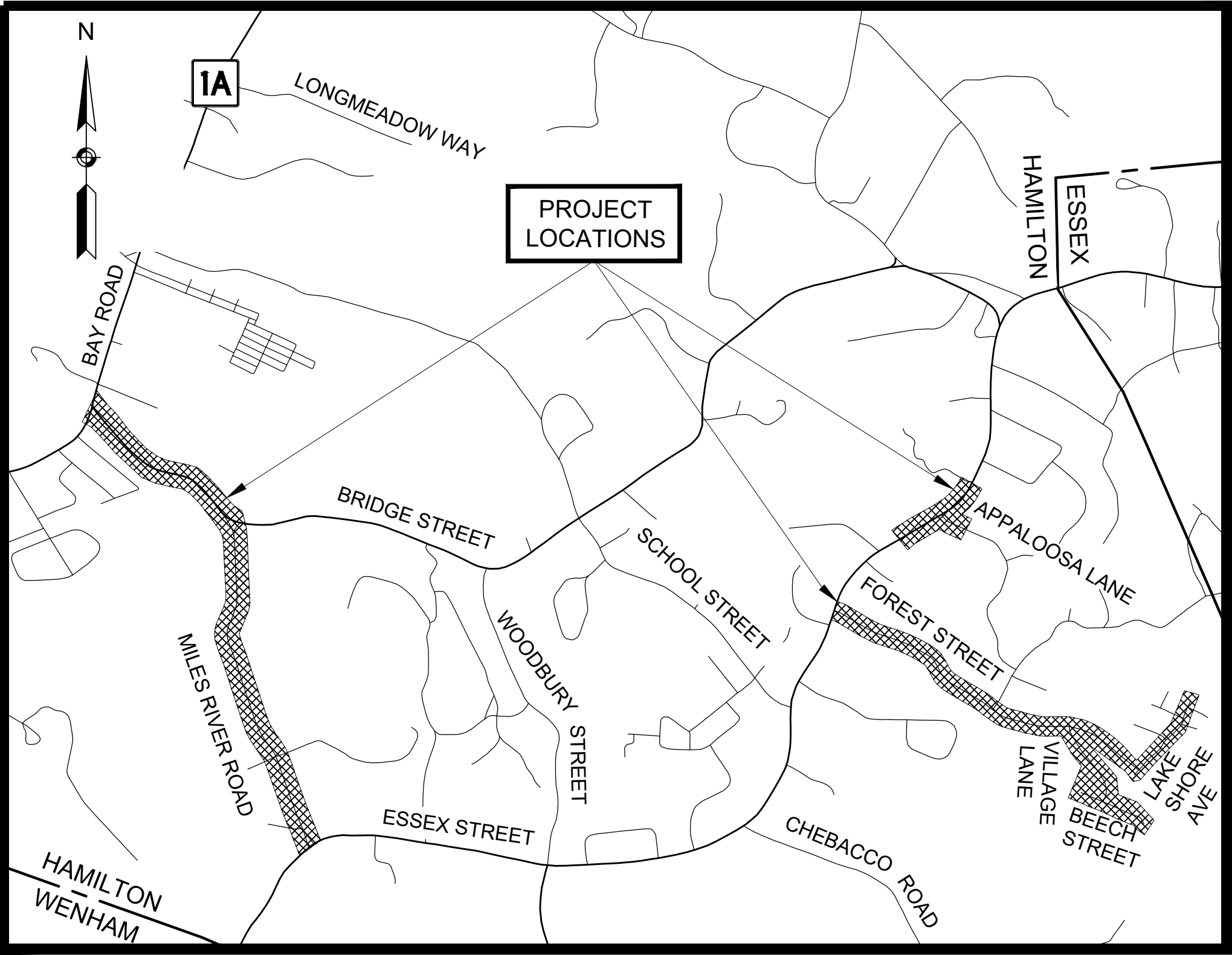
IN THE TOWN OF

HAMILTON
ESSEX COUNTY

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.


REVISED NOI SUBMITTAL

INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
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15-16	CONSTRUCTION DETAILS



LENGTH OF PROJECT ALONG BRIDGE STREET = 1940 FEET = 0.367 MILES
LENGTH OF PROJECT ALONG MILES RIVER ROAD = 3570 FEET = 0.676 MILES
LENGTH OF PROJECT ALONG ESSEX STREET = 850 FEET = 0.161 MILES
LENGTH OF PROJECT ALONG FOREST STREET = 3630 FEET = 0.68 MILES
LENGTH OF PROJECT ALONG APPALOOSA LANE = 275 FEET = 0.052 MILES
LENGTH OF PROJECT ALONG LAKE SHORE AVE = 1070 FEET = 0.203 MILES
LENGTH OF PROJECT ALONG VILLAGE LANE = 905 FEET = 0.171 MILES
LENGTH OF PROJECT ALONG BEECH STREET = 615 FEET = 0.116 MILES


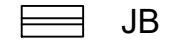











































































































































































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DATE	DESCRIPTION	REV #

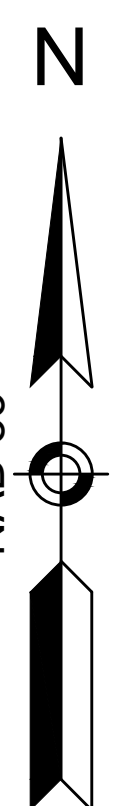


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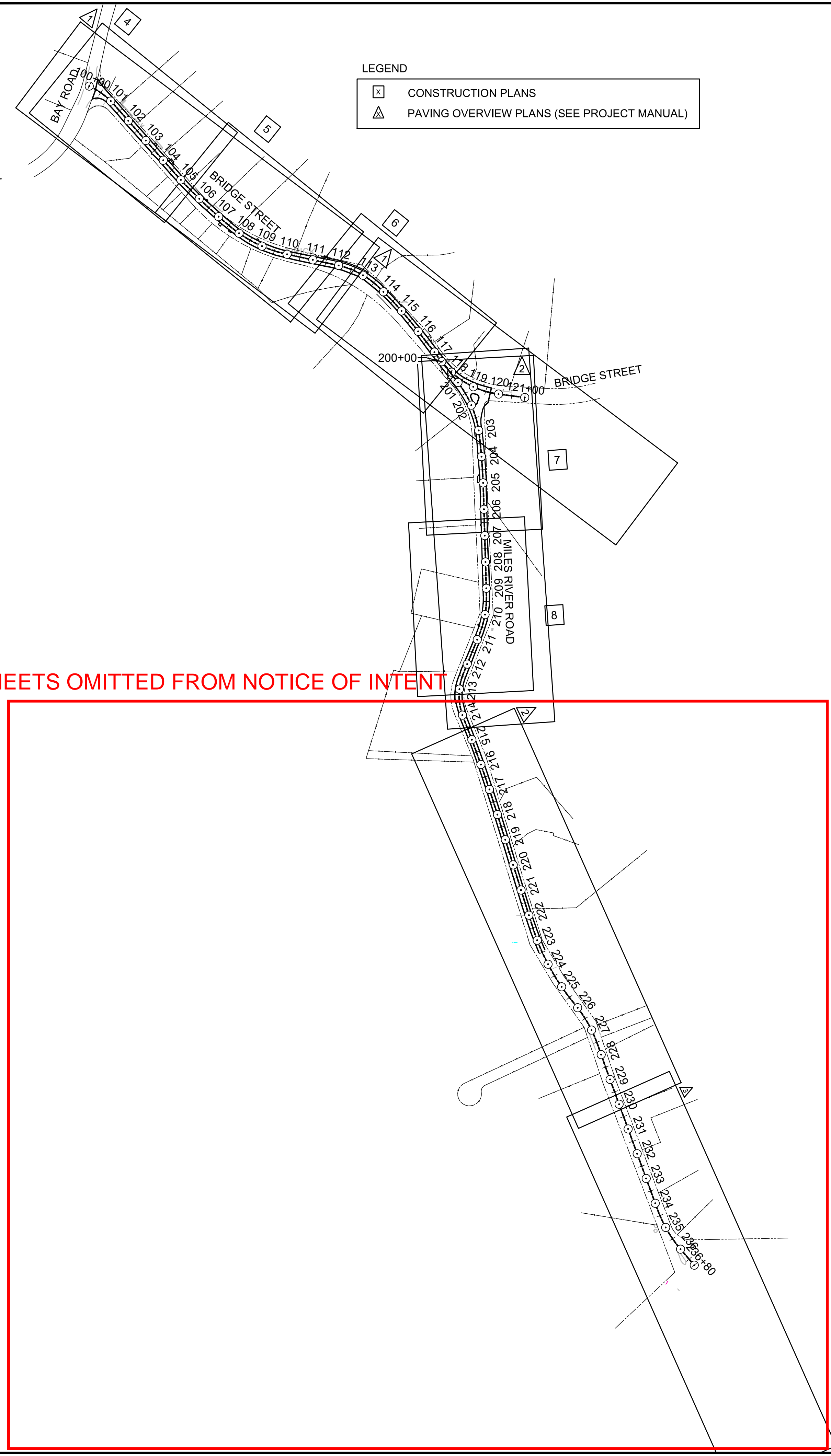
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GENERAL SYMBOLS			TRAFFIC SYMBOLS			ABBREVIATIONS		
EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION	GENERAL	HAMILTON BRIDGE ST, MILES RIVER RD, ESSEX ST, FOREST ST, APPALOOSA LANE, VILLAGE LANE, BEECH ST, & LAKE SHORE AVE LEGEND & ABBREVIATIONS SHEET 2 OF 16	
 JB	 JB	JERSEY BARRIER	 1	 1	CONTROLLER PHASE ACTUATED	AADT	ANNUAL AVERAGE DAILY TRAFFIC	<div>GENERAL</div> <div>ABBREVIATIONS (cont.)</div>
 CB	 CB	CATCH BASIN	 1	 1	TRAFFIC SIGNAL HEAD (SIZE AS NOTED)	ABAN	ABANDON	
 FP	 FP	CATCH BASIN CURB INLET	 1	 1	WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)	ADJ	ADJUST	
 GP	 GP	FLAG POLE	 1	 1	VIDEO DETECTION CAMERA	APPROX.	APPROXIMATE	
 MB	 MB	GAS PUMP	 1	 1	MICROWAVE DETECTOR	A.C.	ASPHALT CONCRETE	
		MAIL BOX	 1	 1	PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE	ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE	
		POST SQUARE	 1	 1	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT	BIT.	BITUMINOUS	
 WELL	 WELL	POST CIRCULAR	 1	 1	VEHICULAR SIGNAL HEAD	BC	BOTTOM OF CURB	
 EHH	 EHH	WELL	 1	 1	VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED	BD.	BOUND	
		ELECTRIC HANDHOLE	 1	 1	FLASHING BEACON	BL	BASELINE	
 GG	 GG	FENCE GATE POST	 1	 1	PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)	BLDG	BUILDING	
 BHL #	 BHL #	GAS GATE	 1	 1	RAILROAD SIGNAL	BM	BENCHMARK	
 MW #	 MW #	BORING HOLE	 1	 1	SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)	BO	BY OTHERS	
 TP #	 TP #	MONITORING WELL	 1	 1	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)	BOS	BOTTOM OF SLOPE	
		TEST PIT	 1	 1	HIGH MAST POLE OR TOWER	BR.	BRIDGE	
 *	 *	HYDRANT	 1	 1	SIGN AND POST	CB	CATCH BASIN	
 CO.BD.		LIGHT POLE	 1	 1	SIGN AND POST (2 POSTS)	CBCI	CATCH BASIN WITH CURB INLET	
 ○ ▲	 ○ ▲	COUNTY BOUND	 1	 1	MAST ARM WITH LUMINAIRE	CC	CEMENT CONCRETE	
 ○	 ○	GPS POINT	 1	 1	OPTICAL PRE-EMPTION DETECTOR	CCM	CEMENT CONCRETE MASONRY	
 ○	 ○	CABLE MANHOLE	 1	 1	CONTROL CABINET, GROUND MOUNTED	CEM	CEMENT	
 ○	 ○	DRAINAGE MANHOLE	 1	 1	CONTROL CABINET, POLE MOUNTED	CI	CURB INLET	
 ○	 ○	ELECTRIC MANHOLE	 1	 1	LOAD CENTER ASSEMBLY	CIP	CAST IRON PIPE	
 ○	 ○	GAS MANHOLE	 1	 1	PULL BOX 12"x12" (OR AS NOTED)	CLF	CHAIN LINK FENCE	
 ○	 ○	MISC MANHOLE	 1	 1	ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)	CL	CENTERLINE	
 ○	 ○	SEWER MANHOLE	 1	 1	TRAFFIC SIGNAL CONDUIT	CMP	CORRUGATED METAL PIPE	
 ○	 ○	TELEPHONE MANHOLE	 1	 1		CSP	CORRUGATED STEEL PIPE	
 ○	 ○	WATER MANHOLE	 1	 1		CO.	COUNTY	
 ■ MHB	 ■ MHB	MASSACHUSETTS HIGHWAY BOUND	 1	 1		CONC	CONCRETE	
 □ MON	 □ MON	MONUMENT	 1	 1		CONT	CONTINUOUS	
 □ SB	 □ SB	STONE BOUND	 1	 1		CONST	CONSTRUCTION	
 ■ TB	 ■ TB	TOWN OR CITY BOUND	 1	 1		CR GR	CROWN GRADE	
 Δ	 Δ	TRAVERSE OR TRIANGULATION STATION	 1	 1		DHV	DESIGN HOURLY VOLUME	
 -o TPL or GUY	 -o TPL or GUY	TROLLEY POLE OR GUY POLE	 1	 1		DI	DROP INLET	
 ○ HTP	 ○ HTP	TRANSMISSION POLE	 1	 1		DIA	DIAMETER	
 -o UFB	 -o UFB	UTILITY POLE W/ FIREBOX	 1	 1		DIP	DUCTILE IRON PIPE	
 -o UPDL	 -o UPDL	UTILITY POLE WITH DOUBLE LIGHT	 1	 1		DW	STEADY DON'T WALK - PORTLAND ORANGE	
 -o ULT	 -o ULT	UTILITY POLE W / 1 LIGHT	 1	 1		DWY	DRIVEWAY	
 -o UPL	 -o UPL	UTILITY POLE	 1	 1		ELEV (or EL.)	ELEVATION	
 ○	 ○	BUSH	 1	 1		EMB	EMBANKMENT	
 ○	 ○	TREE	 1	 1		EOP	EDGE OF PAVEMENT	
 ○	 ○	STUMP	 1	 1		EXIST (or EX)	EXISTING	
 ○	 ○	SWAMP / MARSH	 1	 1		EXC	EXCAVATION	
 ○ WG	 ○ WG	WATER GATE	 1	 1		F&C	FRAME AND COVER	
 ○ PM								

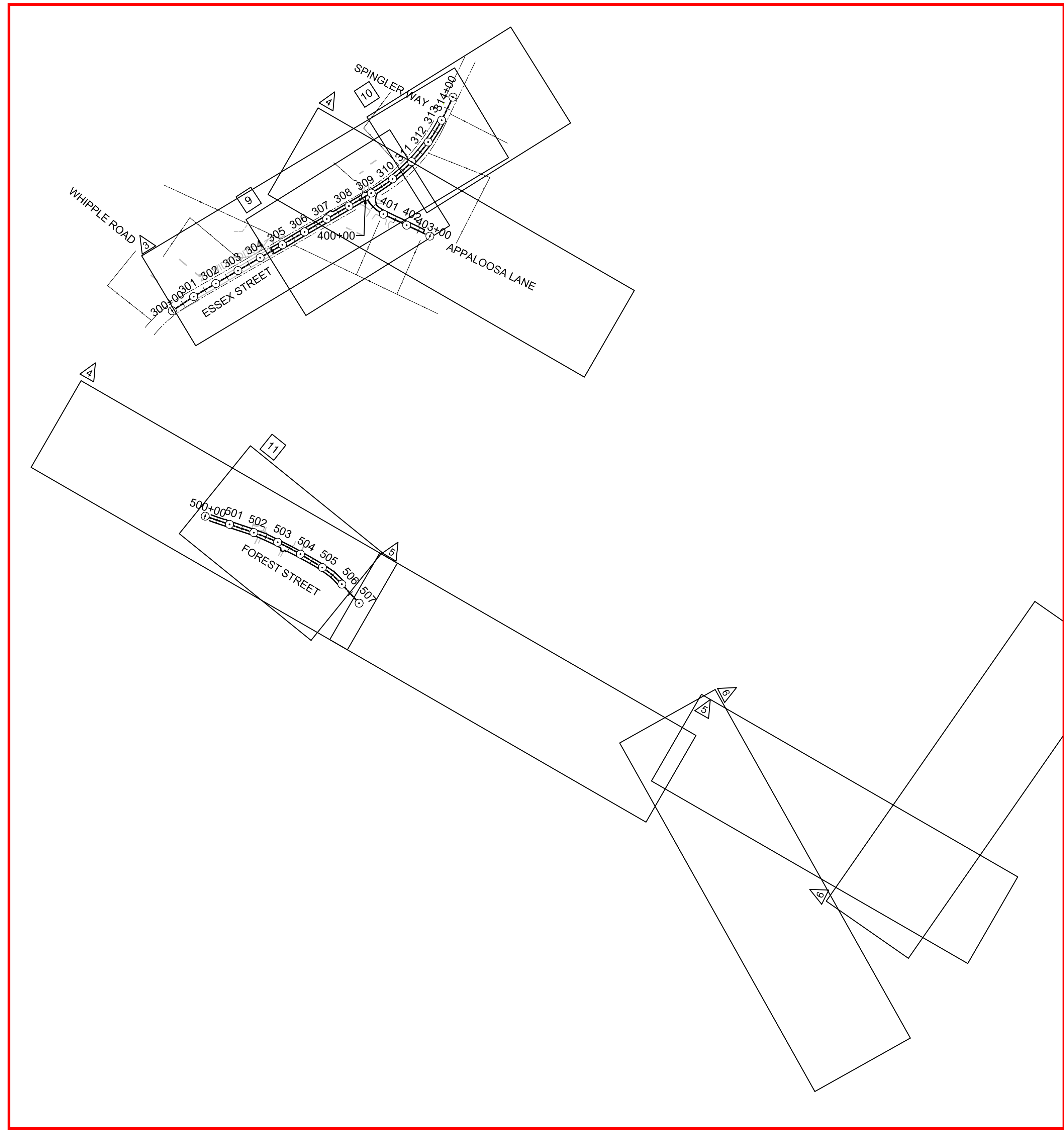


LEGEND

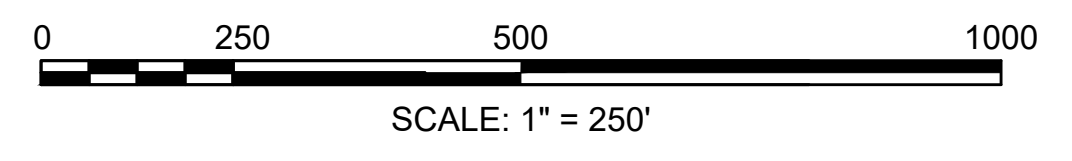
	CONSTRUCTION PLANS
	PAVING OVERVIEW PLANS (SEE PROJECT MANUAL)



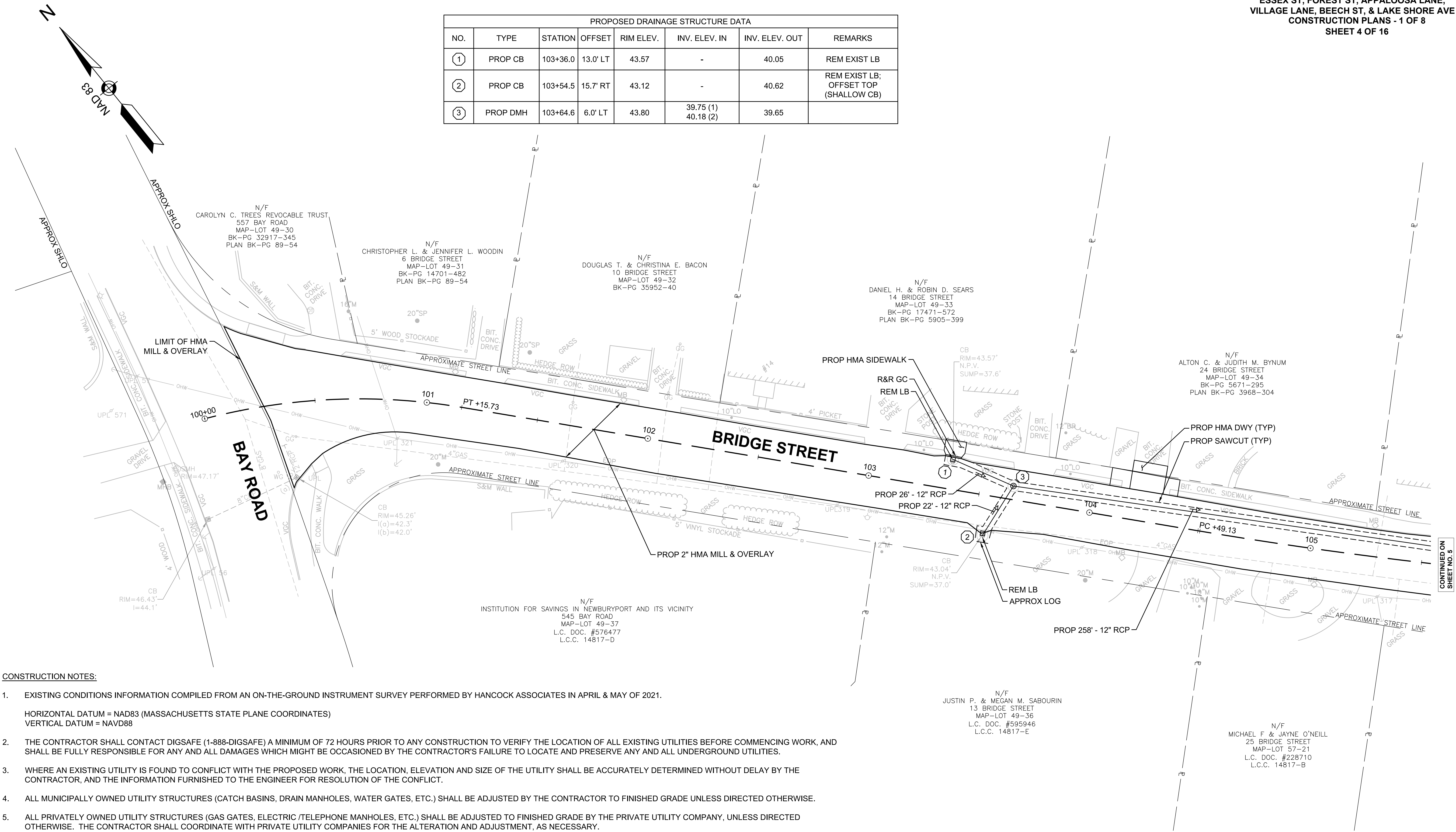
SHEETS OMITTED FROM NOTICE OF INTENT



HAMILTON
BRIDGE ST, MILES RIVER RD,
ESSEX ST, FOREST ST, APPALOOSA LANE,
VILLAGE LANE, BEECH ST, & LAKE SHORE AVE
KEY PLAN
SHEET 3 OF 16

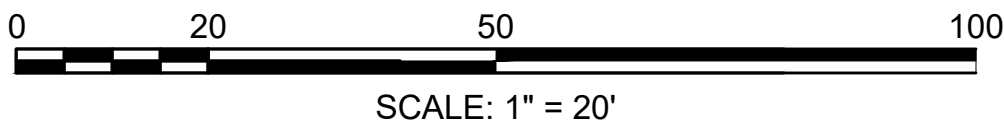


PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
①	PROP CB	103+36.0	13.0' LT	43.57	-	40.05	REM EXIST LB
②	PROP CB	103+54.5	15.7' RT	43.12	-	40.62	REM EXIST LB; OFFSET TOP (SHALLOW CB)
③	PROP DMH	103+64.6	6.0' LT	43.80	39.75 (1) 40.18 (2)	39.65	



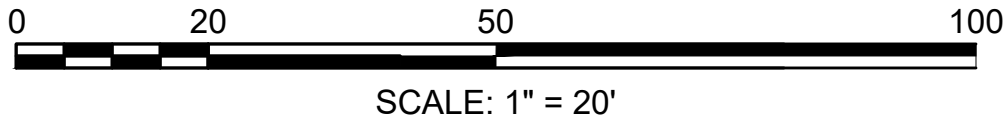
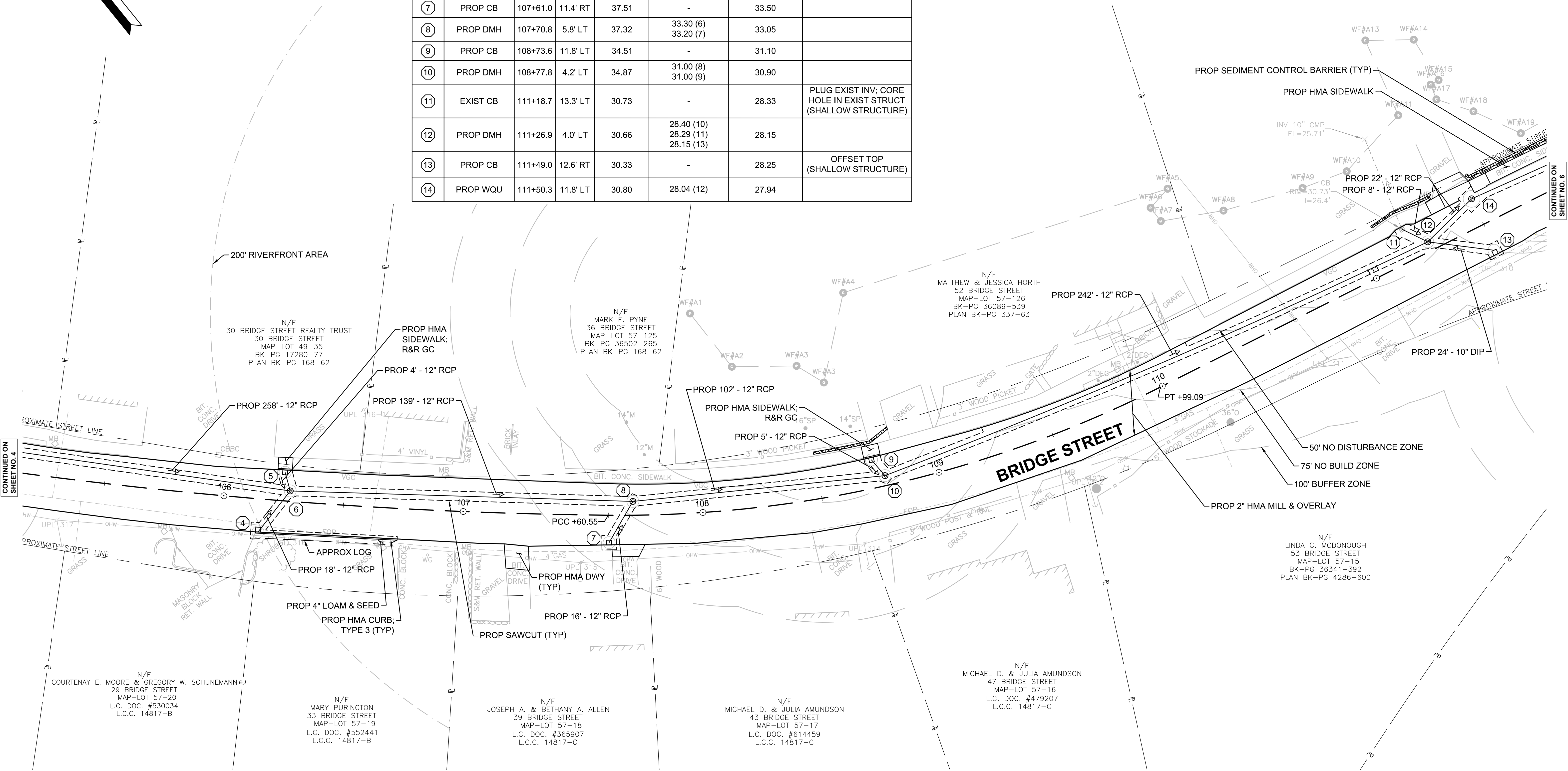
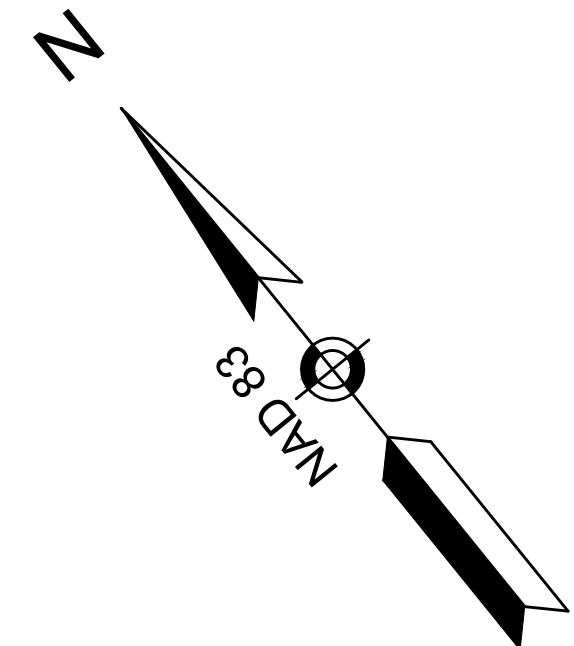
CONSTRUCTION NOTES:

- EXISTING CONDITIONS INFORMATION COMPILED FROM AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY HANCOCK ASSOCIATES IN APRIL & MAY OF 2021.
HORIZONTAL DATUM = NAD83 (MASSACHUSETTS STATE PLANE COORDINATES)
VERTICAL DATUM = NAVD88
- THE CONTRACTOR SHALL CONTACT DIGSAFE (1-888-DIGSAFE) A MINIMUM OF 72 HOURS PRIOR TO ANY CONSTRUCTION TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- 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 TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- ALL MUNICIPALLY OWNED UTILITY STRUCTURES (CATCH BASINS, DRAIN MANHOLES, WATER GATES, ETC.) SHALL BE ADJUSTED BY THE CONTRACTOR TO FINISHED GRADE UNLESS DIRECTED OTHERWISE.
- ALL PRIVATELY OWNED UTILITY STRUCTURES (GAS GATES, ELECTRIC /TELEPHONE MANHOLES, ETC.) SHALL BE ADJUSTED TO FINISHED GRADE BY THE PRIVATE UTILITY COMPANY, UNLESS DIRECTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES FOR THE ALTERATION AND ADJUSTMENT, AS NECESSARY.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE.
- 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), AS APPROVED BY THE ENGINEER.
- THE TERM "MEET EXIST" MEANS TO MEET BOTH THE EXISTING ALIGNMENT AND ELEVATION.
- ALL EXISTING TREES WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS. ALL PROVIDED DIMENSIONS REFER TO THE DIAMETER AT BREAST HEIGHT.
- ALL AREAS BETWEEN THE BACK OF SIDEWALK OR CURB TO THE LIMIT OF GRADING, OR AREAS DISTURBED BY THE CONTRACTORS OPERATIONS SHALL BE RESTORED WITH 4 INCHES OF LOAM AND SEED.

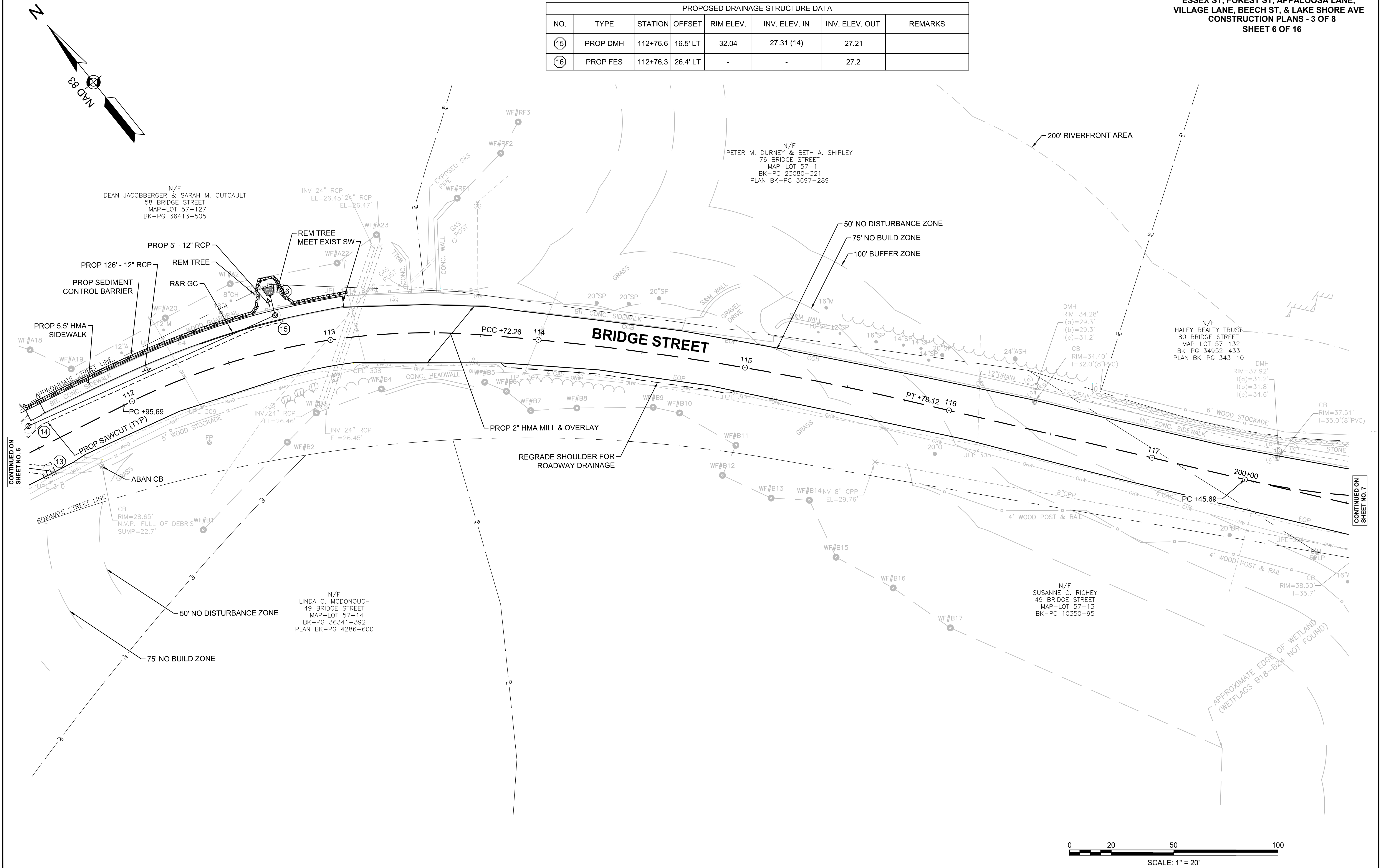


CONTINUED ON
SHEET NO. 5

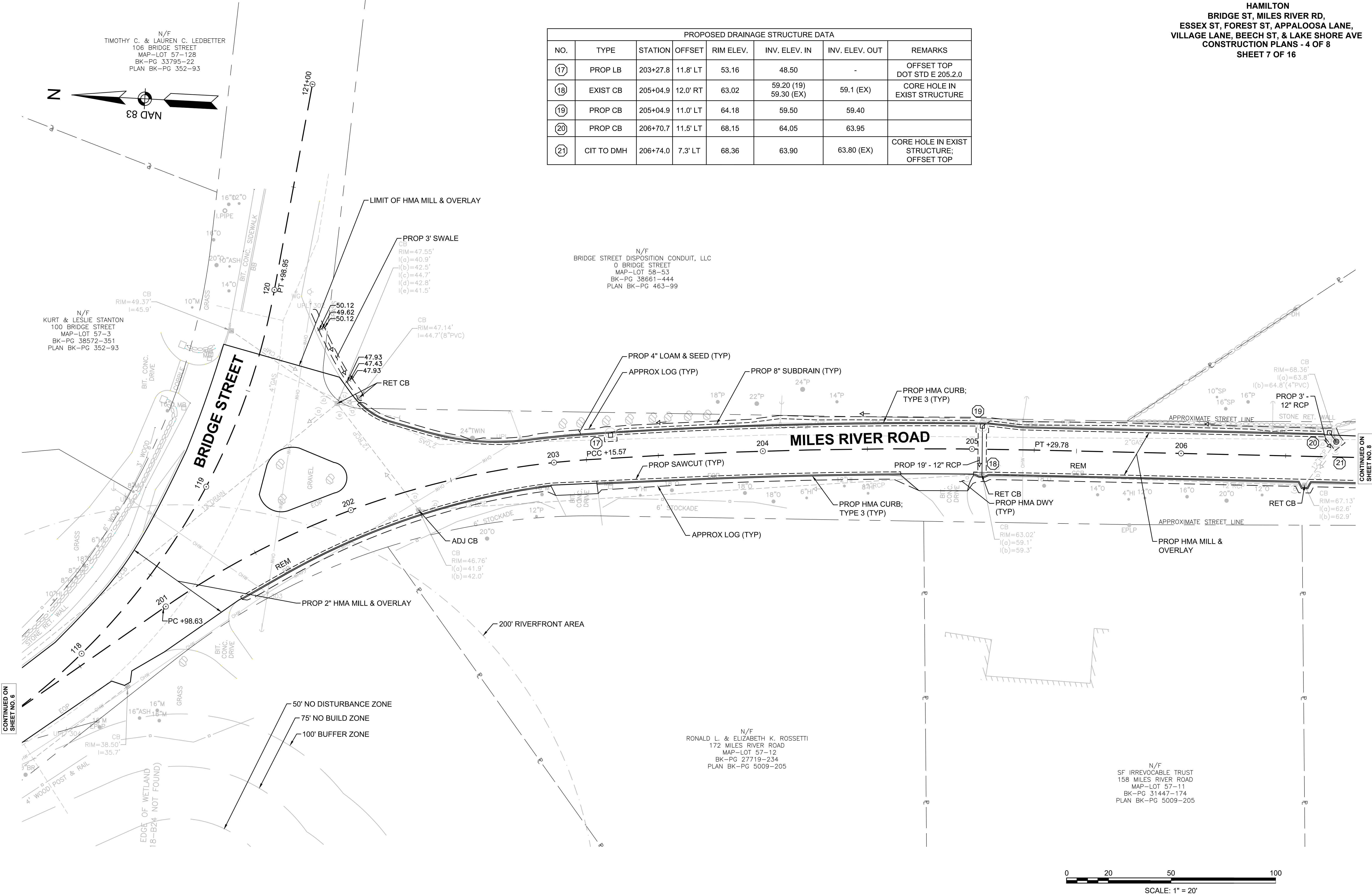
PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
4	PROP CB	106+15.4	13.7' RT	41.70	-	37.70	OFFSET TOP
5	PROP CB	106+24.7	11.9' LT	41.70	-	37.70	
6	PROP DMH	106+27.5	4.3' LT	41.72	36.20 (3) 37.35 (4) 37.60 (5)	36.10	
7	PROP CB	107+61.0	11.4' RT	37.51	-	33.50	
8	PROP DMH	107+70.8	5.8' LT	37.32	33.30 (6) 33.20 (7)	33.05	
9	PROP CB	108+73.6	11.8' LT	34.51	-	31.10	
10	PROP DMH	108+77.8	4.2' LT	34.87	31.00 (8) 31.00 (9)	30.90	
11	EXIST CB	111+18.7	13.3' LT	30.73	-	28.33	PLUG EXIST INV; CORE HOLE IN EXIST STRUCT (SHALLOW STRUCTURE)
12	PROP DMH	111+26.9	4.0' LT	30.66	28.40 (10) 28.29 (11) 28.15 (13)	28.15	
13	PROP CB	111+49.0	12.6' RT	30.33	-	28.25	OFFSET TOP (SHALLOW STRUCTURE)
14	PROP WQU	111+50.3	11.8' LT	30.80	28.04 (12)	27.94	



PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
15	PROP DMH	112+76.6	16.5' LT	32.04	27.31 (14)	27.21	
16	PROP FES	112+76.3	26.4' LT	-	-	27.2	

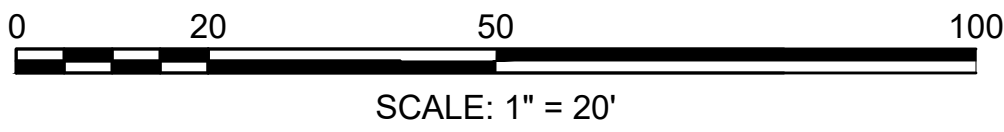


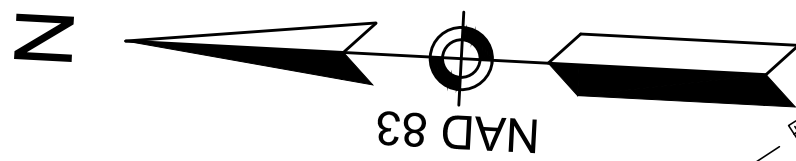
PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
17	PROP LB	203+27.8	11.8' LT	53.16	48.50	-	OFFSET TOP DOT STD E 205.2.0
18	EXIST CB	205+04.9	12.0' RT	63.02	59.20 (19) 59.30 (EX)	59.1 (EX)	CORE HOLE IN EXIST STRUCTURE
19	PROP CB	205+04.9	11.0' LT	64.18	59.50	59.40	
20	PROP CB	206+70.7	11.5' LT	68.15	64.05	63.95	
21	CIT TO DMH	206+74.0	7.3' LT	68.36	63.90	63.80 (EX)	CORE HOLE IN EXIST STRUCTURE; OFFSET TOP



CONTINUED ON
SHEET NO. 6

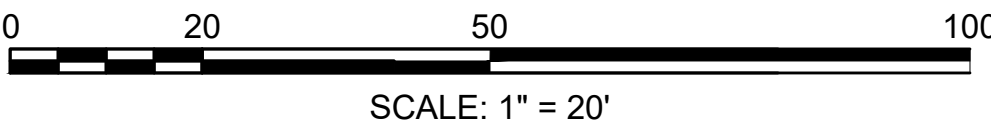
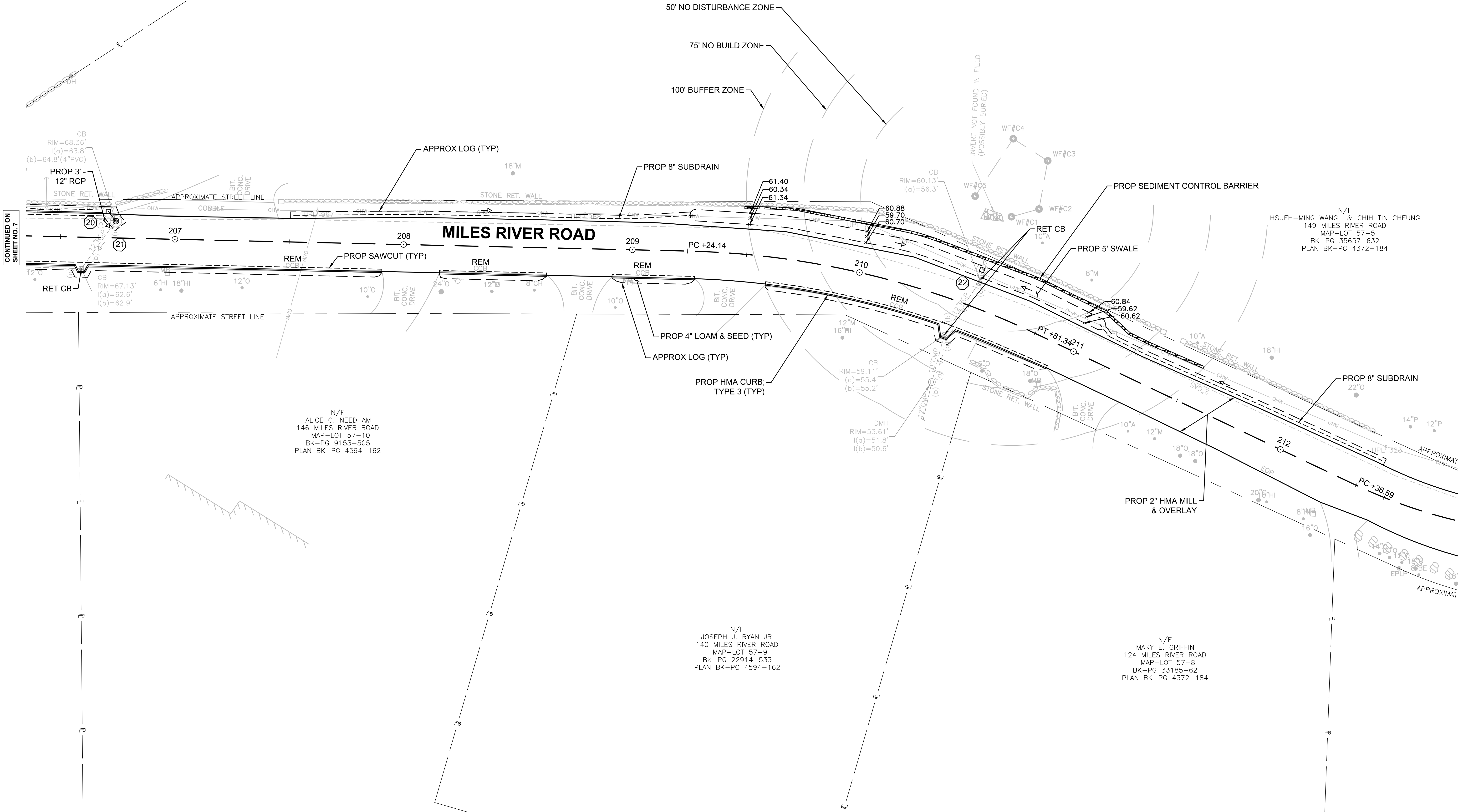
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SHEET NO. 8

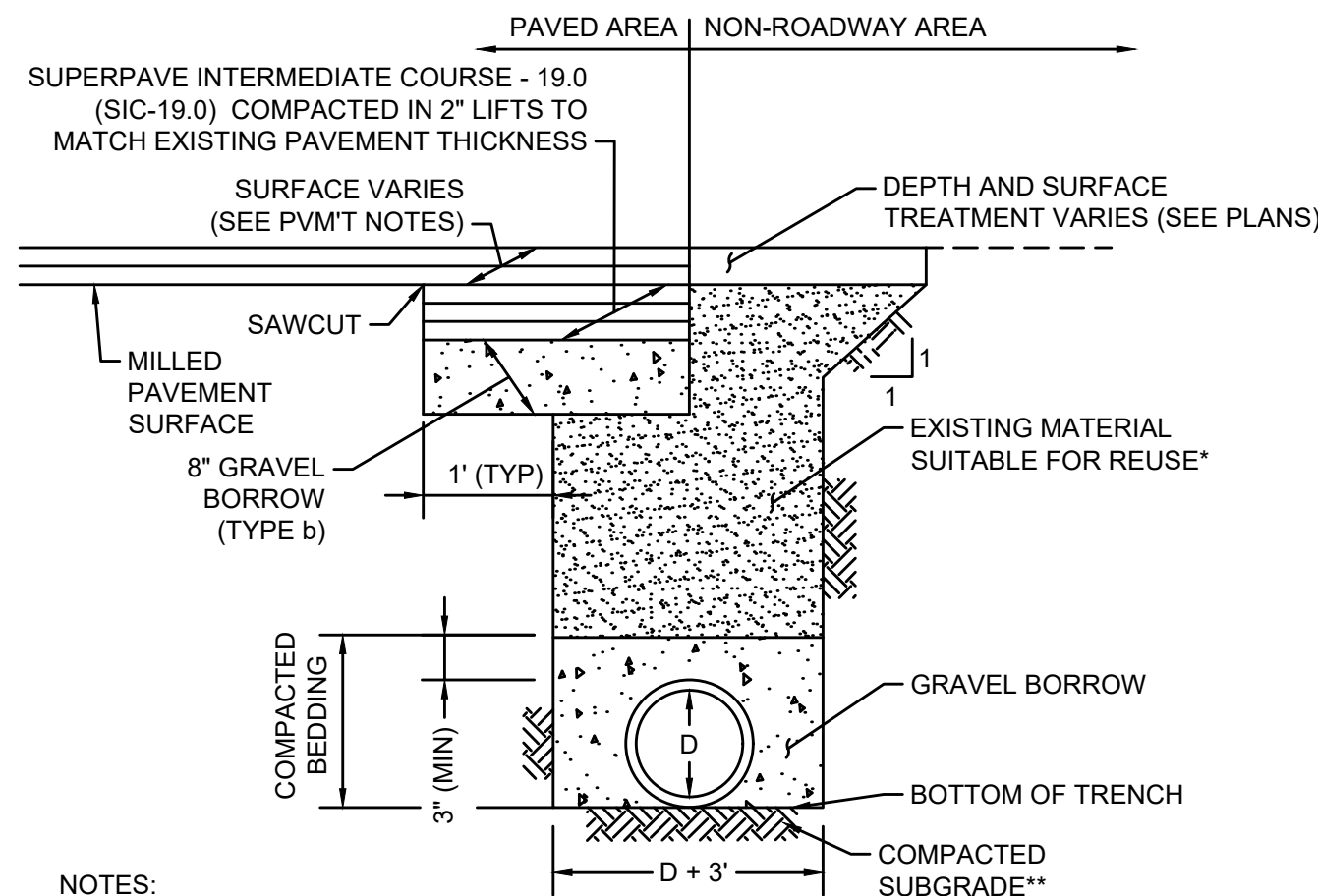




PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
22	PROP DI	210+50.0	16.6' LT	60.39	MATCH EXIST	MATCH EXIST	

HAMILTON
BRIDGE ST, MILES RIVER RD,
ESSEX ST, FOREST ST, APPALOOSA LANE,
VILLAGE LANE, BEECH ST, & LAKE SHORE AVE
CONSTRUCTION PLANS - 5 OF 8
SHEET 8 OF 16



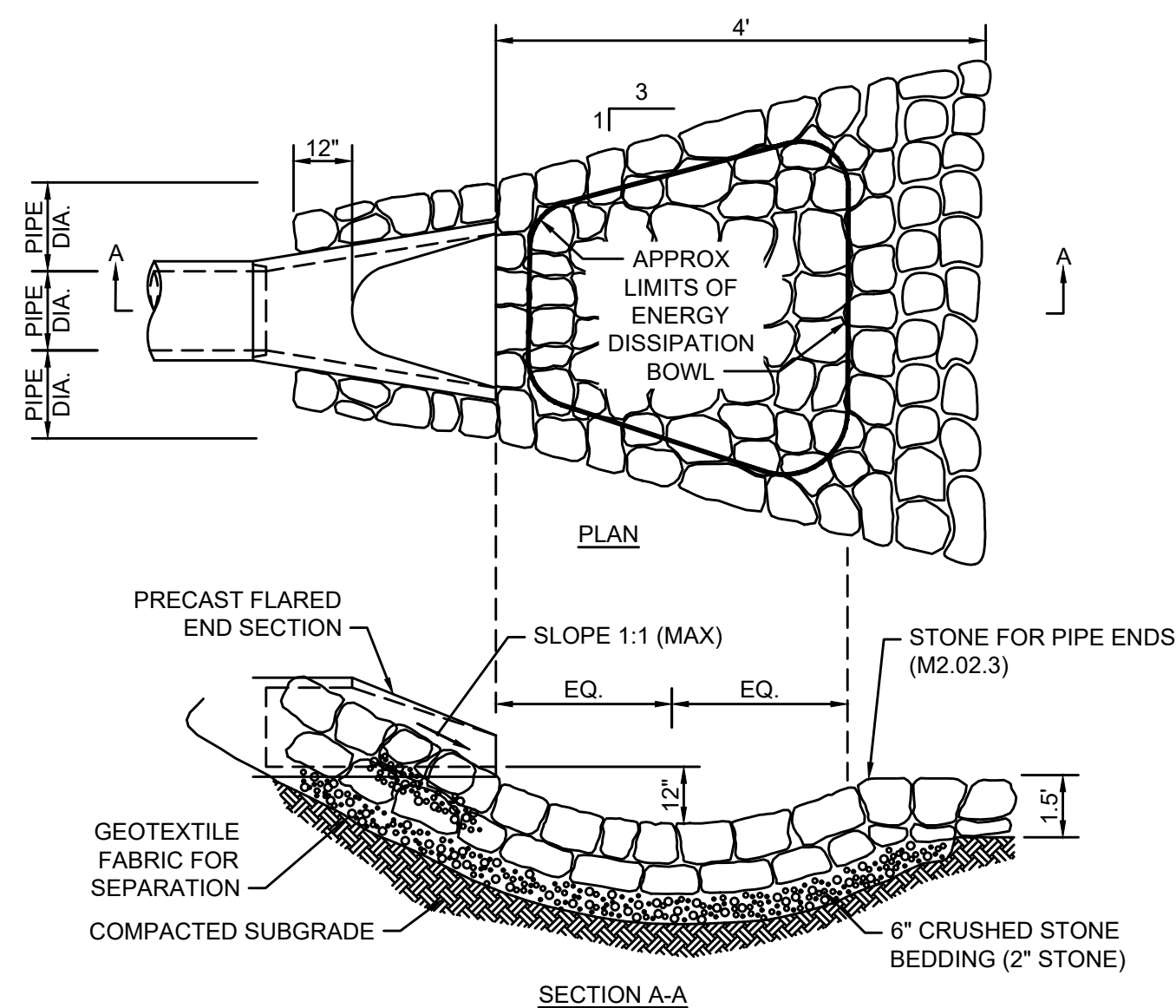


NOTES:

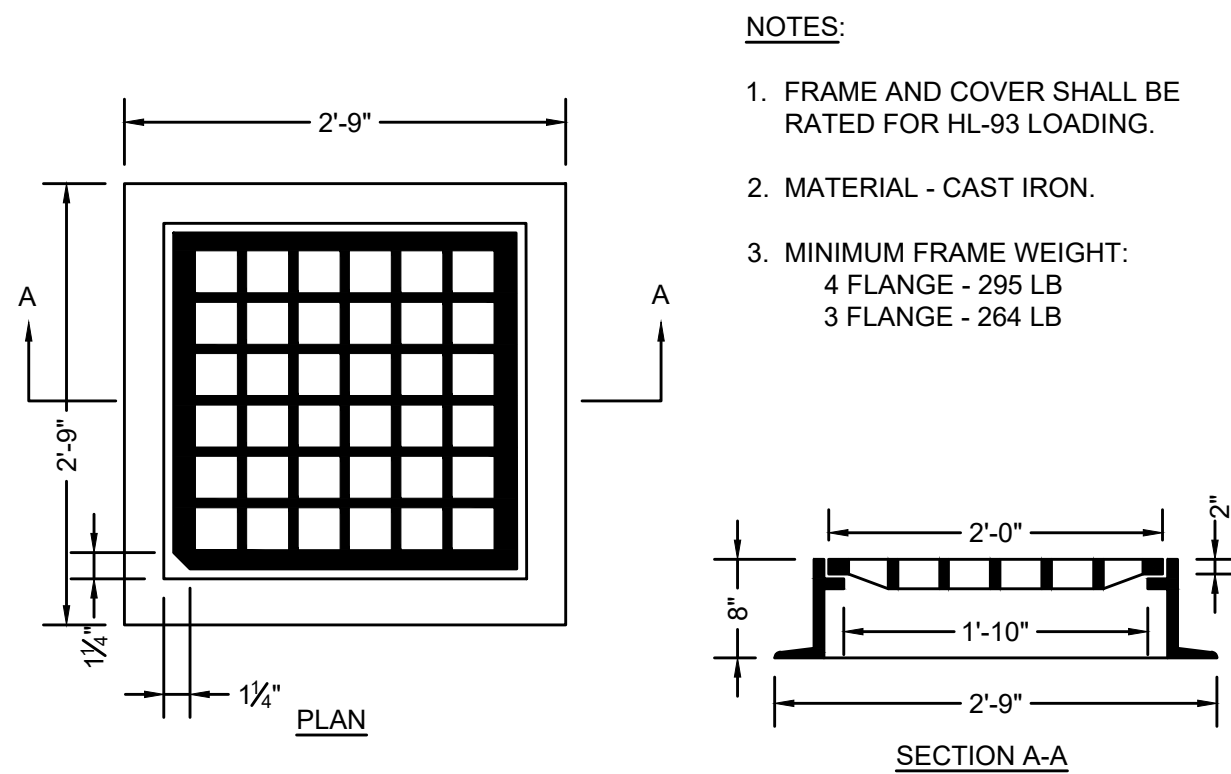
* EXISTING MATERIAL OBTAINED FROM EXCAVATION THAT IS DETERMINED TO BE SUITABLE, AND APPROVED BY THE ENGINEER SHALL BE USED. BACKFILL SHALL BE PLACED IN LAYERS NO MORE THAN 6" IN DEPTH AND THOROUGHLY COMPACTED. BACKFILLING TO A POINT 2' OVER THE PIPE SHALL CONTAIN NO STONES LARGER THAN 3".

**SOFT OR UNSUITABLE MATERIAL EXISTING BELOW THE REQUIRED BEDDING GRADE SHALL BE REMOVED AS DIRECTED AND REPLACED WITH SAND, GRAVEL, CRUSHED STONE OR OTHER SUITABLE MATERIAL AND THOROUGHLY COMPACTED.

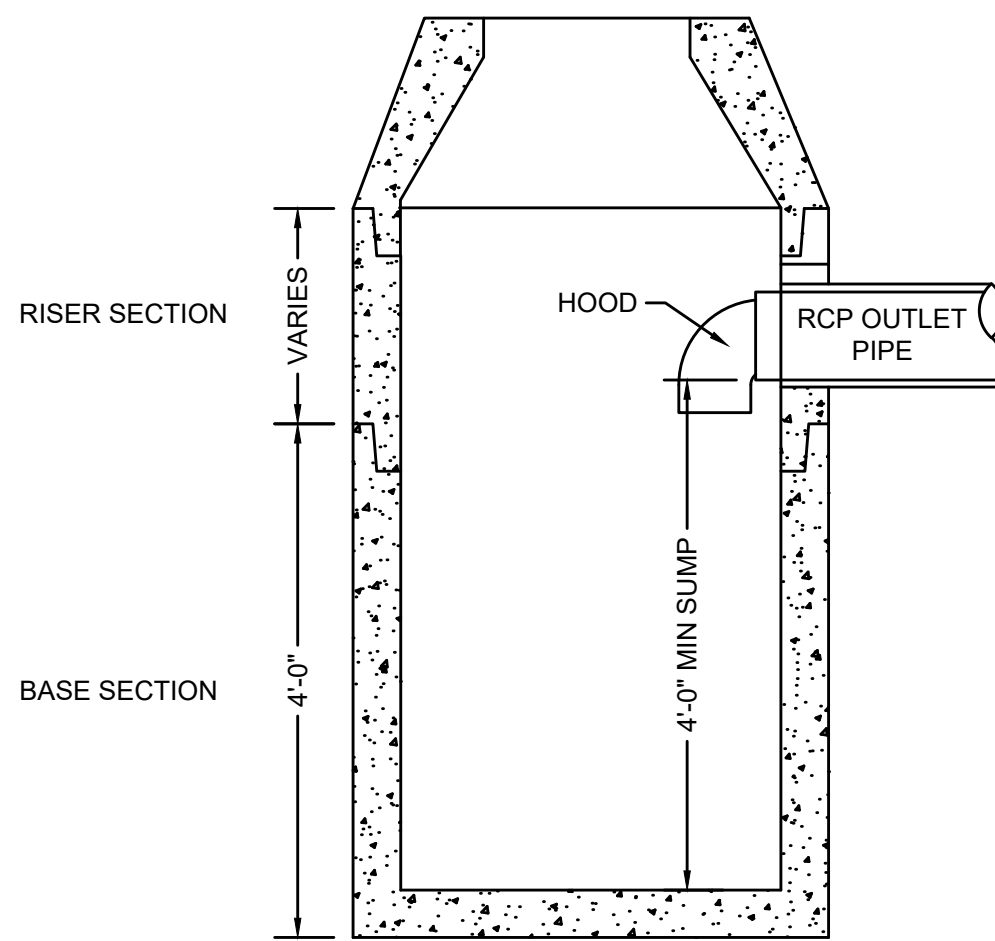
UTILITY TRENCH
N.T.S.



STONE AT FLARED END SECTION
N.T.S.



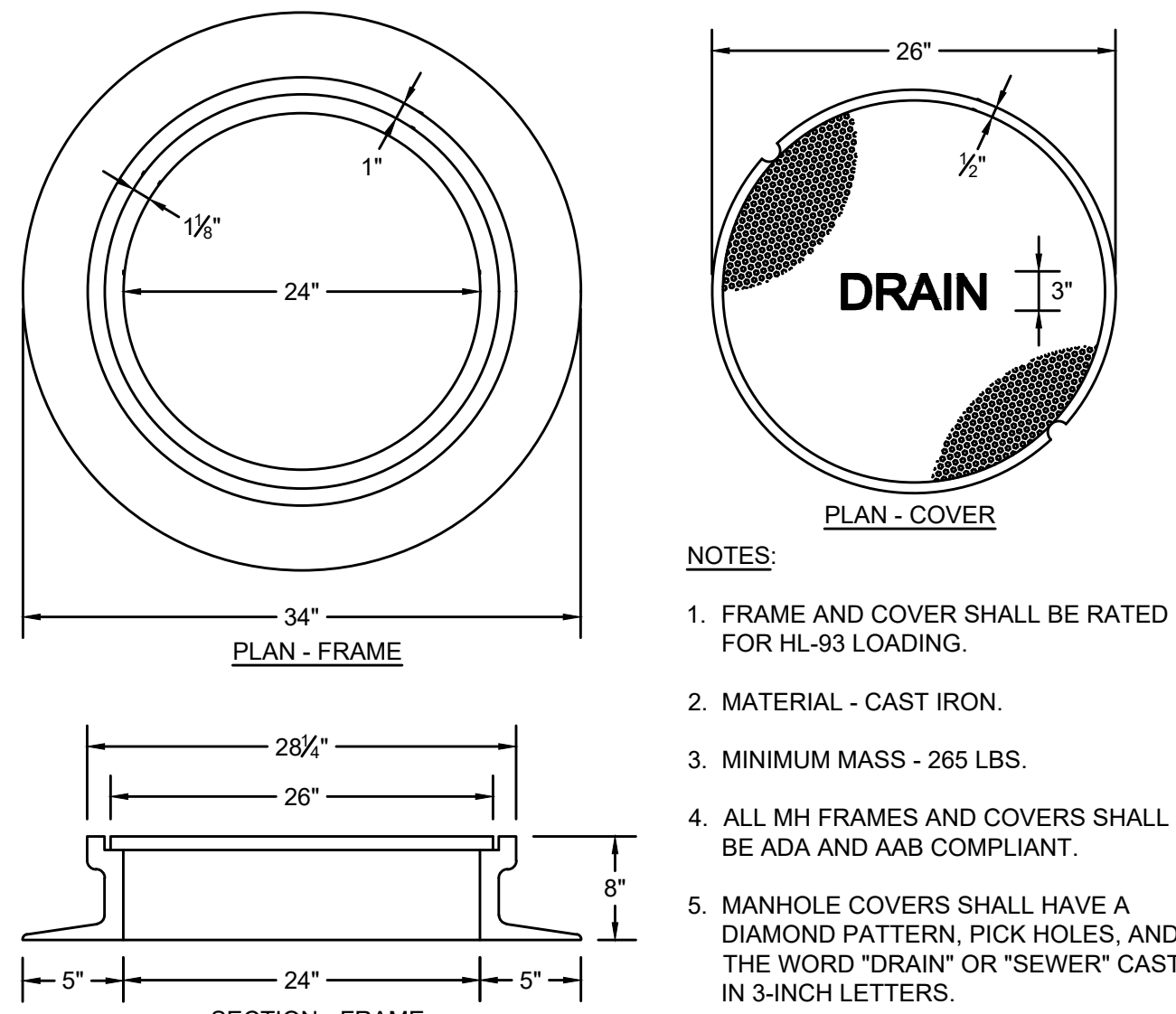
CATCH BASIN FRAME & GRATE (MUNICIPAL STANDARD)
N.T.S.



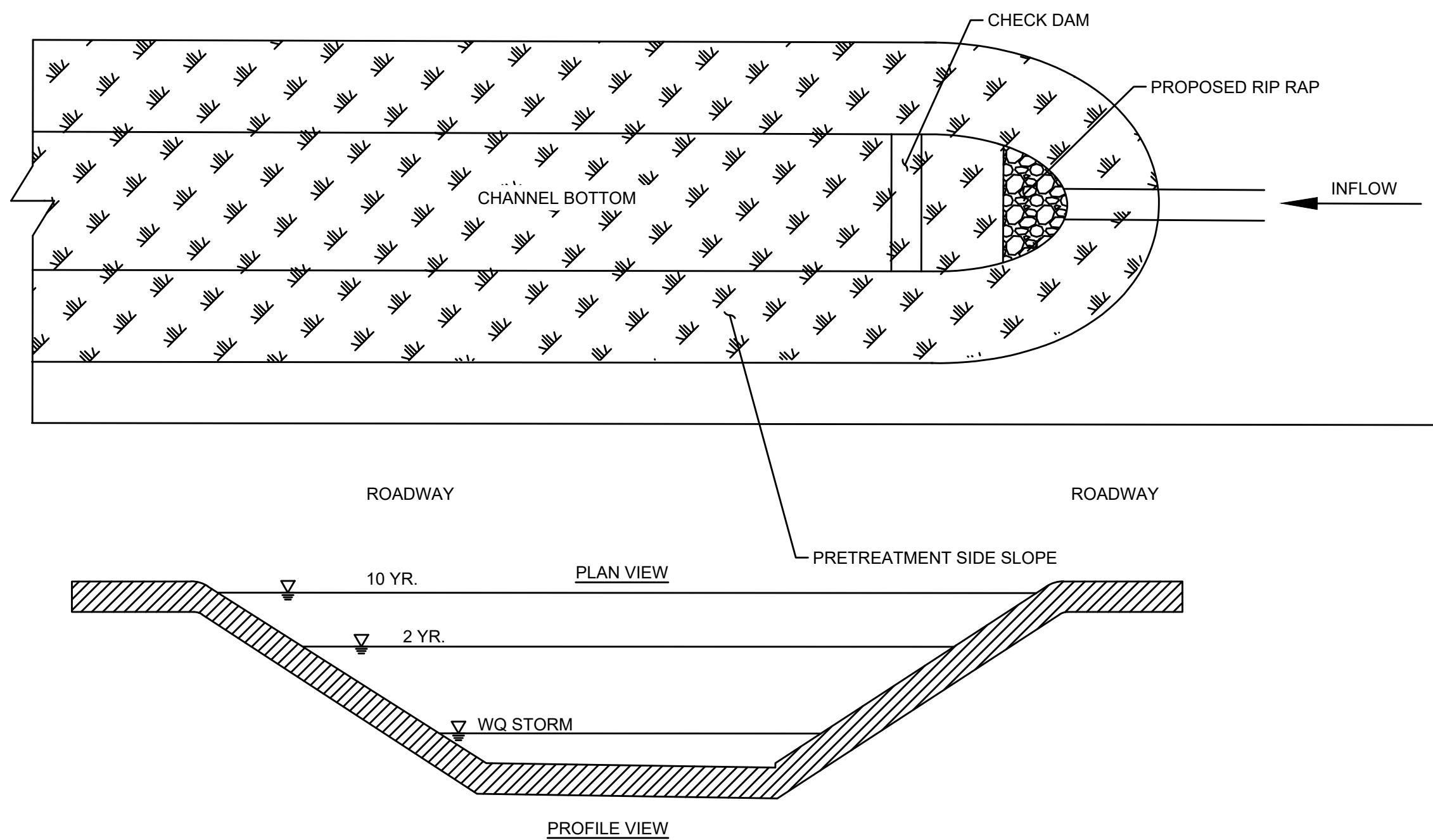
NOTE:

ALL CATCH BASINS SHALL CONFORM TO MASSDOT CONSTRUCTION STANDARD E 201.4.0 EXCEPT FOR 4' SUMP DEPTH AS SHOWN

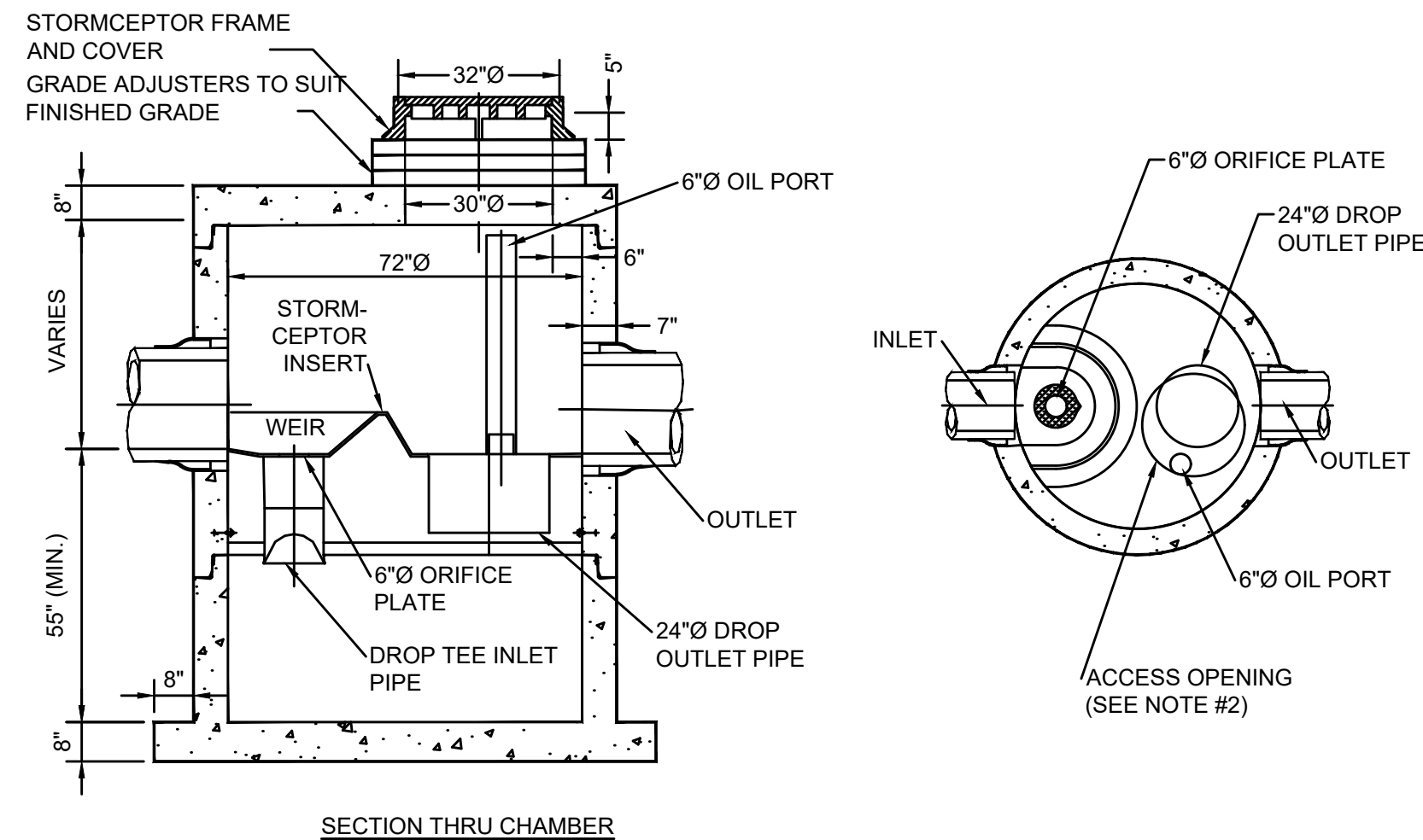
DEEP SUMP CATCH BASIN WITH HOOD
N.T.S.



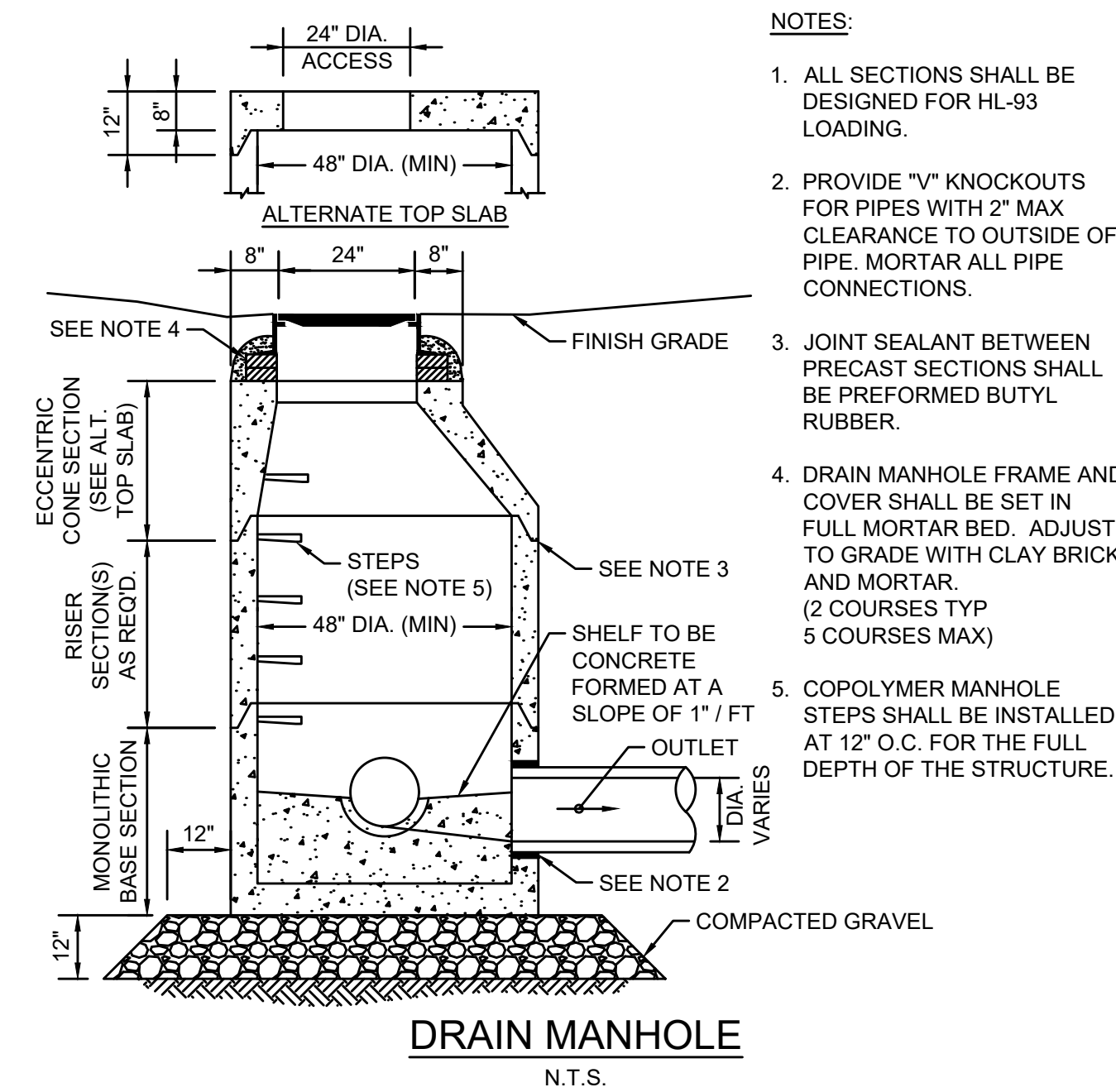
MANHOLE FRAME & COVER
N.T.S.



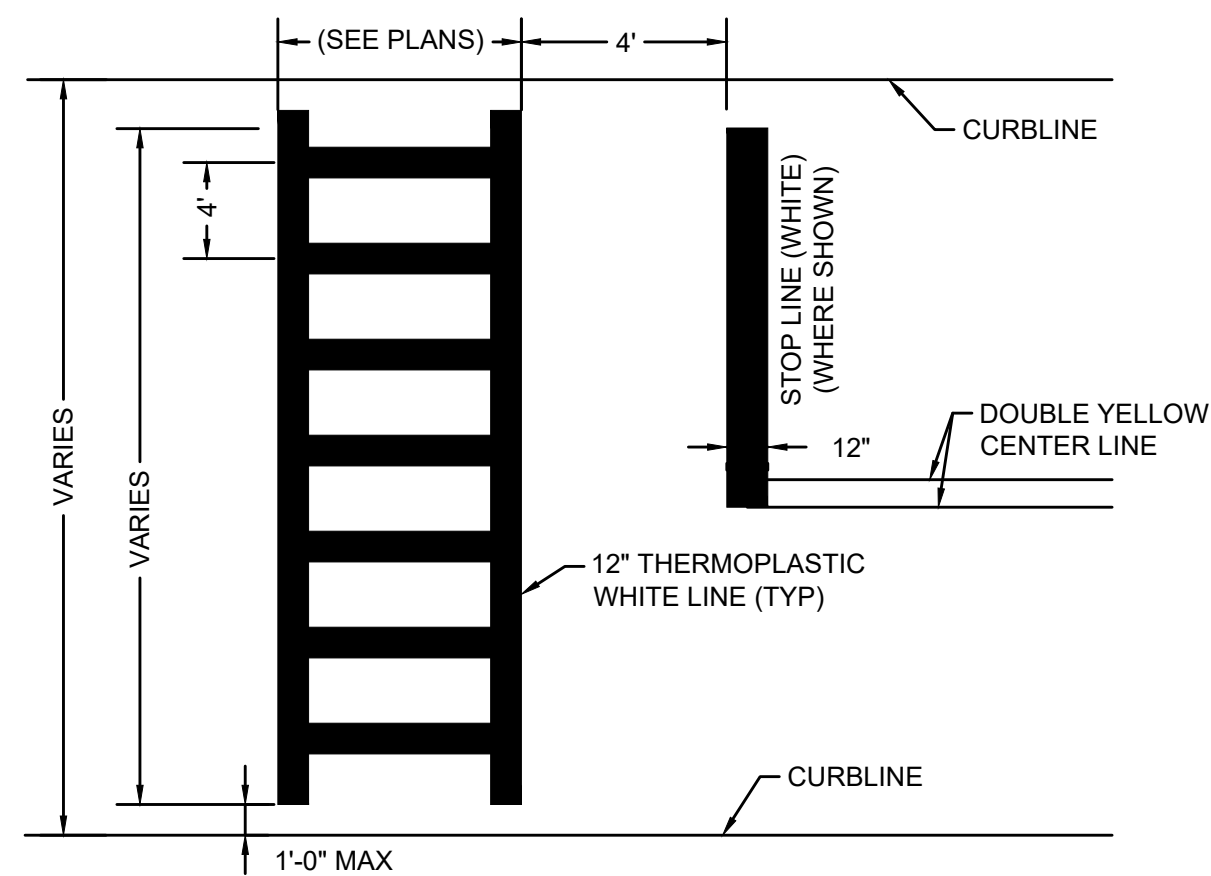
DRAINAGE SWALE
N.T.S.



STC 900 PRECAST CONCRETE STORMCEPTOR[®] (900 U.S. GALLON CAPACITY)
N.T.S.



DRAIN MANHOLE
N.T.S.



NOTES:

1. ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED.

2. LAYOUT OF CROSSWALKS SHALL BE APPROVED BY THE ENGINEER PRIOR TO APPLICATION.

CROSSWALK PAVEMENT MARKING
N.T.S.

NOTES:

1. THE USE OF FLEXIBLE CONNECTION IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.

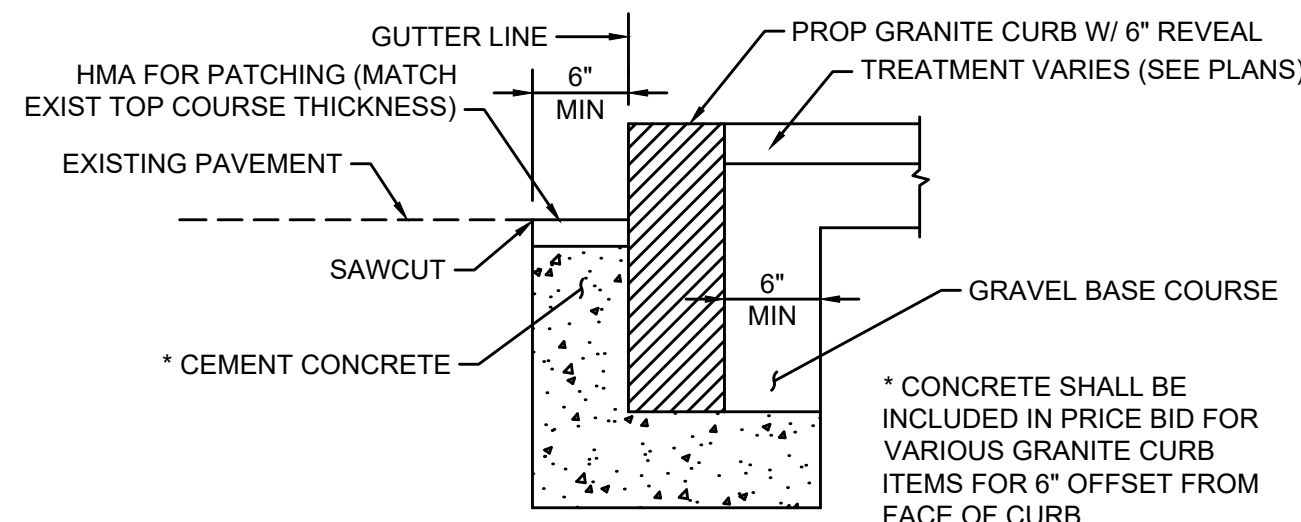
2. THE COVER SHOULD BE POSITIONED OVER THE OUTLET DROP PIPE AND THE OIL PORT.

3. THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: # 4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.

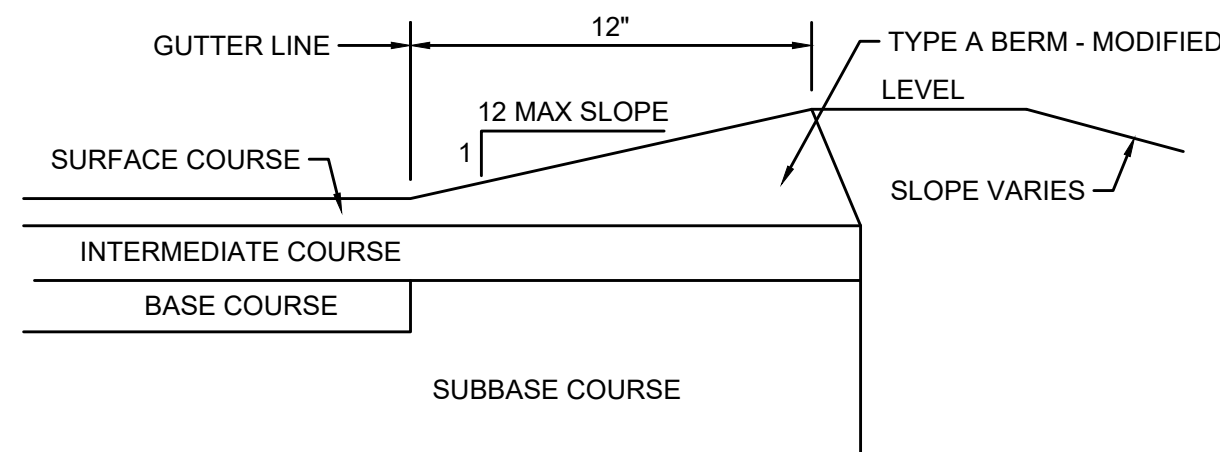
4. CONTACT A CONCRETE PIPE DIVISION REPRESENTATIVE FOR FURTHER DETAILS NOT LISTED ON THIS DRAWING.

5. A COMPARABLE PRODUCT MAY BE PROPOSED BY THE CONTRACTOR, BUT ITS USE REQUIRES APPROVAL BY THE ENGINEER OF RECORD.

SOURCE:
WWW.STORMCEPTOR.COM

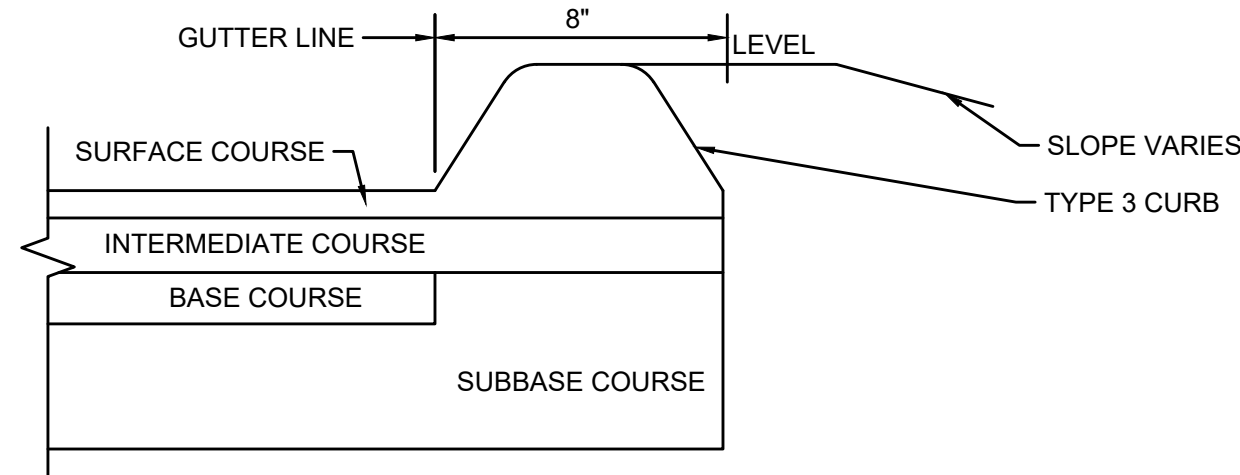


GRANITE CURB IN EXISTING PAVEMENT
N.T.S.



FOR ALL OTHER DIMENSIONS, SEE MASSDOT E 106.1.0

MONOLITHIC BERM
N.T.S.

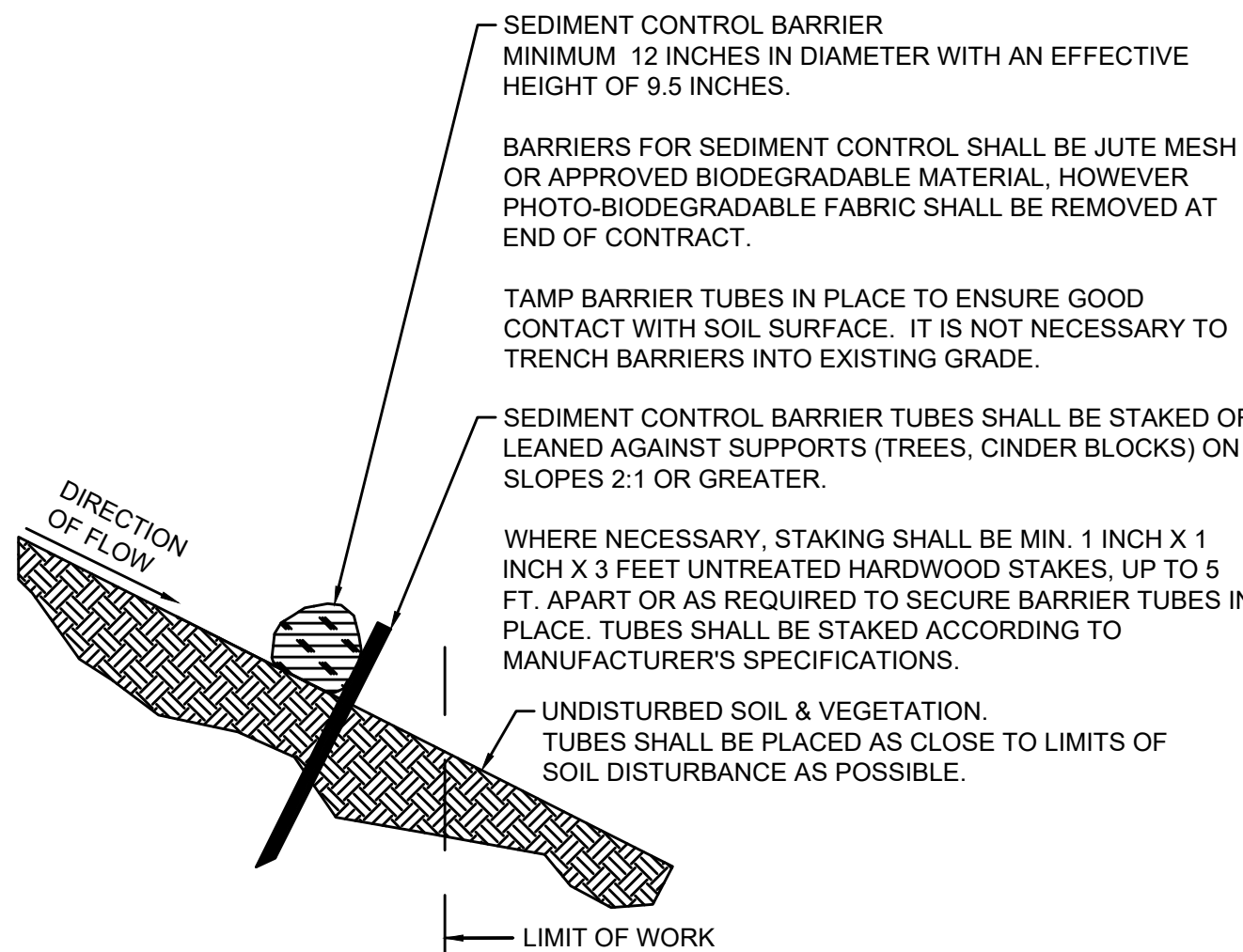


FOR ALL OTHER DIMENSIONS, SEE MASSDOT E 106.1.0

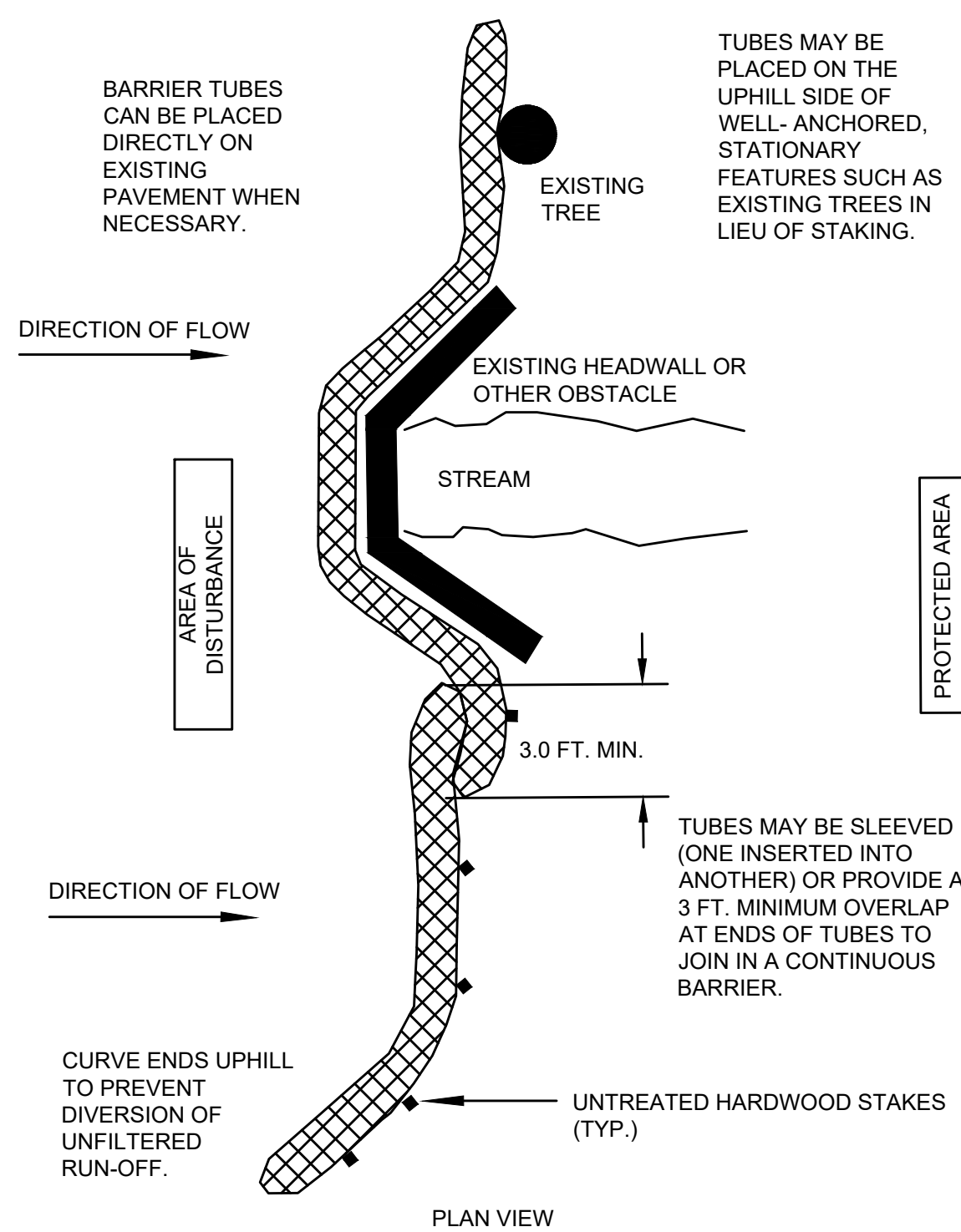
HMA CURB TYPE 3
N.T.S.

NOTES:

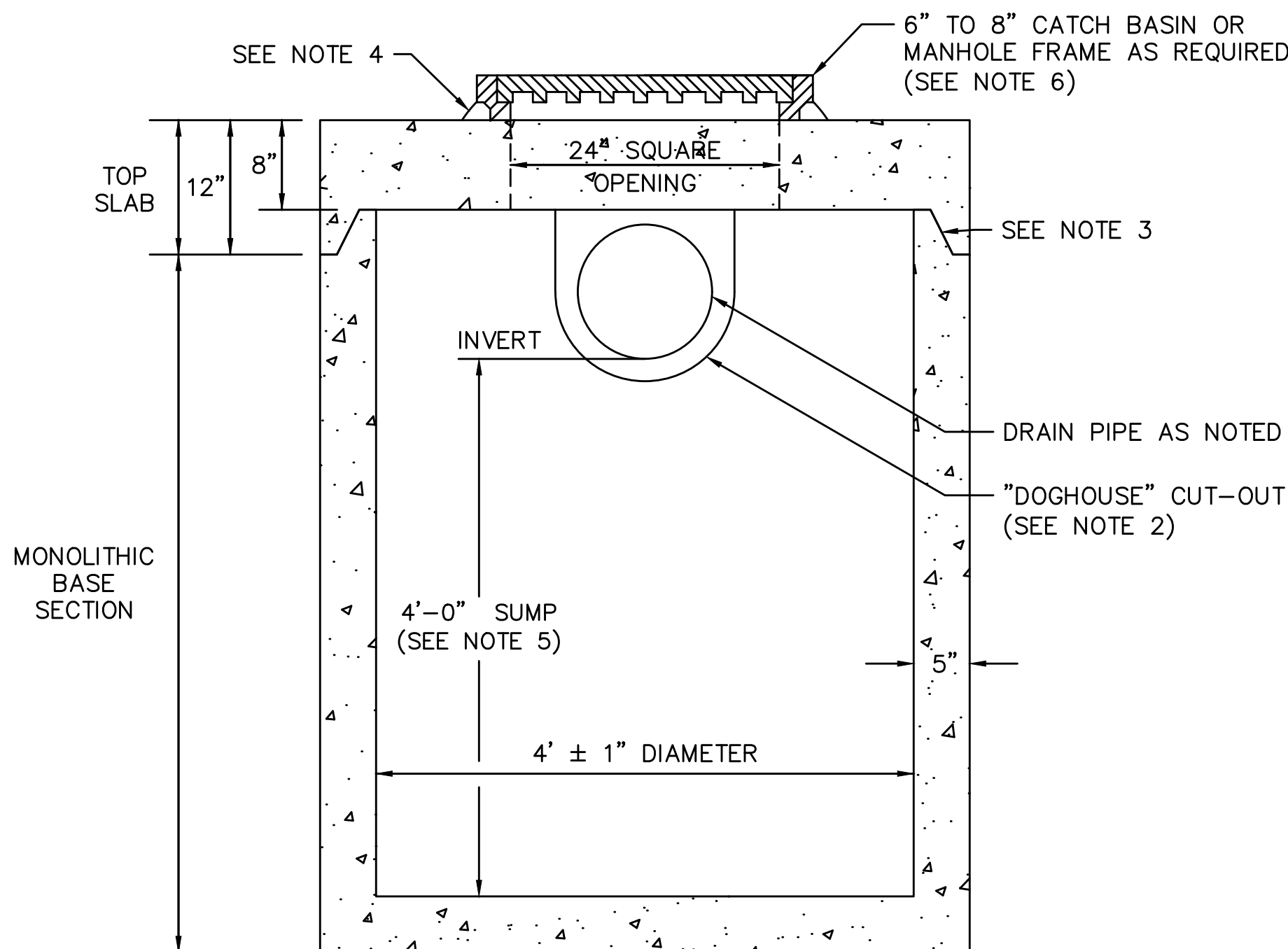
1. PROVIDE A MINIMUM BARRIER TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL BARRIER TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. TUBE LOCATION MAY BE SHIFTED TO ADJUST TO LANDSCAPE FEATURES, BUT SHALL PROTECT UNDISTURBED AREA AND VEGETATION TO MAXIMUM EXTENT POSSIBLE. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. ADDITIONAL BARRIER TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
5. ADDITIONAL STAKING SHALL BE USED AT THE DIRECTION OF THE ENGINEER.



SEDIMENT CONTROL BARRIER
N.T.S.



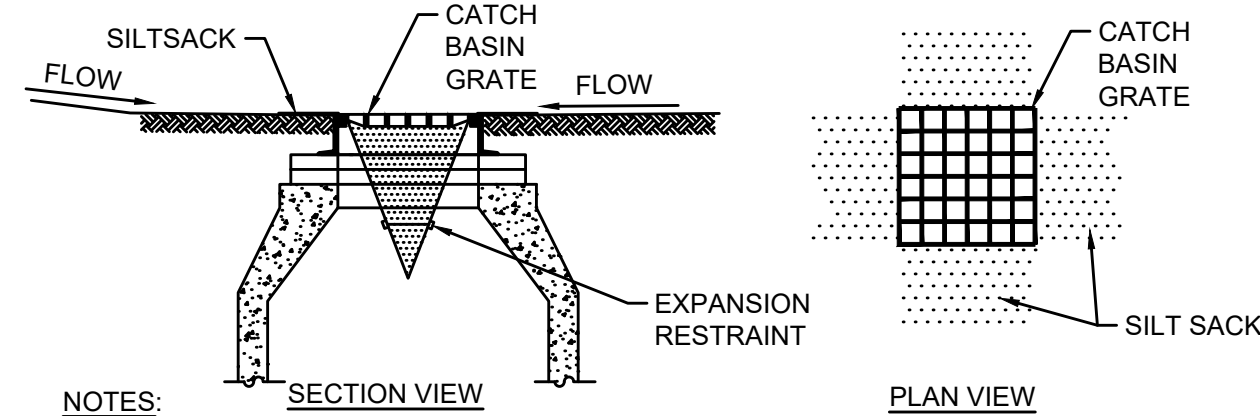
TYPICAL SUBDRAIN PLACEMENT
N.T.S.



NOTES:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE DOGHOUSE OPENING FOR PIPE WITH 2" MAX CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHALL NOT REST DIRECTLY ON PIPE. GROUT ALL PIPE CONNECTIONS WITH NON-SHRINK GROUT.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN AND MANHOLE FRAMES SHALL BE SET IN FULL MORTAR BED.
5. OMIT 4' SUMP FOR MANHOLE STRUCTURES.
6. FRAME ELEVATION SHALL BE INSTALLED AT FINISH GRADE USING VARIABLE FRAME DEPTHS AND VARIABLE HEIGHT BRICK COURSES.

SPECIAL CATCH BASIN/MANHOLE (SHALLOW)
NOT TO SCALE



INLET PROTECTION SILT SACK IN CATCH BASIN
N.T.S.

PAVEMENT NOTES

PROPOSED MILL & HOT MIX ASPHALT (HMA) OVERLAY

SURFACE: 2" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER ASPHALT EMULSION TACK COAT OVER 2" PAVEMENT FINE MILLING

PROPOSED FULL DEPTH PAVEMENT LESS THAN 4' WIDE

SURFACE: 2" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER ASPHALT EMULSION TACK COAT OVER

BASE: 6" HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE OVER

SUBBASE: 12" GRAVEL BORROW , TYPE b

PROPOSED PERMANENT PAVEMENT TRENCH PATCH

SURFACE: VARIABLE DEPTH HMA FOR PATCHING TO MATCH EXISTING PAVEMENT PER SECTION 450.53 (COMPACTED IN 2" (MAX) LIFTS TO MATCH EXIST PAVEMENT THICKNESS)

BASE: 8" GRAVEL BORROW, TYPE b OVER

SUBBASE: EXISTING MATERIAL SUITABLE FOR RE-USE (SEE VARIOUS TRENCH DETAILS)

PROPOSED TEMPORARY PAVEMENT TRENCH PATCH

SURFACE: 2½" TEMPORARY ASPHALT PATCHING

BASE: EXISTING MATERIAL SUITABLE FOR RE-USE (SEE VARIOUS TRENCH DETAILS)

PROPOSED HMA SIDEWALK

SURFACE: 1¼" SUPERPAVE SURFACE COURSE 9.5 (SSC -9.5) OVER 1¼" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC - 12.5) OVER

BASE: 8" SUITABLE EXISTING GRAVEL; ADD GRAVEL BORROW, TYPE b AS REQUIRED

PROPOSED DRIVEWAY APRON REPAIR

SURFACE: 1½" SUPERPAVE SURFACE COURSE 9.5 (SSC -9.5) OVER 2½" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC - 12.5) OVER

BASE: 8" SUITABLE EXISTING GRAVEL; ADD GRAVEL BORROW, TYPE b AS REQUIRED

GENERAL PAVEMENT NOTES:

1. ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED BETWEEN ALL ASPHALT SURFACES AND SAWCUT JOINTS BEFORE PAVING. HMA JOINT SEALANT SHALL BE APPLIED TO ALL COLD JOINTS (LONGITUDINAL AND TRANSVERSE) BEFORE PAVING SURFACE COURSE. ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED IN ACCORDANCE WITH SUBSECTION 450.43. ALL SURFACES SHALL BE CLEAN OF ALL ORGANICS, DEBRIS, AND SAND PRIOR TO PAVING.
2. ALL HMA SHALL BE IN ACCORDANCE WITH SECTION 460.
3. ASPHALT EMULSION FOR TACK COAT SHALL BE RS-1H TO RESIST TRACKING OF TACK BY HAUL VEHICLES.
4. HMA FOR WALKS SHALL BE IN ACCORDANCE WITH SECTION 702.
5. ALL GRAVEL BORROW MEETING SPECIFICATION SHALL BE RETAINED IN PLACE, COMPACTED, AND LEVELED AS REQUIRED.