

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

PLAN AND PROFILE OF ROUTE 140 (MILFORD STREET)

IN THE TOWN OF

UPTON
WORCESTER COUNTY

THESE PLANS ARE SUPPLEMENTED BY THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 2023, AS AMENDED, 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.

UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	1 22
PROJECT FILE NO. 608456		

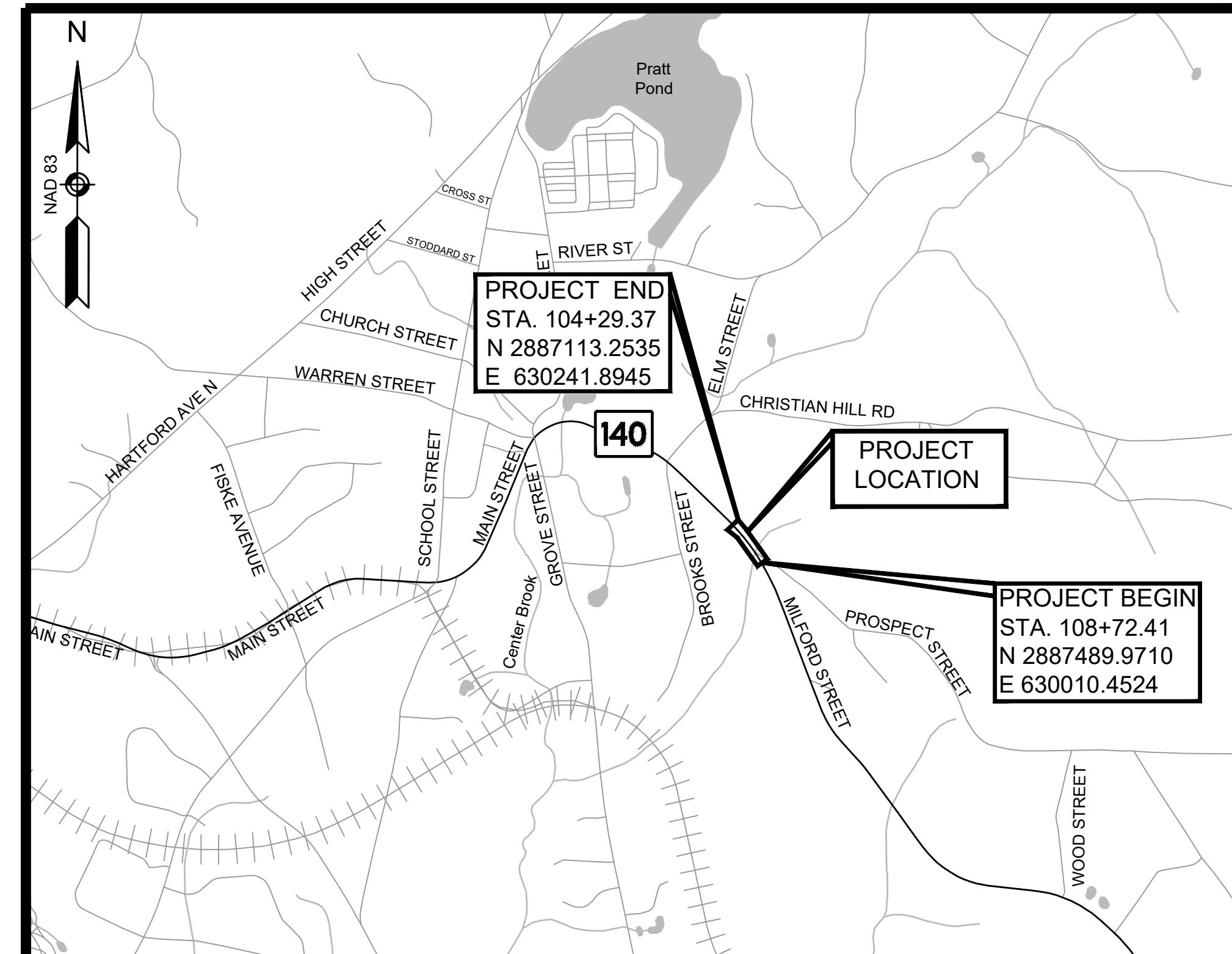
TITLE SHEET & INDEX

608456_HD(TITLE SHEET-INDEX).DWG
Plotted on 11-Dec-2023 10:59 AM

25% SUBMITTAL

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	GENERAL NOTES
3	LEGEND & ABBREVIATIONS
4	KEY PLAN & BORING LOCATIONS
5 - 6	BORING LOGS
7	CULVERT PROFILE
8	CONSTRUCTION PLAN
9 - 10	PROFILES
11	TRAFFIC SIGN & PAVEMENT MARKINGS
12	TRAFFIC SIGN SUMMARY SHEET
13 - 14	TEMPORARY TRAFFIC CONTROL PLANS
15 - 17	TEMPORARY TRAFFIC CONTROL PLAN TYPICAL SECTIONS
18	TEMPORARY TRAFFIC CONTROL SIGN SUMMARY SHEET
19 - 20	TEMPORARY TRAFFIC CONTROL STANDARD DETAILS
21	UTILITY PLAN
22	CONSTRUCTION DETAILS



0 1000 2000 3000 4000
SCALE: 1" = 1000'

LENGTH OF PROJECT = 443.04 FEET = 0.08 MILES

DESIGN DESIGNATION (ROUTE 140 (MILFORD STREET))	
DESIGN SPEED	45 MPH
ADT (2022)	7,276
ADT (2029)	7,801
K	10.0%
D	50%
T (PEAK HOUR)	3.2%
T (AVERAGE DAY)	4.1%
DHV	728
DDHV	365
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

	12/11/23	25% DESIGN SUBMISSION	
DATE	DESCRIPTION	REV #	
			
APPROVED			
CHIEF ENGINEER		DATE	

 BSC GROUP
803 Summer Street
Boston, Massachusetts
02127
www.bscgroup.com 617 896 4300

UPTON ROUTE 140 (MILFORD STREET)			
STATE	FED. AID PROJ. NO.	SCHEET NO.	TOTAL SHEETS
MA	-	2	22
PROJECT FILE NO. 608456			

GENERAL NOTES

1. EXISTING GROUND SURFACES SHOWN ON PLANS, PROFILES AND CROSS SECTIONS ARE BASED UPON DATA OBTAINED BY FIELD SURVEYS.
2. THE LOCATIONS OF EXISTING SUBSURFACE STRUCTURES, SUCH AS SEWERS, WATER MAINS, DRAINS AND OTHER UTILITIES ARE APPROXIMATE ONLY AND THE ENGINEER DOES NOT GUARANTEE THEIR NUMBER OR LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE EXCAVATING.
3. THE CONTRACTOR SHALL DIG TEST PITS AT EXISTING DRAINAGE STRUCTURES TO DETERMINE EXISTING INVERT ELEVATIONS INDICATED ON THE PLANS AS N/A (NOT AVAILABLE). PROPOSED DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE OR UTILITY DESIGN, ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR REQUIRED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED.
4. EXISTING WATER BOXES AND CURB STOPS, FIRE ALARM, SEWER AND SURFACE DRAIN MANHOLE FRAMES AND COVERS, CATCH BASIN FRAMES AND GRATES AND OTHER CASTINGS SHALL BE ADJUSTED TO LINE AND/OR GRADE AS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.
5. ALL EXISTING BROKEN OR DAMAGED SERVICE BOXES AND GATE BOXES WITHIN THE PROJECT SITE SHALL BE REPLACED WITH NEW STRUCTURES IN ACCORDANCE WITH THE MUNICIPAL STANDARDS AND AS REQUIRED BY THE ENGINEER.
6. ALL GAS GATES, ELECTRIC MANHOLES AND TELEPHONE MANHOLES WITHIN THE LIMITS OF WORK SHALL BE ADJUSTED BY THE OWNING AGENCY, UNLESS OTHERWISE INDICATED ON THE PLANS. ALL GAS, ELECTRIC, TELEPHONE AND CATV WORK SHALL BE DONE BY THE OWNING AGENCY. THE CONTRACTOR SHALL NOTIFY THE OWNING AGENCIES TO ADJUST AND/OR RELOCATE THESE STRUCTURES TO AVOID IMPACTING THE CONTRACTOR'S SCHEDULE OF OPERATIONS.
7. ALL PROPOSED DRAINAGE CONNECTIONS TO EXISTING STRUCTURES WILL BE INCLUDED IN THE COST OF THE NEW PIPE.
8. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY COMPANIES DOING WORK IN THE SAME AREA. THE CONTRACTOR SHALL ALLOW THE UTILITY COMPANIES AND THEIR REPRESENTATIVES TO ADJUST AND/OR INSTALL THEIR SYSTEMS WITHIN TOWN/STATE OWNED STREETS AND EASEMENTS.
9. NO EXISTING PUBLIC UTILITY STRUCTURES SHALL BE ABANDONED AND/OR DISMANTLED WITHOUT AUTHORIZATION FROM THE ENGINEER.
10. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES WHEN THE INSTALLATION OF DRAINAGE LINES AND STRUCTURES ARE IN CLOSE PROXIMITY TO EXISTING UTILITY POLES.
11. THE CONTRACTOR SHALL COORDINATE WORK WITH THE OWNERS OF UTILITY POLES AND SHALL BE RESPONSIBLE FOR TRIMMING TREES AS NECESSARY TO ACCOMMODATE NEW UTILITY POLE LOCATIONS.
12. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR TEMPORARY SUPPORT WHILE EXCAVATING IN CLOSE PROXIMITY OF UTILITY POLES, IF REQUIRED BY THE UTILITY, AT NO ADDITIONAL COST.
13. CURB SHALL BE FURNISHED AND SET AT LOCATIONS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.
14. CONSTRUCT DRIVEWAYS AND WALKS AS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.
15. EXISTING GRANITE CURB AND/OR EDGING SUITABLE FOR REUSE WITHIN THE PROJECT SITE SHALL BE REMOVED AND RESET IN ACCORDANCE WITH THE PLANS AND/OR AS REQUIRED BY THE ENGINEER. EXISTING CURB CORNERS IN THE PROJECT SHOULD BE REMOVED AND DISCARDED.
16. SAW CUT EXISTING BITUMINOUS CONCRETE ROADWAYS, CEMENT CONCRETE SIDEWALKS AND BITUMINOUS CONCRETE DRIVEWAYS AS SHOWN ON THE PLANS AND AT THE PROPOSED MATCH LINE.
17. WHERE THE NEW CONSTRUCTION COINCIDES WITH PRESENT TRAVELED WAYS.
 - 17.1. THE CONTRACTOR SHALL PERFORM WORK IN ACCORDANCE WITH THE TEMPORARY TRAFFIC CONTROL PLANS AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR WORK ZONES.
 - 17.2. THE CONTRACTOR SHALL PERFORM THEIR WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH AND INCONVENIENCE TO BUSINESS CONCERN AND ABUTTERS, ON ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM.
 - 17.3. THE CONTRACTOR SHALL NOT BE ALLOWED TO PARK EQUIPMENT OR STOCKPILE EQUIPMENT OR MATERIAL ON THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE.
 - 17.4. THE CONTRACTOR SHALL MAINTAIN SAFE AND RESPONSIBLE ACCESS TO AND FROM ABUTTING PROPERTY PRIVATE WAYS, DRIVEWAYS AND ALL ALLEYS AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
18. 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.
19. THE CONTRACTOR SHALL DIG TEST PITS AS REQUIRED TO LOCATE EXISTING UTILITIES PRIOR TO TREE/SHRUB PLANTING. ROOT BALLS SHALL BE PLANTED A MINIMUM OF SIX (6) LATERAL FEET AWAY FROM GAS PIPES.
20. THE CONTRACTOR SHALL REPORT ANY CONFLICTS BETWEEN TREE PITS AND EXISTING UNDERGROUND UTILITIES TO THE ENGINEER AND THE MUNICIPAL TREE WARDEN FOR RESOLUTION.
21. THE CONTRACTOR SHALL DIG TEST PITS TO LOCATE EXISTING UTILITIES PRIOR TO INSTALLING LIGHT POLE FOUNDATIONS. LIGHT POLE FOUNDATIONS SHALL BE INSTALLED A MINIMUM OF THREE (3) LATERAL FEET AWAY FROM GAS PIPES.

SURVEY NOTES

1. THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY PERFORMED BY BSC GROUP, INC. BETWEEN JUNE 25, 2014 AND JULY 24, 2014 AND BETWEEN NOVEMBER 16, 2022 AND NOVEMBER 17, 2022.
2. HORIZONTAL DATUM IS NAD 1983. VERTICAL DATUM IS NAVD 1988. BOTH DATUMS ARE ACQUIRED FROM GPS OBSERVATIONS.
3. PROPERTY LINES SHOWN ARE APPROXIMATE.
4. WETLAND RESOURCE LIMITS AND FLAGS WERE DETERMINED BY BSC GROUP, INC.

WATER AND SEWER NOTES

1. THE PROPOSED WATER AND SEWER INFRASTRUCTURE SHOWN ON THESE PLAN WAS PROVIDED BY TIGHE & BOND IN DECEMBER 2023. THE WORK IS PROPOSED AS PART OF THE TOWN OF UPTON'S GOVERNOR'S LANDING WATER MAIN, SANITARY SEWER AND PUMP STATION PROJECT
2. THE PROPOSED WATER AND SEWER PROJECT IS BE CONSTRUCTED PRIOR TO THE COMPLETION OF THIS PROJECT AND IS NOT PART OF THIS CONTRACT.
3. ONCE CONSTRUCTED, WATER AND SEWER INFRASTRUCTURE WILL BE SHOWN AS EXISTING CONDITIONS AND THE APPROPRIATE DISPOSITIONS WILL BE INCLUDED ON THE UTILITY PLAN.

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
	*	HYDRANT
	*	LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
C	C	CABLE MANHOLE
D	D	DRAINAGE MANHOLE
E	E	ELECTRIC MANHOLE
G	G	GAS MANHOLE
M	M	MISC MANHOLE
S	S	SEWER MANHOLE
T	T	TELEPHONE MANHOLE
W	W	WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W/ 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
		TREE
		STUMP
	WG	SWAMP / MARSH
	WG	WATER GATE
	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
100-99-		CONTOURS (ON-THE-GROUND SURVEY DATA)
100-99-		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
	1	CONTROLLER PHASE ACTUATED
	2	TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
	3	WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
	4	VIDEO DETECTION CAMERA
	5	MICROWAVE DETECTOR
	6	PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
	7	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
	8	VEHICULAR SIGNAL HEAD
	9	VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
	10	FLASHING BEACON
	11	PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
	12	RAILROAD SIGNAL
	13	SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
	14	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
	15	HIGH MAST POLE OR TOWER
	16	SIGN AND POST
	17	SIGN AND POST (2 POSTS)
	18	MAST ARM WITH LUMINAIRE
	19	OPTICAL PRE-EMPTION DETECTOR
	20	CONTROL CABINET, GROUND MOUNTED
	21	CONTROL CABINET, POLE MOUNTED
	22	FLASHING BEACON CONTROL AND METER PEDESTAL
	23	LOAD CENTER ASSEMBLY
	24	PULL BOX 12"x12" (OR AS NOTED)
	25	ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
	26	TRAFFIC SIGNAL CONDUIT

ABBREVIATIONS

GENERAL	DESCRIPTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT

UPTON ROUTE 140 (MILFORD STREET)			
STATE	FED. AID PROJ. NO.	HEET NO.	TOTAL SHEETS
MA	-	3	22
			PROJECT FILE NO. 608456

LEGEND & ABBREVIATIONS

GENERAL	DESCRIPTION
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
REMOVE AND DISPOSE	REMOVE AND DISPOSE
R&D	REINFORCED CONCRETE PIPE
ROAD	ROAD
R&P	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RIGHT	RIGHT
SB	STONE BOUND
SHOULDER	SHOULDER
SEWER MANHOLE	SEWER MANHOLE
ST	STREET
STOPPING SIGHT DISTANCE	STOPPING SIGHT DISTANCE
STATE HIGHWAY LAYOUT LINE	STATE HIGHWAY LAYOUT LINE
TANGENT	TANGENT
TEMP	TEMPORARY
TOP OF CURB	TOP OF CURB
TOP OF SLOPE	TOP OF SLOPE
TYPICAL	TYPICAL
UTILITY POLE	UTILITY POLE
VARIES	VARIES
VERTICAL	VERTICAL
VERTICAL CURVE	VERTICAL CURVE
WHEEL CHAIR RAMP	WHEEL CHAIR RAMP
WATER GATE	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
ONLY	ONLY	PAVEMENT ARROW - WHITE
SL	SL	LEGEND "ONLY" - WHITE
CW	CW	STOP LINE
SWL	SWL	CROSSWALK
SYL	SYL	SOLID WHITE LINE
BWL	BWL	SOLID YELLOW LINE
BYL	BYL	BROKEN WHITE LINE
DWL	DWL	BROKEN YELLOW LINE
DYL	DYL	DOTTED WHITE LINE
DWLEX	DWLEX	DOTTED YELLOW LINE
DBWL	DBWL	DOTTED WHITE LINE EXTENSION
DBYL	DBYL	DOTTED YELLOW LINE EXTENSION

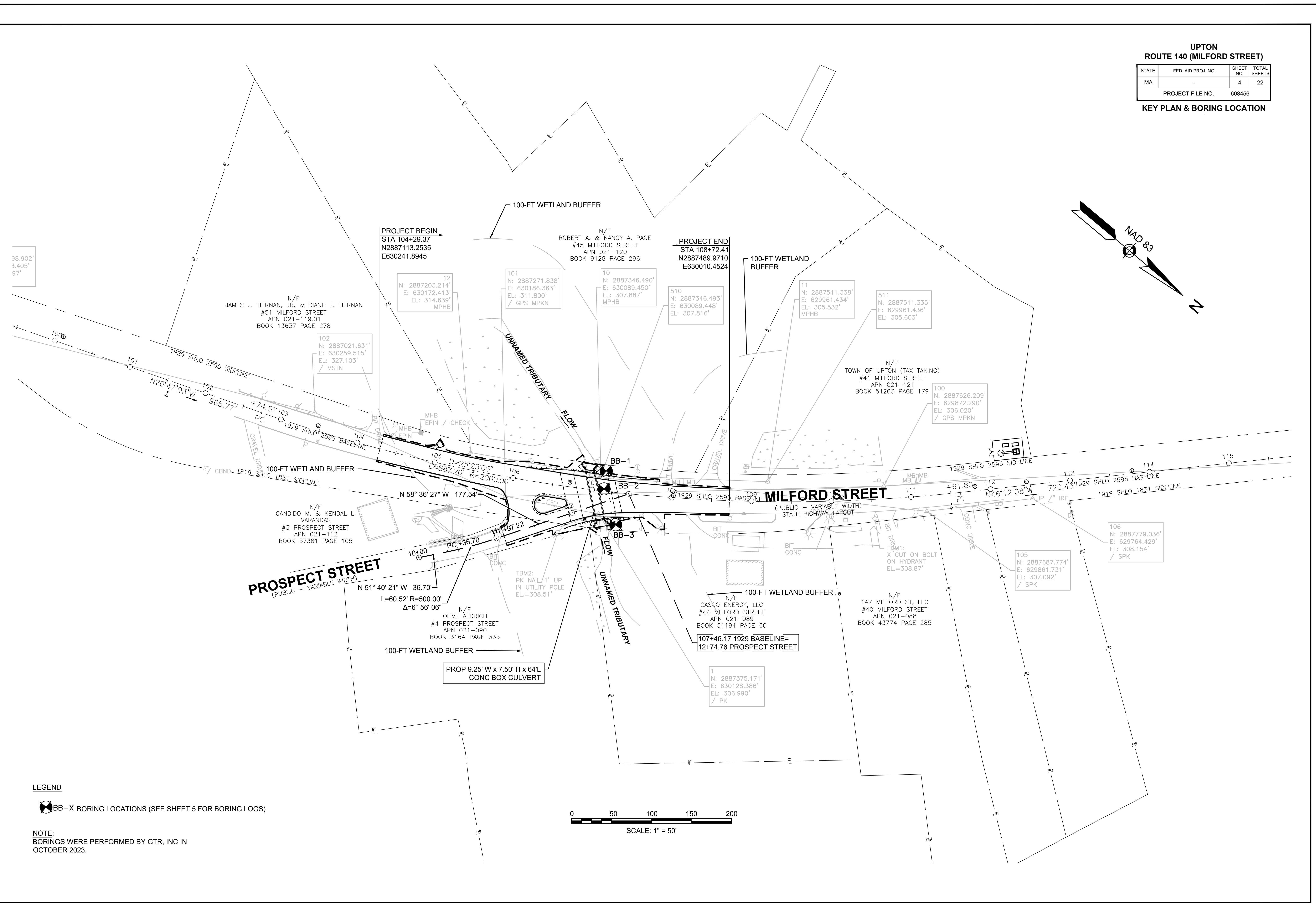
TRAFFIC SIGNAL ABBREVIATIONS	DESCRIPTION
CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEAD

**UPTON
ROUTE 140 (MILFORD STREET)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	22
PROJECT FILE NO.		608456	

KEY PLAN & BORING LOCATION

608456_HD(KEYPLAN-BORINGS).DWG Plotted on 11-Dec-2023 10:59 AM



UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	sheet no. total sheets
MA	-	5 22
PROJECT FILE NO.	608456	

BORING LOGS



GEOSCIENCES TESTING AND RESEARCH, INC.
55 Middlesex Street, Suite 225, North Chelmsford, MA.
Phone: (978) 251-9395 www.gtrinc.net

Project Name:	Milford St Culvert Replacement	Boring No.:	BB-1
Location:	Upton, MA	Page:	1 of 2
		GTR Job #:	22.336
		GTR Rep:	C. Van Huyneghem
		Reviewer:	C. George

Drilling Co.	Carr-Dee Corp.										
Driller:	Joe DeSimone										
Start Date:	10/24/2023										
Ground Surface Elev (ft):	~306.5										
Boring Location:	N 2887345.2033, E 630082.9448										
Note:	Mobile B56 rig with autohammer										
Depth	Casing BPF	Sample Data					Stratum	Additional Data	Notes		
		No.	Pen/ Recovery	Depth (ft.)	Blows per 6in	Field Test	Description and Classification			Description	
0	S-1A	24/7	0 - 0.25	2 - 3			TOPSOIL			TOPSOIL	1
		24/3	0.25 - 2	4 - 4		S-1B: Brown f-c Sand, little Silt					
		24/8	2 - 4	4 - 3		Loose, brown, f-c SAND, some Gravel, trace Silt					
		24/15	4 - 6	4 - 2		Loose, brown, f-c SAND, little Organic/Inorganic Silt					
		24/22	4 - 6	2 - 2		Loose, brown, f-c SAND, little Organic Silt					
		24/29	6 - 8	2 - 2		M. dense, brown, f-c SAND, little Organic Silt					
		24/36	8 - 10	6 - 13		M. Dense, gray, GRAVEL and f-c SAND, trace Silt					
		24/43	10 - 12	12 - 12		M. Dense brown, GRAVEL and f-c SAND, trace Silt					
		24/50	12 - 14	8 - 7		M. Dense, brown, f-m SAND, trace Silt					
		24/57	14 - 16	4 - 4		M. Dense, brown, f-m SAND, trace Silt					
24/64	20 - 22	25 - 40		V. Dense, gray, f-c SAND and Gravel, trace Silt			GRANULAR FILL	10'			
24/71	29 - 20										
24/78	25 - 26	4:00									
24/85	26-27	2:00									
24/92	27-28	4:00									
24/99	28-29	2:00									
24/106	29-30	5:00									
24/113											
24/120											
24/127											
24/134							BEDROCK	24'			
24/141											
24/148											
24/155											
24/162											
24/169											
24/176											
24/183											
24/190											
24/197											
24/204											
24/211											
24/218											
24/225											
24/232											
24/239											
24/246											
24/253											
24/260											
24/267											
24/274											
24/281											
24/288											
24/295											
24/302											
24/309											
24/316											
24/323											
24/330											
24/337											
24/344											
24/351											
24/358											
24/365											
24/372											
24/379											
24/386											
24/393											
24/400											
24/407											
24/414											
24/421											
24/428											
24/435											
24/442											
24/449											
24/456											
24/463											
24/470											
24/477											
24/484											
24/491											
24/498											
24/505											
24/512											
24/519											
24/526											
24/533											
24/540											
24/547											
24/554											
24/561											
24/568											
24/575											
24/582											
24/589											
24/596											
24/603											
24/610											
24/617											
24/624											
24/631											
24/638											
24/645											
24/652											
24/659											
24/666											
24/673											
24/680											
24/687											
24/694											
24/701											
24/708											
24/715											
24/722											
24/729											
24/736											
24/743											
24/750											
24/757											
24/764											
24/771											
24/778											
24/785											
24/792											
24/799											
24/806											
24/813											
24/820											
24/827											
24/834											
24/841											
24/848											
24/855											
24/862											
24/869											
24/876											
24/883											
24/890											
24/897											
24/904											
24/911											
24/918											
24/925											
24/932											
24/939											
24/946											
24/953											
24/960											
24/967											
24/974											
24/981											
24/988											
24/995											
24/1002											
24/1009											
24/1016											
24/1023											
24/1030											
24/1037											
24/1044											
24/1051											
24/1058											
24/1065											
24/1072											
24/1079											
24/1086											
24/1093											
24/1100											
24/1107											
24/1114											
24/1121											
24/1128											
24/1135											
24/1142											
24/1149											
24/1156											
24/1163											
24/1170											
24/1177											
24/1184											
24/1191											
24/1198											
24/1205											
24/1212											
24/1219											
24/1226											
24/1233											
24/1240											

UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	6 22
PROJECT FILE NO. 608456		

BORING LOGS

GEOSCIENCES TESTING AND RESEARCH, INC.
55 Middlesex Street, Suite 225, North Chelmsford, MA.
Phone: (978) 251-9395 www.gtrinc.net

Boring No. BB-2
Page: 1 of 1
GTR Job #: 22.336
GTR Rep: C. Van Huyneghem
Reviewer: C. George

Project Name: Milford St Culvert Replacement
Location: Upton, MA

Drilling Co. Carr-Dee Corp.
Driller: Joe DeSimone Helper(s): Jay Smith Equipment: Casing: Sampler: Core: Groundwater: Depth (ft)
Start Date: 10/24/2023 End Date: 10/24/2023 Type: HW SS NX Date Time Water Casing Hole
Ground Surface Elev (ft): ~307.6 Size I.D.: 4.00" 1.375" 2.16" 10/24 2:15 8' 18' 21'
Boring Location: N 2887348.6550, E 630140.4202 Hammer Wt.: 140 lb 140 lb -
Note: Mobile B56 rig with autohammer Hammer Fall: 30" 30" -

Depth	Casing BPF	Sample Data					Stratum	Additional Data	Notes
		No.	Pen/ Recovery	Depth (ft.)	Blows per 6in	Field Test			
0							ASPHALT 6"	1, 2	
	S-1	24/6	0 - 2	10 - 7		Medium dense, brown, f-c SAND and Gravel, trace Silt, dry			
				24 - 16		Medium dense, brown, GRAVEL and fine to coarse Sand, trace Silt, dry			
	S-2	24/14	2 - 4	10 - 10		Medium dense, brown, fine to coarse SAND and Gravel, some Silt			
				9 - 9		Brown, loose, SAND, little org. Silt			
	S-3	24/8	4 - 6	12 - 9		Brown, very dense f-c SAND, trace Silt			
				4 - 9		Brown, m. dense f-c SAND, some Gravel, trace Silt			
	S-4	24/14	6 - 8	5 - 3		Brown, medium dense f-c SAND and Gravel, trace Silt			
				4 - 4		Medium dense brown and gray GRAVEL, some f-c SAND, trace Silt			
	S-5	24/24	8-10	3 - 14		Brown, m. dense f-c SAND and Gravel, trace Silt			
			37 - 30		Bottom of boring at 21 feet below ground surface with 3 foot rock core				
5						GRANULAR FILL 10'	1, 2		
	S-6	24/13	10-12	10 - 8				Brown, m. dense f-c SAND, some Gravel, trace Silt	
				12 - 9				Brown, medium dense f-c SAND and Gravel, trace Silt	
	S-7	24/16	12-14	13 - 10				Brown, medium dense f-c SAND and Gravel, trace Silt	
				17 - 18				Medium dense brown and gray GRAVEL, some f-c SAND, trace Silt	
	S-8	24/10	14-16	26 - 13				Brown, m. dense f-c SAND and Gravel, trace Silt	
				7 - 7				Brown, m. dense f-c SAND and Gravel, trace Silt	
	S-9	24/14	16-17.76	7 - 8				C-1: Dark Gray, fine to medium grained, fresh, slightly to moderately fractured, very hard, GNEISS	
				19-100/2"					
	C-1	36/28	18-19	6:00					
			19-20						
			6:00						
			20-21						
			3:00						
10						BEDROCK 21'	1, 2		
NOTES: 1. Rollerbit drilled ahead to 18' before coring 2. Rock core run was terminated due to access of the road.									
Order of Sample Description (Modified Burmister)			PENETRATION RESISTANCE (N) GUIDE						
1. Moisture Content: Dry, Moist, Wet 2. Soil Relative Density or Consistency 3. Color 4. Major Component: Should be capitalized 5. Minor Component: "and" - 35% to 50% minor grain size "some" - 20% to 35% minor grain size "little" - 10% to 20% minor grain size "trace" - < 10% of minor grain size			Cohesionless Soils (Sands)			Cohesive Soils (Clays)			
Relative Density / Blows per Foot			Consistency / Blows per Foot						
Very Loose >> 0 - 4			Very Soft >> Below 2						
Loose >> 4 - 10			Soft >> 2 - 4						
Medium Dense >> 10 - 30			Medium Stiff >> 4 - 8						
Dense >> 30 - 50			Stiff >> 8 - 15						
Very Dense >> Over 50			Very Stiff >> 15 - 30						
			Hard >> Over 30						

GEOSCIENCES TESTING AND RESEARCH, INC.
55 Middlesex Street, Suite 225, North Chelmsford, MA.
Phone: (978) 251-9395 www.gtrinc.net

Boring No. BB-3
Page: 1 of 1
GTR Job #: 22.336
GTR Rep: C. Van Huyneghem
Reviewer: C. George

Project Name: Milford St Culvert Replacement
Location: Upton, MA

Drilling Co. Carr-Dee Corp.
Driller: Joe DeSimone Helper(s): Jay Smith Equipment: Casing: Sampler: Core: Groundwater: Depth (ft)
Start Date: 10/24/2023 End Date: 10/24/2023 Type: HW SS NX Date Time Water Casing Hole
Ground Surface Elev (ft): +306.4 Size I.D.: 4.00" 1.375" 2.16" 10/24 11:20 8' 30' 30'
Boring Location: N 2887399.1110, E 630121.7777 Hammer Wt.: 140 lb 140 lb -
Note: Mobile B56 rig with autohammer Hammer Fall: 30" 30" -

Depth	Casing BPF	Sample Data					Stratum	Additional Data	Notes
		No.	Pen/ Recovery	Depth (ft.)	Blows per 6in	Field Test			
0	S-1	24/4	0 - 2	WH - 1		Very loose, dark brown TOPSOIL	TOPSOIL 4"	1, 2	
						M. Dense, gray, Gravel and f-c Sand, trace Silt			
	S-2	24/6	2 - 4	6 - 6					
				5 - 3					
	S-3	24/10	5 - 7	1 - WH		V. Soft, black AMORPHOUS PEAT			
				WH - WH					
	S-4	24/24	7 - 9	1 - 1		Soft, Black, AMORPHOUS PEAT			
				2 - WH					
				WH					
	S-5A	24/24	10-10.4	WH - 10		Soft, Black, AMORPHOUS PEAT			
S-5B		10.4-12	9 - 8		M. dense, Gray, f-c SAND and Gravel, trace Silt				
S-6	24/9	12-14	11 - 4		S-6: Loose, gray, f-m SAND, trace Silt				
			4 - 2		Loose, gray, GRAVEL and f-c Sand, trace Silt				
S-7	24/11	14-16	2 - 1						
			3 - 4						
S-8	24/2	20-22	4 - 5		Loose, Gray f-c SAND, some Gravel, trace Silt				
			4 - 5						
S-9	24/7	25-27	24-17		Dense, gray GRAVEL and f-c Sand, trace Silt				
			30-13						
S-10	24/0	30	120/6"		No Recovery	30'	2		
					Bottom of boring at 30 feet below ground surface with rollerbit refusal				
NOTES: 1. Mudline 6' from grade 2. S-8: No recovery, Drillers readvanced 20-22									
Order of Sample Description (Modified Burmister)			PENETRATION RESISTANCE (N) GUIDE						
1. Moisture Content: Dry, Moist, Wet 2. Soil Relative Density or Consistency 3. Color 4. Major Component: Should be capitalized 5. Minor Component: "and" - 35% to 50% minor grain size "some" - 20% to 35% minor grain size "little" - 10% to 20% minor grain size "trace" - < 10% of minor grain size			Cohesionless Soils (Sands)			Cohesive Soils (Clays)			
Relative Density / Blows per Foot			Consistency / Blows per Foot						
Very Loose >> 0 - 4			Very Soft >> Below 2						
Loose >> 4 - 10			Soft >> 2 - 4						
Medium Dense >> 10 - 30			Medium Stiff >> 4 - 8						
Dense >> 30 - 50			Stiff >> 8 - 15						
Very Dense >> Over 50			Very Stiff >> 15 - 30						
			Hard >> Over 30						

PAVEMENT NOTES

ROADWAY

PROPOSED PAVEMENT MILLING AND OVERLAY

PROPOSED PAVEMENT MILLING AND OVERLAY

SURFACE: 1 $\frac{1}{2}$ " SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
0.09 GAL/SY TACK COAT OVER
VARIABLE DEPTH PAVEMENT STANDARD MILLING

PROPOSED FULL DEPTH RECONSTRUCTION

PROPOSED PAVEMENT RECONSTRUCTION

SURFACE: 1 $\frac{1}{2}$ " SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
0.08 GAL/SY TACK COAT OVER

INTERMEDIATE: 2 $\frac{1}{2}$ " SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVE
0.08 GAL/SY TACK COAT OVER

BASE: 4 $\frac{1}{2}$ " SUPERPAVE BASE COURSE 37.5 - (SBC - 37.5) OVER

SUB-BASE: 4" DENSE GRADED CRUSHED STONE OVER
8" GRAVEL BORROW (M1.03.0 TYPE b)

PROPOSED TEMPORARY ROADWAY FULL DEPTH PAVEMENT

SURFACE: 1 $\frac{1}{2}$ " SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
0.08 GAL/SY TACK COAT OVER

INTERMEDIATE: 2 $\frac{1}{2}$ " SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVE

SUBBASE: 8" GRAVEL BORROW (M1.03.0 TYPE b)

PROPOSED CEMENT CONCRETE SIDEWALK

STRUCTURAL ELEMENT - CONCRETE ORDER FORM

SURFACE: 4" CEMENT CONCRETE (4,000 PSI, $\frac{3}{4}$ -INCH, 610 cu ft) **FOUNDATION:** 8" GRAVEL BORROW (M1.03.0 TYPE b)

TEMPORARY HMA PEDESTRIAN WALKWAY

GENERAL SURFACE COURSE
SURFACE: 2" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
SUBBASE: 4" GRAVEL BORROW (M1.03.0 TYPE b)

CULVERT

PROPOSED CULVERT FULL DEPTH PAVEMENT

SURFACE: 1 $\frac{1}{2}$ " SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
0.08 GAL/SY TACK COAT OVER

INTERMEDIATE: 2 $\frac{1}{2}$ " SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER
0.08 GAL/SY TACK COAT OVER

BASE: VARIABLE DEPTH (4 $\frac{1}{2}$ " MIN) SUPERPAVE BASE COURSE 37.5 - (SBC - 37.5) OVE
MEMBRANE WATERPROOFING (SPRAY APPLIED)

PROPOSED CULVERT MINIMUM DEPTH PAVEMENT

SURFACE: VARIABLE DEPTH (3" MIN) SUPERPAVE SURFACE COURSE - 19.0 (SSC - 19.0) OVER
MEMBRANE WATERPROOFING (SPRAY APPLIED)

PROPOSED CULVERT CEMENT CONCRETE SIDEWALK & SAFETY CURB

SURFACE: VARIABLE DEPTH 5000 PSI HP CEMENT CONCRETE

NOTE

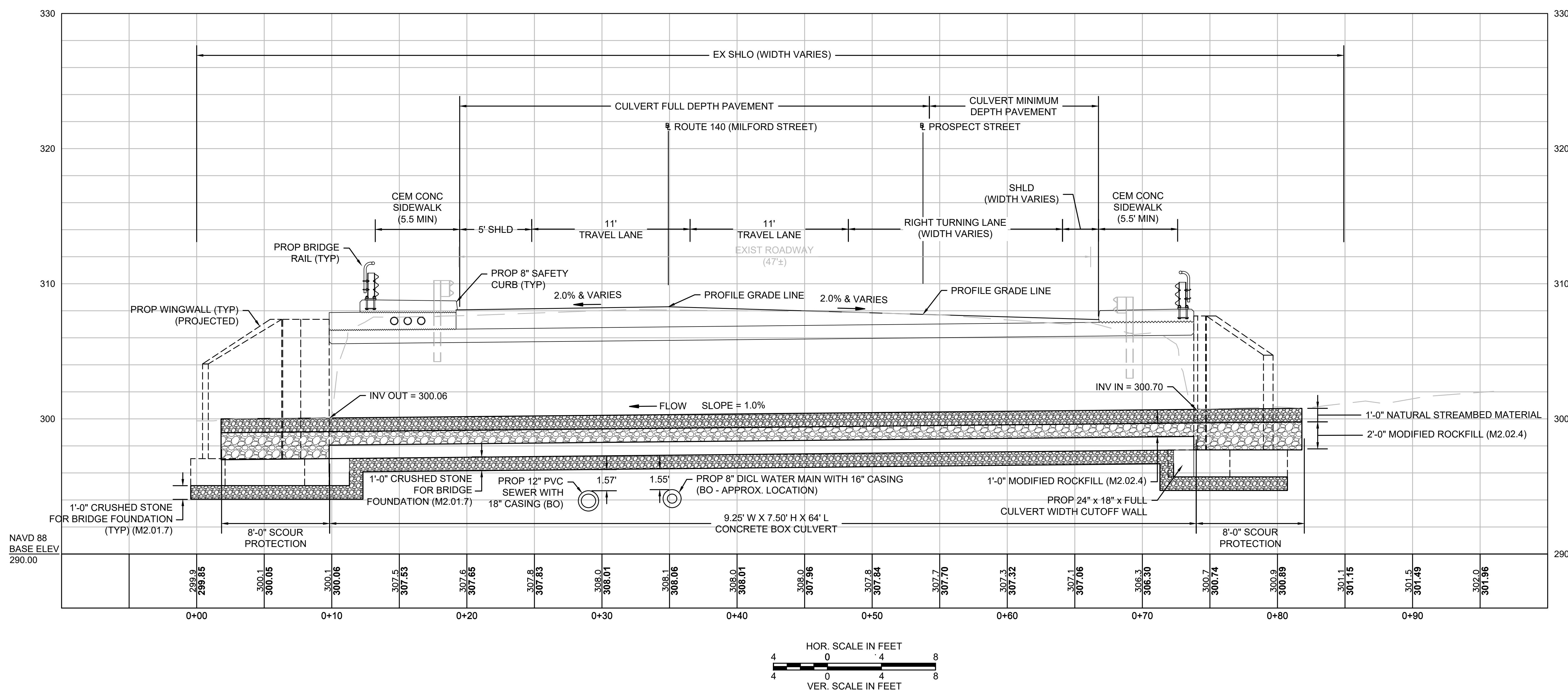
1. EXISTING GRAVEL BORROW SATISFYING GRADATION REQUIREMENTS SHALL REMAIN IN PLACE. UNSUITABLE MATERIALS SHALL BE REPLACED WITH GRAVEL BORROW FOR BASE COURSE.
2. ASPHALT EMULSION FOR TACK COAT SHALL MEET ALL REQUIREMENTS OUTLINED IN THE 2023 CONSTRUCTION SPECIFICATIONS FOR ANIONIC EMULSIFIED ASPHALT (SECTION M3.03.1) , AND SPRAYED FOR 95% UNIFORM COVERAGE PRIOR TO PAVING.

**UPTON
ROUTE 140 (MILFORD STREET)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEET
MA	-	7	22
PROJECT FILE NO.		608456	

CULVERT PROFILE

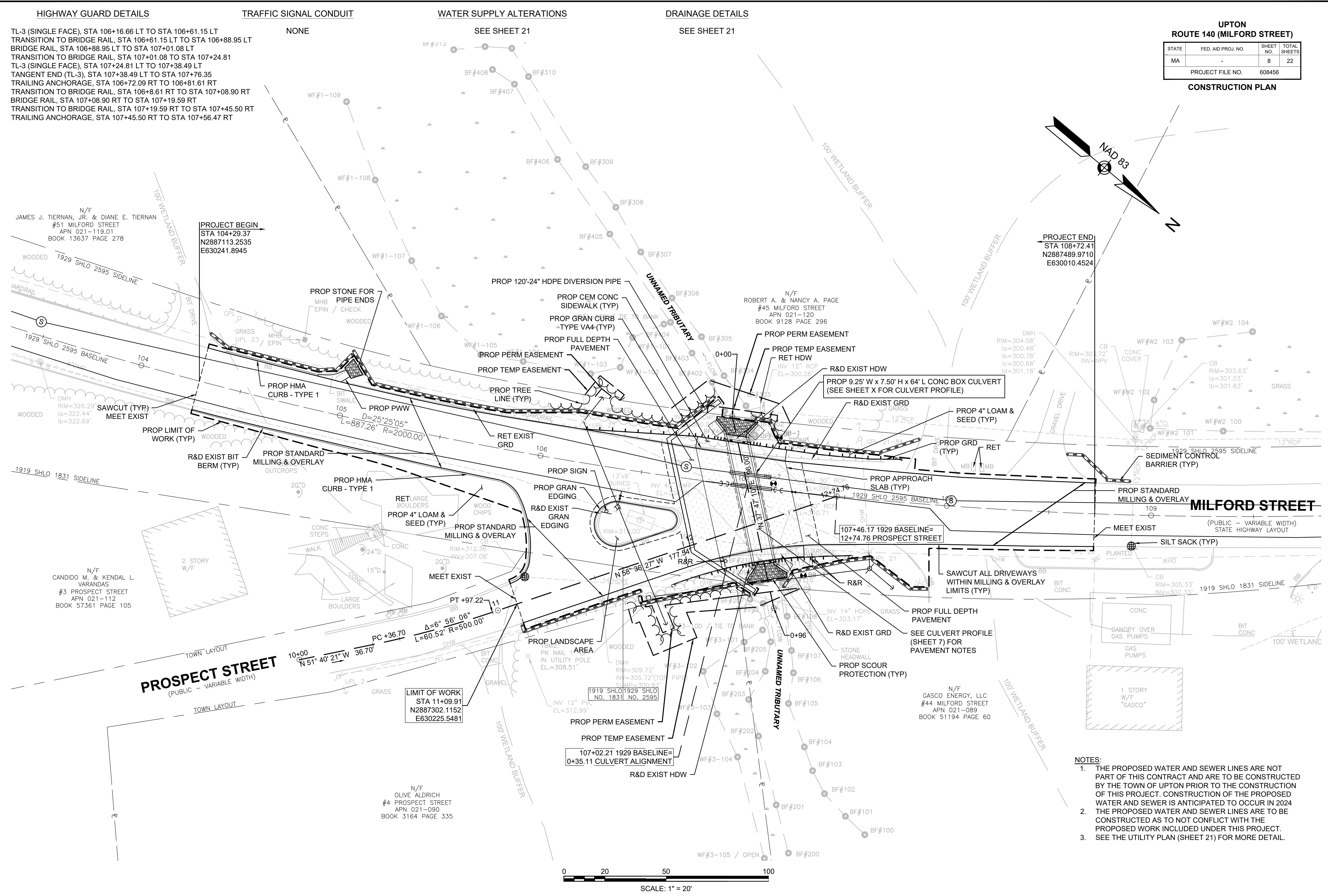
008436_HD(CULVER PROFILE).DWG Plotted on 11-Dec-2023 10:39 AM



UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	8 22
		PROJECT FILE NO. 608456

CONSTRUCTION PLAN

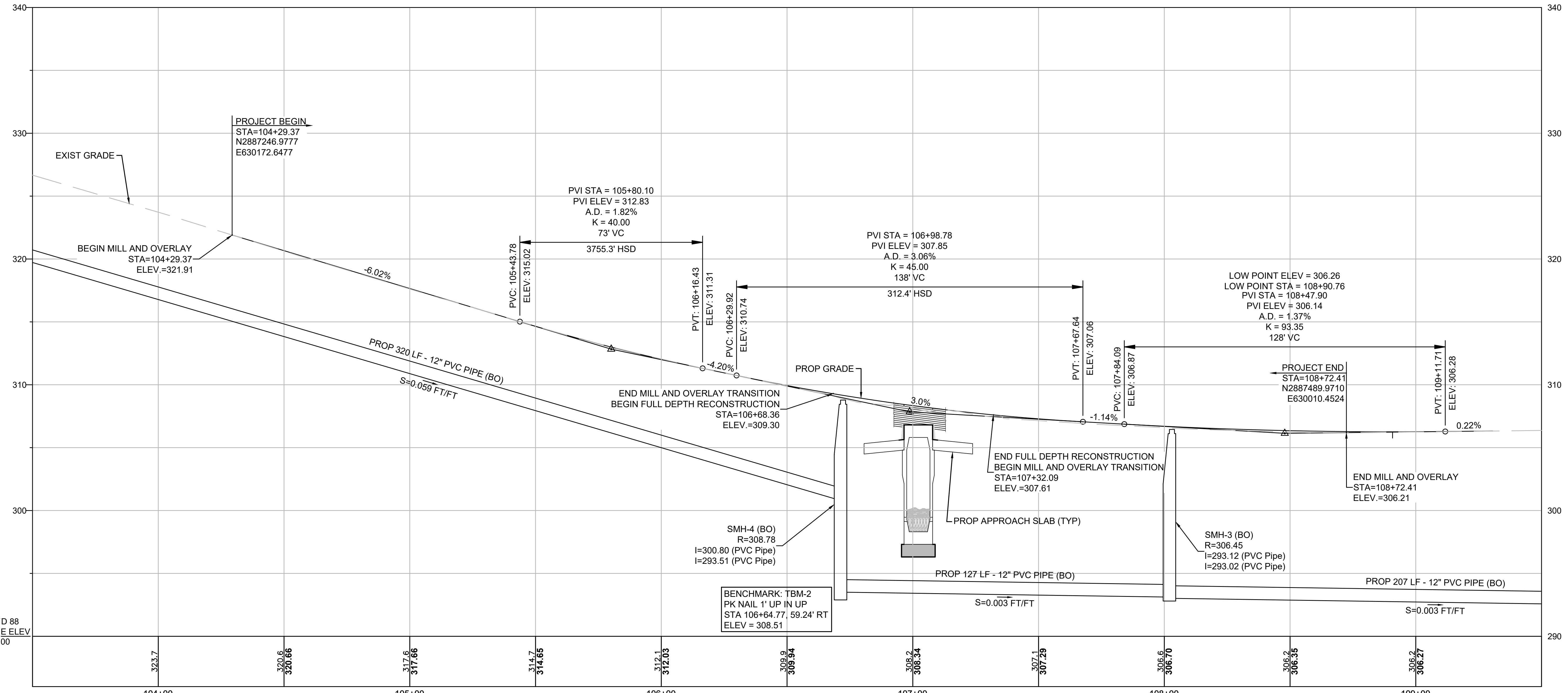
608456_HD/CONSTRUCTION PLAN.DWG
Plotted on 11-Dec-2023 10:59 AM



UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	9 22
PROJECT FILE NO. 608456		

PROFILE
MILFORD STREET

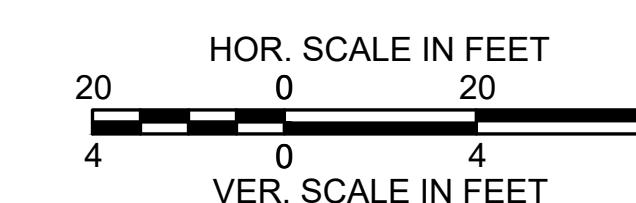
608456_HD(PROFILES).DWG Plotted on 11-Dec-2023 10:59 AM



MILFORD STREET PROFILE

1"=20' HORIZ.

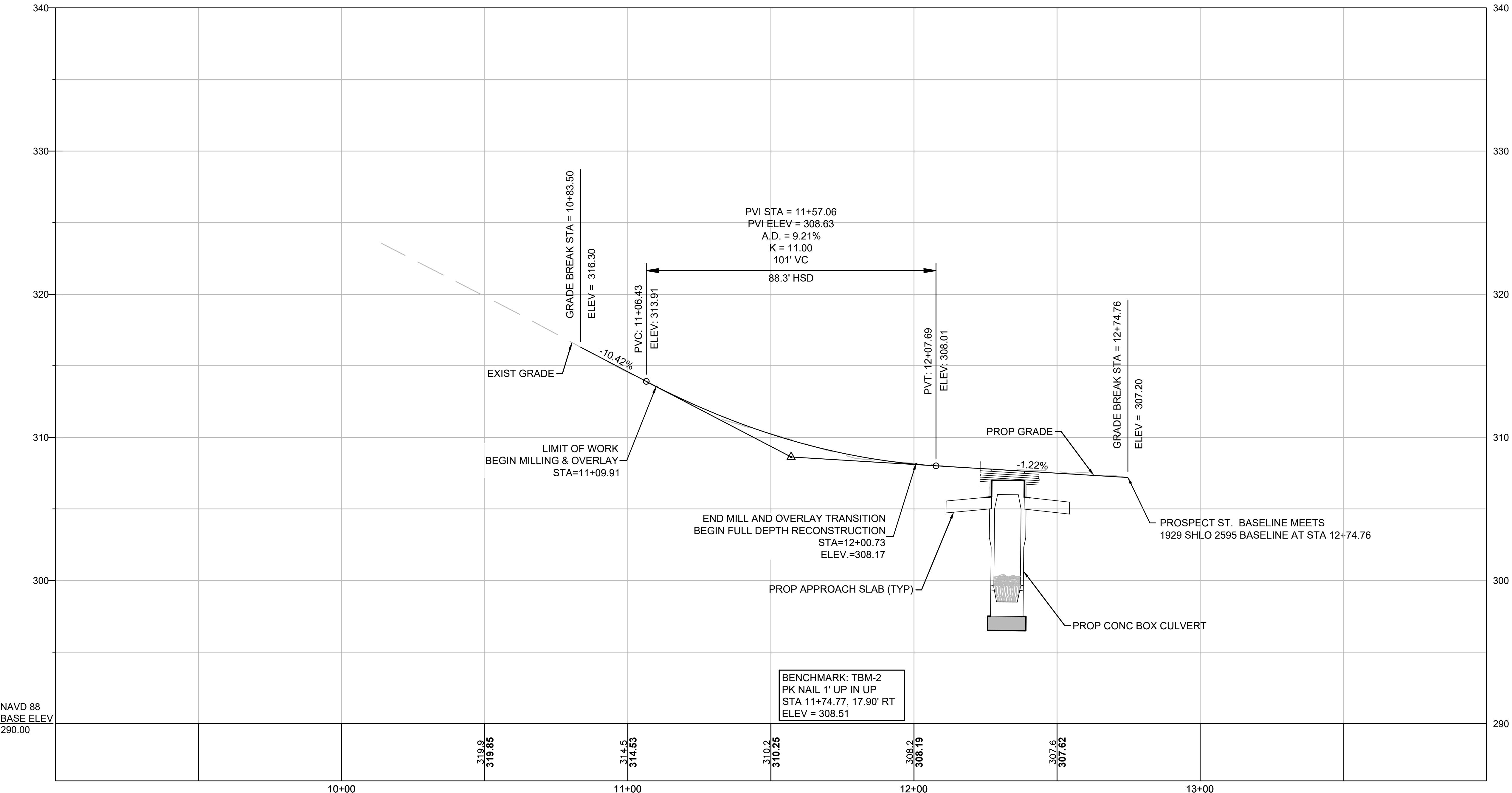
1"=4' VERT.



BENCHMARK: TBM-1
X CUT ON BOLT
STA 110+53.37, 24.12' RT
ELEV = 308.87

UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	SCHEET NO. TOTAL SHEETS
MA	-	10 22
PROJECT FILE NO.	608456	

PROFILE
PROSPECT STREET



UPTON
ROUTE 140 (MILFORD STREET)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	22
PROJECT FILE NO.			608456

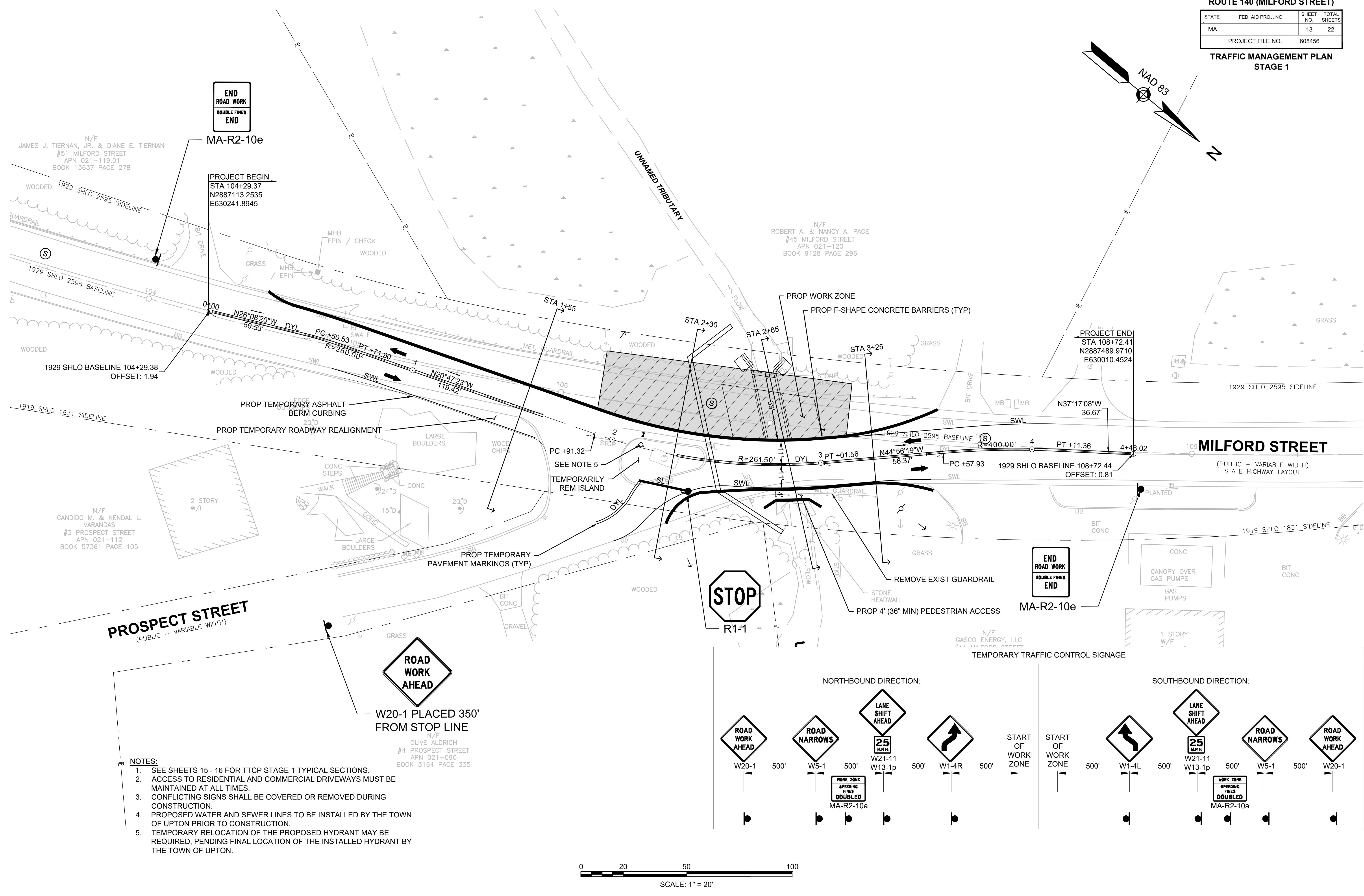
SIGN SUMMARY

TRAFFIC SIGN SUMMARY

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA (S.F.)
	WIDTH (in)	HEIGHT (in)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR		BACK-GROUND	LEGEND	BORDER			
R1-1	30	30		SEE 2003 M.U.T.C.D.	1	RED	WHITE	WHITE	P-5 (1)	6.25	6.25		

UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	13 22
PROJECT FILE NO. 608456		

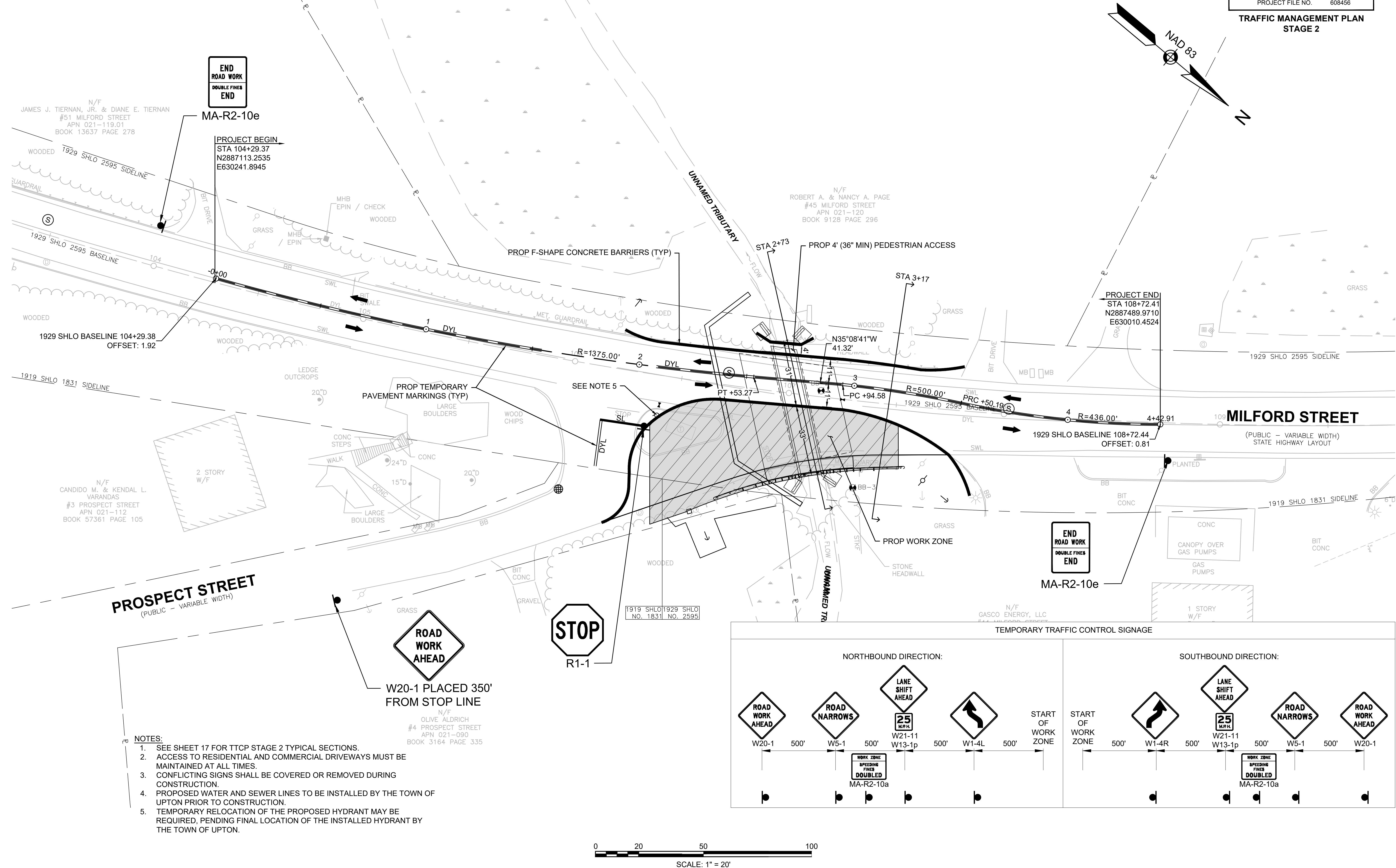
TRAFFIC MANAGEMENT PLAN
STAGE 1



UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	14 22
PROJECT FILE NO. 608456		

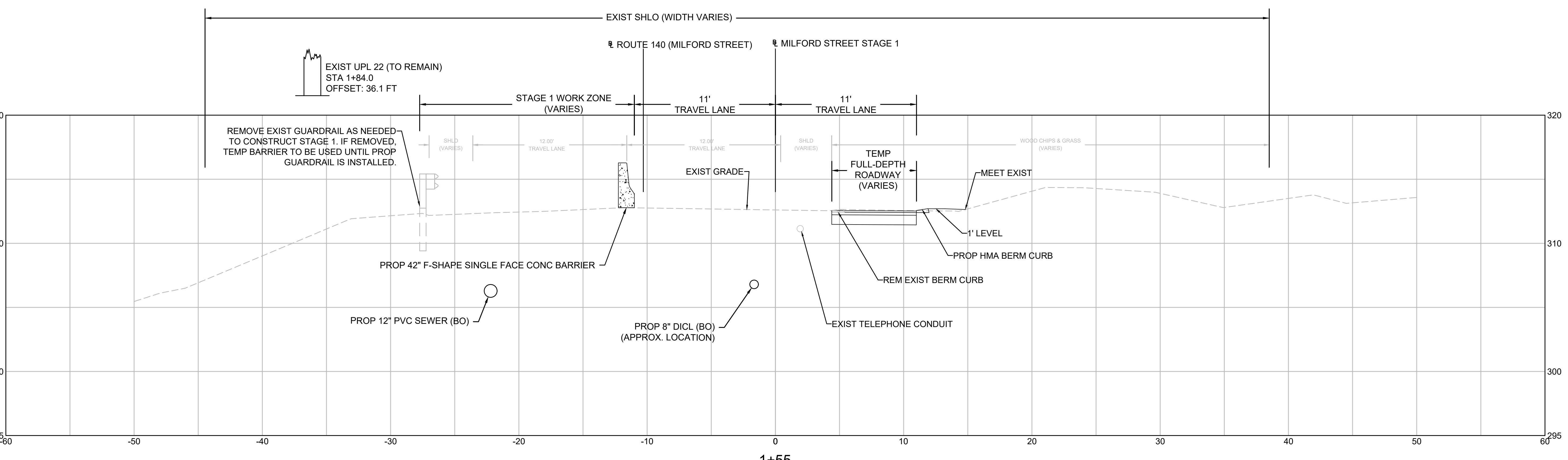
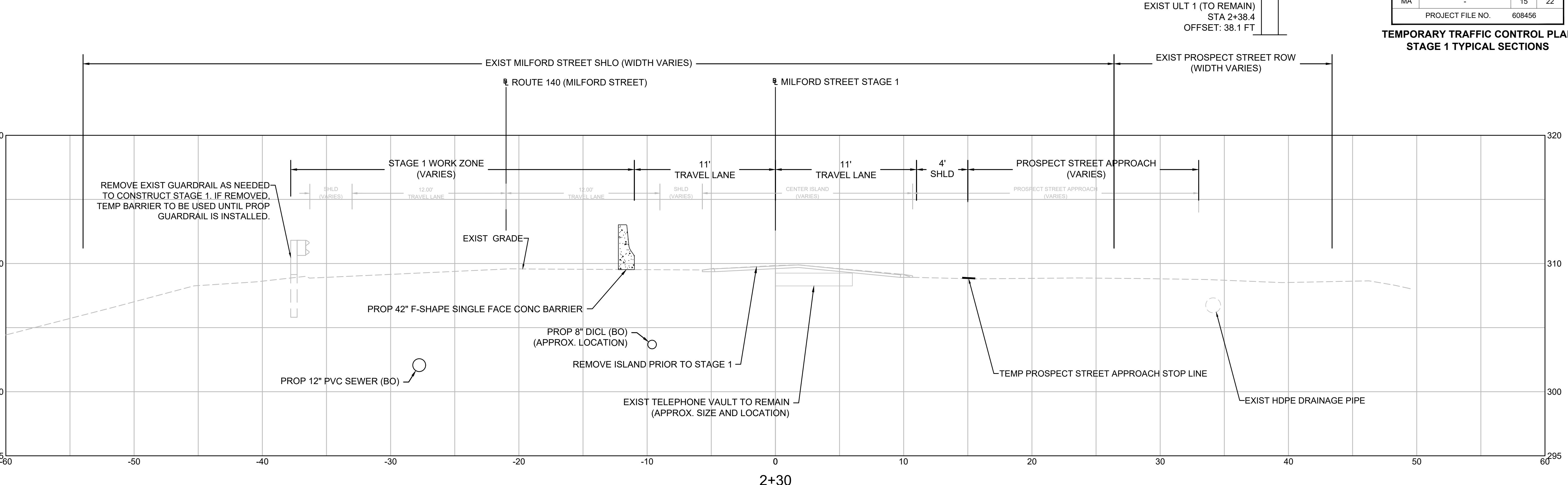
TRAFFIC MANAGEMENT PLAN
STAGE 2

608456-HD/TTCP-STAGE2.DWG Plotted on 11-Dec-2023 11:13 AM



UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	15 22
		PROJECT FILE NO. 608456

TEMPORARY TRAFFIC CONTROL PLAN
STAGE 1 TYPICAL SECTIONS



HOR. SCALE IN FEET
4 0 4 8
4 0 4 8

VER. SCALE IN FEET

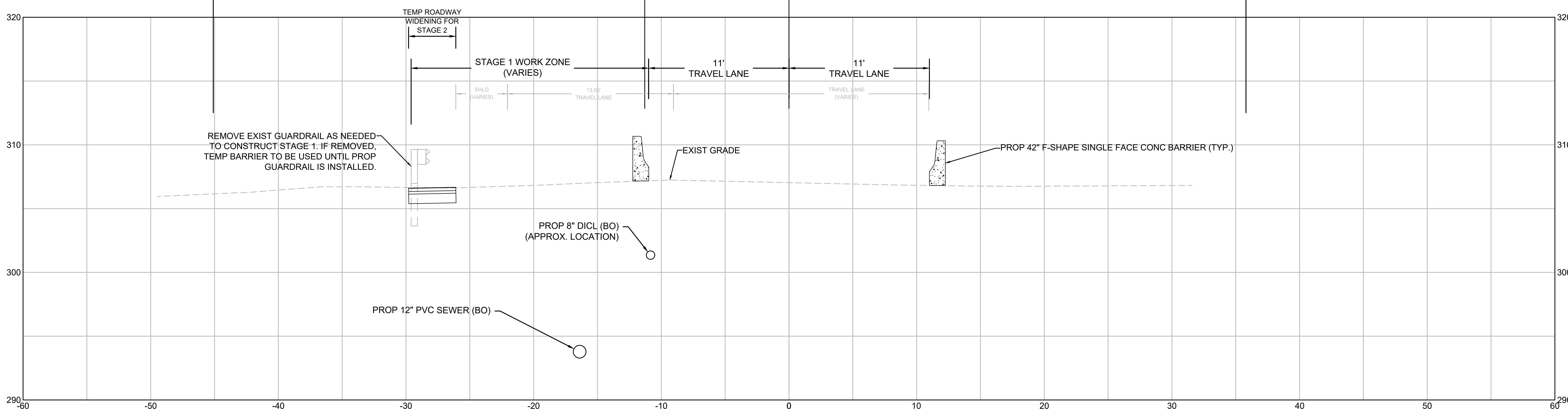
UPTON ROUTE 140 (MILFORD STREET)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	22
PROJECT FILE NO.		608456	

**TEMPORARY TRAFFIC CONTROL PLAN
STAGE 1 TYPICAL SECTIONS**

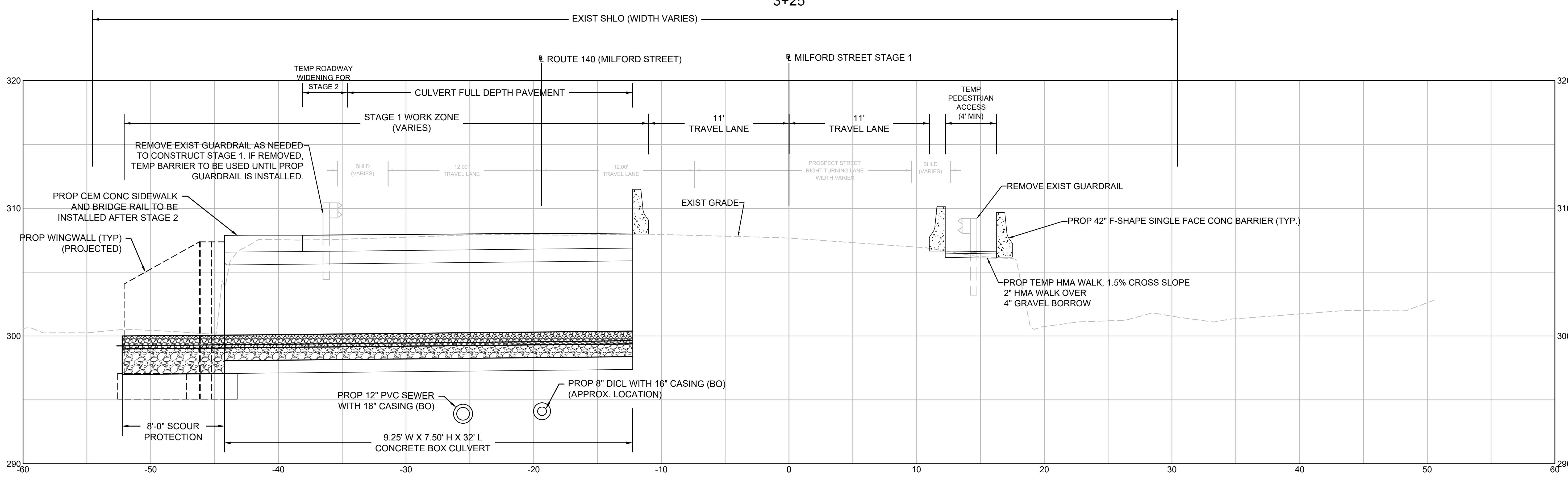
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEET
MA	-	16	22
PROJECT FILE NO.		608456	

<div[](img/TemporaryTrafficControlPlanStage1TypicalSectionsImage.jpg)

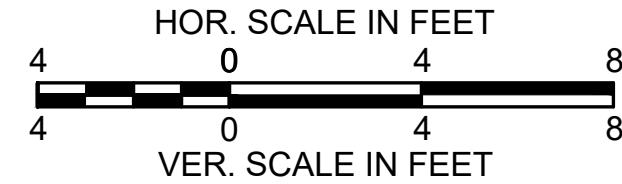
608456_HDX(TTCP-TYP-XS).DWG Plotted on 11-Dec-2023 11:00 AM



3+25



2+85

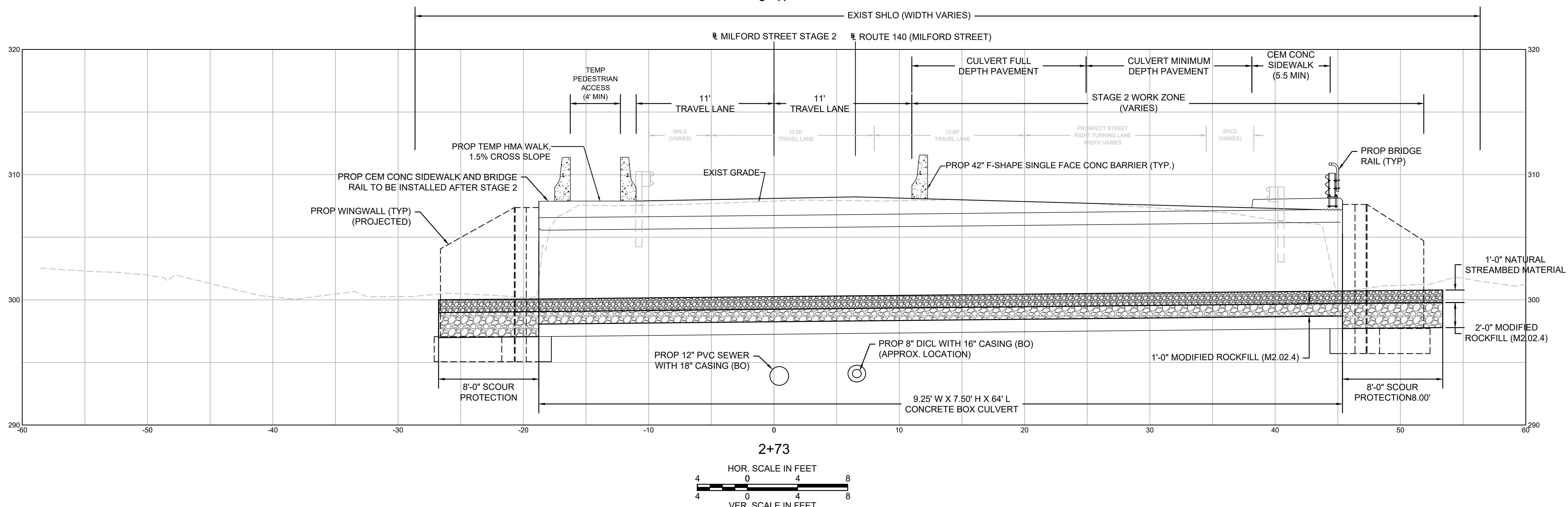
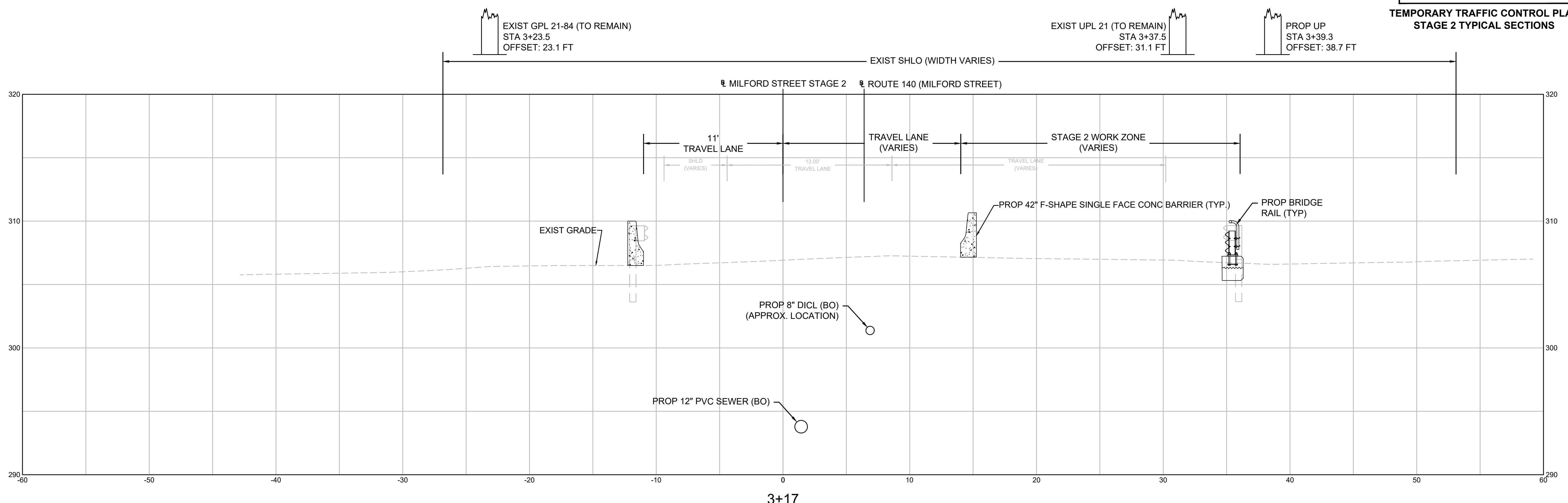


UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	17 22

PROJECT FILE NO. 608456

TEMPORARY TRAFFIC CONTROL PLAN
STAGE 2 TYPICAL SECTIONS

608456-HDX(TTCP-TYP-XS).DWG Plotted on 11-Dec-2023 11:00 AM

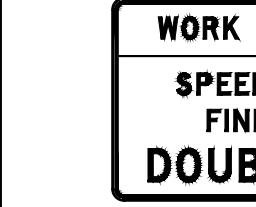
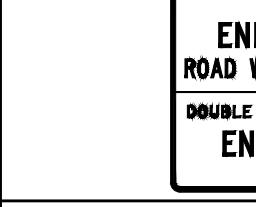
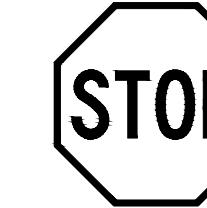
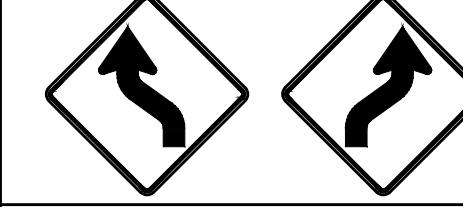


**UPTON
ROUTE 140 (MILFORD STREET)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	22
PROJECT FILE NO. 608456			

**TEMPORARY TRAFFIC CONTROL PLANS
NOTES & SIGN SUMMARY**

Plotted on 11-Dec-2023 11:00 AM

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (IN.)			NUMBER OF SIGNS REQ.	COLOR			UNIT AREA (S.F.)	AREA (S.F.)
	WIDTH (IN.)	HEIGHT (IN.)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK- GROUND	LEGEND	BORDER		
MA-R2-10a	48	36		SEE MASSDOT STANDARDS			2	FLUORE- SCENT ORANGE	BLACK	BLACK	12.00	24.00
MA-R2-10e	36	48		SEE MASSDOT STANDARDS			2	FLUORE- SCENT ORANGE	BLACK	BLACK	12.00	24.00
R1-1	30	30		SEE 2009 M.U.T.C.D.			1	RED	WHITE	WHITE	6.25	6.25
W1-4L/R	36	36		SEE 2009 M.U.T.C.D.			2	FLUORE- SCENT ORANGE	BLACK	BLACK	9.00	18.00
W5-1	36	36		SEE 2009 M.U.T.C.D.			2	FLUORE- SCENT ORANGE	BLACK	BLACK	9.00	18.00
W13-1p	18	18		SEE 2009 M.U.T.C.D.			2	FLUORE- SCENT ORANGE	BLACK	BLACK	2.25	4.50
W20-1	36	36		SEE 2009 M.U.T.C.D.			3	FLUORE- SCENT ORANGE	BLACK	BLACK	9.00	27.00
W21-11	36	36		SEE 2009 M.U.T.C.D.			2	FLUORE- SCENT ORANGE	BLACK	BLACK	9.00	18.00

TRAFFIC MANAGEMENT NOTES

GENERAL:

1. ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - 2009 EDITION (M.U.T.C.D.); MASSDOT'S STANDARD SPECIFICATIONS; NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP #350); THE FHWA MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) 2009 EDITION; MASSDOT'S STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS, THE LATEST EDITION; THEIR LATEST REVISIONS; AND THE FOLLOWING:
2. UNLESS WRITTEN PERMISSION FROM MASSDOT IS OBTAINED, ALL TRAVEL WAYS WITHIN MASSDOT'S RIGHT OF WAY CAN ONLY BE OCCUPIED BETWEEN THE HOURS OF 09:00 AM AND 03:00 PM, MONDAY THROUGH FRIDAY.
3. WARNING SIGNS SHALL HAVE AN ORANGE BACKGROUND, AND REGULATORY SIGNS SHALL BE BLACK TEXT ON A WHITE BACKGROUND.

CONSTRUCTION SIGNING:

1. FINAL LOCATION OF SIGNS, DRUMS, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD BY MASSDOT'S REPRESENTATIVE.
2. SEVEN DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ONE PCMS AT DESIGNATED LOCATIONS, WITH THE FOLLOWING MESSAGE: "ROADWAY / WORK / ____" AND "CONST / BEGINS / MONTH DAY".
3. ADVISORY SPEED PLATES (W13-1(XX)) SHALL BE USED IF APPROPRIATE AND AS REQUIRED BY MASSDOT. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE MASSDOT REPRESENTATIVE.
4. AT THE END OF EACH WORKDAY/SHIFT, THE CONTRACTOR SHALL COVER TEMPORARY TRENCHES WITH STEEL PLATES. TEMPORARY TRAFFIC CONTROL DEVICES, I.E., DRUMS AND CONSTRUCTION FENCES, SHALL BE REMOVED FROM THE TRAVELWAY.
5. NON-ESSENTIAL TEMPORARY CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED FROM THE HIGHWAY WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
6. DISTANCES LISTED BETWEEN TRAFFIC DEVICES ARE PROVIDED AS A GUIDE, AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.

MISCELLANEOUS:

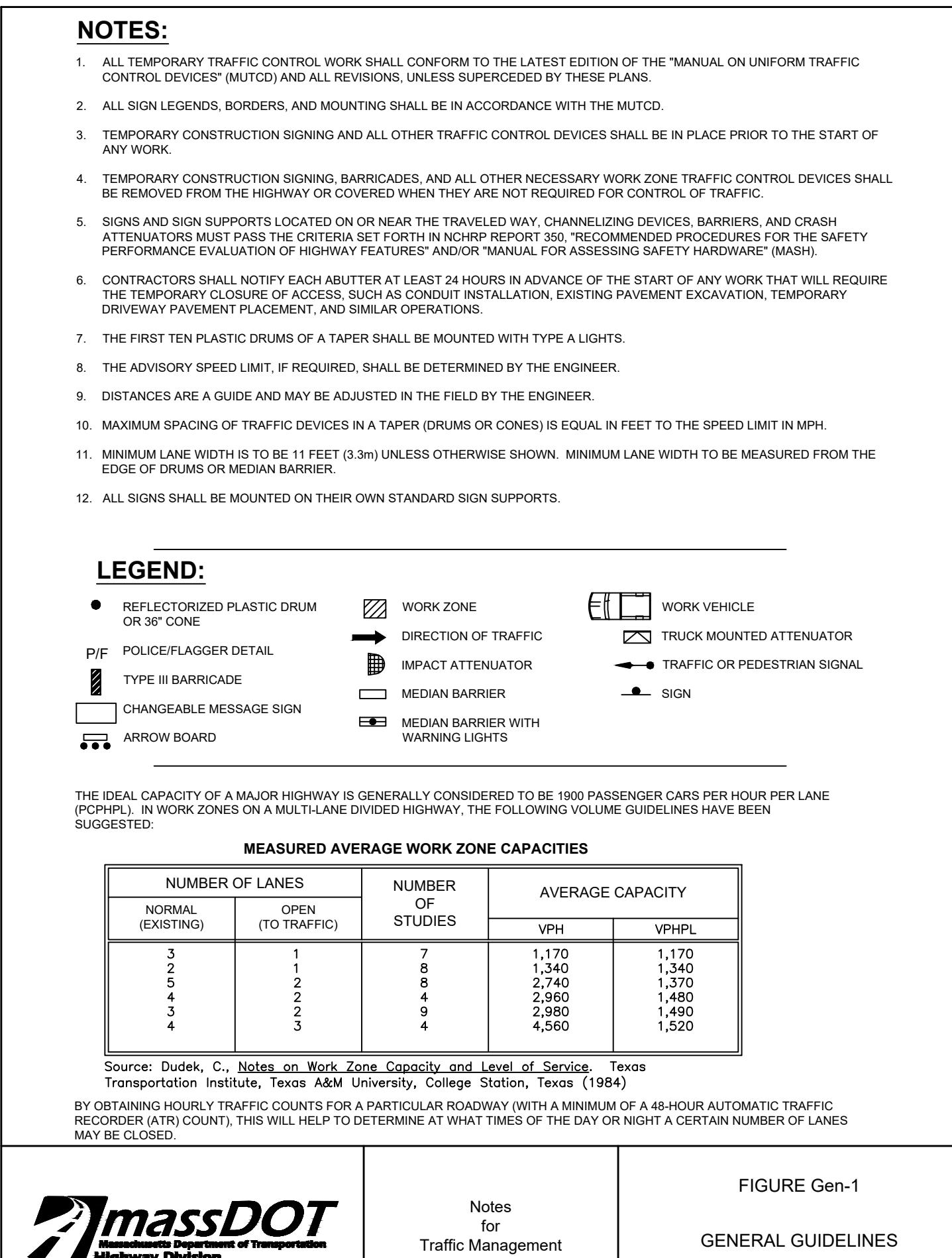
1. THE WORKSITE SHALL BE ADEQUATELY PROTECTED (DURING BOTH WORKING AND NON-WORKING HOURS) TO ENSURE THE SAFETY OF VEHICULAR AND PEDESTRIAN TRAFFIC.
2. AT ALL TIMES, MAINTAIN INGRESS AND EGRESS TO ALL STREETS AND DRIVES.
3. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE THE TEMPORARY MARKINGS AND RESTORE THE PAVEMENT MARKINGS TO THEIR ORIGINAL LOCATION.

608456_HDX/TTCP/SIGNSUMMARY.DWG

UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	19 22

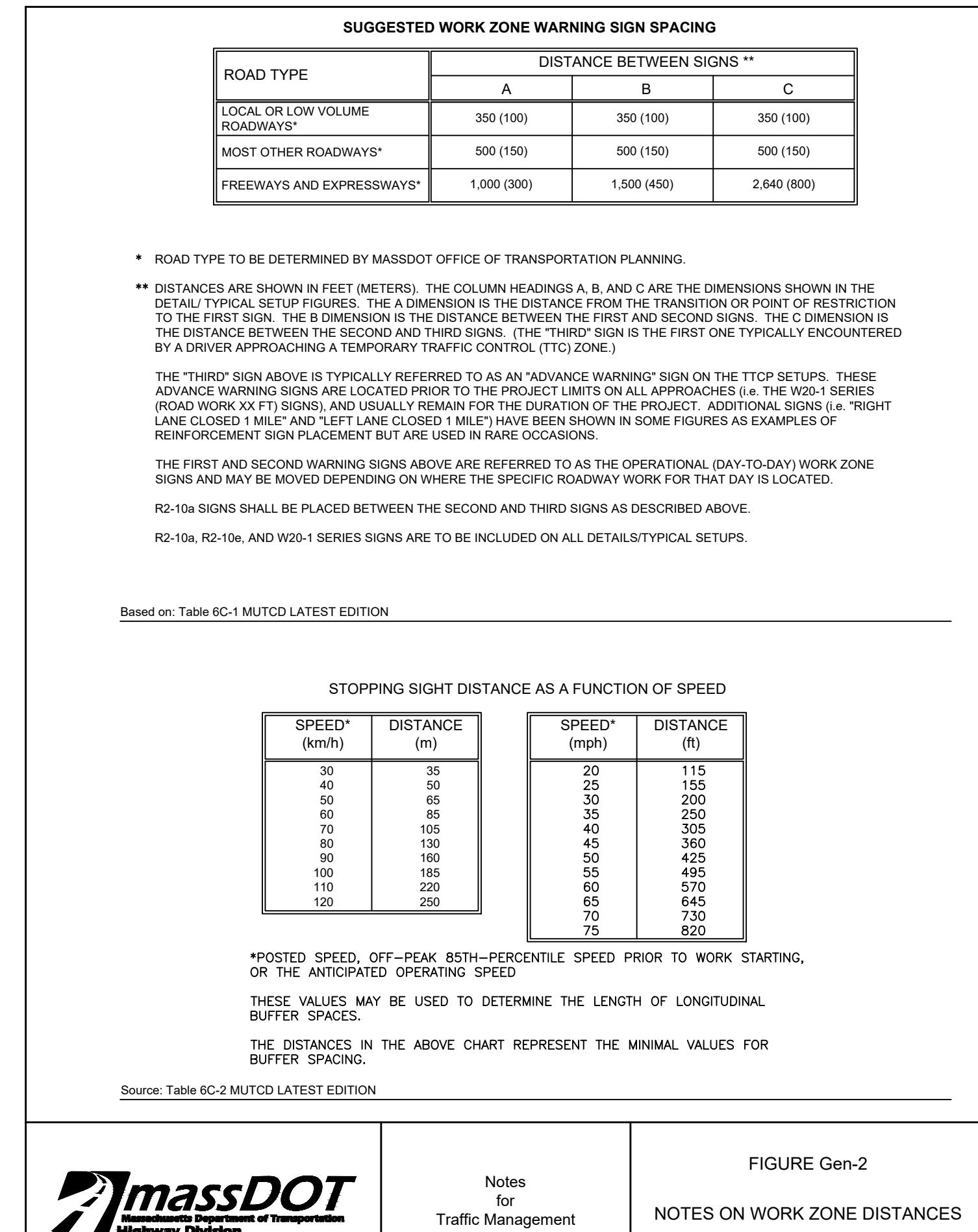
PROJECT FILE NO. 608456

TEMPORARY TRAFFIC CONTROL PLANS DETAILS



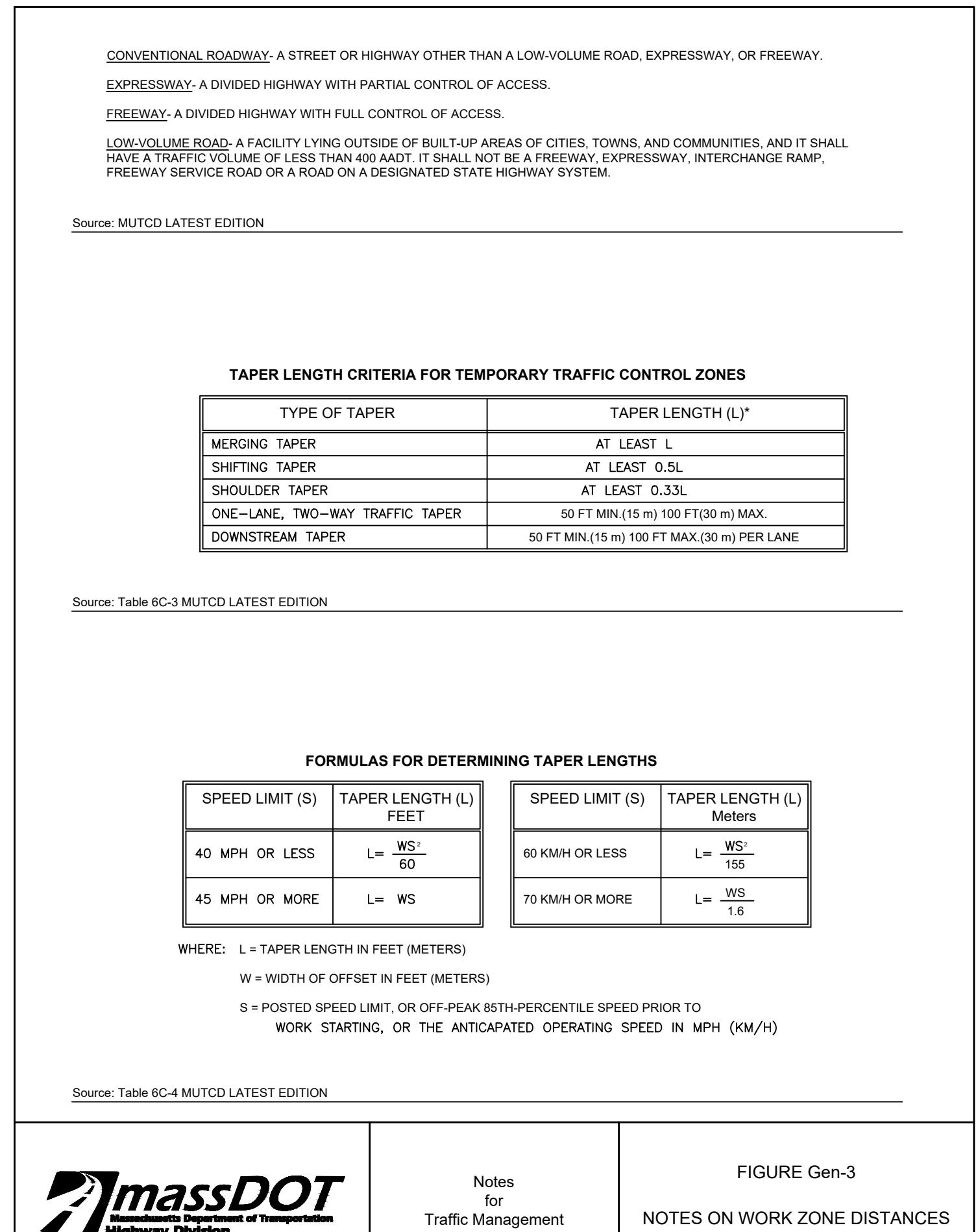
Notes
for
Traffic Management

FIGURE Gen-1
GENERAL GUIDELINES



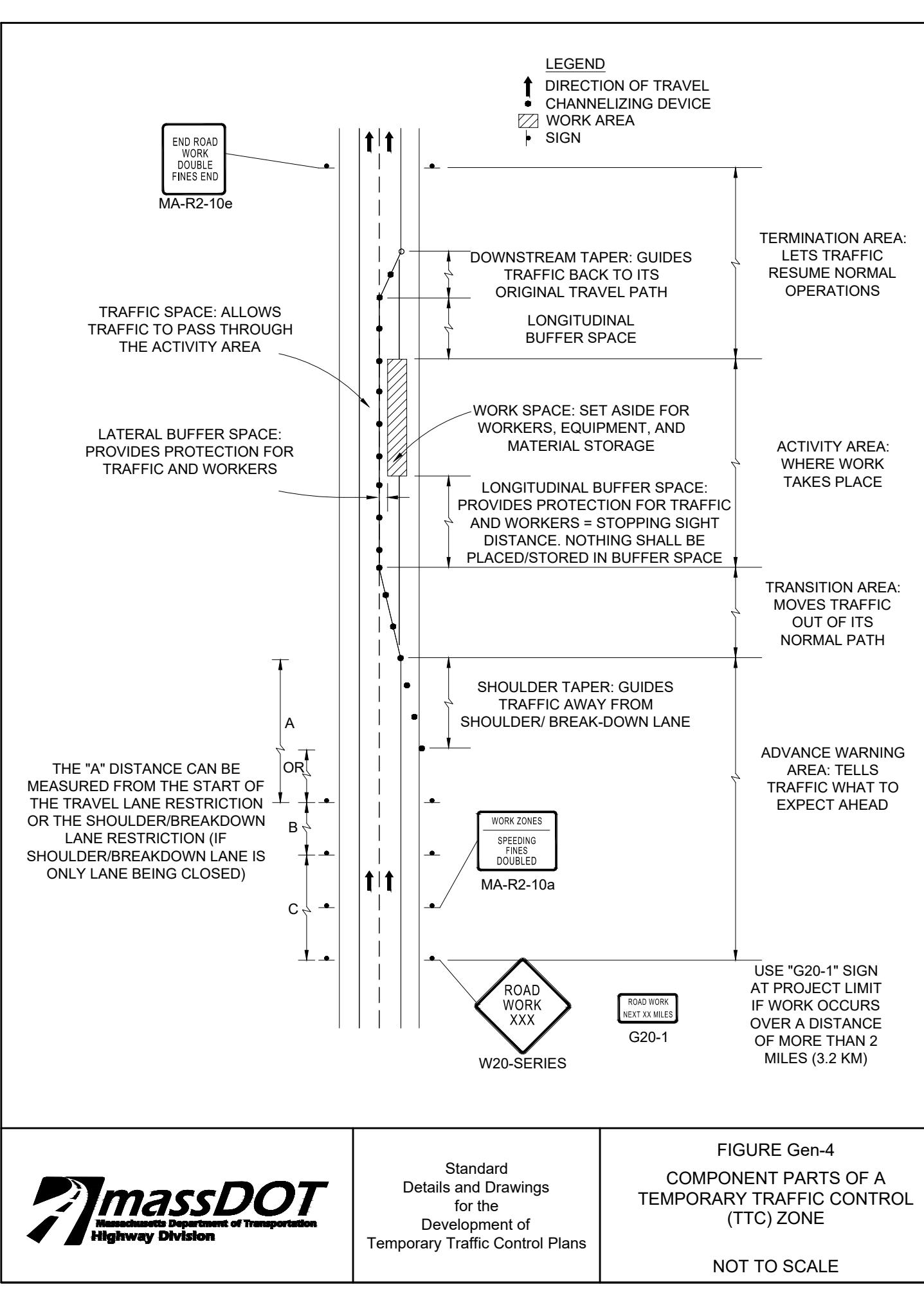
Notes
for
Traffic Management

FIGURE Gen-2
NOTES ON WORK ZONE DISTANCES



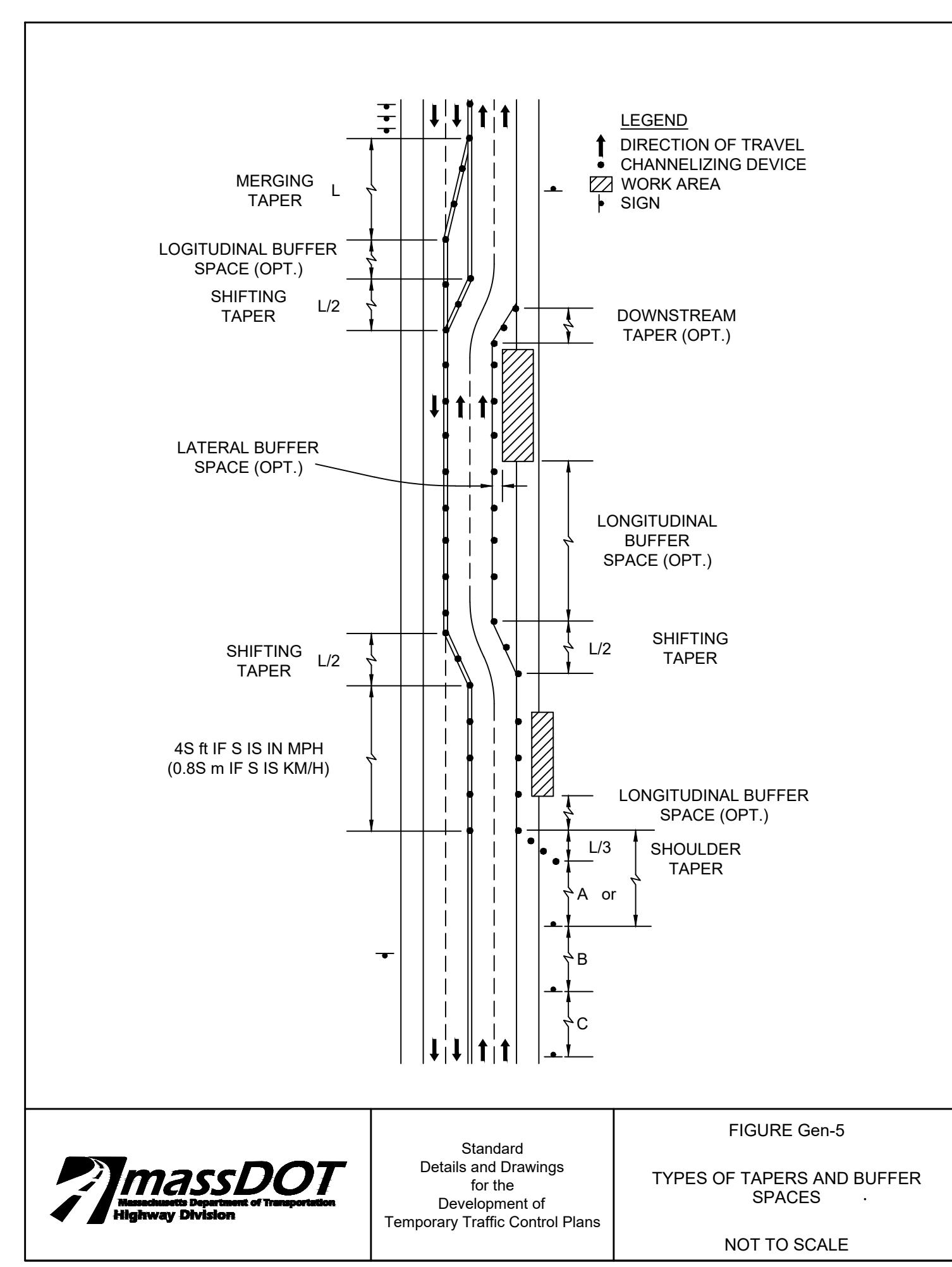
Notes
for
Traffic Management

FIGURE Gen-3
NOTES ON WORK ZONE DISTANCES



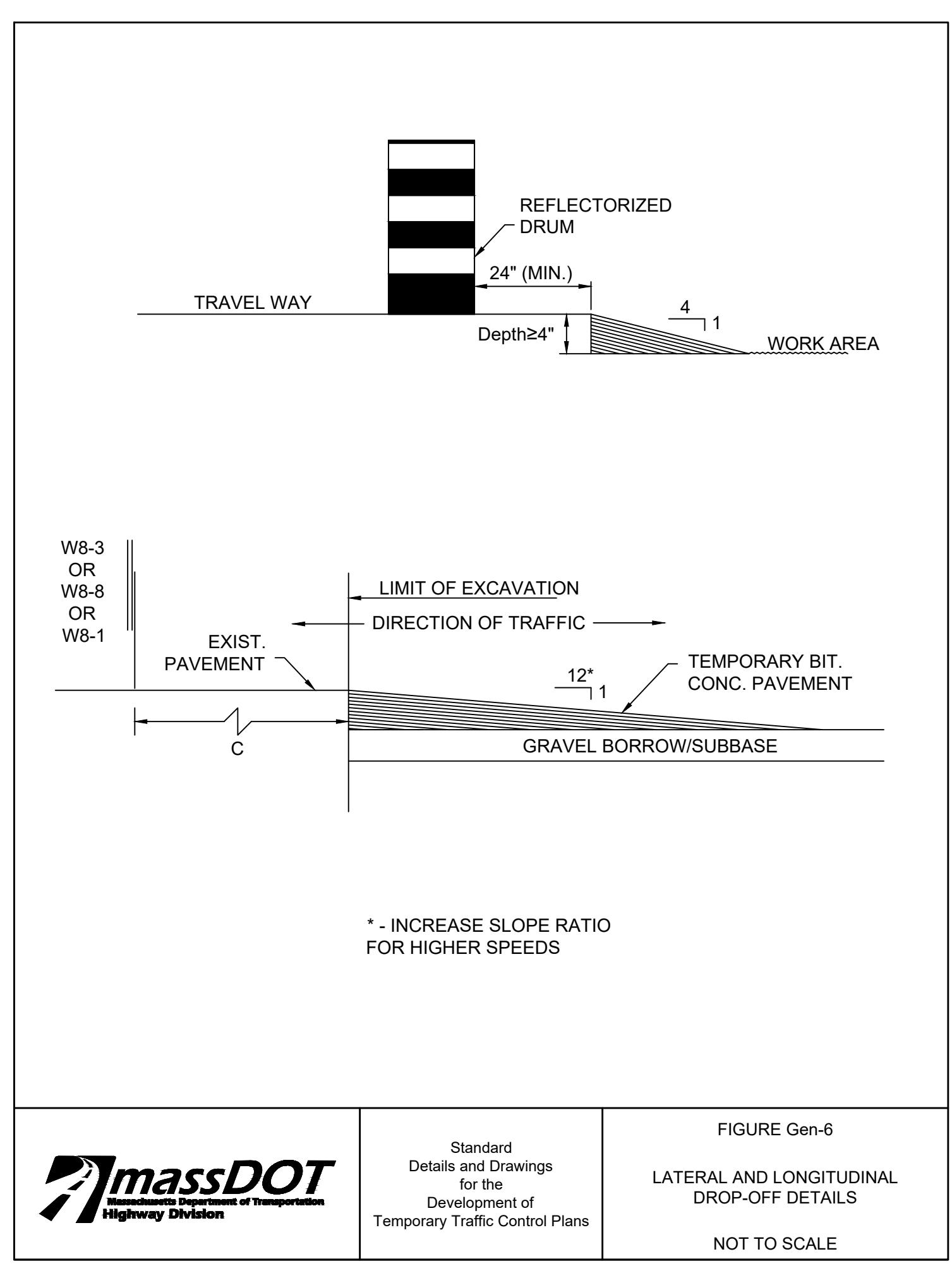
Standard
Details and Drawings
for the
Development of
Temporary Traffic Control Plans

FIGURE Gen-4
COMPONENT PARTS OF A
TEMPORARY TRAFFIC CONTROL
(TTC) ZONE
NOT TO SCALE



Standard
Details and Drawings
for the
Development of
Temporary Traffic Control Plans

FIGURE Gen-5
TYPES OF TAPERS AND BUFFER SPACES
NOT TO SCALE

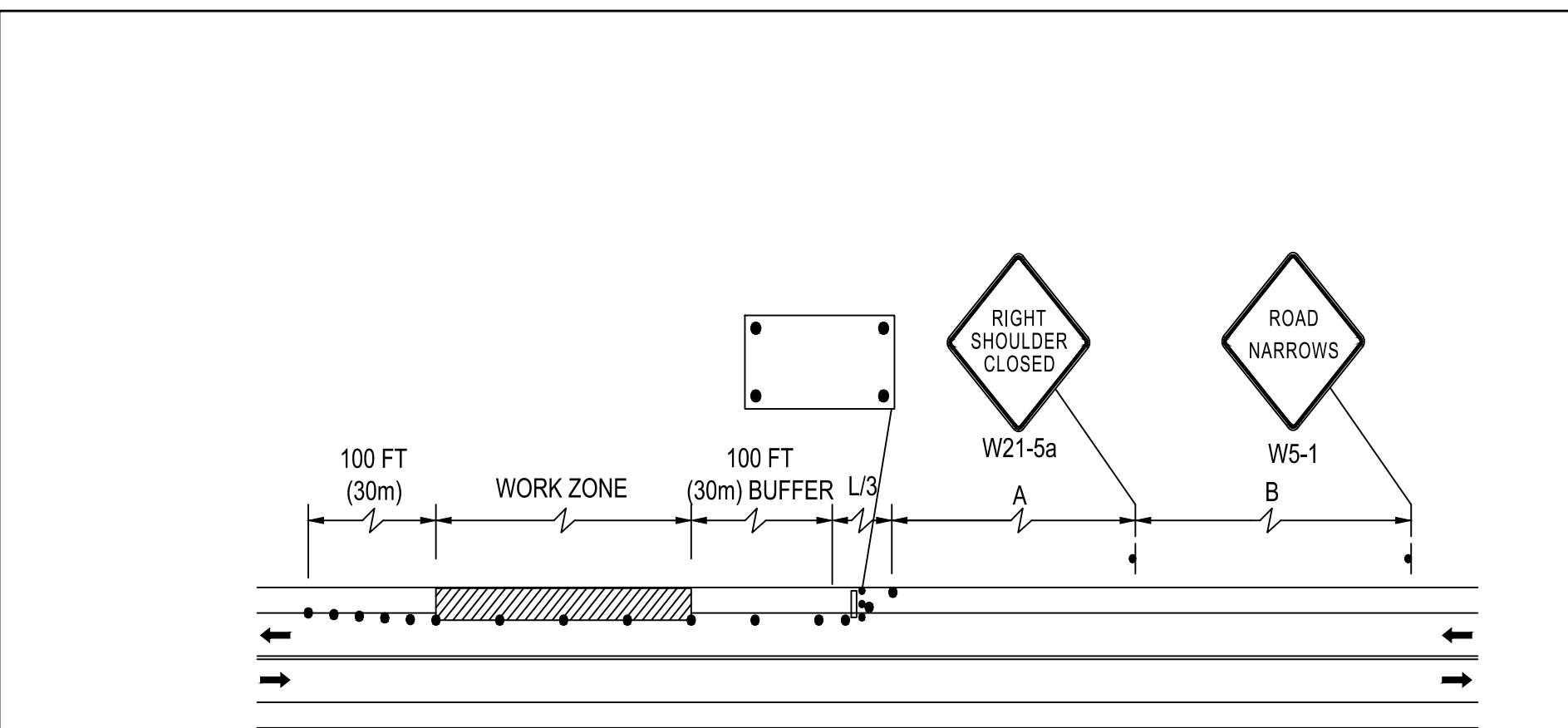


Standard
Details and Drawings
for the
Development of
Temporary Traffic Control Plans

FIGURE Gen-6
LATERAL AND LONGITUDINAL
DROP-OFF DETAILS
NOT TO SCALE

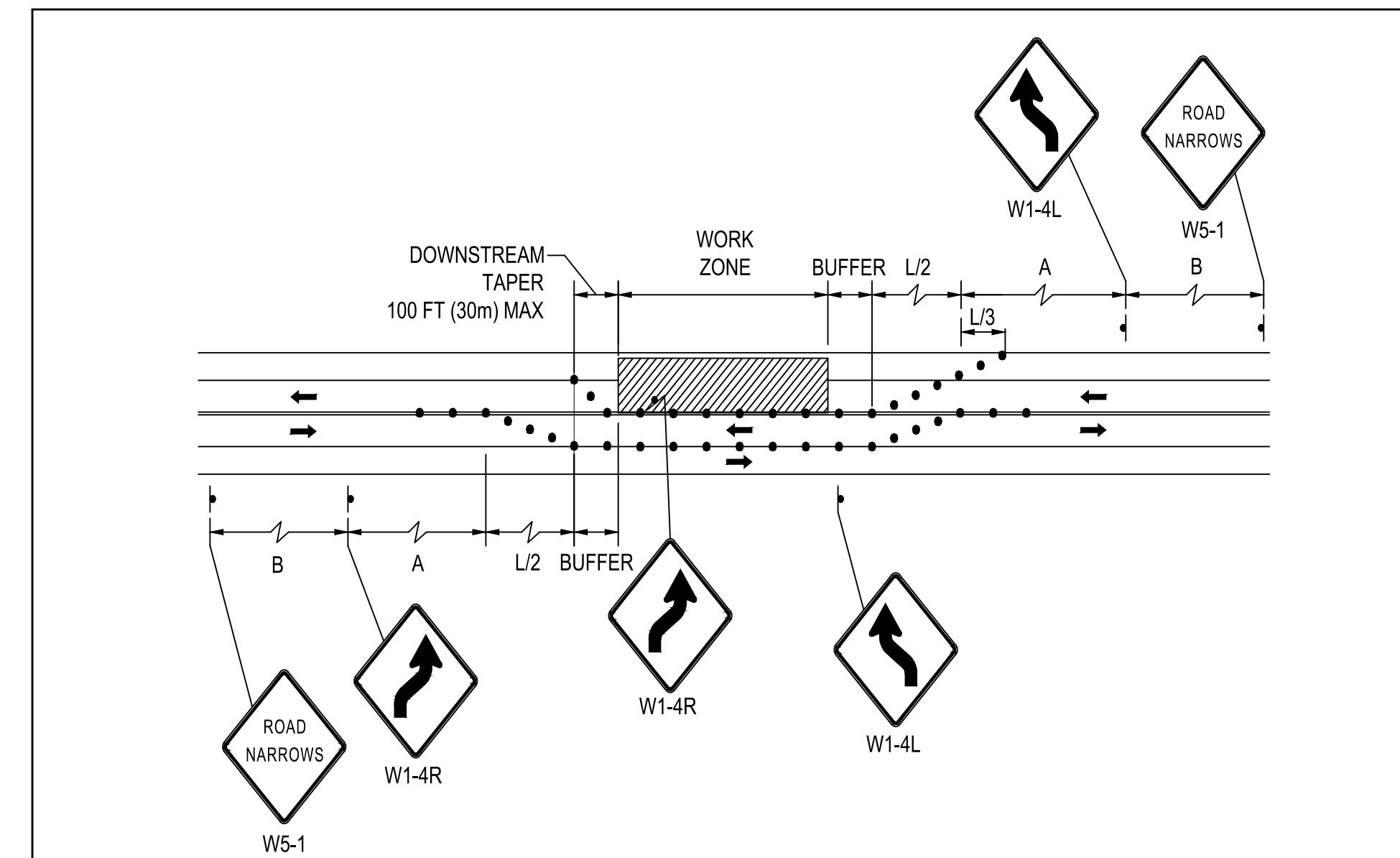
UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	20 22
PROJECT FILE NO. 608456		

TEMPORARY TRAFFIC CONTROL PLANS DETAILS



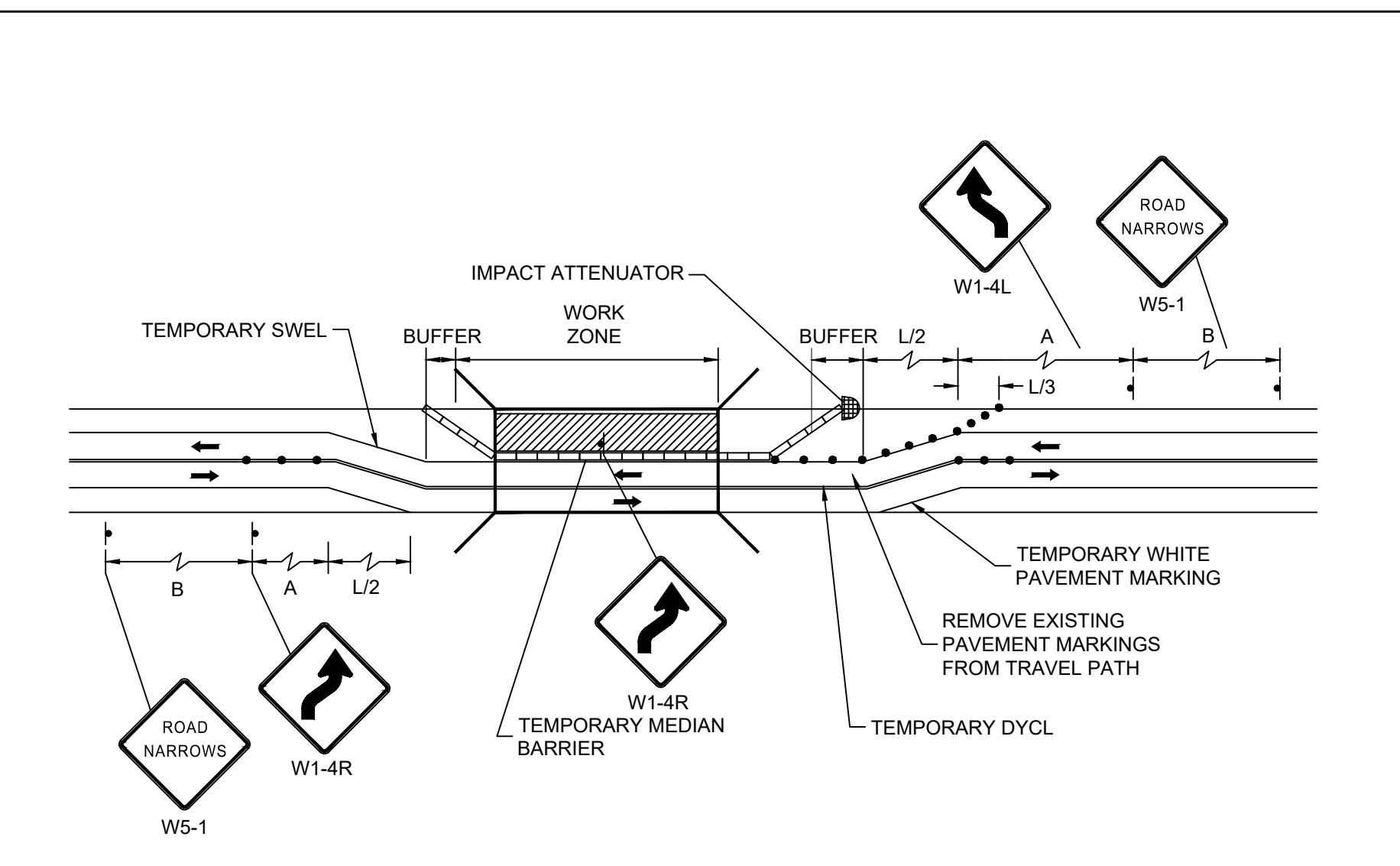
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE TLR-1
TWO LANE ROAD SHOULDER CLOSED
NOT TO SCALE



Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE TLR-2
TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSED
NOT TO SCALE



Standard Details and Drawings for the Development of Temporary Traffic Control Plans

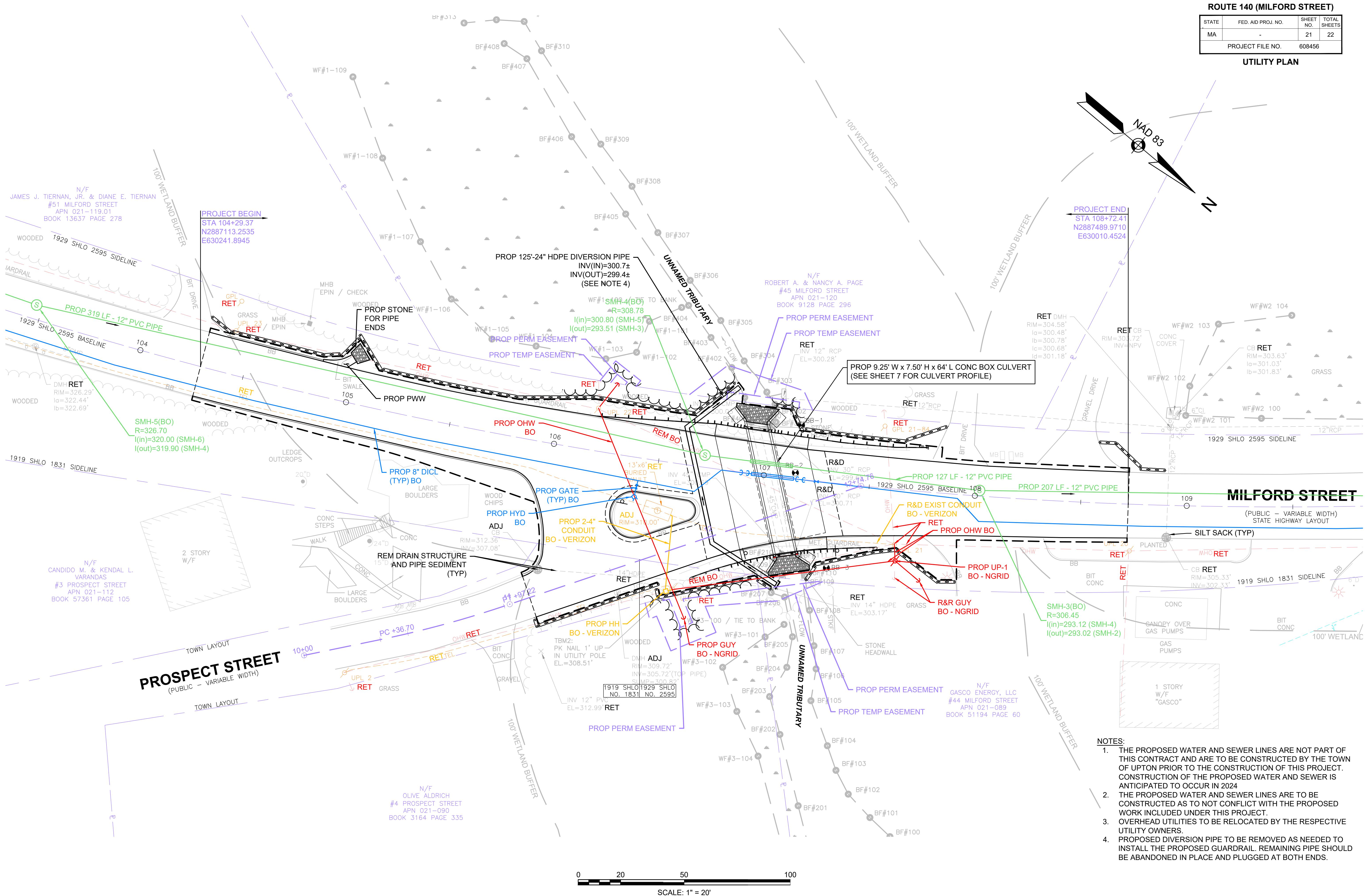
FIGURE Brg-3
PARTIAL BRIDGE CLOSURE STAGE ONE STAGE TWO (SWITCH TO OTHER SIDE)
NOT TO SCALE

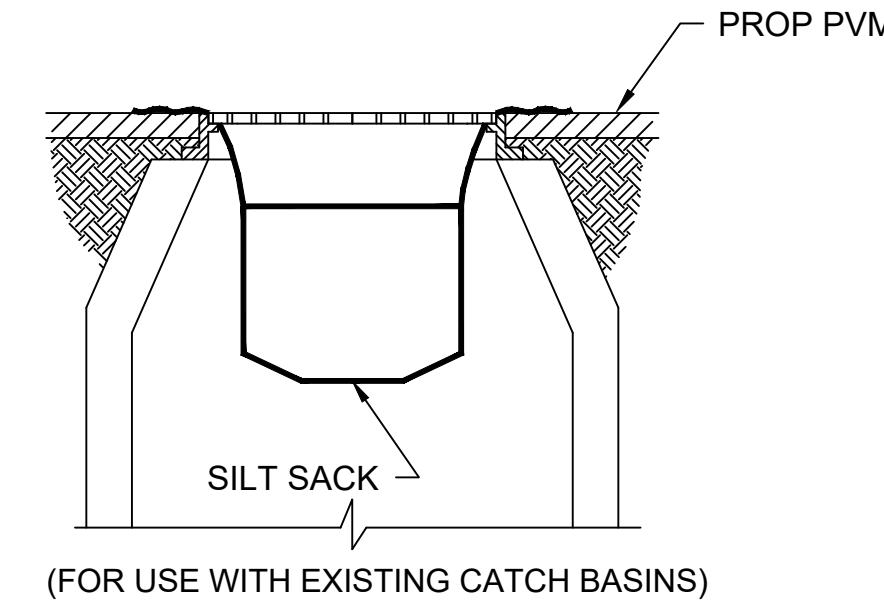
UPTON ROUTE 140 (MILFORD STREET)		
STATE	FED. AID PROJ. NO.	HEET NO. TOTAL SHEETS
MA	-	21 22

PROJECT FILE NO. 608456

UTILITY PLAN

608456_HDUTILITYPLAN.DWG
Plotted on 11-Dec-2023 11:01 AM

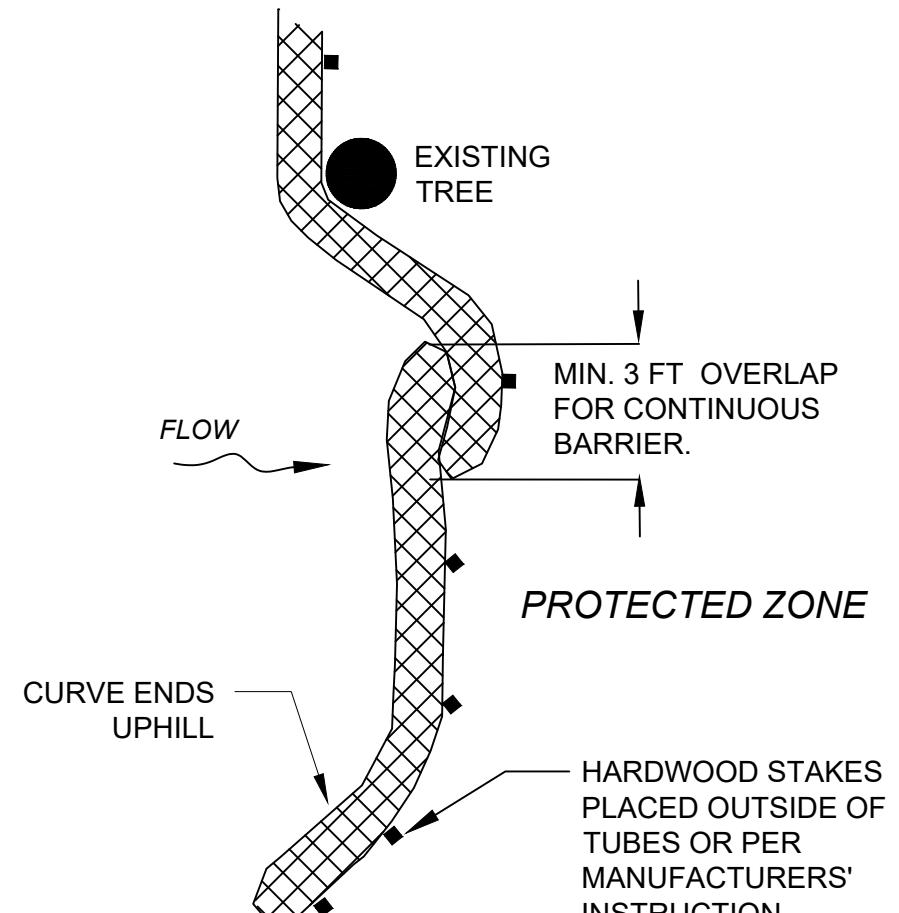




TES:
T SACKS SHALL BE PLACED IN ALL CATCH BASINS
THE VICINITY OF NEW CONSTRUCTION. CATCH
SINS SHALL BE PROTECTED AS SHOWN, WITH
IMUM WEEKLY MAINTENANCE, OR AS REQUIRED,
D REPLACED IF NECESSARY.

SILT SACK INLET PROTECTION

NOT TO SCALE

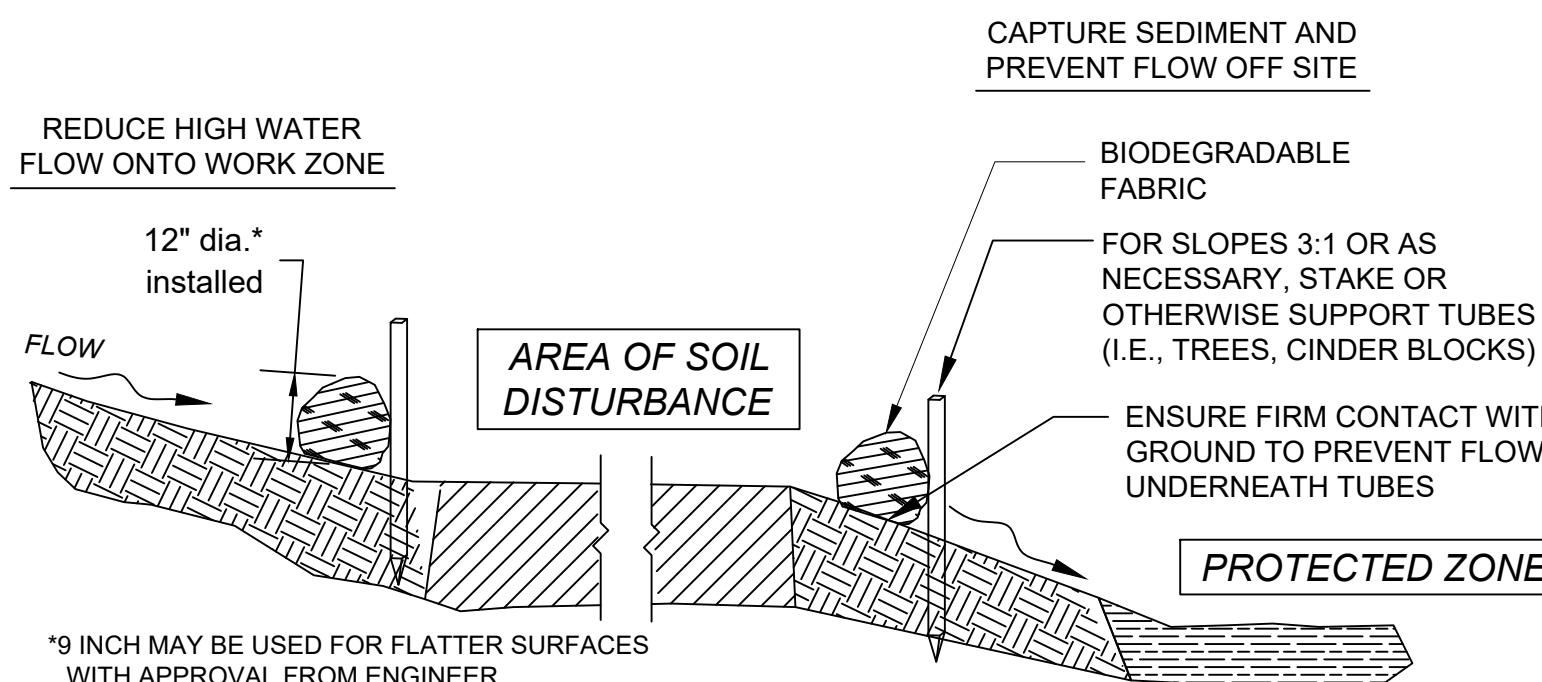


- PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.
- PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE
- ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.
- PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE

PLAN VIEW

COMPOST FILTER TUBE

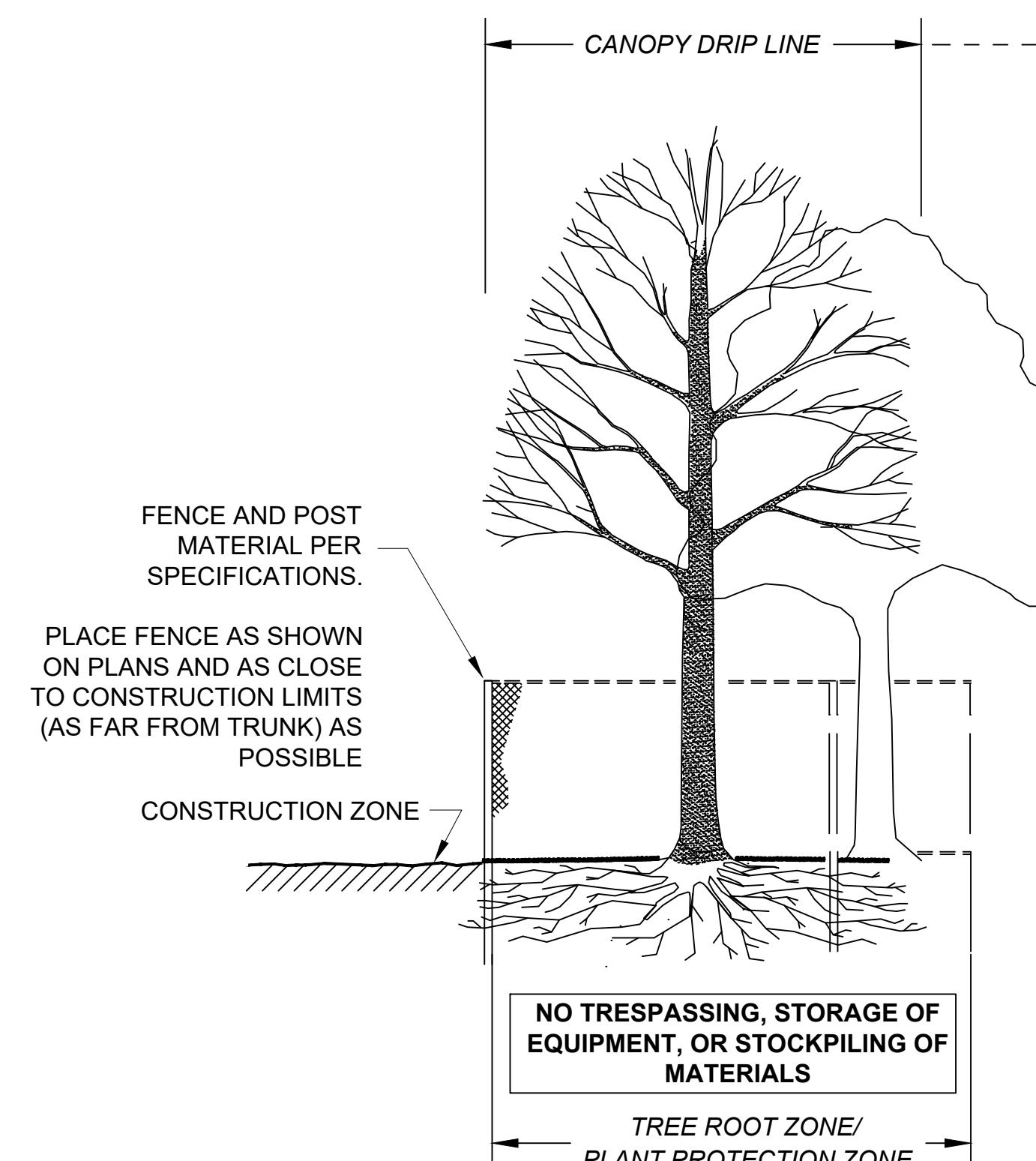
NOT TO SCALE



SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE

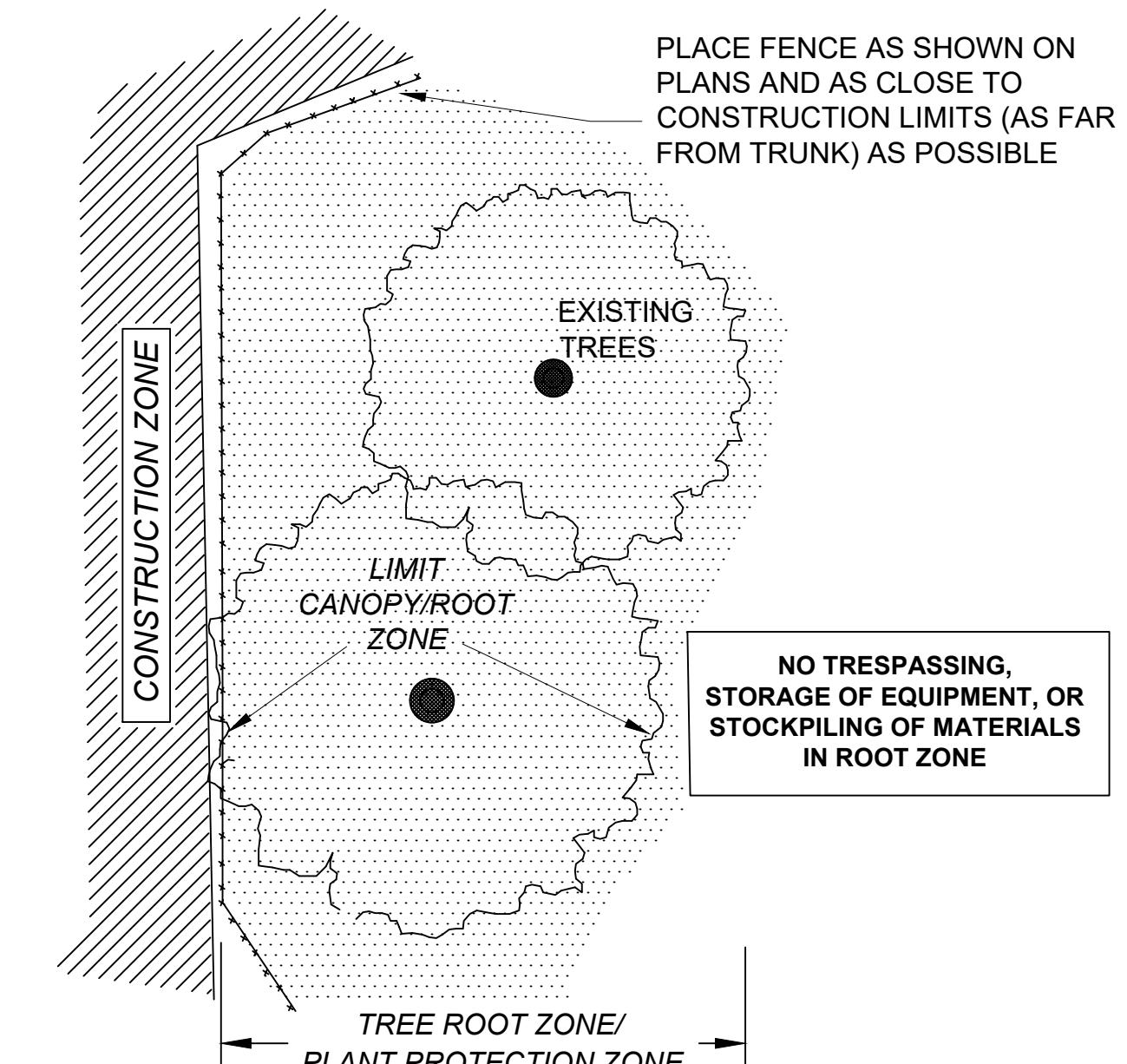
NOT TO SCALE



SECTION - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

NOT TO SCALE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE