MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	67
PROJECT FILE NO.	609410		

TITLE SHEET & INDEX

PLAN AND PROFILE OF

CENTRE STREET (ROUTE 123)

IN THE CITY OF

BROCKTON

PLYMOUTH COUNTY

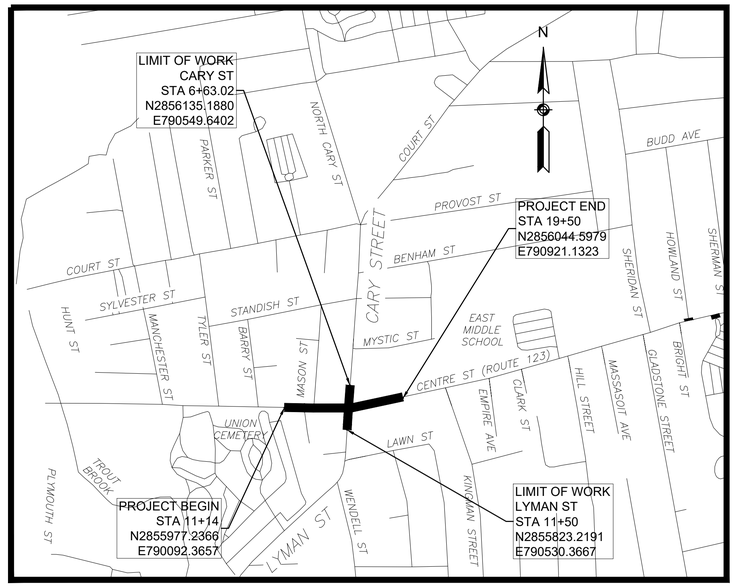
FEDERAL AID PROJECT NO.

75%/100% SUBMITTAL

THESE PLANS ARE SUPPLEMENTED BY THE 2023 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 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.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	KEY PLAN & BORING LOCATIONS
4-5	TYPICAL SECTIONS
6-10	CONSTRUCTION BASELINE TIES
11-15	CONSTRUCTION PLANS
16-17	PROFILES
18-19	PROFILES - SIDE STREETS
20-24	CURB TIE & GRADING PLANS
25-29	TRAFFIC SIGN & PAVEMENT MARKINGS
30-31	TRAFFIC SIGN SUMMARY SHEETS
32-34	TRAFFIC SIGNAL PLANS & DETAILS
35-37	TEMPORARY TRAFFIC CONTROL PLANS
38-43	UTILITY PLANS & DRAINAGE STRUCTURE TABLES
44-47	CONSTRUCTION DETAILS
48-50	WHEELCHAIR RAMP/DRIVEWAY DETAILS
51-67	CROSS SECTIONS



LOCUS MAP

0 500 1000 1500 2000

SCALE: 1" = 500'

LENGTH OF PROJECT = 836 FEET = 0.158 MILES

DESIGN DESIGNATION (CENTRE ST & BROCKTON AVE / RTE 123)

DESIGN SPEED	40 MPH
ADT (2019)	15,600 VPD
ADT (2029)	17,200 VPD
K	7.3%
D	54% EB
T (PEAK HOUR)	2.7%
T (AVERAGE DAY)	1.8%
DHV	1,255
DDHV	675
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERY

DESIGN DESIGNATION (LYMAN STREET)

DESIGN SPEED	35 MPH
ADT (2021)	12,500 VPD
ADT (2031)	13,800 VPD
K	7.30%
D	54% SB
T (PEAK HOUR)	5.53%
T (AVERAGE DAY)	2.95%
DHV	1,007
DDHV	544
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL

DESIGN DESIGNATION (CARY STREET)

DESIGN SPEED	35 MPH
ADT (2019)	9,400 VPD
ADT (2029)	10,400 VPD
K	7.30%
D	54.2% SB
T (PEAK HOUR)	5.15%
T (AVERAGE DAY)	2.46%
DHV	760
DDHV	410
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST
SUITE 101
MARLBOROUGH, MA 01752

DATE	DESCRIPTION	REV #

massDOT
Massachusetts Department of Transportation
Highway Division

APPROVED

CHIEF ENGINEER **DATE**

609410_HD(TITLE SHEET CARY).DWG Plotted on 12-Mar-2023 11:37 AM

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
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		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
HTP		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
•SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	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
		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	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
	*	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
	20'	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
	20'	MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE, 12" WIDE
	CW	CROSSWALK, 12" WIDE
	SWL	SOLID WHITE LINE, 6" WIDE
	SYL	SOLID YELLOW LINE, 6" WIDE
	BWL	BROKEN WHITE LINE, 6" WIDE
	BYL	BROKEN YELLOW LINE, 6" WIDE
	DWL	DOTTED WHITE LINE, 6" WIDE - 3' LINE - 9' GAP
	DYL	DOTTED YELLOW LINE, 6" WIDE - 3' LINE - 9' GAP
	DWLEx	DOTTED WHITE LINE EXTENSION, 6" WIDE - 2' LINE - 6' GAP
	DYLEx	DOTTED YELLOW LINE EXTENSION, 6" WIDE - 2' LINE - 6' GAP
	DBWL	DOUBLE WHITE LINE, 6" WIDE EACH LINE
	DBYL	DOUBLE YELLOW LINE, 6" WIDE EACH LINE
	YTL	YELLOW TRANSVERSE LINE, 12" WIDE EACH LINE, 10' O.C OFFSET

ABBREVIATIONS

GENERAL

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
BSW	BACK OF SIDEWALK
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE/CONCRETE CURB
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CILP	CAST IRON - LOW PRESSURE
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
CRW	CONCRETE RETAINING WALL
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
GWA	GUY WIRE ATTACHED
HDW	HEADWALL
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
MHS	MANHOLE - SEWER
MHB	MASSACHUSETTS HIGHWAY BOUND
MHDL-TC	MASS HIGHWAY DITCH LINE - TOP OF CURB
MIN	MINIMUM
MIPE	MONUMENT-IRON PIPE
MMON	MASSDOT MONUMENT
MSRW	MASONRY RETAINING WALL
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

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	67
PROJECT FILE NO.	609410		

LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

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
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCC	ROUND CONCRETE CURB
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
SPRC	SPRUCE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
VGT	VEGETATION
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

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	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

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BROCKTON
CENTRE STREET (ROUTE 123)

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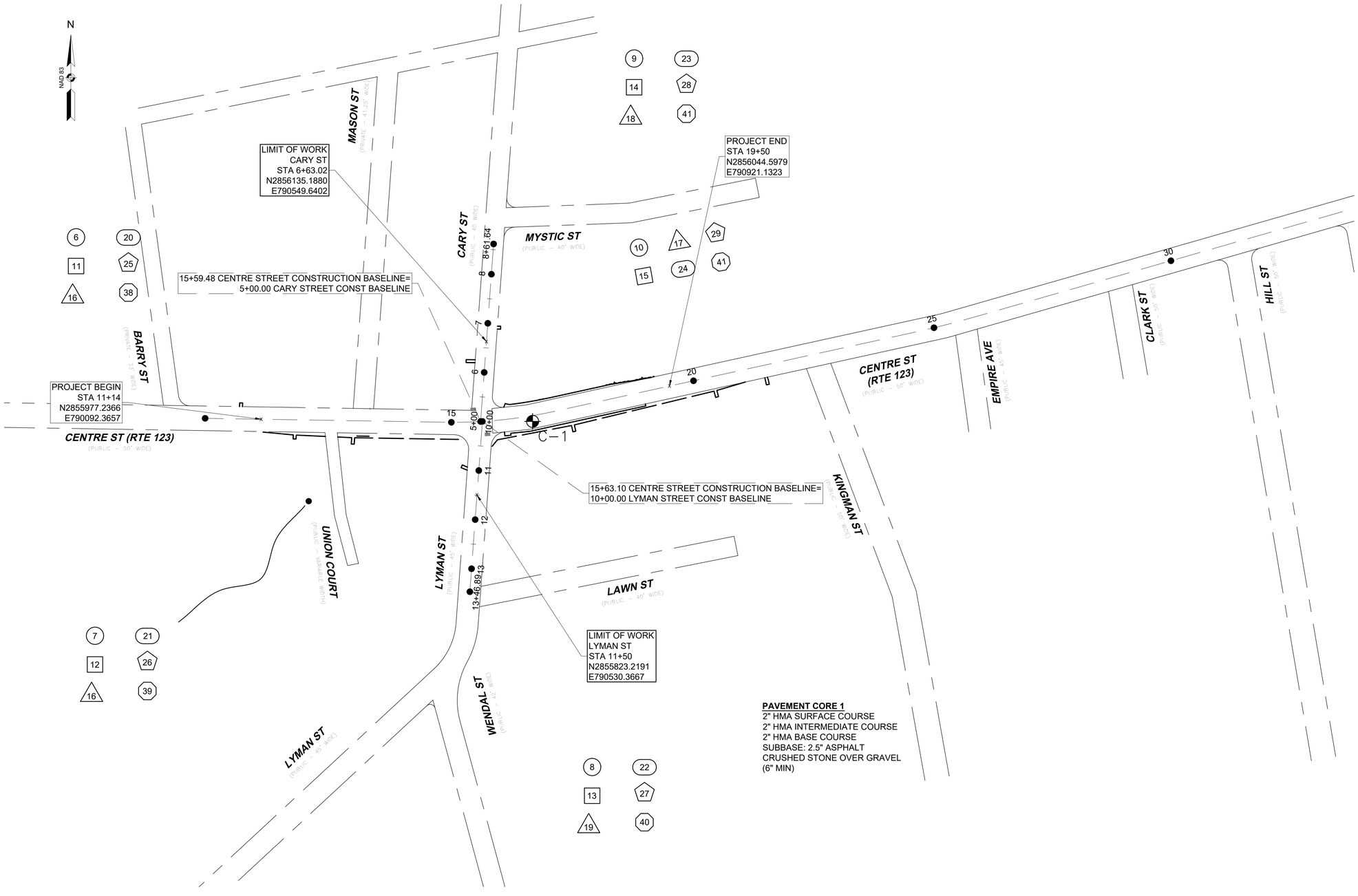
MA	-	3	67
PROJECT FILE NO.	609410		

KEY PLAN
CENTRE STREET (ROUTE 123)
LYMAN STREET - CARY STREET



LEGEND

- XX CONSTRUCTION BASELINE TIES
- XX CONSTRUCTION PLANS
- XX PROFILES
- XX CURB TIE & GRADING PLANS, SUBMITTED AT 75% SUBMISSION
- XX TRAFFIC SIGN & PAVEMENT MARKINGS
- XX UTILITY PLANS
- PAVEMENT CORE 5/27/2021 & 5/28/2021

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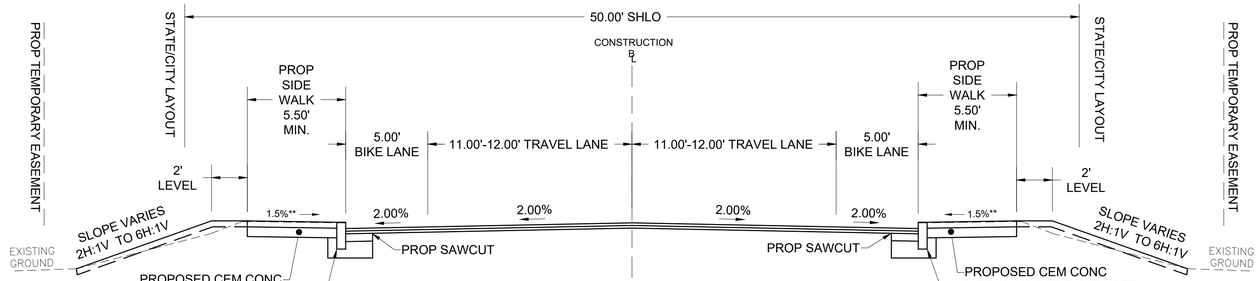
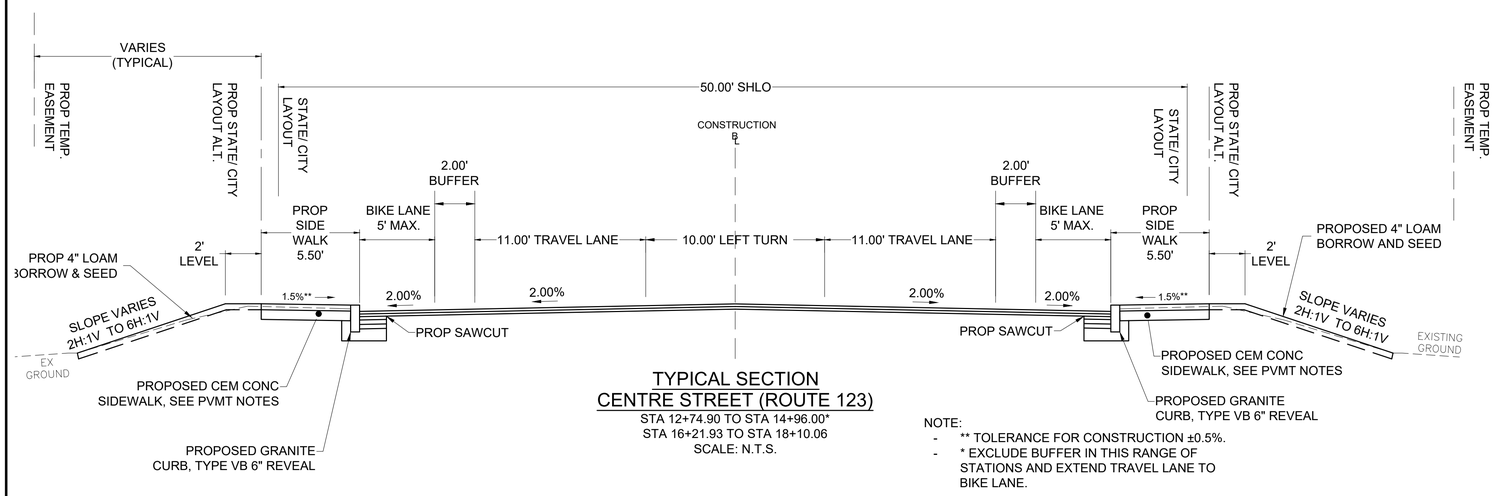


TYPICAL SECTION
CENTRE STREET (ROUTE 123)

STA 11+14.00 TO STA 12+74.90
STA 19+24.20 TO STA 19+50.00
SCALE: N.T.S.

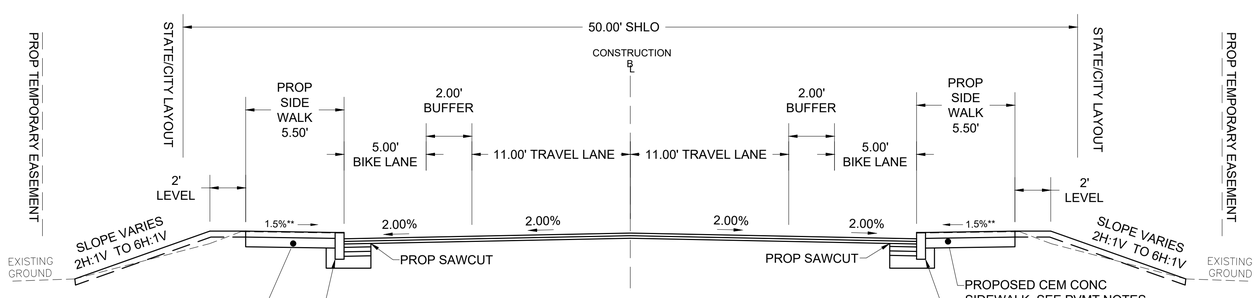
NOTE:
- ** TOLERANCE FOR CONSTRUCTION ±0.5%.



TYPICAL SECTION
CENTRE STREET (ROUTE 123)

STA 12+74.90 TO STA 14+96.00*
STA 16+21.93 TO STA 18+10.06
SCALE: N.T.S.

NOTE:
- ** TOLERANCE FOR CONSTRUCTION ±0.5%.
- * EXCLUDE BUFFER IN THIS RANGE OF STATIONS AND EXTEND TRAVEL LANE TO BIKE LANE.



TYPICAL SECTION
CENTRE STREET (ROUTE 123)

STA 18+10.06 TO STA 18+24.20

SCALE: N.T.S.

NOTE:
- ** TOLERANCE FOR CONSTRUCTION ±0.5%.

0 4 10 16

SCALE: 1" = 4'

PAVEMENT NOTES

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	67
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TYPICAL SECTIONS
SHEET 01 OF 02

PROPOSED PAVEMENT MILLING AND PAVEMENT OVERLAY

SURFACE: 1.75" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC - 12.5 - P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

INTERMEDIATE*: 2.25" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

MILLING: 2.50" PAVEMENT FINE MILLING

PROPOSED NARROW BOX WIDENING (LESS THAN 4 FT)

SURFACE: 1.75" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC - 12.5 - P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

INTERMEDIATE*: 2.25" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

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

SUBBASE: 8" GRAVEL BORROW TYPE b

PROPOSED FULL DEPTH PAVEMENT AND BOX WIDENING (4 FT OR MORE)

SURFACE: 1.75" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC - 12.5 - P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

INTERMEDIATE*: 2.25" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

BASE: 3" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC - 19.0) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER 3" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC - 19.0) OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE OVER 8" GRAVEL BORROW TYPE b

FULL DEPTH PAVEMENT, FULL DEPTH PAVEMENT PATCHES FOR TRENCHES, AND WIDENING 4 FEET OR MORE SHALL BE PAVED OVER GRAVEL BACKFILL. GRAVEL BACKFILL SHALL BE COMPACTED IN LAYERS NOT TO EXCEED 6 INCHES AND COMPACTED TO 95% MAXIMUM DRY DENSITY (PROCTOR STANDARD).

FOR FULL DEPTH PATCHES AND TRENCH PATCHES, ASPHALT EMULSION FOR TACK COAT SHALL BE RS-1h TO RESIST TRACKING BY HAUL VEHICLES. ADDITIONALLY, THE TOP OF THE SUPERPAVE SURFACE MATERIAL SHALL BE PAVED FLUSH WITH THE EXISTING ADJACENT ROADWAY SURFACE. FOR THE FINAL OVERLAY, MILL THE PATCHES AND EXISTING ADJACENT ROADWAY TOGETHER TO PRODUCE A SMOOTH MILLED SURFACE IN PREPARATION FOR THE RESURFACING OVERLAY.

*MINIMUM THICKNESS OF INTERMEDIATE COURSE SHOWN. AN INTERMEDIATE COURSE OF VARIABLE THICKNESS SHALL BE USED TO ACHIEVE THE CROSS SLOPE AS SHOWN ON THE CURB TIE AND GRADING, AND CROSS SECTIONS. THE COMPACTED LIFT THICKNESS OF THE VARIABLE INTERMEDIATE COURSE SHALL NOT BE LESS THAN 2.25 INCHES AND SHALL NOT BE MORE THAN 4.5 INCHES.

PROPOSED CEMENT CONCRETE PEDESTRIAN CURB RAMPS, SIDEWALKS, AND WALKS

SURFACE: 4" CEMENT CONCRETE AIR ENTRAINED 4000 PSI, 3/4", 610 LB OVER
FOUNDATION: 8" GRAVEL BORROW TYPE b

PROPOSED CEMENT CONCRETE DRIVEWAYS

SURFACE: 6" CEMENT CONCRETE AIR ENTRAINED 4000 PSI, 3/4", 610 LB OVER
FOUNDATION: 8" GRAVEL BORROW TYPE b

PROPOSED HOT MIX ASPHALT DRIVEWAY

SURFACE: 1.5" SUPERPAVE SURFACE COURSE OVER 2.5" SUPERPAVE INTERMEDIATE COURSE OVER
FOUNDATION: 8" GRAVEL BORROW TYPE b

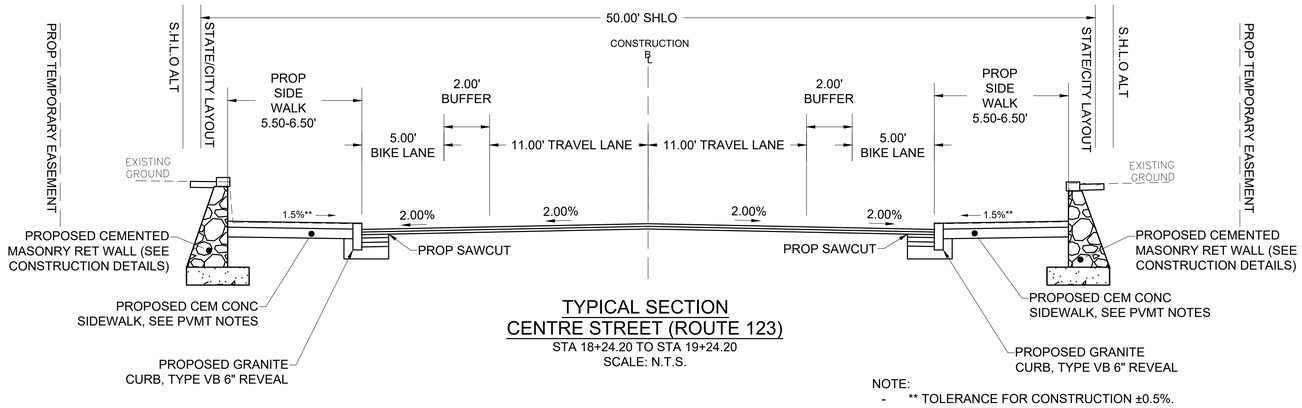
BOX WIDENING TABLE	
NARROW BOX WIDENING	CENTRE STREET BL: STA 11+14 TO 13+10 RT, STA 18+80 TO STA 19+50 RT, STA 11+14 TO STA 12+31 LT, STA 18+70 TO STA 19+50 LT LYMAN STREET BL: STA 10+65 TO 11+50 RT, STA 10+37 TO 11+50 LT CARY STREET BL: STA 5+43 TO 6+55.02 LT, STA 5+94 TO 6+63.02 RT
BOX WIDENING 4' OR MORE	CENTRE STREET BL: STA 13+10 TO 15+00 RT, STA 16+00 TO STA 18+80 RT, STA 12+31 TO STA 15+40 LT, STA 16+00 TO STA 18+70 LT LYMAN STREET BL: STA 10+21 TO 10+65 RT, STA 10+11 TO 10+37 LT CARY STREET BL: STA 5+13 TO 5+43 LT, STA 5+22 TO 5+94 RT

609410_HD(TYPICAL SECTIONS).DWG Plotted on 12-Mar-2023 11:37 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	67
PROJECT FILE NO.	609410		

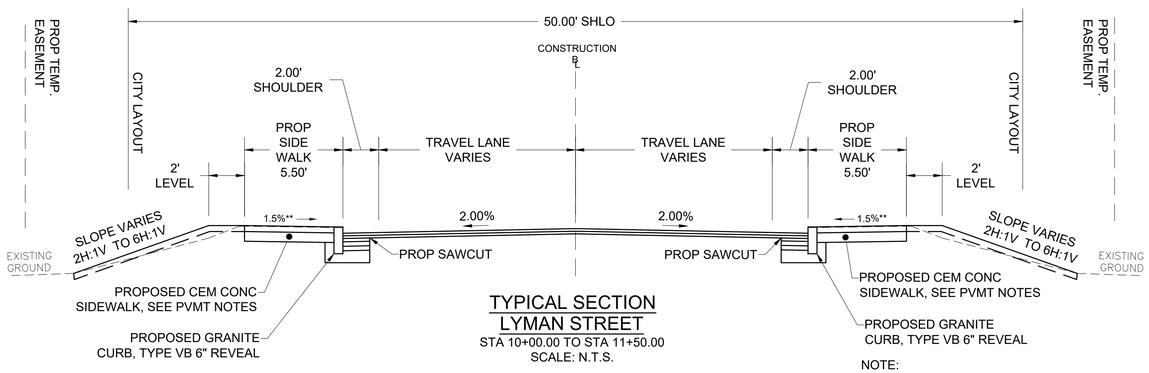
TYPICAL SECTIONS
SHEET 02 OF 02



TYPICAL SECTION
CENTRE STREET (ROUTE 123)

STA 18+24.20 TO STA 19+24.20
SCALE: N.T.S.

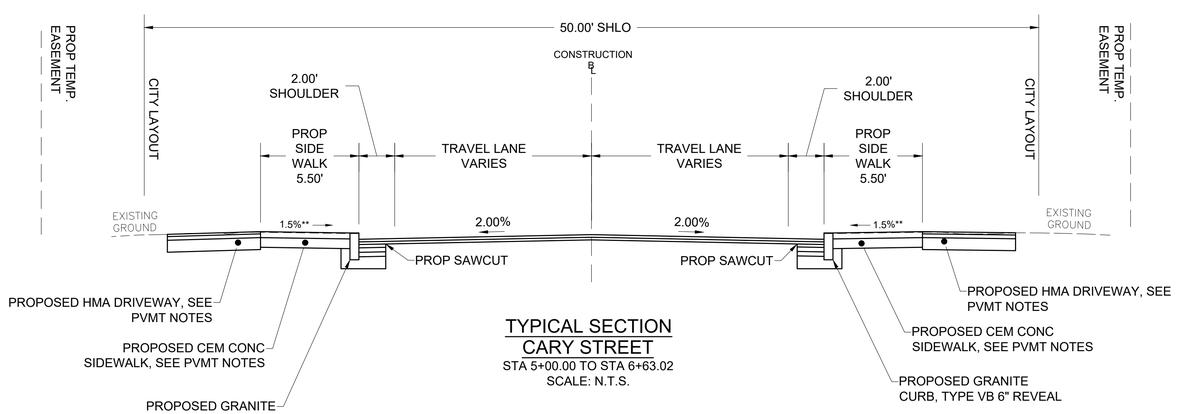
NOTE:
- ** TOLERANCE FOR CONSTRUCTION ±0.5%.



TYPICAL SECTION
LYMAN STREET

STA 10+00.00 TO STA 11+50.00
SCALE: N.T.S.

NOTE:
- ** TOLERANCE FOR CONSTRUCTION ±0.5%.



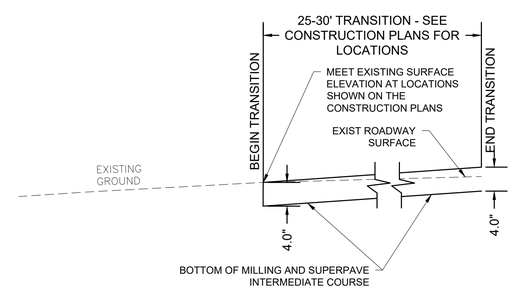
TYPICAL SECTION
CARY STREET

STA 5+00.00 TO STA 6+63.02
SCALE: N.T.S.

NOTE:
- ** TOLERANCE FOR CONSTRUCTION ±0.5%.

TYPICAL SECTIONS GENERAL NOTES:

1. SEE CONSTRUCTION PLANS FOR LOCATIONS OF CEMENT CONCRETE SIDEWALK OR HMA WALK ADJACENT TO ROUTE 123 AND SIDESTREETS.
2. USE PAVEMENT FINE MILLING TO ESTABLISH LONGITUDINAL SLOPES AND CROSS SLOPES. DEPTH MAY VARY LONGITUDINALLY BETWEEN STATIONS AS WELL AS WITHIN A CROSS SECTION.
3. A 2% CROSS SLOPE SHALL BE MAINTAINED THROUGHOUT THE PROJECT.
4. WHERE THE MILLING OPERATION DAYLIGHTS AND LEAVES A PORTION OF EXISTING ROADWAY UN-MILLED, THE CONTRACTOR SHALL SCARIFY THE UN-MILLED ROADWAY SURFACE IN PREPARATION FOR CLEANING, TACK-COAT, & OVERLAY. USE ADDITIONAL THICKNESS OF INTERMEDIATE COURSE TO ESTABLISH GRADE IN AREAS BEYOND THE MILLING DAYLIGHT POINT WHERE REQUIRED TO PROVIDE THE PROPOSED CROSS SLOPE.
5. USE VARIABLE THICKNESS INTERMEDIATE COURSE TO RAISE THE FINISH ROADWAY PROFILE UP TO THE DESIGN PGL AND TO FORM THE DESIGN CROSS SLOPES. THICKNESS OF INTERMEDIATE COURSE AT THE PGL CAN BE CALCULATED FROM THE CROSS SECTIONS AND PROFILE PLANS.
6. SEE CURB TIE AND GRADING PLANS FOR SPECIFIC CROSS SLOPES.
7. USE LOAM & SEED FOR SURFACE TREATMENT AT BACK OF WALK UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION PLANS.
8. PROPOSED UTILITY DRAINAGE STRUCTURES AND PROPOSED STEEL FRAMES AND COVERS SHALL BE LOCATED OUT OF THE TRAVEL LANE WHEEL PATH WHERE POSSIBLE.



EXISTING PAVEMENT
ELEVATION TRANSITION

SCALE: NONE

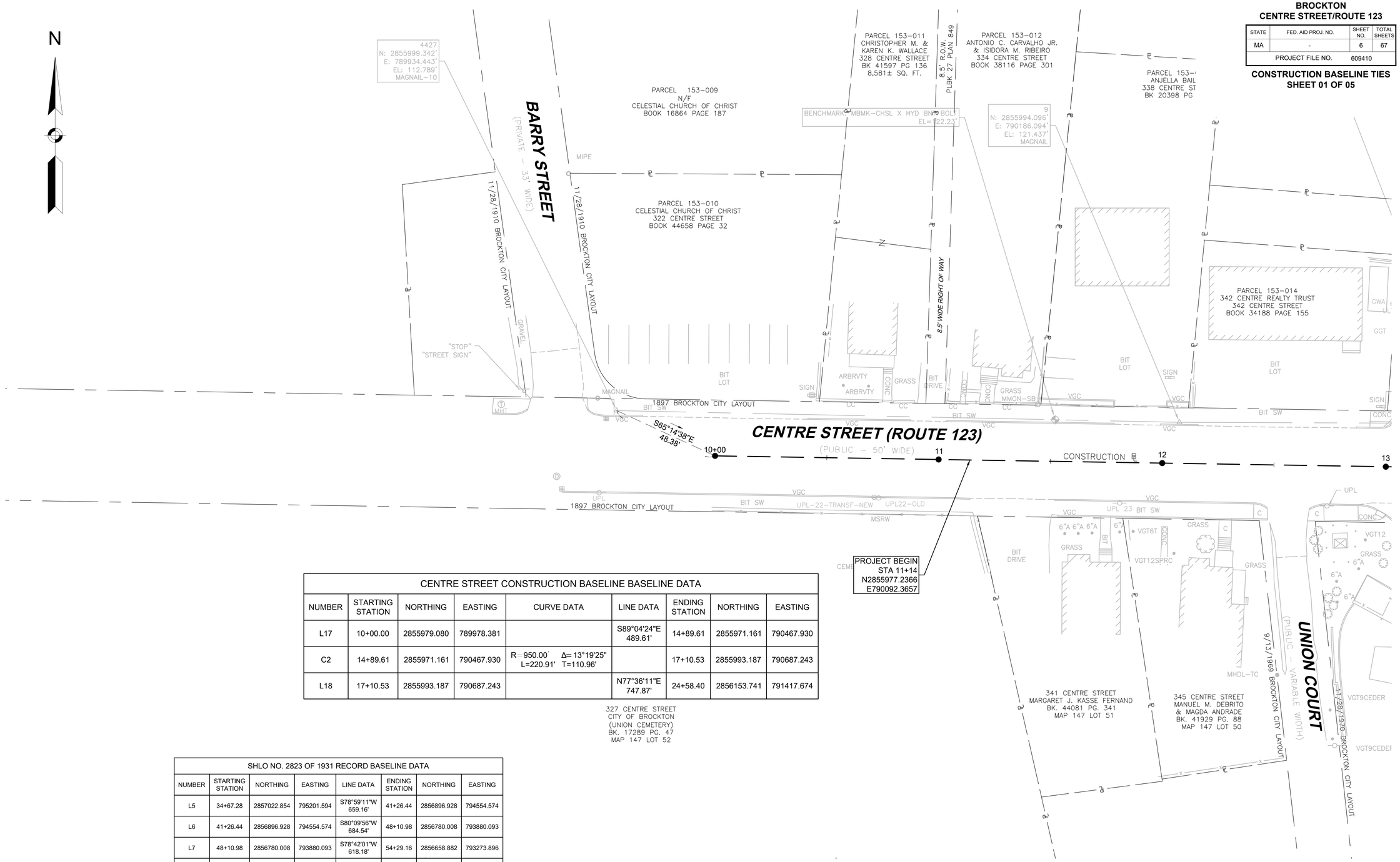
0 4 10 16
SCALE: 1" = 4'

609410_HD(TYPICAL SECTIONS).DWG Plotted on 12-Mar-2023 11:37 AM

BROCKTON
CENTRE STREET/ROUTE 123

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	67
PROJECT FILE NO.	609410		

CONSTRUCTION BASELINE TIES
SHEET 01 OF 05



CENTRE STREET CONSTRUCTION BASELINE BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L17	10+00.00	2855979.080	789978.381		S89°04'24"E 489.61'	14+89.61	2855971.161	790467.930
C2	14+89.61	2855971.161	790467.930	R=950.00' Δ=13°19'25" L=220.91' T=110.96'		17+10.53	2855993.187	790687.243
L18	17+10.53	2855993.187	790687.243		N77°36'11"E 747.87'	24+58.40	2856153.741	791417.674

327 CENTRE STREET
CITY OF BROCKTON
(UNION CEMETERY)
BK. 17289 PG. 47
MAP 147 LOT 52

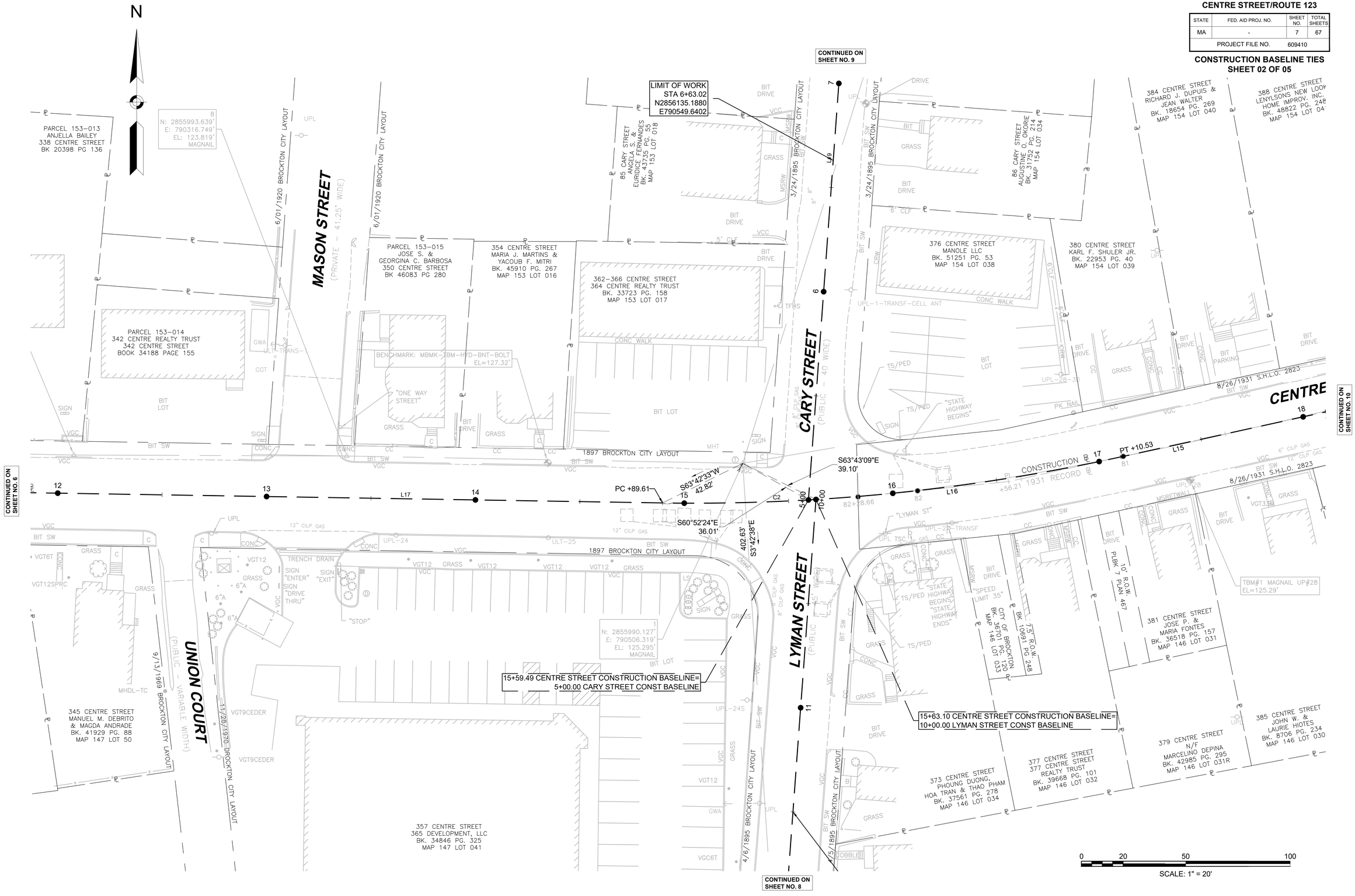
SHLO NO. 2823 OF 1931 RECORD BASELINE DATA							
NUMBER	STARTING STATION	NORTHING	EASTING	LINE DATA	ENDING STATION	NORTHING	EASTING
L5	34+67.28	2857022.854	795201.594	S78°59'11"W 659.16'	41+26.44	2856896.928	794554.574
L6	41+26.44	2856896.928	794554.574	S80°09'56"W 684.54'	48+10.98	2856780.008	793880.093
L7	48+10.98	2856780.008	793880.093	S78°42'01"W 618.18'	54+29.16	2856658.882	793273.896
L8	54+29.16	2856658.882	793273.896	S77°03'21"W 409.69'	58+38.85	2856567.111	792874.616
L9	58+38.85	2856567.111	792874.616	S74°00'41"W 1451.86'	72+90.71	2856167.203	791478.919
L15	72+90.71	2856167.203	791478.919	S77°36'11"W 865.50'	81+56.21	2855981.396	790633.599
L16	81+56.21	2855981.396	790633.599	S84°11'11"W 72.45'	82+28.66	2855974.057	790561.521

609410_HDI(CONST BL TIES).DWG Plotted on 12-Mar-2023 11:38 AM

BROCKTON
CENTRE STREET/ROUTE 123

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	67
PROJECT FILE NO.	609410		

CONSTRUCTION BASELINE TIES
SHEET 02 OF 05



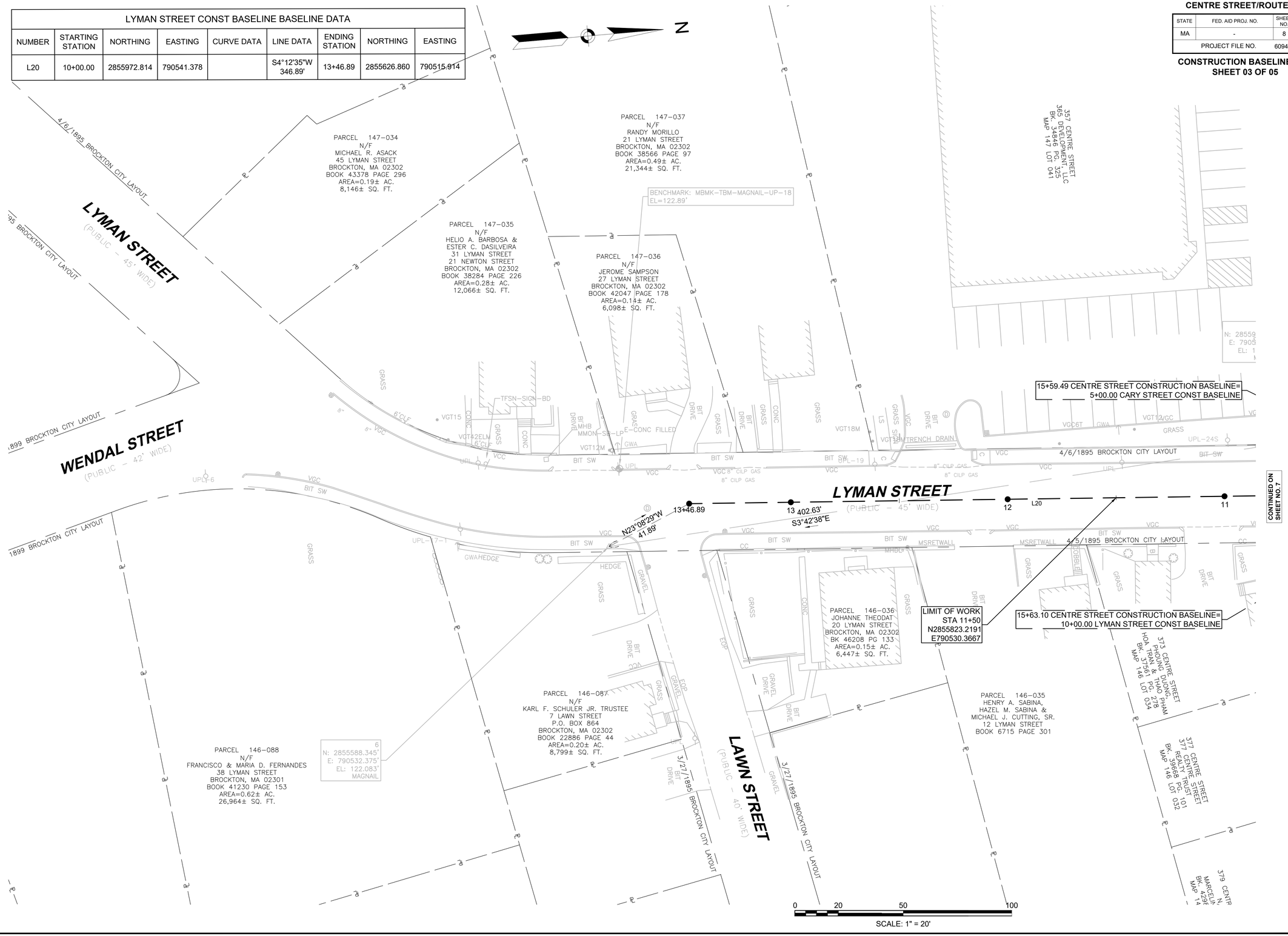
609410_HDI(CONST BL TIES).DWG Plotted on 12-Mar-2023 11:38 AM

BROCKTON
CENTRE STREET/ROUTE 123

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	67
PROJECT FILE NO.	609410		

CONSTRUCTION BASELINE TIES
SHEET 03 OF 05

LYMAN STREET CONST BASELINE BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L20	10+00.00	2855972.814	790541.378		S4°12'35"W 346.89'	13+46.89	2855626.860	790515.914



609410_HD(CONST BL TIES).DWG Plotted on 12-Mar-2023 11:38 AM

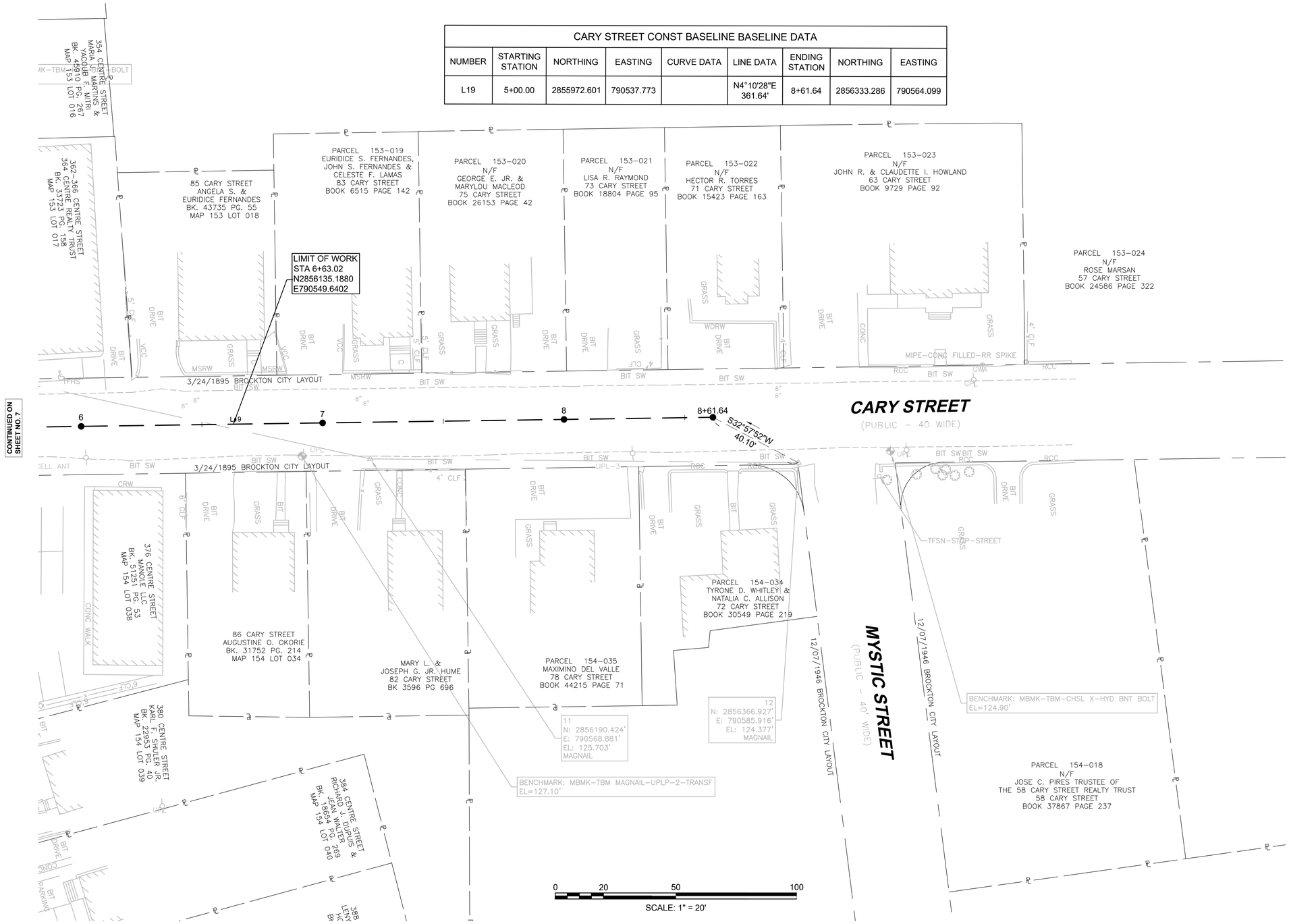
BROCKTON
CENTRE STREET/ROUTE 123

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	67
PROJECT FILE NO.	609410		

CONSTRUCTION BASELINE TIES
SHEET 04 OF 05

609410_HDI(CONST BL TIES).DWG Plotted on 12-Mar-2023 11:38 AM

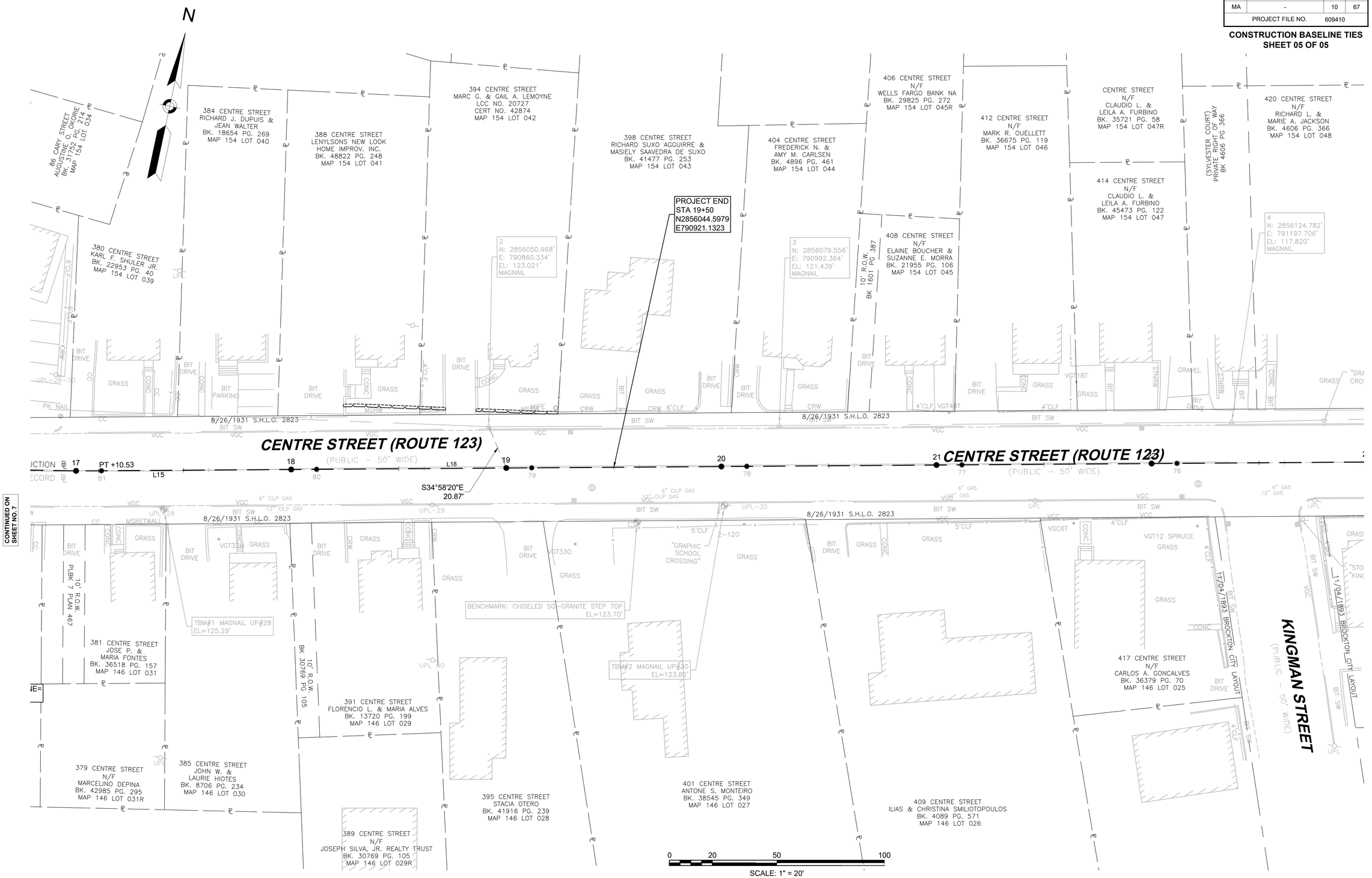
CARY STREET CONST BASELINE BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L19	5+00.00	2855972.601	790537.773		N4°10'28"E 361.64'	8+61.64	2856333.286	790564.099



BROCKTON
CENTRE STREET/ROUTE 123

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	67
PROJECT FILE NO.	609410		

CONSTRUCTION BASELINE TIES
SHEET 05 OF 05



609410_HD(CONST BL TIES).DWG Plotted on 12-Mar-2023 11:38 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	67
PROJECT FILE NO.	609410		

CONSTRUCTION PLANS
SHEET 01 OF 05

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

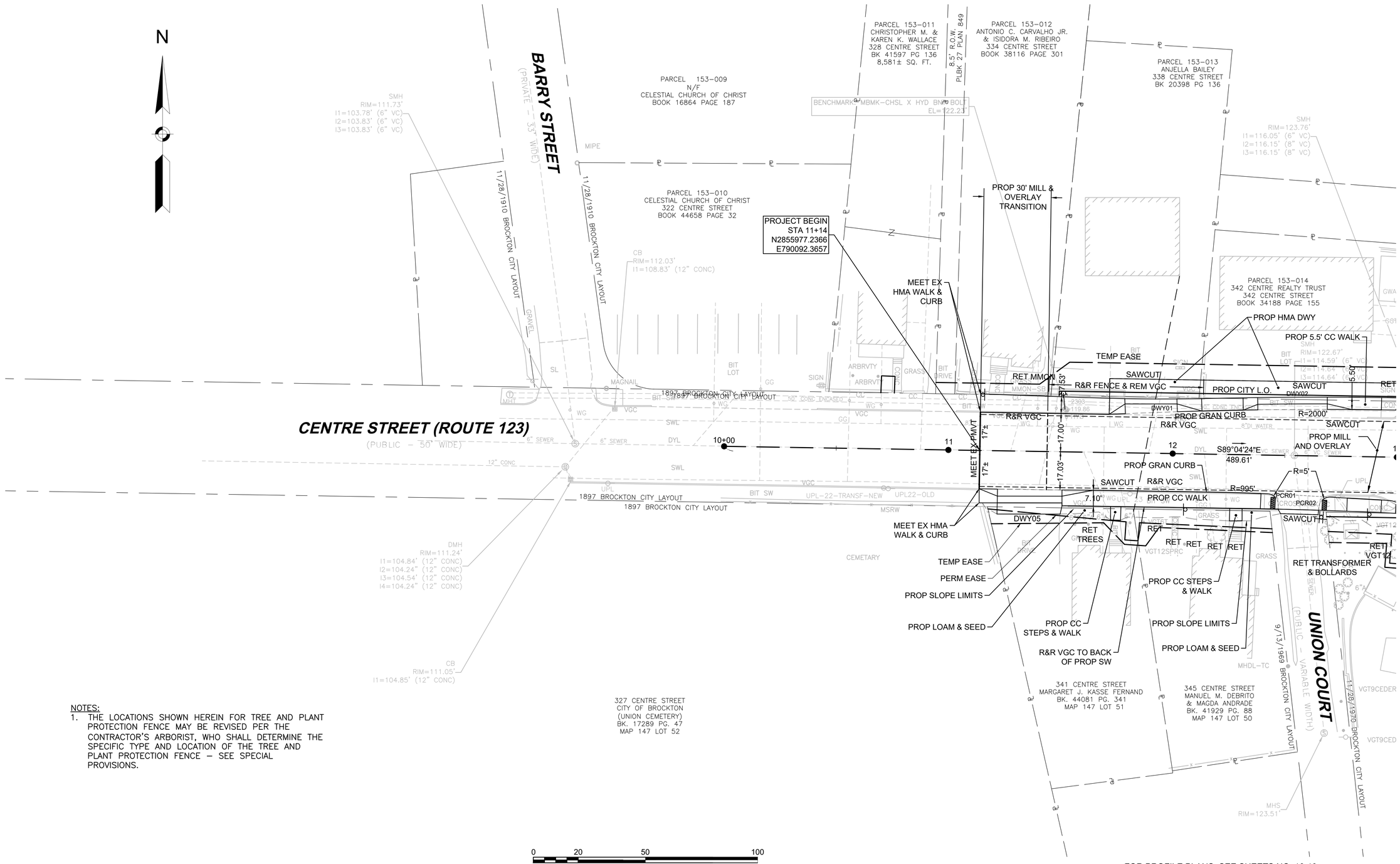
SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS



NOTES:

1. THE LOCATIONS SHOWN HEREIN FOR TREE AND PLANT PROTECTION FENCE MAY BE REVISED PER THE CONTRACTOR'S ARBORIST, WHO SHALL DETERMINE THE SPECIFIC TYPE AND LOCATION OF THE TREE AND PLANT PROTECTION FENCE – SEE SPECIAL PROVISIONS.

CONTINUED ON SHEET NO. 12

FOR PROFILE PLANS, SEE SHEETS NO. 16-19

609410_HD(CONST PLANS CARY).DWG Plotted on 12-Mar-2023 11:39 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	67
PROJECT FILE NO.	609410		

CONSTRUCTION PLANS
SHEET 02 OF 05

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

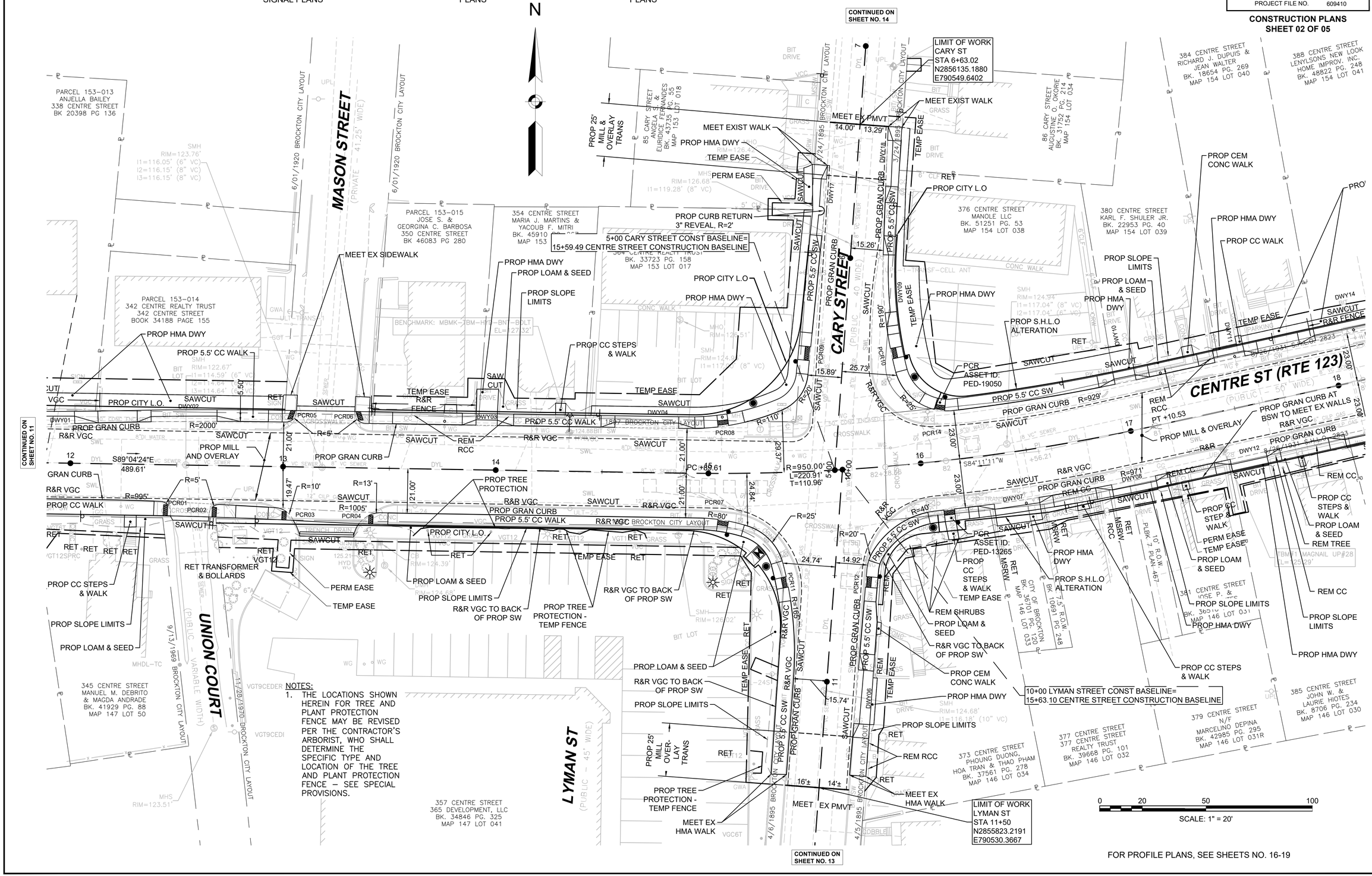
SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS



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CONTINUED ON SHEET NO. 11

CONTINUED ON SHEET NO. 15

CONTINUED ON SHEET NO. 13

FOR PROFILE PLANS, SEE SHEETS NO. 16-19

609410_HD(CONST PLANS CARY).DWG Plotted on 12-Mar-2023 11:39 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	67
PROJECT FILE NO.	609410		

CONSTRUCTION PLANS
SHEET 03 OF 05

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS

NOTES:
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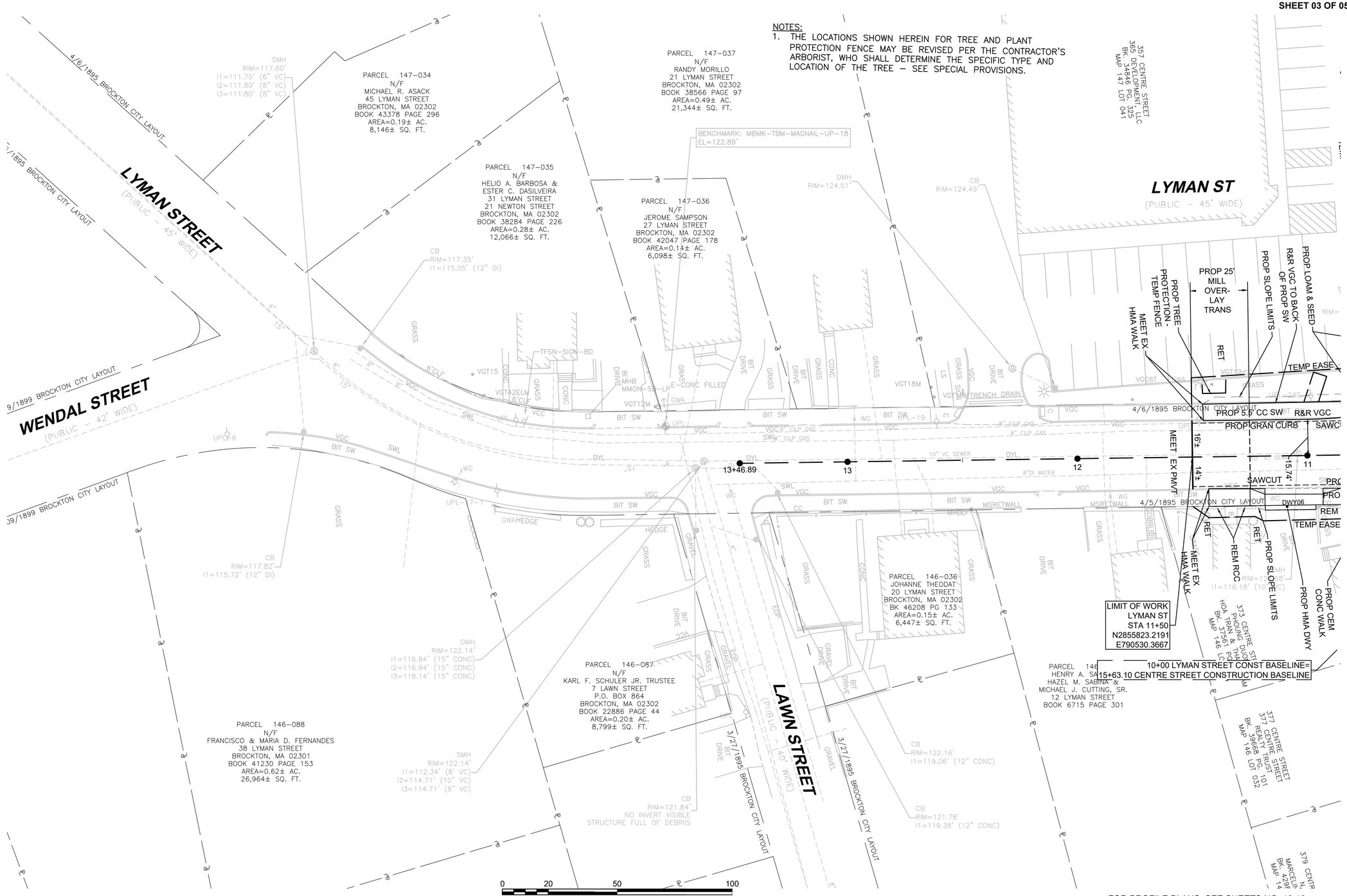


FOR PROFILE PLANS, SEE SHEETS NO. 16-19

CONTINUED ON SHEET NO. 12

609410_HD(CONST PLANS CARY).DWG Plotted on 12-Mar-2023 11:39 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	67
PROJECT FILE NO.	609410		

CONSTRUCTION PLANS
SHEET 04 OF 05

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

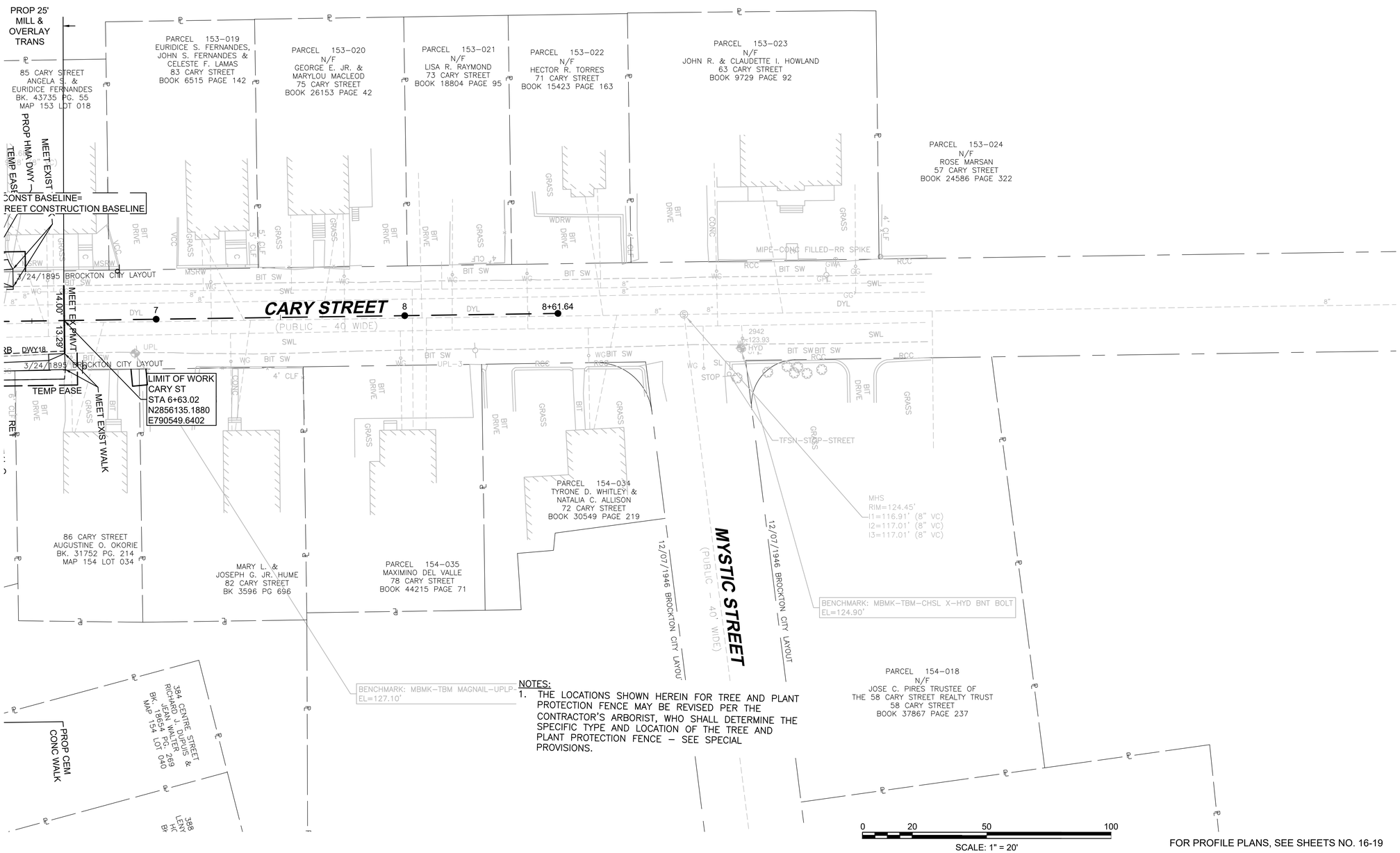
SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE UTILITY PLANS

DRAINAGE DETAILS

SEE UTILITY PLANS



NOTES:

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CONTINUED ON SHEET NO. 12

FOR PROFILE PLANS, SEE SHEETS NO. 16-19

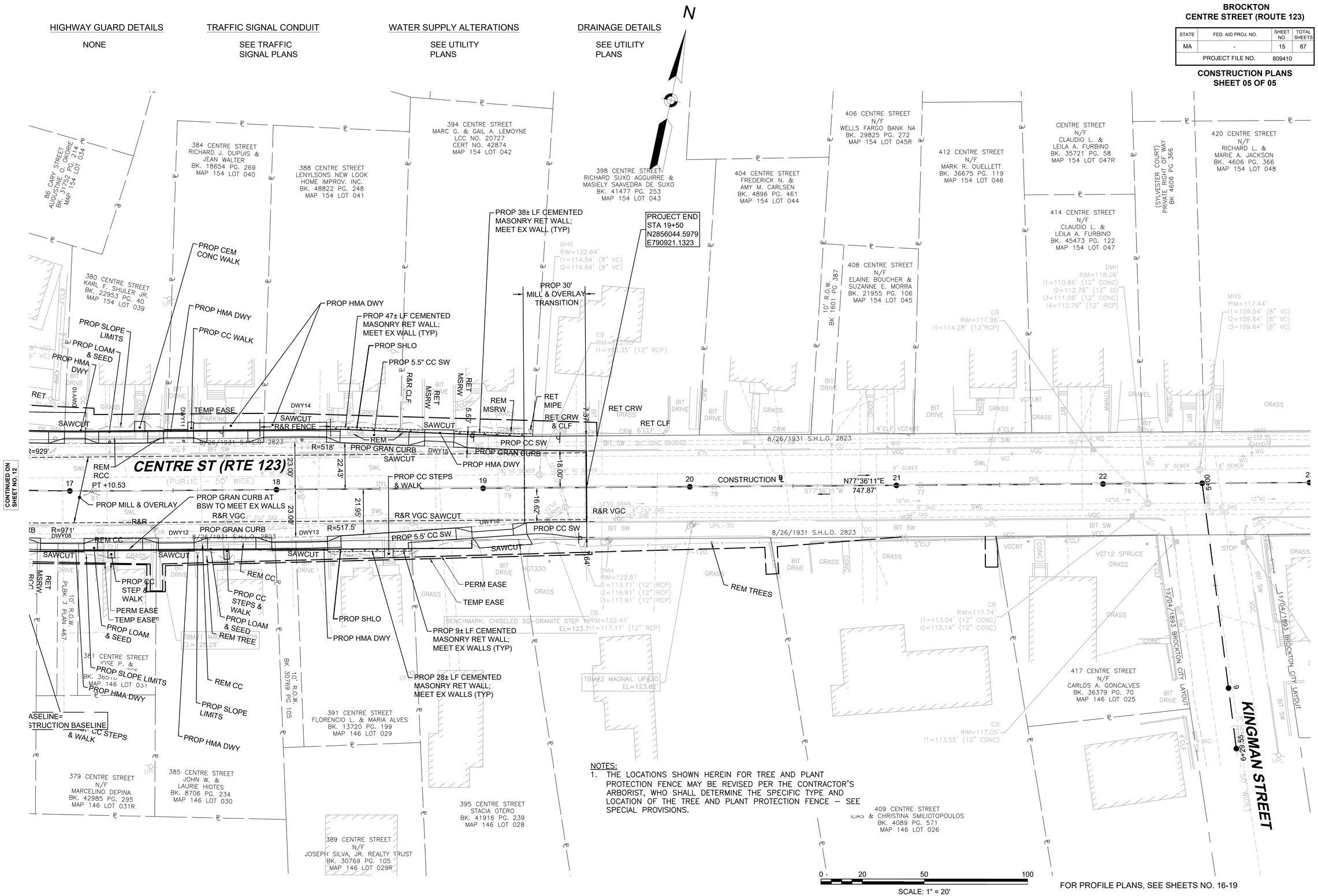
609410_HD(CONST PLANS CARY).DWG Plotted on 12-Mar-2023 11:39 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	67
PROJECT FILE NO.	609410		

CONSTRUCTION PLANS
SHEET 05 OF 05

HIGHWAY GUARD DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	SEE TRAFFIC SIGNAL PLANS	SEE UTILITY PLANS	SEE UTILITY PLANS



NOTES:
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FOR PROFILE PLANS, SEE SHEETS NO. 16-19

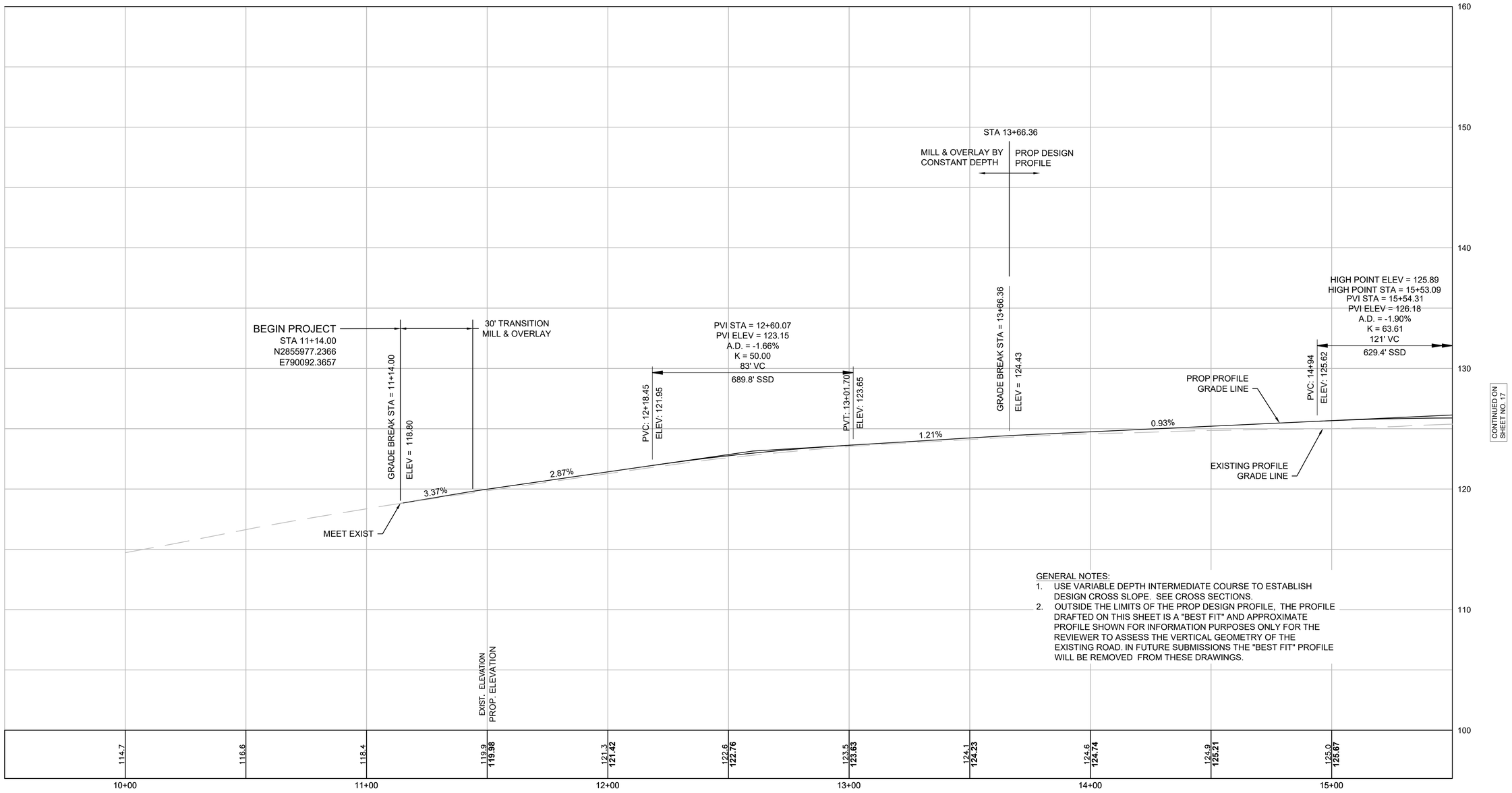
609410_HD(CONST PLANS CARY).DWG Plotted on 12-Mar-2023 11:39 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	67
PROJECT FILE NO.	609410		

PROFILES - CENTRE STREET
SHEET 01 OF 02

CENTRE STREET



GENERAL NOTES:
1. USE VARIABLE DEPTH INTERMEDIATE COURSE TO ESTABLISH DESIGN CROSS SLOPE. SEE CROSS SECTIONS.
2. OUTSIDE THE LIMITS OF THE PROP DESIGN PROFILE, THE PROFILE DRAFTED ON THIS SHEET IS A "BEST FIT" AND APPROXIMATE PROFILE SHOWN FOR INFORMATION PURPOSES ONLY FOR THE REVIEWER TO ASSESS THE VERTICAL GEOMETRY OF THE EXISTING ROAD. IN FUTURE SUBMISSIONS THE "BEST FIT" PROFILE WILL BE REMOVED FROM THESE DRAWINGS.

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 11-15

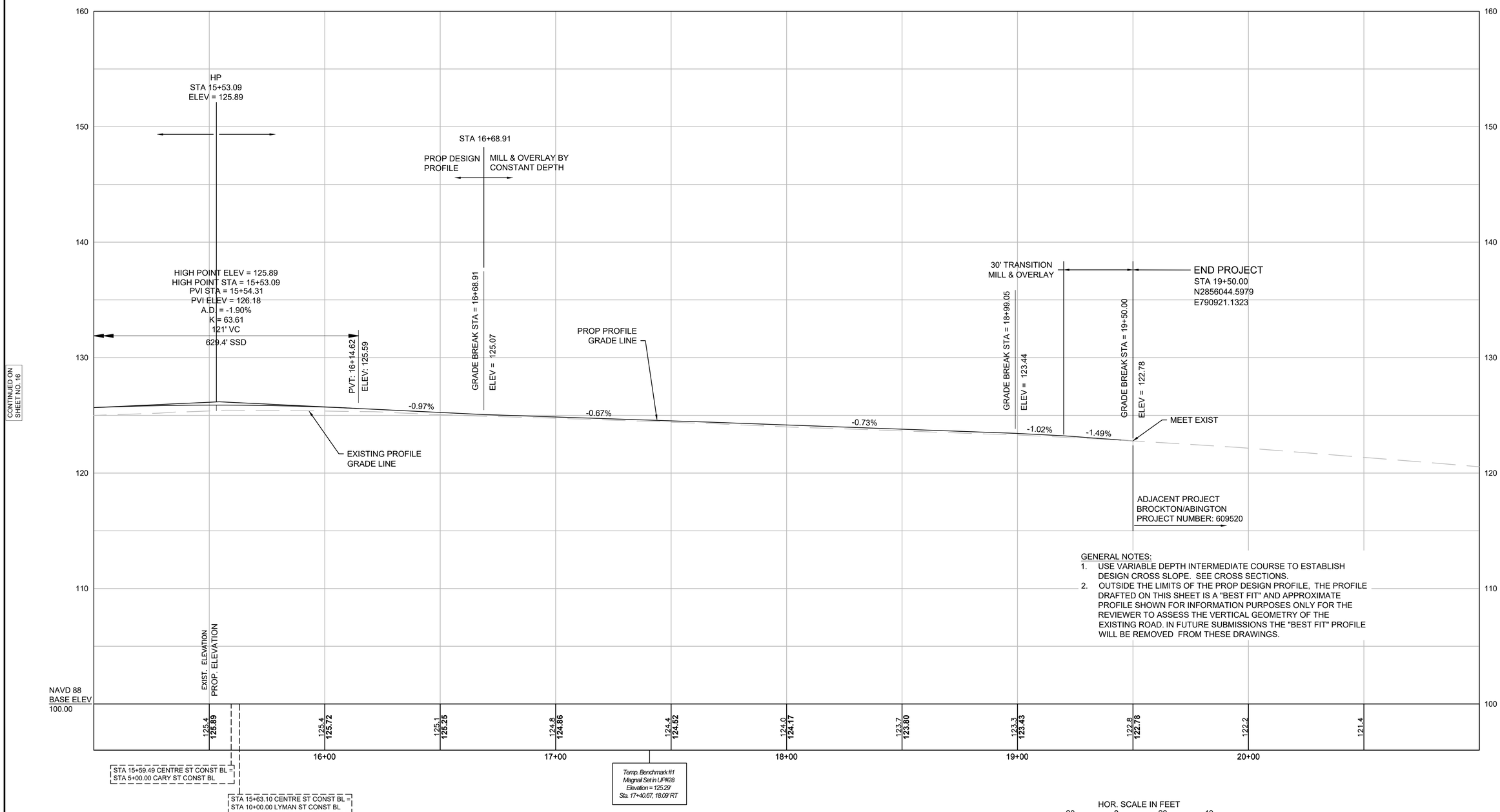
609410_HD(PROFILE PLANS).DWG Plotted on 12-Mar-2023 11:39 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	67
PROJECT FILE NO.	609410		

PROFILES - CENTRE STREET
SHEET 02 OF 02

CENTRE STREET



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HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 11-15

609410_HD(PROFILE PLANS).DWG Plotted on 12-Mar-2023 11:40 AM

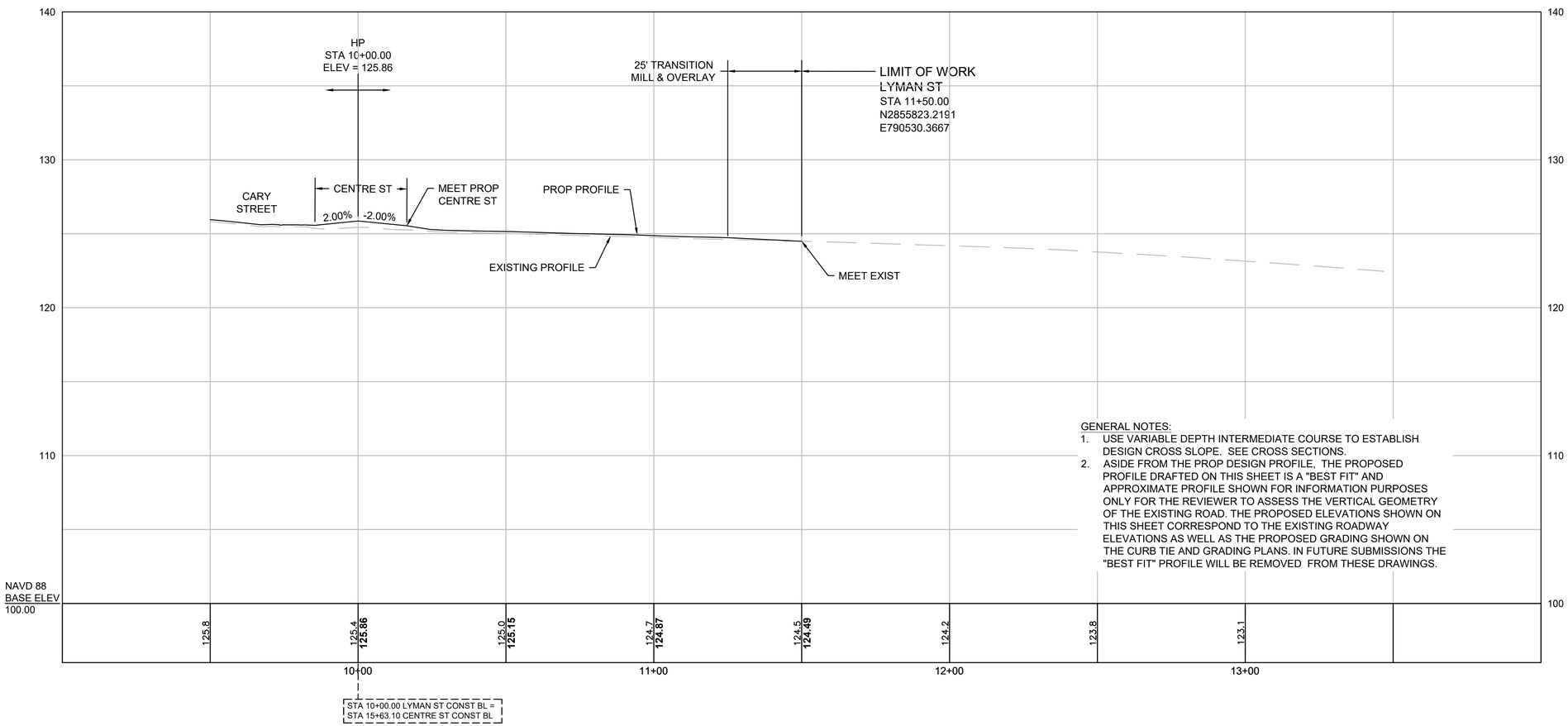
BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	67
PROJECT FILE NO.	609410		

PROFILES
LYMAN STREET

609410_HD(PROFILE PLANS).DWG Plotted on 12-Mar-2023 11:40 AM

LYMAN STREET



GENERAL NOTES:

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2. ASIDE FROM THE PROP DESIGN PROFILE, THE PROPOSED PROFILE DRAFTED ON THIS SHEET IS A "BEST FIT" AND APPROXIMATE PROFILE SHOWN FOR INFORMATION PURPOSES ONLY FOR THE REVIEWER TO ASSESS THE VERTICAL GEOMETRY OF THE EXISTING ROAD. THE PROPOSED ELEVATIONS SHOWN ON THIS SHEET CORRESPOND TO THE EXISTING ROADWAY ELEVATIONS AS WELL AS THE PROPOSED GRADING SHOWN ON THE CURB TIE AND GRADING PLANS. IN FUTURE SUBMISSIONS THE "BEST FIT" PROFILE WILL BE REMOVED FROM THESE DRAWINGS.

HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 11-15

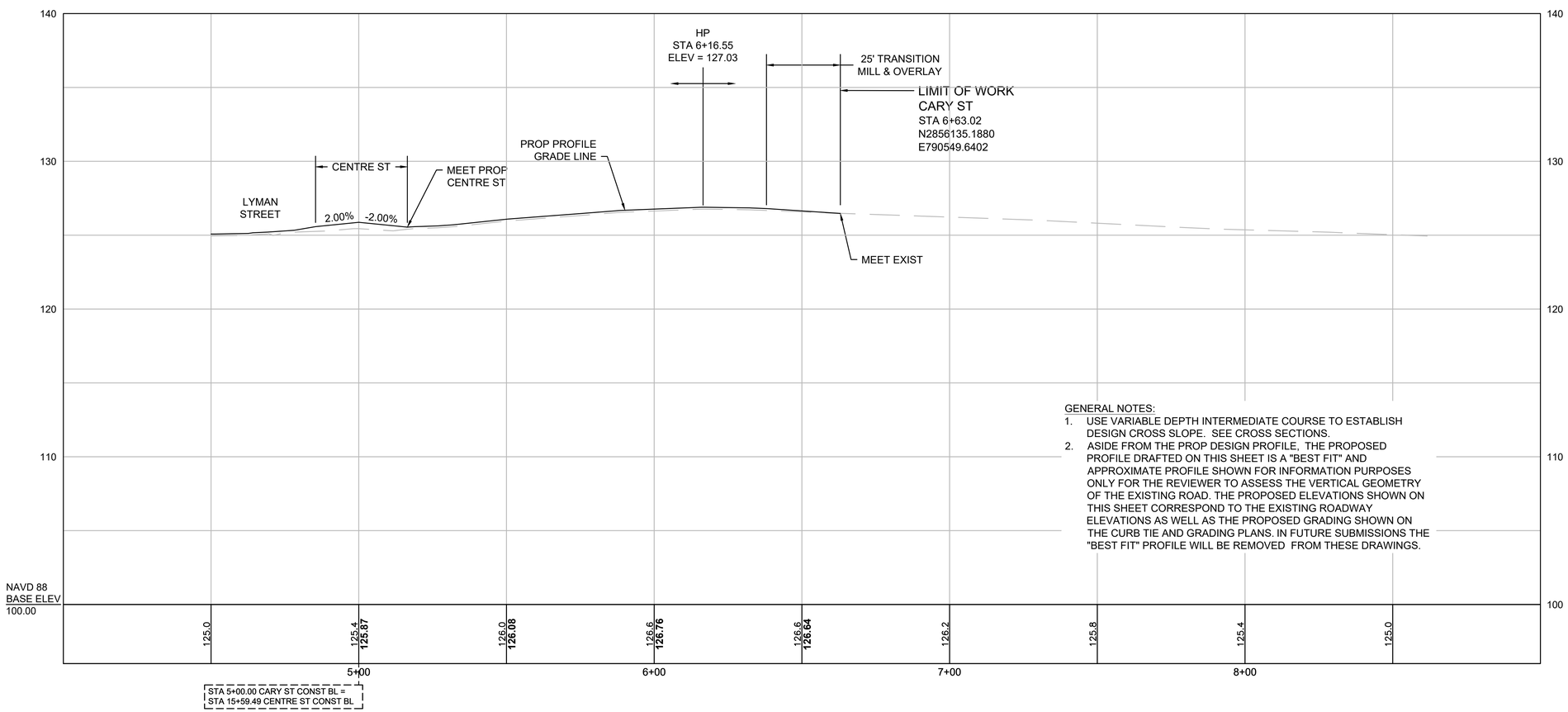
BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	67
PROJECT FILE NO.	609410		

PROFILES
CARY STREET

609410_HD(PROFILE PLANS).DWG Plotted on 12-Mar-2023 11:40 AM

CARY STREET



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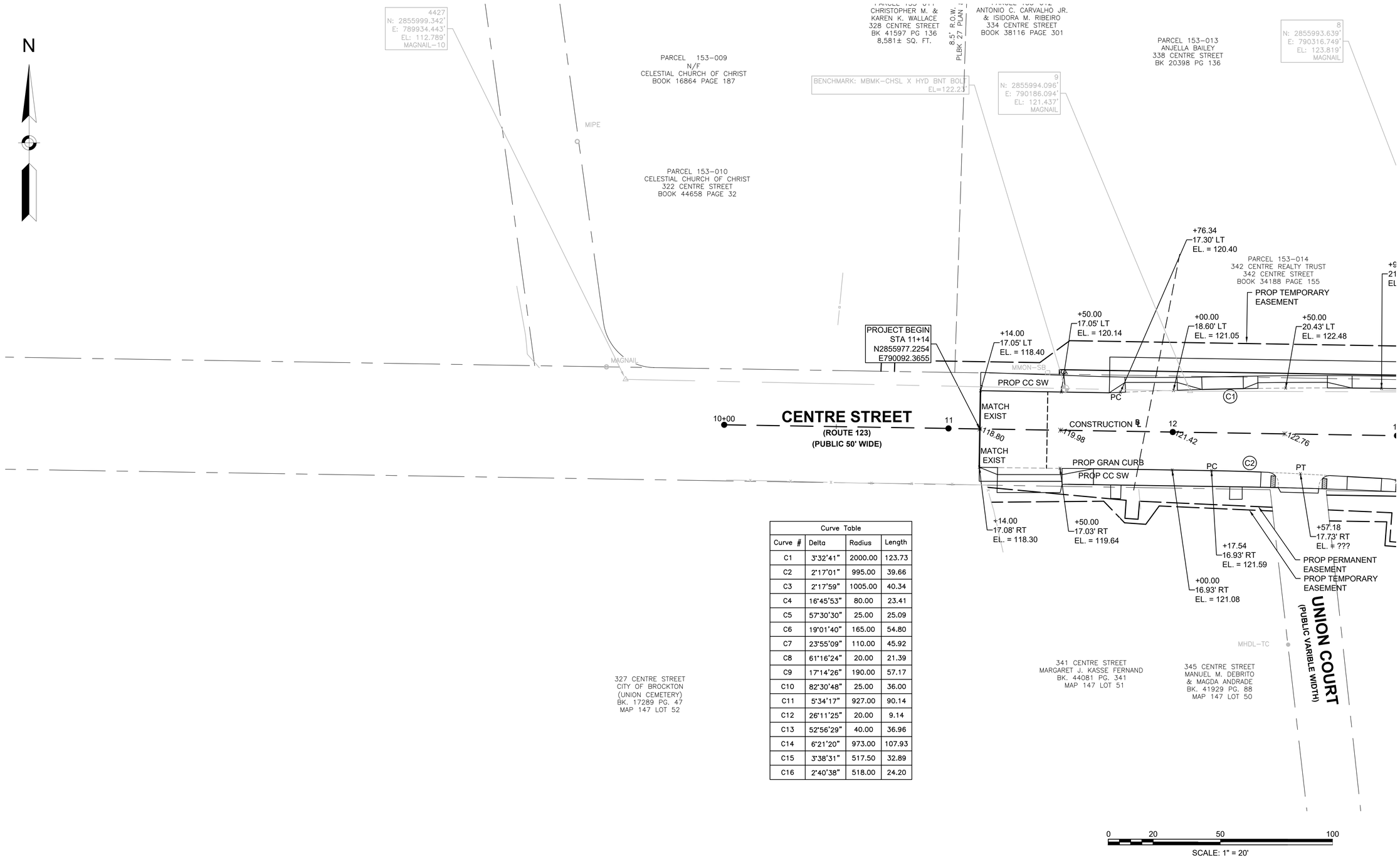
HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

FOR CONSTRUCTION PLANS:
SEE SHEET NOS. 11-15

BROCKTON
CENTRE STREET(ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	67
PROJECT FILE NO.	609410		

CURB TIE & GRADING PLANS
SHEET 01 OF 05



Curve Table			
Curve #	Delta	Radius	Length
C1	3°32'41"	2000.00	123.73
C2	2°17'01"	995.00	39.66
C3	2°17'59"	1005.00	40.34
C4	16°45'53"	80.00	23.41
C5	57°30'30"	25.00	25.09
C6	19°01'40"	165.00	54.80
C7	23°55'09"	110.00	45.92
C8	61°16'24"	20.00	21.39
C9	17°14'26"	190.00	57.17
C10	82°30'48"	25.00	36.00
C11	5°34'17"	927.00	90.14
C12	26°11'25"	20.00	9.14
C13	52°56'29"	40.00	36.96
C14	6°21'20"	973.00	107.93
C15	3°38'31"	517.50	32.89
C16	2°40'38"	518.00	24.20

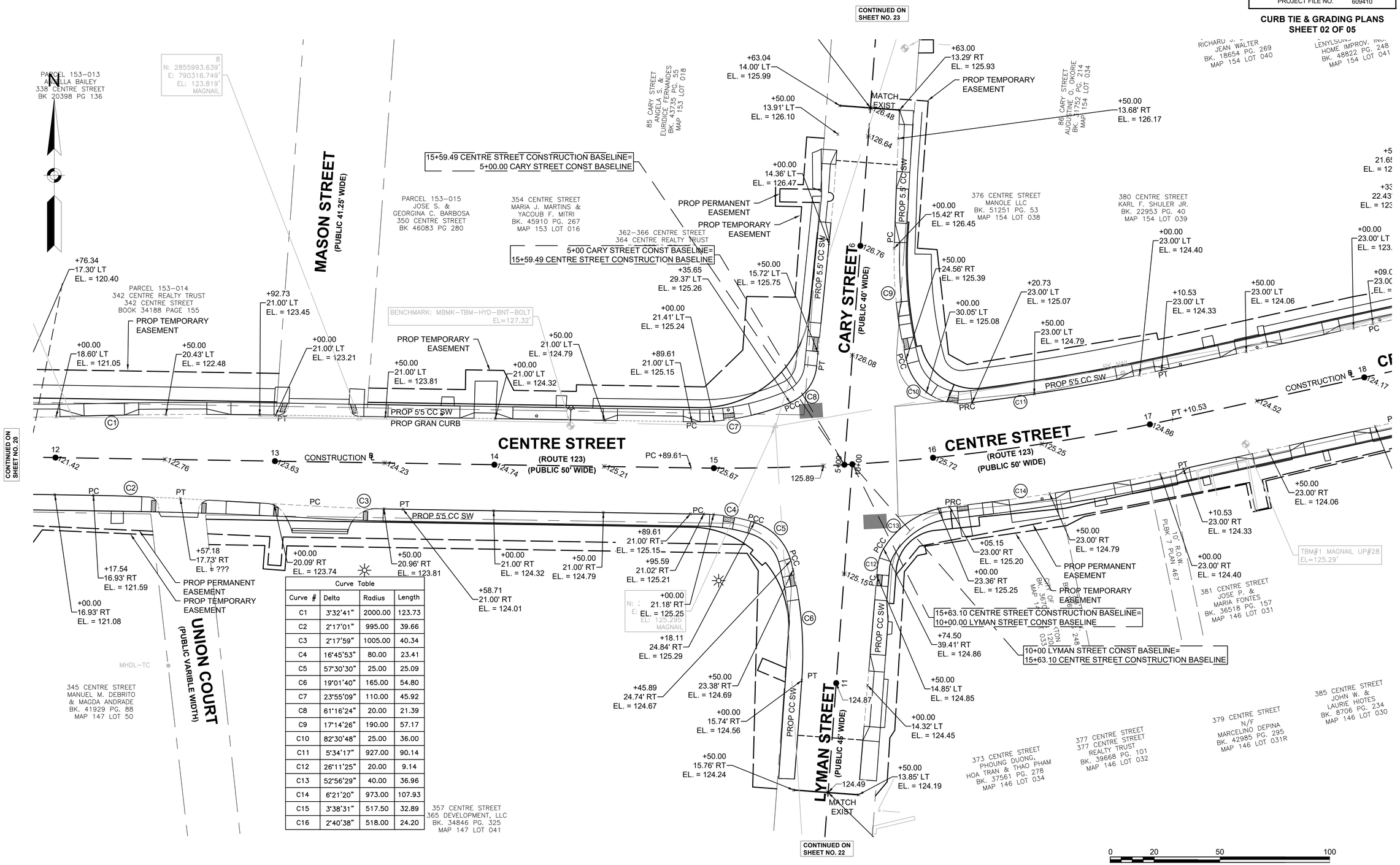
CONTINUED ON SHEET NO. 21

609410_HD(CURB TIE & GRADING).DWG Plotted on 12-Mar-2023 11:40 AM

BROCKTON
CENTRE STREET(ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	67
PROJECT FILE NO.	609410		

CURB TIE & GRADING PLANS
SHEET 02 OF 05



Curve Table			
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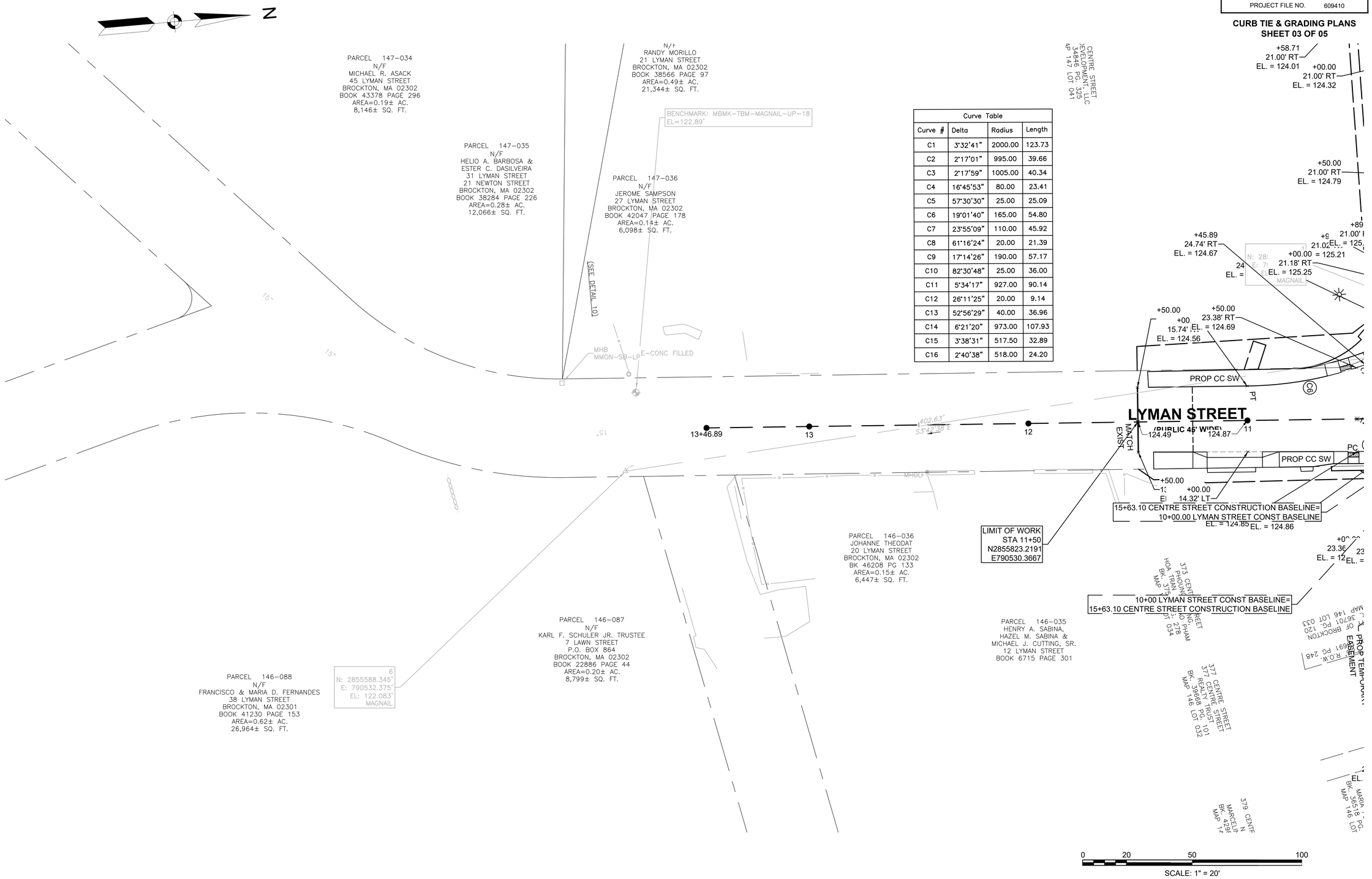
C3	2°17'59"	1005.00	40.34
C4	16°45'53"	80.00	23.41
C5	57°30'30"	25.00	25.09
C6	19°01'40"	165.00	54.80
C7	23°55'09"	110.00	45.92
C8	61°16'24"	20.00	21.39
C9	17°14'26"	190.00	57.17
C10	82°30'48"	25.00	36.00
C11	5°34'17"	927.00	90.14
C12	26°11'25"	20.00	9.14
C13	52°56'29"	40.00	36.96
C14	6°21'20"	973.00	107.93
C15	3°38'31"	517.50	32.89
C16	2°40'38"	518.00	24.20

609410_HD(CURB TIE & GRADING).DWG Plotted on 12-Mar-2023 11:40 AM

BROCKTON
CENTRE STREET(ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	67
PROJECT FILE NO.	609410		

CURB TIE & GRADING PLANS
SHEET 03 OF 05



Curve Table			
Curve #	Delta	Radius	Length
C1	3°32'41"	2000.00	123.73
C2	2°17'01"	995.00	39.66
C3	2°17'59"	1005.00	40.34
C4	16°45'53"	80.00	23.41
C5	57°30'30"	25.00	25.09
C6	19°01'40"	165.00	54.80
C7	23°55'09"	110.00	45.92
C8	61°16'24"	20.00	21.39
C9	17°14'26"	190.00	57.17
C10	82°30'48"	25.00	36.00
C11	5°34'17"	927.00	90.14
C12	26°11'25"	20.00	9.14
C13	52°56'29"	40.00	36.96
C14	6°21'20"	973.00	107.93
C15	3°38'31"	517.50	32.89
C16	2°40'38"	518.00	24.20

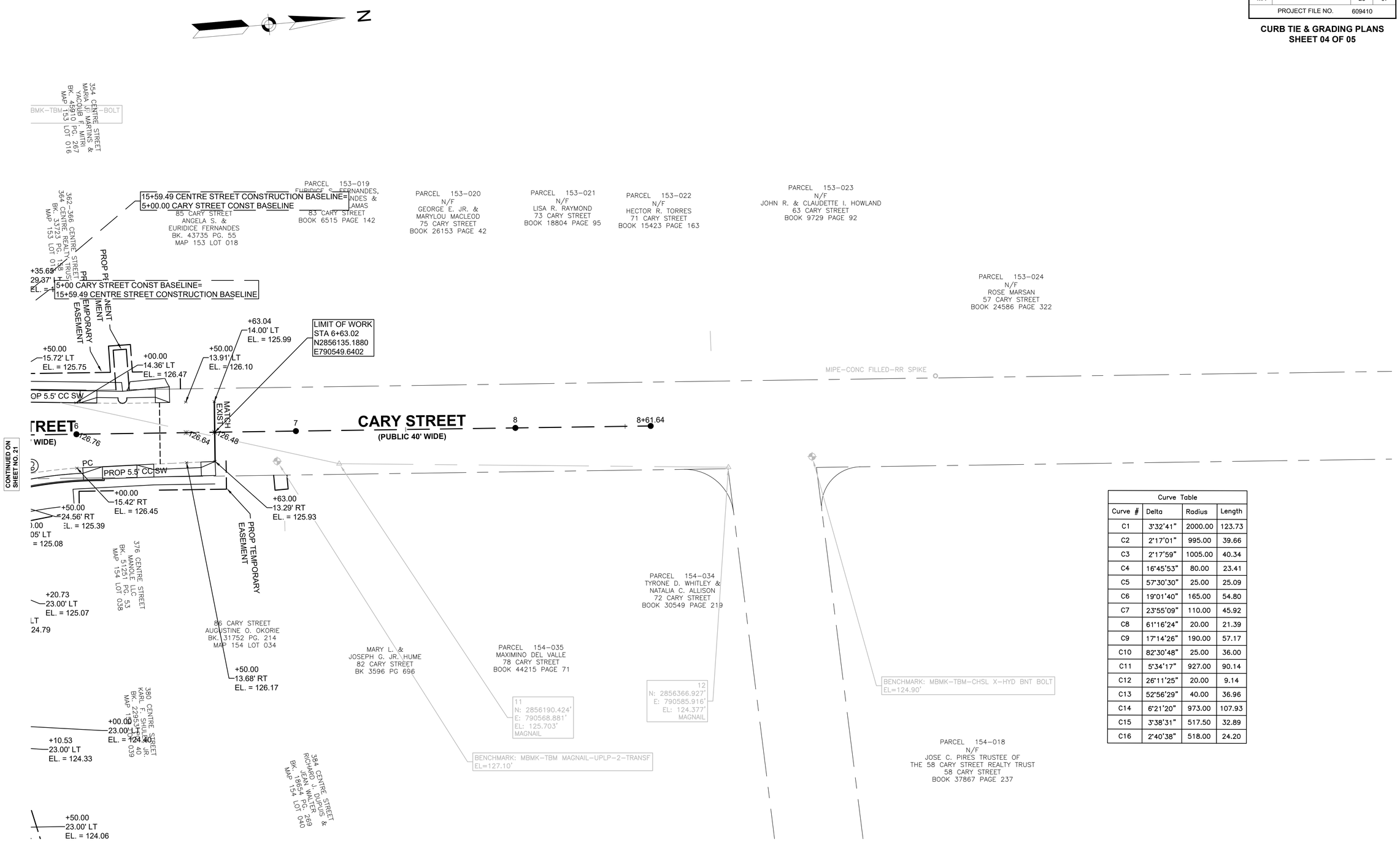
CONTINUED ON SHEET NO. 21

609410_HD(CURB TIE & GRADING).DWG Plotted on 12-Mar-2023 11:40 AM

BROCKTON
CENTRE STREET(ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	67
PROJECT FILE NO.	609410		

CURB TIE & GRADING PLANS
SHEET 04 OF 05



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C9	17°14'26"	190.00	57.17
C10	82°30'48"	25.00	36.00
C11	5°34'17"	927.00	90.14
C12	26°11'25"	20.00	9.14
C13	52°56'29"	40.00	36.96
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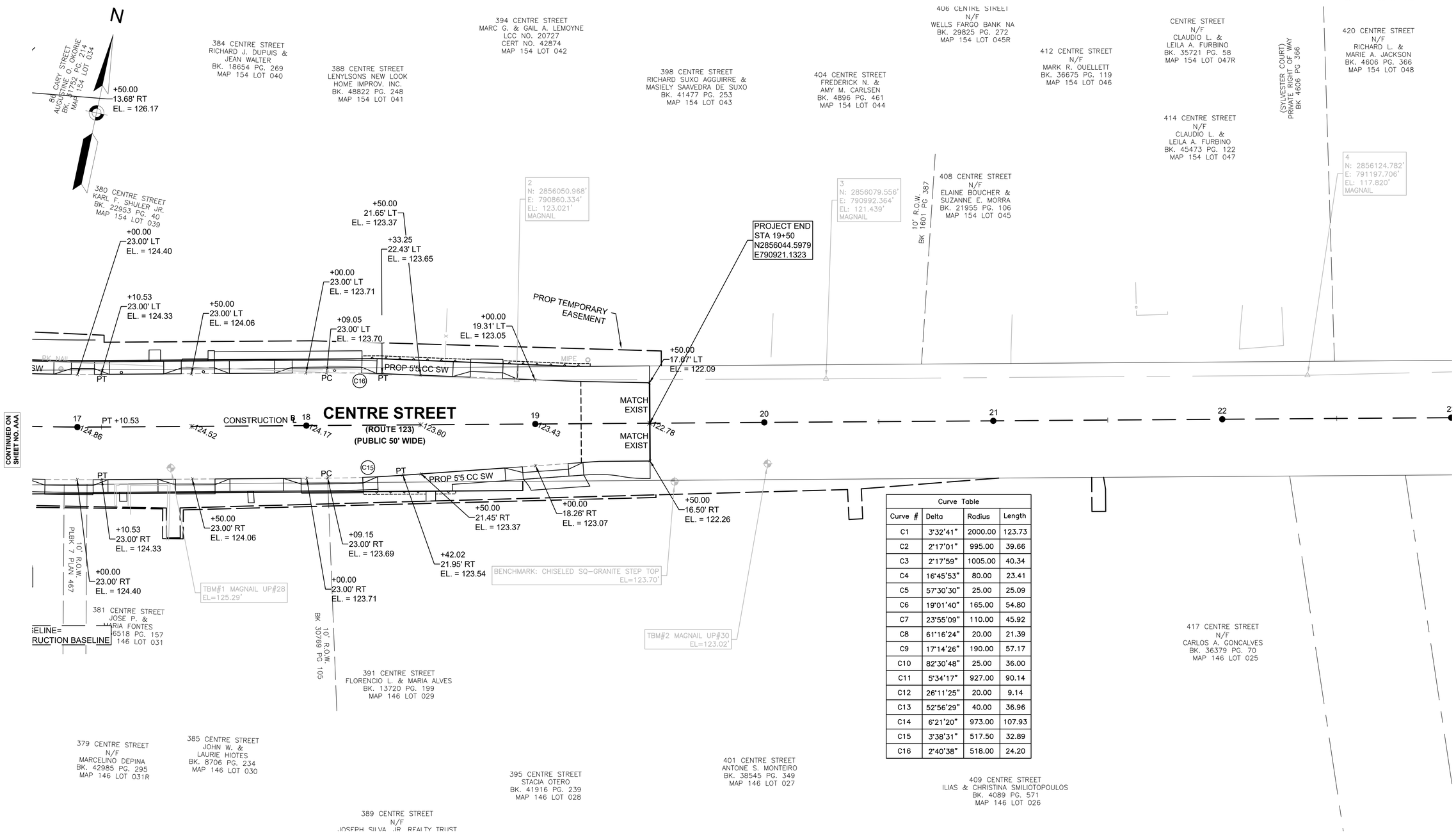
C16	2°40'38"	518.00	24.20

609410_HD(CURB TIE & GRADING).DWG Plotted on 12-Mar-2023 11:40 AM

BROCKTON
CENTRE STREET(ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	67
PROJECT FILE NO.	609410		

CURB TIE & GRADING PLANS
SHEET 05 OF 05



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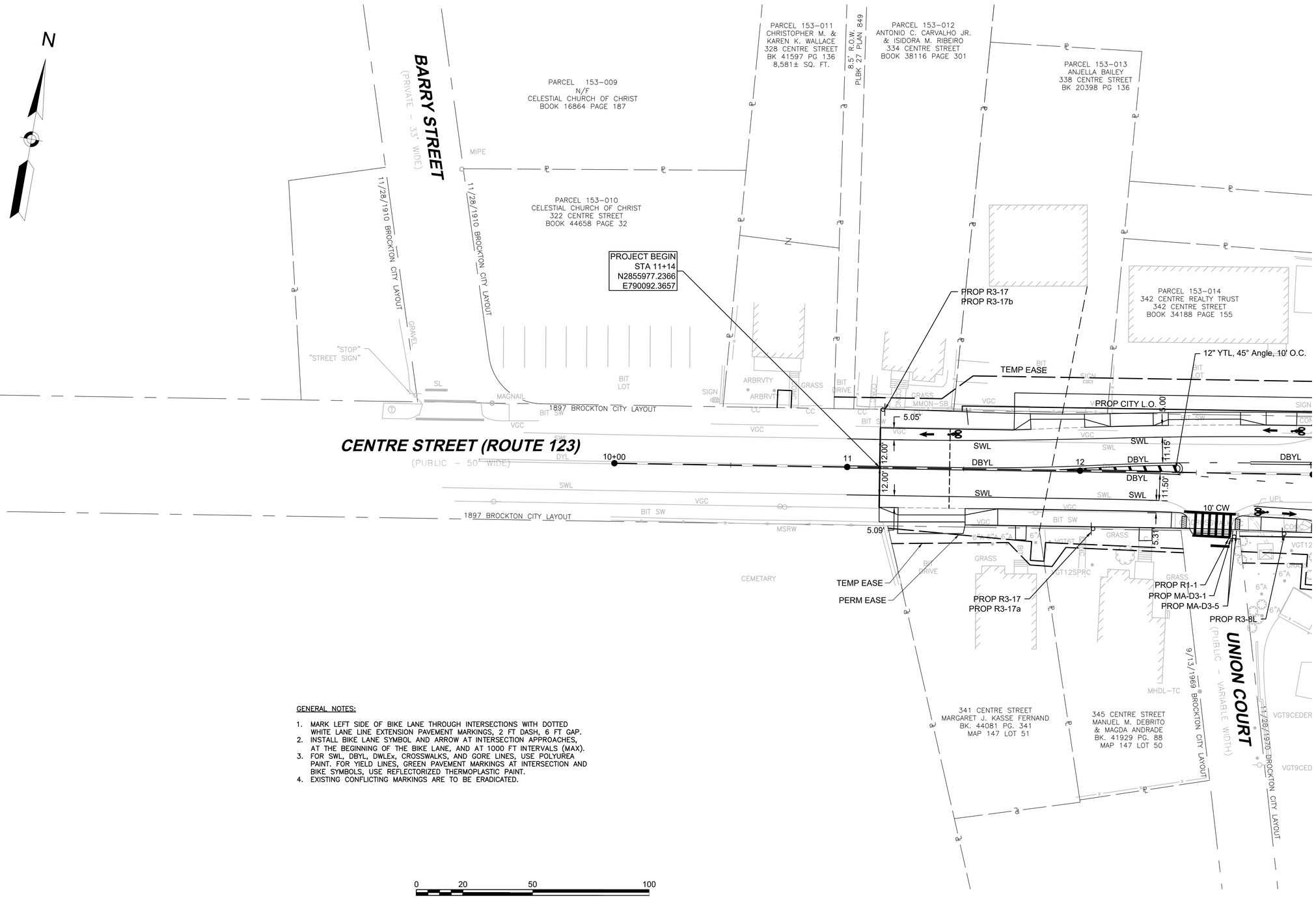
609410_HD(CURB TIE & GRADING).DWG Plotted on 12-Mar-2023 11:40 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	67
PROJECT FILE NO.	609410		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 01 OF 05



GENERAL NOTES:

1. MARK LEFT SIDE OF BIKE LANE THROUGH INTERSECTIONS WITH DOTTED WHITE LANE LINE EXTENSION PAVEMENT MARKINGS, 2 FT DASH, 6 FT GAP.
2. INSTALL BIKE LANE SYMBOL AND ARROW AT INTERSECTION APPROACHES, AT THE BEGINNING OF THE BIKE LANE, AND AT 1000 FT INTERVALS (MAX).
3. FOR SWL, DBYL, DWLEx, CROSSWALKS, AND GORE LINES, USE POLYUREA PAINT. FOR YIELD LINES, GREEN PAVEMENT MARKINGS AT INTERSECTION AND BIKE SYMBOLS, USE REFLECTORIZED THERMOPLASTIC PAINT.
4. EXISTING CONFLICTING MARKINGS ARE TO BE ERADICATED.

0 20 50 100
SCALE: 1" = 20'

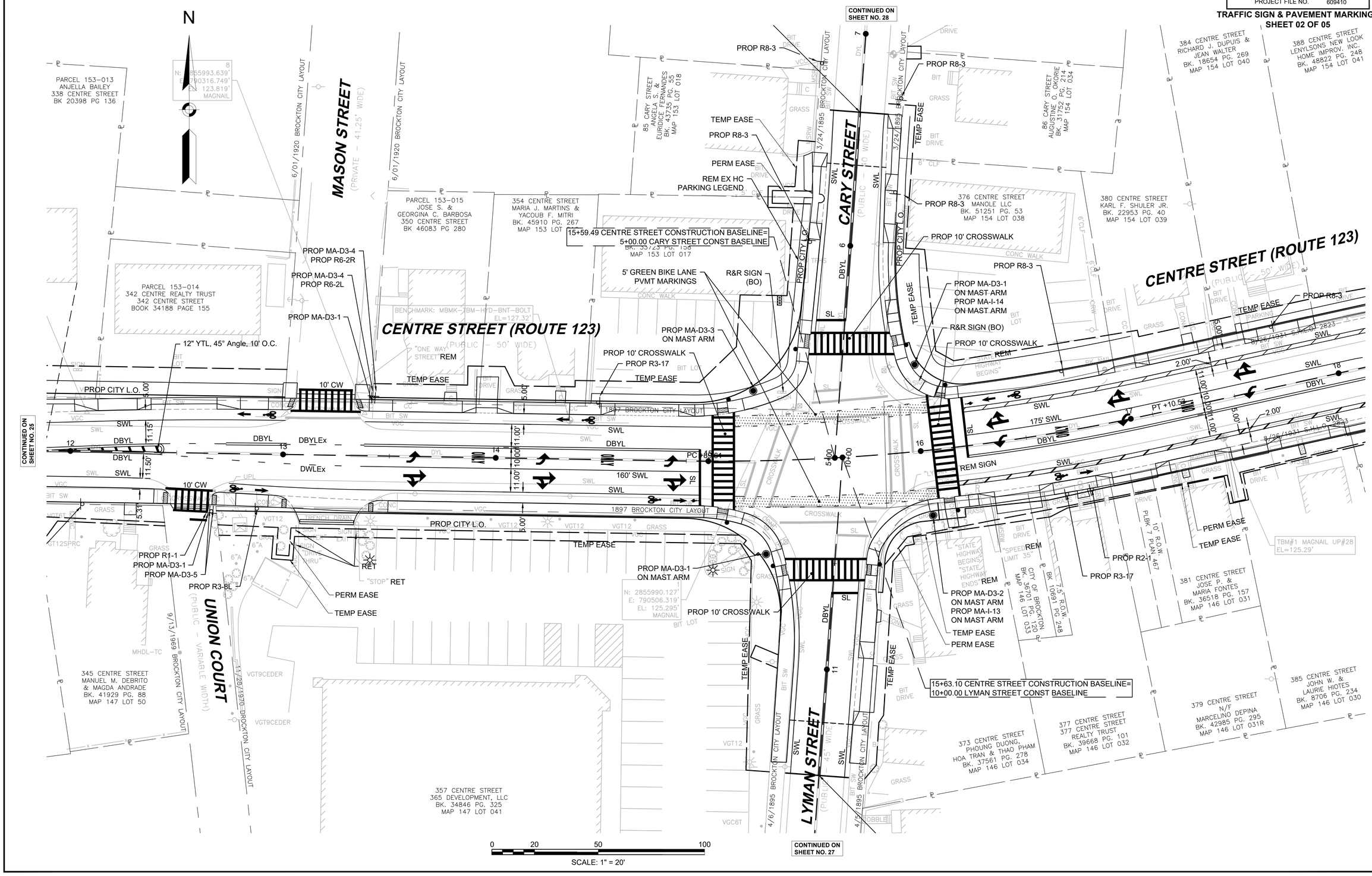
CONTINUED ON SHEET NO. 26

609410_HD\SIGN & PM PLANS\.DWG Plotted on 12-Mar-2023 11:41 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	67
PROJECT FILE NO.	609410		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 02 OF 05

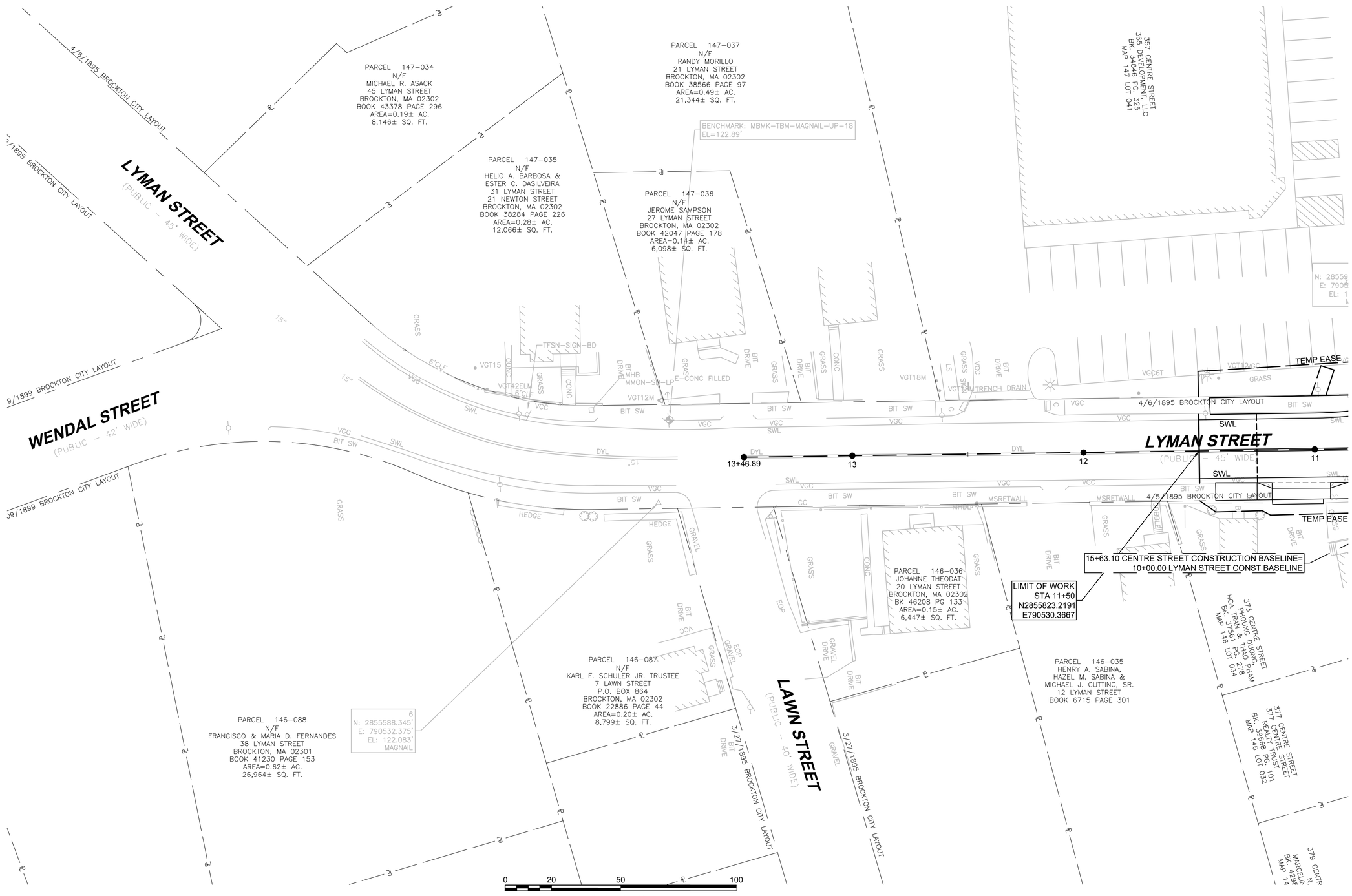


609410_HDISIGN & PM PLANS\DWG Plotted on 12-Mar-2023 11:41 AM

BROCKTON
CENTRE STREET(ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	67
PROJECT FILE NO.	609410		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 03 OF 05



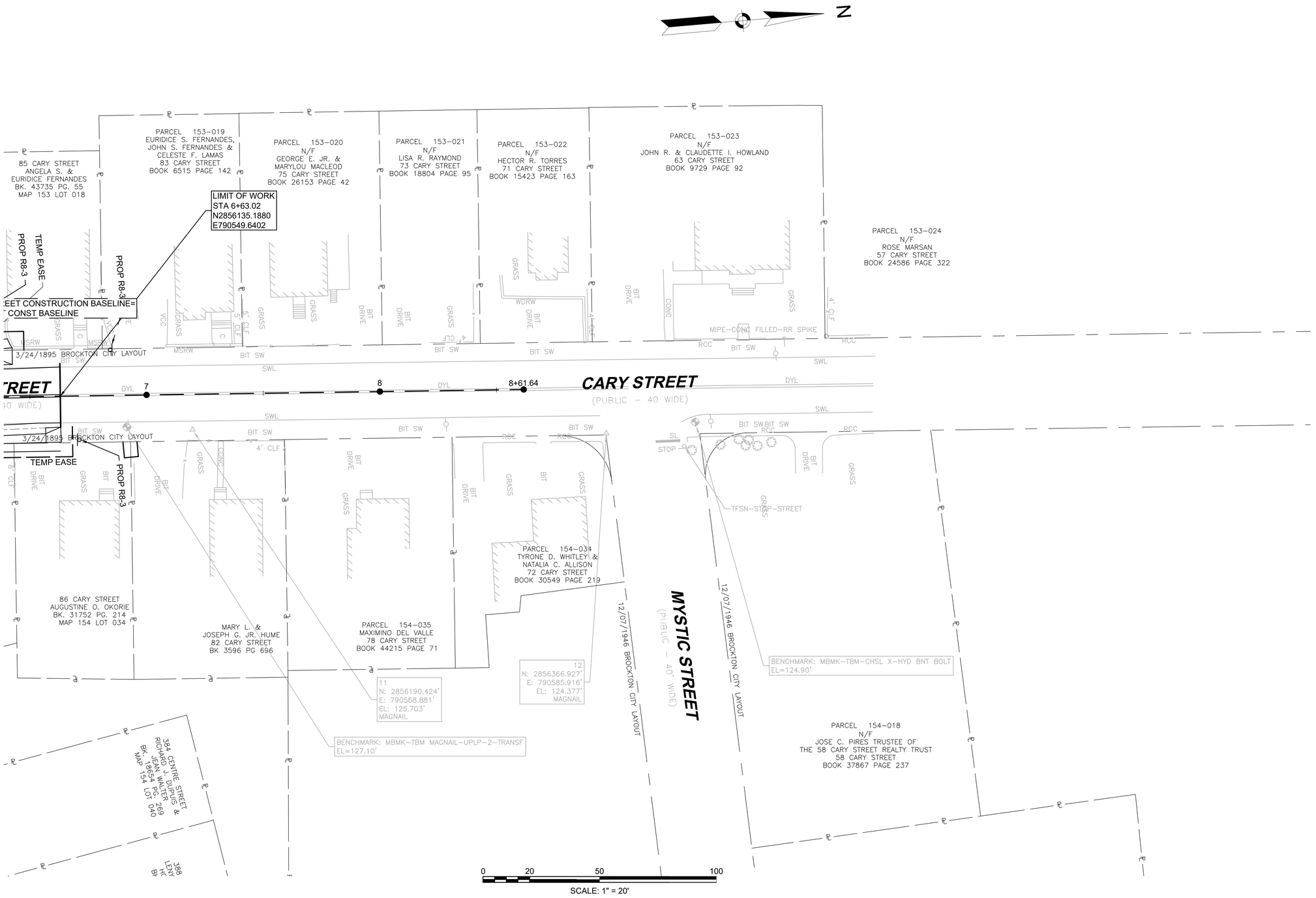
CONTINUED ON SHEET NO. 26

609410_HDISIGN & PM PLANS).DWG Plotted on 12-Mar-2023 11:41 AM

BROCKTON
CENTRE STREET(ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	67
PROJECT FILE NO.	609410		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 04 OF 05



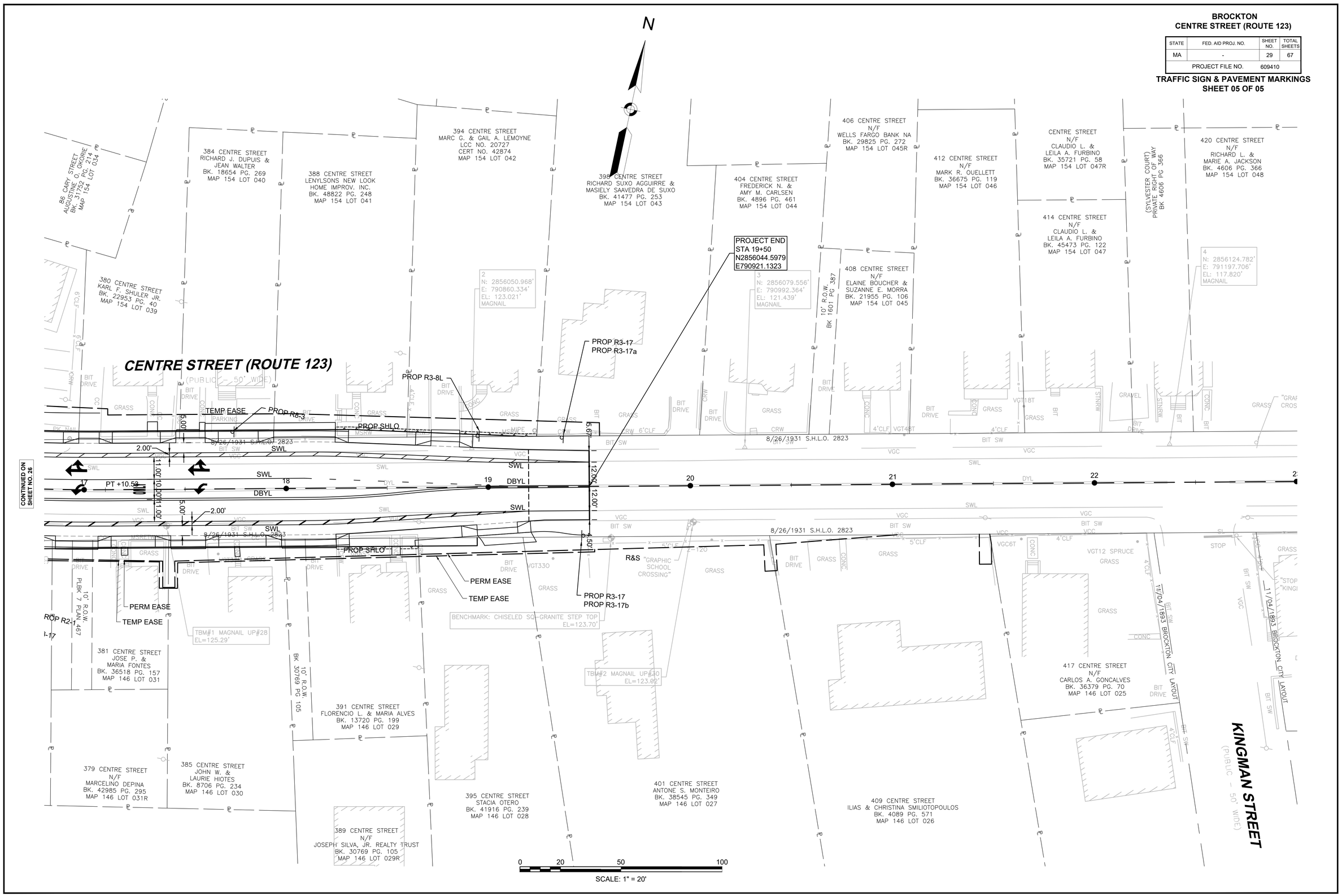
CONTINUED ON SHEET NO. 26

609410_HD\SIGN & PM PLANS\.DWG Plotted on 12-Mar-2023 11:41 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	67
PROJECT FILE NO.	609410		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 05 OF 05



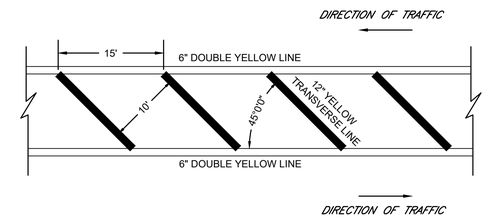
609410_HD\SIGN & PM PLANS\.DWG Plotted on 12-Mar-2023 11:41 AM

609410_HD(SIGN SUMMARY).DWG Plotted on 12-Mar-2023 11:41 AM

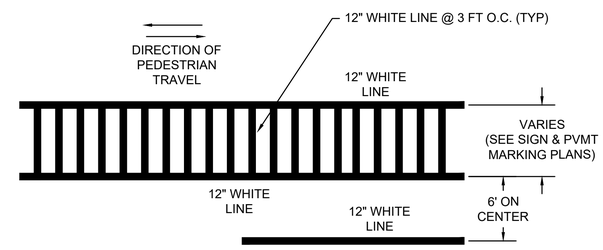
TRAFFIC SIGN SUMMARY

IDENTIFI-CATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)			COLOR			# OF SIGNS REQ'D	UNIT AREA (SF)	TOTAL AREA (SF)	POST SIZE (TOT # POSTS)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MARKER	BACK-GROUND	LEGEND	BORDER				
R1-1	30	30	STOP	MUTCD STD	MUTCD STD	MUTCD STD	RED	WHITE	WHITE	1	6.25	6.25	P5 (1)
R3-17	30	24	BIKE LANE				TOP PORTION: BLACK WHITE WHITE BOTTOM PORTION: WHITE BLACK BLACK			6	5.0	30.0	P5 (6)
R3-17a	30	12	AHEAD				WHITE	BLACK	BLACK	2	2.5	5.0	MOUNT W/ R3-17
R3-17b	30	12	ENDS				WHITE	BLACK	BLACK	2	2.5	5.0	MOUNT W/ R3-17
R3-8L	30	30	ONLY				WHITE	BLACK	BLACK	2	6.25	12.5	P5 (2)
R6-2R	24	30	ONE WAY →				WHITE	BLACK	BLACK	1	5.0	5.0	MOUNT W/ MA-D3-4
R6-2L	24	30	ONE WAY ←				WHITE	BLACK	BLACK	1	5.0	5.0	MOUNT W/ MA-D3-4
R8-3	24	24					WHITE	RED/ BLACK	BLACK	6	4.0	24.0	P5 (6)
R2-1 (35)	24	30	SPEED LIMIT 35				WHITE	BLACK	BLACK	1	5.0	5.0	P5 (1)

TOTAL THIS SHEET=97.75 SF



TRAFFIC GORE FOR PAINTED MEDIANS AND PAINTED ISLANDS
PAVEMENT MARKINGS DETAIL
SCALE: NONE



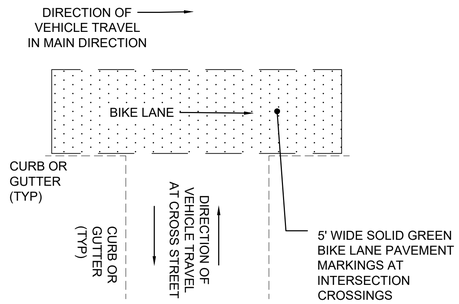
CROSSWALK & STOP LINE
PAVEMENT MARKINGS DETAIL
SCALE: NONE

TRAFFIC SIGN SUMMARY

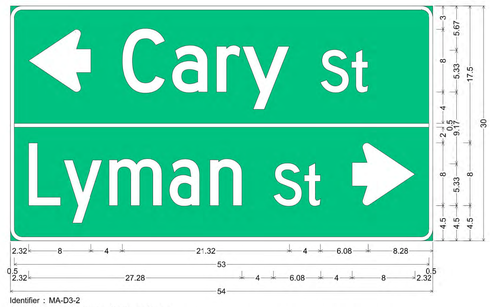
IDENTIFI-CATION NUMBER	SIZE OF SIGN (INCHES)		TEXT	TEXT DIMENSIONS (INCHES)			COLOR			NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)	POST SIZE (# POSTS)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE MARKER	BACK-GROUND	LEGEND	BORDER				
MA-D3-1	42.0	12	Centre St	SERIES D 1ST LETTER: 6" ABBR.: 4"	3" TOP 3" BOTTOM	N/A	GREEN	WHITE SERIES D	WHITE	2	3.50	7.00	MOUNTED ON MAST ARM
MA-D3-1	54.0	18	Centre St	SERIES D 1ST LETTER: 8" ABBR.: 5.33"	5" TOP 5" BOTTOM	N/A	GREEN	WHITE SERIES D	WHITE	2	6.75	13.50	MOUNTED ON MAST ARM
MA-D3-2	54.0	18	Lyman St	SERIES D 1ST LETTER: 8" ABBR.: 5.33"	5" TOP 5" BOTTOM	N/A	GREEN	WHITE SERIES D	WHITE	1	6.75	6.75	MOUNTED ON MAST ARM
MA-D3-3	54.0	18	Cary St	SERIES D 1ST LETTER: 8" ABBR.: 5.33"	5" TOP 5" BOTTOM	N/A	GREEN	WHITE SERIES D	WHITE	1	6.75	6.75	MOUNTED ON MAST ARM
MA-D3-4	42.0	12	Mason St	SERIES D 1ST LETTER: 6" ABBR.: 4"	3" TOP 3" BOTTOM	N/A	GREEN	WHITE SERIES D	WHITE	2	3.50	7.00	P5 (2) MOUNTED BACK-BACK
MA-D3-5	39.0	12	Union Ct	SERIES D 1ST LETTER: 6" ABBR.: 4"	3" TOP 3" BOTTOM	N/A	GREEN	WHITE SERIES D	WHITE	2	3.25	6.50	P5 (2) MOUNTED BACK-BACK
MA-I-13	24	30	STATE HIGHWAY BEGINS	MASSDOT STD	MASSDOT STD	MASSDOT STD	GREEN	WHITE	WHITE	1	5.00	5.00	MOUNT ON MAST ARM
MA-I-14	24	30	STATE HIGHWAY ENDS	MASSDOT STD	MASSDOT STD	MASSDOT STD	GREEN	WHITE	WHITE	1	5.00	5.00	MOUNT ON MAST ARM

TOTAL THIS SHEET=57.50 SF

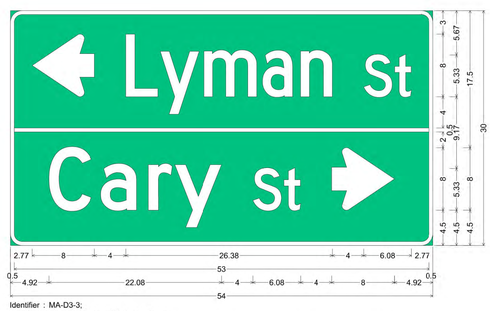
SIGN NOTES:
1. ALL WARNING, REGULATORY AND ROUTE MARKERS SHALL BE FABRICATED WITH HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING (SEE SECTION M9.30.0) TYPE III OR IV.
2. ALL P5 POSTS SHALL BE TELESCOPIC BREAKAWAY RECTANGULAR TYPE POSTS.
3. ALL STREET NAME SIGNS SHALL BE POS (PAINTED ONE SIDE). STREET NAME SIGNS MOUNTED ON P5 POSTS SHALL BE MOUNTED BACK TO BACK AND BOLTED THROUGH THE POST.



BIKE LANE THRU INTERSECTION PAVEMENT MARKINGS DETAIL
SCALE: NONE

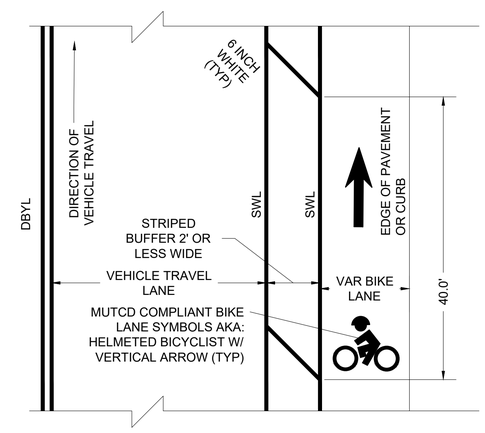


Identifier : MA-D3-2
1.50" Radius, 0.50" Border, White on Green;
Standard Arrow Custom 8.00" X 8.00" 180°; "Cary" D 2K 75% spacing; "St" D 2K; "Lyman" C 2K; "St" D 2K;
Standard Arrow Custom 8.00" X 8.00" 0°;



Identifier : MA-D3-3;
1.50" Radius, 0.50" Border, White on Green;
Standard Arrow Custom 8.00" X 8.00" 180°; "Lyman" C 2K 75% spacing; "St" D 2K; "Cary" D 2K; "St" D 2K;
Standard Arrow Custom 8.00" X 8.00" 0°;

BIKE LANE PAVEMENT MARKINGS NOTES:
1. SEE TYPICAL SECTIONS AND SIGN AND PAVEMENT MARKINGS PLANS FOR TRAVEL LANE AND BIKE LANE WIDTHS.
2. INSTALL BIKE LANE SYMBOL AND ARROW AT INTERSECTION APPROACHES, AT THE BEGINNING OF THE BIKE LANE, AND AT 1000 FT INTERVALS (MAX).



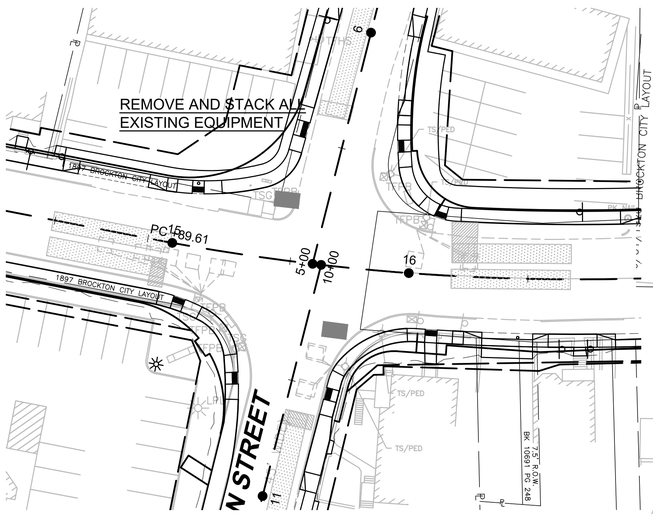
BIKE LANE MARKINGS ADJACENT TO TRAVEL WAY
SCALE: NONE

609410_HD(SIGN SUMMARY).DWG Plotted on 12-Mar-2023 11:41 AM

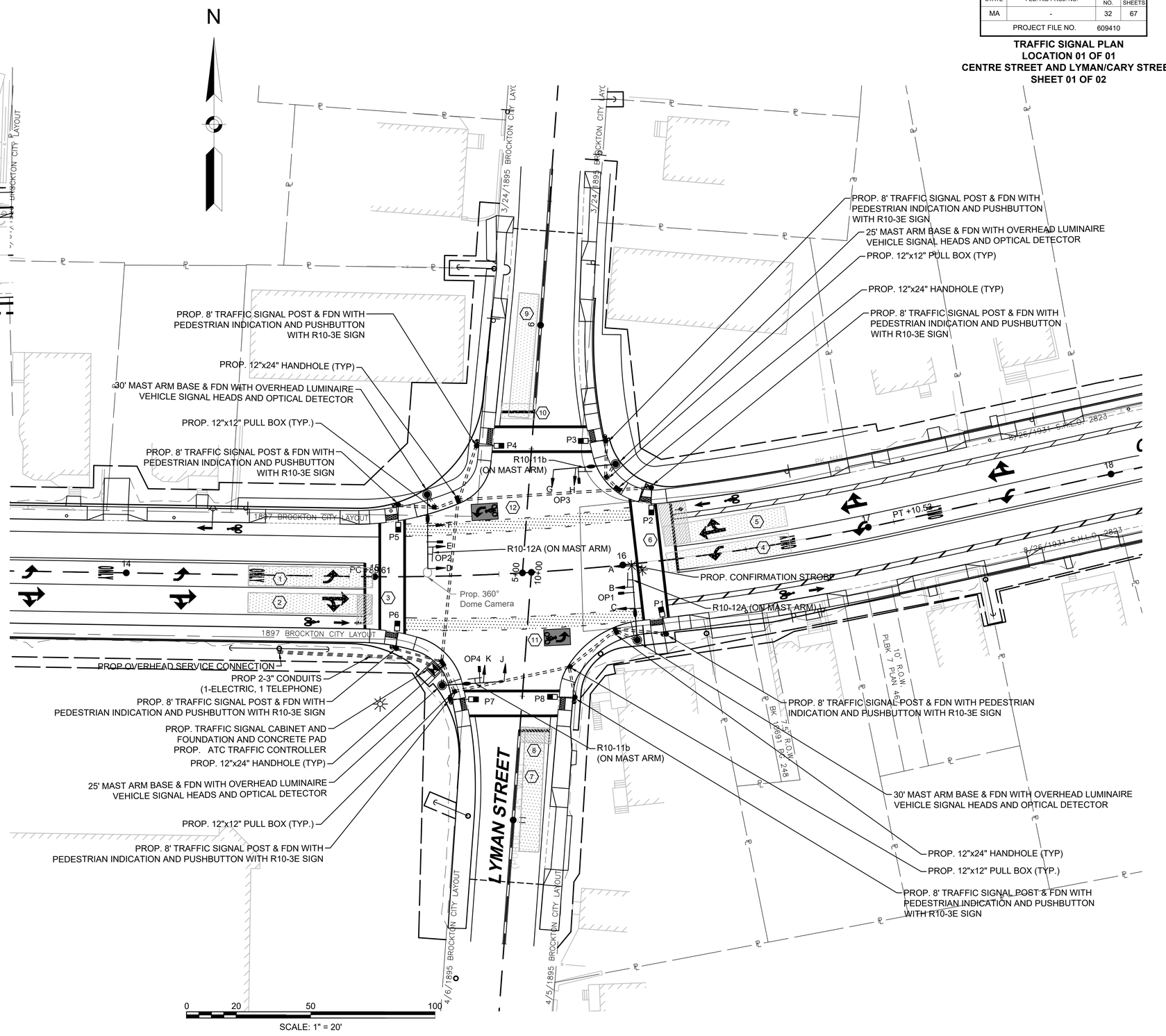
BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	67
PROJECT FILE NO.	609410		

TRAFFIC SIGNAL PLAN
LOCATION 01 OF 01
CENTRE STREET AND LYMAN/CARY STREET
SHEET 01 OF 02



EXISTING SIGNAL LAYOUT
SCALE 1" = 30'



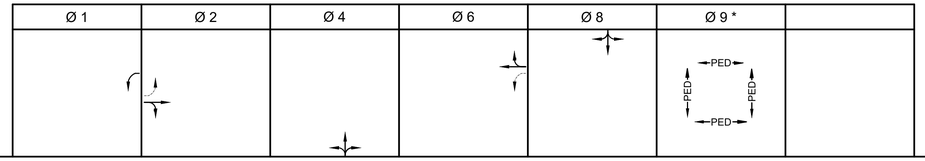
PROPOSED SIGNAL EQUIPMENT		
BASELINE STA.	OFFSET (FT.)	FEATURE
15+19.53	35.04 RT	TRAFFIC SIGNAL CABINET
15+21.65	32.96 LT	30' TRAFFIC SIGNAL MAST ARM
15+26.06	32.53 RT	25' TRAFFIC SIGNAL MAST ARM
16+01.22	40.73 LT	25' TRAFFIC SIGNAL MAST ARM
16+02.69	30.68 RT	30' TRAFFIC SIGNAL MAST ARM
15+08.60	28.96 RT	8' TRAFFIC SIGNAL POST
15+09.69	29.01 LT	8' TRAFFIC SIGNAL POST
15+29.12	49.57 RT	8' TRAFFIC SIGNAL POST
15+43.05	52.06 LT	8' TRAFFIC SIGNAL POST
15+76.71	51.43 RT	8' TRAFFIC SIGNAL POST
15+98.06	50.42 LT	8' TRAFFIC SIGNAL POST
16+14.23	29.52 LT	8' TRAFFIC SIGNAL POST
16+15.01	29.77 RT	8' TRAFFIC SIGNAL POST

609410_TR(SIGNAL PLANS).DWG Plotted on 12-Mar-2023 11:42 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	67
PROJECT FILE NO.	609410		

TRAFFIC SIGNAL PLAN
LOCATION 01 OF 01
CENTRE STREET AND LYMAN/CARY STREET
SHEET 02 OF 02



SEQUENCE AND TIMING

STREET	DIRECTION	HOUSINGS	1	2	3		4	5	6		7	8	9		10	11	12		13	14	15		16	17	18						FLASHING OPERATION
CENTRE STREET	EB	A	R	R	R		FYA	Y	R		R	R	R		R	R	R		R	R	R		R	R	R						FY
CENTRE STREET	EB	B,C	R	R	R		G	Y	R		R	R	R		R	R	R		R	R	R		R	R	R						FY
CENTRE STREET	WB	D	GLA	YLA	RLA#		R	R	R		R	R	R		FLA	Y	R		R	R	R		R	R	R						FY
CENTRE STREET	WB	E,F	R	R	R		R	R	R		R	R	R		G	Y	R		R	R	R		R	R	R						FY
LYMAN STREET	NB	G,H	R	R	R		R	R	R		G	Y	R		R	R	R		R	R	R		R	R	R						FR
CARY STREET	SB	J,K	R	R	R		R	R	R		R	R	R		R	R	R		G	Y	R		R	R	R						FR
PEDESTRIAN	EAST	P1-P2	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		W	FDW	DW						OFF
PEDESTRIAN	NORTH	P3-P4	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		W	FDW	DW						OFF
PEDESTRIAN	WEST	P5-P6	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		W	FDW	DW						OFF
PEDESTRIAN	SOUTH	P7-P8	DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		DW	DW	DW		W	FDW	DW						OFF
																															OFF
TIMING IN SECONDS																															
MINIMUM GREEN (INITIAL)			6				10				6				10				6												EMERGENCY ONLY
PASSAGE TIME (VEHICLE)			2				2				2				2				2												
MAXIMUM 1			10				32				35				47				35												
MAXIMUM 2			12				30				35				47				35												
YELLOW CLEARANCE				3				3				3				3				3											
RED CLEARANCE					2				2				2				2				2				4						
WALK (W)																							7								
PEDESTRIAN CLEARANCE																								10							
RECALL			NONE				SOFT				NONE				SOFT				NONE				PED								
MEMORY			NON-LOCKING				NON-LOCKING				NON-LOCKING				NON-LOCKING				NON-LOCKING				LOCKING								

NOTES:
1. AUTOMATIC FLASHING OPERATION PER 2009 MUTCD, AS AMENDED.
2. STOP AND GO OPERATION FOR 24 HOURS PER DAY, FLASHING OPERATION FOR EMERGENCY ONLY.
3. DURING PEDESTRIAN INTERVAL, FDW THROUGH YELLOW OPERATION SHALL NOT BE IN EFFECT
4. MAX 2 TO OPERATE MONDAY THROUGH FRIDAY, 3:00 PM TO 7:00 PM, MAX 1 TO OPERATE ALL OTHER TIMES.

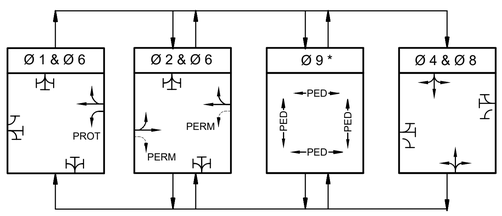
* UPON PEDESTRIAN ACTIVATION ONLY
\# FYLA WHEN TRANSITIONING FROM PHASE 1 TO 6

MAJOR ITEMS REQUIRED

PAY ITEM	QUANTITY	ITEM
816.01	1	ATC CONTROLLER, CAB.& FDN.
	1	SERVICE CONNECTION, TYPE OVERHEAD
	2	25 FT MAST ARM ASSEMBLY, BASE & FDN.
	2	30 FT MAST ARM ASSEMBLY, BASE & FDN.
	8	8' TRAFFIC SIGNAL POST, BASE, & FDN.
	9	1 WAY, 3 SECTION, SIGNAL HOUSING (12" L.E.D.)
	1	1 WAY, 4 SECTION, SIGNAL HOUSING (12" L.E.D.)
	8	PEDESTRIAN HOUSING (16" COUNTDOWN L.E.D.)
	8	APS PEDESTRIAN PUSH BUTTON, SIGN & SADDLES
	1	360 DEGREE VIDEO DETECTOR CAMERA
	1	9" VIDEO MONITOR
	1	VIDEO DETECTION PROCESSOR
	4	PRE-EMPTION RECEIVER-SINGLE CHANNEL
	2	PRE-EMPTION PHASE SELECTOR MODULE-DUAL CHANNEL
	1	PRE-EMPTION CARD RACK
	1	PRE-EMPTION COMFIRMATION STROBE (WHITE)
804.3	420'	3 IN. ELECTRICAL CONDUIT TYPE NM - PLASTIC -(UL)
811.22	4	ELECTRIC HANDHOLE - SD2.022
811.31	4	PULL BOX 12X12 INCHES - SD2.031
PLUS ALL NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION.		

*A FULL COMPLEMENT OF EQUIPMENT SHALL BE PROVIDED IN THE SIGNAL CONTROLLER CABINET

PREFERENTIAL PHASING SEQUENCE



EMERGENCY PRE-EMPTION DATA

APPROACH	PREEMPTION PHASE	DETECTOR	TIME (SEC)
CENTRE STREET EASTBOUND	2	OP1	MIN 10 MAX 60
CENTRE STREET WESTBOUND	6	OP2	MIN 10 MAX 60
LYMAN STRET NORTHBOUND	4	OP3	MIN 10 MAX 60
CARY STREET SOUTHBOUND	8	OP4	MIN 10 MAX 60

EMERGENCY VEHICLE PREEMPTION OPERATION:

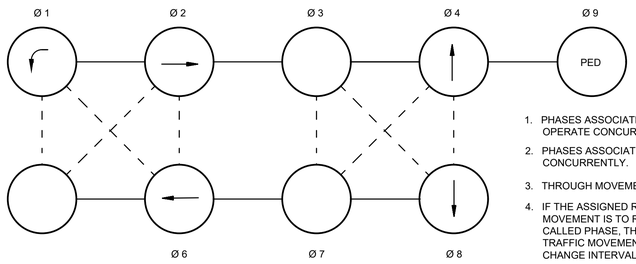
1. EMERGENCY VEHICLE PREEMPTION SHALL BE ACTUATED BY AN OPTICAL SIGNAL FROM AN OPTICAL EMITTER MOUNTED ON AN EMERGENCY VEHICLE AND RECEIVED BY AN OPTICAL DETECTOR LOCATED AT INTERSECTION. A SEPARATE RECEIVING DETECTOR IS REQUIRED FOR EACH DETECTED APPROACH.
2. PREEMPTION SIGNALS FROM MULTIPLE APPROACHES SHALL BE SERVICED ON A FIRST DETECTED FIRST SERVED BASIS.
3. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL TIME THE CLEARANCE INTERVALS OF THE ACTIVE PHASE (IF DIFFERENT THAT TO BE SERVICED) AND ADVANCE TO AND/OR HOLD IN EMERGENCY VEHICLE PREEMPTION PHASE UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME CLEARANCES AND SIMILARLY SERVICE OTHER EMERGENCY VEHICLE PREEMPTION SEQUENCES IN THE ORDER RECEIVED (IF RECEIVED) OTHERWISE, RESUME NORMAL PREFERENTIAL PHASE SEQUENCE.
4. PREEMPTION MINIMUM GREENS SHALL BE TEN SECONDS.
5. NORMAL CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TERMINATED BY PREEMPTION DEMAND.
6. ACTUAL TIMING FOR PREEMPTION SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FIRE DEPARTMENT AND SHALL BE APPROVED BY CITY PRIOR TO OPERATION.

VIDEO DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED ø RED. TIME IN SEC.

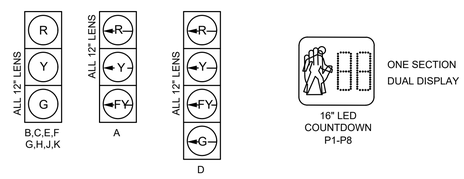
DETECTOR NUMBER	CAMERA NUMBER	DETECTION TYPE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	360 camera	VEHICLE/ BIKE	2	2	B	-	-
2	360 camera	VEHICLE/ BIKE	2	2	B	-	-
3	360 camera	BIKE	2	2	B	-	-
4	360 camera	VEHICLE/ BIKE	1	1	B	-	-
5	360 camera	VEHICLE/ BIKE	6	6	B	-	-
6	360 camera	BIKE	6	6	B	-	-
7	360 camera	VEHICLE/ BIKE	4	4	B	-	-
8	360 camera	BIKE	4	4	B	-	-
9	360 camera	VEHICLE/ BIKE	8	8	B	-	-
10	360 camera	BIKE	8	8	B	-	-
11	360 camera	BIKE	4	4	B	5	-
12	360 camera	BIKE	8	8	B	5	-

NEMA DUAL RING PHASING NOTES:



1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

SIGNAL IDENTIFICATION



1. ALL SIGNALS SHALL HAVE CUT AWAY VISORS.
2. ALL SIGNALS SHALL HAVE 12" LED WITH 5" NONLOUVERED BACK PLATES W/ 3" REFLECTIVE BORDER

609410_TR(SIGNAL PLANS).DWG Plotted on 12-Mar-2023 11:42 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	67
PROJECT FILE NO.	609410		

TRAFFIC SIGNAL PLAN
LOCATION 01 OF 01
CENTRE STREET AND LYMAN/CARY STREET
FOUNDATION TABLES

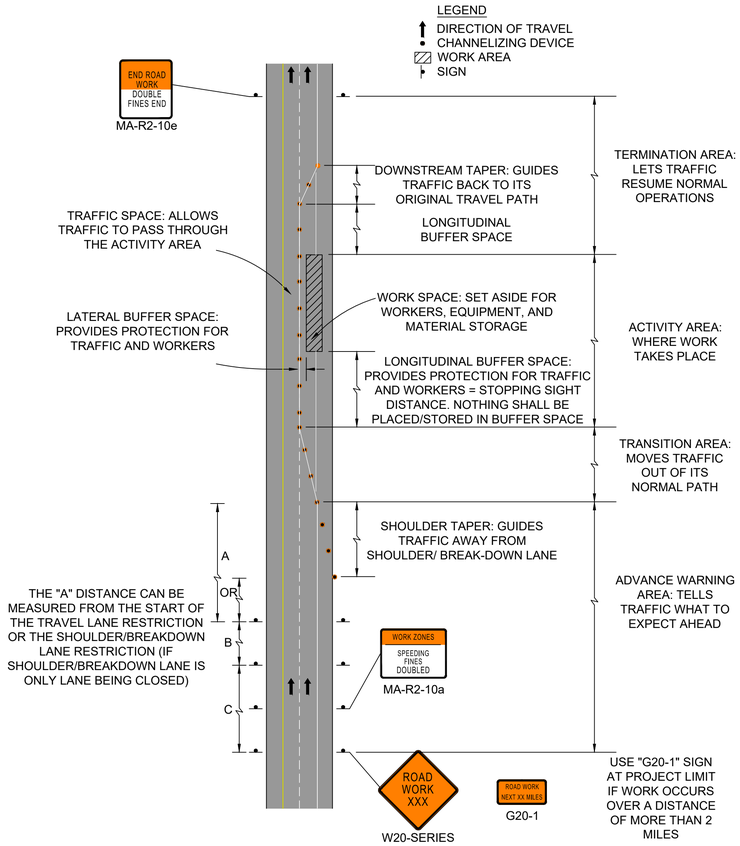
Boring Number	Station & Offset	Soil Type	Mast Arm Length	Foundation Depth	Foundation Diameter
	Baseline/Street Name				
	Baseline/Street Name				

NOTE:
THE RESULTS OF THE BORINGS
AND THE FOUNDATION DESIGN WILL
BE INCLUDED IN THE NEXT SUBMITTAL.

609410_TR(SIGNAL PLANS).DWG Plotted on 12-Mar-2023 11:42 AM

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	67
PROJECT FILE NO.	609410		

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 01 OF 03



COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350	350	350
MOST OTHER ROADWAYS*	500	500	500
FREEWAYS AND EXPRESSWAYS*	1,000	1,500	2,640

** DISTANCES ARE SHOWN IN FEET. THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (i.e. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (i.e. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

MA-R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

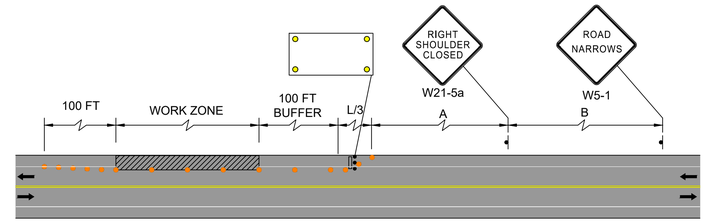
MA-R2-10a, R2-10e, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

NOTES:

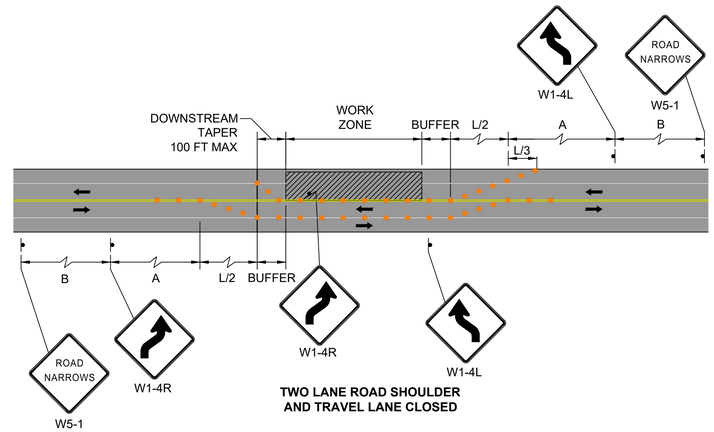
1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
7. THE FIRST TEN PLASTIC DRUMS IN ANY TAPER SHALL BE EQUIPPED WITH TYPE A SEQUENTIAL FLASHING LIGHTS.
8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
10. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
11. MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.

LEGEND:

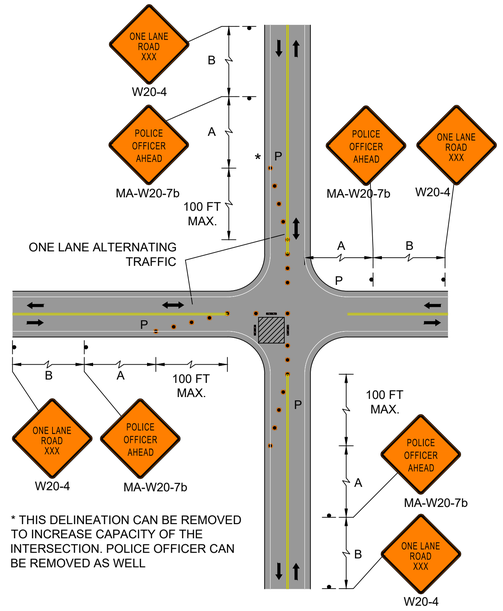
- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- P/F POLICE/FLAGGER DETAIL
- TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN
- ARROW BOARD
- WORK ZONE
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- MEDIAN BARRIER
- MEDIAN BARRIER WITH WARNING LIGHTS
- WORK VEHICLE
- TRUCK MOUNTED ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN



TWO LANE ROAD
SHOULDER CLOSED

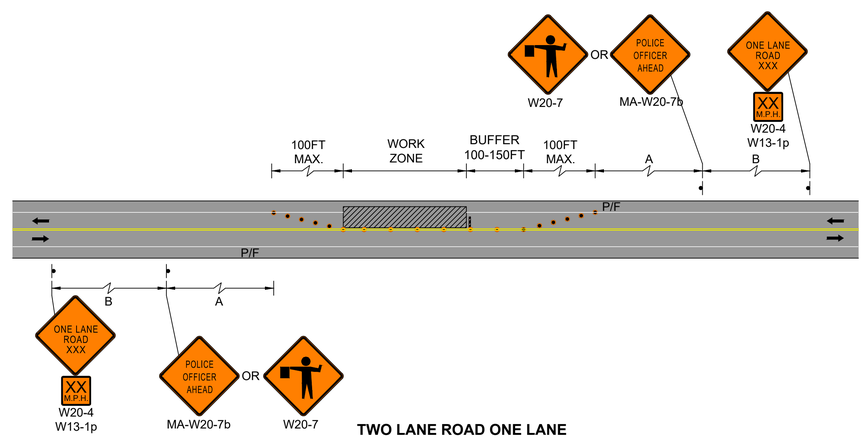


TWO LANE ROAD SHOULDER
AND TRAVEL LANE CLOSED



* THIS DELINEATION CAN BE REMOVED TO INCREASE CAPACITY OF THE INTERSECTION. POLICE OFFICER CAN BE REMOVED AS WELL

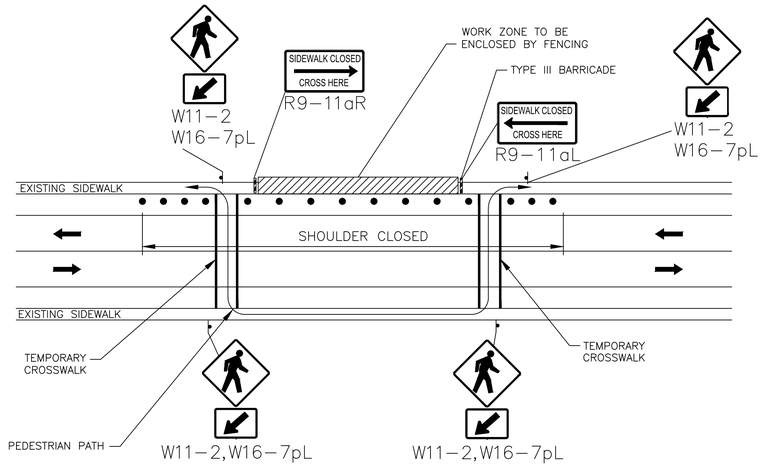
SINGLE LANE APPROACH ONE
QUADRANT CLOSURE
(POLICE DETAIL AT INTERSECTION)



TWO LANE ROAD ONE LANE
ALTERNATING TRAFFIC
(POLICE DETAIL OR FLAGGER)

609410_HD(TTCP).DWG Plotted on 12-Mar-2023 11:42 AM

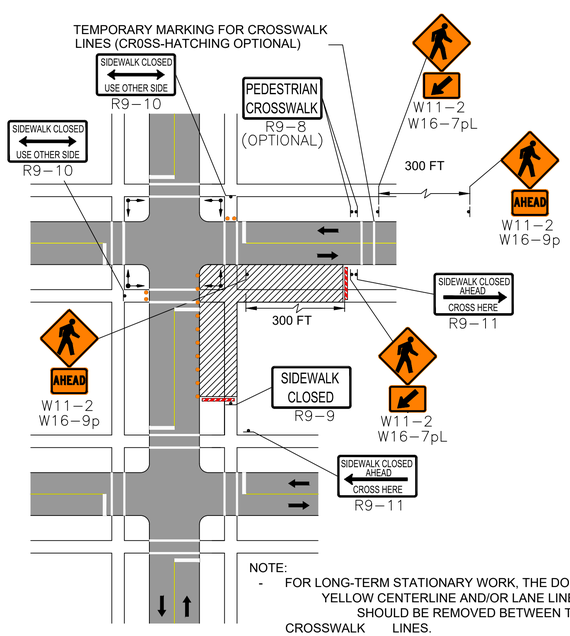
609410_HD(TTCP).DWG Plotted on 12-Mar-2023 11:42 AM



TEMPORARY PEDESTRIAN BYPASS NOTES:

1. IF A MINIMUM WIDTH OF 48" OF SOLID SMOOTH UNOBSTRUCTED SURFACE REMAINS ALONG THE WORK AREA THEN THE DETAILS CAN BE DISREGARDED. DELINEATION OF THE WORK AREA WILL STILL BE REQUIRED. All PEDESTRIAN DETOUR ROUTES SHALL BE ADA/MAAB COMPLIANT IN THEIR ENTIRETY.
2. THE POLICE/FLAGGER MAY DIRECT PEDESTRIANS, AS NEEDED, WITH OR WITHOUT PERMANENT OR TEMPORARY CROSSWALKS AND WITH OR WITHOUT TEMPORARY PEDESTRIAN TRAFFIC SIGNS.
3. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.

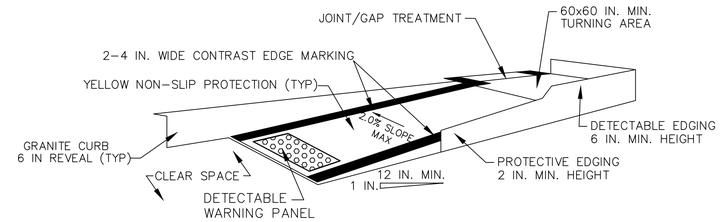
SIDEWALK CLOSED WITH TEMPORARY PEDESTRIAN BYPASS TYPE II



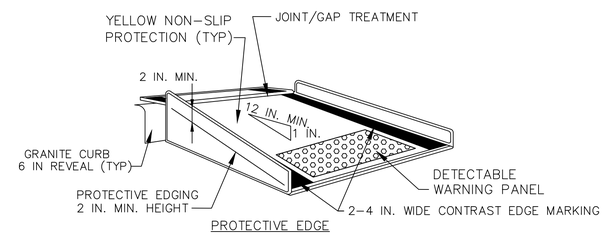
NOTE:
- FOR LONG-TERM STATIONARY WORK, THE DOUBLE YELLOW CENTERLINE AND/OR LANE LINES SHOULD BE REMOVED BETWEEN THE CROSSWALK LINES.
- ALL PEDESTRIAN DETOUR ROUTES SHALL BE ADA/AAB COMPLIANT IN THEIR ENTIRETY.

PEDESTRIAN DETOUR

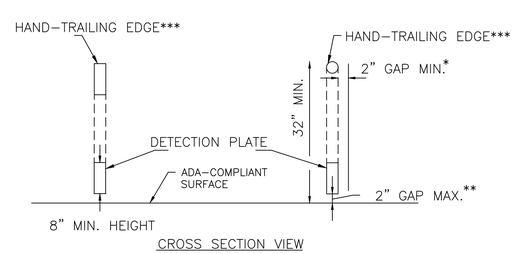
1. CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
3. DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
5. CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
6. CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.
10. IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PAD MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.



TEMPORARY CURB RAMP-PARALLEL TO CURB



TEMPORARY CURB RAMP-PERPENDICULAR TO CURB



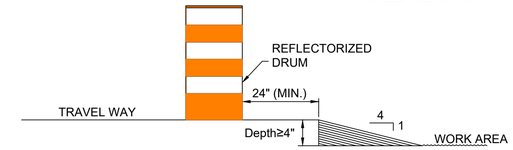
TEMPORARY PEDESTRIAN BARRICADE

NOTES:

* THERE SHALL BE A 2 INCH GAP BETWEEN THE HAND-TRAILING EDGE AND ITS SUPPORT.

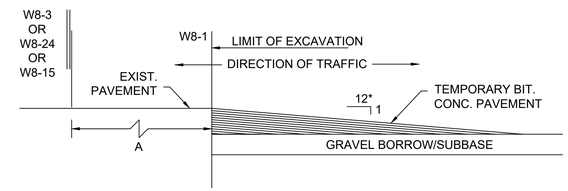
** A MAXIMUM 2 INCH GAP BETWEEN THE BOTTOM OF THE BOTTOM RAIL AND THE SURGACE MAY BE USED TO PROVIDE DRAINAGE.

*** THE HAND-TRAILING EDGE AND DETECTION PLATE SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE PATH SUCH THAT A PEDESTRIAN USER WITH A LONG CANE CAN FOLLOW IT.



LATERAL DROP-OFF DETAIL

NOT TO SCALE



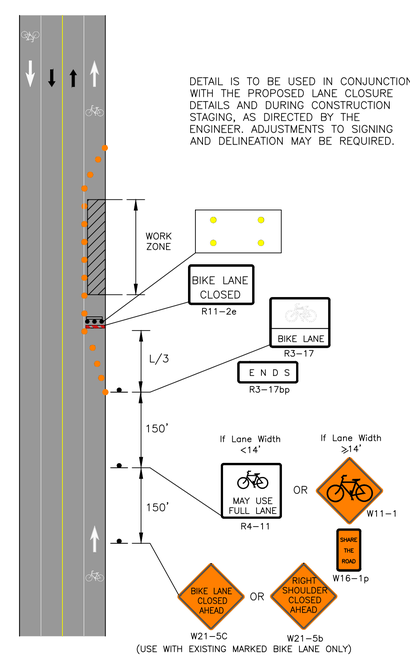
LONGITUDINAL DROP-OFF DETAIL

NOT TO SCALE

* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS

LATERAL AND LONGITUDINAL DROP-OFF DETAILS

DETAIL IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER. ADJUSTMENTS TO SIGNING AND DELINEATION MAY BE REQUIRED.



BICYCLE LANE CLOSURE WITHOUT DETOUR

Source: Table 6C–2 MUTCD LATEST EDITION

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

IDENTIFI–CATION NUMBER	SIZE OF SIGN WIDTH (IN)	SIZE OF SIGN HEIGHT (IN)	TEXT	TEXT DIMENSION (in) LETTER HEIGHT	TEXT DIMENSION (in) VERTICAL SPACING	TEXT DIMENSION (in) ARROW RTE MKR	NO. SIGNS REQ'D	COLOR BACK–GROUND	COLOR LEGEND	COLOR BORDER	UNIT AREA (sq. ft)	TOTAL AREA (sq. ft)
R9–8 (OPTIONAL)	36	18	PEDESTRIAN CROSSWALK	MUTCD STD	MUTCD STD	MUTCD STD	4	WHITE	BLACK	BLACK	4.50	18.00
R9–9	24	12	SIDEWALK CLOSED				6	WHITE	BLACK	BLACK	2.00	12.00
R9–10	24	12	SIDEWALK CLOSED ↔ USE OTHER SIDE				4	WHITE	BLACK	BLACK	2.00	8.00
R9–11aL	24	12	SIDEWALK CLOSED ← CROSS HERE				4	WHITE	BLACK	BLACK	2.00	8.00
R9–11aR	24	12	SIDEWALK CLOSED → CROSS HERE				4	WHITE	BLACK	BLACK	2.00	8.00
W1–4R	36	36					2	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	18.00
W1–4L	36	36					2	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	18.00
W5–1	36	36	ROAD NARROWS				4	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	36.00
W11–1	24	24					2	FLUO–RESCENT ORANGE	BLACK	BLACK	4.00	8.00
W13–1p	24	24	XX MPH				4	FLUO–RESCENT ORANGE	BLACK	BLACK	4.00	8.00
W21–5c	36	36	BIKE LANE CLOSED AHEAD				2	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	18.00
W11–2	36	36					4	FLUO–RESCENT YELLOW GREEN	BLACK	BLACK	9.00	36.00
W16–9p	24	12	AHEAD				4	FLUO–RESCENT YELLOW GREEN	BLACK	BLACK	2.00	8.00
W16–7pL	24	12	↙				4	FLUO–RESCENT YELLOW GREEN	BLACK	BLACK	2.00	8.00
W16–1p	18	24	SHARE THE ROAD				2	FLUO–RESCENT ORANGE	BLACK	BLACK	3.00	6.00

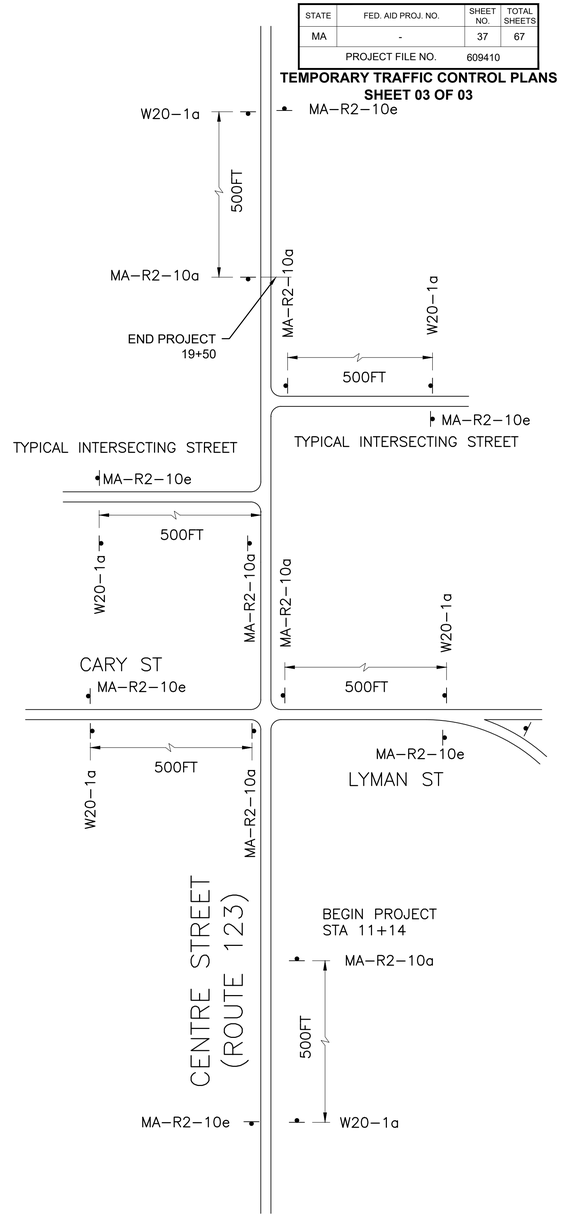
IDENTIFI–CATION NUMBER	SIZE OF SIGN WIDTH (IN)	SIZE OF SIGN HEIGHT (IN)	TEXT	TEXT DIMENSION (in) LETTER HEIGHT	TEXT DIMENSION (in) VERTICAL SPACING	TEXT DIMENSION (in) ARROW RTE MKR	NO. SIGNS REQ'D	COLOR BACK–GROUND	COLOR LEGEND	COLOR BORDER	UNIT AREA (sq. ft)	TOTAL AREA (sq. ft)
W20–4	36	36	ONE LANE ROAD 1000 FT	MUTCD STD	MUTCD STD	MUTCD STD	4	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	36.00
W20–7	36	36		↓	↓	↓	4	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	36.00
OR MA–W20–7b	36	36	POLICE OFFICER AHEAD	MASS DOT STD	MASS DOT STD	MASS DOT STD		FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	36.00
W21–5a	36	36	RIGHT SHOULDER CLOSED	MUTCD STD	MUTCD STD	MUTCD STD	2	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	18.00
MA–R2–10a	48	36	WORK ZONE SPEEDING FINES DOUBLED	MASS DOT STD	MASS DOT STD	MASS DOT STD	6	TOP PORTION: FLUO–RESCENT ORANGE; BOTTOM PORTION: WHITE	TOP PORTION: BLACK; BOTTOM PORTION: BLACK	TOP PORTION: BLACK; BOTTOM PORTION: BLACK	12.00	72.00
MA–R2–10e	36	48	END ROAD WORK / DOUBLE FINES END	MASS DOT STD	MASS DOT STD	MASS DOT STD	6	TOP PORTION: FLUO–RESCENT ORANGE; BOTTOM PORTION: WHITE	TOP PORTION: BLACK; BOTTOM PORTION: BLACK	TOP PORTION: BLACK; BOTTOM PORTION: BLACK	12.00	72.00
W20–1a	36	36	ROAD WORK AHEAD	MUTCD STD	MUTCD STD	MUTCD STD	6	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	54.00
R11–2e	48	30	BIKE LANE CLOSED				2	WHITE	BLACK	BLACK	10.00	20.00
R3–17	30	24	BIKE LANE				2	TOP PORTION: BLACK; BOTTOM PORTION: WHITE	TOP PORTION: WHITE; BOTTOM PORTION: BLACK	TOP PORTION: WHITE; BOTTOM PORTION: BLACK	5.00	10.00
R3–17bP	30	12	E N D S				2	WHITE	BLACK	BLACK	2.50	5.00
R4–11	30	30	MAY USE FULL LANE				2	WHITE	BLACK	BLACK	6.25	12.50
W21–5b	36	36	RIGHT SHOULDER CLOSED AHEAD	↓	↓	↓	2	FLUO–RESCENT ORANGE	BLACK	BLACK	9.00	18.00

TOTAL AREA THIS SHEET = 607.50 SQ. FT.

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	67
PROJECT FILE NO.	609410		

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 03 OF 03



ADVANCED PROJECT CONSTRUCTION SIGNING

NOT TO SCALE

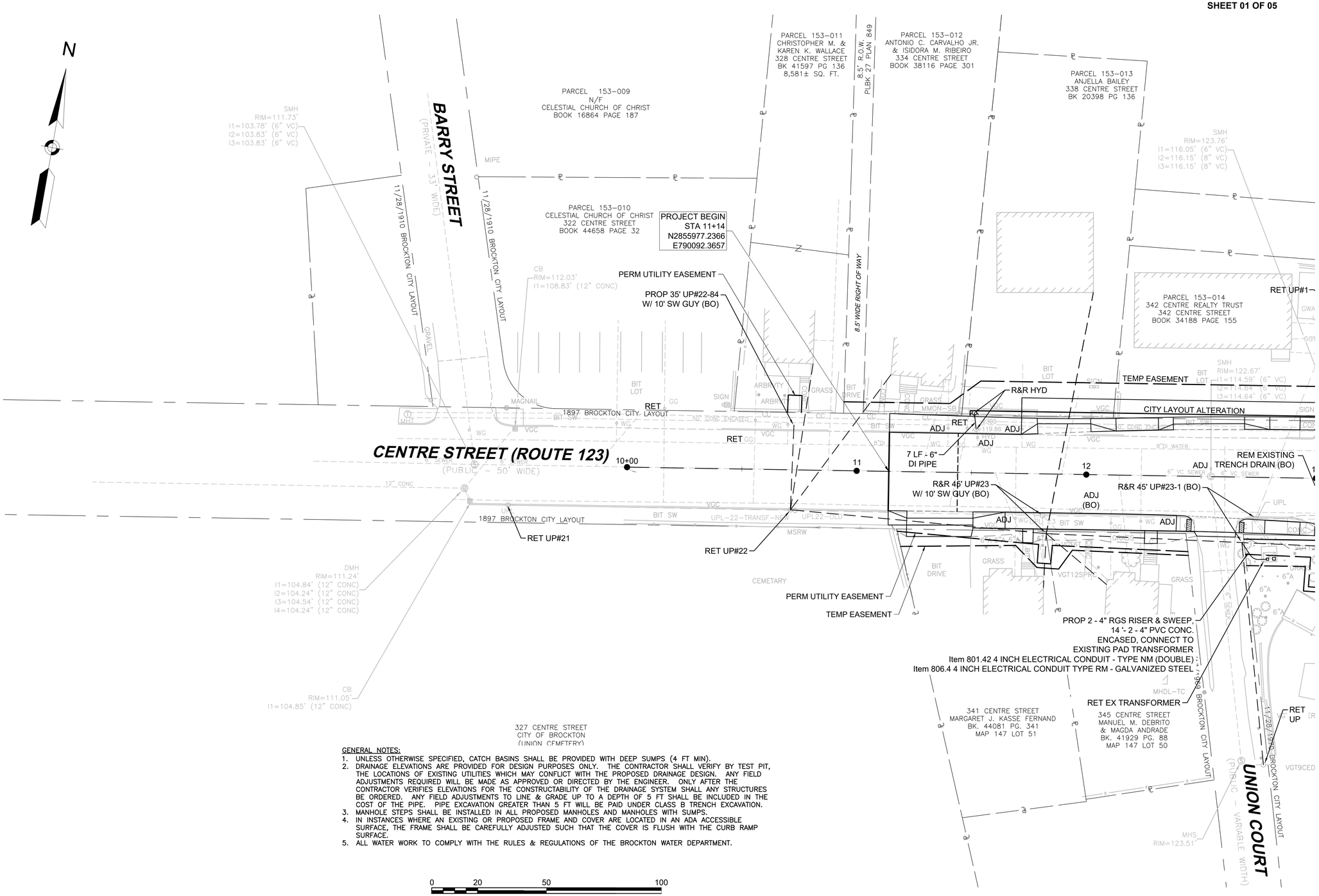
NOTES:
1. ALL WARNING, REGULATORY AND ROUTE MARKERS SHALL BE FABRICATED WITH HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING (SEE SECTION M9.30.0) TYPE III OR IV.
2. ALL SIGNS NOTED AS "(R&R)" SHALL BE MOUNTED ON NEW POSTS OR AS OTHERWISE INDICATED.

609410_HD(TTCP).DWG Plotted on 12-Mar-2023 11:42 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	67
PROJECT FILE NO.	609410		

UTILITY PLANS
SHEET 01 OF 05



CONTINUED ON SHEET NO. 39

GENERAL NOTES:

1. UNLESS OTHERWISE SPECIFIED, CATCH BASINS SHALL BE PROVIDED WITH DEEP SUMPS (4 FT MIN).
2. 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 DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5 FT SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5 FT WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
3. MANHOLE STEPS SHALL BE INSTALLED IN ALL PROPOSED MANHOLES AND MANHOLES WITH SUMPS.
4. IN INSTANCES WHERE AN EXISTING OR PROPOSED FRAME AND COVER ARE LOCATED IN AN ADA ACCESSIBLE SURFACE, THE FRAME SHALL BE CAREFULLY ADJUSTED SUCH THAT THE COVER IS FLUSH WITH THE CURB RAMP SURFACE.
5. ALL WATER WORK TO COMPLY WITH THE RULES & REGULATIONS OF THE BROCKTON WATER DEPARTMENT.

0 20 50 100
SCALE: 1" = 20'

609410_HD(UTILITY PLANS CARY).DWG Plotted on 12-Mar-2023 11:43 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	67
PROJECT FILE NO.	609410		

UTILITY PLANS
SHEET 02 OF 05

GENERAL NOTES:

1. UNLESS OTHERWISE SPECIFIED, CATCH BASINS SHALL BE PROVIDED WITH DEEP SUMPS (4 FT MIN).
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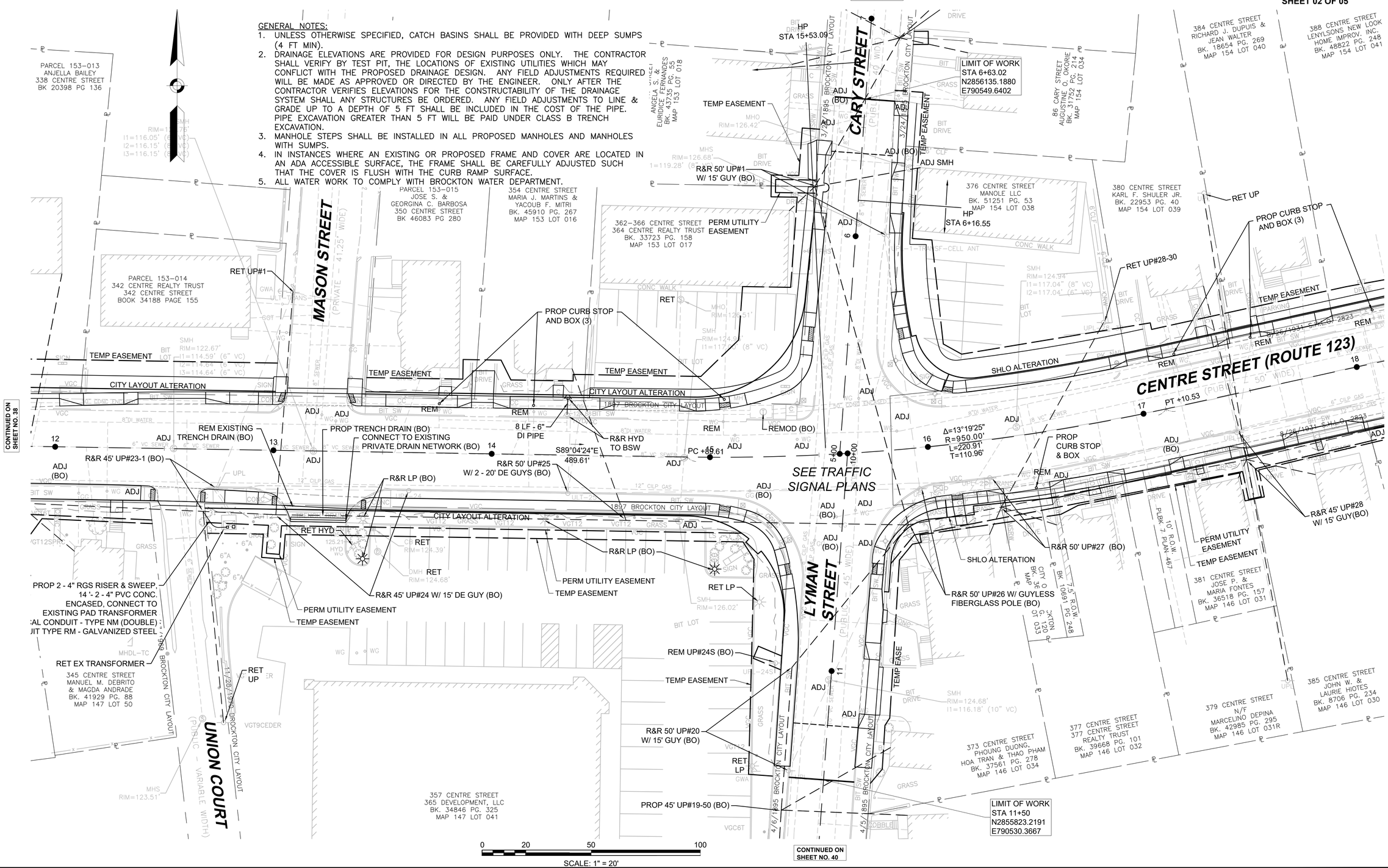
5. ALL WATER WORK TO COMPLY WITH BROCKTON WATER DEPARTMENT.

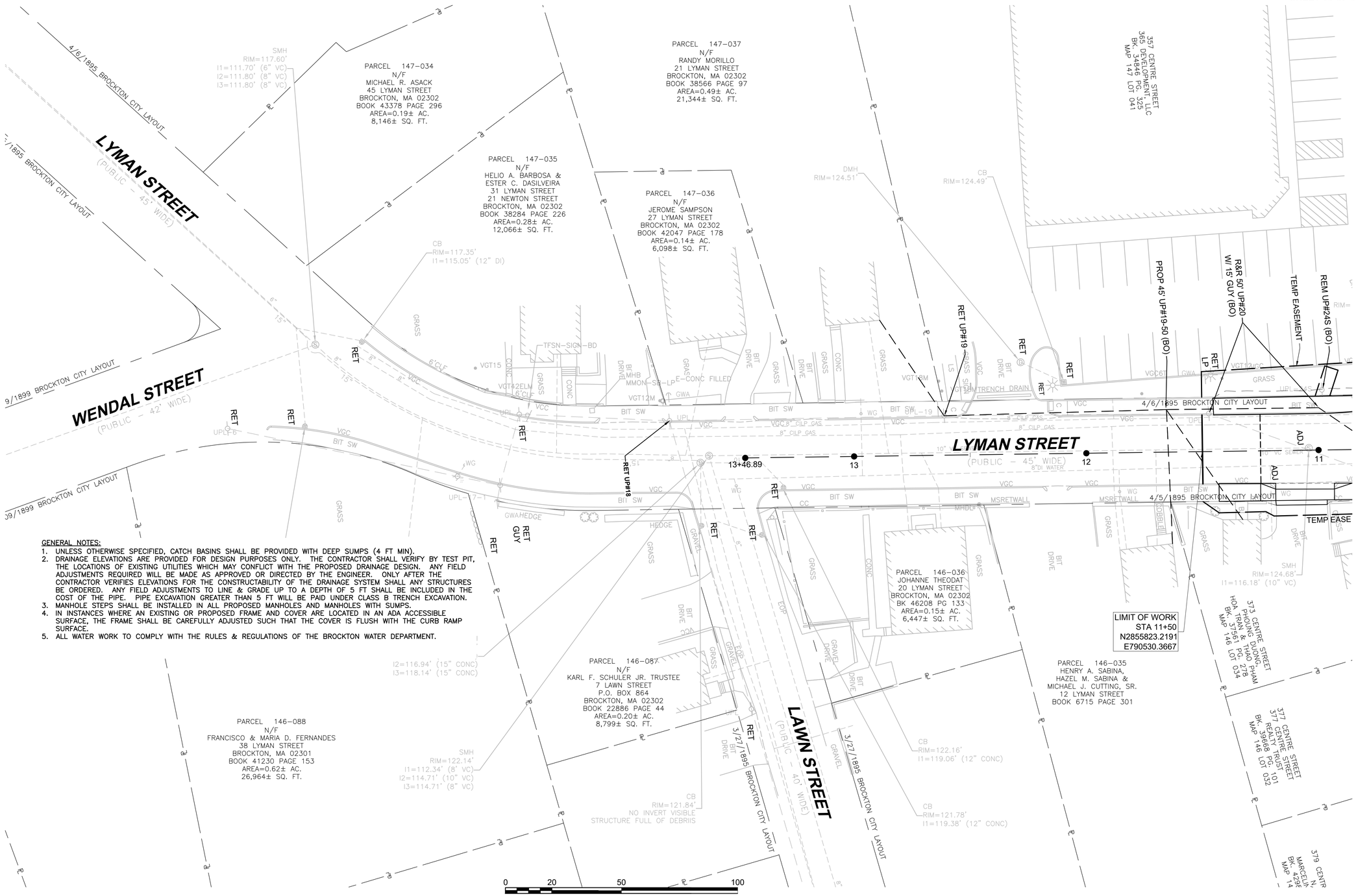


609410_HD(UTILITY PLANS CARY).DWG Plotted on 12-Mar-2023 11:43 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	67
PROJECT FILE NO.	609410		

UTILITY PLANS
SHEET 03 OF 05



GENERAL NOTES:

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5. ALL WATER WORK TO COMPLY WITH THE RULES & REGULATIONS OF THE BROCKTON WATER DEPARTMENT.

609410_HD(UTILITY PLANS CARY).DWG Plotted on 12-Mar-2023 11:43 AM

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	67
PROJECT FILE NO.	609410		

UTILITY PLANS
SHEET 04 OF 05

GENERAL NOTES:

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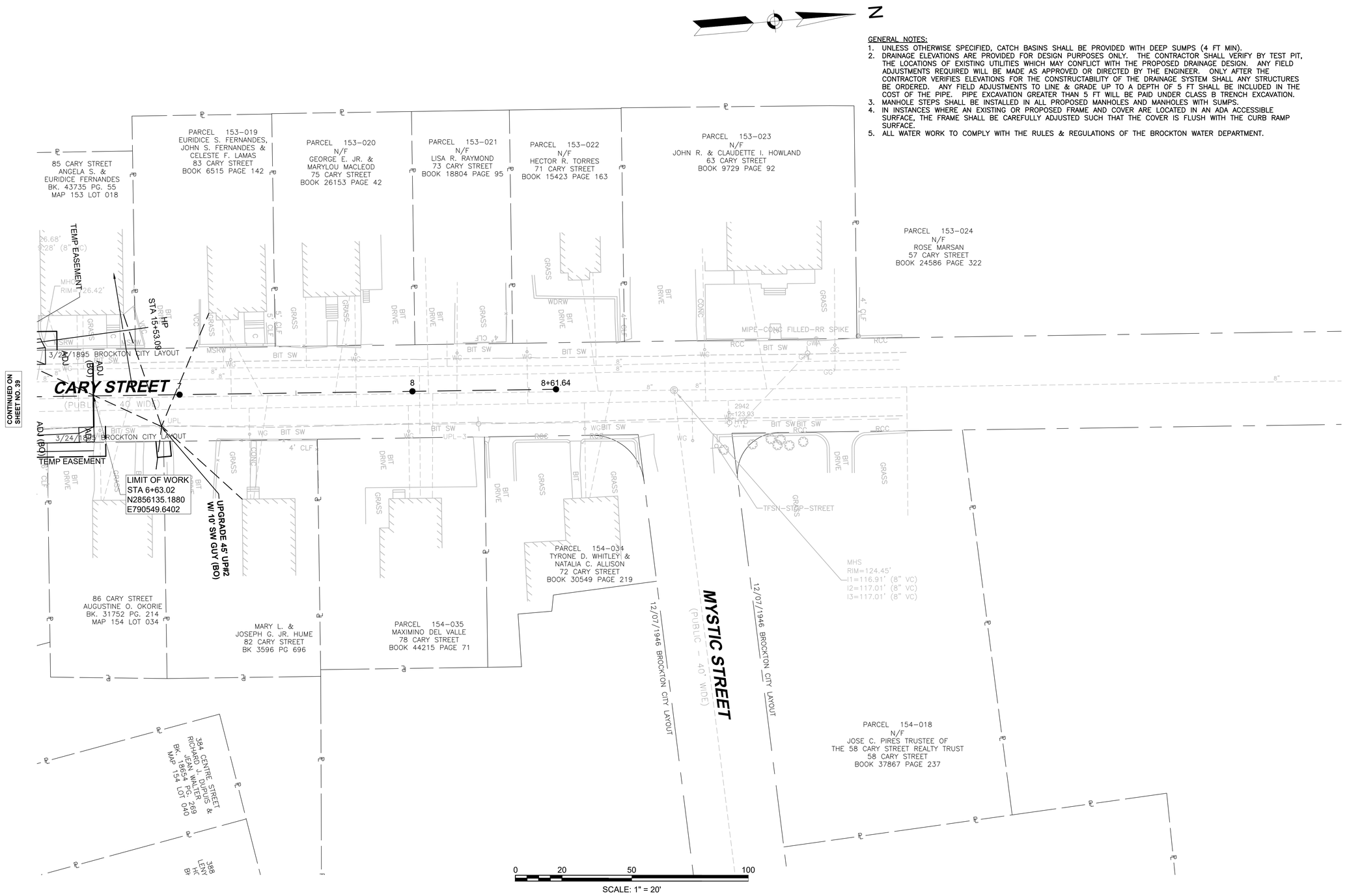

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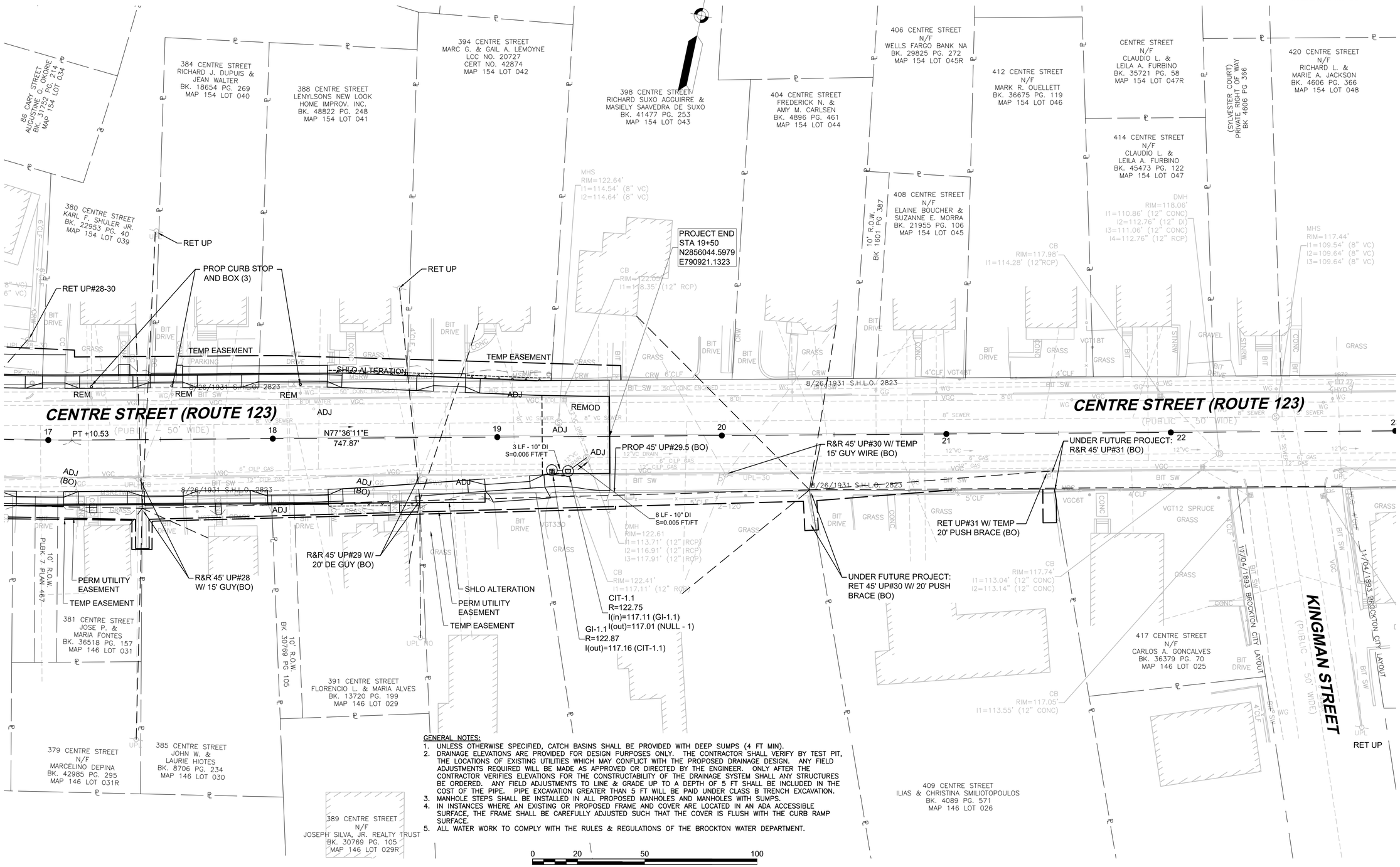
BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	67
PROJECT FILE NO.	609410		

UTILITY PLANS
SHEET 05 OF 05

609410_HD(UTILITY PLANS CARY).DWG Plotted on 12-Mar-2023 11:43 AM



GENERAL NOTES:

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0 20 50 100

SCALE: 1" = 20'

609410_HD(UTILITY PLANS CARY).DWG Plotted on 12-Mar-2023 11:43 AM

DRAINAGE STRUCTURE TABLE

NAME/TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
CIT-1.1	19+31.39	15.3 RT	122.75	I=117.11' (GI-1.1)	I=117.01' (NULL - 1)	REBUILD TOP 3 FT AND CIT TO SUMP
GI-1.1	19+24.20	14.9 RT	122.87		I=117.16' (CIT-1.1)	ECCENTRIC CYLINDRICAL STRUCTURE RECTANGULAR FRAME
NULL - 1	19+39.74	9.5 RT	117.15	I=116.96' (CIT-1.1)		NULL STRUCTURE

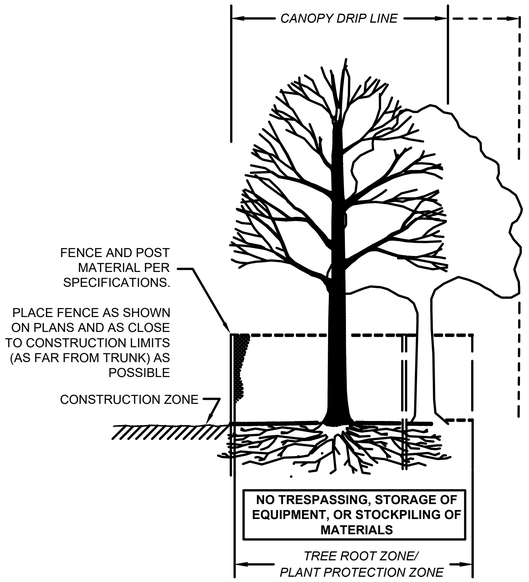
PIPE TABLE

PIPE	PIPE LOCATION	SIZE & TYPE	LENGTH	SLOPE	REMARKS
PIPE - (103)	GI-1.1 TO CIT-1.1 STA 19+24 TO 19+31	10" DI	3 LF	0.006	DUCTILE IRON PIPE
PIPE - (124)	CIT-1.1 TO NULL - 1 STA 19+31 TO 19+40	10" DI	8 LF	0.005	DUCTILE IRON PIPE

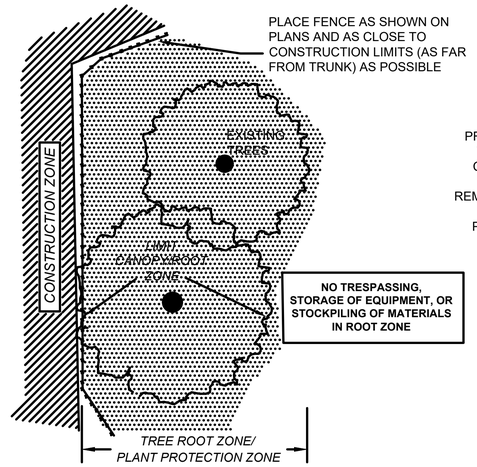
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	44	67
PROJECT FILE NO.	609410		

CONSTRUCTION DETAILS
SHEET 01 OF 04

609410_HD(CONSTR DETAILS).DWG Plotted on 12-Mar-2023 11:44 AM



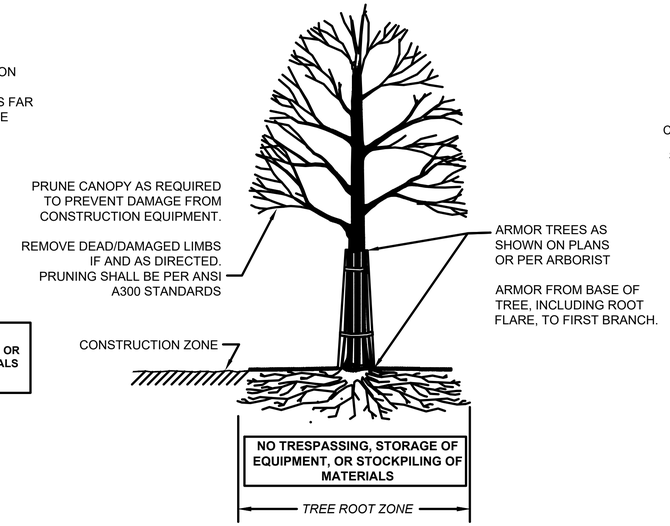
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

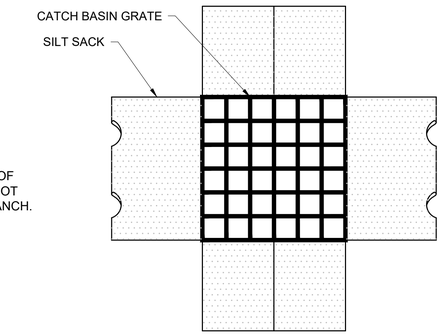
TREE & PLAN PROTECTION FENCE (PROTECTION OF ROOT ZONE)

SCALE: NONE

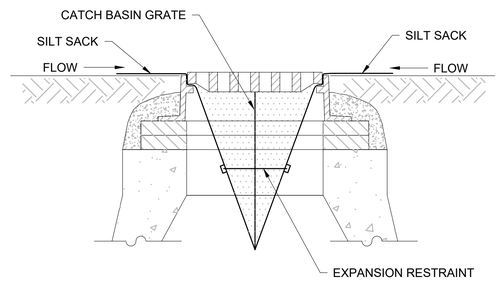


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK



PLAN VIEW



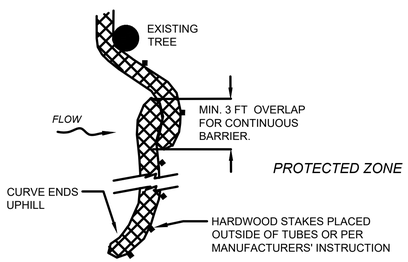
SECTION VIEW

SILT SACK SEDIMENT TRAP NOTES:

1. INSTALL TRAP AT THE INLET PER MANUFACTURER'S PROCEDURES.
2. INSTALL SILT SACK IN ALL CATCH BASINS DOWNGRADE OF PROPOSED EXCAVATION AND DO NOT REMOVE UNTIL WORK IS COMPLETE AND GRASS IS ESTABLISHED.
3. GRATE TO BE PLACED OVER SILT SACK.
4. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

SILT SACK SEDIMENT TRAP

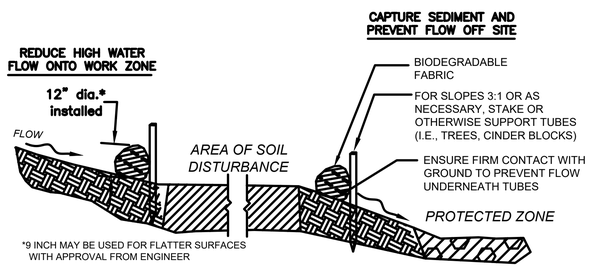
SCALE: NONE



PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.

ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

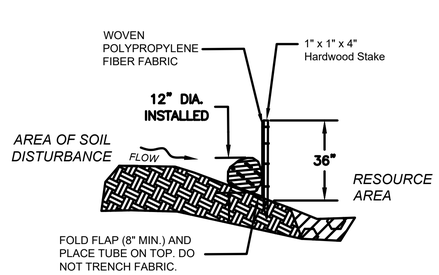
PLAN VIEW



SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE

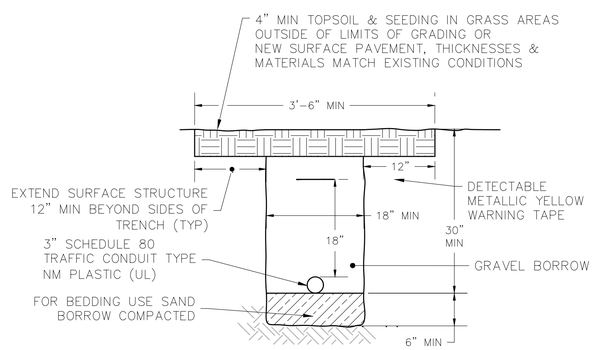
NOT TO SCALE



SECTION

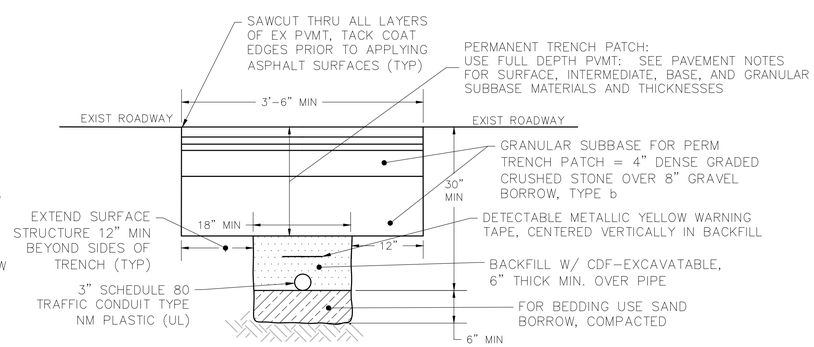
COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE



TRAFFIC CONDUIT TRENCH NOT UNDER ROADWAY

SCALE: NONE



TRAFFIC CONDUIT TRENCH UNDER ROADWAY

SCALE: NONE

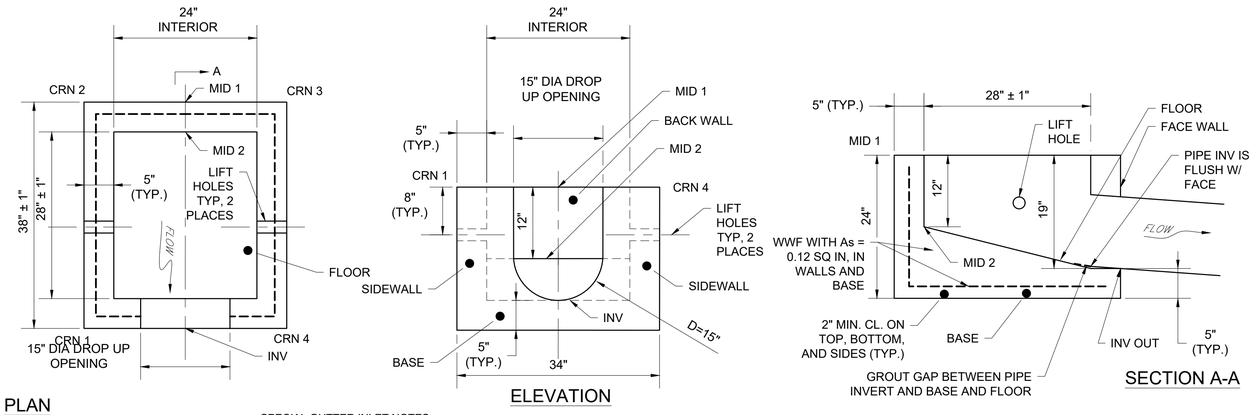
TRAFFIC CONDUIT TRENCH NOTES:

1. METALLIC WARNING TAPE SHALL MEET ALL CURRENT APWA STANDARDS.
2. IN ROADWAY AREAS TO BE RESURFACED, MILL & OVERLAY PERMANENT TRENCH PATCH WITH ABUTTING ROADWAY.
3. IN ROADWAY AREAS TO REMAIN AS-IS, PERMANENT TRENCH PATCH SHALL BE FLUSH WITH THE ABUTTING EXISTING ROADWAY SURFACE AND MATCH THE SLOPE OF THE EXISTING ROADWAY SURFACE.

BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	67
PROJECT FILE NO.	609410		

CONSTRUCTION DETAILS
SHEET 02 OF 04



SPECIAL GUTTER INLET NOTES:
1. IN LOCATIONS WHERE THERE IS NO CURB INLET, USE A STANDARD 4-FLANGE FRAME.
2. DESIGNED FOR AASHTO HS25-44 LOADING.
3. USE 4000 PSI MIN CEMENT CONCRETE.
4. USE GRADE 60 REINFORCEMENT, EPOXY COATED.

SPECIAL GUTTER INLET - PRE-CAST CONCRETE

SCALE: NONE

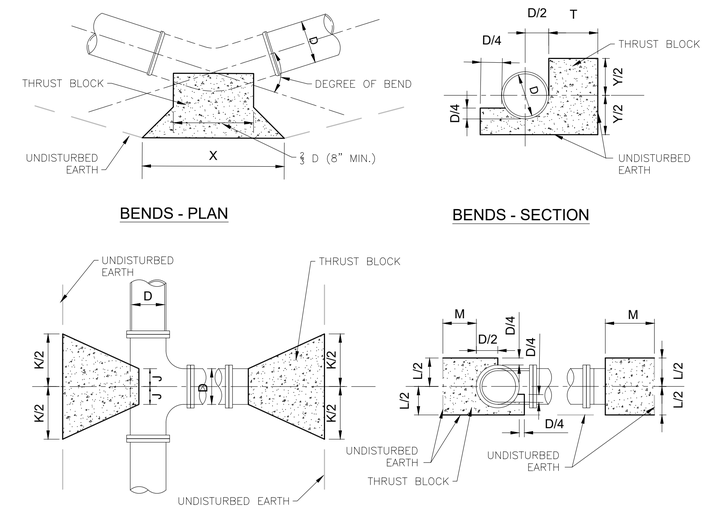


TABLE OF DIMENSIONS FOR CONCRETE THRUST BLOCK BEHIND BENDS												
	(90° BEND)						(45° BEND)					
D (in)	4	6	8	10	12	14	4	6	8	10	12	14
X (in)	35	35	50	56	72	80	24	24	35	45	51	60
Y (in)	20	20	24	32	35	40	16	16	19	21	27	33
T (in)	11	11	14	16	19	22	11	11	14	16	19	22

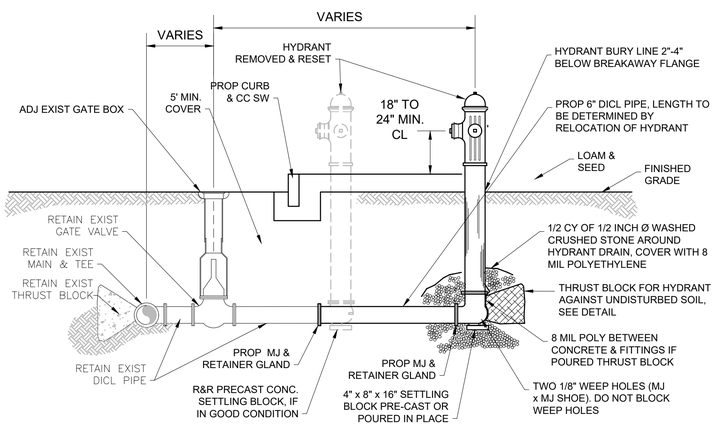
TABLE OF DIMENSIONS FOR CONCRETE THRUST BLOCK BEHIND BENDS												
	(22 1/2° BEND)						(11 1/4° BEND)					
D (in)	4	6	8	10	12	14	4	6	8	10	12	14
X (in)	28	28	30	32	37	42	12	12	19	21	27	33
Y (in)	13	13	13	16	19	22	8	8	9	12	13	16
T (in)	11	11	13	16	19	22	11	11	13	16	19	22

TABLE OF DIMENSIONS FOR CONCRETE THRUST BLOCK AT TEE/PLUG						
D (in)	4	6	8	10	12	14
J (in)	6	6	7	9	10	12
K (in)	16	16	20	26	32	36
L (in)	16	16	21	24	29	34
M (in)	11	11	14	16	19	22

THRUST BLOCK NOTES:
1. ALL CONCRETE SHALL BE 3000 P.S.I., 1.5 INCH, 470 CEMENT CONCRETE @ 28 DAYS.
2. DIMENSIONS SHOWN ARE MINIMUM AND ARE BASED UPON SOIL PRESSURE OF 1500 PSF AND TOTAL PRESSURE OF 250 PSI. TOTAL PRESSURE IS WORKING PRESSURE PLUS SURGE PRESSURE.
3. THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.

THRUST BLOCK DETAILS

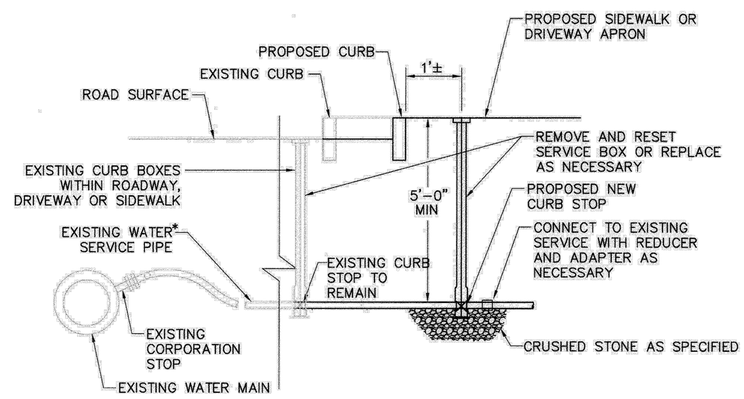
NOT TO SCALE



HYDRANT REMOVE & RESET NOTES:
1. ALL MATERIALS WILL CONFORM TO TOWN MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES SHALL CONFORM TO TOWN GUIDELINES AND POLICIES.
2. ALL HYDRANT, VALVE, AND TEE JOINTS TO BE RESTRAINED MECHANICAL JOINTS
3. INSTALL RISERS AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER TO SET HYDRANT AT THE ELEVATION SHOWN HEREIN.
4. IF THRUST BLOCK IS POURED, ALL GLANDS, JOINTS, BOLTS, AND NUTS SHALL BE COVERED OR WRAPPED IN 8 MIL OR GREATER POLYETHYLENE SHEETING TO KEEP THE CONCRETE FROM BONDING TO THE PIPE AND APPURTENANCES. THE PLASTIC SHALL BE PLACED SO THAT THE PIPE JOINTS WILL BE ACCESSIBLE FOR ANY FUTURE REPAIRS. NO CONCRETE SHALL DIRECTLY COVER PIPE JOINTS, FITTING JOINTS, NUTS, BOLTS OR HYDRANT DRAIN HOLES.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE HYDRANT AND THE VALVE.

HYDRANT REMOVED & RESET (STRAIGHT BACK)

SCALE: NONE



CURB STOP RELOCATION DETAIL

N.T.S.

609410_HD(CONSTR DETAILS).DWG Plotted on 12-Mar-2023 11:44 AM

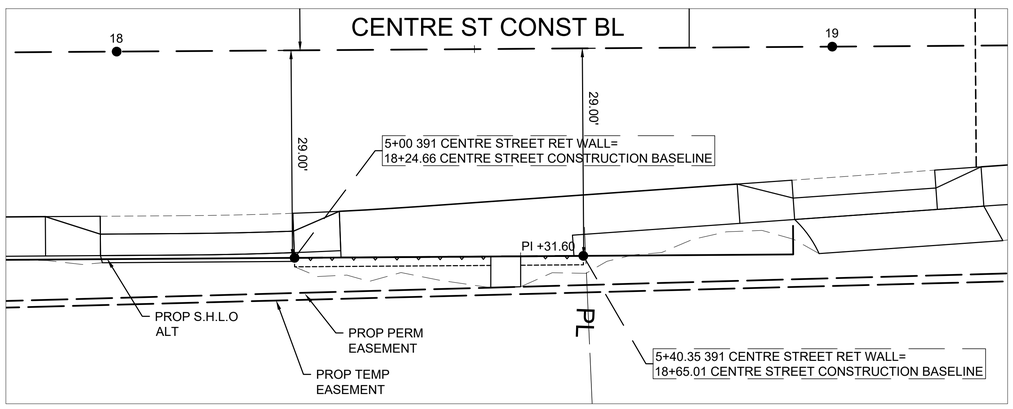
BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	67
PROJECT FILE NO.	609410		

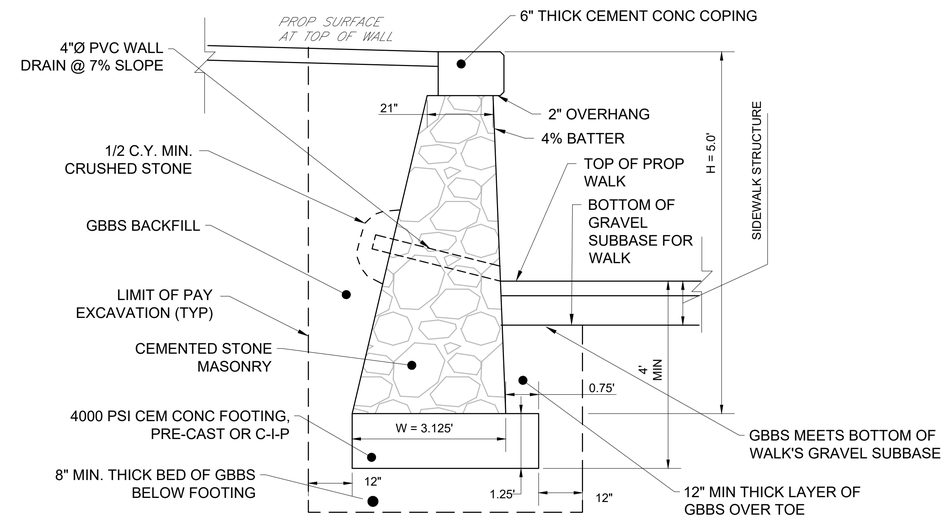
CONSTRUCTION DETAILS
SHEET 03 OF 04

609410_HD(CONSTR DETAILS).DWG Plotted on 12-Mar-2023 11:44 AM

391 CENTRE STREET
STONE MASONRY WALL IN CEMENT MORTAR
PLAN VIEW
SCALE: 1" = 10'

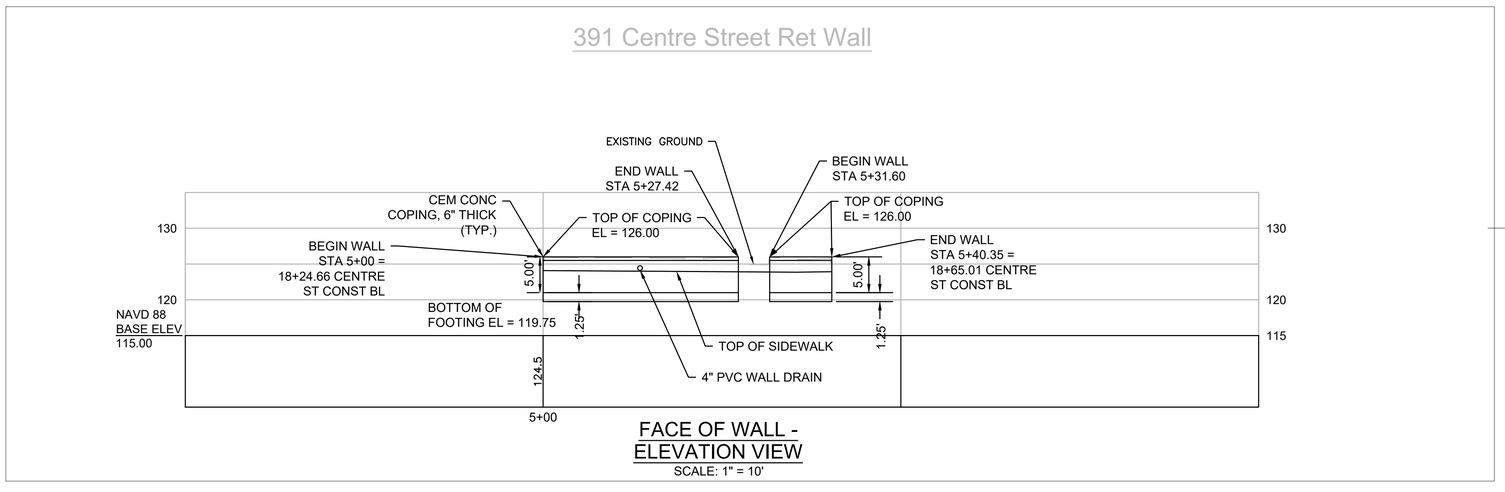


NOTES:
1. CONTRACTOR SHALL PERFORM A MINIMUM OF ONE (1) TEST PIT AND OBTAIN A LABORATORY GRADATION OF THE MATERIAL TO CONFIRM THE BEARING CAPACITY OF THE SUBGRADE TO SUPPORT THE PROPOSED WALL STRUCTURE.

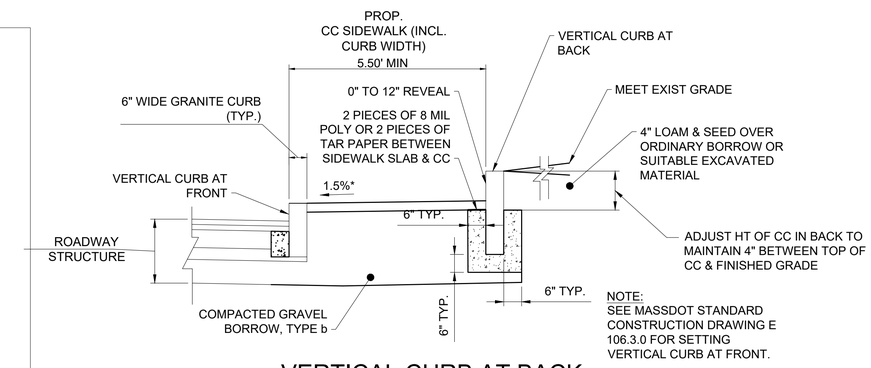


TYPICAL WALL SECTION
SCALE = NONE

STONE MASONRY WALL
GENERAL NOTES:
1. GBBS – GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES.
2. DO NOT USE SPOILS FOR BACKFILL.
3. USE 4000 PSI, 3/4 IN., 610 LB, AIR–ENTRAINED CEMENT CONCRETE.
4. FOR CRUSHED STONE, USE MASSDOT MATERIAL M2.01.1 OR M2.01.2, WITH THE EXCEPTION THAT MATERIAL SHALL BE GAP–GRADED OR POORLY GRADED AS DEFINED BY USGS (ASTM–D2487) AND NOT MORE THAN 1% FINES.



FACE OF WALL - ELEVATION VIEW
SCALE: 1" = 10'



NOTE:
SEE MASSDOT STANDARD CONSTRUCTION DRAWING E 106.3.0 FOR SETTING VERTICAL CURB AT FRONT.

* TOLERANCE FOR CONSTRUCTION +/- 0.5%

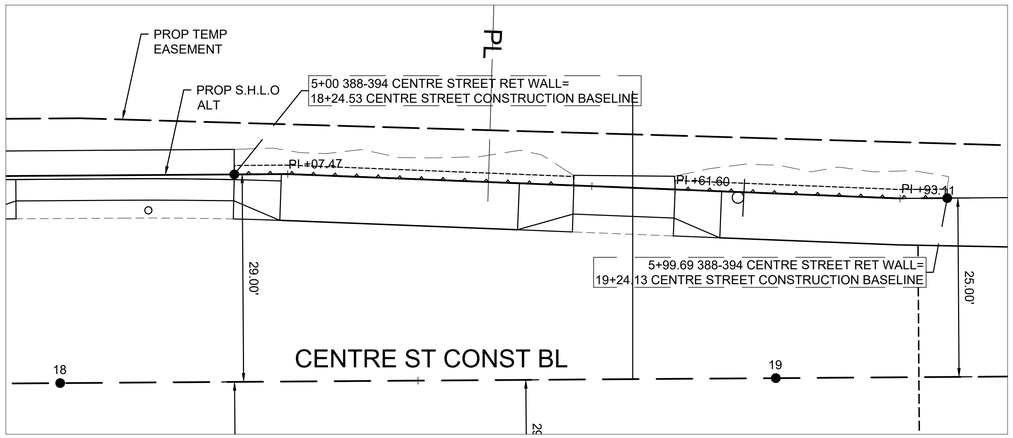
VERTICAL CURB AT BACK OF WALK WITH REVEAL
SCALE: NONE

BROCKTON
CENTRE STREET (ROUTE 123)

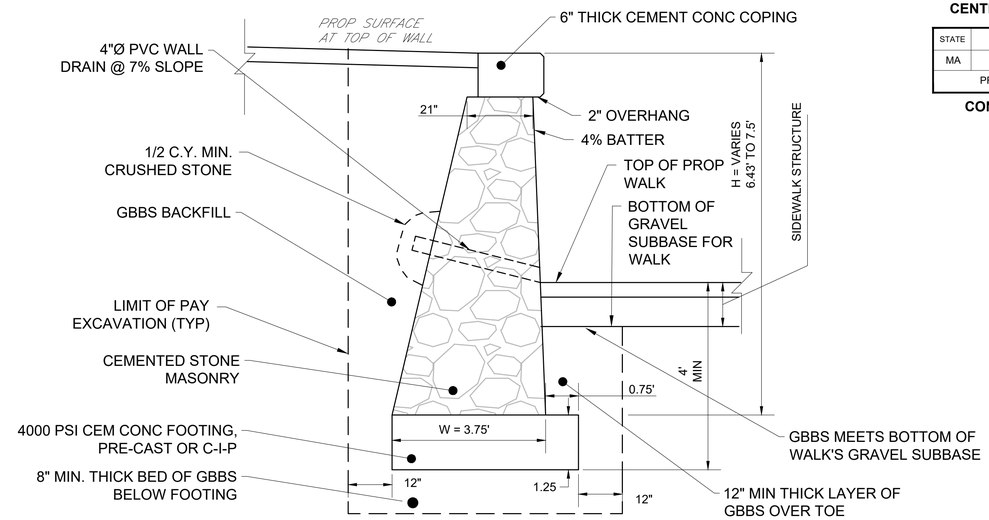
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	47	67
PROJECT FILE NO.	609410		

CONSTRUCTION DETAILS
SHEET 04 OF 04

388-394 CENTRE STREET
STONE MASONRY WALL IN CEMENT MORTAR
PLAN VIEW
SCALE: 1" = 10'

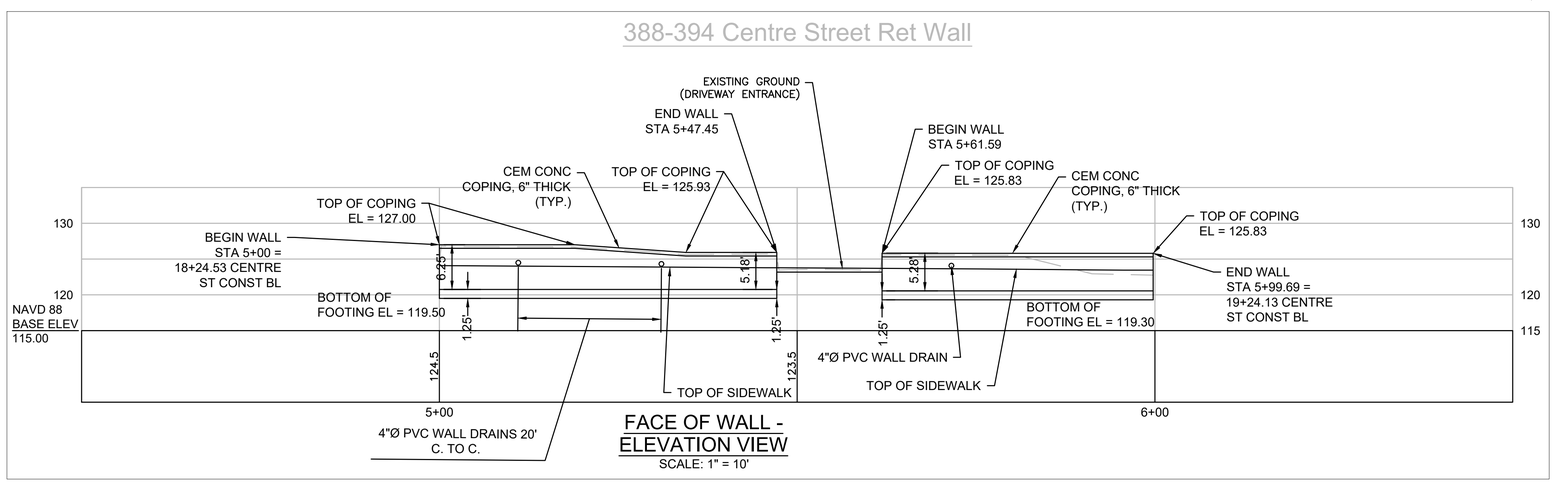


NOTES:
1. CONTRACTOR SHALL PERFORM A MINIMUM OF ONE (1) TEST PIT AND OBTAIN A LABORATORY GRADATION OF THE MATERIAL TO CONFIRM THE BEARING CAPACITY OF THE SUBGRADE TO SUPPORT THE PROPOSED WALL STRUCTURE.

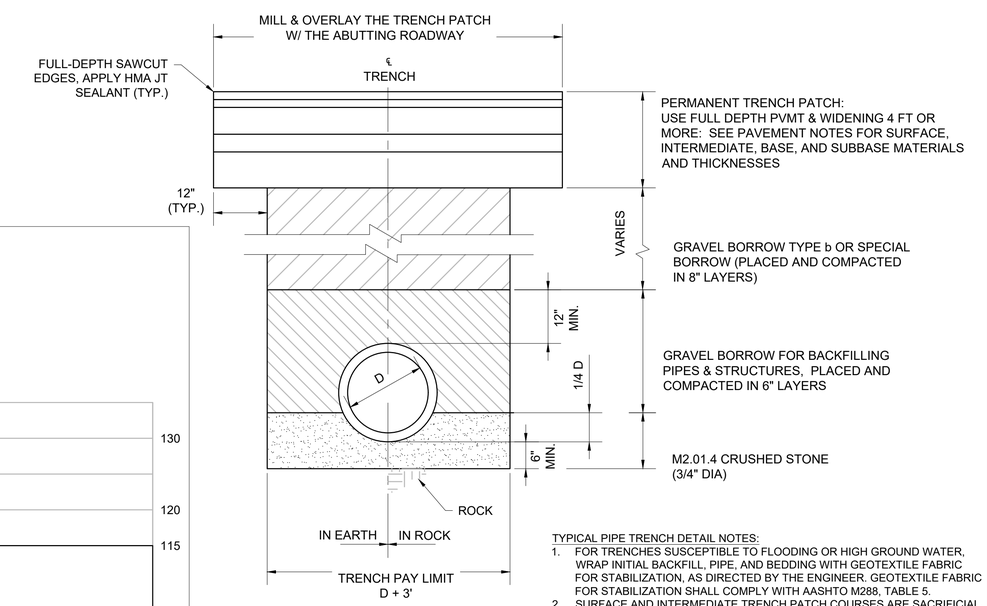


TYPICAL WALL SECTION
SCALE = NONE

STONE MASONRY WALL
GENERAL NOTES:
1. GBBS – GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES.
2. DO NOT USE SPOILS FOR BACKFILL.
3. USE 4000 PSI, 3/4 IN., 610 LB, AIR-ENTRAINED CEMENT CONCRETE.
4. FOR CRUSHED STONE, USE MASSDOT MATERIAL M2.01.1 OR M2.01.2, WITH THE EXCEPTION THAT MATERIAL SHALL BE GAP-GRADED OR POORLY GRADED AS DEFINED BY USGS (ASTM-D2487) AND NOT MORE THAN 1% FINES.



FACE OF WALL - ELEVATION VIEW
SCALE: 1" = 10'



TYPICAL PIPE TRENCH DETAIL NOTES:
1. FOR TRENCHES SUSCEPTIBLE TO FLOODING OR HIGH GROUND WATER, WRAP INITIAL BACKFILL, PIPE, AND BEDDING WITH GEOTEXTILE FABRIC FOR STABILIZATION, AS DIRECTED BY THE ENGINEER. GEOTEXTILE FABRIC FOR STABILIZATION SHALL COMPLY WITH AASHTO M288, TABLE 5.
2. SURFACE AND INTERMEDIATE TRENCH PATCH COURSES ARE SACRIFICIAL. THE TRENCH PATCH WILL BE MILLED & OVERLAID AT THE SAME TIME AS THE ABUTTING ROADWAY.

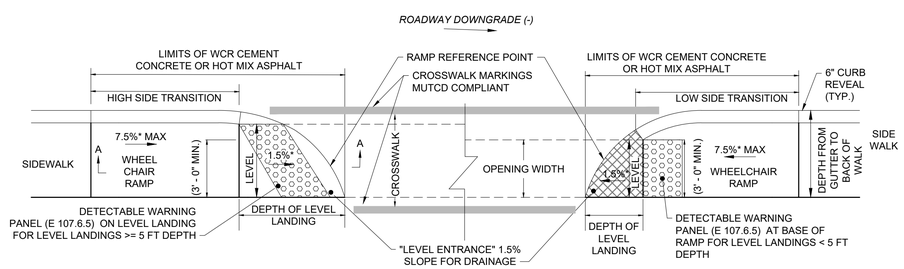
TYPICAL PIPE TRENCH DETAIL
SCALE: NONE

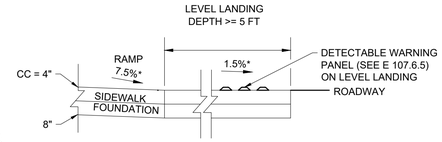
609410_HD(CONSTR DETAILS).DWG Plotted on 12-Mar-2023 11:44 AM

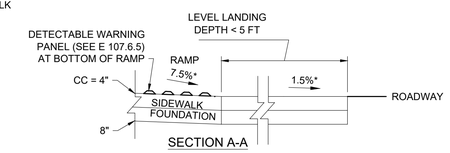
BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	48	67
PROJECT FILE NO.	609410		

PEDESTRIAN CURB RAMP & DRIVEWAY DETAILS
SHEET 01 OF 03







SECTION A-A

LEGEND
HIGH SIDE AND LOW SIDE IS WITH RESPECT TO THE PROFILE GRADE LINE. FOR TRANSITION LENGTHS SEE E 107.9.0

* TOLERANCE FOR CONSTRUCTION ± 0.5%

PEDESTRIAN CURB RAMP WITH CONTINUOUS TRAVEL

PCR NO	BASELINE	STA AT CENTER OF OPENING	OFFSET	OPENING WIDTH (FT)	GUTTER PROFILE SLOPE (%) AT REF. PT	HIGH TRANS LENGTH (FT)	LOW TRANS LENGTH (FT)	DEPTH FROM GUTTER TO BACK OF WALK (FT)	DEPTH OF LEVEL LANDING FROM GUTTER (FT)	COMMENT
1	CENTRE ST	12+47.12	20.47 RT	6.19	−2.45	11.00		6.79	1.43	
2	CENTRE ST	12+65.97	21.20 RT	5.54	−1.80	9.00		5.94	1.43	
3	CENTRE ST	13+03.84	22.95 RT	4.50	−1.44	9.00		5.62	3.49	
4	CENTRE ST	13+05.42	23.95 LT	4.96	−1.65	9.00		5.50	4.45	
5	CENTRE ST	13+33.65	24.19 LT	4.95	−1.10	9.00		5.50	4.35	
6	CENTRE ST	13+38.15	24.02 RT	4.50	−1.15	9.00		5.50	4.53	

PCR AND DRIVEWAY NOTES:

1. CONSTRUCTION DETAILS SHALL BE IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.
2. ALL TRANSITIONS ARE 6 INCH MAXIMUM REVEAL AT THE TOP OF THE TRANSITION UNLESS OTHERWISE NOTED ON THE SCHEDULES OR THE CONSTRUCTION PLANS.
3. CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
4. SEE CONSTRUCTION PLANS FOR LOCATION OF WHEELCHAIR RAMP, AND DRIVEWAYS.
5. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED PEDESTRIAN CURB RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.
6. DETECTABLE WARNING PANEL SHALL BE LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE). TRUNCATED DOMES TO BE ALIGNED WITH DIRECTION OF TRAVEL.
7. FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.
8. ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

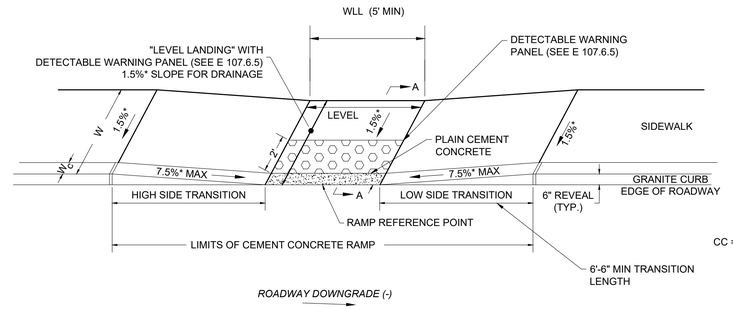
609410_HD(PCR DETAILS).DWG Plotted on 12-Mar-2023 11:44 AM

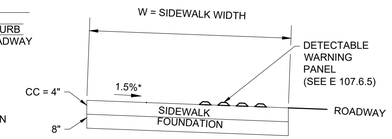
BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	49	67
PROJECT FILE NO.	609410		

PEDESTRIAN CURB RAMP & DRIVEWAY DETAILS
SHEET 02 OF 03

LEGEND	
HSL	HIGH SIDE TRANSITION LENGTH (SEE E107.9.0)
LSL	LOW SIDE TRANSITION LENGTH
W	SIDEWALK WIDTH = DEPTH FROM GUTTER TO BACK OF WALK
Wc	WIDTH OF CURB
WLL	WIDTH OF LEVEL LANDING (PARALLEL WITH WALK)
CC	CEMENT CONCRETE
HMA	HOT MIX ASPHALT





SECTION A-A

* ± 0.5% FOR CONSTRUCTION TOLERANCE

WHEELCHAIR RAMPS LESS THAN 12'–4" SIDEWALK

PCR NO	BASELINE	STA AT CENTER OF OPENING	OFFSET	OPENING WIDTH (FT)	GUTTER PROFILE SLOPE (%) AT REF. PT	HIGH TRANS LENGTH (FT)	LOW TRANS LENGTH (FT)	DEPTH FROM GUTTER TO BACK OF WALK (FT)	WIDTH OF LEVEL LANDING FROM GUTTER (FT)	COMMENT
7	CENTRE ST	15+06.98	22.01 RT	5.00	–0.51	7.67	6.50	5.50	3.00	
8	CENTRE ST	15+07.12	22.18 LT	5.00	–0.54	7.67	6.50	5.50	2.71	
PED–13265	CENTRE ST	16+10.91	23.00 RT	5.00	0.95	7.67	6.50	5.50	3.03	
PED–19050	CENTRE ST	16+11.51	23.83 LT	4.86	0.47	7.67	6.50	5.50	3.00	
12	LYMAN ST	10+51.82	14.83 LT	5.00	–0.50	7.67	6.50	5.50	3.00	
11	LYMAN ST	10+54.92	21.92 RT	4.98	–0.12	7.67	6.50	5.50	3.00	
9	CARY ST	5+53.85	15.62 LT	6.50	–1.92	9.00	6.50	5.50	3.00	
10	CARY ST	5+56.54	22.56 RT	4.99	–2.78	11.00	6.50	5.49	3.00	

PCR AND DRIVEWAY NOTES:

1. CONSTRUCTION DETAILS SHALL BE IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.
2. ALL TRANSITIONS ARE 6 INCH MAXIMUM REVEAL AT THE TOP OF THE TRANSITION UNLESS OTHERWISE NOTED ON THE SCHEDULES OR THE CONSTRUCTION PLANS.
3. CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
4. SEE CONSTRUCTION PLANS FOR LOCATION OF WHEELCHAIR RAMP, AND DRIVEWAYS.
5. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED PEDESTRIAN CURB RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.
6. DETECTABLE WARNING PANEL SHALL BE LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE). TRUNCATED DOMES TO BE ALIGNED WITH DIRECTION OF TRAVEL.
7. FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.
8. ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

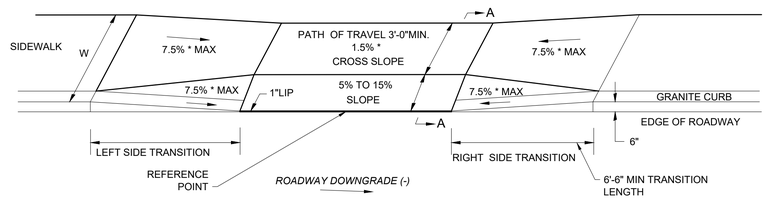
609410_HD(PCR DETAILS).DWG Plotted on 12-Mar-2023 11:44 AM

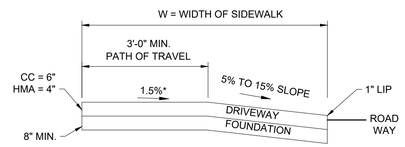
BROCKTON
CENTRE STREET (ROUTE 123)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	50	67
PROJECT FILE NO.	609410		

PEDESTRIAN CURB RAMP & DRIVEWAY DETAILS
SHEET 03 OF 03

LEGEND	
W	SIDEWALK WIDTH = DEPTH FROM GUTTER TO BACK OF WALK
Wc	WIDTH OF CURB
WLL	WIDTH OF LEVEL LANDING (PARALLEL WITH WALK)
CC	CEMENT CONCRETE
HMA	HOT MIX ASPHALT





SECTION A-A

* ± 0.5% FOR CONSTRUCTION TOLERANCE

SIDEWALK AT DRIVEWAYS WITHOUT CURB RETURNS

DWY NO	BASELINE	STA AT CENTER OF OPENING	OFFSET	OPENING WIDTH (FT)	GUTTER PROFILE SLOPE (%) AT REF. PT	HIGH TRANS LENGTH (FT)	LOW TRANS LENGTH (FT)	DEPTH FROM GUTTER TO BACK OF WALK (FT)	WIDTH OF PATH OF TRAVEL (FT)	COMMENT
5	CENTRE ST	11+36.55	17.06' RT	28.75	−3.29	14.00	8.20	5.94	3.26	LOW TRANSITION TO MEET EX SIDEWALK
1	CENTRE ST	11+90.22	18.10' LT	23.15	−2.76	11.00	6.50	6.10	3.23	
2	CENTRE ST	12+53.14	20.50' LT	30.96	−2.14	11.00	6.50	5.50	3.00	
3	CENTRE ST	13+95.37	21.00' LT	9.98	−0.93	7.67	6.50	5.50	3.00	
4	CENTRE ST	14+70.73	21.00' LT	30.00	−0.90	7.67	6.50	5.50	3.00	
7	CENTRE ST	16+42.09	23.00' RT	21.30	0.86	7.67	6.50	5.50	3.00	
8	CENTRE ST	16+96.54	23.00' RT	21.00	0.60	7.67	6.50	5.50	3.00	
10	CENTRE ST	17+02.36	23.00' LT	10.06	0.65	7.67	6.50	5.50	3.00	
12	CENTRE ST	17+51.33	23.00' RT	17.25	0.69	7.67	6.50	5.50	3.00	
11	CENTRE ST	17+51.41	23.00' LT	11.69	0.72	7.67	6.50	5.50	3.00	
14	CENTRE ST	18+09.17	23.00' LT	30.35	0.70	7.67	6.50	5.50	3.00	
13	CENTRE ST	18+11.00	23.00' RT	26.92	0.71	7.67	6.50	5.50	3.00	
15	CENTRE ST	18+78.77	20.31' LT	14.11	0.60	7.67	6.50	5.50	3.00	
16	CENTRE ST	19+04.21	18.00' RT	20.00	0.73	7.67	6.50	5.50	3.00	
6	LYMAN ST	11+06.94	14.25 LT	25.22	−0.61	7.67	6.50	7.27	4.60	
9	CARY ST	5+88.52	16.31 RT	27.29	−1.47	9.00	6.50	5.50	3.00	
17	CARY ST	6+23.79	13.81 LT	26.71	−0.09	7.67	6.50	5.50	3.00	
18	CARY ST	6+45.06	13.69 RT	21.49	−0.73	7.67	6.50	5.50	3.67	

PCR AND DRIVEWAY NOTES:

1. CONSTRUCTION DETAILS SHALL BE IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.
2. ALL TRANSITIONS ARE 6 INCH MAXIMUM REVEAL AT THE TOP OF THE TRANSITION UNLESS OTHERWISE NOTED ON THE SCHEDULES OR THE CONSTRUCTION PLANS.
3. CONCRETE RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP.
4. SEE CONSTRUCTION PLANS FOR LOCATION OF WHEELCHAIR RAMP, AND DRIVEWAYS.
5. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED PEDESTRIAN CURB RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.
6. DETECTABLE WARNING PANEL SHALL BE LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE). TRUNCATED DOMES TO BE ALIGNED WITH DIRECTION OF TRAVEL.
7. FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.
8. ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

609410_HD(PCR DETAILS).DWG Plotted on 12-Mar-2023 11:44 AM