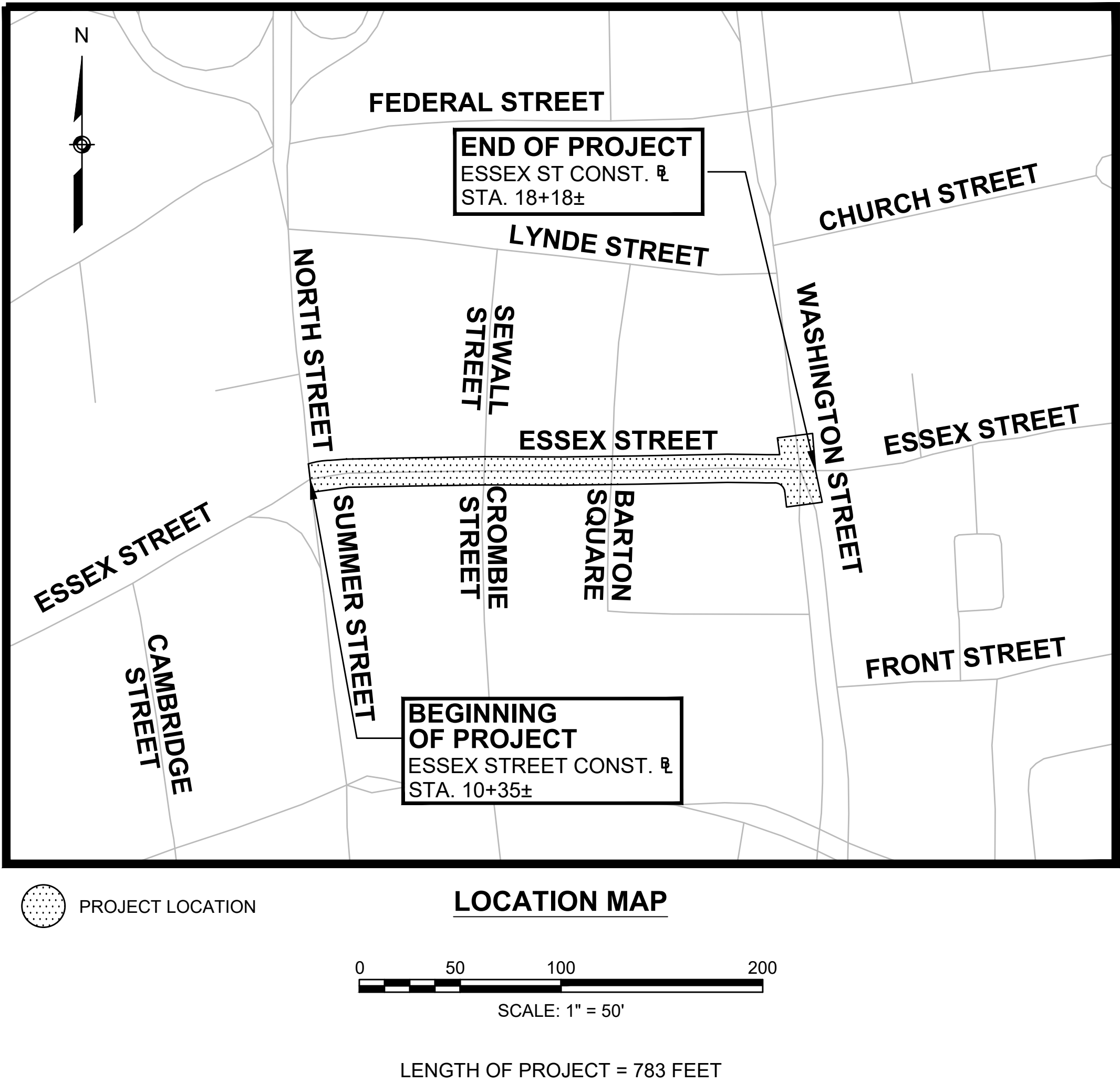


CITY OF SALEM, MASSACHUSETTS
ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
BID NO. 20-66-230



KIMBERLEY DRISCOLL, MAYOR

DAVID H. KNOWLTON, P.E., CITY ENGINEER / DPS DIRECTOR



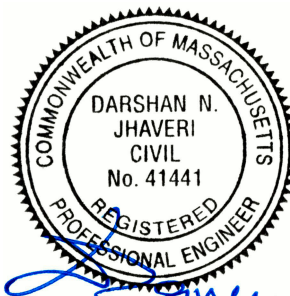
PLAN INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	TYPICAL SECTIONS & PAVEMENT NOTES
4-8	CONSTRUCTION NOTES & DETAILS
9	EXISTING SIDEWALK VAULTS
10-11	CONSTRUCTION PLANS
12	PROFILE
13-14	CURB TIE PLANS
15	GRADING PLAN
16-17	DRAINAGE & UTILITY PLANS
18-19	LANDSCAPE PLANS
20-21	LIGHTING PLANS
22	LIGHTING DETAILS
23-24	SIGN & PAVEMENT MARKING PLANS
25	TRAFFIC SIGN SUMMARY
26-28	TEMPORARY TRAFFIC CONTROL PLANS
29-30	CONSTRUCTION STAGING PLANS
31-34	DETOUR PLANS

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED APRIL 1, 2019, THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, 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, WILL GOVERN.

PREPARED BY:



REVISED SET
6/10/2020

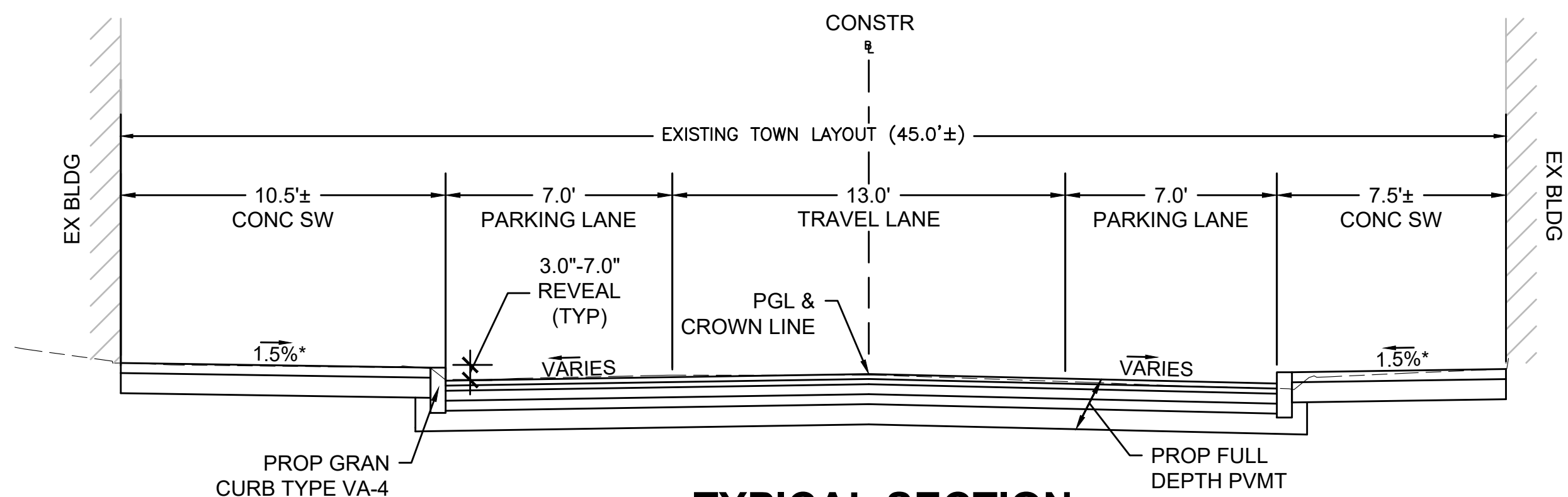


5/22/2020
REGISTERED PROFESSIONAL ENGINEER DATE

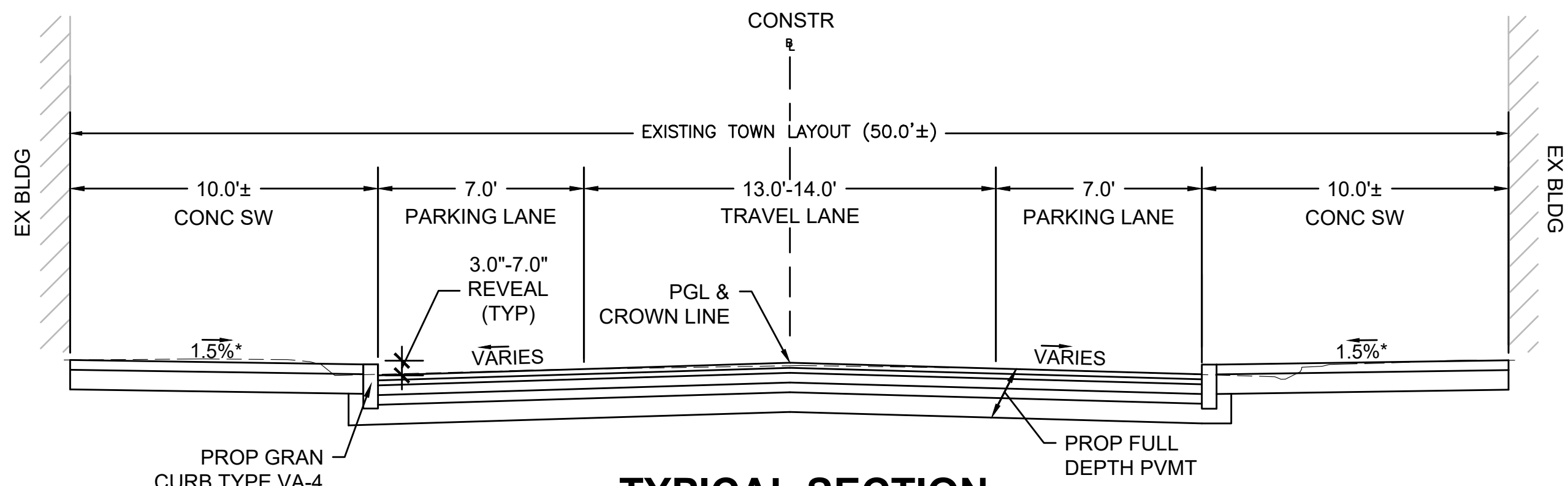
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GENERAL SYMBOLS				PAVEMENT MARKINGS AND SIGNING SYMBOLS				TRAFFIC SIGNAL				ABBREVIATIONS			
EXISTING		PROPOSED		DESCRIPTION		PROPOSED		TRAFFIC SIGNAL		GENERAL		ABBREVIATIONS (cont.)			
	JB		JB	JERSEY BARRIER		CW	CROSSWALK, 24" LONGITUDINAL WHITE LINES, PARALLEL TO TRAFFIC FLOW (2' LINE, 2' GAP)		CAB.	CABINET		AADT	ANNUAL AVERAGE DAILY TRAFFIC		
	CB		CB	CATCH BASIN		SL	STOP LINE - 12" WHITE LINE 4" BEHIND CW (TYP.)		CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT		ABAN	ABANDON		
	FP		FP	CATCH BASIN CURB INLET		SWL	SOLID WHITE LINE - 4"		DW	STEADY DON'T WALK		ADJ	ADJUST		
	GP		GP	FLAG POLE		SWCHL	SOLID WHITE CHANNELIZING LINES - 12" (SPACING NOTED)		FDW	FLASHING DON'T WALK		APPROX.	APPROXIMATE		
	MB		MB	GAS PUMP		SWGL	SOLID WHITE GORE LINE 12" @ 45°, (SPACING NOTED)		FR	FLASHING CIRCULAR RED		A.C.	ASPHALT CONCRETE		
				MAIL BOX		DWLex	DOTTED WHITE LANE EXTENSION LINE - 4" (2' LINE & 6' GAP)		FRL	FLASHING RED LEFT ARROW		ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE		
				POST SQUARE		DBYL	DOUBLE YELLOW LINE - 2 - 4" LINES		FY	FLASHING CIRCULAR AMBER		ALT	ALTERATION		
	WELL		WELL	POST CIRCULAR		SYL	SOLID YELLOW LINE - 4"		FYL	FLASHING AMBER LEFT ARROW		BIT.	BITUMINOUS		
	WELL		WELL	WELL			ACCESSIBLE SYMBOL - WHITE		FYR	FLASHING AMBER RIGHT ARROW		BC	BOTTOM OF CURB		
	EHH		EHH	ELECTRIC HANDHOLE			PAVEMENT ARROW - WHITE		G	STEADY CIRCULAR GREEN		BD.	BOUND		
				FENCE GATE POST			LEGEND "ONLY" - WHITE		GL	STEADY GREEN LEFT ARROW		BL (or BL)	BASELINE		
	GG		GG	GAS GATE					GR	STEADY GREEN RIGHT ARROW		BLDG	BUILDING		
	BHL #		BHL #	BORING HOLE					GSL	STEADY GREEN SLASH LEFT ARROW		BM	BENCHMARK		
	MW #		MW #	MONITORING WELL					GSR	STEADY GREEN SLASH RIGHT ARROW		BO	BY OTHERS		
	TP #		TP #	TEST PIT					GV	STEADY GREEN VERTICAL ARROW		BOS	BOTTOM OF SLOPE		
				HYDRANT					OL	OVERLAP		BOW	BOTTOM OF WALL		
				LIGHT POLE					PED	PEDESTRIAN		BR.	BRIDGE		
	CO.BD.			COUNTY BOUND					PTZ	PAN, TILE, ZOOM		BSW	BACK OF SIDEWALK		
				GPS POINT					R	STEADY CIRCULAR RED		CB	CATCH BASIN		
				CABLE MANHOLE					RL	STEADY RED LEFT ARROW		CBI	CATCH BASIN WITH CURB INLET		
				DRAINAGE MANHOLE					RR	STEADY RED RIGHT ARROW		CC	CEMENT CONCRETE		
				ELECTRIC MANHOLE					TR SIG	TRAFFIC SIGNAL		CCM	CEMENT CONCRETE MASONRY		
				GAS MANHOLE					TSC	TRAFFIC SIGNAL CONDUIT		CEM	CEMENT		
				MISC MANHOLE					W	STEADY WALK		CI	CURB INLET		
				SEWER MANHOLE					Y	STEADY CIRCULAR AMBER		CIP	CAST IRON PIPE		
				TELEPHONE MANHOLE					YL	STEADY AMBER LEFT ARROW		CIT	CHANGE IN TYPE		
				WATER MANHOLE								CLF	CHAIN LINK FENCE		
	MHB		MHB	MASSACHUSETTS HIGHWAY BOUND								CL	CENTERLINE		
				MONUMENT								CMP	CORRUGATED METAL PIPE		
				STONE BOUND								CPP	CORRUGATED PLASTIC PIPE		
				TOWN OR CITY BOUND								CSP	CORRUGATED STEEL PIPE		
				TRAVERSE OR TRIANGULATION STATION								CO.	COUNTY		
	TPL or GUY		TPL or GUY	TROLLEY POLE OR GUY POLE								CONC	CONCRETE		
				TRANSMISSION POLE								COND	CONDUIT		
	UFB		UFB	UTILITY POLE W/ FIREBOX								CONT	CONTINUOUS		
	UPDL		UPDL	UTILITY POLE WITH DOUBLE LIGHT								CONST	CONSTRUCTION		
	ULT		ULT	UTILITY POLE W / 1 LIGHT								CR GR	CROWN GRADE		
	UPL		UPL	UTILITY POLE								DHV	DESIGN HOURLY VOLUME		
				BUSH								DI	DROP INLET		
				TREE								DIA	DIAMETER		
				STUMP								DIP	DUCTILE IRON PIPE		
				SWAMP / MARSH								DW	STEADY DON'T WALK - PORTLAND ORANGE		
	WG		WG	WATER GATE								DWDY	DRIVEWAY		
	PM		PM	PARKING METER								ELEV (or EL.)	ELEVATION		
				OVERHEAD CABLE/WIRE								EMB	EMBANKMENT		
				CURBING								EOP	EDGE OF PAVEMENT		
				CONTOURS (ON-THE-GROUND SURVEY DATA)								EXIST (or EX)	EXISTING		
				CONTOURS (PHOTOGRAMMETRIC DATA)								EXC	EXCAVATION		
				UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)								F&C	FRAME AND COVER		
				UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)								F&G	FRAME AND GRATE		
				UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)								FDN.	FOUNDATION		
				UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)								FLDSTN	FIELDSTONE		
				UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)								FM	FORCE MAIN		
				UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)								GAR	GARAGE		
				BALANCED STONE WALL								GD	GROUND		
				RETAINING WALL (TYPE AS NOTED)								GG	GAS GATE		
				GUARD RAIL - STEEL POSTS								GI	GUTTER INLET		
				GUARD RAIL - WOOD POSTS								GIP	GALVANIZED IRON PIPE		
				CHAIN LINK OR METAL FENCE								GRAN	GRANITE		
				WOOD FENCE								GRAV	GRAVEL		
				HAY BALES/SILT FENCE								GRD	GUARD		
				TREE LINE or LIMIT OF CLEARING AND GRUBBING								HDW	HEADWALL		
				SAWCUT LINE								HMA	HOT MIX ASPHALT		
				TOP OR BOTTOM OF SLOPE								HOR	HORIZONTAL		
				LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY								HYD	HYDRANT		
				BANK OF RIVER OR STREAM								INV	INVERT		
				BORDER OF WETLAND								IP	IRON PIPE		
				100 FT WETLAND BUFFER								JCT	JUNCTION		
				200 FT RIVERFRONT BUFFER								L	LENGTH OF CURVE		
				STATE HIGHWAY LAYOUT								LB	LEACH BASIN		
				TOWN OR CITY LAYOUT								LP	LOW POINT		
				COUNTY LAYOUT								LT	LEFT		
				RAILROAD SIDELINE								M.A.	MAST ARM		
				TOWN OR CITY BOUNDARY LINE								MAX	MAXIMUM		
				PROPERTY LINE OR APPROXIMATE PROPERTY LINE								MB	MAILBOX		
				EASEMENT								MH	MANHOLE		
				HIGHWAY/PROPERTY BOUND (TYPE AS NOTED)								MHB	MASSACHUSETTS HIGHWAY BOUND		
	TP-1		TP-1	TEST PIT								MIN	MINIMUM		
	B-1		B-1	BORING/PROBE								NIC	NOT IN CONTRACT		
				EROSION CONTROL BARRIER/COMPOST FILTER TUBES								NO.	NUMBER		
				SIGN AND POST								O.C.	ON CENTER		
				SIGN AND POST (2 POSTS)								PC	POINT OF CURVATURE		
				CONSTRUCTION BASELINE								PCC	POINT OF COMPOUND CURVATURE		
				SURVEY LINE								P.G.L.	PROFILE GRADE LINE		
				ACCESSIBLE RAMP											

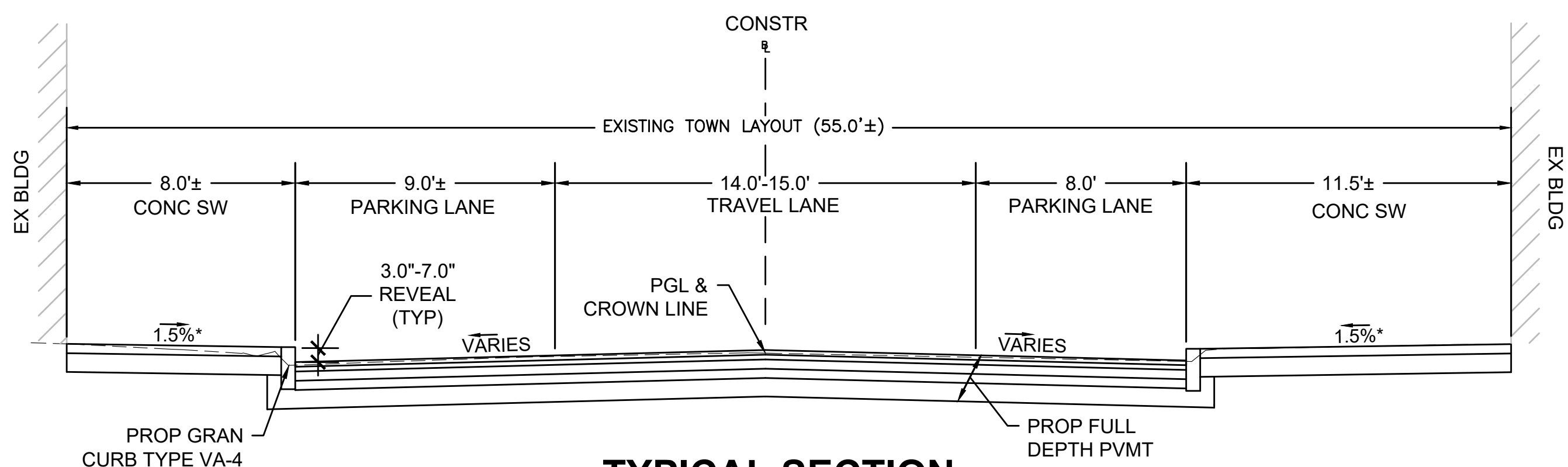
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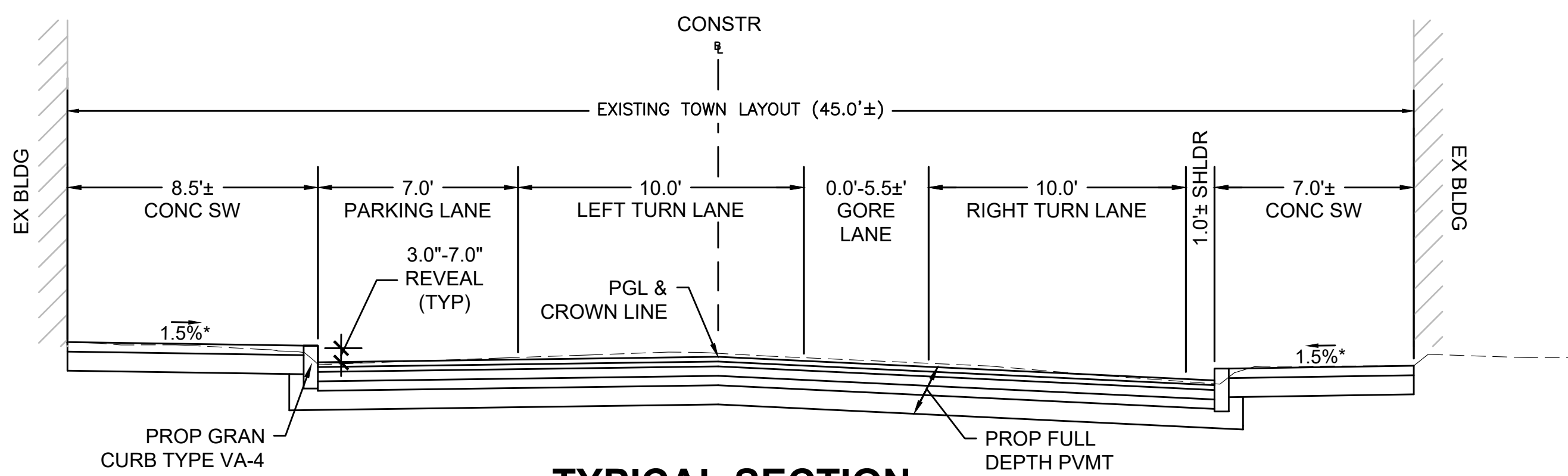
**TYPICAL SECTION
ESSEX STREET
STA 15+00± TO 16+65±**



**TYPICAL SECTION
ESSEX STREET
STA 13+20± TO 15+00±**



**TYPICAL SECTION
ESSEX STREET
STA 10+50± TO 12+80±**



**TYPICAL SECTION
ESSEX STREET
STA 16+65± TO 17+50±**

PAVEMENT NOTES

COLD-PLANNING AND RESURFACING (PAVEMENT TRANSITION)

COLD PLANNING: REMOVE 1-3/4" HMA PAVEMENT

SURFACE COURSE" 1-3/4" HOT MIX ASPHALT PAVEMENT SURFACE COURSE (MODIFIED TOP)

FULL DEPTH CONSTRUCTION

SURFACE COURSE": 1-3/4" HOT MIX ASPHALT PAVEMENT SURFACE COURSE (MODIFIED TOP) OVER

INTERMEDIATE COURSE: 2-1/4" HOT MIX ASPHALT INTERMEDIATE COURSE (DENSE BINDER) OVER

BASE COURSE: 3-1/2" HOT MIX ASPHALT BASE COURSE MATERIAL, PLACED IN ONE LAYER OVER

SUB-BASE: 4" DENSE GRADED CRUSHED STONE FOR SUB BASE OVER
8" GRAVEL BORROW TYPE b, AS REQUIRED

PROJECT TACK COAT NOTES:

TACK COAT: ASPHALT EMULSION FOR TACK COAT, GRADE RS-1 SHALL BE PLACED AT A RATE OF:

0.07 GALLONS PER SQUARE YARD OVER MILLED SURFACES
0.07 GALLONS PER SQUARE YARD OVER CEMENT CONCRETE BASE COURSE
0.05 GALLONS PER SQUARE YARD OVER SMOOTH TIGHT PAVEMENTS PRIOR TO PAVING AN OVERLAY

CEMENT CONCRETE SIDEWALK, WHEELCHAIR RAMPS, WALKS, AND PADS

SURFACE COURSE: 4" CEMENT CONCRETE WALK SURFACE
4000 PSI, 3/4", 610 OVER

FOUNDATION**: 8" GRAVEL BORROW TYPE b, AS REQUIRED

** STRUCTURAL SOIL (ITEM 706.11) SHALL BE USED IN LIEU OF 8" GRAVEL BORROW WHERE SHOWN ON THE LANDSCAPE PLANS AND DETAILS

CEMENT CONCRETE DRIVEWAY APRON

SURFACE COURSE: 6" CEMENT CONCRETE
4000 PSI, 3/4", 610 OVER

BASE COURSE: 8" GRAVEL BORROW TYPE b, AS REQUIRED

HOT MIX ASPHALT DRIVEWAY AND PAVEMENT AREA

SURFACE COURSE: 1-1/2" TOP COURSE MATERIAL OVER
2" BOTTOM COURSE MATERIAL

BASE COURSE: 4" DENSE GRADED CRUSHED STONE

*TOLERANCE FOR CONSTRUCTION ±0.5%

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	KY
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ



PREPARED BY:

SCALE:

NOT TO SCALE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

**ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
TYPICAL SECTIONS &
PAVEMENT NOTES
SALEM, MASSACHUSETTS**

ISSUE DATE	MAY 22, 2020
SHEET	3 of 34

GENERAL NOTES

1.

THE LOCATION OF SUBSURFACE UTILITIES SHOWN IS APPROXIMATE AND NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITY LINES AND STRUCTURES PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR MUST NOTIFY DIG SAFE PRIOR TO ANY EXCAVATION, DEMOLITION OR EXPLOSION WORK IN PUBLIC OR PRIVATE WAYS OR UTILITY COMPANY RIGHT-OF-WAY OR EASEMENT.
2.

WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR THE RESOLUTION OF THE CONFLICT.
3.

THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SANITARY STRUCTURES AS NECESSARY FOR THE CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK CONFORMING TO M4.05.2.
4.

THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, CABLE TV, FIRE ALARM AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES. ALL UTILITY CASTING AND FIRE ALARM BOXES SHALL BE ADJUSTED TO FINISH GRADE BY THEIR RESPECTIVE OWNERS.
5.

AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
6.

THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
7.

ALL DRAINAGE STRUCTURES SHALL BE RETAINED UNLESS NOTED OTHERWISE.
8.

ALL FRAMES AND GRATES FOR PROPOSED DRAINAGE STRUCTURES SHALL BE MUNICIPAL STANDARD.
9.

CATCH BASIN AND MANHOLE FRAMES AND GRATES/COVERS SHALL CLEARLY ALIGN WITH THE OPENINGS IN THE PRECAST STRUCTURES AND THE GRADE OF THE ROADWAY.
10.

UNLESS OTHERWISE NOTED EXISTING DRAINAGE LINES TO BE REPLACED SHALL BE ABANDONED IN PLACE. IF THEY CONFLICT WITH THE PROPOSED DRAINAGE LINES THEY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
11.

WHERE DRAINAGE PIPES OR STRUCTURES ARE ABANDONED IN PLACE THE CONTRACTOR SHALL MAKE SURE THAT ALL CONNECTING PIPES, INLETS AND OUTLETS ARE PLUGGED. ALL LIVE CONNECTIONS SHALL BE CONNECTED TO THE NEW SYSTEM.
12.

ALL CURB TIE DIMENSIONS ARE TO THE FACE OF THE CURB (GUTTER LINE) OR EDGE OF TRAVEL WAY.
13.

ALL PROPOSED GRANITE CURB SHALL BE TYPE VA-4 UNLESS OTHERWISE NOTED ON THE PLAN.
14.

PROPOSED SIDEWALKS AND WHEELCHAIR RAMPS SHALL BE CONSTRUCTED TO THE NEAREST SCORE LINE OR EXPANSION JOINT IN THE EXISTING ADJACENT WALK SURFACE AS DIRECTED BY THE ENGINEER.
15.

ALL DRIVEWAY LIMITS ARE AS SHOWN ON THE PLANS SHALL BE VERIFIED IN THE FIELD AND MAY BE ADJUSTED IF NECESSARY BY THE ENGINEER.
16.

PROPOSED SIDEWALK AT SIGNS, POLES AND OTHER FEATURES SHALL BE BOXED AND PROVIDED FLEXIBLE JOINT FILLER.
17.

THE PROPOSED SIDEWALK GRADE SHALL MEET THE EXISTING GRADE AT ALL STORE/BUSINESS DOOR ENTRANCE ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLAN.
18.

PROPOSED SIDEWALK AND WHEELCHAIR RAMPS SCORE LINES AND EXPANSION JOINTS ARE SHOWN ON STREETSCAPE DETAIL. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER DURING CONSTRUCTION.
19.

WHEN WORKING NEXT TO EXISTING WALLS, BERMS, AND OTHER STRUCTURES, CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB THE EXISTING STRUCTURES. ANY DAMAGE TO THE EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
20.

ORNAMENTAL STREET LIGHTING LAYOUTS ARE SHOWN ON LIGHTING PLANS. THE DETAILS ARE SHOWN ON LIGHTING DETAIL SHEETS.
21.

PROPOSED TREE PLANTING, LANDSCAPE ISLAND AND OTHER AMENITIES ARE SHOWN ON LANDSCAPE PLANS AND DETAIL SHEETS.
22.

DUE TO THE PROJECT IN DOWNTOWN AREA, CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DISTURB EXISTING STORE ENTRANCES, DOOR SILLS, VENTS, BUILDING STEPS OR FACES, WHEN CONSTRUCTING PROPOSED SIDEWALK. THE CONTRACTOR SHALL MEET ALL EXISTING GRADES AT THESE LOCATIONS UNLESS OTHERWISE SHOWN ON THE PLAN.
23.

SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS SHALL BE IN ACCORDANCE WITH MASSDOT REQUIREMENTS AND THE LATEST VERSION OF THE MUTCD.
24.

SURVEY BASE PLAN BY LIGHTHOUSE LAND SURVEYING, LLC IN NOVEMBER AND DECEMBER 2016.
25.

THE SURVEY BASE PLAN ARE IN U.S. SURVEY FEET IN THE MASSACHUSETTS STATE PLANE (MAINLAND ZONE) COORDINATE SYSTEM REFERENCED TO THE NORTH AMERICAN DATUM OF 1983.
26.

ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
27.

EXISTING TRASH RECEPTACLES AND BENCHES WILL BE REMOVED BY THE CITY OF SALEM BEFORE WORK COMMENCES.
28.

PROPOSED TREE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL STAKE TREES IN THE FIELD PRIOR TO INSTALLATION FOR APPROVAL BY THE ENGINEER.
29.

LOCATION OF PROPOSED SHRUB PLANTINGS ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER PRIOR TO INSTALLATION.
30.

THE SOIL MIX SHALL BE APPLIED AT THE LOCATIONS OF THE TREE GRATES. LIMIT OF SOIL MIX TRENCHES ARE SHOWN ON PLANTING PLAN.
31.

THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN A MINIMUM LEVEL OF GENERAL STREET LIGHTING EQUIVANT TO THE EXISTING CONDITION OVER THE COURSE OF THE PROJECT EITHER BY TEMPORARILY RETAINING SOME OF THE EXISTING LIGHTS AND/OR ACTIVATING PORTIONS OF THE NEW LIGHTING SYSTEMS. THE CONTRACTOR SHALL BE REQUIRED TO IDENTIFY THEIR APPROACH IN THEIR POST BID SCHEDULE.

WHEELCHAIR RAMP NOTES

1.

ALL WHEELCHAIR RAMPS SHALL CONFORM TO THE REQUIREMENTS OF THE ARCHITECTURAL ACCESS BOARD (A.A.B.) AND THE AMERICANS WITH DISABILITIES ACT (A.D.A.). AND THE LATEST MASSDOT STANDARDS.
2.

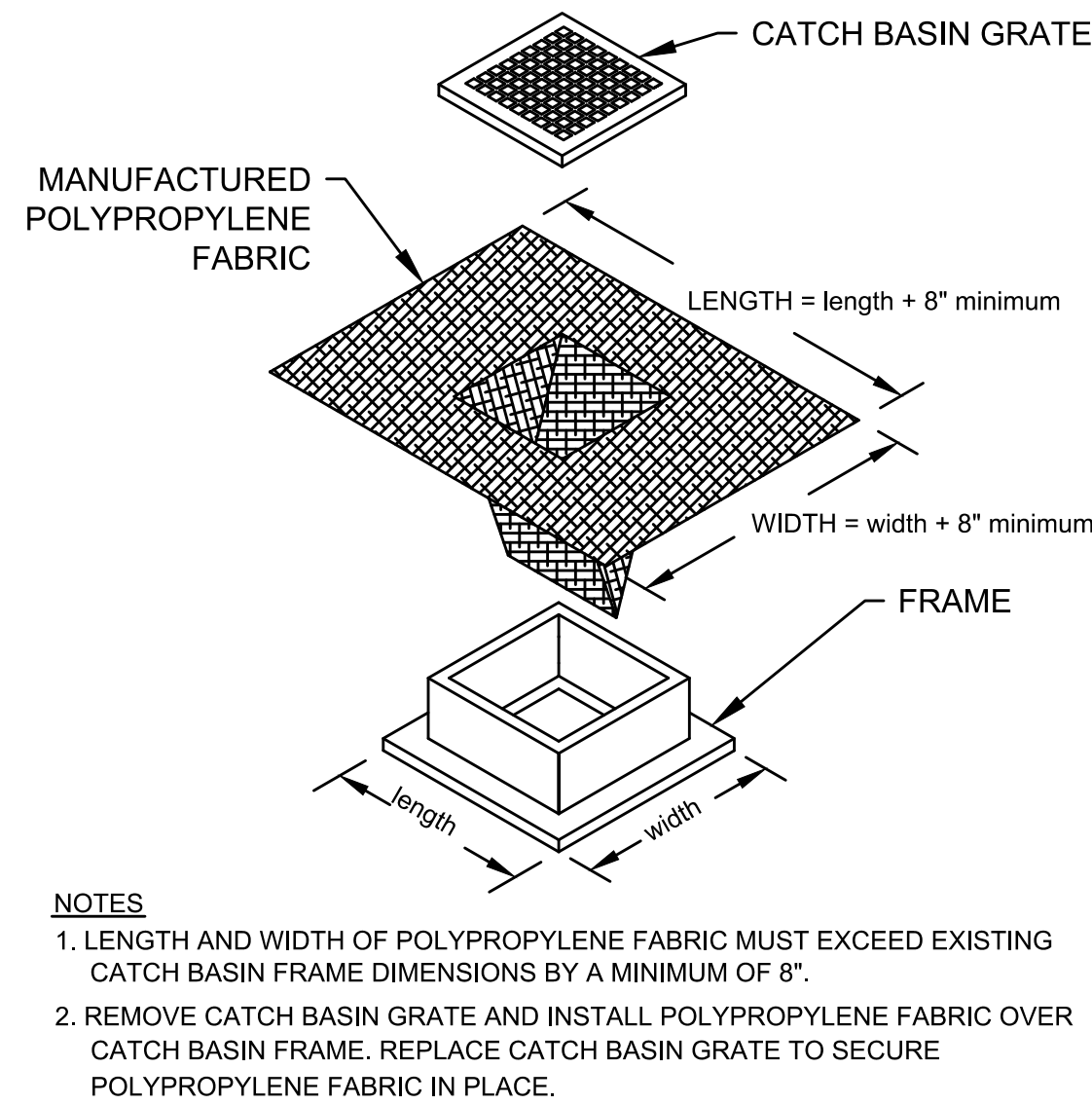
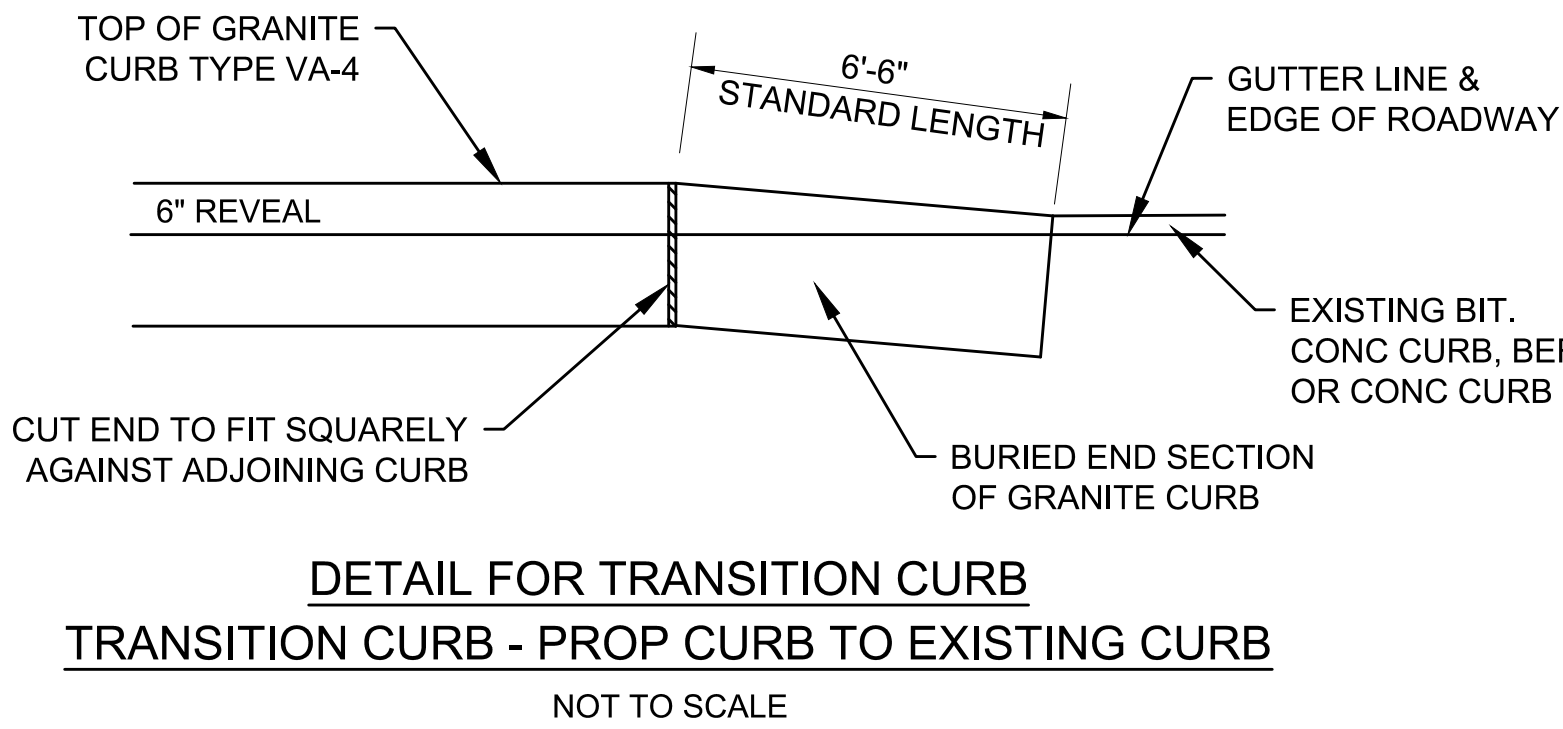
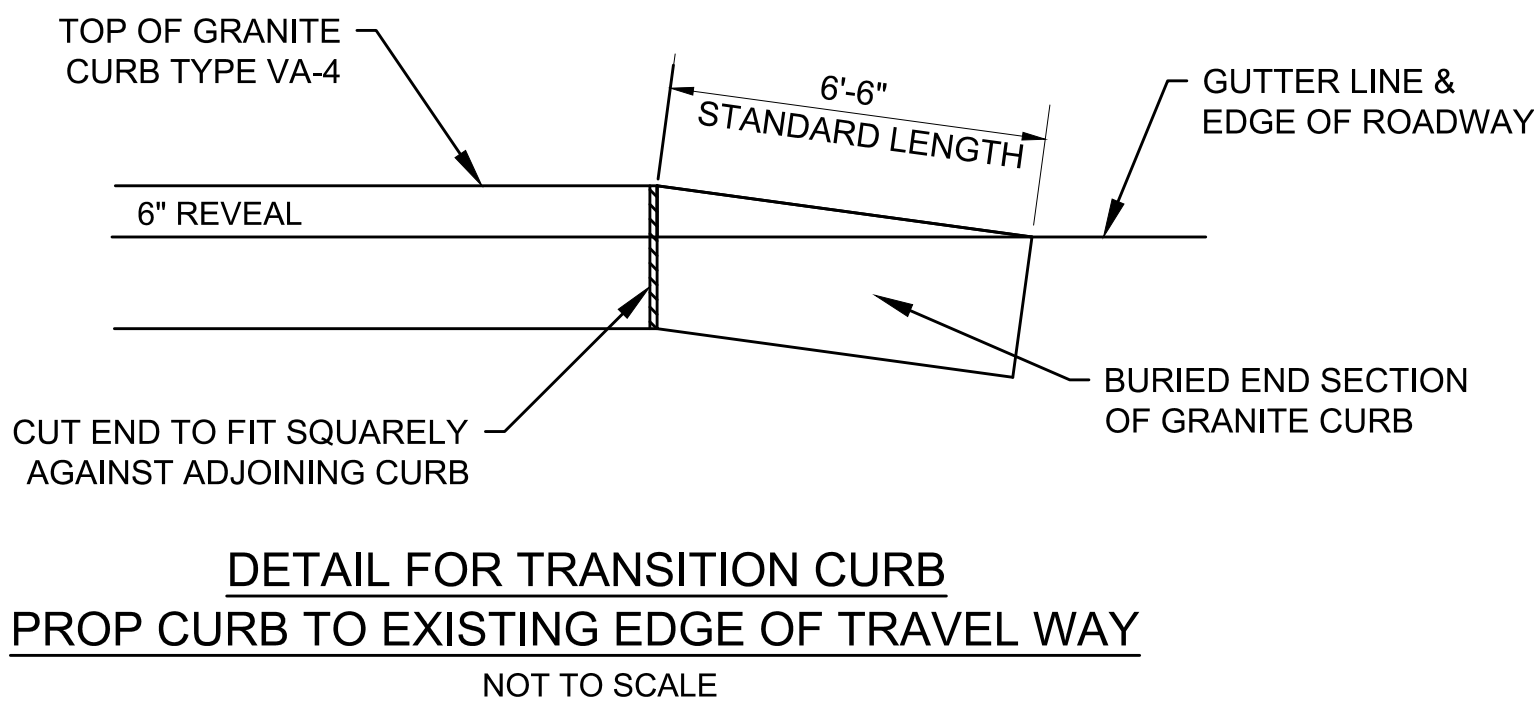
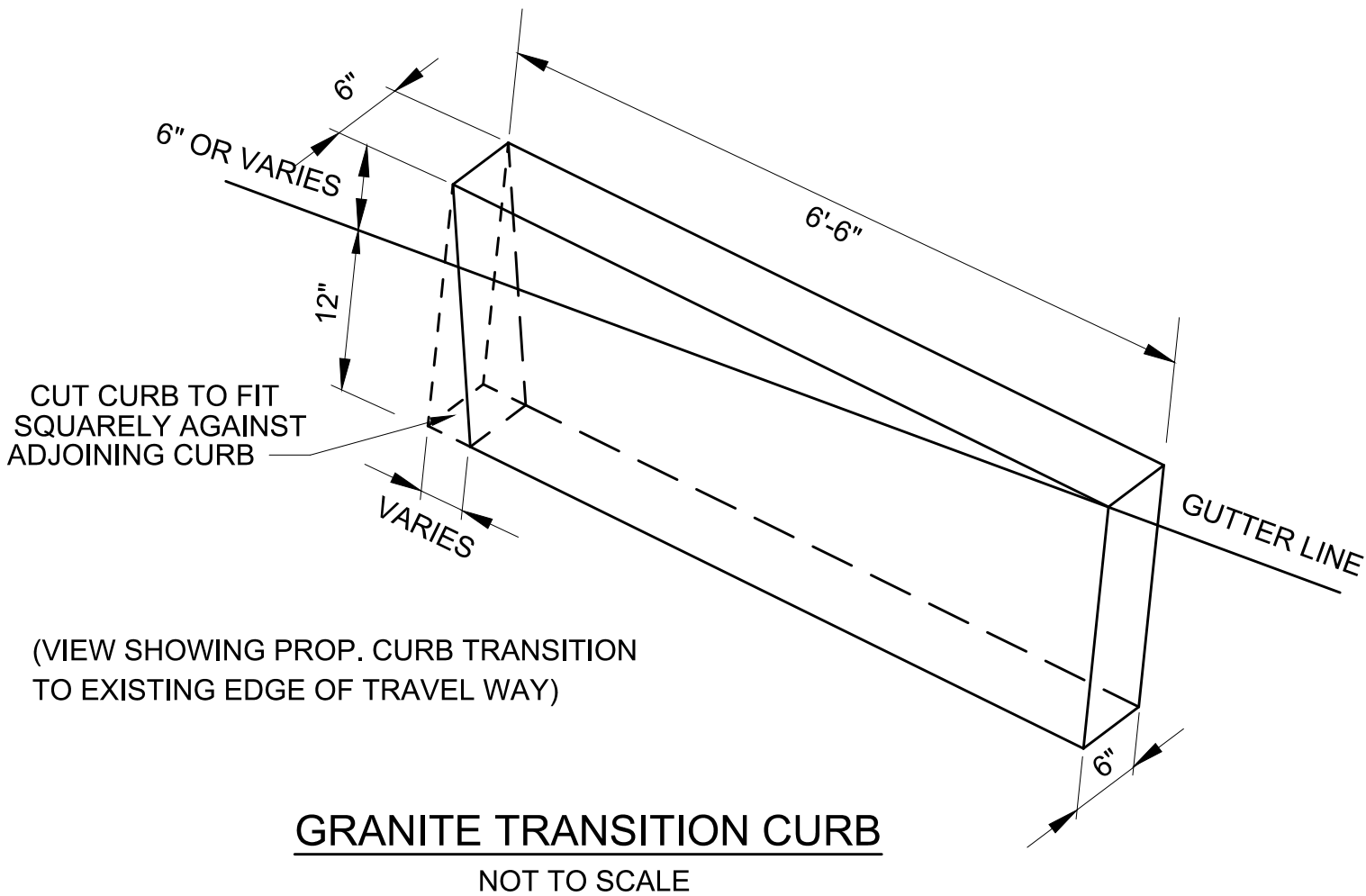
THE LOCATION OF PROPOSED WHEELCHAIR RAMPS ARE SHOWN ON CONSTRUCTION PLANS AND THE WHEELCHAIR RAMP DETAILS. EXACT LOCATIONS MAY BE ADJUSTED, IF NECESSARY, BY THE ENGINEER IN THE FIELD.
3.

ALL PROPOSED WHEELCHAIR RAMPS SHALL HAVE DETECTABLE WARNING PANELS INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DRAWINGS. THE COLOR OF THE PANEL SHALL BE BRICK RED AND APPROVED BY THE ENGINEER.
4.

IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET, IS WITHIN THE ACTUAL WHEELCHAIR RAMP PATH, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OF THE STRUCTURE COVER SHALL BE FLUSH WITH THE RAMP SURFACE AND SHALL MATCH THE SLOPE OF THE NEW WHEELCHAIR RAMP AS DIRECTED BY THE ENGINEER.
5.

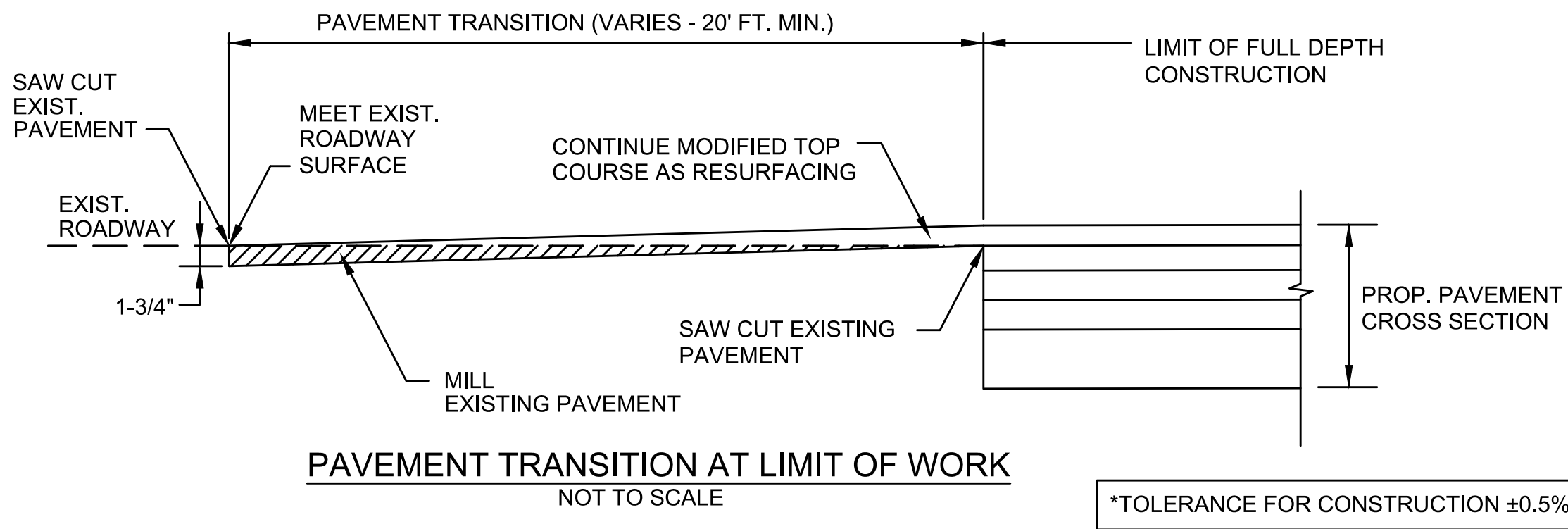
THE TRANSITION SLOPE OF ANY CURB RAMP, EXCEPT MAXIMUM LENGTH HIGH SIDE TRANSITIONS, SHALL NOT EXCEED 7.5%, +/-0.5% FOR TOLERANCE OF CONSTRUCTION. PER AAB 521 CMR, FINISHED SLOPE MAY NOT EXCEED 8.33%. PROPOSED WHEELCHAIR RAMP SLOPES, ESPECIALLY HIGH SIDE TRANSITIONS, SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO POURING OF CONCRETE AND ADJUSTED, IF NECESSARY, AT THE DIRECTION OF THE ENGINEER.
6.

THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO SEWALL STREET / CROMBIE STREET INTERSECTION WHEELCHAIR RAMPS CONSTRUCTION DUE TO CUTSOMIZED DESIGN.



- NOTES
1. LENGTH AND WIDTH OF POLYPROPYLENE FABRIC MUST EXCEED EXISTING CATCH BASIN FRAME DIMENSIONS BY A MINIMUM OF 8".
 2. REMOVE CATCH BASIN GRATE AND INSTALL POLYPROPYLENE FABRIC OVER CATCH BASIN FRAME. REPLACE CATCH BASIN GRATE TO SECURE POLYPROPYLENE FABRIC IN PLACE.

CATCH BASIN EROSION CONTROL PROTECTION (TYP)



*TOLERANCE FOR CONSTRUCTION ±0.5%

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	KY
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ



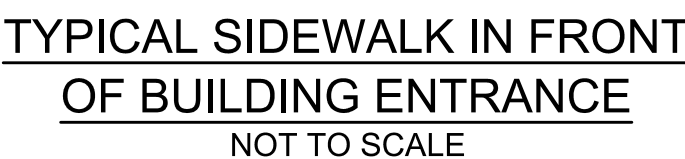
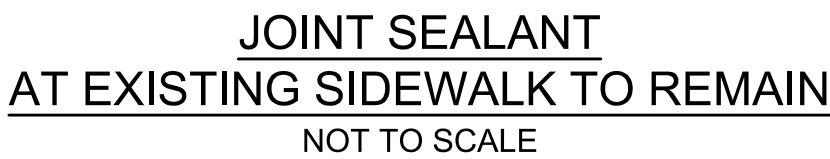
SCALE:

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ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
CONSTRUCTION NOTES & DETAILS
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	4 of 34



CURB TRANSITION LENGTH FOR WHEELCHAIR RAMPS

MASSDOT CONST. STD. DWG. NO. E107.9.0
*BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6"

*TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$

DRAWN BY:	KY
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ



SCALE:

NOT TO SCALE

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

ROADWAY AND STREETScape IMPROVEMENTS

ESSEX STREET

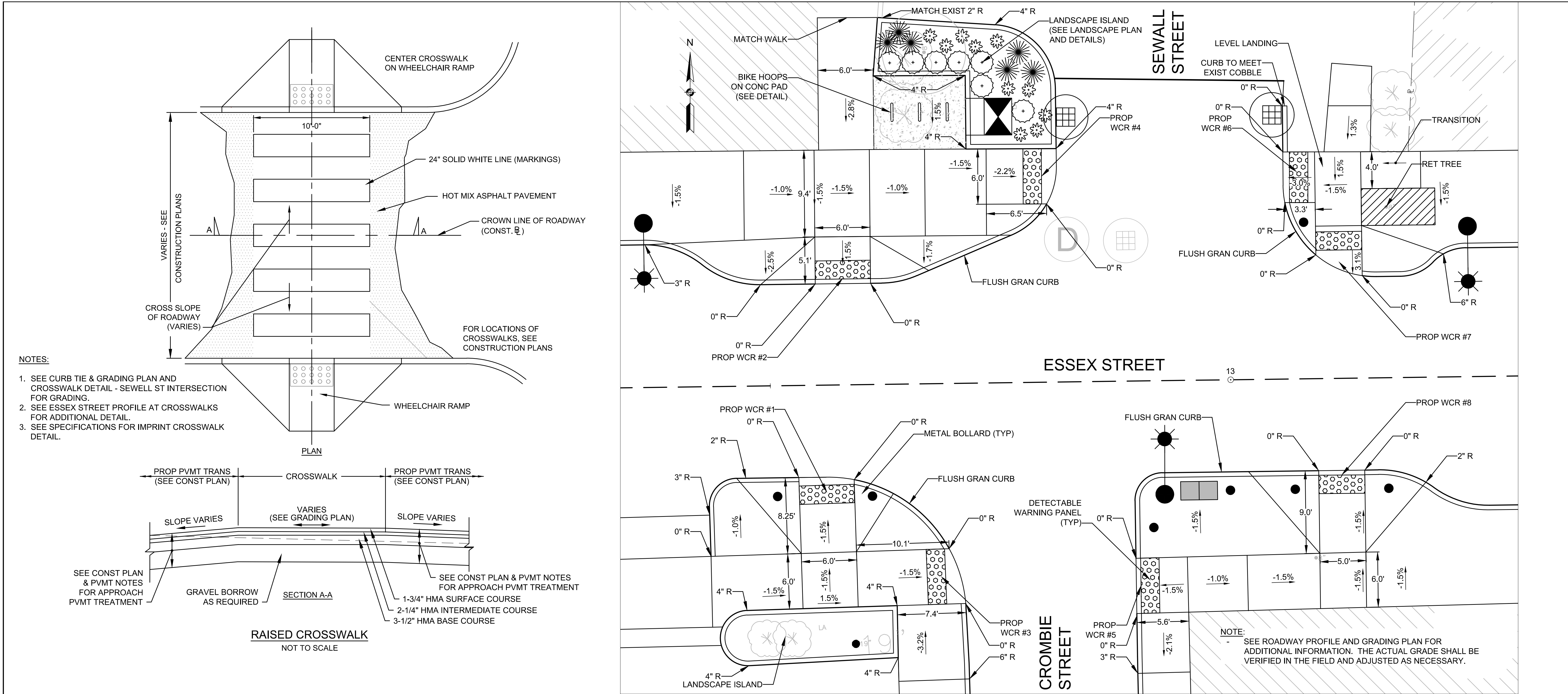
CONSTRUCTION DETAILS

SALEM, MASSACHUSETTS

ISSUE DATE MAY 22, 2020

SHEET 5 of 34

O:\3030s\5360 - Salem - On-Call\Drawing Files\Plan Set\5360 DETAILS.dwg



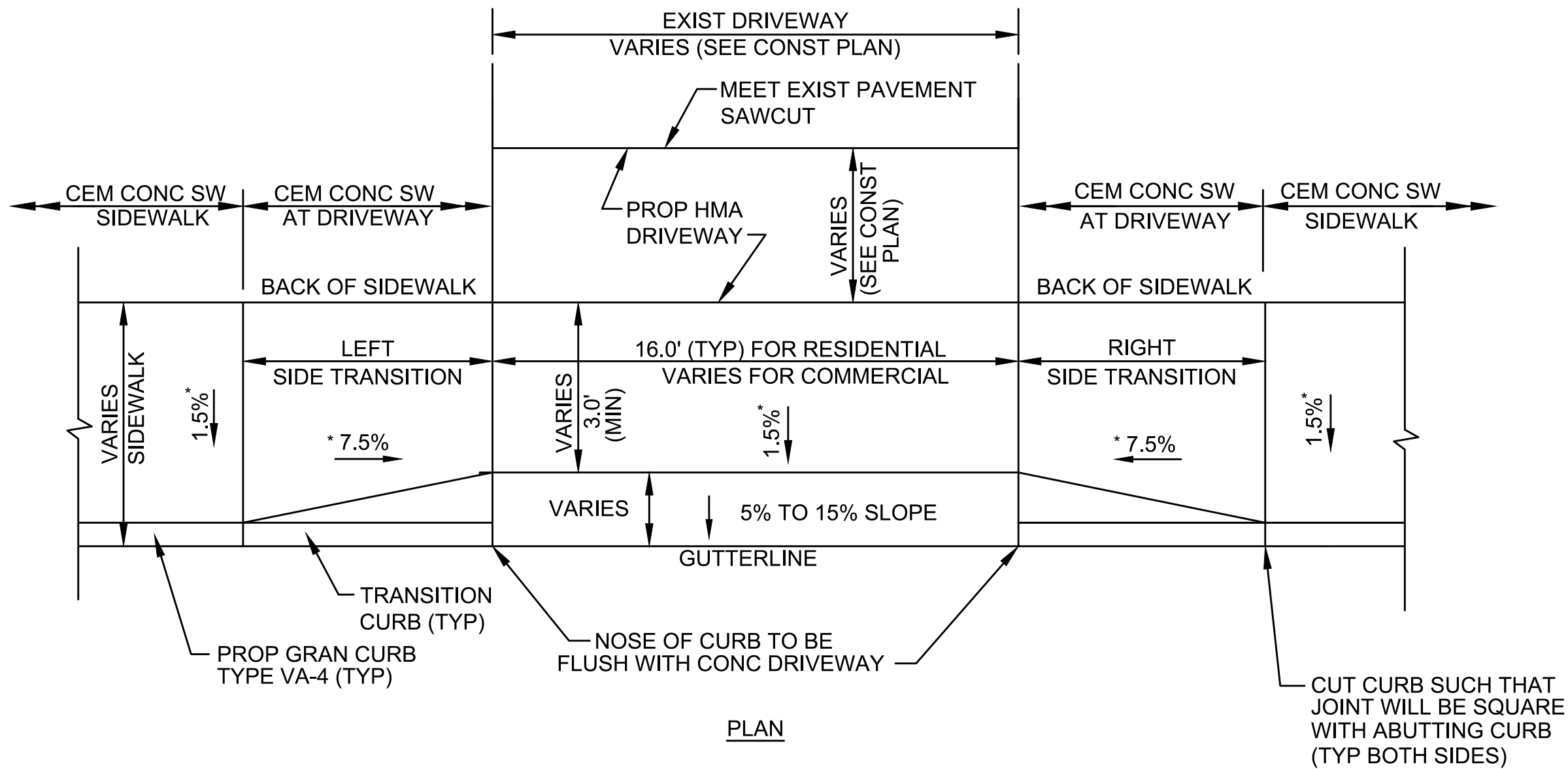
WHEELCHAIR RAMP TYPE "C" - SEWALL / CROMBIE STREET INTERSECTION
SCALE: 1" = 5'

WHEEL CHAIR RAMP DATA											
WCR NO.	LOCATION	RAMP REFERENCE POINT		GUTTER PROFILE SLOPE	LENGTH OF PRIMARY RAMP L	WIDTH OF RAMP OPENING W	DEPTH OF LEVEL LANDING (MIN 4.0')	TRANSITION LENGTH		SIDEWALK WIDTH	WCR TYPE
		STATION	OFFSET					LEFT	RIGHT		
1	ESSEX ST.	12+56.0	10.0' RT	+4.00%	8.2'	6.0'	6.0'	FLUSH	6.75'	6.0'	C
2	ESSEX ST.	12+58.0	11.0' LT	+3.65%	5.1'	6.0'	9.4'	6.0'	FLUSH	9.4	C
3	ESSEX ST.	12+70.4'	20.9' RT	-3.41%	11.2'	6.0'	6.0'	8.2'	FLUSH	6.0'	C
4	ESSEX ST.	12+81.3	22.4' LT	-3.35%	7.5'	6.0'	6.7'	FLUSH	-	9.4'	C
5	ESSEX ST.	12+89.5	22.3' RT	+2.79%	5.6'	6.0'	6.5'	FLUSH	6.5'	6.0'	C
6	ESSEX ST.	13+06.0	21.9' LT	+2.71%	3.5'	5.5'	5.0'	6.5'	FLUSH	10.5'	C
7	ESSEX ST.	13+11.9	11.9' LT	+1.91%	VARIES 3.1'-5.4'	5.0'	8.0'	FLUSH	9.5'	10.5'	C
8	ESSEX ST.	13+11.9	10.0' RT	+1.91%	9.0'	5.0'	6.0'	6.5'	FLUSH	6.0'	C

WHEEL CHAIR RAMP DATA (CONT.)											
WCR NO.	LOCATION	RAMP REFERENCE POINT		GUTTER PROFILE SLOPE	LENGTH OF PRIMARY RAMP L	WIDTH OF RAMP OPENING W	DEPTH OF LEVEL LANDING (MIN 4.0')	TRANSITION LENGTH		SIDEWALK WIDTH	WCR TYPE
		STATION	OFFSET					LEFT	RIGHT		
9	ESSEX ST.	14+80.9	18.1' RT	+4.00%	6.5'	6.6'	-	-	6.7'	8.0'	B
10	ESSEX ST.	14+94.2	18.5' RT	+3.65%	9.0'	6.0'	-	9.5'	-	8.0'	B
11	ESSEX ST.	17+61.8	22.9' RT	-3.41%	5.4'	5.0'	5.9'	4.33'	7.67'	6.75'	A
12	ESSEX ST.	17+61.7	10.0' LT	-3.35%	5.0'	5.0'	7.6'	7.67'	4.33'	8.7'	A
13	WASHINGTON ST.	2+47.7	26.3' LT	+2.79%	5.2'	6.0'	7.1'	6.5'	5.0'	9.0'	A
14	WASHINGTON ST.	3+01.4	19.9' LT	+2.71%	6.0'	5.0'	7.2'	4.33'	7.67'	8.7'	A
15	WASHINGTON ST.	2+95.1	16.4' RT	+1.91%	8.5'	6.0'	8.1'	13.75'	6.5'	11.5'	A
16	WASHINGTON ST.	2+48.0	21.9' RT	+1.91%	5.0'	22.3'	9.5'	7.8'	6.5'	-	D

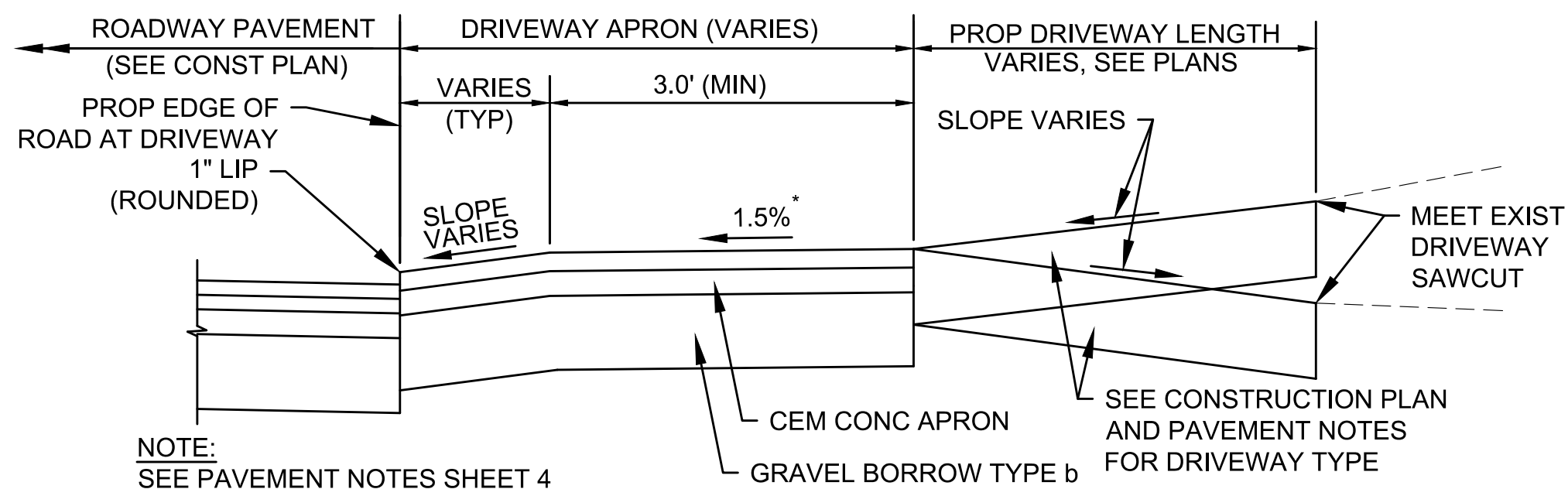
*TOLERANCE FOR CONSTRUCTION ±0.5%

6/5/2020 JMC DJ CROSSWALK TREATMENT CHANGE				DRAWN BY: KY/SD		PE STAMP: [Stamp]		PREPARED BY: [Stamp]		SCALE: SCALE AS NOTED		ROADWAY AND STREETSCAPE IMPROVEMENTS ESSEX STREET CONSTRUCTION DETAILS SALEM, MASSACHUSETTS		ISSUE DATE: MAY 22, 2020	
				DESIGNED BY: KY/DJ										SHEET 6 of 34	
				CHECKED BY: DJ											
NUMBER DATE MADE BY CHECKED BY DESCRIPTION															
REVISIONS															



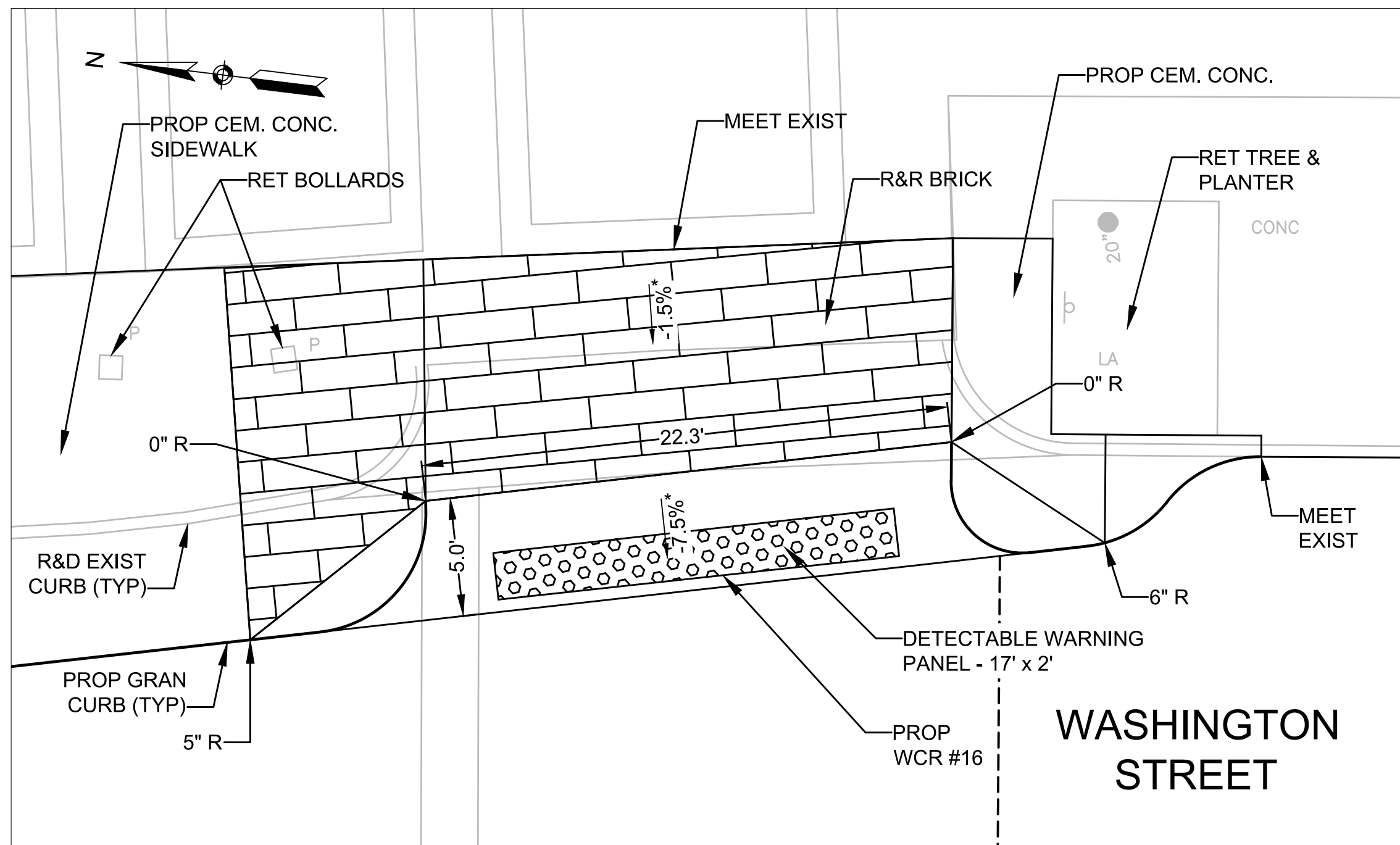
DETAIL FOR TYPICAL DRIVEWAY WITH SIDEWALK - TYPE A

NOT TO SCALE
MASSDOT CONST. STD. DWG. NO. E107.7.0



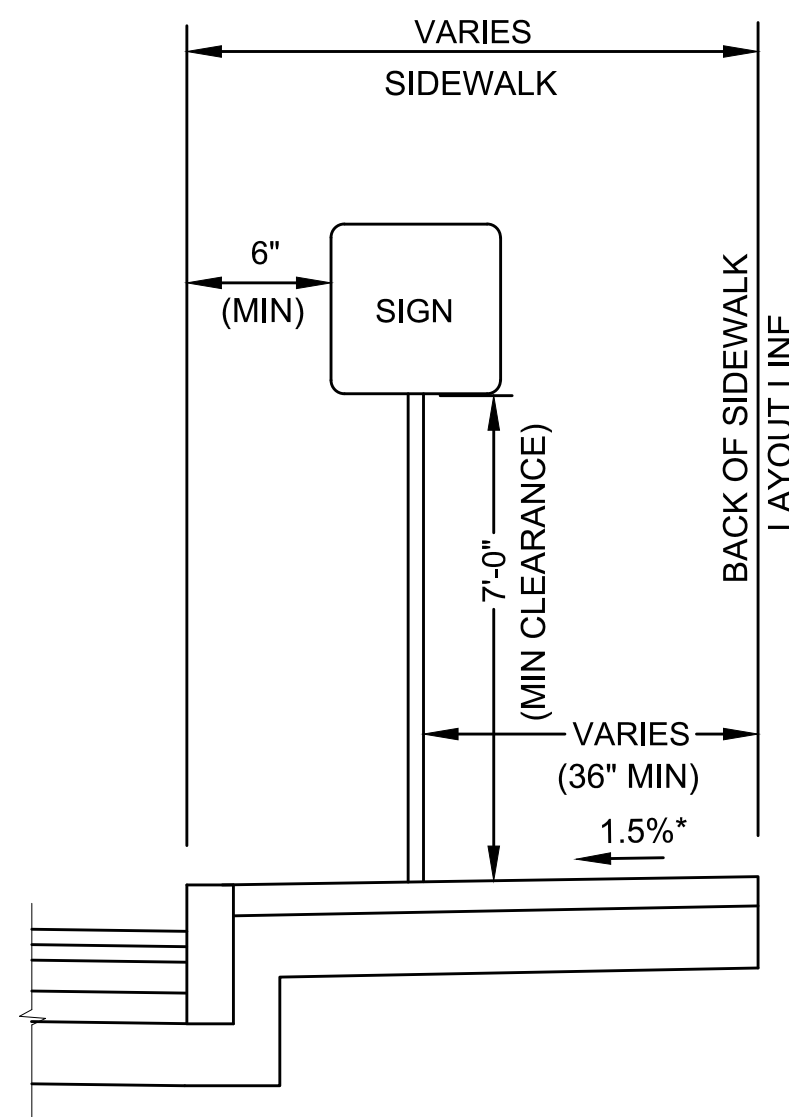
SECTION FOR TYPICAL CEM CONC DRIVEWAY WITH SIDEWALK

NOT TO SCALE



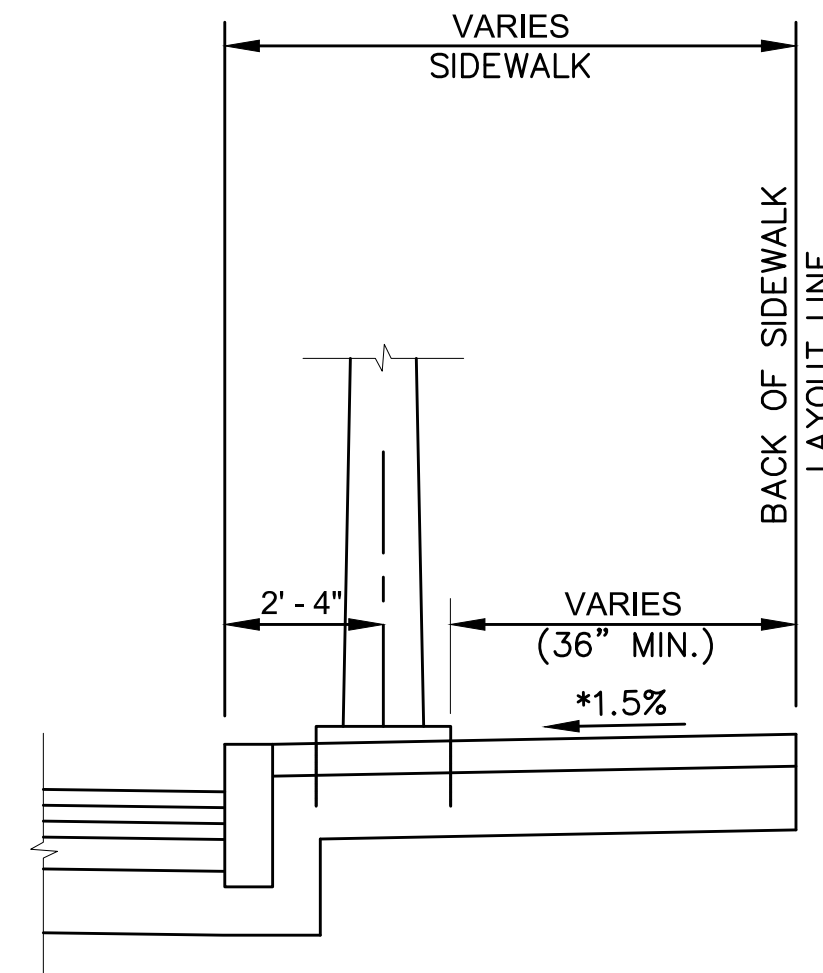
DETAIL FOR SHARED DRIVEWAY WITH WHEELCHAIR RAMP TYPE "D"

SCALE: 1" = 5'



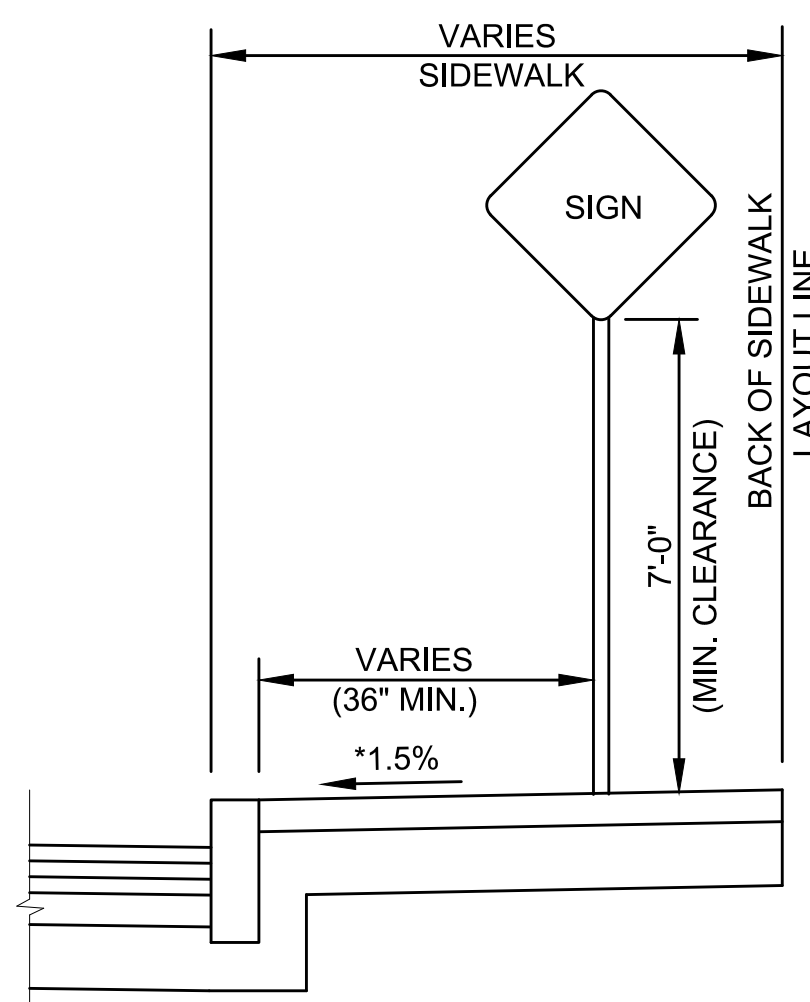
TRAFFIC SIGN AT CURB

NOT TO SCALE



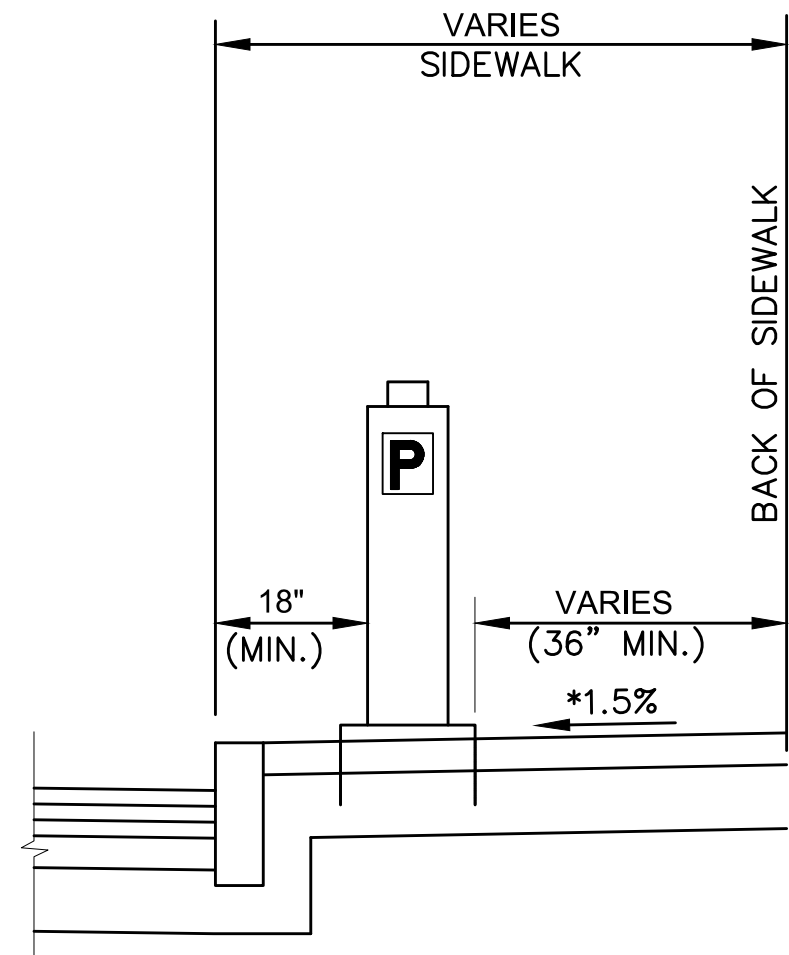
ORNAMENTAL LIGHT POLE

NOT TO SCALE



TRAFFIC SIGN AT BACK OF SDWK.

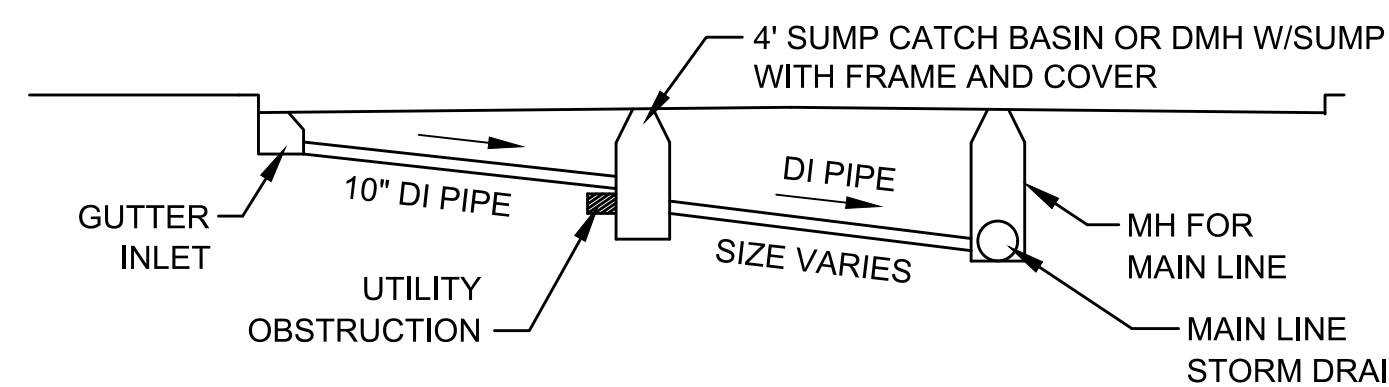
NOT TO SCALE



PARKING PAY STATION

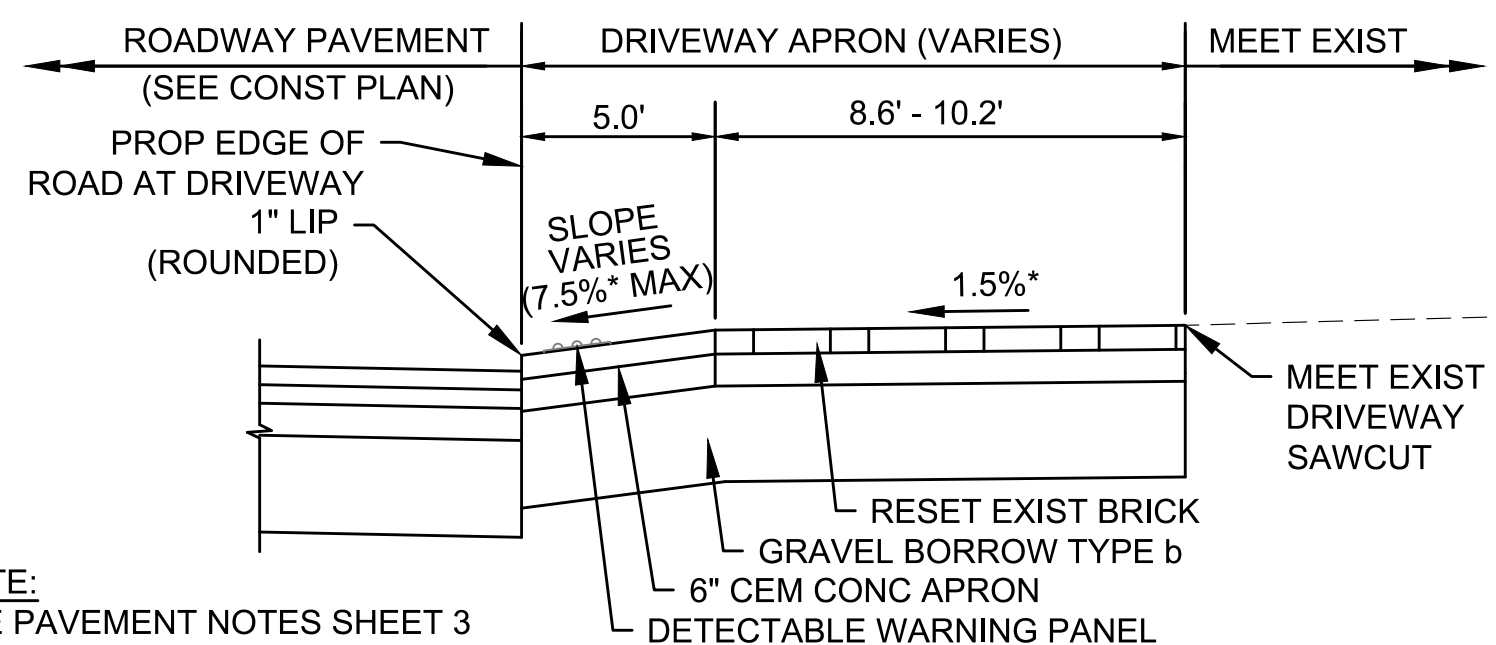
NOT TO SCALE

DETAILS SHOWING SIDEWALK CLEARANCES



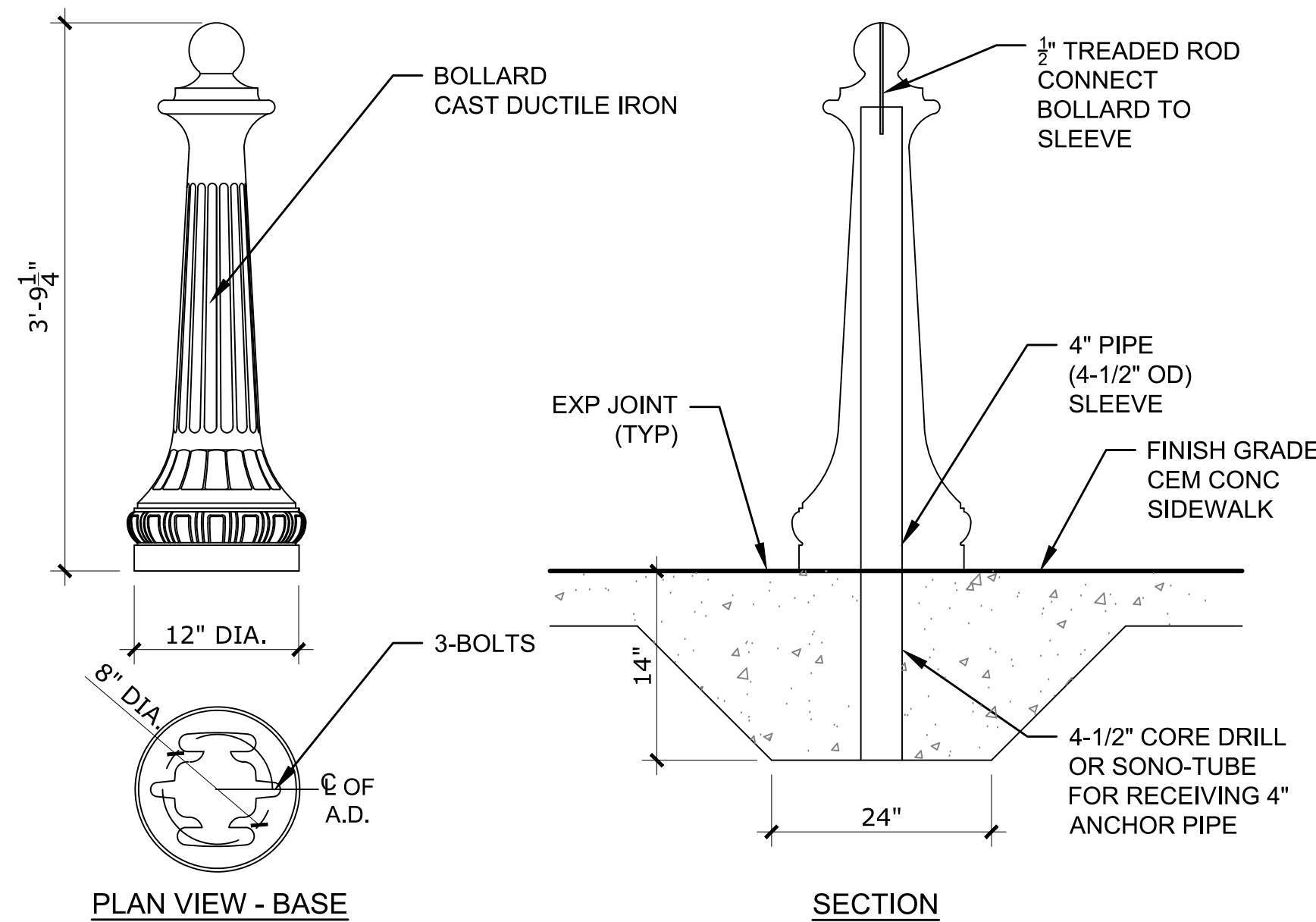
CONTINGENCY DETAIL FOR STORM DRAIN LATERAL LINES

(USE ONLY IF OBSTRUCTION IS ENCOUNTERED)
NOT TO SCALE



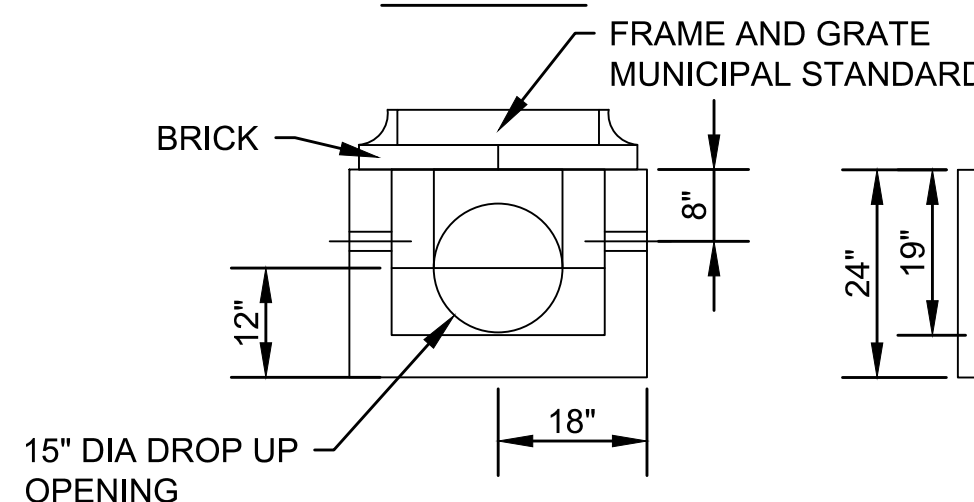
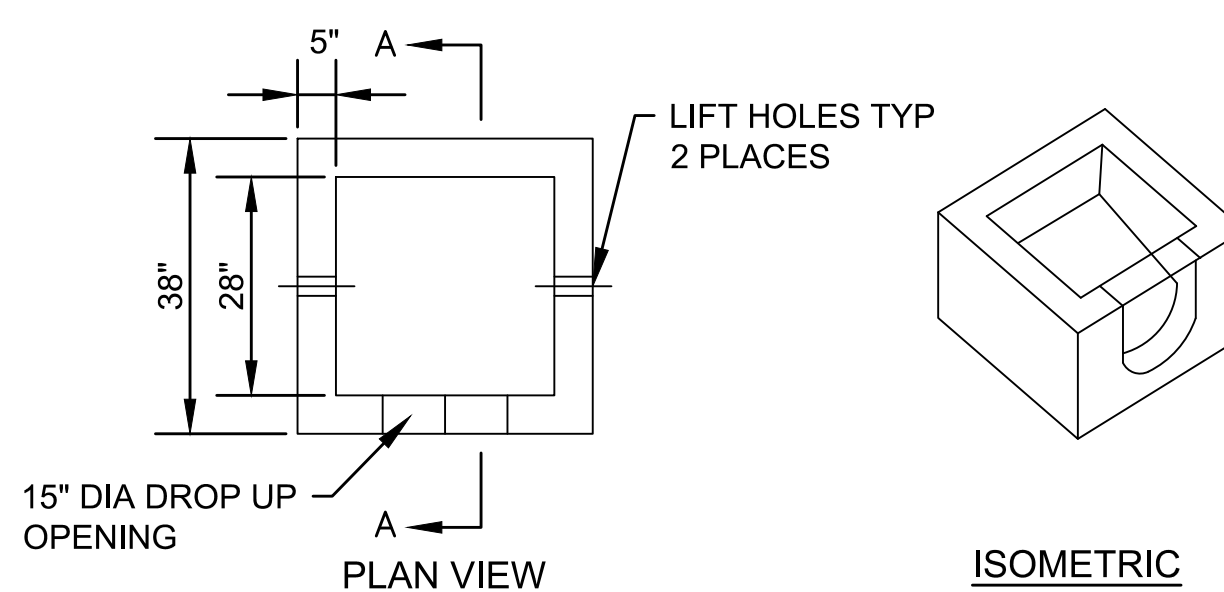
SECTION FOR SHARED DRIVEWAY WITH WHEELCHAIR RAMP

NOT TO SCALE



METAL BOLLARD

NOT TO SCALE

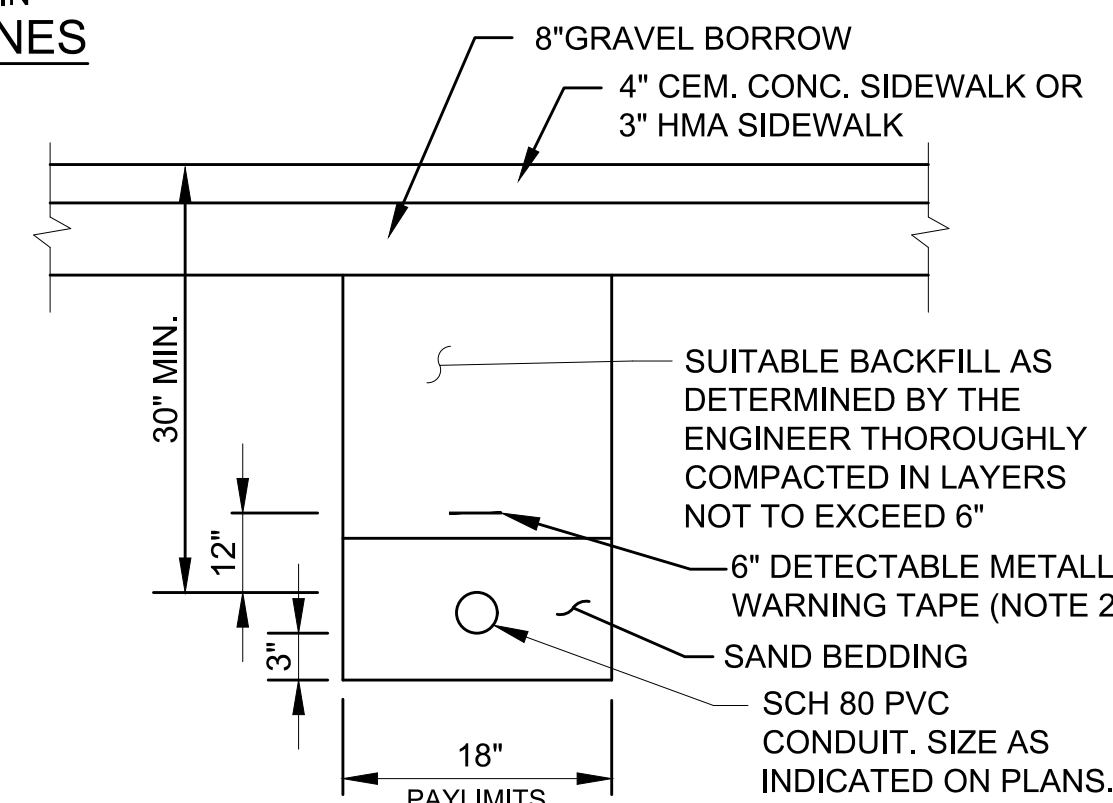


WWF WITH
As = 0.15 SQ IN
TYP IN CENTER IN
WALLS AND BASE

- NOTES:
- DESIGNED FOR AASHTO HS25-44 LOADING
 - CONCRETE STRENGTH f_c =4000 PSI
 - REINFORCING STEEL: ASTM A185 (wwf) f_y =60,000 PSI
 - CURB INLETS ARE REQUIRED WHEN GUTTER INLETS ARE INSTALLED AGAINST CURBING.

PRE-CAST GUTTER INLET

NOT TO SCALE
(ITEM 204.11)



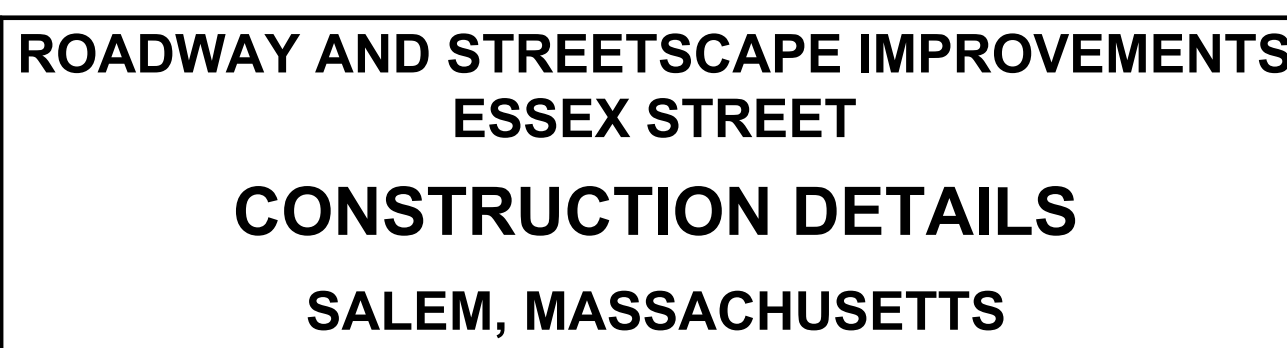
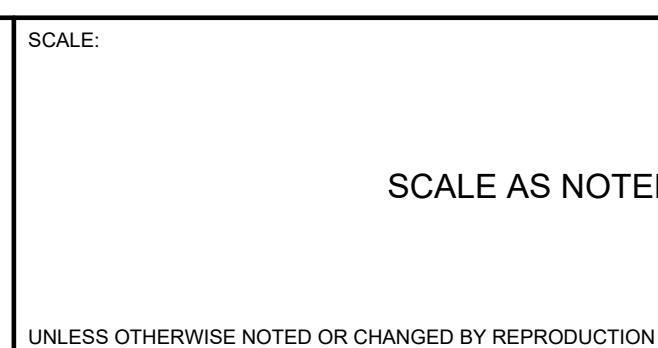
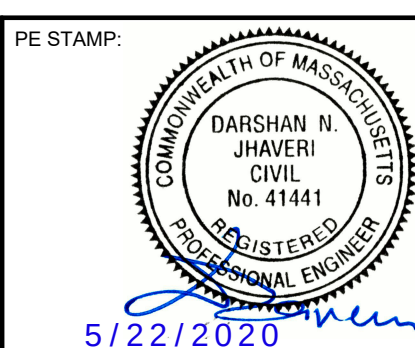
DETAIL FOR CONDUIT TRENCH UNDER SIDEWALK AREA

NOT TO SCALE

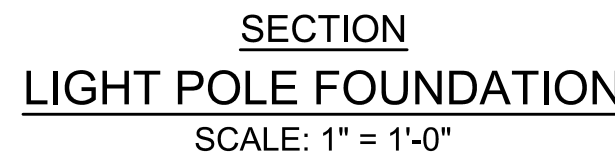
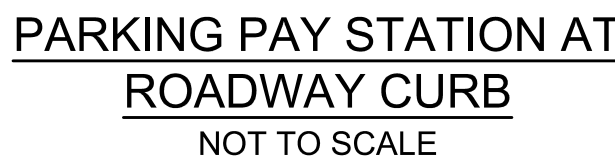
*TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$

6/5/2020	JMC	DJ	CROSSWALK TREATMENT CHANGE
NUMBER	DATE	MADE BY	CHECKED BY
REVISIONS			

DRAWN BY:	KY/SD
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ



ISSUE DATE	MAY 22, 2020
SHEET	7 of 34



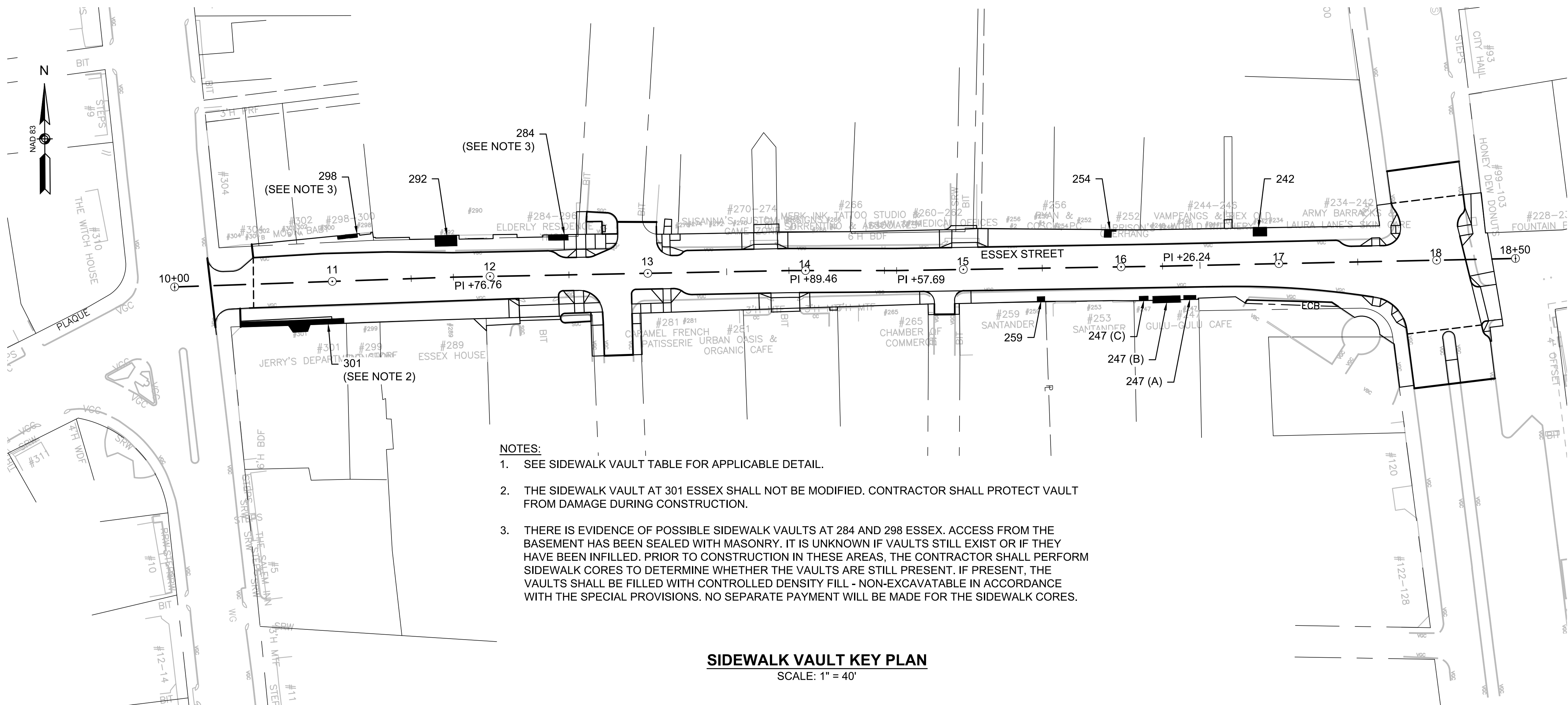
DRAWN BY:	SR
DESIGNED BY:	SR/DJ
CHECKED BY:	DJ



SCALE: AS NOTED

ISSUE DATE MAY 22, 2020

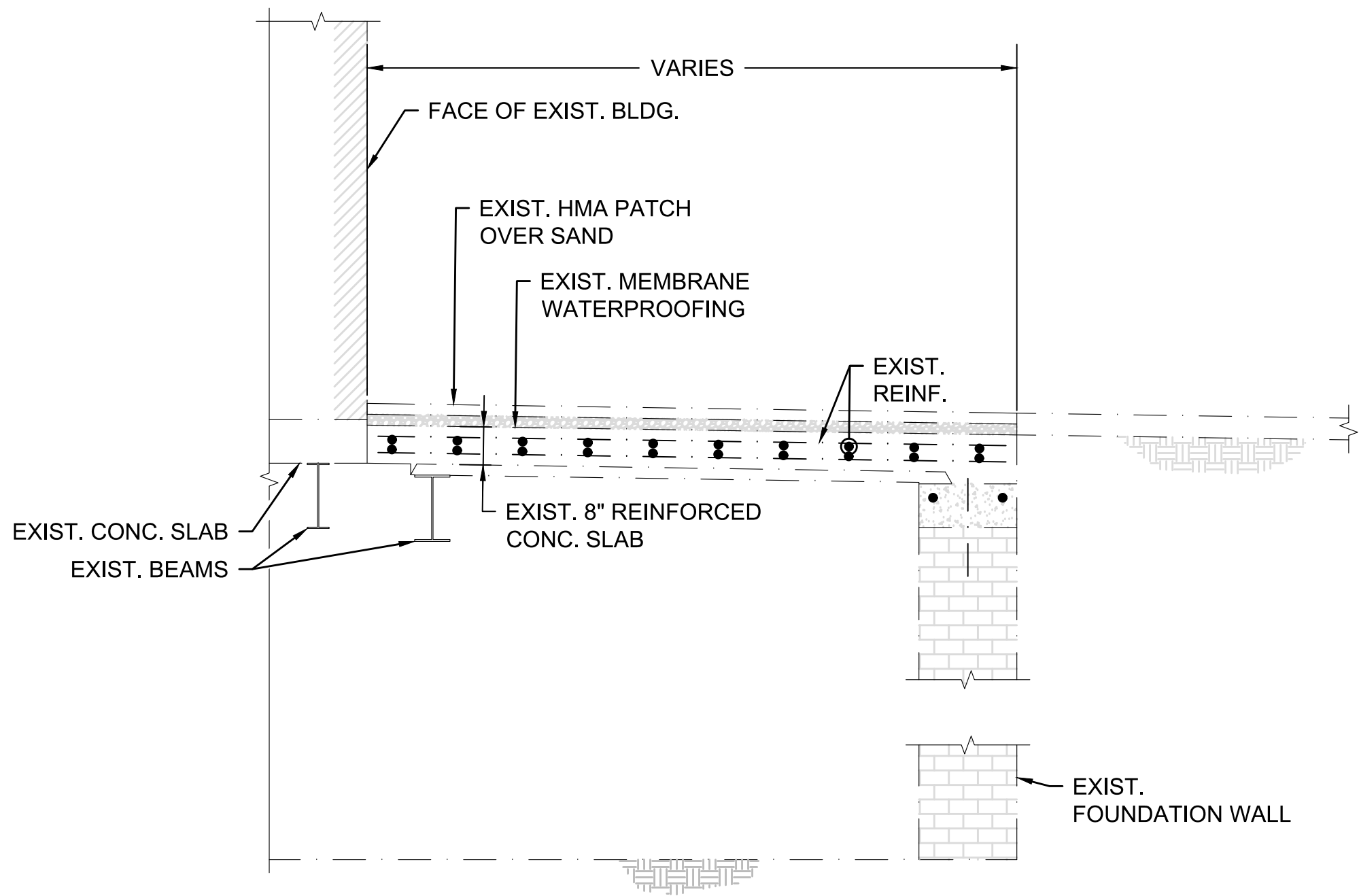
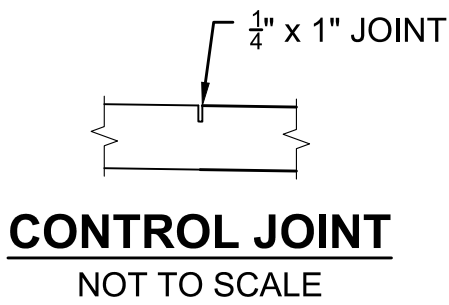
SHEET 8 of 34



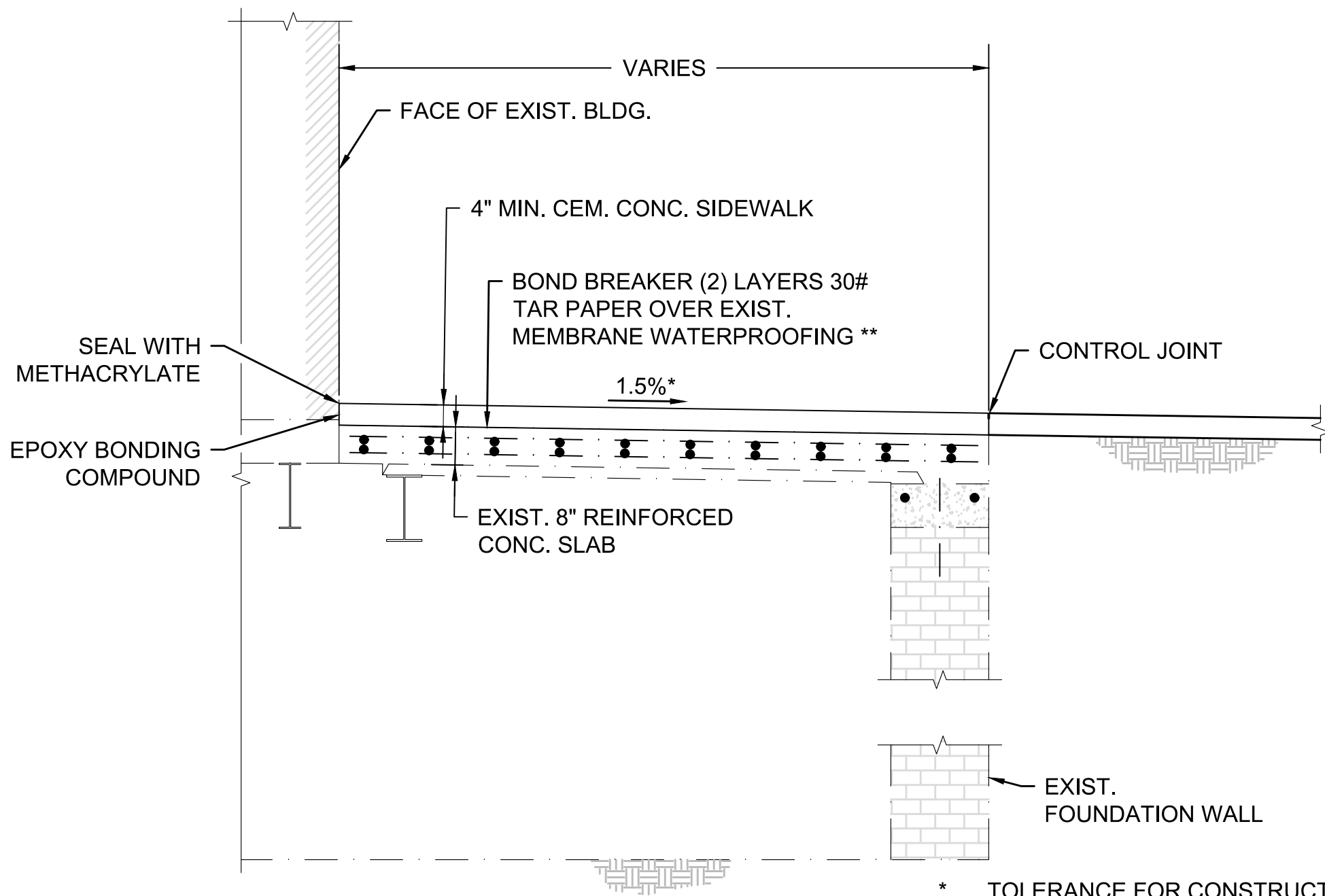
SIDEWALK VAULT TABLE	
LOCATION	APPROX. INTERIOR DIMENSIONS*
242	8'-8" x 5'-7"
247 (A)	7'-8" x 2'-6"
247 (B)	17'-4" x 3'-9"
247 (C)	5'-7" x 2'-9"
254	7'-5" x 5'-0"
259	4'-9" x 3'-8"
292	13'-10" x 3'-4"

- NOTES:
- SEE SIDEWALK VAULT TABLE FOR APPLICABLE DETAIL.
 - THE SIDEWALK VAULT AT 301 ESSEX SHALL NOT BE MODIFIED. CONTRACTOR SHALL PROTECT VAULT FROM DAMAGE DURING CONSTRUCTION.
 - THERE IS EVIDENCE OF POSSIBLE SIDEWALK VAULTS AT 284 AND 298 ESSEX. ACCESS FROM THE BASEMENT HAS BEEN SEALED WITH MASONRY. IT IS UNKNOWN IF VAULTS STILL EXIST OR IF THEY HAVE BEEN INFILLED. PRIOR TO CONSTRUCTION IN THESE AREAS, THE CONTRACTOR SHALL PERFORM SIDEWALK CORES TO DETERMINE WHETHER THE VAULTS ARE STILL PRESENT. IF PRESENT, THE VAULTS SHALL BE FILLED WITH CONTROLLED DENSITY FILL - NON-EXCAVATABLE IN ACCORDANCE WITH THE SPECIAL PROVISIONS. NO SEPARATE PAYMENT WILL BE MADE FOR THE SIDEWALK CORES.

SIDEWALK VAULT KEY PLAN
SCALE: 1" = 40'



EXISTING TYPICAL VAULT DETAIL
NOT TO SCALE



PROPOSED TYPICAL VAULT DETAIL
NOT TO SCALE

- * TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)
** CONTRACTOR TO REPAIR THE EXIST. MEMBRANE WATERPROOFING IF DAMAGED DURING CONSTRUCTION.

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NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS	DESCRIPTION

DRAWN BY:	DW
DESIGNED BY:	DW/CJ
CHECKED BY:	CJ



SCALE:	
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION	

ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
EXISTING SIDEWALK VAULTS
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	9 of 34

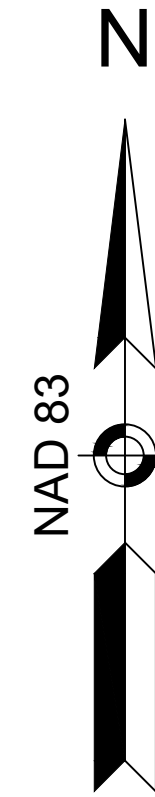
CURB TIE PLAN
SEE SHEET 13

GRADING PLAN
SEE SHEET 15

DRAINAGE & UTILITY PLAN
SEE SHEET 16

LANDSCAPE PLAN
SEE SHEET 18

LIGHTING PLAN
SEE SHEET 20



NORTH STREET

SUMMER STREET

ESSEX STREET

SEWALL STREET

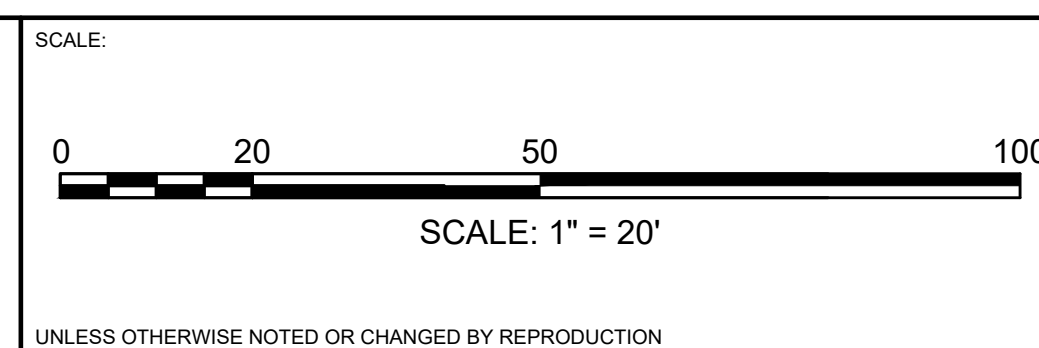
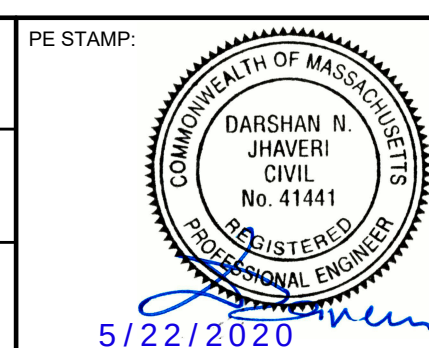
CROMBIE STREET

CONTINUED ON
SHEET NO. 11

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NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
1	6/5/2020	JMC	DJ	CROSSWALK TREATMENT CHANGE
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DRAWN BY:	KY
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ



ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
CONSTRUCTION PLAN
SALEM, MASSACHUSETTS

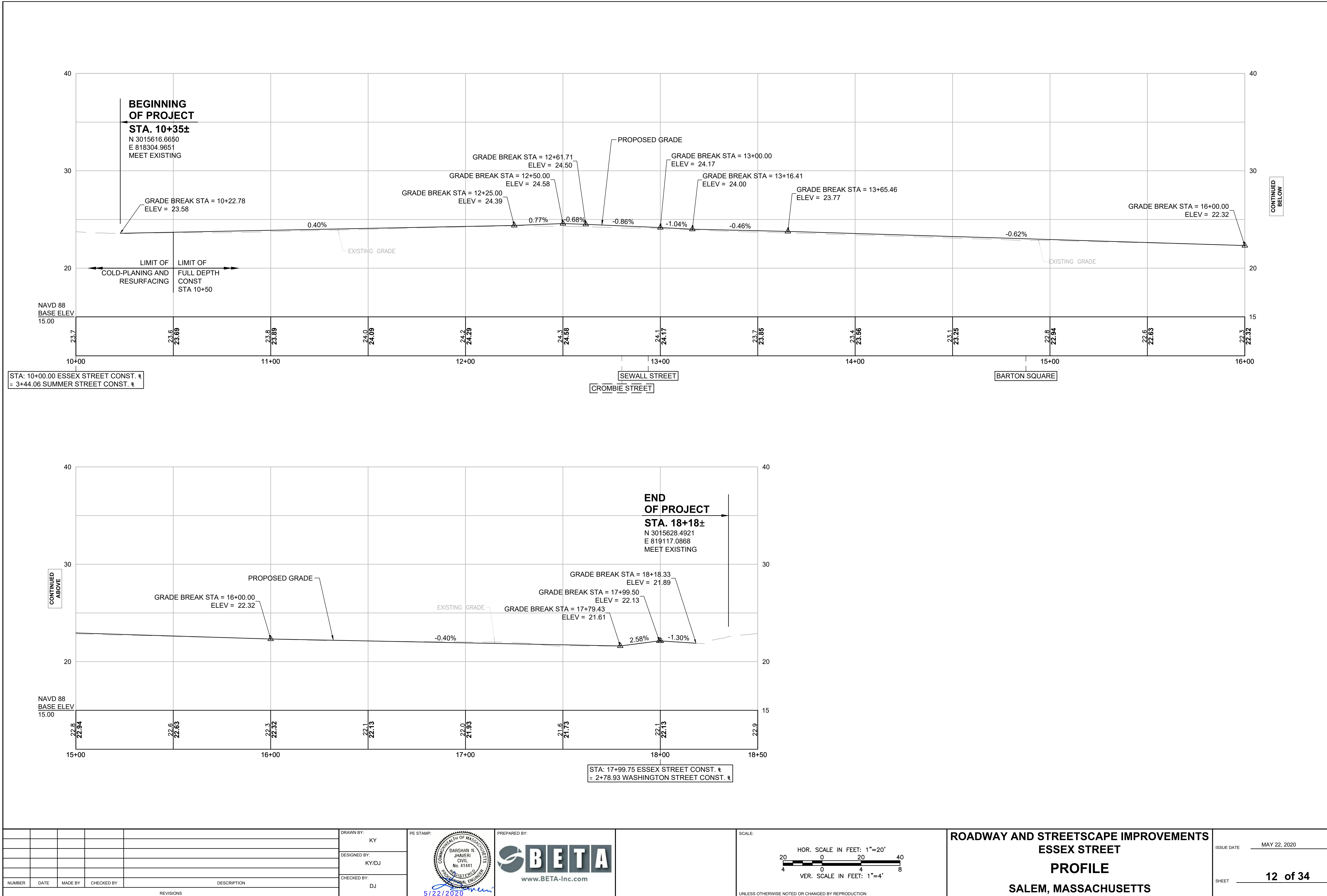
ISSUE DATE	MAY 22, 2020
SHEET	10 of 34

LIGHTING PLAN
SEE SHEET 21



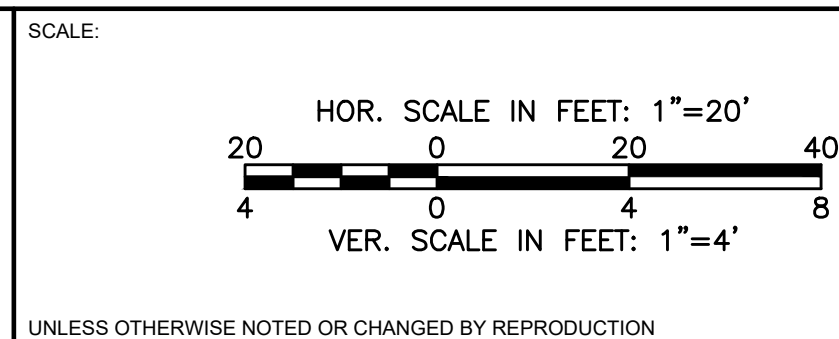
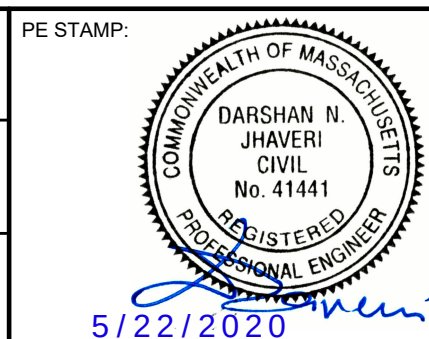
ISSUE DATE	MAY 22, 2020
SHEET	11 of 34

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NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	KY
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ

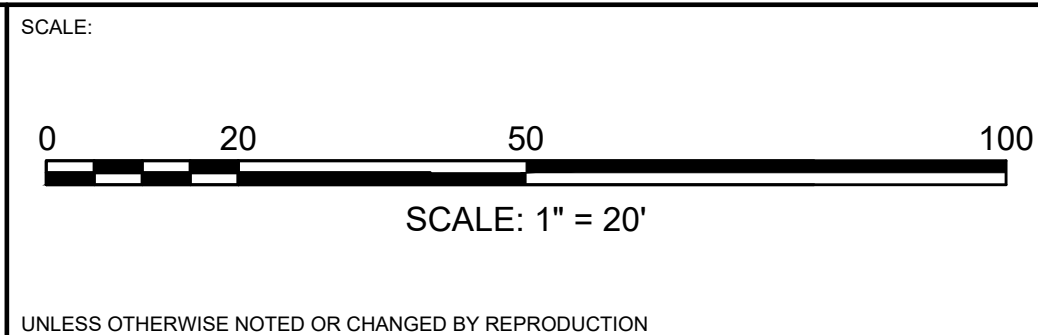
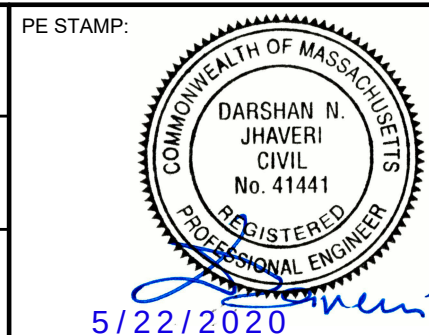


ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
PROFILE
SALEM, MASSACHUSETTS

O:\30305\5360 - Salem - On-Call\Drawing Files\Plan Set\5360 TIE.dwg

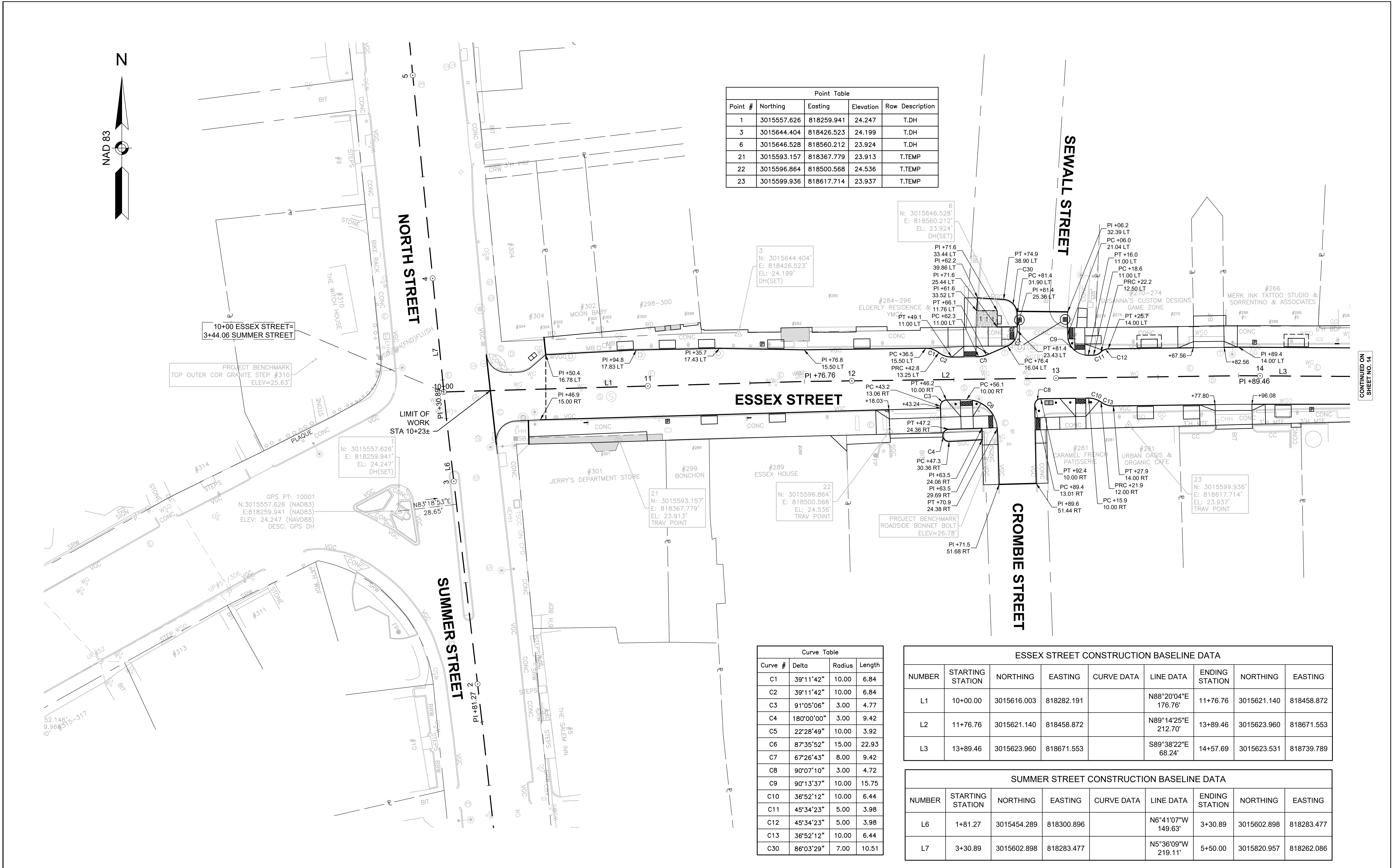
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	KY
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ



ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
CURB TIE PLAN
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	13 of 34

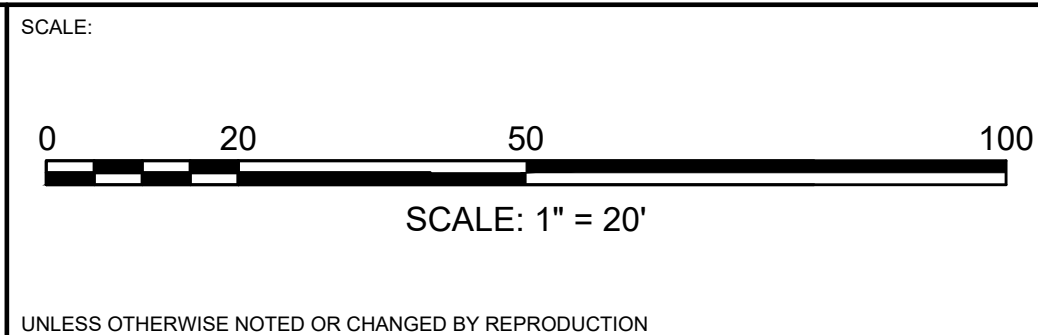
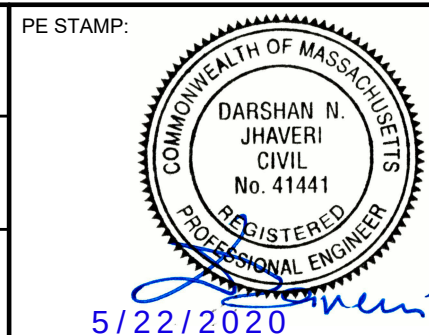


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C:\3300s\5360 - Salem - On-Call\Drawing Files\Plan Set\5360 TIE.dwg

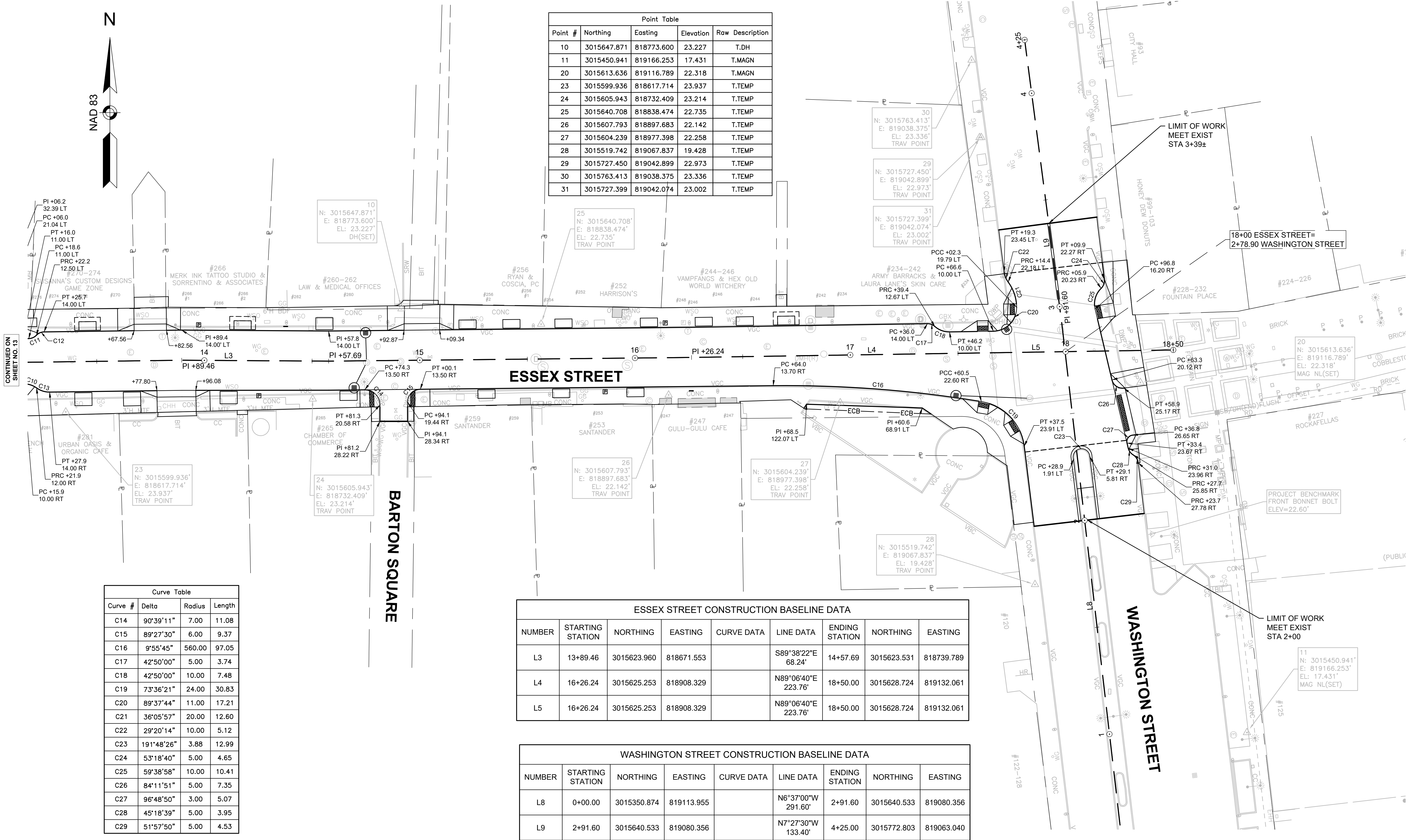
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	KY
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ



ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
CURB TIE PLAN
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	14 of 34



Point Table				
Point #	Northing	Easting	Elevation	Raw Description
10	3015647.871	818773.600	23.227	T.DH
11	3015450.941	819166.253	17.431	T.MAGN
20	3015613.636	819116.789	22.318	T.MAGN
23	3015599.936	818617.714	23.937	T.TEMP
24	3015605.943	818732.409	23.214	T.TEMP
25	3015640.708	818838.474	22.735	T.TEMP
26	3015607.793	818897.683	22.142	T.TEMP
27	3015604.239	818977.398	22.258	T.TEMP
28	3015519.742	819067.837	19.428	T.TEMP
29	3015727.450	819042.899	22.973	T.TEMP
30	3015763.413	819038.375	23.336	T.TEMP
31	3015727.399	819042.074	23.002	T.TEMP

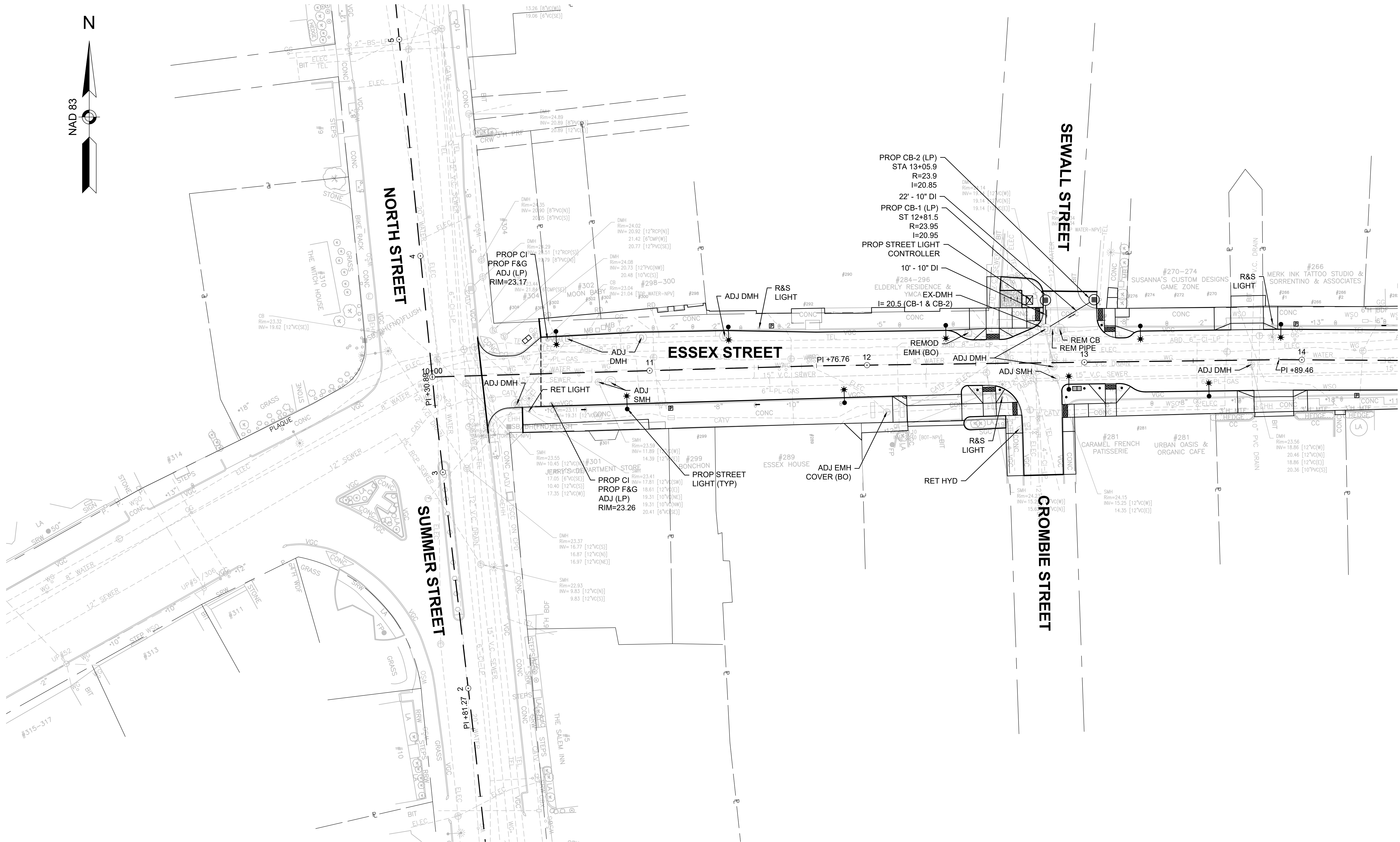
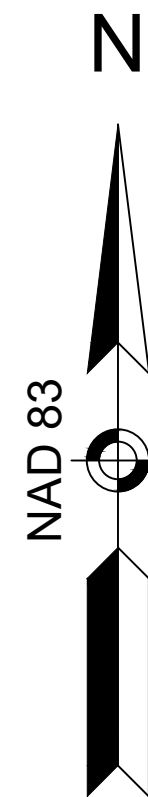
Curve Table			
Curve #	Delta	Radius	Length
C14	90°39'11"	7.00	11.08
C15	89°27'30"	6.00	9.37
C16	9°55'45"	560.00	97.05
C17	42°50'00"	5.00	3.74
C18	42°50'00"	10.00	7.48
C19	73°36'21"	24.00	30.83
C20	89°37'44"	11.00	17.21
C21	36°05'57"	20.00	12.60
C22	29°20'14"	10.00	5.12
C23	191°48'26"	3.88	12.99
C24	53°18'40"	5.00	4.65
C25	59°38'58"	10.00	10.41
C26	84°11'51"	5.00	7.35
C27	96°48'50"	3.00	5.07
C28	45°18'39"	5.00	3.95
C29	51°57'50"	5.00	4.53

ESSEX STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	13+89.46	3015623.960	818671.553		S89°38'22"E 68.24'	14+57.69	3015623.531	818739.789
L4	16+26.24	3015625.253	818908.329		N89°06'40"E 223.76'	18+50.00	3015628.724	819132.061
L5	16+26.24	3015625.253	818908.329		N89°06'40"E 223.76'	18+50.00	3015628.724	819132.061

WASHINGTON STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L8	0+00.00	3015350.874	819113.955		N6°37'00"W 291.60'	2+91.60	3015640.533	819080.356
L9	2+91.60	3015640.533	819080.356		N7°27'30"W 133.40'	4+25.00	3015772.803	819063.040



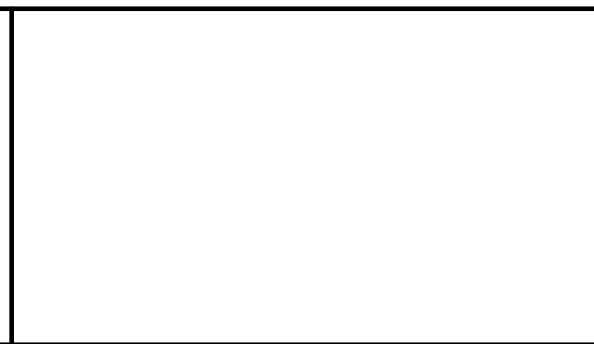
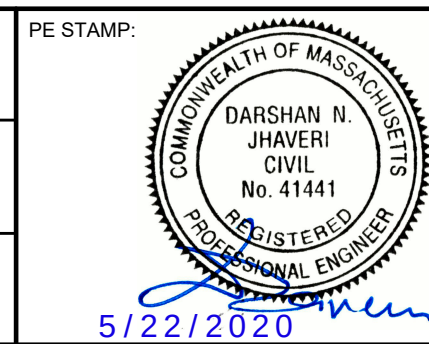
O:\5300s\5360 - Salem - On-Call\Drawing Files\Plan Set\5360 DRAIN UTIL.dwg



CONTINUED ON
SHEET NO. 17

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

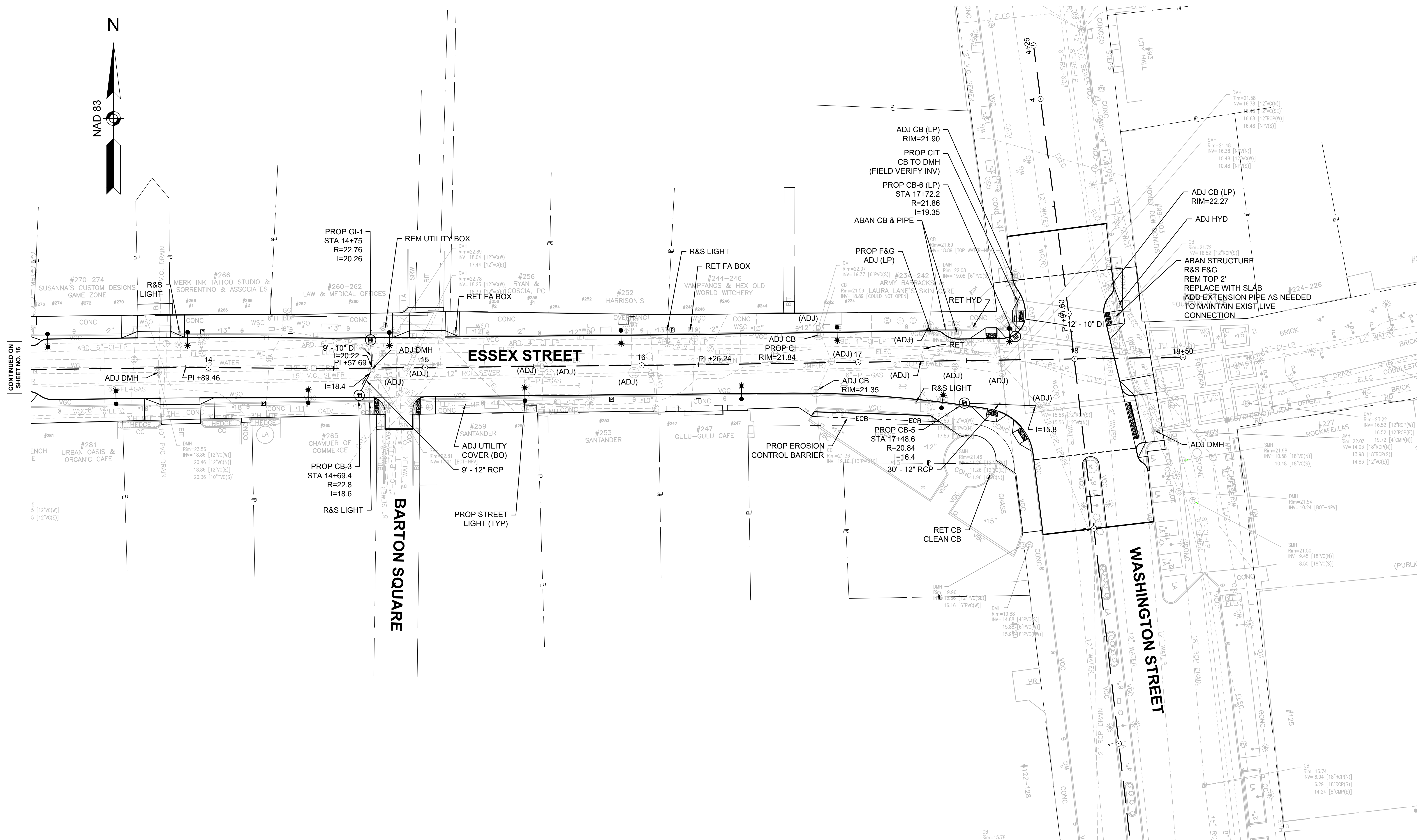
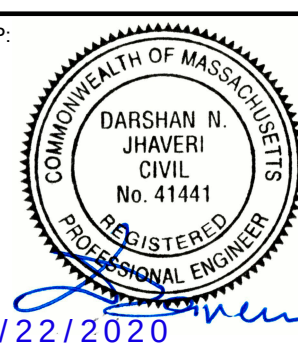
DRAWN BY:	KY
DESIGNED BY:	KY/DJ
CHECKED BY:	DJ



UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
DRAINAGE & UTILITY PLAN
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	16 of 34

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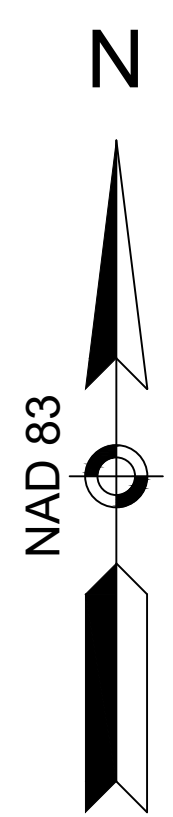
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UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

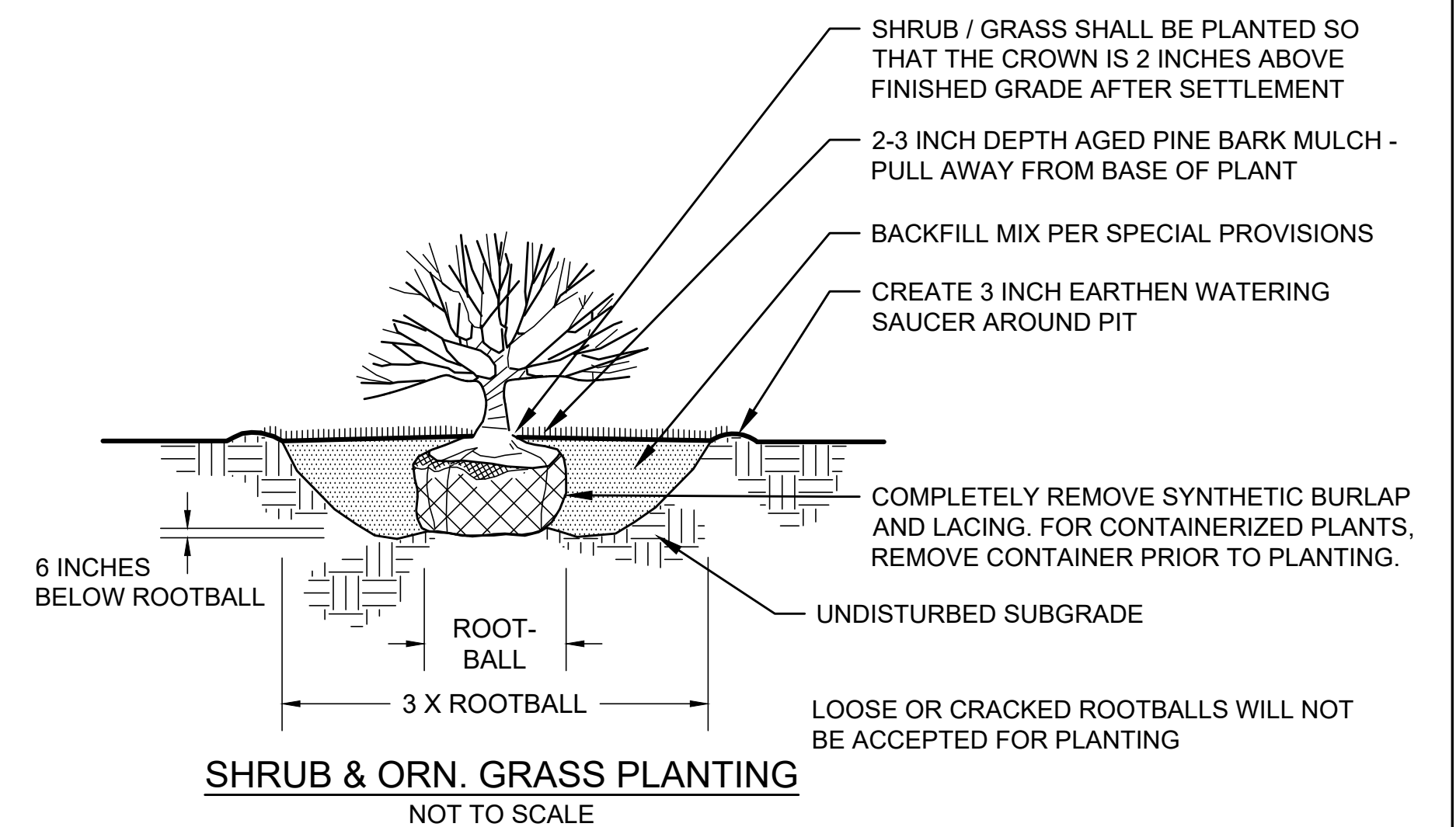
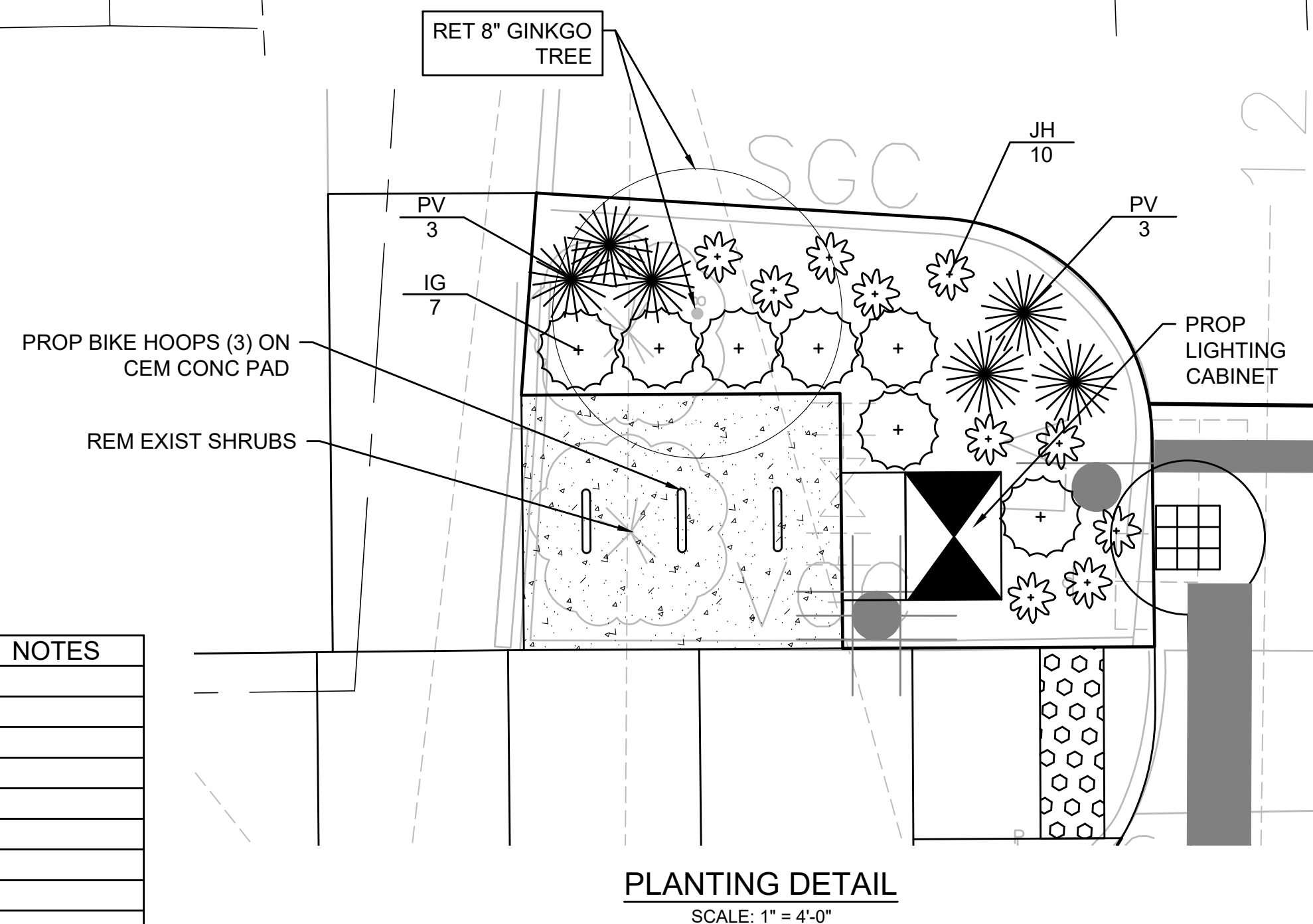
ISSUE DATE MAY 22, 2020

SHEET 17 of 34



1. CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
2. FINAL LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO PLANTING.
3. ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME & SIZE.
4. ALL PLANTS WILL BE MULCHED PER THE PLANTING SPECIFICATIONS AND DETAILS. PLANTING DETAILS AND SPECIAL PROVISIONS.

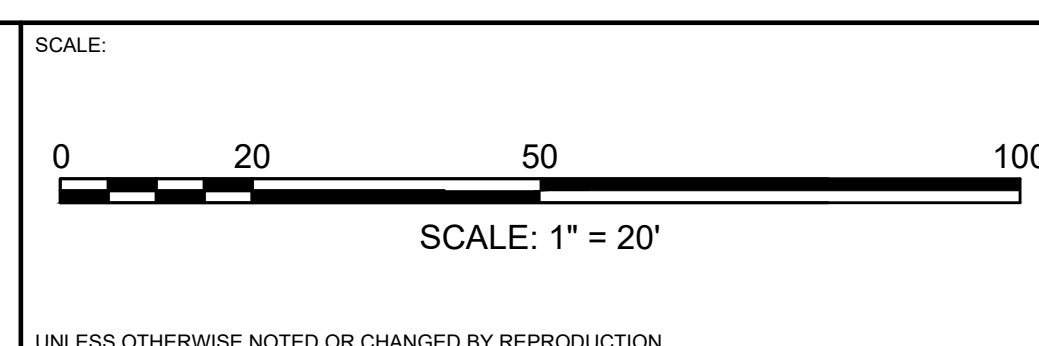
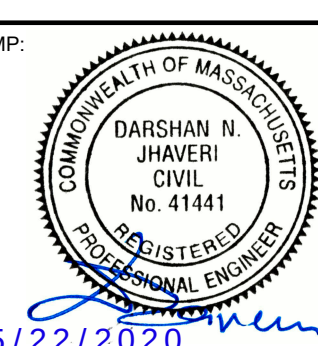
KEY	QU.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
TREES						
AR	1	ACER RUBRUM 'ARMSTRONG'	MAPLE - RED - 'ARMSTRONG'	3-3.5' CAL	B&B	
LS	1	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	SWEETGUM - ROTUNDILOBA'	3-3.5' CAL	B&B	
OV	1	OSTRYA VIRGINIANA	HOPHORNBEAM - AMERICAN	3-3.5' CAL	B&B	
SHRUBS AND ORNAMENTAL GRASSES						
IG	7	ILEX GLABRA 'NIGRA'	INKBERRY - DWARF - 'NIGRA'	3 GAL	CONT	
JH	10	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	JUNIPER - 'BAR HARBOR'	3 GAL	CONT	
PV	6	PANICUM VIRIGATUM 'SHENANDOAH'	SWITCH GRASS - 'SHENANDOAH'	3 GAL	CONT	



KEY	QU.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
TREES						
LS	1	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'	SWEETGUM - ROTUNDILOBA'	3-3.5" CAL	B&B	
OV	1	OSTRYA VIRGINIANA	HOPHORNBEAM - AMERICAN	3-3.5" CAL	B&B	
SHRUBS AND ORNAMENTAL GRASSES						
IG	7	ILEX GLABRA 'NIGRA'	INKBERRY - DWARF - 'NIGRA'	3 GAL	CONT	
JH	10	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	JUNIPER - 'BAR HARBOR'	3 GAL	CONT	
PV	6	PANICUM VIRIGATUM 'SHENANDOAH'	SWITCH GRASS - 'SHENANDOAH'	3 GAL	CONT	

	6/5/2020	JMC	DJ	CROSSWALK TREATMENT CHANGE
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	SR
DESIGNED BY:	SR
CHECKED BY:	DJ

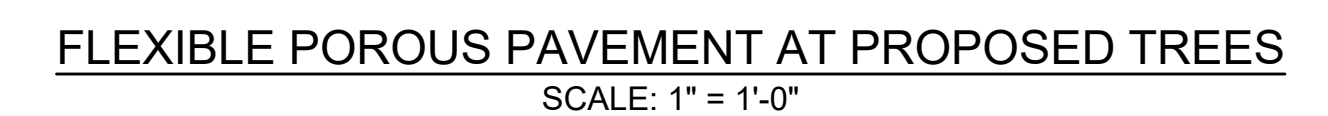
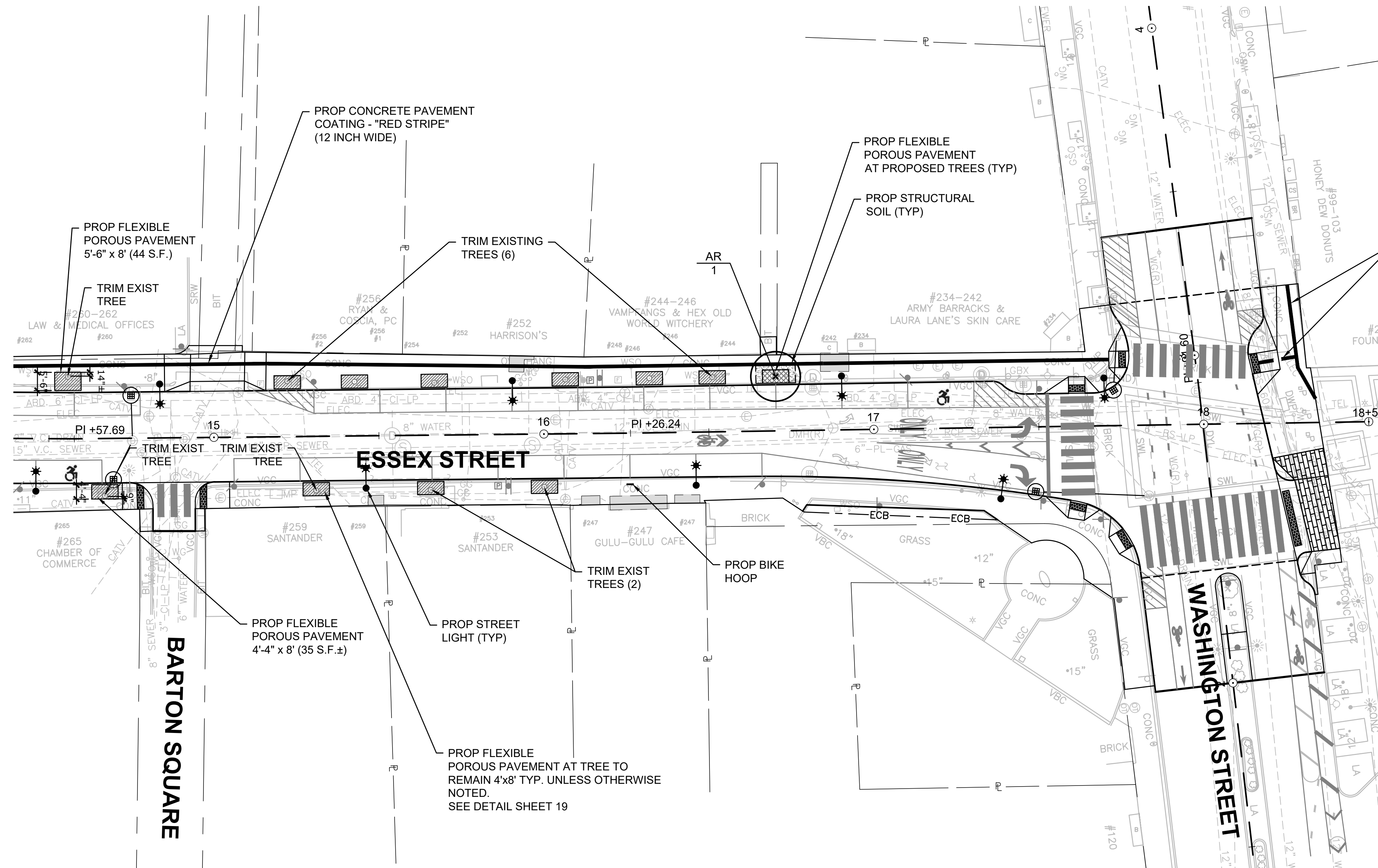


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**ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
LANDSCAPE PLAN
SALEM, MASSACHUSETTS**

ISSUE DATE MAY 22, 2020

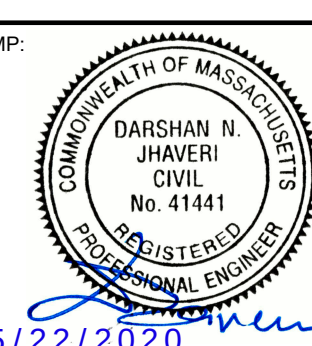
18 of 34



KEY	QU.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
TREES						
AR	1	ACER RUBRUM 'ARMSTRONG'	MAPLE - RED - 'ARMSTRONG'	3-3.5" CAL	B&B	

	6/5/2020	JMC	DJ	CROSSWALK TREATMENT CHANGE
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

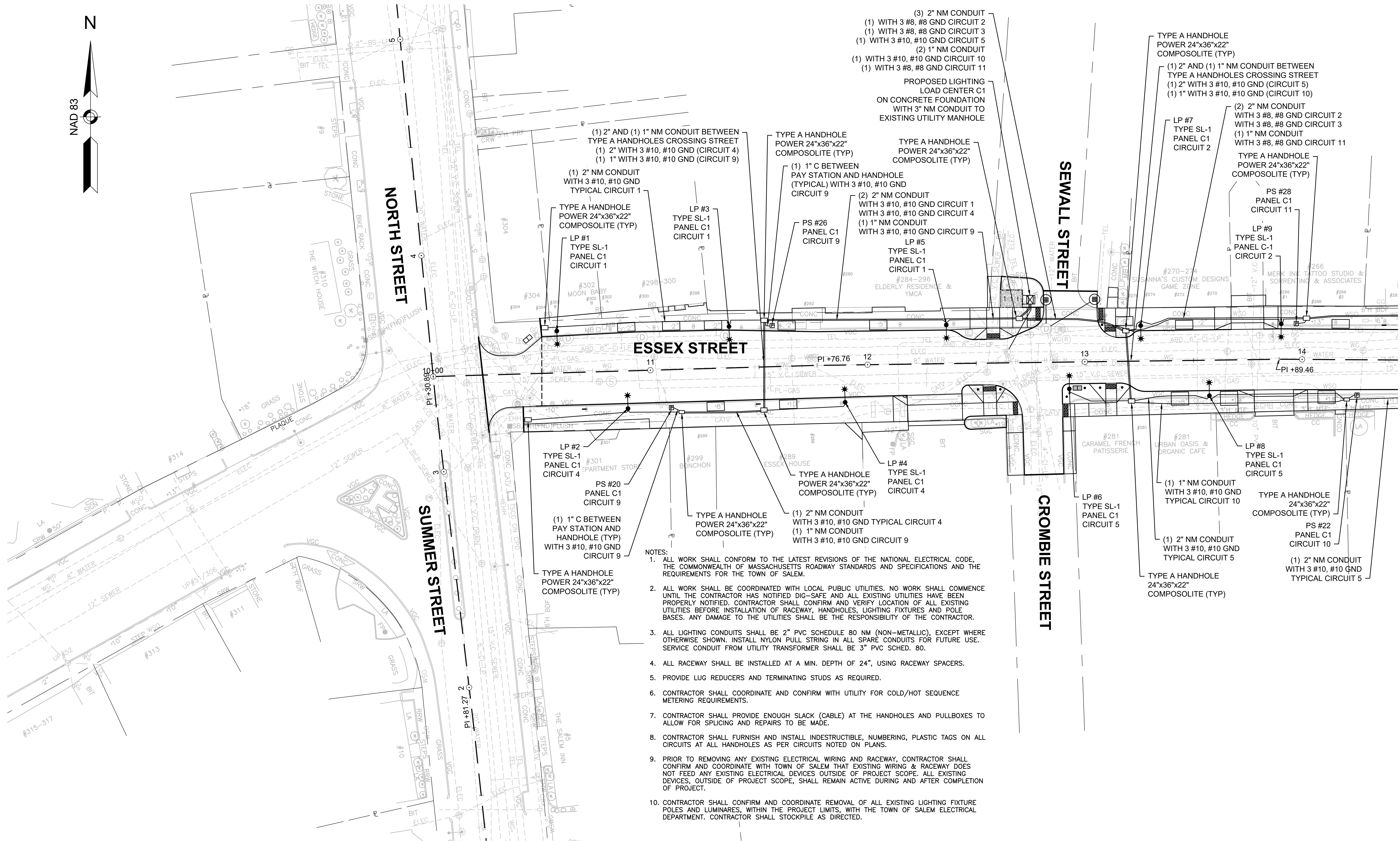
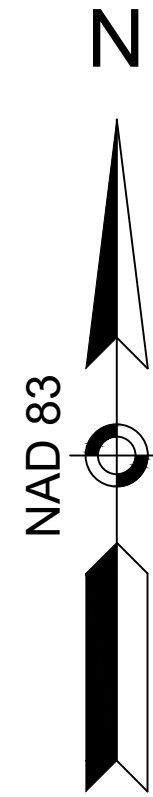
DRAWN BY:	SR
	DESIGNED BY:
	SR
CHECKED BY:	DJ



UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

ROADWAY AND STREETSCAPE IMPROVEMENTS ESSEX STREET LANDSCAPE PLAN SALEM, MASSACHUSETTS

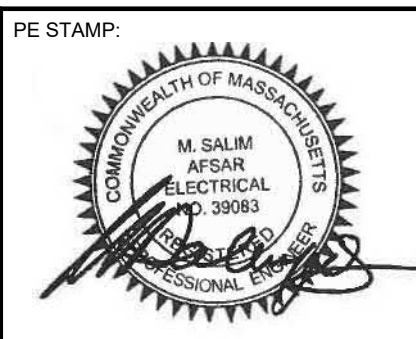
SHEET **19 of 34**



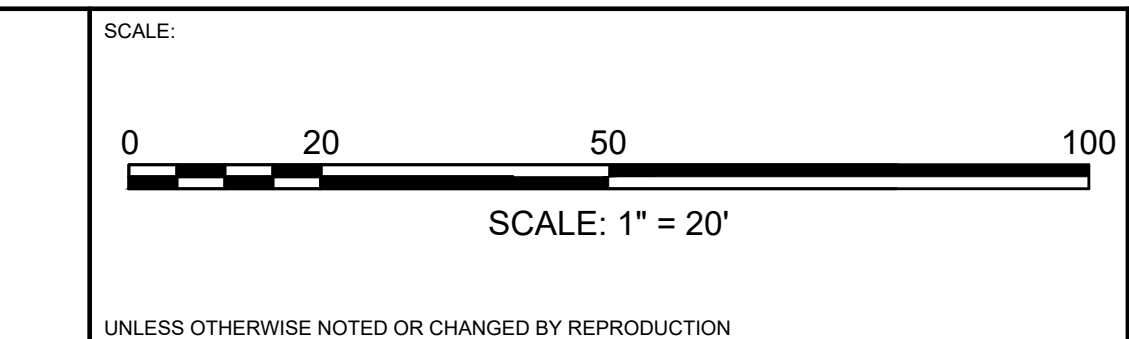
- NOTES:
1. ALL WORK SHALL CONFORM TO THE LATEST REVISIONS OF THE NATIONAL ELECTRICAL CODE, THE COMMONWEALTH OF MASSACHUSETTS ROADWAY STANDARDS AND SPECIFICATIONS AND THE REQUIREMENTS FOR THE TOWN OF SALEM.
 2. ALL WORK SHALL BE COORDINATED WITH LOCAL PUBLIC UTILITIES. NO WORK SHALL COMMENCE UNTIL THE CONTRACTOR HAS NOTIFIED DIG-SAFE AND ALL EXISTING UTILITIES HAVE BEEN PROPERLY NOTIFIED. CONTRACTOR SHALL CONFIRM AND VERIFY LOCATION OF ALL EXISTING UTILITIES BEFORE INSTALLATION OF RACEWAY, HANDHOLES, LIGHTING FIXTURES AND POLE BASES. ANY DAMAGE TO THE UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 3. ALL LIGHTING CONDUITS SHALL BE 2" PVC SCHEDULE 80 NM (NON-METALLIC), EXCEPT WHERE OTHERWISE SHOWN. INSTALL NYLON PULL STRING IN ALL SPARE CONDUITS FOR FUTURE USE. SERVICE CONDUIT FROM UTILITY TRANSFORMER SHALL BE 3" PVC SCHED. 80.
 4. ALL RACEWAY SHALL BE INSTALLED AT A MIN. DEPTH OF 24", USING RACEWAY SPACERS.
 5. PROVIDE LUG REDUCERS AND TERMINATING STUDS AS REQUIRED.
 6. CONTRACTOR SHALL COORDINATE AND CONFIRM WITH UTILITY FOR COLD/HOT SEQUENCE METERING REQUIREMENTS.
 7. CONTRACTOR SHALL PROVIDE ENOUGH SLACK (CABLE) AT THE HANDHOLES AND PULLBOXES TO ALLOW FOR SPLICING AND REPAIRS TO BE MADE.
 8. CONTRACTOR SHALL FURNISH AND INSTALL INDESTRUCTIBLE, NUMBERING, PLASTIC TAGS ON ALL CIRCUITS AT ALL HANDHOLES AS PER CIRCUITS NOTED ON PLANS.
 9. PRIOR TO REMOVING ANY EXISTING ELECTRICAL WIRING AND RACEWAY, CONTRACTOR SHALL CONFIRM AND COORDINATE WITH TOWN OF SALEM THAT EXISTING WIRING & RACEWAY DOES NOT FEED ANY EXISTING ELECTRICAL DEVICES OUTSIDE OF PROJECT SCOPE. ALL EXISTING DEVICES, OUTSIDE OF PROJECT SCOPE, SHALL REMAIN ACTIVE DURING AND AFTER COMPLETION OF PROJECT.
 10. CONTRACTOR SHALL CONFIRM AND COORDINATE REMOVAL OF ALL EXISTING LIGHTING FIXTURE POLES AND LUMINAIRES, WITHIN THE PROJECT LIMITS, WITH THE TOWN OF SALEM ELECTRICAL DEPARTMENT. CONTRACTOR SHALL STOCKPILE AS DIRECTED.

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY: PG/SD
DESIGNED BY: PG
CHECKED BY: DJ



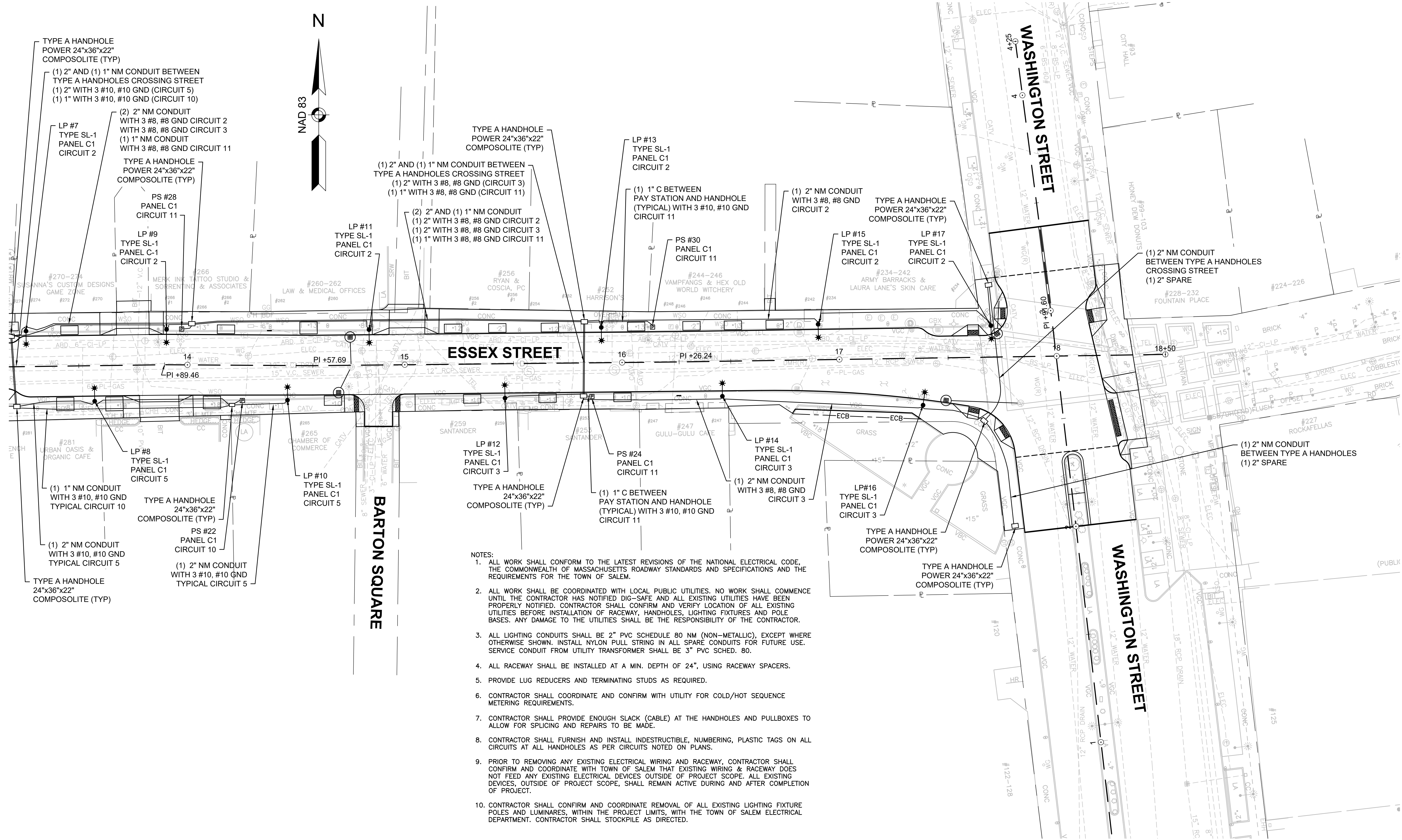
PREPARED BY:



ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
LIGHTING PLAN
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	20 of 34

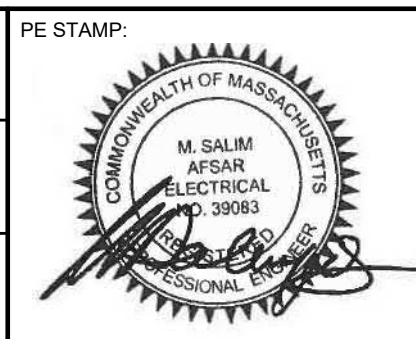
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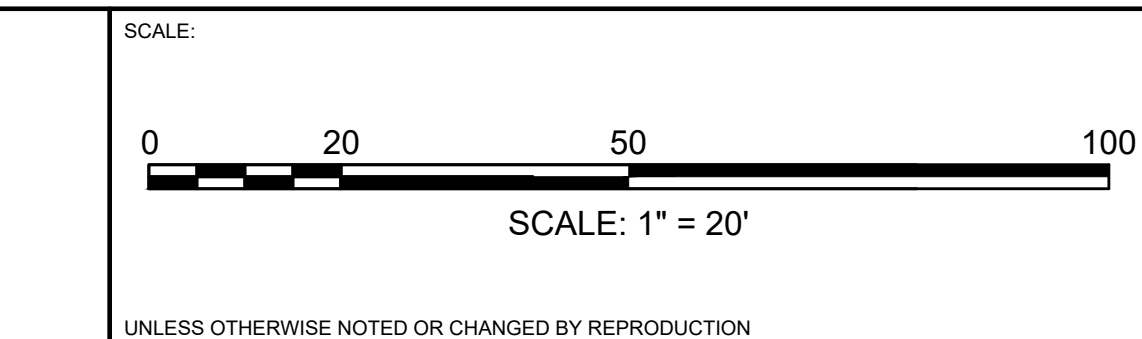
- NOTES:
1. ALL WORK SHALL CONFORM TO THE LATEST REVISIONS OF THE NATIONAL ELECTRICAL CODE, THE COMMONWEALTH OF MASSACHUSETTS ROADWAY STANDARDS AND SPECIFICATIONS AND THE REQUIREMENTS FOR THE TOWN OF SALEM.
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NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	PG/SD
DESIGNED BY:	PG
CHECKED BY:	DJ



PREPARED BY:



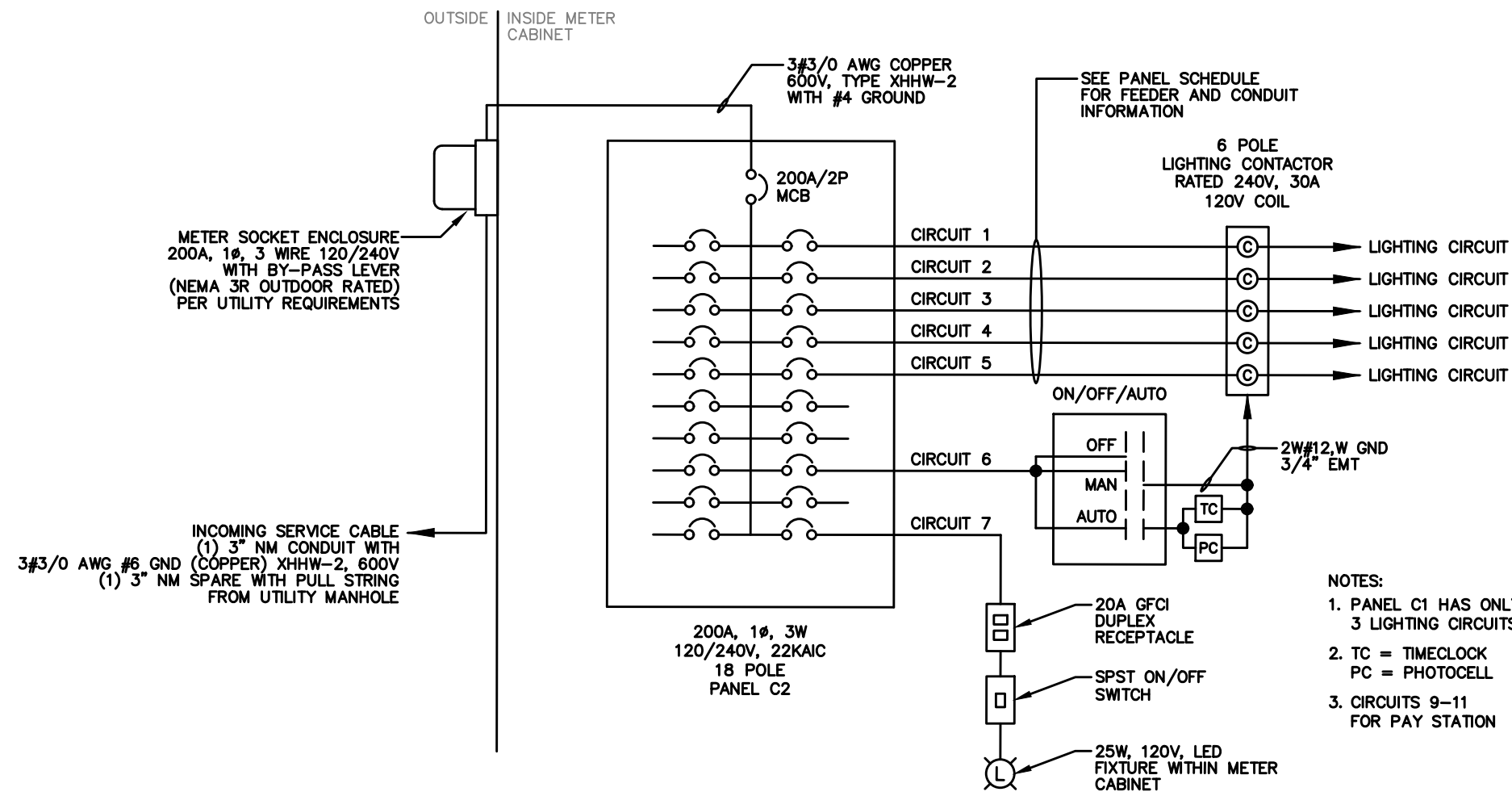
ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
LIGHTING PLAN
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
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ELECTRICAL FIXTURE SCHEDULE							
TYPE	DESCRIPTION	MANUFACTURER & CATALOG NUMBER	LAMPS NUMBER	LAMPS TYPE	INPUT VOLTS	INPUT WATTS	REMARKS
SL1	SINGLE HEAD SITE LIGHTING FIXTURE WITH INTEGRAL GFCI RECEPTACLE AND WATTAGE SELECTOR SWITCH	SPRING CITY: ALUMICHELOORS/EV1X2 45CR3GR10LACLB FEDTR2PCU 20' AFG TO 10'	1	LED	UNV	100W	SEE NOTES BELOW
PS	MULTI SPACE PAY STATION	DIGITAL: LUKE 2 SERIES	-	-	120	25W	SEE NOTES BELOW

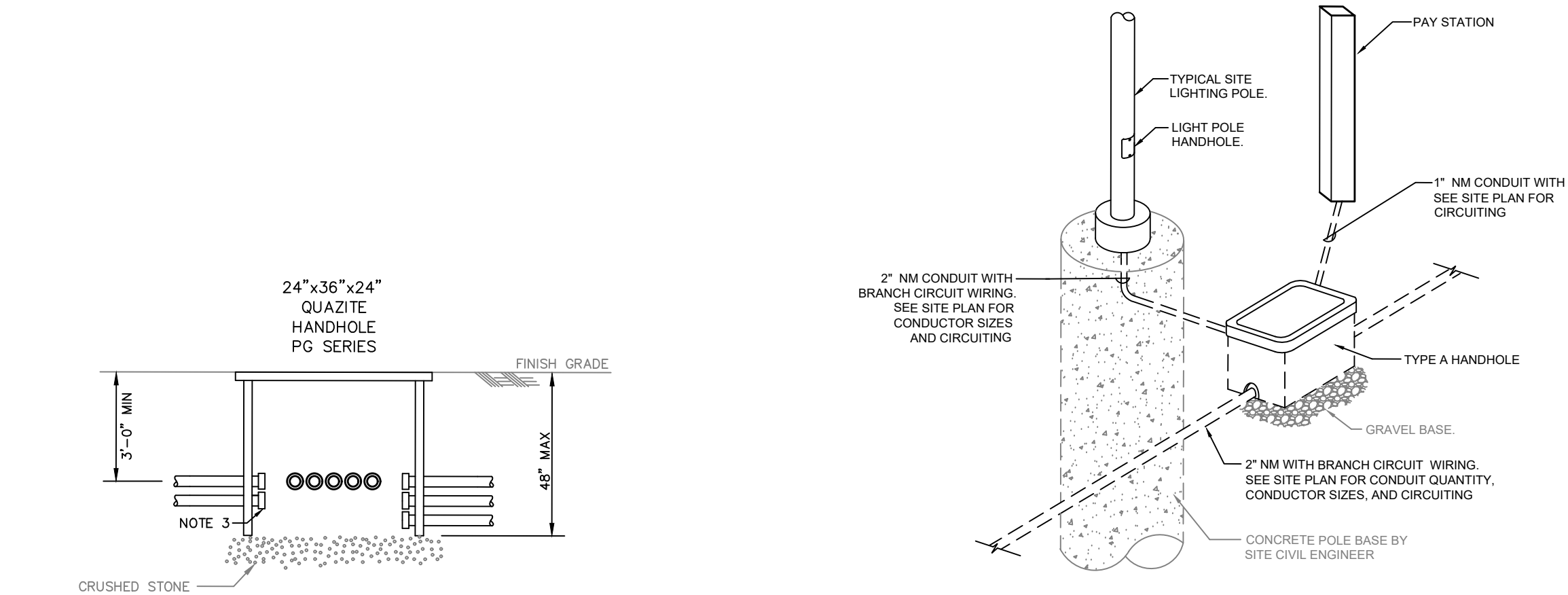
- FIXTURE SCHEDULE NOTES:
- ELECTRICAL CONTRACTOR SHALL CONFIRM FIXTURE, POLE BASE, COVER COLOR/FINISH, AND LAMP COLOR WITH LANDSCAPE ARCHITECT.
 - CONTRACTOR SHALL CONFIRM QUANTITY AND LOCATION OF FIXTURES WITH SITE/CIVIL ENGINEER AND LANDSCAPE ARCHITECT.
 - CONTRACTOR SHALL CONFIRM MOUNTING HEIGHT OF GFCI RECEPTACLE WITH LANDSCAPE ARCHITECT.

LOAD CENTER PANEL SCHEDULE - C1					
PHASE: 1		WIRES: 3	VOLTAGE: 120/240	MAINS: 200AMCB	
CIRCUIT	FRAME	BREAKER	POLES(N-NEUTRAL)	TRIP	DESCRIPTION OF LOAD
M	200	2P	200		MAIN CIRCUIT BREAKER
1	30	2P	30		NEW LIGHTING CIRCUIT C1-1
2	30	2P	30		NEW LIGHTING CIRCUIT C1-2
3	30	2P	30		NEW LIGHTING CIRCUIT C1-3
4	30	2P	30		NEW LIGHTING CIRCUIT C1-4
5	30	2P	30		NEW LIGHTING CIRCUIT C1-5
6	20	1P	20		RECEPTACLE IN CABINET
7	20	1P	20		ON/OFF/AUTO CONTROL IN CABINET
8	20	1P	20		TIMELOCK IN CABINET
9	20	1P	20		PAY STATION CIRCUIT C1-9
10	20	1P	20		PAY STATION CIRCUIT C1-10
11	20	1P	20		PAY STATION CIRCUIT C1-11



③ Lighting Load Center Riser Detail

Scale: None

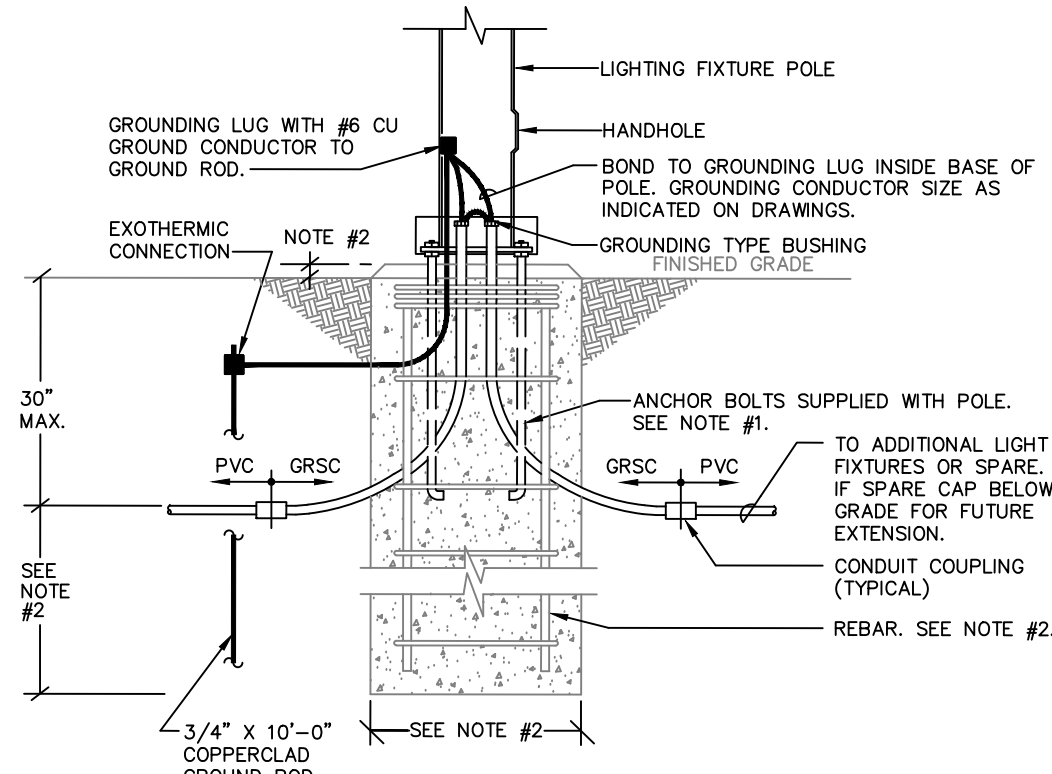


NOTES:

- CONTRACTOR SHALL CONFIRM LOCATION AND INSTALLATION OF NEW HANDHOLE WITH SITE/CIVIL ENGINEER.

① Type A Handhole

Scale: None

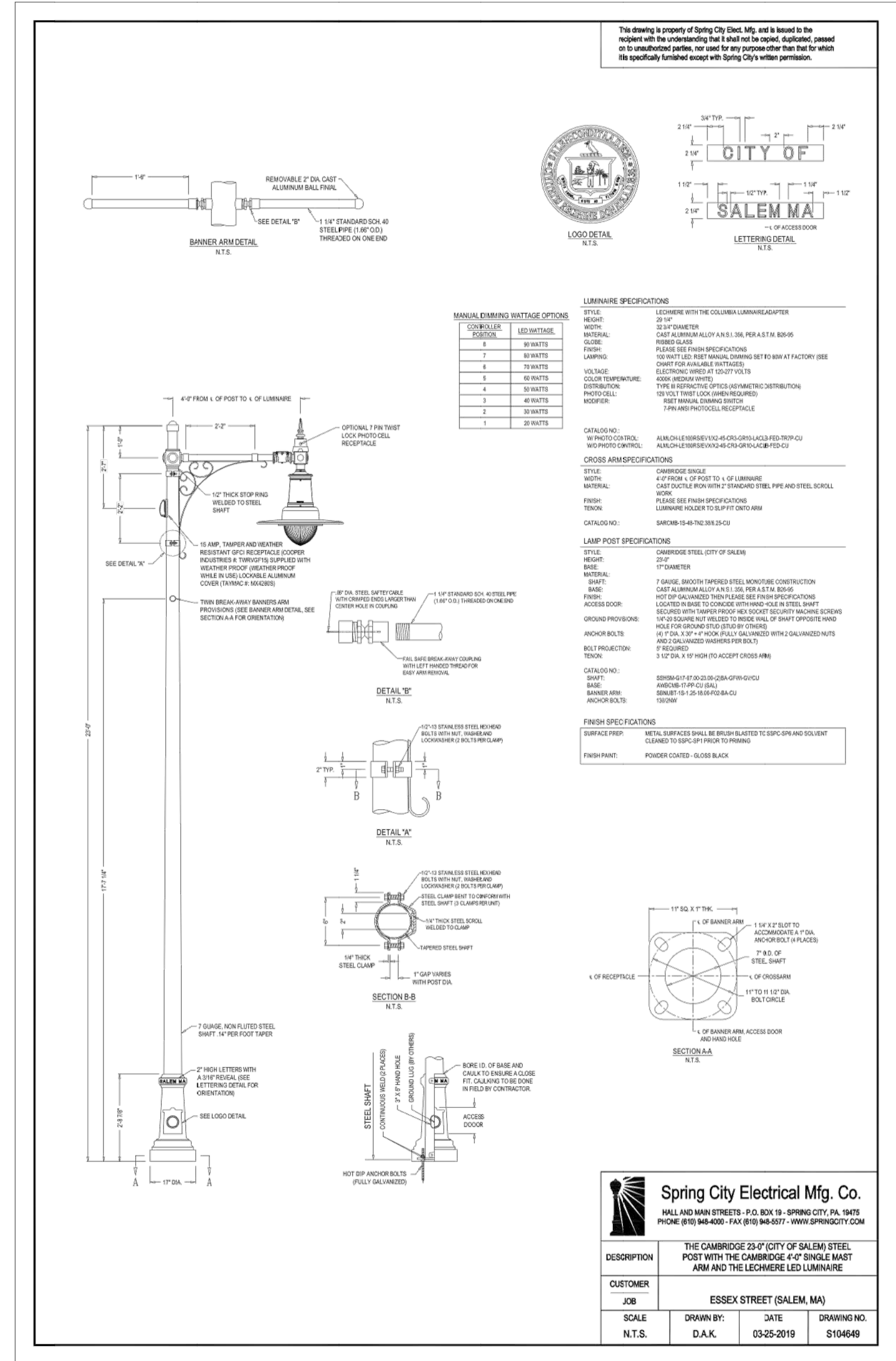


NOTES:

- BOLT PATTERN SHOWN IS TYPICAL AND NOT FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE BOLT PATTERN DETAILS BASED ON SELECTED MANUFACTURER.
- REFER TO SITE CIVIL ENGINEER FOR POLE BASE HEIGHT, SIZE AND REBAR REQUIREMENTS.
- COORDINATE EXACT ANCHOR BOLT REQUIREMENTS WITH SITE CIVIL ENGINEER e.g. BREAK-AWAY TYPE.

④ Site Lighting Pole Base Detail

Scale: None

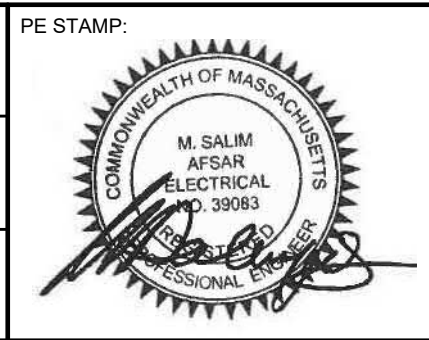


⑤ Site Lighting Detail

Scale: None

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION	
				REVISIONS	

DRAWN BY:	PG
DESIGNED BY:	PG
CHECKED BY:	DJ



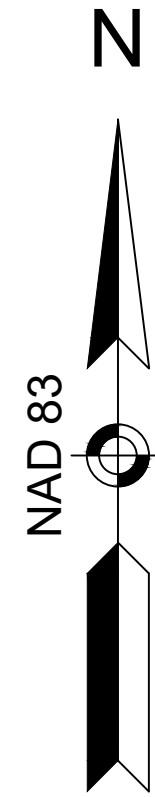
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UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION	

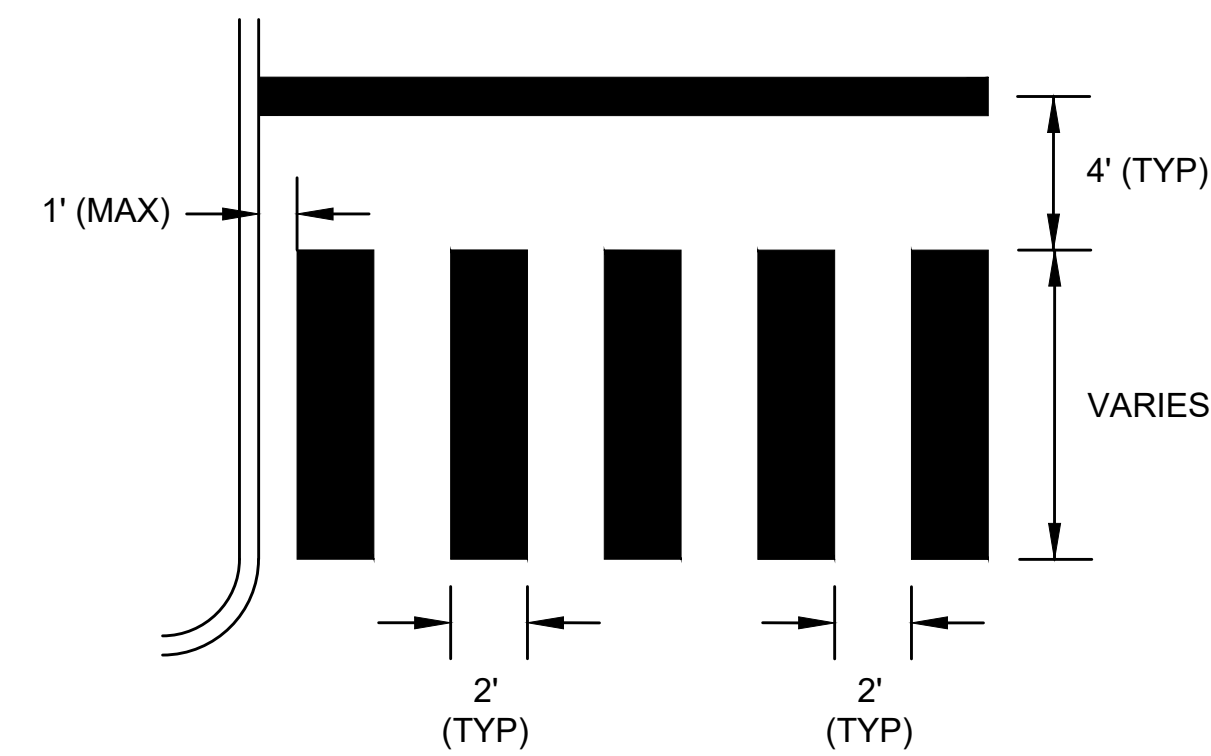
ROADWAY AND STREETSCAPE IMPROVEMENTS	
ESSEX STREET	
LIGHTING DETAILS	
SALEM, MASSACHUSETTS	

ISSUE DATE	MAY 22, 2020
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SIGN & PAVEMENT MARKING NOTES

1. ALL EXISTING SIGNS AND SIGN POSTS WITHIN THE PROJECT LIMITS SHALL BE R&D UNLESS OTHERWISE NOTED ON PLANS.
2. ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY AN APPROVED METHOD.
3. ALL PROPOSED SIGN POSTS SHALL BE P-5 TYPE (TELESCOPIC POST).
4. SP-1, R7-11 AND R7-8a SIGNS SHALL BE MOUNTED AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° TO THE CURB AND FACING THE FLOW OF TRAFFIC. ALL OTHER SIGNS SHOULD BE 90° TO THE CURB AND FACING THE FLOW OF TRAFFIC.
5. STREET SIGNS SHALL BE MOUNTED PARALLEL WITH THE STREET.
6. ALL R&R SIGNS SHALL BE MOUNTED ON NEW POSTS.
7. SIGNS TO BE MOUNTED NEAR THE CURB LINE SHALL BE SET BACK 6" FROM THE EDGE OF THE SIGN PANEL TO THE CURB LINE. NO SIGN SHALL OVERHANG THE CURB LINE.
8. ALL SIGNS SHALL BE MOUNTED TO PROVIDE A 7' MINIMUM CLEARANCE BETWEEN THE BOTTOM OF THE SIGN AND FINISHED GRADE.
9. CONTRACTOR TO COORDINATE WITH CITY OF SALEM FOR REMOVAL OF PARKING METERS PRIOR TO CONSTRUCTION.



CROSSWALK DETAIL
NOT TO SCALE

ESSEX STREET
ONE WAY

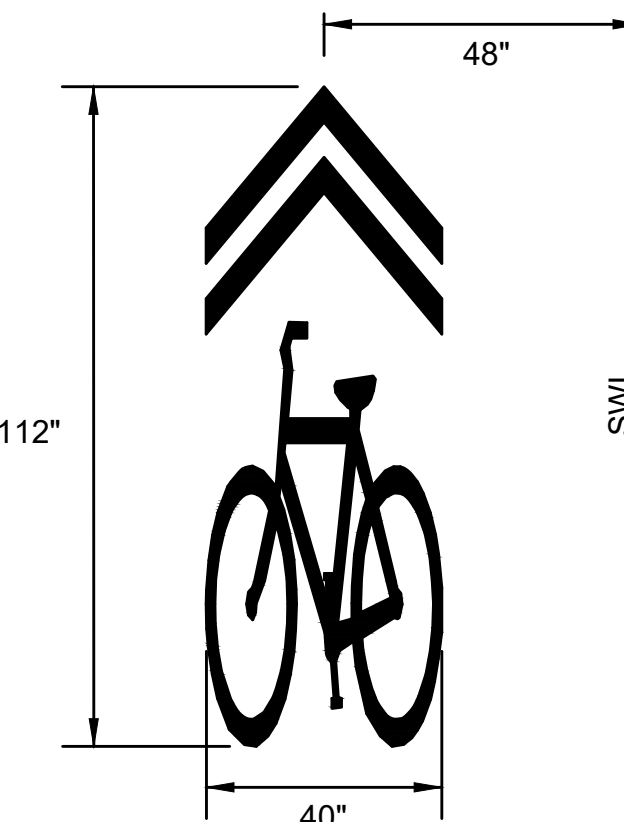
SEWALL STREET

CROMBIE STREET
ONE WAY

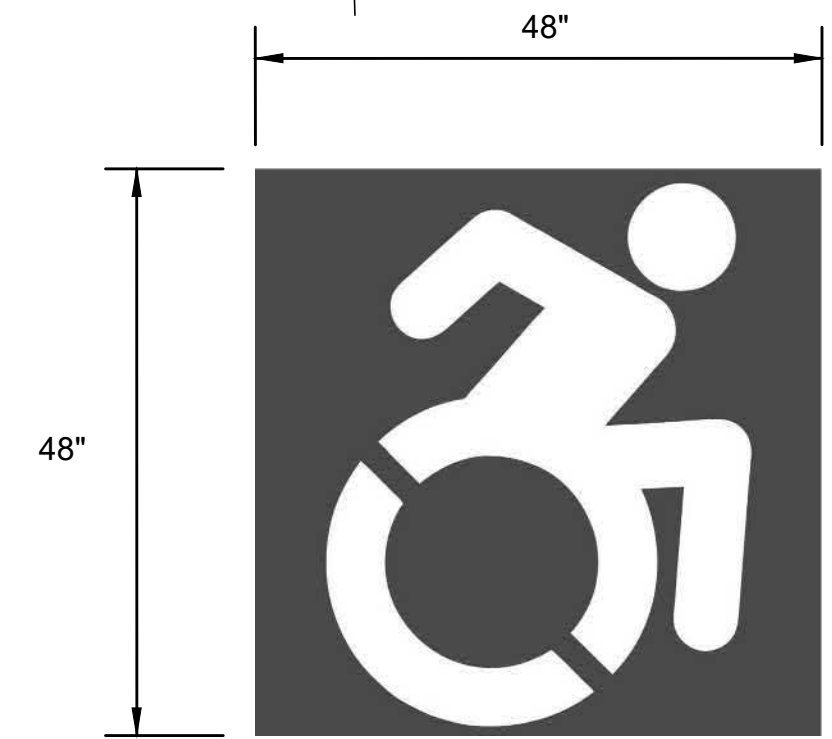
SUMMER STREET

ESSEX STREET

NORTH STREET



SHARED LANE MARKING DETAIL
NOT TO SCALE



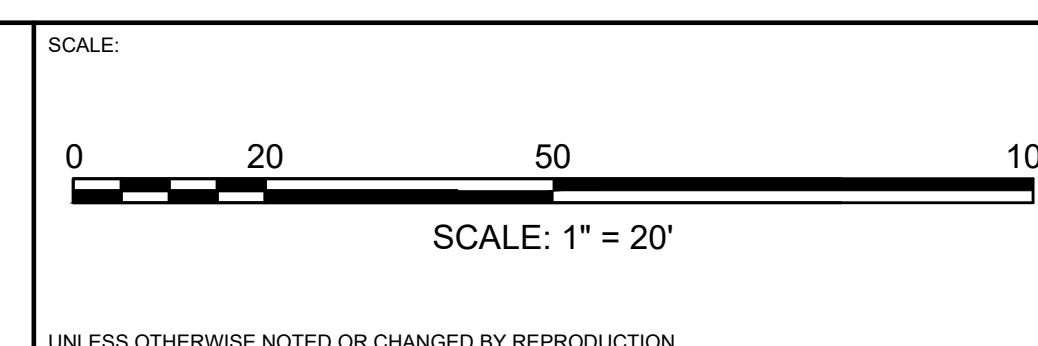
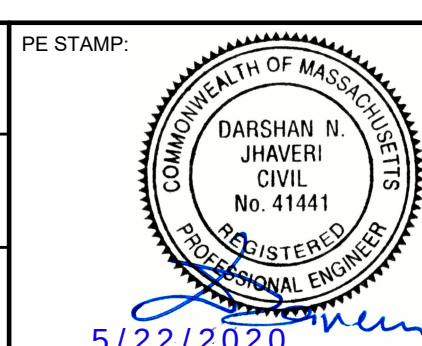
- NOTES:
1. ACCESSIBLE SYMBOLS SHALL BE WHITE THERMOPLASTIC WITH BLUE BACKGROUND.
 2. ACCESSIBLE SYMBOLS SHALL BE INSTALLED, ORIENTATED AS SHOWN IN EACH LOCATION AND CENTERED IN THE PARKING STALL.

ACCESSIBLE SYMBOL
PAVEMENT MARKING
NOT TO SCALE

CONTINUED ON
SHEET NO. 24

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
1	6/5/2020	JMC	DJ	CROSSWALK TREATMENT CHANGE
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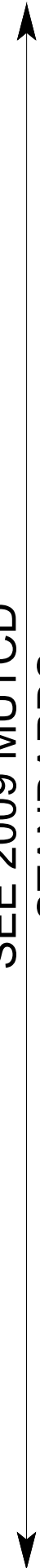
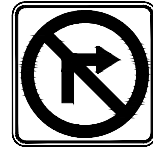
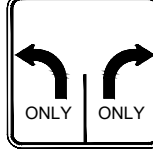
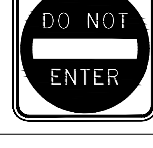
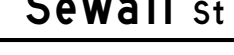
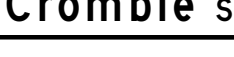
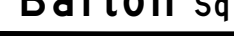
DRAWN BY:	LF
DESIGNED BY:	JMC
CHECKED BY:	DJ



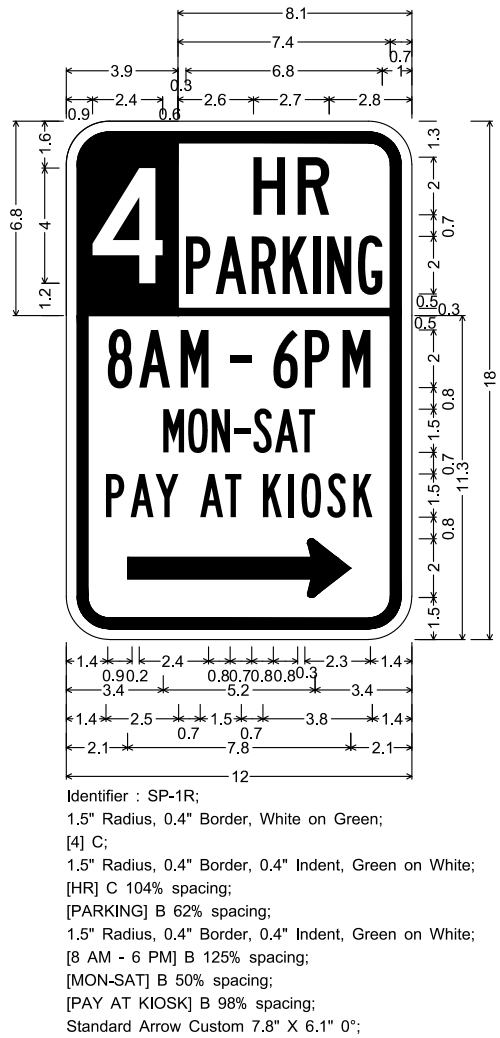
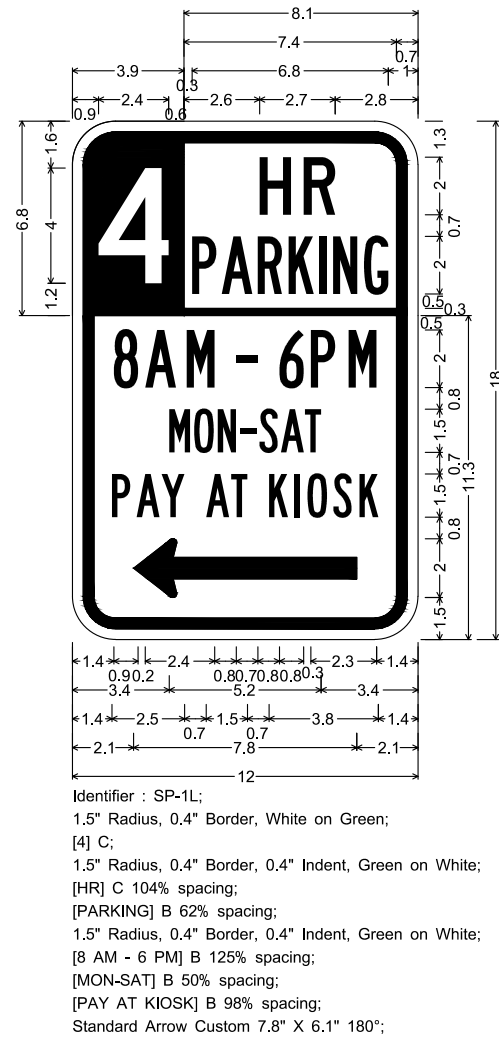
ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
SIGN & PAVEMENT MARKINGS PLAN
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	23 of 34

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IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK- GROUND	LEGEND	BORDER					
R1-1	30 in	30 in		SEE 2009 MUTCD STANDARDS			4	RED	WHITE	WHITE	P-5 4	6.25	25.0		
R3-1	24 in	24 in					1	WHITE	RED/ BLACK	BLACK	MOUNT W/ R1-1	4.0	4.0		
R3-7LR	30 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	6.25	6.25		
R4-11	30 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	6.25	6.25		
R5-1	30 in	30 in					4	WHITE	RED/ BLACK	BLACK	MOUNT 1 ON L.P. 1 W/ R1-1 1 W/ R6-1 1 P-5	6.25	25.0		
R6-1 (PBS)	36 in	12 in					5	WHITE	BLACK	BLACK	MOUNT 1 ON M.A. 1 ON L.P. 1 W/ R1-1 2 P-5	3.0	15.0		
R6-2L	24 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	5.0	5.0		
R6-2R	24 in	30 in					1	WHITE	BLACK	BLACK	P-5 1	5.0	5.0		
R7-8a	12 in	18 in					4	WHITE	GREEN	GREEN	MOUNT 2 W/ SP-1L 2 W/ SP-1R	1.5	6.0		
R7-11L	12 in	18 in					3	WHITE	RED	RED	MOUNT 4 W/ SP-1R 1 P-5	1.5	4.5		
R7-11R	12 in	18 in					1	WHITE	RED	RED	MOUNT W/ SP-1L	1.5	1.5		
R7-20	24 in	18 in					12	WHITE	GREEN	GREEN	P-5 6	3.0	36.0		
SP-1L	12 in	18 in		SEE SPECIAL SIGN DETAILS			6	WHITE	GREEN	GREEN	P-5 6	1.5	9.0		
SP-1R	12 in	18 in					7	WHITE	GREEN	GREEN	P-5 7	1.5	10.5		
SP-2	12 in	18 in		CITY OF SALEM TO PROVIDE			12	WHITE	BLACK	BLACK	MOUNT 6 W/ SP-1L 6 W/ SP-1R	-	-		
D3-1	54 in	12 in		6/4C			3 3 	6" SEAL	2	GREEN	WHITE	WHITE	MOUNT W/ R6-1	EACH	EACH
D3-1 (PBS)	54 in	12 in							2				MOUNT 1 ON L.P. 1 ON M.A.	EACH	EACH
D3-2	54 in	12 in							2				MOUNT W/ R6-1	EACH	EACH
D3-3 (PBS)	60 in	12 in							1				MOUNT ON L.P.	EACH	EACH
D3-4 (PBS)	54 in	12 in							1				MOUNT ON L.P.	EACH	EACH
D3-5 (PBS)	54 in	12 in							1				MOUNT ON L.P.	EACH	EACH
D3-6 (PBS)	54 in	12 in							1						MOUNT ON M.A.

- NOTES:
- HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING CONFORMING TO SECTION M9:30.0, TYPE III OR IV, OF THE MASSDOT STANDARD SPECIFICATIONS SHALL BE USED FOR ALL SIGNS.
 - ALL P5 POSTS SHALL BE TELESCOPIC, RECTANGULAR TYPE POSTS, CONFORMING TO THE DIMENSIONS AND REQUIREMENTS OF THE MASSDOT "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS" (LATEST EDITION).
 - SEE THE 2009 "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" FOR THE LATEST SPECIFICATIONS ON TEXT DIMENSIONS AND COLOR. (ALSO SEE SECTION M9.30.0 TYPE III MASSDOT STANDARD SPECIFICATION, THE "MASSACHUSETTS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES," AND "GUIDE SIGN POLICY FOR SECONDARY STATE HIGHWAYS" (LATEST EDITIONS) BY THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION).
 - STREET NAME (D3) WIDER THAN 36" SHALL BE PAINTED ONE SIDE AND SHALL USE TWO SIGNS MOUNTED BACK TO BACK WITH BOLT-THROUGH METHOD. SEE SPECIAL PROVISIONS.
 - PBS: PAINTED BOTH SIDES.



SPECIAL SIGN DETAILS

NOT TO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS	

DRAWN BY:	JMC
DESIGNED BY:	JMC
CHECKED BY:	DJ



SCALE:	NONE
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ROADWAY AND STREETScape IMPROVEMENTS ESSEX STREET TRAFFIC SIGN SUMMARY SALEM, MASSACHUSETTS
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ISSUE DATE	MAY 22, 2020
SHEET	25 of 34

NOTES:

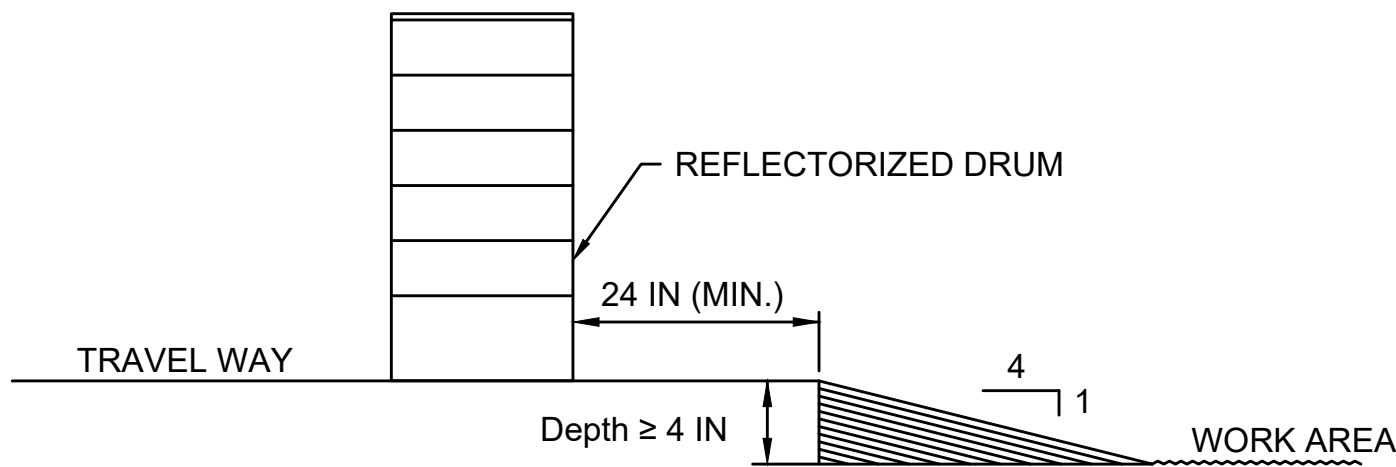
1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
2. ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD, EXCEPT THAT BACKGROUND COLOR SHALL BE FLUORESCENT ORANGE, IN ACCORDANCE WITH MASSDOT SPECIFICATIONS.
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, AND REFLECTORIZED PLASTIC DRUMS WITH LIGHTING DEVICES MOUNTED ON THEM, 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 72 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 OF A TAPER SHALL BE MOUNTED WITH 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 12 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.
13. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THE PLAN SHALL REFER TO MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".
14. SP-5 AND SP-6 SIGNS SHALL BE MOUNTED TOGETHER PRIOR TO ANY RAISING OF STRUCTURES. SIGNS SHALL BE PLACED AT THE WESTERN PROJECT LIMIT AND SHALL BE VISIBLE FROM SUMMER STREET AND NORTH STREET.
15. SP-7 SIGNS SHALL BE INSTALLED PRIOR TO THE BEGINNING OF WORK. SIGN SHALL BE PLACED AT THE WESTERN PROJECT LIMIT AND SHALL BE VISIBLE FROM SUMMER STREET AND NORTH STREET. ADDITIONAL SIGNS SHALL BE INSTALLED ON SUMMER STREET AND NORTH STREET PER DIRECTION OF THE ENGINEER.

LEGEND:

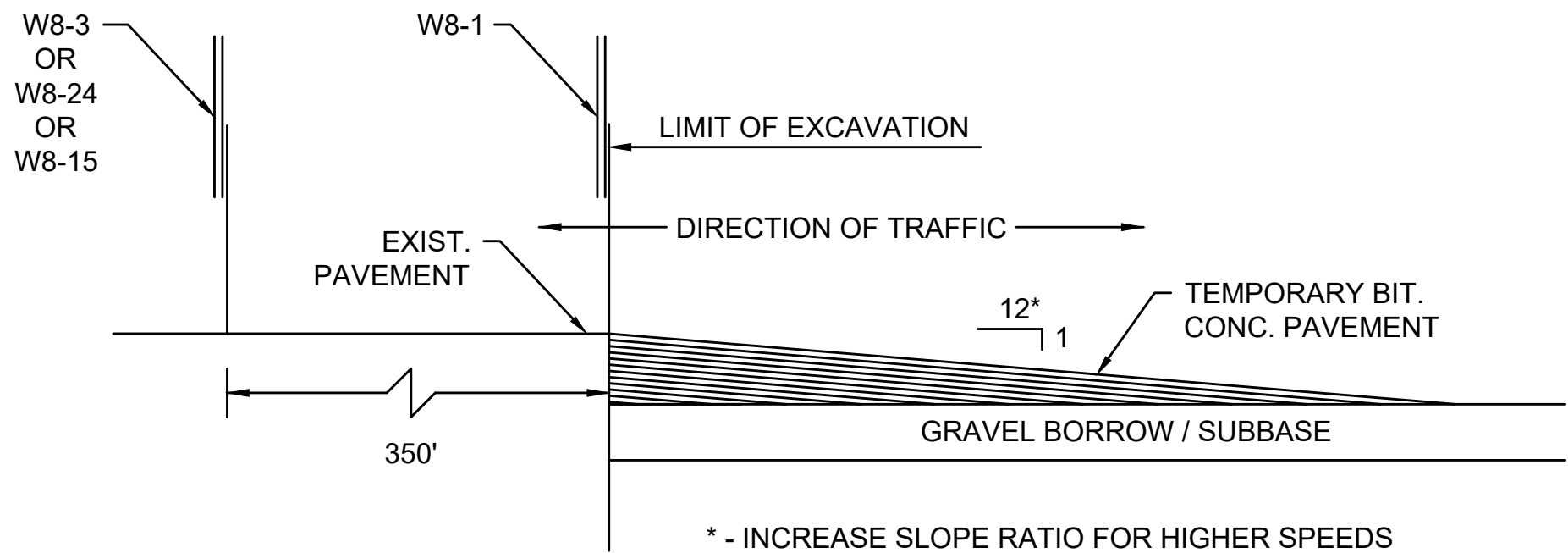
- REFLECTORIZED PLASTIC DRUM
- TYPE III BARRICADE
- FLASHING ARROW PANNEL
- FLASHING ARROW PANNEL
- WORK ZONE
- DIRECTION OF TRAFFIC
- IMPACT ATTENUATOR
- MEDIAN BARRIER
- MEDIAN BARRIER WITH WARNING LIGHTS
- WORK VEHICLE
- TRUCK MOUNTED ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN
- P POLICE DETAIL
- F FLAGGER

TAPER LENGTH

SPEED LIMIT	FORMULA
40 MPH or Less	$L=WS^2/60$
45 MPH or Greater	$L=W \times S$
L = TAPER LENGTH IN FEET W = WIDTH OF OFFSET IN FEET S = POSTED SPEED IN MPH	

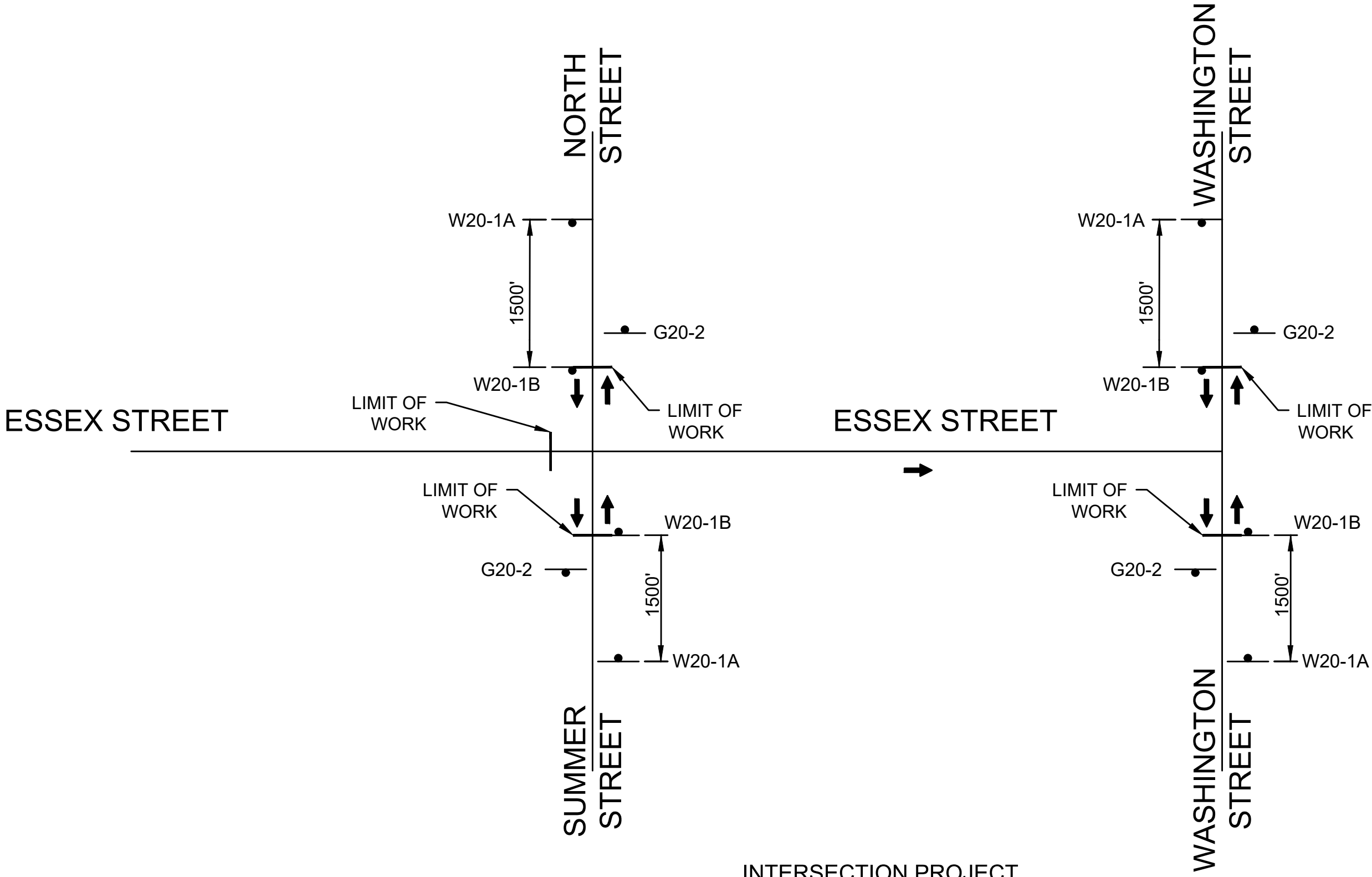


LATERAL DROP-OFF DETAIL
NOT TO SCALE

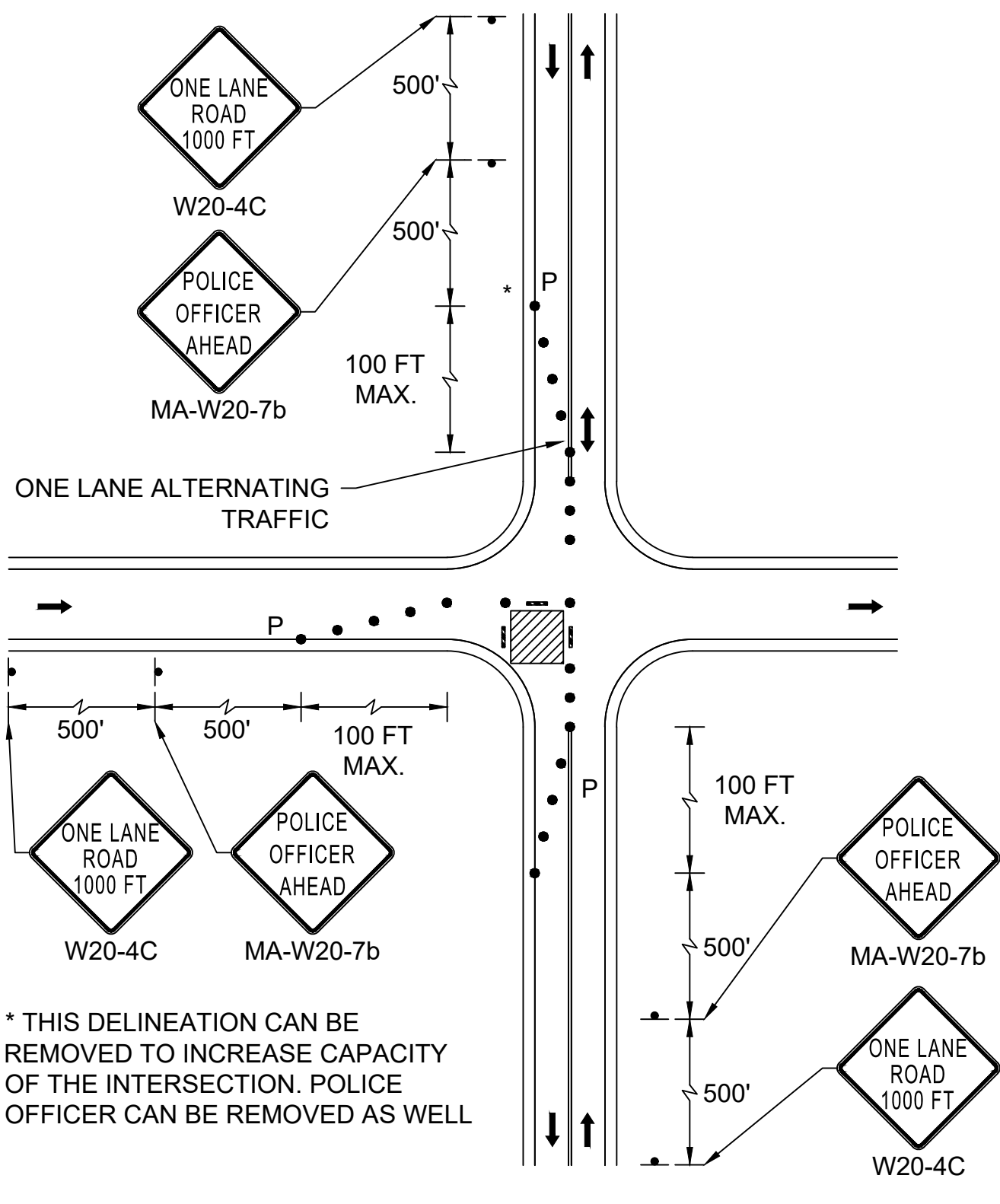


LONGITUDINAL DROP-OFF DETAIL
NOT TO SCALE

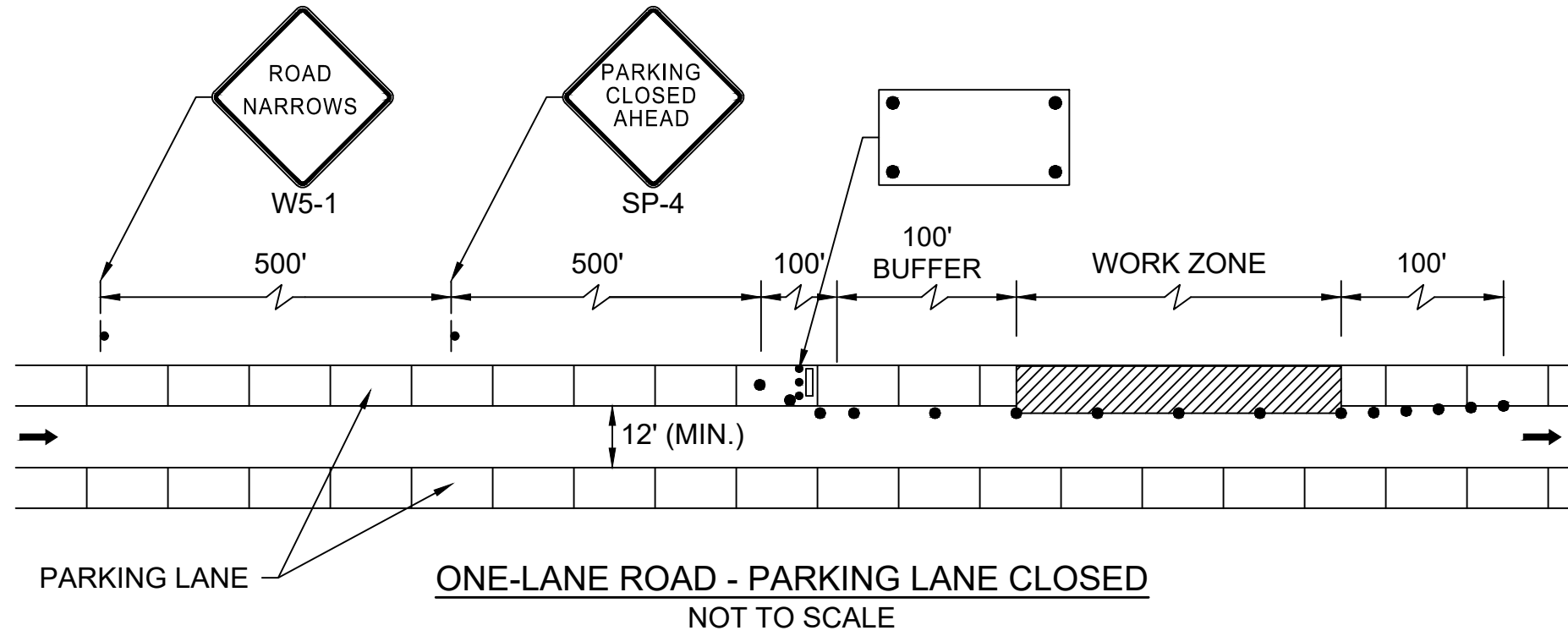
* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS



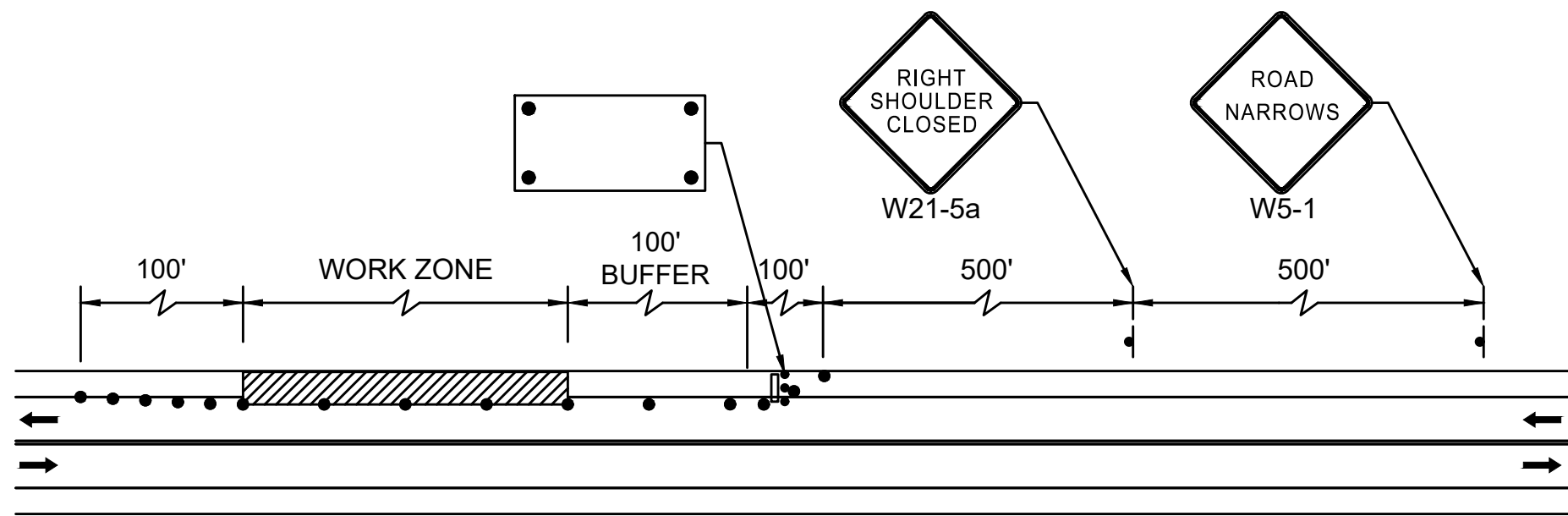
INTERSECTION PROJECT
LIMIT SIGNING
NOT TO SCALE



INTERSECTION WITH LANE CLOSURE
NOT TO SCALE



ONE-LANE ROAD - PARKING LANE CLOSED
NOT TO SCALE



TWO-LANE ROAD - SHOULDER CLOSED
NOT TO SCALE

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	JMC
DESIGNED BY:	JMC
CHECKED BY:	DJ

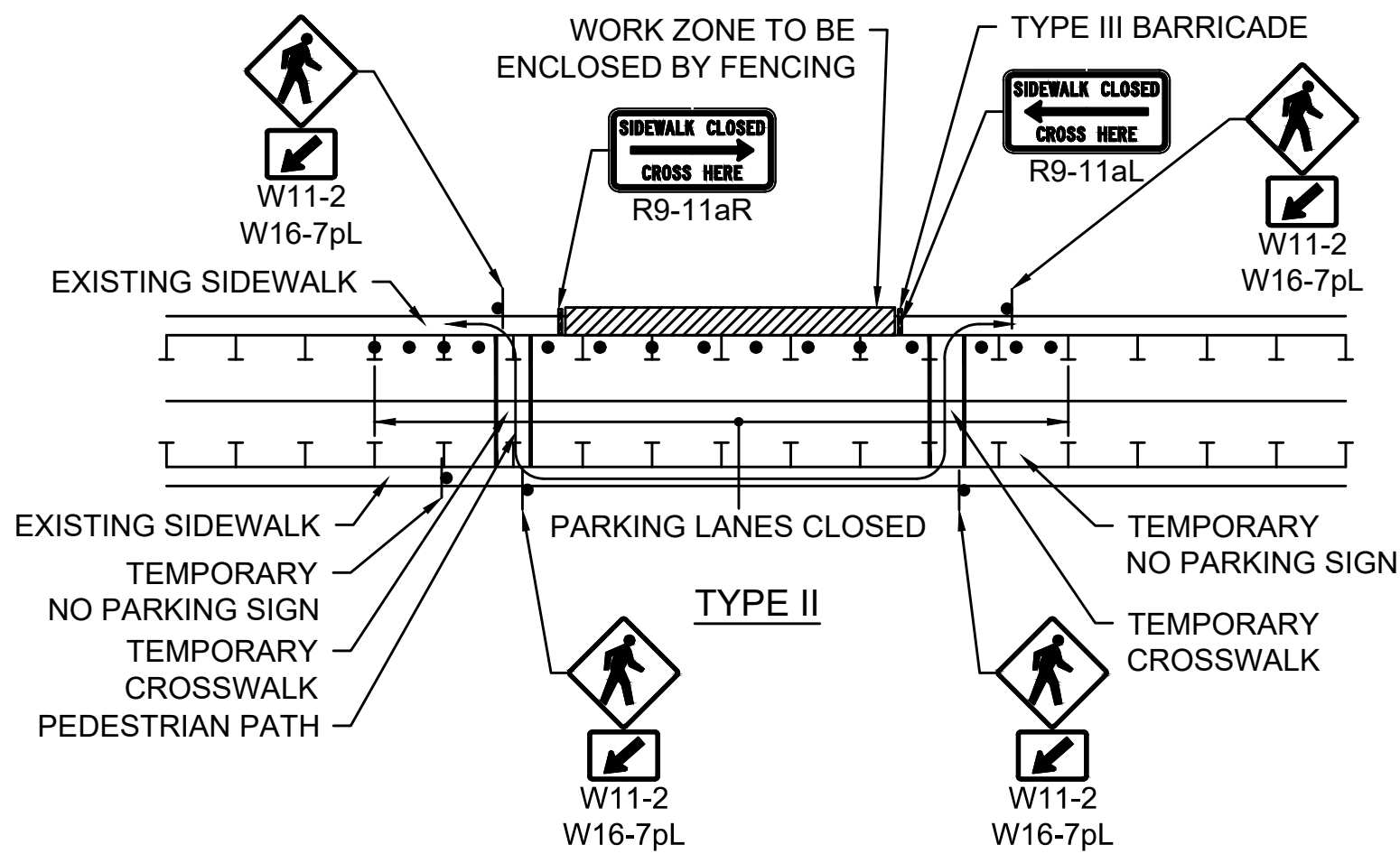


SCALE:

NONE

ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
TEMPORARY TRAFFIC CONTROL PLAN
SALEM, MASSACHUSETTS

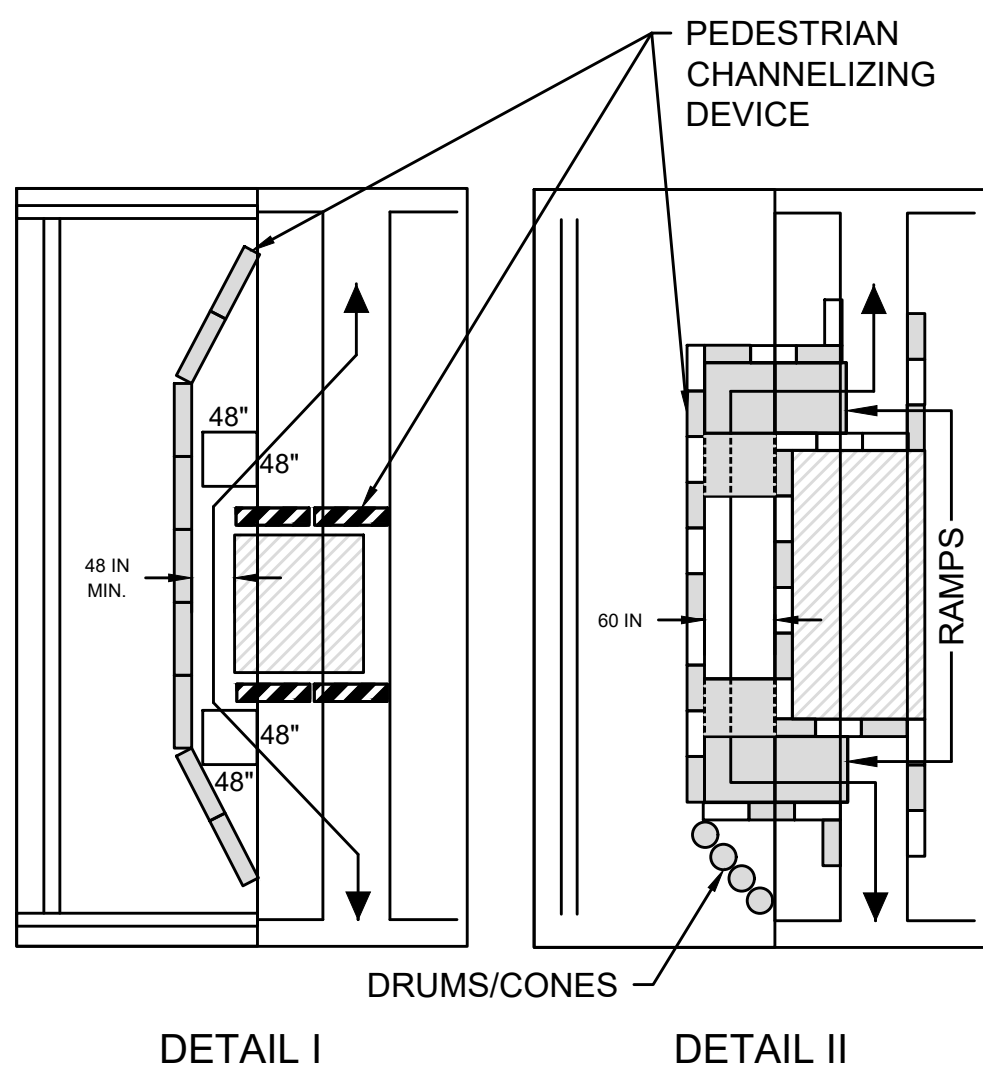
ISSUE DATE	MAY 22, 2020
SHEET	26 of 34



NOTES:

1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMPS WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
5. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE, (FOR SHORT TERM SETUPS < 10 HOURS, THIS CONDITION MAY BE WAIVED. A NOTE WOULD NEED TO BE INCLUDED IN THE TTCP THAT STATES HOW THE CONTRACTOR SHOULD ADDRESS THIS ISSUE.)

PEDESTRIAN BYPASS DETAILS
NOT TO SCALE

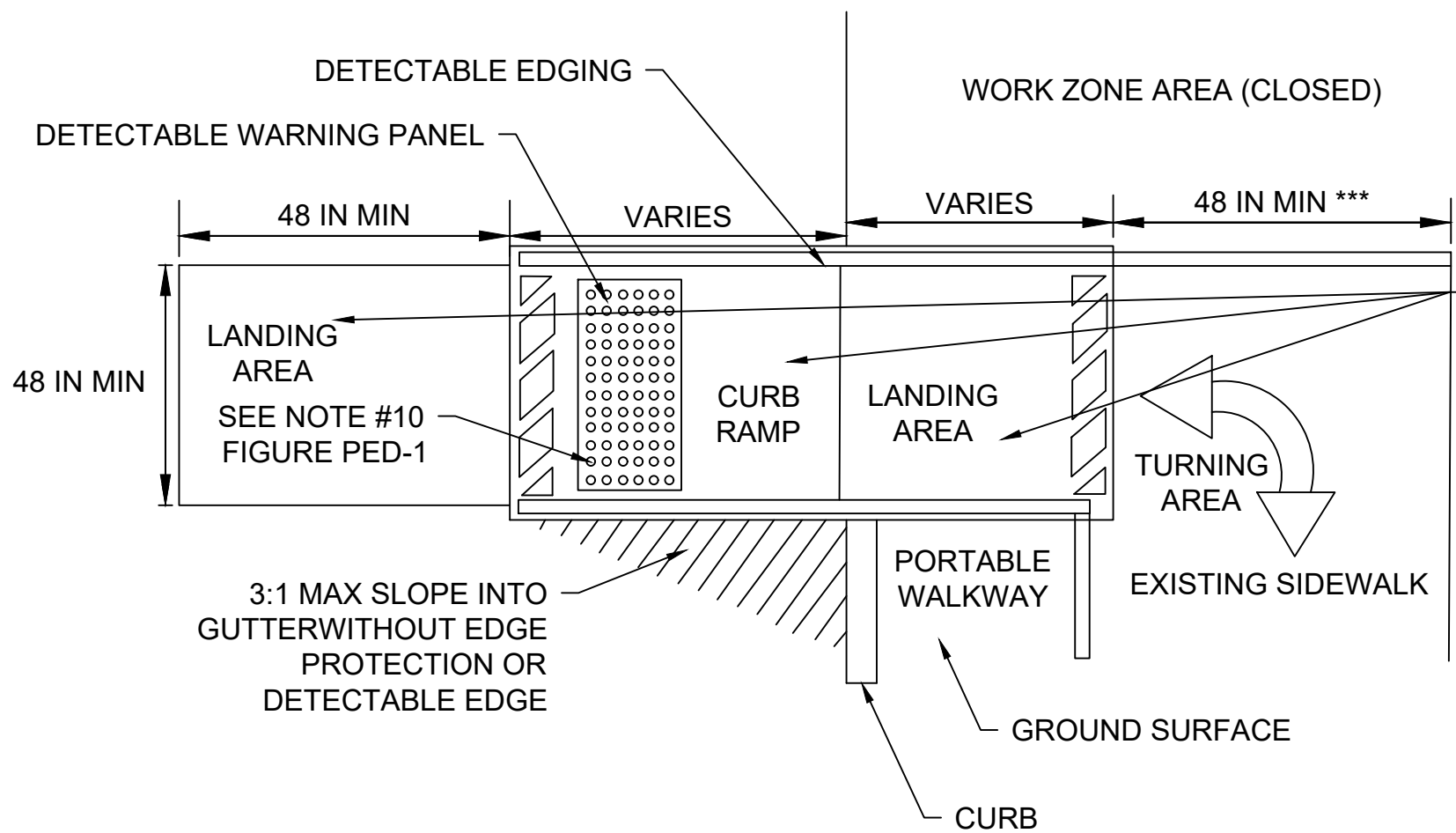


NOTES:

- DETAIL I IS CONSIDERED AN EXAMPLE OF A SHORT TERM CLOSURE AND PEDESTRIAN ASSISTANCE (PERSONEL) TO NAVIGATE AROUND THE CLOSURE/WORK AREA COULD BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAB DEVICES. DETAIL II IS CONSIDERED AN EXAMPLE OF A LONG TERM CLOSURE THAT WOULD REQUIRE ADDITIONAL ADA/AAB COMPLIANT DEVICES. IF A SIDEWALK CLOSURE OR RESTRICTION LASTS FOR MORE THAN ONE (1) WORK SHIFT THEN ADA/AAB COMPLIANCE SHALL BE FOLLOWED.
- WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- A PEDESTRIAN CHANNELIZING DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ACROSS THE FULL WIDTH OF THE CLOSED SIDEWALK.
- WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT (SEE FIGURES).
- THE ALTERNATE PATHWAY SHOULD HAVE A SMOOTH CONTINUOUS HARD SURFACE FOR THE ENTIRE LENGTH OF THE TEMPORARY PEDESTRIAN FACILITY.
- THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THE SIDEWALK EXCEEDS 200 FEET THEN A 5 FOOT BE 5 FOOT PASSING ZONE SHALL BE PROVIDED.
- THE PROTECTIVE REQUIREMENTS OF A TTC WORK ZONE MAY HAVE AN IMPACT IN DETERMINING THE NEED FOR TEMPORARY TRAFFIC BARRIERS AND THEIR USE IN PROVIDING PEDESTRIAN DELINEATION SHOULD BE BASED ON ENGINEERING JUDGMENT .
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN; VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE. THESE DETAILS ARE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DETERMINED BY THE ENGINEER.
- AUDIBLE INFORMATION DEVICES SHOULD BE CONSIDERED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
- EXISTING AUDIBLE DEVICES NO LONGER APPLICABLE DUE TO CONSTRUCTION SHALL BE DISABLED.

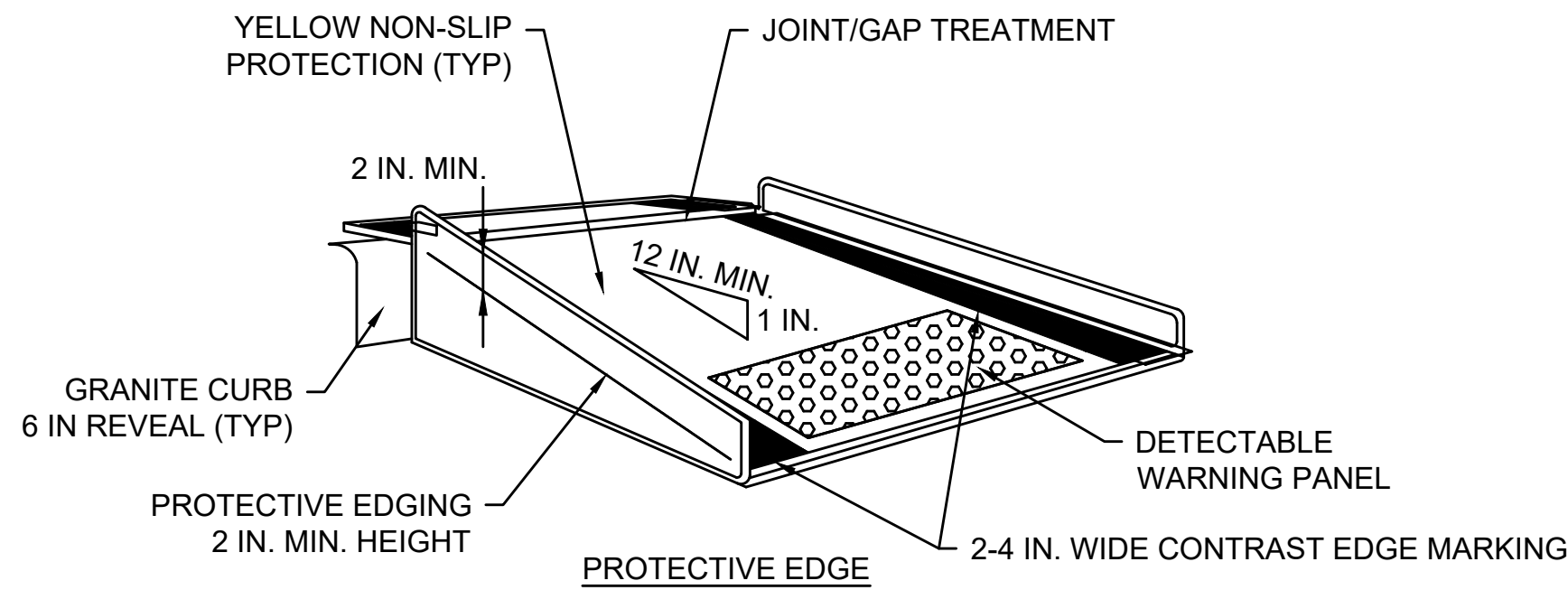
AUDIBLE DEVICES:

- FOR LONG TERM SIDEWALK CLOSURES (AT A MINIMUM OVERNIGHT) A FORM OF SPEECH MESSAGING FOR PEDESTRIANS WITH VISUAL DISABILITIES SHALL BE PROVIDED. AUDIBLE INFORMATION DEVICES SUCH AS DETECTABLE BARRIERS OR BARRICADES AND OTHER PASSIVE PEDESTRIAN ACTIVATION (MOTION ACTIVATED) DEVICES SHOULD BE CONSIDERED FOR THESE CASES. THESE AUDIBLE DEVICES CAN BE MOUNTABLE OR STAND ALONE.

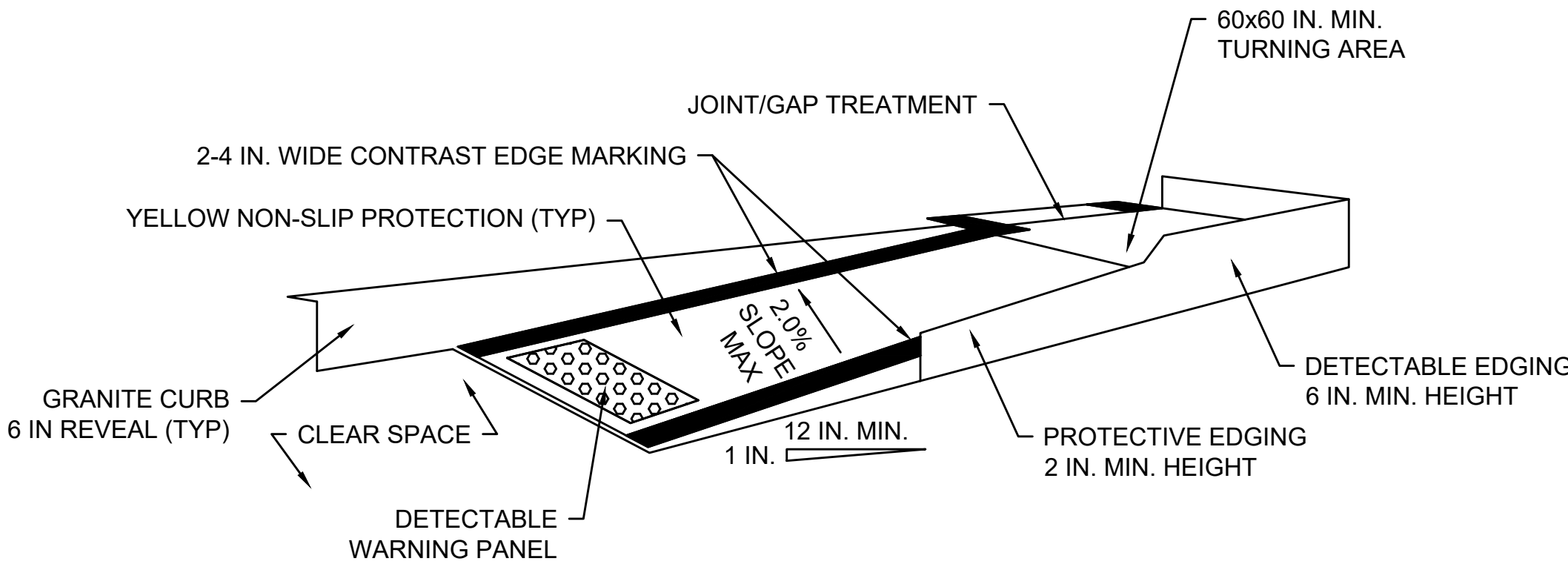


TEMPORARY CURB RAMP
NOT TO SCALE

- * LANDING AREA USED TO OVERLAP NON-ADA COMPLIANT SURFACES.
- ** DETECTABLE EDGE REMOVED IF A CONTINUOUS SIDEWALK.
- *** 60 IN. IF AN OBSTRUCTION IS AT BACK OF SIDEWALK



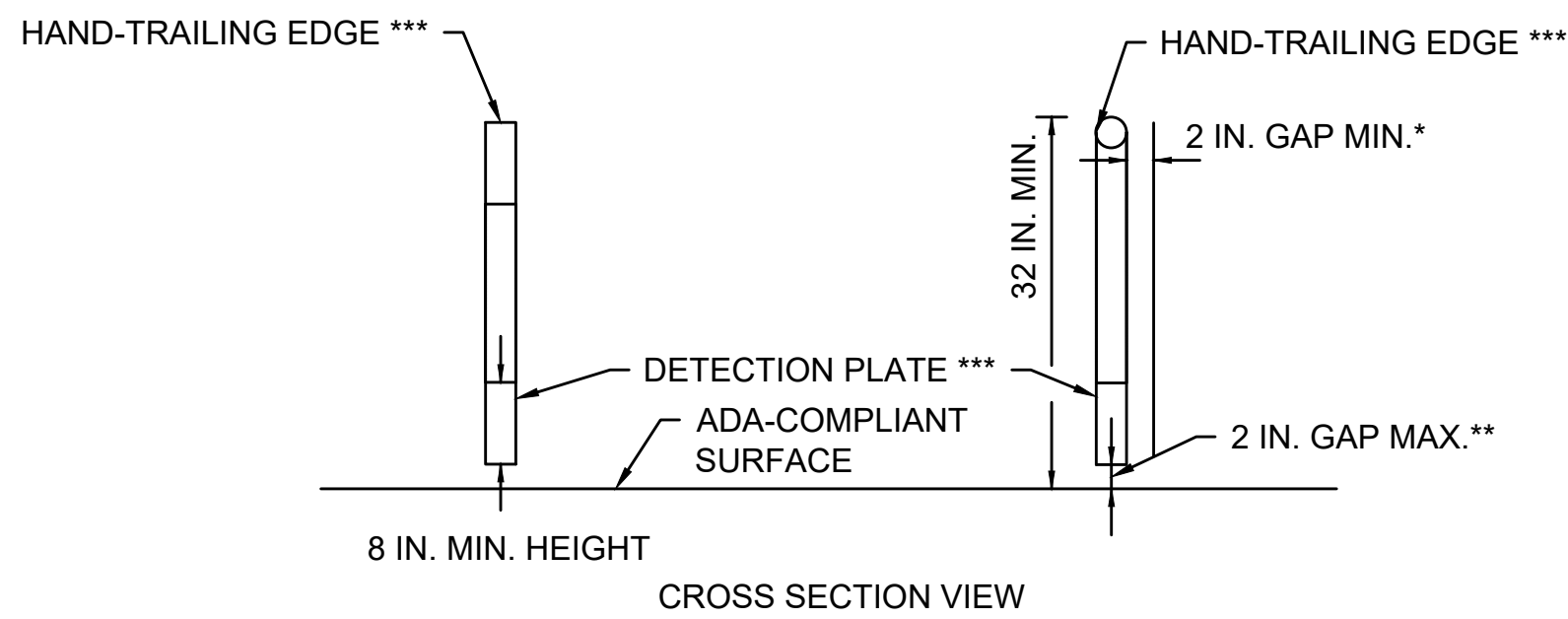
TEMPORARY CURB RAMP-PERPENDICULAR TO CURB
NOT TO SCALE



TEMPORARY CURB RAMP-PARALLEL TO CURB
NOT TO SCALE

NOTES:

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.



PEDESTRIAN CHANNELIZING DEVICE
NOT TO SCALE

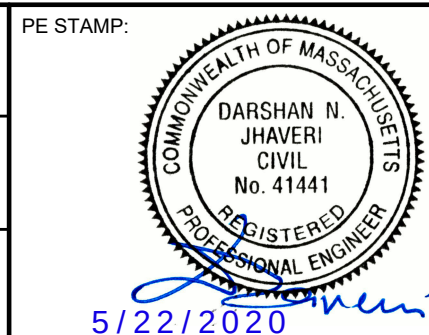
NOTES:

- * 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 SURFACE 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.

O:\3030a5360 - Salem - On-Call\Drawing Files\Plan Set\5360 TTCP.dwg

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	LF
DESIGNED BY:	JMC
CHECKED BY:	DJ



PREPARED BY:	
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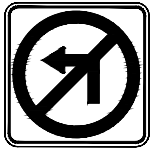
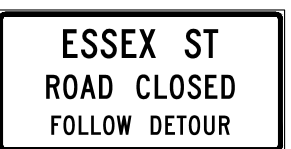
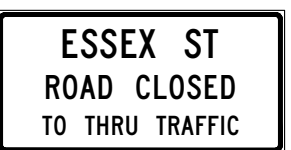
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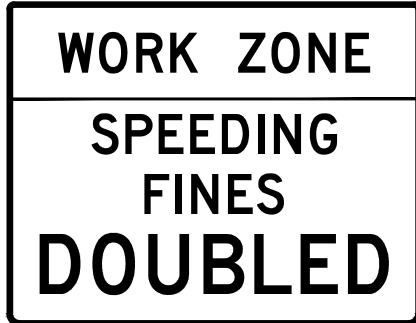
ROADWAY AND STREETScape IMPROVEMENTS ESSEX STREET TEMPORARY TRAFFIC CONTROL PLAN SALEM, MASSACHUSETTS
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ISSUE DATE	MAY 22, 2020
SHEET	27 of 34

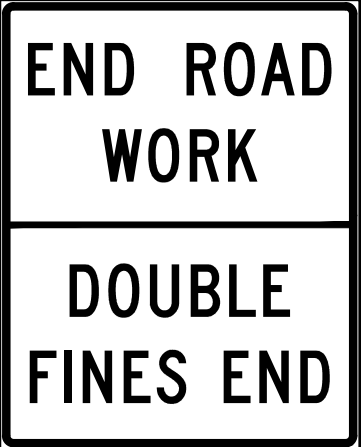
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

DETOUR SIGNING

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK- GROUND	LEGEND	BORDER			
R3-1	24 in	24 in		SEE 2009 MUTCD STANDARDS			2	WHITE	RED/ BLACK	BLACK	MOUNT W/ M4-10L	4.0	8.0
R3-2	24 in	24 in					3	WHITE	RED/ BLACK	BLACK	MOUNT W/ M4-10R	4.0	12.0
R5-1	30 in	30 in					1	WHITE	RED/ BLACK	BLACK	P-5 1	6.25	6.25
R11-2	48 in	30 in					2	WHITE	BLACK	BLACK	MOUNT ON BARRICADE	10.0	20.0
M4-8a	24 in	18 in					2	ORANGE	BLACK	BLACK	P-5 2	3.0	6.0
M4-9L	30 in	24 in					3	ORANGE	BLACK	BLACK	MOUNT W/ D3-1	5.0	15.0
M4-9R	30 in	24 in					4	ORANGE	BLACK	BLACK	MOUNT W/ D3-1	5.0	20.0
M4-9V	30 in	24 in					1	ORANGE	BLACK	BLACK	MOUNT W/ D3-1	5.0	5.0
M4-10L	48 in	18 in					2	ORANGE	BLACK	BLACK	P-5 2	6.0	6.0
M4-10R	48 in	18 in					4	ORANGE	BLACK	BLACK	MOUNT 2 ON BARRICADE 2 P-5	6.0	24.0
D3-1	42 in	12 in		6/4C	3 3		8	ORANGE	BLACK	BLACK	P-5 8	3.5	28.0
SP-2	60 in	30 in		6 5 4	4 3.5 3.5 4		3	ORANGE	BLACK	BLACK	P-5 (2) 3	12.5	37.5
SP-3	60 in	30 in		6 5 4	4 3.5 3.5 4		4	WHITE	BLACK	BLACK	MOUNT 1 ON BARRICADE 3 P-5 (2)	12.5	50.0



MA-R2-10a
NOTE:
"WORK ZONE"
BLACK ON ORANGE;
"SPEEDING FINES DOUBLED"
BLACK ON WHITE



MA-R2-10e
NOTE:
"END ROAD WORK"
BLACK ON ORANGE;
"DOUBLE FINES END"
BLACK ON WHITE



SP-6
30" x 18"



SP-7
42" x 24"



W13-1
24" x 30"



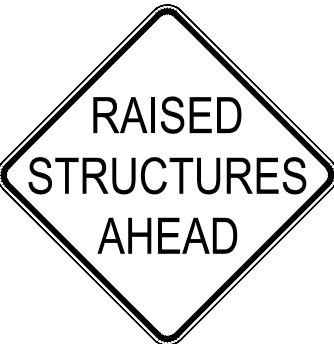
W20-1A
36" x 36"



W20-1B
36" x 36"



W21-5aR
30" x 30"



SP-5
36" x 36"

CONSTRUCTION SIGNS
NOT TO SCALE

SAFETY SIGNING FOR CONSTRUCTION OPERATIONS										
LEGEND	TYPE	SIZE	COLOR			UNIT AREA	NO. SIGNS	TOTAL AREA	POSTS	
			BACKGROUND	LEGEND	BORDER					
WORK ZONE SPEEDING FINES...	MA-R2-10a	48" x 36"	WHITE	BLACK	BLACK	12 SF	4	48 SF	P-5: 4	
END ROAD WORK	MA-R2-10e	36" x 48"	ORANGE/WHITE**	BLACK	BLACK	12 SF	4	48 SF	P-5: 4	
SIDEWALK CLOSED CROSS HERE	R9-11a	48" x 24"	ORANGE/WHITE**	BLACK	BLACK	8 SF	2	16 SF	P-5: 2	
ROAD NARROWS	W5-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2	
BUMP	W8-1	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
PAVEMENT ENDS	W8-3	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
GROOVED PAVEMENT	W8-15	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
STEEL PLATE AHEAD	W8-24	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
PEDESTRIAN	W11-2	30" x 30"	FYG***	BLACK	BLACK	6.3 SF	4	25 SF	P-5: 4	
ADVISORY SPEED	W13-1	24" x 24"	ORANGE**	BLACK	BLACK	4 SF	2	8 SF	P-5: 0	
DOWNWARD LEFT DIAGONAL ARROW	W16-7pL	24" x 12"	FYG***	BLACK	BLACK	2 SF	4	8 SF	P-5: 0	
ROAD WORK 1500 FT	W20-1A	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
ROAD WORK AHEAD	W20-1B	36" x36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
ONE LANE ROAD AHEAD	W20-4	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
ONE LANE ROAD 1000 FT	W20-4C	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
FLAGGER	W20-7	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
POLICE OFFICER AHEAD	MA-W20-7b	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	4	36 SF	P-5: 4	
RIGHT SHOULDER CLOSED	W21-5aR	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2	
PARKING CLOSED AHEAD	SP-4	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2	
RAISED STRUCTURES AHEAD	SP-5	36" x 36"	ORANGE**	BLACK	BLACK	9 SF	2	18 SF	P-5: 2	
PASS AT OWN RISK	SP-6	30" x 18"	ORANGE**	BLACK	BLACK	3.8 SF	2	8 SF	P-5: 2	
BUSINESSES OPEN DURING CONSTRUCTION	SP-7	42" x 24"	ORANGE**	BLACK	BLACK	7 SF	3	21 SF	P-5: 3	
TOTAL AREA OF SIGNS:								614 SF	P-5: 65	
* NO. OF SIGNS ARE ESTIMATED FOR BIDDING PURPOSES ONLY										
** ALL CONSTRUCTION SIGNAGE SHALL HAVE FLUORESCENT ORANGE BACKGROUND										
*** FLUORESCENT YELLOW GREEN										

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NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	LF
DESIGNED BY:	JMC
CHECKED BY:	DJ

PE STAMP:



5/22/2020

PREPARED BY:

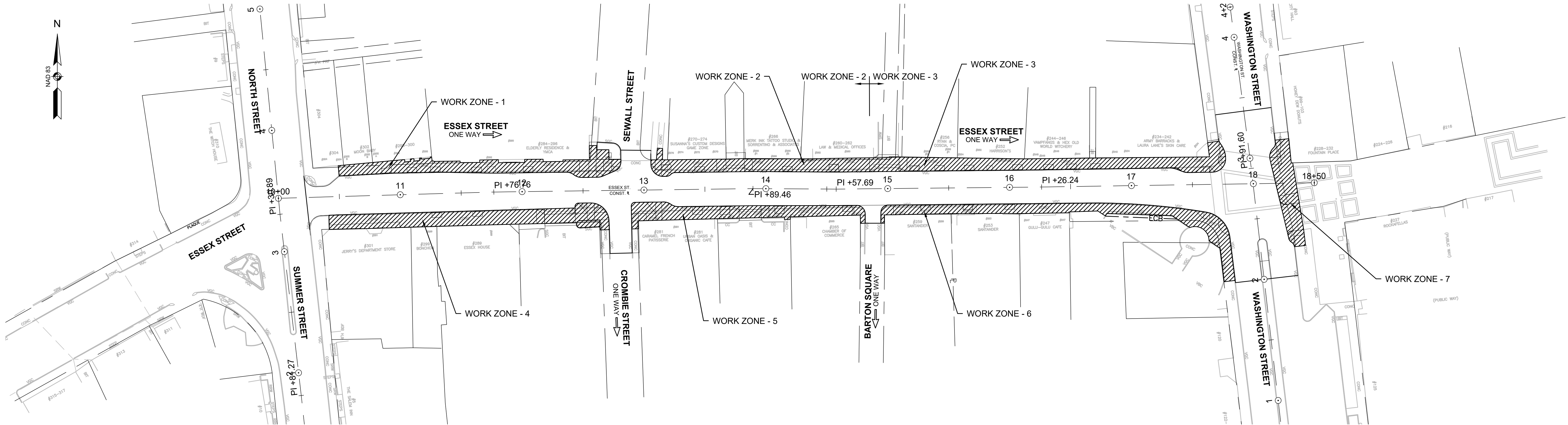

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SCALE:	NONE
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION	

ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
TEMPORARY TRAFFIC CONTROL PLAN
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	28 of 34



ESSEX STREET - WORK ZONES 1, 2, 3, 4, 5, 6, 7

GENERAL WORK NOTES

- THE EXISTING STREET LIGHTING SHALL REMAIN IN PLACE UNTIL THE NEW LIGHTING SYSTEM IS INSTALLED AND OPERATIONAL WITHIN EACH DESIGNATED WORK ZONE
- THE CONTRACTOR, WITH APPROVAL FROM THE ENGINEER, SHALL BE ALLOWED TO INSTALL SURFACE MOUNTED STREET FURNITURE, LIGHT POLES AND PAY STATIONS AS THEY BECOME AVAILABLE
- THE CONTRACTOR, WITH APPROVAL FROM THE ENGINEER, SHALL BE ALLOWED TO REMOVE EXISTING LIGHT POLES & REPLACE SIDEWALK PANELS IN THOSE AREAS AFTER THE NEW LIGHTING SYSTEM IS INSTALLED & OPERATIONAL

PRE-CONSTRUCTION

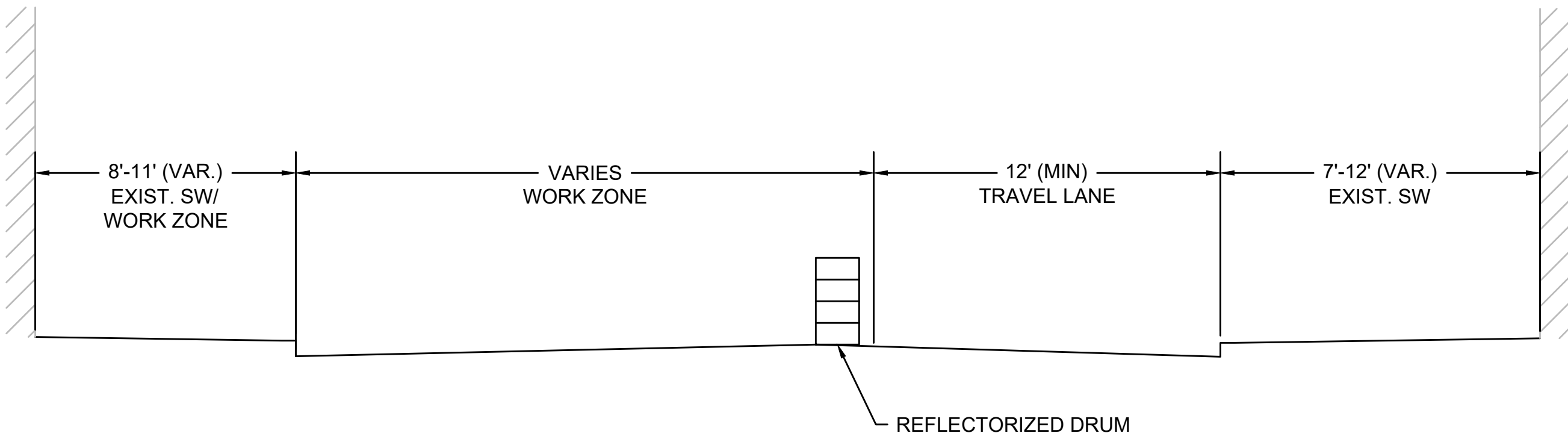
- MAINTAIN ACCESS TO ABUTTERS ON ESSEX STREET.
- INSTALL ADVANCE WARNING SIGNS AND OTHER TEMPORARY TRAFFIC CONTROL DEVICES.
- INSTALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE PLANS AND AS REQUIRED BY THE ENGINEER.
- RELOCATE SELECT UTILITIES WITHIN PROJECT LIMITS. MAINTAIN CONNECTIONS TO ABUTTING PROPERTIES.
- REMOVE EXISTING TREES.

WORK ZONES 1, 2, 3, 4, 5, 6, 7 SIDEWALK CONSTRUCTION

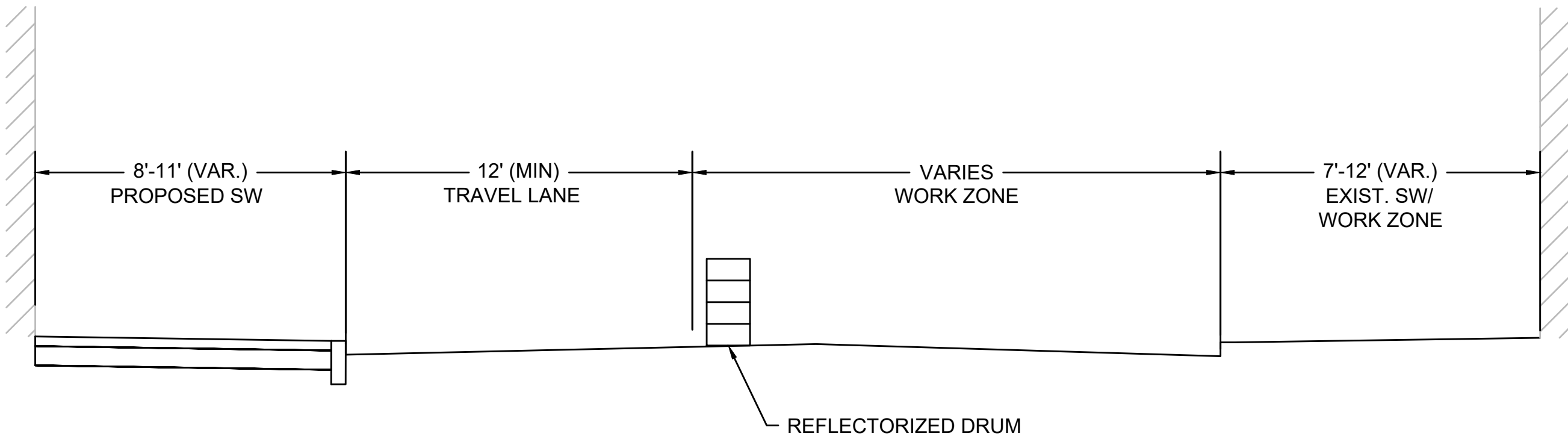
- MAINTAIN ACCESS TO ABUTTERS ALONG THE SIDEWALK
- MAINTAIN A 12 FOOT MINIMUM TRAVEL LANE AT ALL TIMES
- INSTALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE PLANS AND AS REQUIRED BY THE ENGINEER
- COORDINATE WITH CITY OF SALEM FOR REMOVAL OF EXISTING PARKING METERS (POSTS TO BE REMOVED BY CONTRACTOR WITH SIDEWALK EXCAVATION)
- EXCAVATE EXISTING SIDEWALKS. MAINTAIN PEDESTRIAN ACCESS AS REQUIRED
- ALL PARKING TO BE MAINTAINED, EXCEPT WITHIN EACH WORK ZONE BLOCK
- REMOVE AND/OR PLACE GRANITE CURBING
- PLACE NEW LIGHT POLE & PAY STATION FOUNDATIONS, CONDUIT AND HANDHOLES
- PLACE NEW CEMENT CONCRETE SIDEWALKS
- EXISTING STREET LIGHTING TO BE MAINTAINED UNTIL NEW LIGHTING IS INSTALLED & OPERATIONAL
- THE CONTRACTOR WILL BE REQUIRED TO COMPLETE ALL OF THE ABOVE WORK IN EACH WORK ZONE PRIOR TO BEGINNING WORK IN AN ADDITIONAL WORK ZONE

NOTES:

1. ALL WORK SHALL OCCUR (MONDAY - FRIDAY) BETWEEN THE HOURS OF 7:00AM AND 3:30PM.
2. EXISTING PEDESTRIAN ACCESS TO ABUTTERS SHALL BE MAINTAINED AT ALL TIMES UNLESS APPROVED BY THE ENGINEER.
3. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 72 HOURS ADVANCED NOTICE TO ABUTTERS PRIOR TO ANY WORK THAT WILL IMPACT ACCESS.
4. ON-STREET PARKING SHALL BE MAINTAINED OUTSIDE OF THE WORK ZONE AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



TYPICAL SECTION - WORK ZONES 1, 2, 3
(LOOKING EASTBOUND)
NOT TO SCALE



TYPICAL SECTION - WORK ZONES 4, 5, 6, 7
(LOOKING EASTBOUND)
NOT TO SCALE

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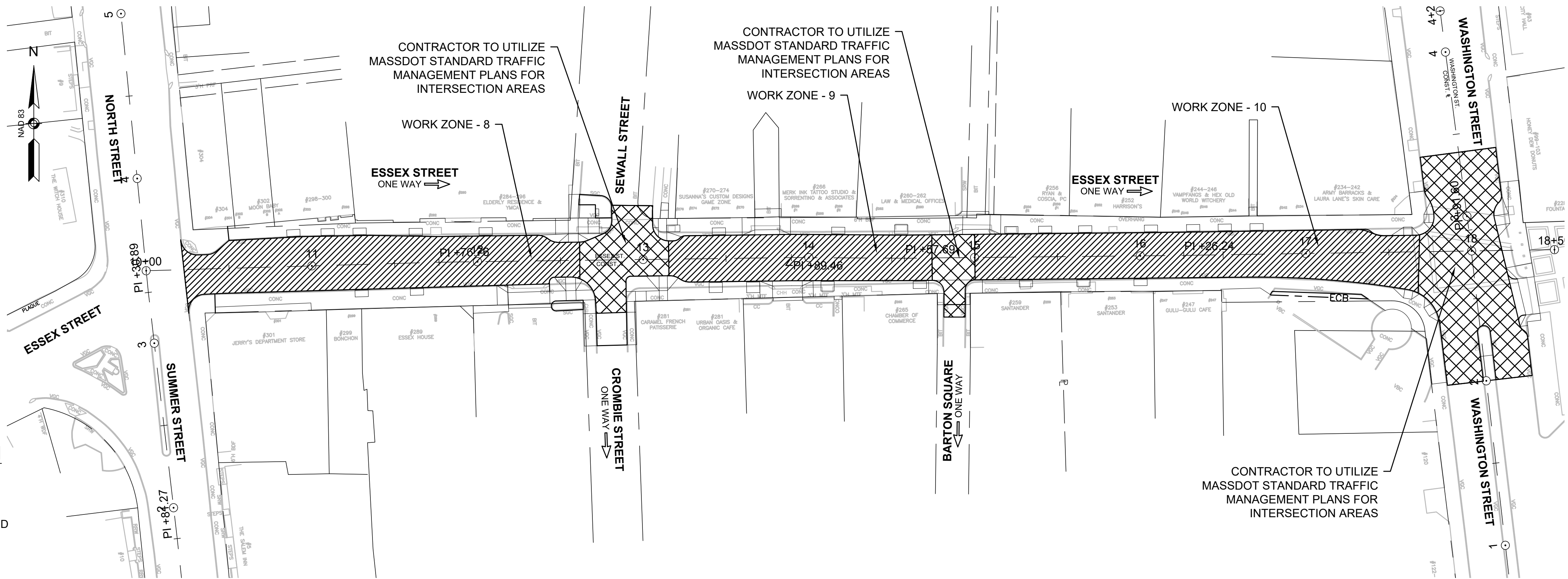
DRAWN BY:	JMC
DESIGNED BY:	JMC
CHECKED BY:	DJ



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ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
CONSTRUCTION PHASING PLAN
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	29 of 34



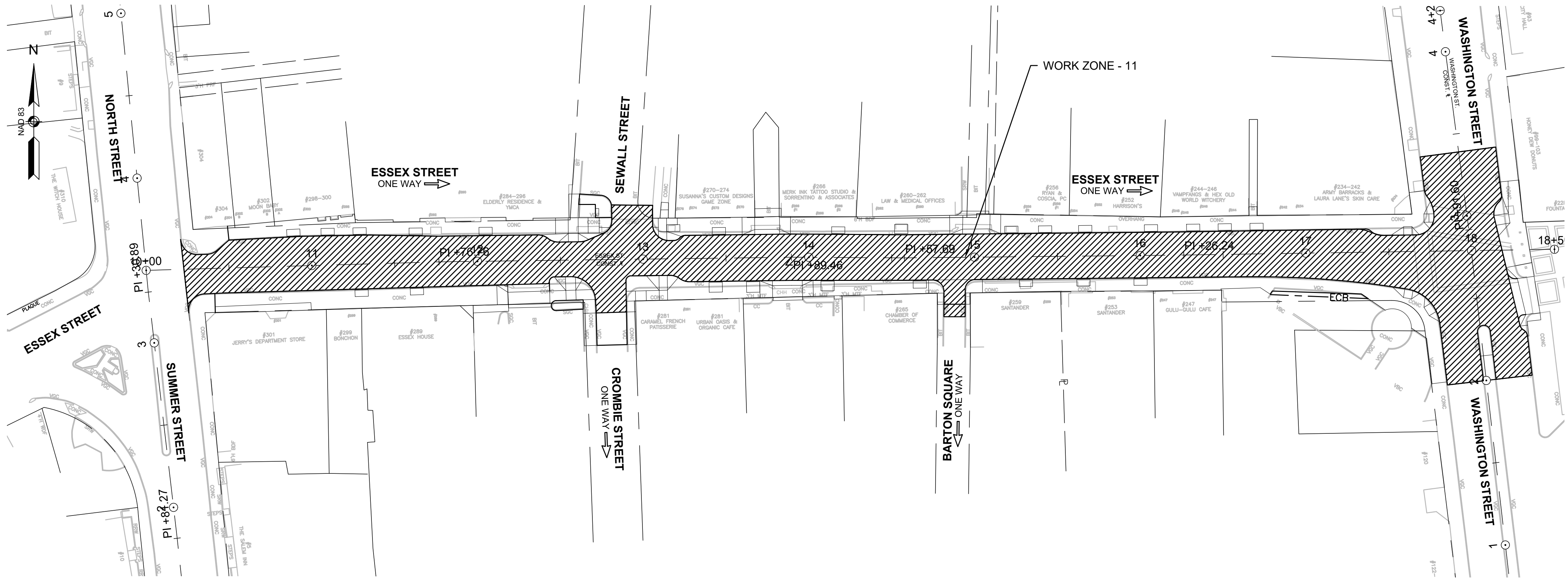
WORK ZONES 8, 9, 10 - FULL DEPTH ROADWAY RECONSTRUCTION

- MAINTAIN ACCESS TO ABUTTERS ALONG THE SIDEWALK
- MAINTAIN A 12 FOOT MINIMUM TRAVEL LANE AT ALL TIMES
- INSTALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE PLANS AND REQUIRED BY THE ENGINEER
- EXCAVATE EXISTING PAVEMENT STRUCTURE, STEEL STREET CAR RAILS & WOOD RAIL TIES AS REQUIRED
- MODIFY DRAINAGE AND UTILITIES AS REQUIRED, INCLUDING CONDUIT CROSSINGS FOR LIGHTING & PAY STATION SYSTEM
- PLACE NEW PAVEMENT STRUCTURE UP TO BINDER COURSE
- ADJUST DRAINAGE AND UTILITY STRUCTURES UP TO BINDER COURSE
- THE CONTRACTOR WILL BE REQUIRED TO COMPLETE ALL OF THE ABOVE WORK IN EACH WORK ZONE PRIOR TO BEGINNING WORK IN AN ADDITIONAL WORK ZONE

ESSEX STREET - WORK ZONES 8, 9, 10

WORK ZONE 11 - FINAL PAVING/PAVEMENT MARKINGS

- MAINTAIN ACCESS TO ABUTTERS ALONG THE SIDEWALK
- MAINTAIN A 12 FOOT MINIMUM TRAVEL LANE WHEN POSSIBLE
- INSTALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE PLANS AND REQUIRED BY THE ENGINEER
- ADJUST ALL UTILITY STRUCTURES TO FINISHED GRADE
- PLACE THE FINISHED PAVEMENT SURFACE COURSE
- REOPEN THE ROADWAY TO TRAFFIC, AS ALLOWED
- PLACE PAVEMENT MARKINGS AFTER THE REQUIRED WAITING PERIOD AFTER PAVEMENT



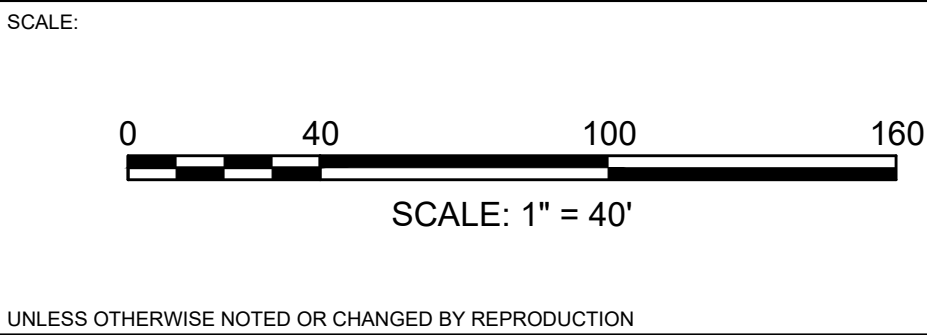
ESSEX STREET - WORK ZONE 11

NOTES:

1. ALL WORK SHALL OCCUR (MONDAY - FRIDAY) BETWEEN THE HOURS OF 7:00AM AND 3:30PM.
2. EXISTING PEDESTRIAN ACCESS TO ABUTTERS SHALL BE MAINTAINED AT ALL TIMES UNLESS APPROVED BY THE ENGINEER.
3. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 72 HOURS ADVANCED NOTICE TO ABUTTERS PRIOR TO ANY WORK THAT WILL IMPACT ACCESS.
4. ON-STREET PARKING SHALL BE MAINTAINED OUTSIDE OF THE WORK ZONE AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

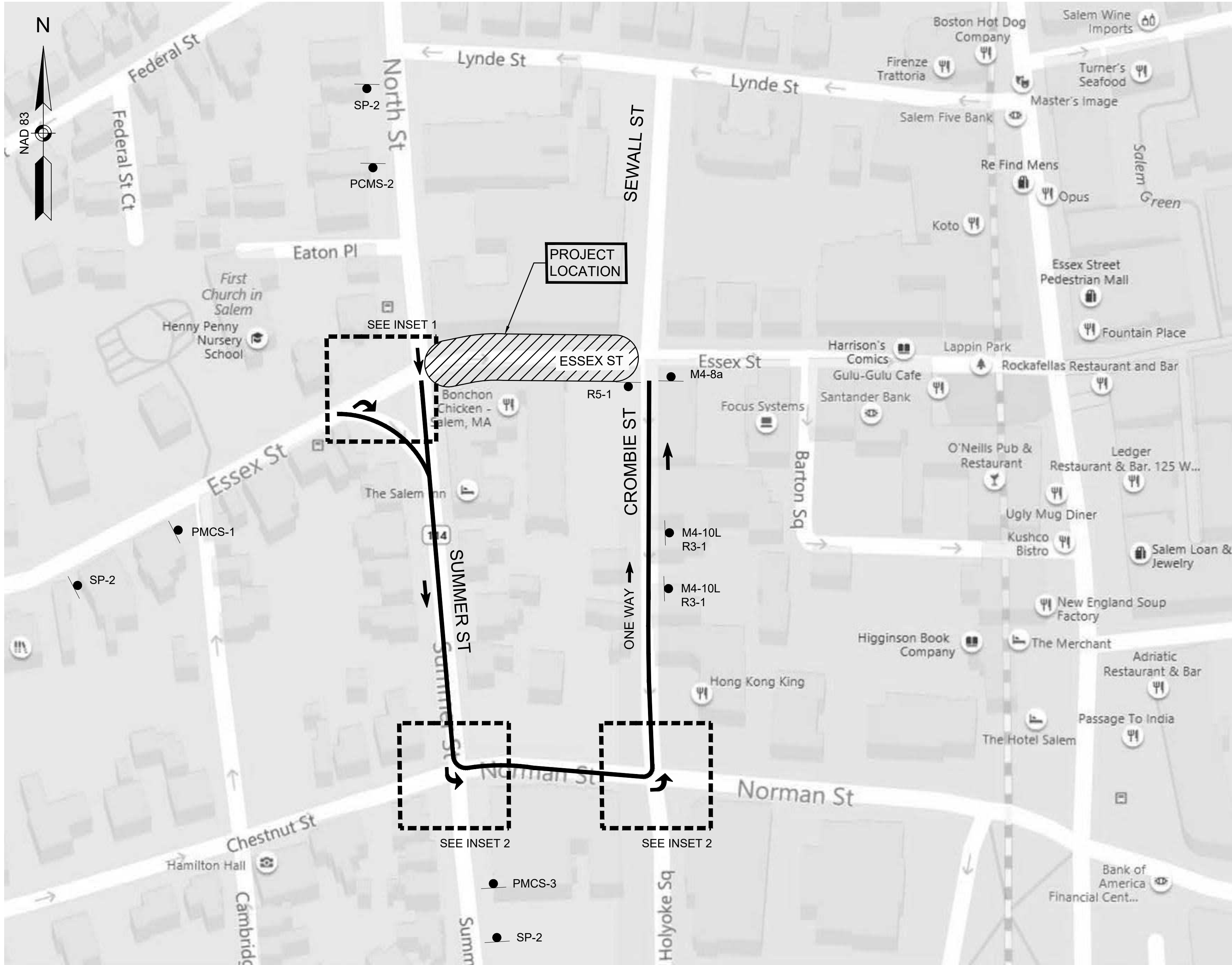
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	JMC
DESIGNED BY:	JMC
CHECKED BY:	DJ

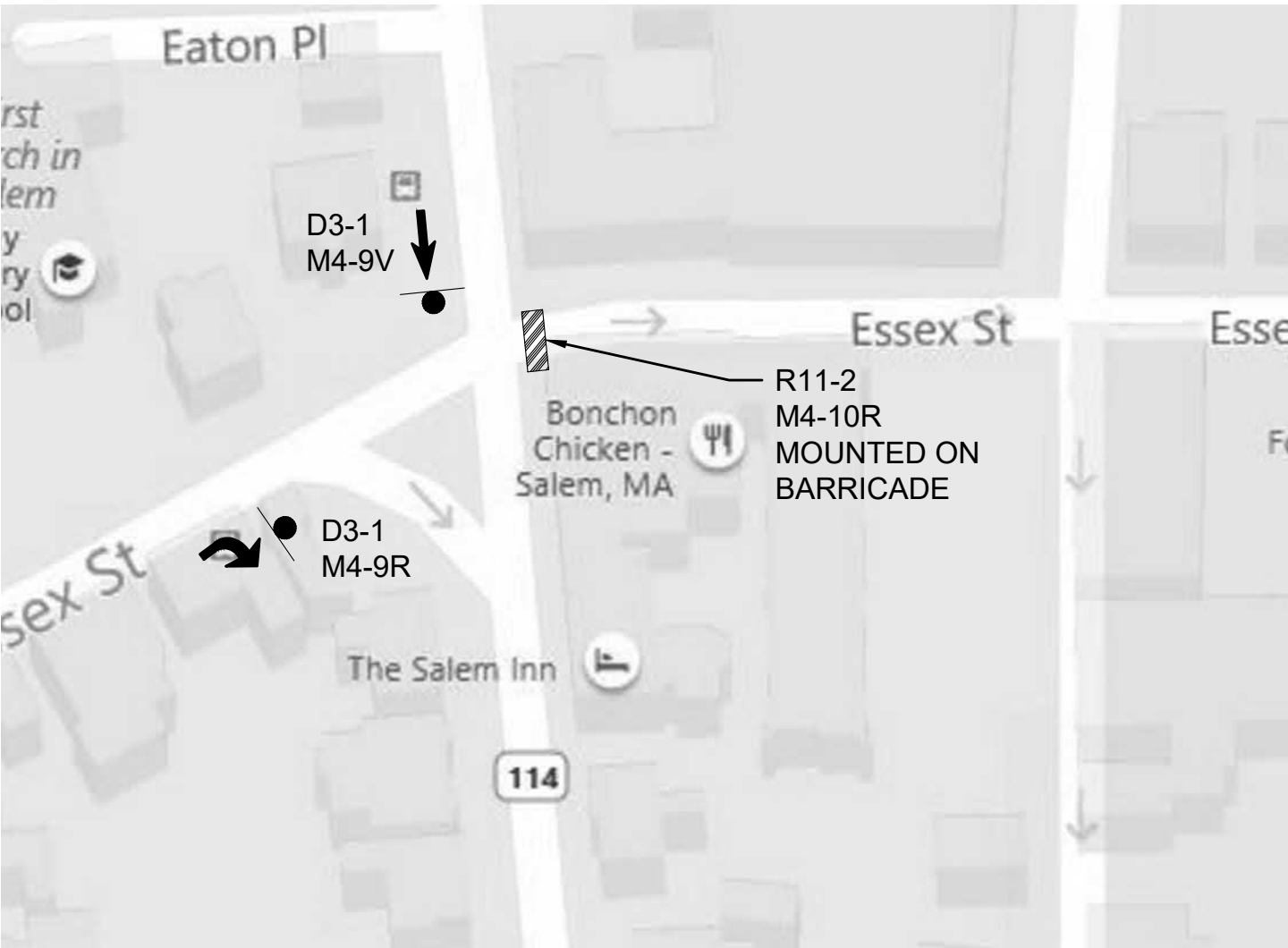


ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
CONSTRUCTION PHASING PLAN
SALEM, MASSACHUSETTS

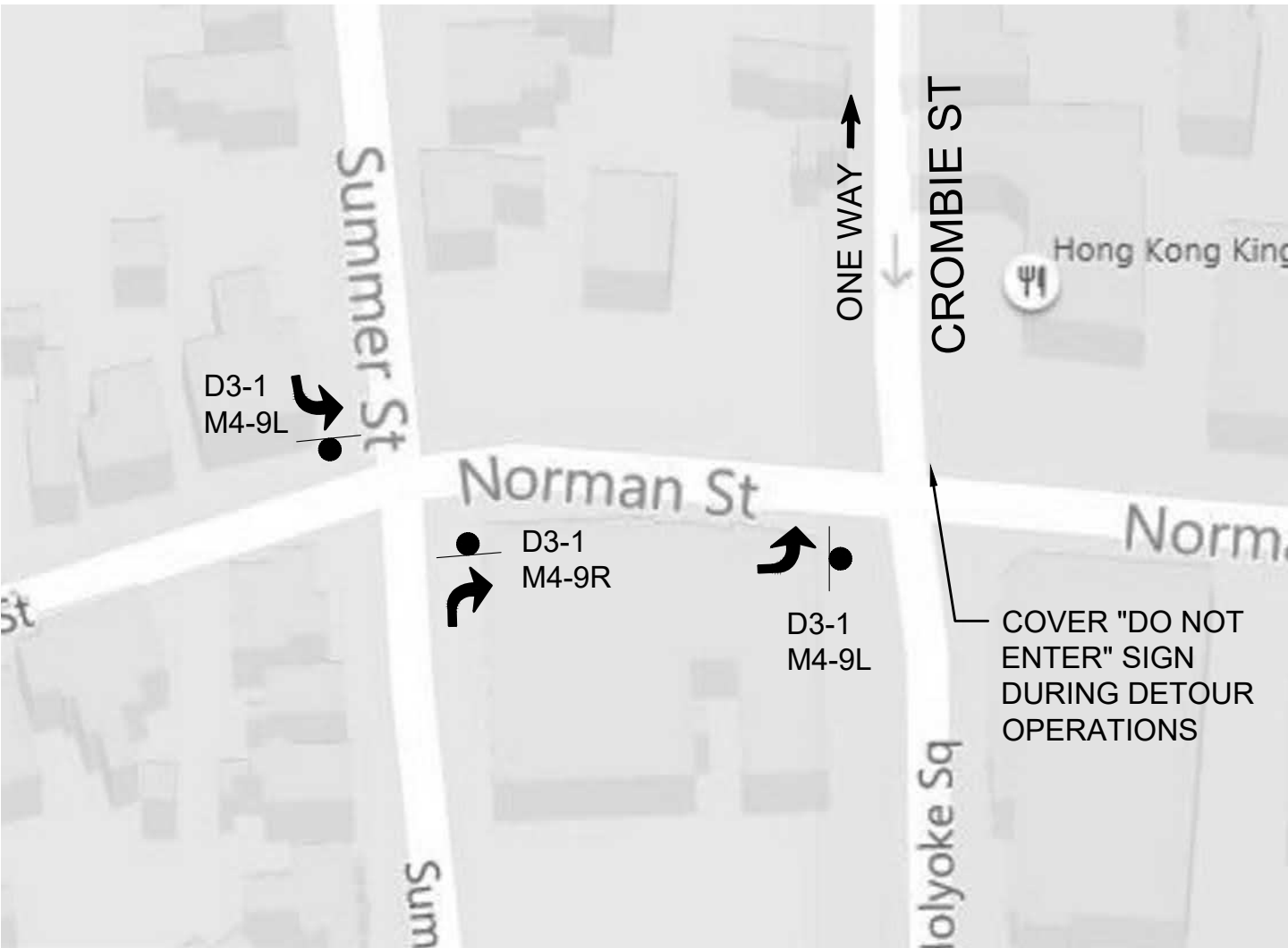
ISSUE DATE	MAY 22, 2020
SHEET	30 of 34



DETOUR PLAN



INSET 1



INSET 2

WORK ZONE 8 DETOUR NOTES:

- ESSEX STREET FULL CLOSURE (SUMMER STREET TO SEWALL STREET) IS REQUIRED FOR FULL DEPTH ROADWAY CONSTRUCTION WORK.
- ESSEX STREET FULL CLOSURE (SUMMER STREET TO SEWALL STREET) IS LIMITED TO THE HOURS OF 7:00 AM AND 3:30 PM (MONDAY-FRIDAY). ESSEX STREET SHALL BE FULLY REOPENED TO TRAFFIC BY 3:30 PM EACH WORK DAY.
- ALL SIGNS SHALL BE COVERED WHEN DETOUR IS NOT IN USE.
- NO ALTERATION SHALL BE UNDERTAKEN WHICH DECREASES OR HAS THE EFFECT OF DECREASING ACCESSIBILITY OR USABILITY OF A FACILITY.
- EXISTING PEDESTRIAN ACCESS SHALL BE MAINTAINED DURING ESSEX STREET FULL CLOSURE.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

E S S E X S T
R O A D
W O R K

PANEL 2

NOTE: PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED TWO WEEKS PRIOR TO DETOUR IMPLEMENTATION.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

E S S E X S T
R O A D
C L O S E D

PANEL 2

NOTE: PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED FOR THE FIRST TWO WEEKS OF DETOUR.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

E S S E X S T
R O A D
C L O S E D

PANEL 2

NOTE: PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED FOR THE FIRST TWO WEEKS OF DETOUR.

PANEL 1

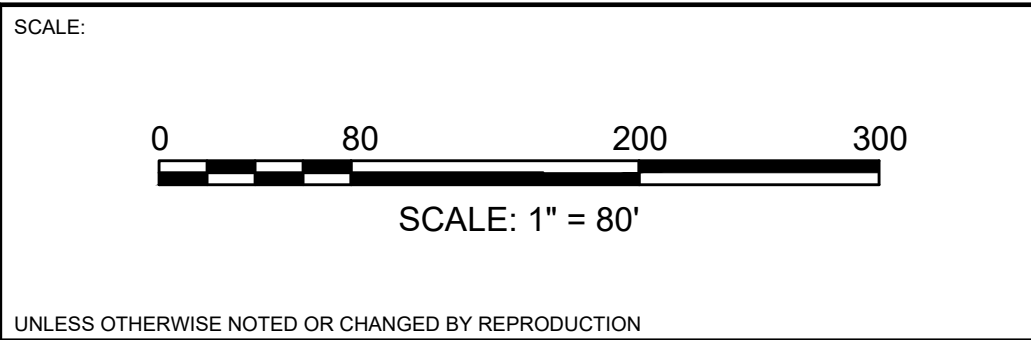
PCMS 1
PCMS 2
PCMS 3

E S S E X S T
R O A D
C L O S E D

PORTABLE CHANGEABLE MESSAGE SIGNS

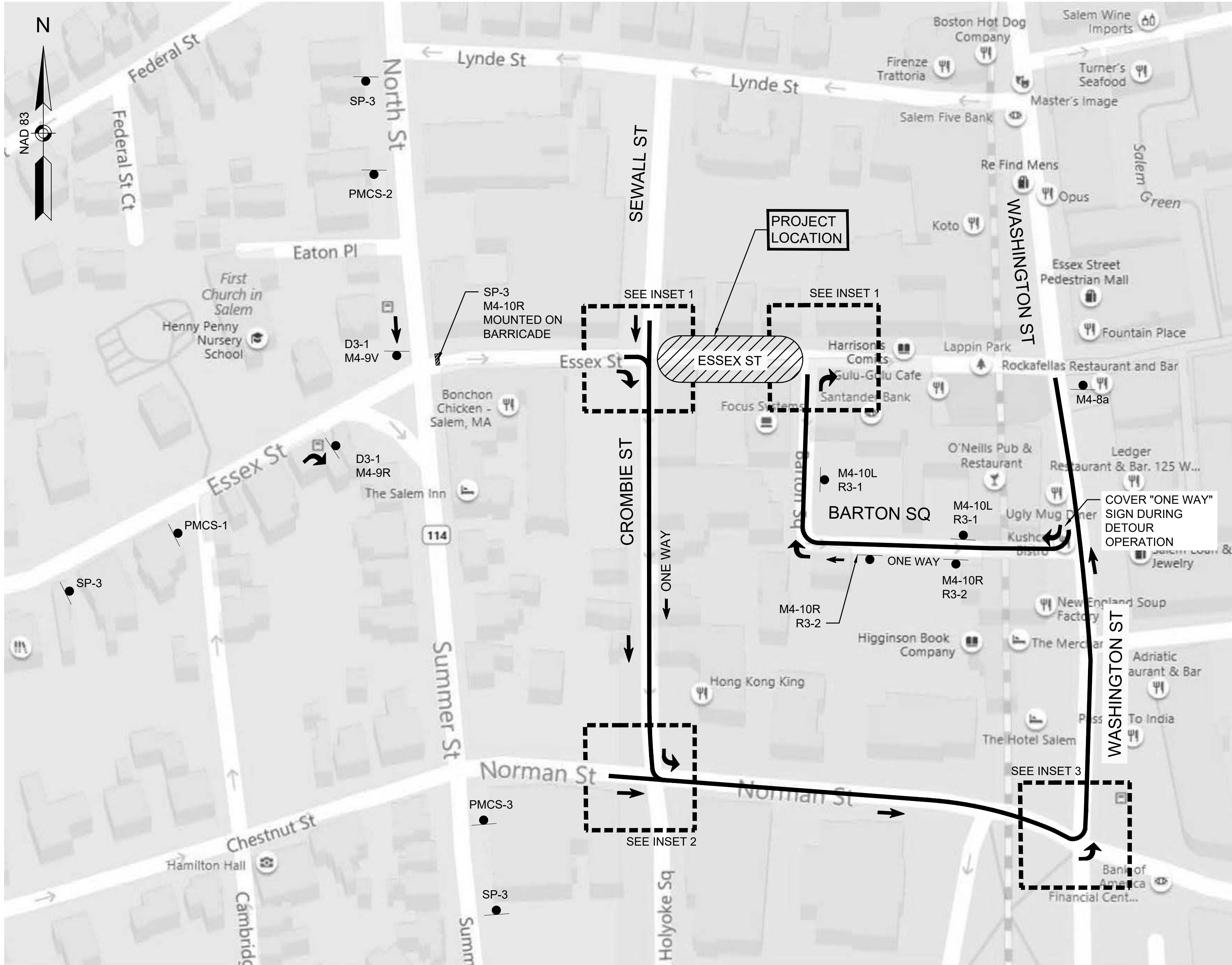
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				REVISIONS

DRAWN BY:	JMC
DESIGNED BY:	JMC
CHECKED BY:	DJ



ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
DETOUR PLAN
WORK ZONE 8
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
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DETOUR PLAN

WORK ZONE 9 DETOUR NOTES:

- ESSEX STREET FULL CLOSURE (SEWALL STREET TO BARTON SQUARE) IS REQUIRED FOR FULL DEPTH ROADWAY CONSTRUCTION WORK.
- ESSEX STREET FULL CLOSURE (SEWALL STREET TO BARTON SQUARE) IS LIMITED TO THE HOURS OF 7:00 AM AND 3:30 PM (MONDAY-FRIDAY). ESSEX STREET SHALL BE FULLY REOPENED TO TRAFFIC BY 3:30 PM EACH WORK DAY.
- ALL SIGNS SHALL BE COVERED WHEN DETOUR IS NOT IN USE.
- NO ALTERATION SHALL BE UNDERTAKEN WHICH DECREASES OR HAS THE EFFECT OF DECREASING ACCESSIBILITY OR USABILITY OF A FACILITY.
- EXISTING PEDESTRIAN ACCESS SHALL BE MAINTAINED DURING ESSEX STREET FULL CLOSURE.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

ESSEX ST
ROAD
WORK

PANEL 2

STARTS
X X / X X

NOTE:

PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED TWO WEEKS PRIOR TO DETOUR IMPLEMENTATION.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

ESSEX ST
ROAD
CLOSED

PANEL 2

FOLLOW
DETOUR

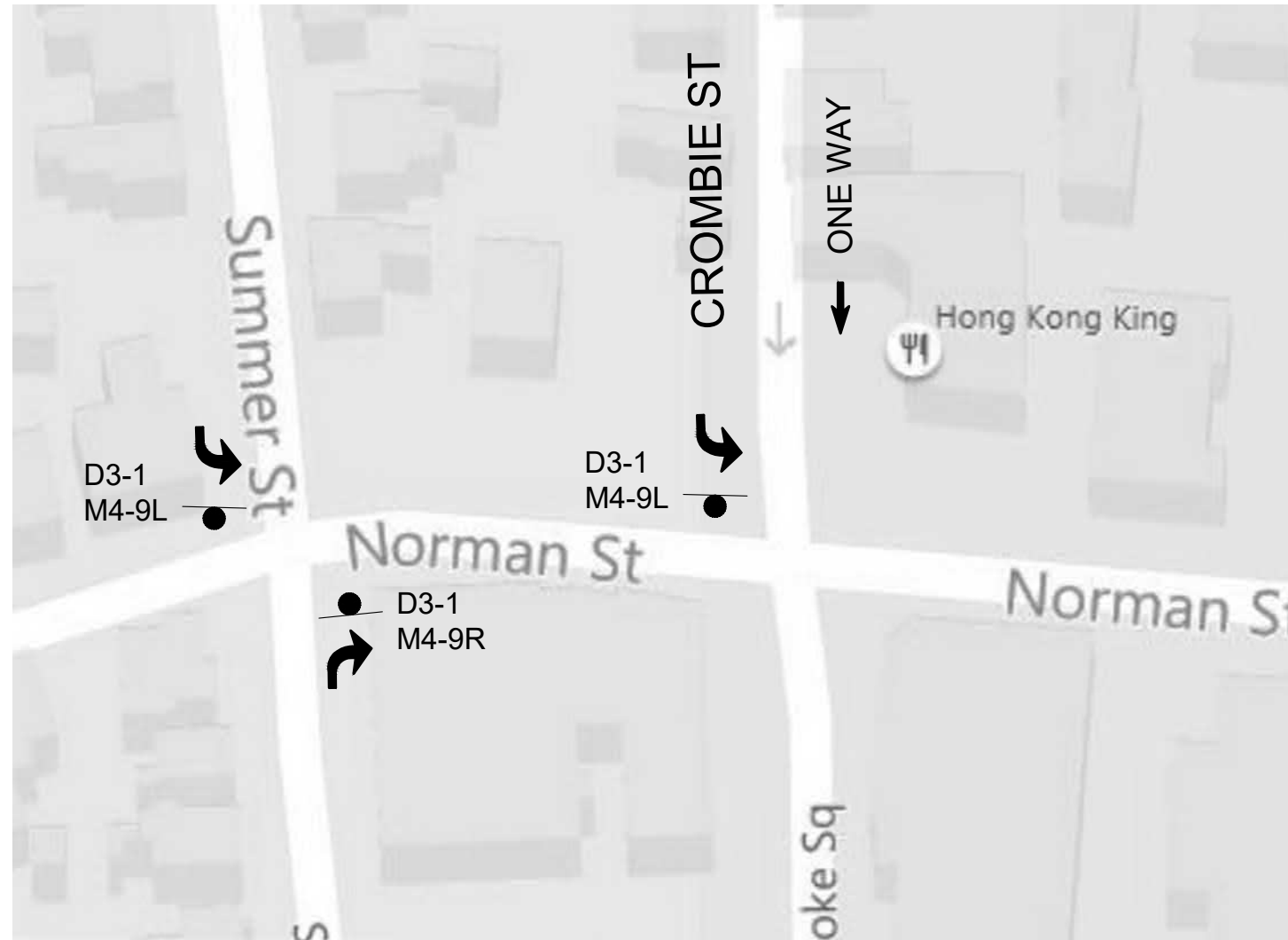
NOTE:

PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED FOR THE FIRST TWO WEEKS OF DETOUR.

PORTABLE CHANGEABLE MESSAGE SIGNS



INSET 1



INSET 2

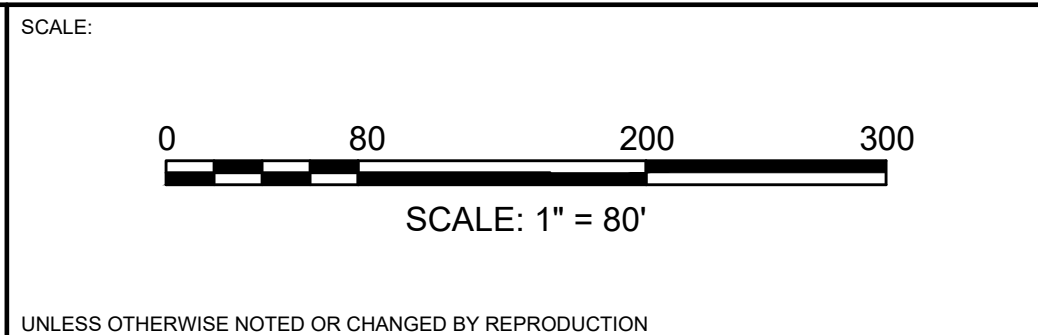


INSET 3

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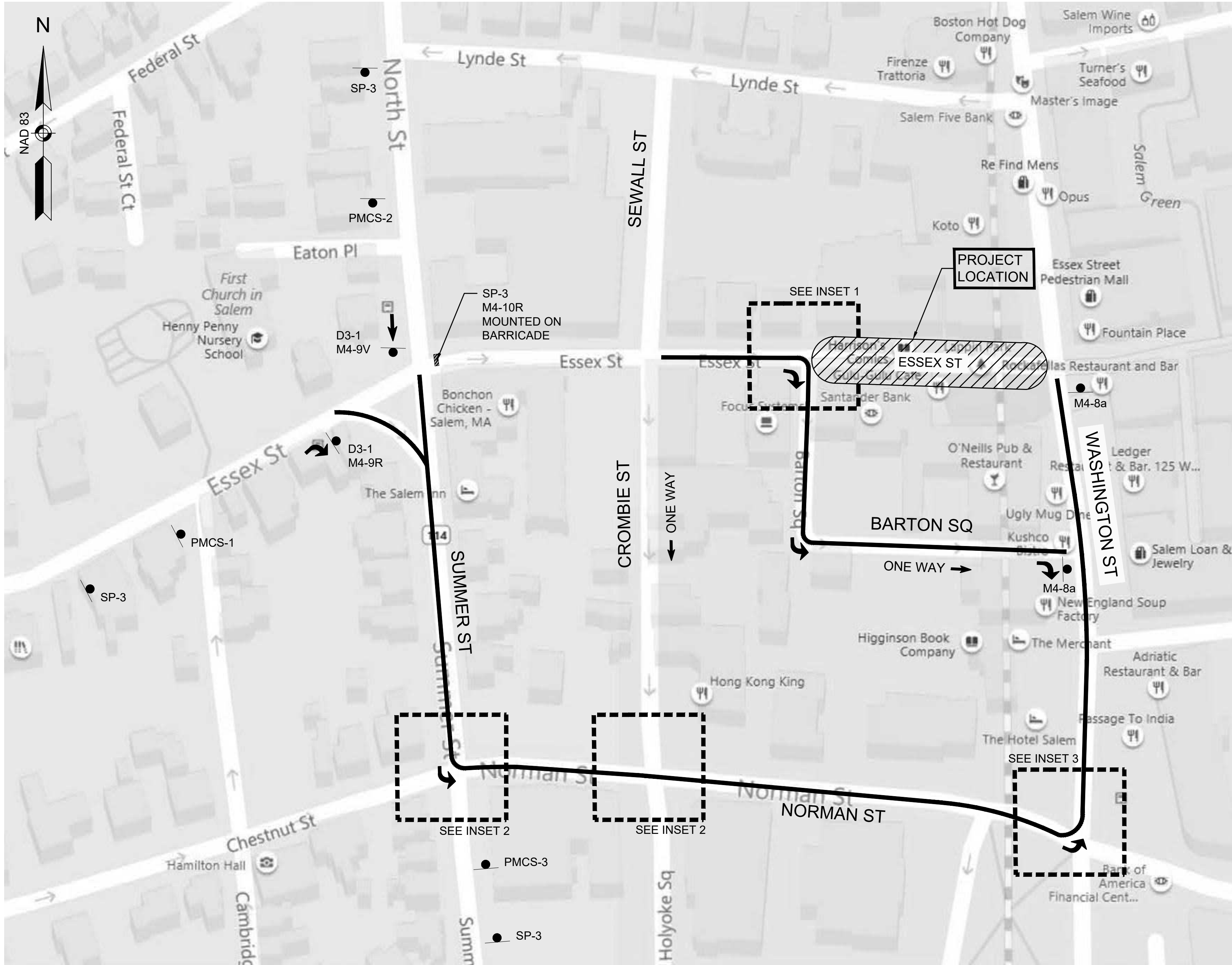
NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

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DESIGNED BY:	JMC
CHECKED BY:	DJ



ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
DETOUR PLAN
WORK ZONE 9
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	32 of 34



DETOUR PLAN

WORK ZONE 10 DETOUR NOTES:

- ESSEX STREET FULL CLOSURE (BARTON SQUARE TO WASHINGTON STREET) IS REQUIRED FOR FULL DEPTH ROADWAY CONSTRUCTION WORK.
- ESSEX STREET FULL CLOSURE (BARTON SQUARE TO WASHINGTON STREET) IS LIMITED TO THE HOURS OF 7:00 AM AND 3:30 PM (MONDAY-FRIDAY). ESSEX STREET SHALL BE FULLY REOPENED TO TRAFFIC BY 3:30 PM EACH WORK DAY.
- ALL SIGNS SHALL BE COVERED WHEN DETOUR IS NOT IN USE.
- NO ALTERATION SHALL BE UNDERTAKEN WHICH DECREASES OR HAS THE EFFECT OF DECREASING ACCESSIBILITY OR USABILITY OF A FACILITY.
- EXISTING PEDESTRIAN ACCESS SHALL BE MAINTAINED DURING ESSEX STREET FULL CLOSURE.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

ESSEX ST
ROAD
WORK

PANEL 2

STARTS
X X / X X

NOTE:

PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED TWO WEEKS PRIOR TO DETOUR IMPLEMENTATION.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

ESSEX ST
ROAD
CLOSED

PANEL 2

FOLLOW
DETOUR

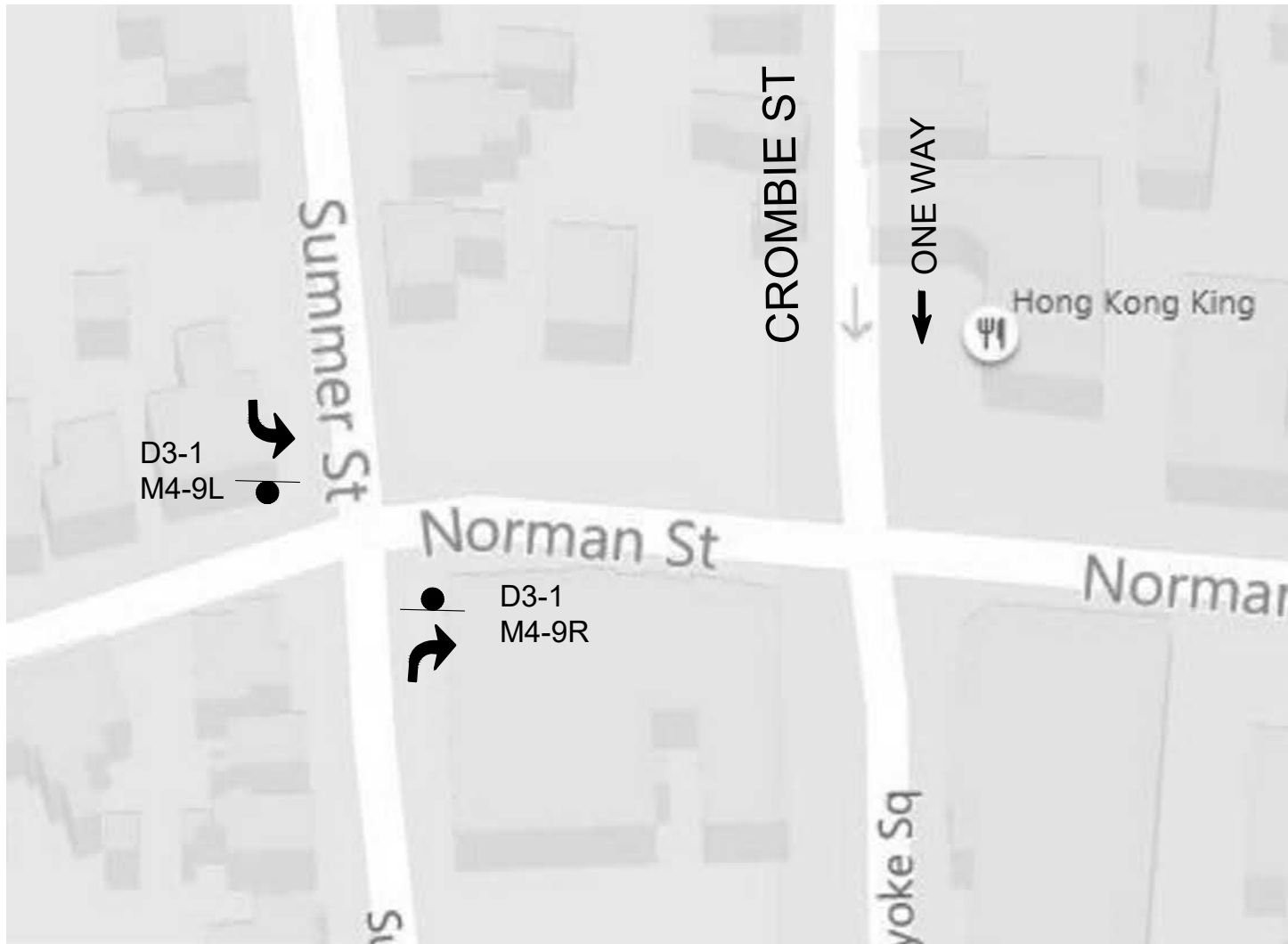
NOTE:

PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED FOR THE FIRST TWO WEEKS OF DETOUR.

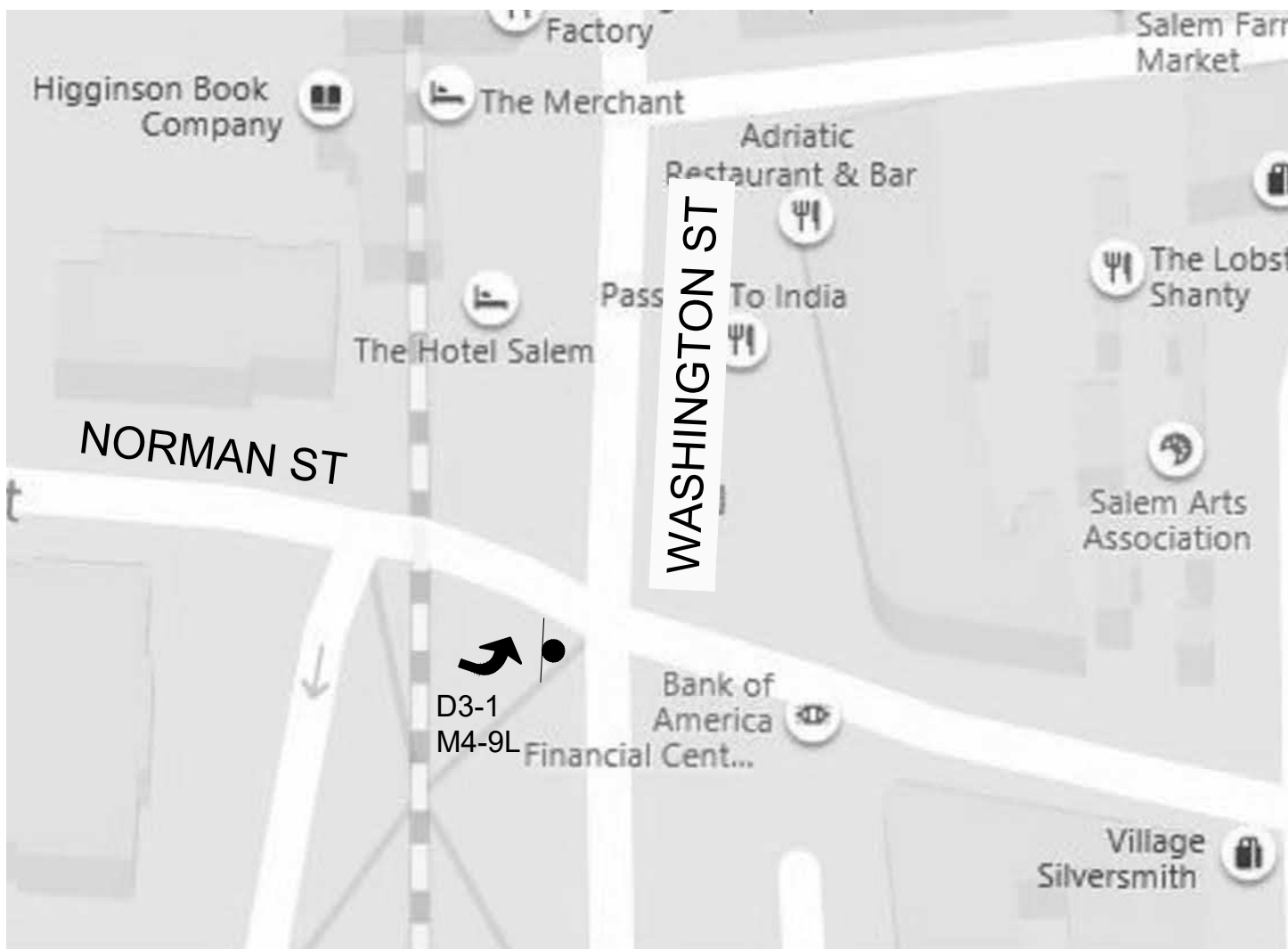
PORTABLE CHANGEABLE MESSAGE SIGNS



INSET 1



INSET 2

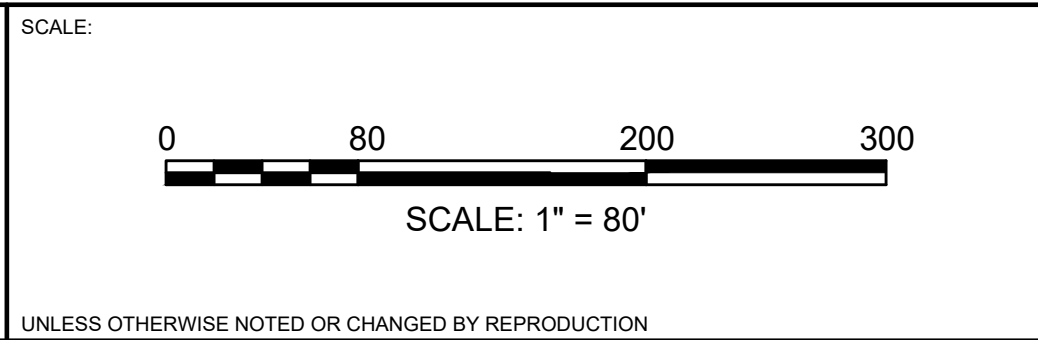


INSET 3

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CHECKED BY:	DJ



ROADWAY AND STREETSCAPE IMPROVEMENTS

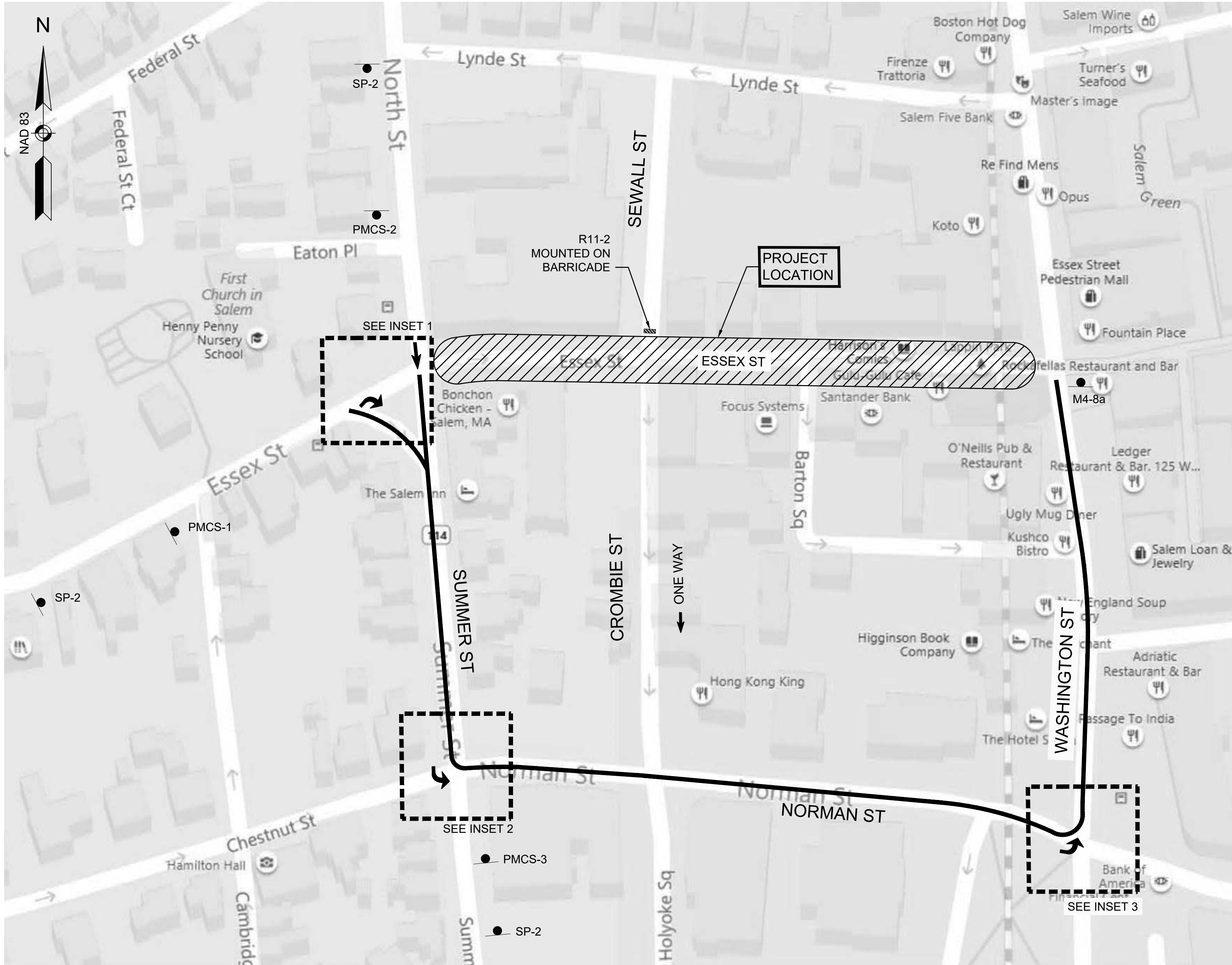
ESSEX STREET

DETOUR PLAN

WORK ZONE 10

SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	33 of 34



DETOUR PLAN

- WORK ZONE 11 DETOUR NOTES:**
- 1. ESSEX STREET FULL CLOSURE (SUMMER STREET TO WASHINGTON STREET) IS REQUIRED FOR FULL DEPTH ROADWAY CONSTRUCTION WORK.
 - 2. ESSEX STREET FULL CLOSURE (SUMMER STREET TO WASHINGTON STREET) IS LIMITED TO THE HOURS OF 7:00 AM AND 3:30 PM (MONDAY-FRIDAY). ESSEX STREET SHALL BE FULLY REOPENED TO TRAFFIC BY 3:30 PM EACH WORK DAY.
 - 3. ALL SIGNS SHALL BE COVERED WHEN DETOUR IS NOT IN USE.
 - 4. NO ALTERATION SHALL BE UNDERTAKEN WHICH DECREASES OR HAS THE EFFECT OF DECREASING ACCESSIBILITY OR USABILITY OF A FACILITY.
 - 5. EXISTING PEDESTRIAN ACCESS SHALL BE MAINTAINED DURING ESSEX STREET FULL CLOSURE.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

E S S E X S T
R O A D
W O R K

PANEL 2

STARTS
X X / X X

NOTE: PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED TWO WEEKS PRIOR TO DETOUR IMPLEMENTATION.

PANEL 1

PCMS 1
PCMS 2
PCMS 3

E S S E X S T
R O A D
C L O S E D

PANEL 2

F O L L O W
D E T O U R

NOTE: PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED FOR THE FIRST TWO WEEKS OF DETOUR.

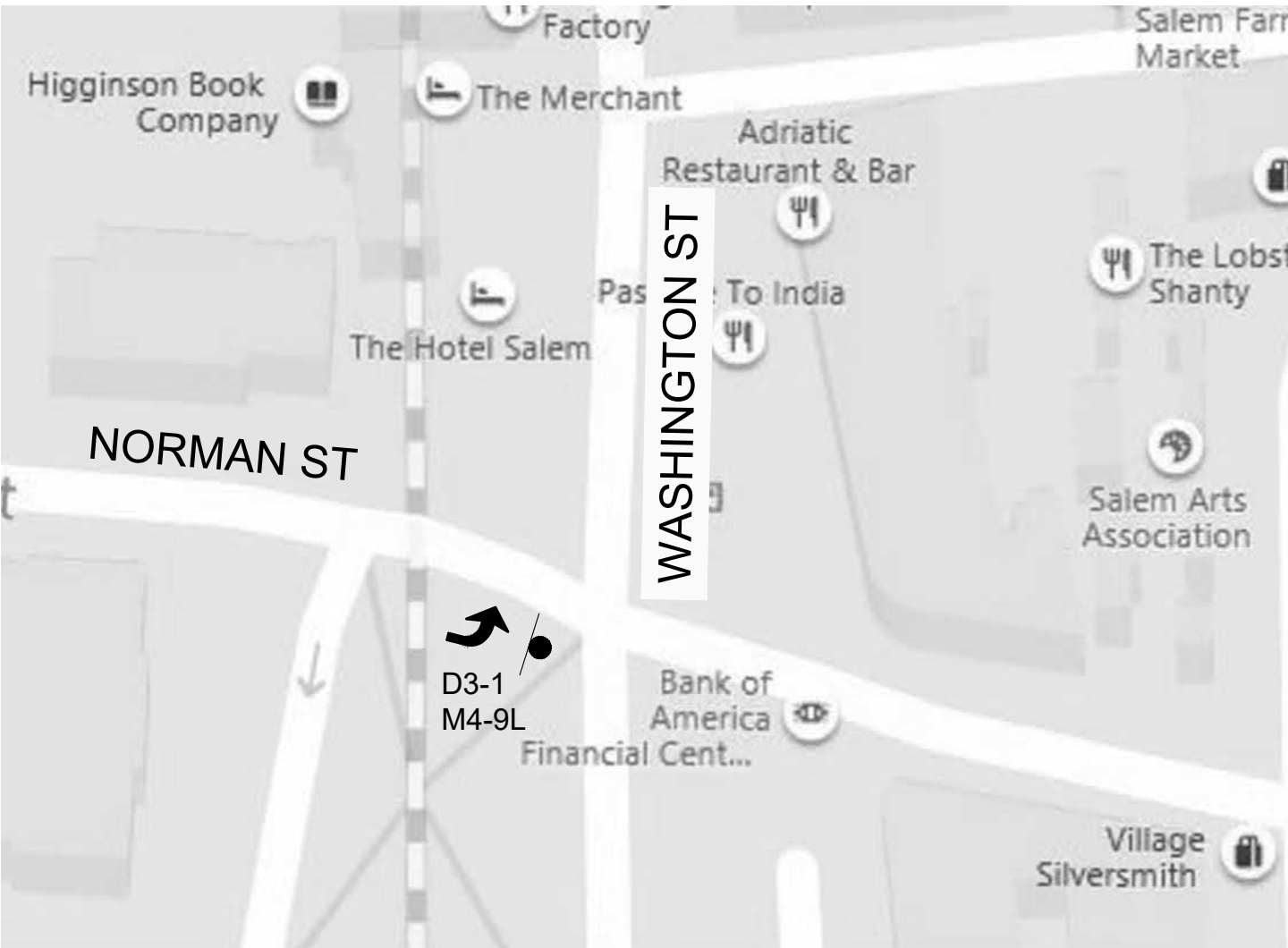
PORTABLE CHANGEABLE MESSAGE SIGNS



INSET 1



INSET 2

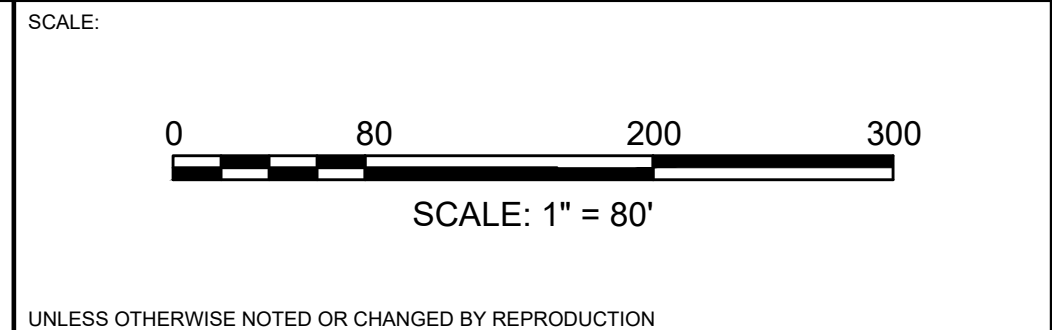


INSET 3

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NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

DRAWN BY:	JMC
DESIGNED BY:	JMC
CHECKED BY:	DJ



ROADWAY AND STREETSCAPE IMPROVEMENTS
ESSEX STREET
DETOUR PLAN
WORK ZONE 11
SALEM, MASSACHUSETTS

ISSUE DATE	MAY 22, 2020
SHEET	34 of 34