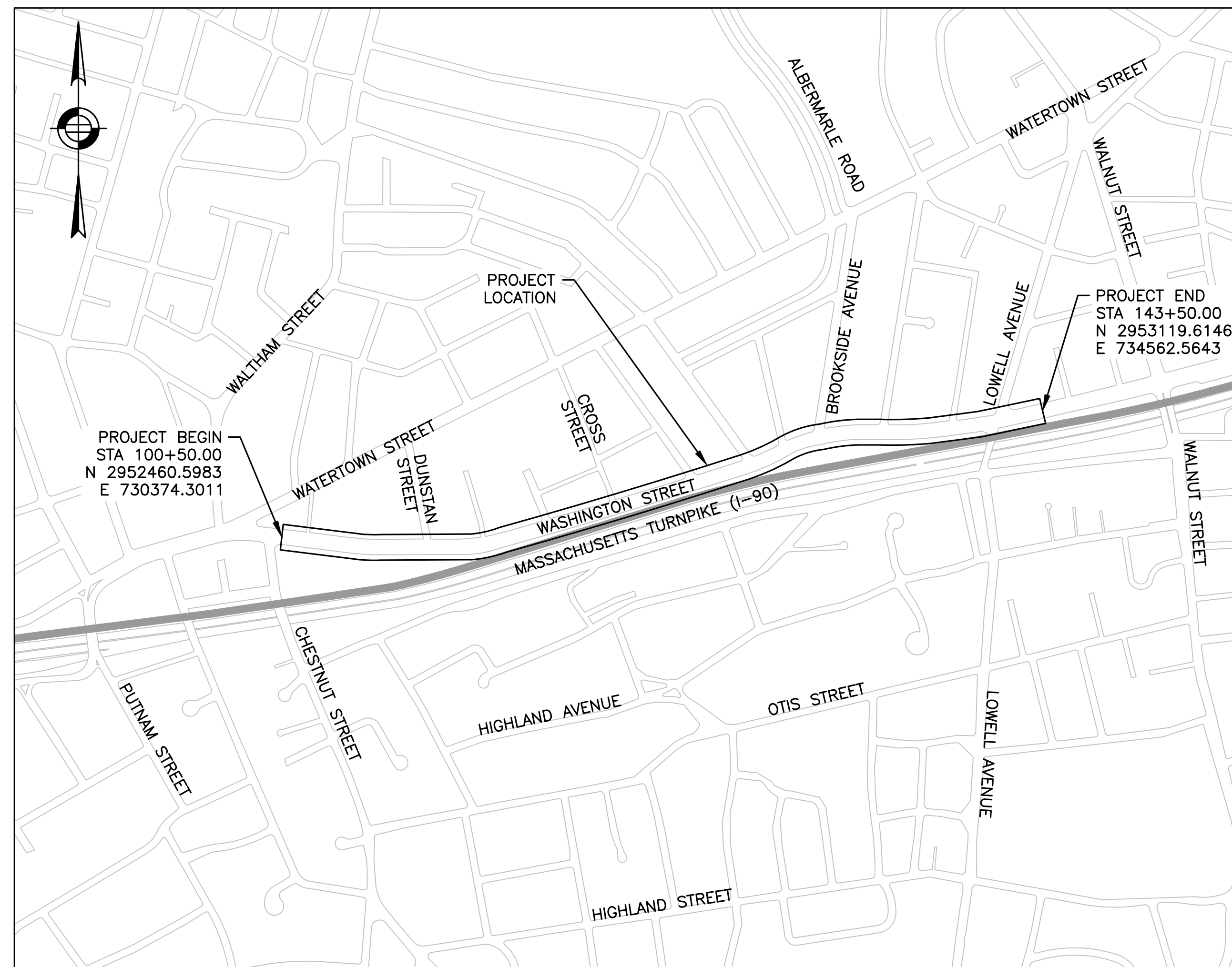


THE CITY OF NEWTON, MASSACHUSETTS WASHINGTON STREET PILOT

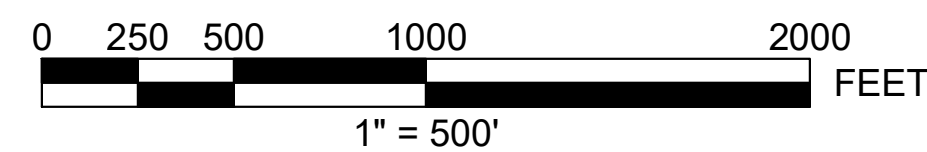
MIDDLESEX COUNTY

25%/75% DESIGN SUBMISSION

INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET AND INDEX
2	GENERAL NOTES
3	LEGEND AND ABBREVIATIONS
4-5	KEY PLANS
6-7	TYPICAL SECTIONS
8-11	CONSTRUCTION BASELINE TIE PLANS
12-18	CONSTRUCTION PLANS
19-25	TRAFFIC SIGN & PAVEMENT MARKINGS
26	TRAFFIC SIGN SUMMARY SHEET
27-30	TRAFFIC SIGNAL PLANS
31-39	LANDSCAPING PLANS & DETAILS
40-41	CONSTRUCTION DETAILS
43-44	PEDESTRIAN RAMP DETAILS 1
45-47	TEMPORARY TRAFFIC CONTROL PLANS



LOCUS PLAN



ALL WORK UNDER THIS CONTRACT SHALL BE DONE IN CONFORMANCE WITH THE CITY OF NEWTON STANDARD DETAILS, CITY OF NEWTON SPECIFICATIONS, AND CITY OF NEWTON ENGINEERING DIRECTIVES, MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 2024, THE 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS; THE 2024 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) WITH MASSACHUSETTS AMENDMENTS AND THE STANDARD MUNICIPAL TRAFFIC CODE; THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING; THE LATEST EDITION OF AMERICAN STANDARD FOR NURSERY STOCK; THE PLANS AND THESE SPECIAL PROVISIONS. WHERE CONFLICTS EXIST, THE CITY OF NEWTON STANDARDS AND SPECIFICATIONS SHALL GOVERN.

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DATE	DESCRIPTION	REV #				
04/08/2024	25%/75% HIGHWAY DESIGN PLANS					
WASHINGTON STREET PILOT TITLE SHEET AND INDEX						
SHS PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	1	47

GENERAL NOTES

1. THE EXISTING CONDITIONS SHOWN ON THESE PLANS CONSIST OF A COMBINATION OF MASSGIS DATA, LIDAR SURVEY AND AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY DAWOOD ENGINEERING, INC. ON MARCH 6, 2023.
2. THE ELEVATIONS DEPICTED ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) OF 1988 (USFT). ELEVATIONS ARE ESTABLISHED BY USING MEANS OF THE MASSACHUSETTS CONTINUOUSLY OPERATING REFERENCE STATION NETWORK (MACORS).
3. THE HORIZONTAL CONTROL DEPICTED ARE BASED ON MASSACHUSETTS COORDINATE SYSTEM, MAINLAND ZONE, NAD83(2011) EPOCH 2010.00. THE HORIZONTAL CONTROL ARE ESTABLISHED BY USING MEANS OF THE MASSACHUSETTS CONTINUOUSLY OPERATING REFERENCE STATION NETWORK (MACORS).
4. ABUTTER INFORMATION AND APPROXIMATE BOUNDARY LINES SHOWN HEREON HAVE BEEN COMPILED FROM MASSGIS DATA.

5.

TEMPORARY BENCHMARK INFORMATION				
TBM #	DESCRIPTION	ELEVATION	NORTHING	EASTING
52	MAGNAILSET	59.18	5905597.7078	1465507.5127
53	DHSET	61.06	5905526.8902	1465251.5675
54	MAGNAILSET	62.80	5905459.3778	1464957.1922
55	DHSET	60.88	5905405.2292	1464668.5654
56	MAGNAILSET	57.52	5905379.0064	1464302.4587
658	MAGNAILFND	52.78	5905322.1406	1463774.7733
59	MAGNAILSET	50.73	5905191.5937	1463495.0459
60	MAGNAILSET	49.74	5905091.6317	1463195.1060
61	MAGNAILSET	51.18	5904977.9067	1462823.5107
63	MAGNAILSET	52.69	5904775.0994	1462123.5278
64	MAGNAILSET	52.95	5904751.8504	1461914.2841
65	MAGNAILFND	53.15	5904757.5666	1461749.6638
66	MAGNAILSET	51.15	5904754.8991	1461426.0573
67	MAGNAILSET	48.49	5904787.0442	1461106.1212
69	MAGNAILSET	48.77	5904837.8270	1460809.4286

6. EXISTING UTILITIES ARE SHOWN HEREON FROM SURFACE VISIBLE EVIDENCE OBSERVED AT THE TIME OF SURVEY. OTHER UNDERGROUND UTILITIES ARE KNOWN TO EXIST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY LOCATING AND COORDINATING ANY ON-SITE ACTIVITY WITH DIG-SAFE AND THE APPROPRIATE UTILITY COMPANY AND MAINTAINING EXISTING UTILITY SYSTEM SERVICE. DIG-SAFE SHALL BE NOTIFIED PER THE COMMONWEALTH OF MASSACHUSETTS STATUTE CHAPTER 82, SECTION 40, AT 1-888-344-7233. NO GUARANTEE IS IMPLIED OR INTENDED AS TO THE ACCURACY, LOCATION OR THAT ALL UTILITIES AND/OR SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION AND INVERTS OR UTILITIES AND STRUCTURES AS REQUIRED PRIOR TO THE START OF CONSTRUCTION.
7. THE CONTRACTOR SHALL RE-ESTABLISH SURVEY CONTROL PRIOR TO BEGINNING WORK ON THIS CONTRACT.
8. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES AT NO ADDITIONAL COST TO THE OWNER. IF THE CONTRACTOR ADJUSTS UTILITY COVERS IT SHALL BE DEEMED PART OF THE WORK AND THERE WILL BE NO ADDITIONAL COMPENSATION.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DAMAGED BY THE CONTRACTOR'S OPERATIONS, INCLUDING STAGING AREAS, SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INVESTIGATING AND CONFIRMING THAT ALL ITEMS TO BE REUSED ARE IN SERVICEABLE CONDITION. IF IT IS DEEMED THAT ANY ITEM IS NOT ABLE TO BE REUSED, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING AND INCLUDE ESTIMATED COSTS TO INSTALL NEW.
12. TEMPORARY TRAFFIC CONTROL PLANS CONTAINED HEREIN ARE GIVEN AS A GUIDE FOR TYPICAL WORK ZONE TRAFFIC CONTROL APPLICATIONS FOR THE TYPES OF WORK ANTICIPATED FOR THIS PROJECT. THEY ARE NOT INTENDED TO COVER ALL POSSIBLE CONSTRUCTION OPERATIONS WHICH THE CONTRACTOR MAY CHOOSE TO EMPLOY. WORK ZONE TRAFFIC CONTROL FOR OTHER CONSTRUCTION OPERATIONS OR OTHER TRAFFIC SITUATIONS IF APPLICABLE SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD AND AS APPROVED OR DIRECTED BY RESIDENT ENGINEER.

PAVEMENT NOTES

PAVEMENT MILL AND OVERLAY:

SURFACE COURSE: 1.5" SUPERPAVE SURFACE COURSE OVER ASPHALT EMULSION FOR TACK COAT
 PAVEMENT MILLING: 1.5" PAVEMENT FINE MILLING

CEMENT CONCRETE SIDEWALK:

SURFACE COURSE: 6" CEMENT CONCRETE SURFACE EMULSIFIED (4000 PSI, 3/4", 610 AIR ENTRAINED) OVER
 SUB-BASE: 8" GRAVEL BORROW

CEMENT CONCRETE PEDESTRIAN CURB RAMP:

SURFACE COURSE: 8" CEMENT CONCRETE SURFACE EMULSIFIED (4000 PSI, 3/4", 610 AIR ENTRAINED) OVER
 SUB-BASE: 8" GRAVEL BORROW



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**WASHINGTON STREET PILOT
 GENERAL NOTES**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	2	47

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		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
		CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		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)
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		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
		LEGEND "ONLY" - WHITE
		12" STOP LINE
		CROSSWALK (SEE CONSTRUCTION DETAILS FOR SPACING)
		6" SOLID WHITE LINE
		6" SOLID YELLOW LINE
		6" BROKEN WHITE LINE (10' MARK 30' SKIP)
		6" BROKEN YELLOW LINE (10' MARK 30' SKIP)
		6" DOTTED YELLOW LINE (3' MARK 9' SKIP)
		6" DOTTED WHITE LINE EXTENSION (2' MARK 4' SKIP)
		6" DOUBLE YELLOW LINE
		12" WIDE DOTTED WHITE BIKE LINE (SEE CONSTRUCTION DETAILS FOR SPACING)
		6" DOTTED YELLOW BIKE CENTER LINE (SEE CONSTRUCTION DETAILS FOR SPACING)

ABBREVIATIONS

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

ABBREVIATIONS (CONTINUED)

GENERAL	DESCRIPTION
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
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
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
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

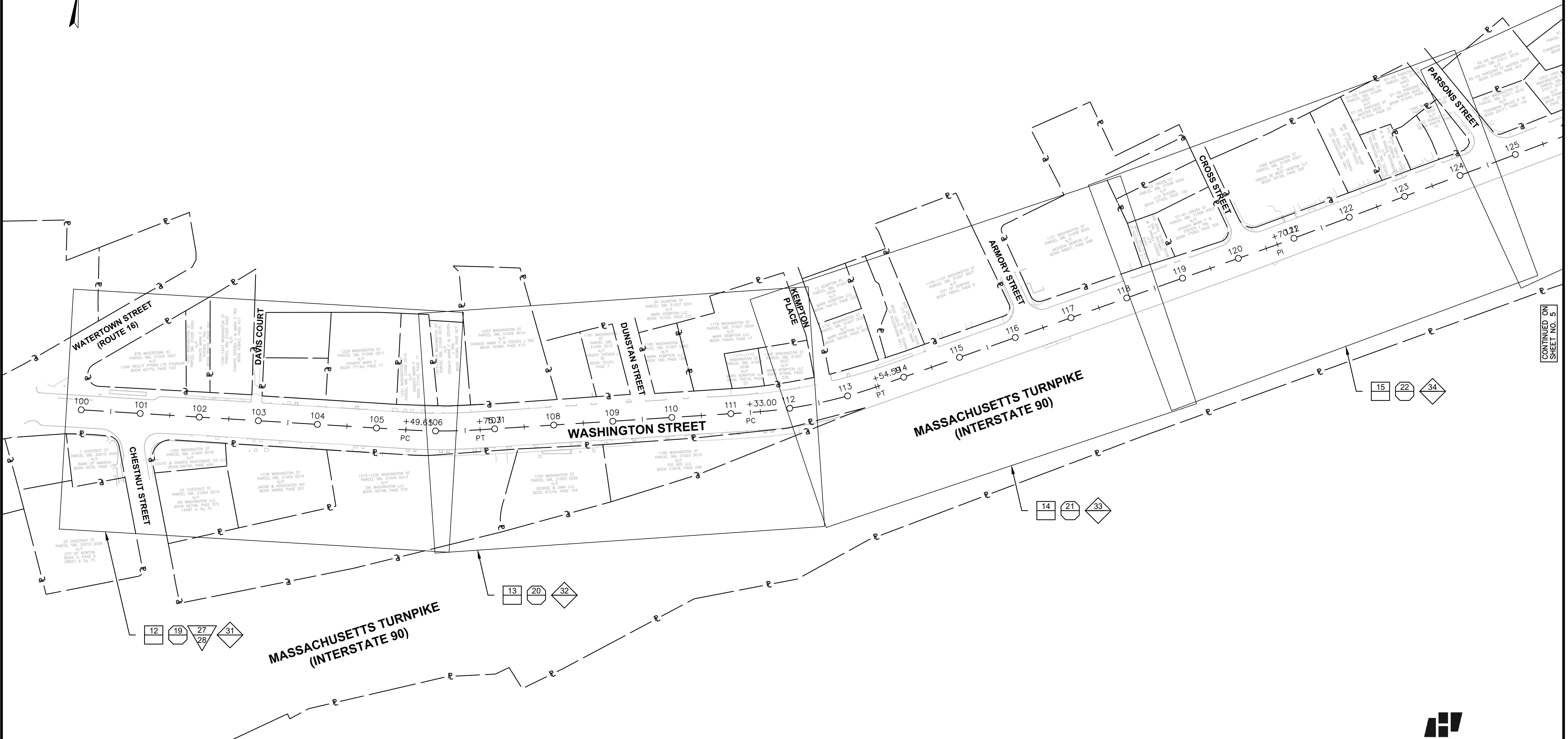
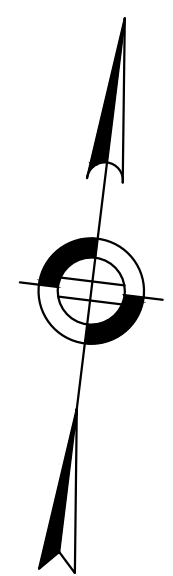


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**WASHINGTON STREET PILOT
LEGEND AND ABBREVIATIONS**

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CONTINUED ON SHEET NO. 5

LEGEND

- CONSTRUCTION PLANS
- TRAFFIC SIGN & PAVEMENT MARKING PLANS
- TRAFFIC SIGNAL PLANS
- LANDSCAPING PLANS

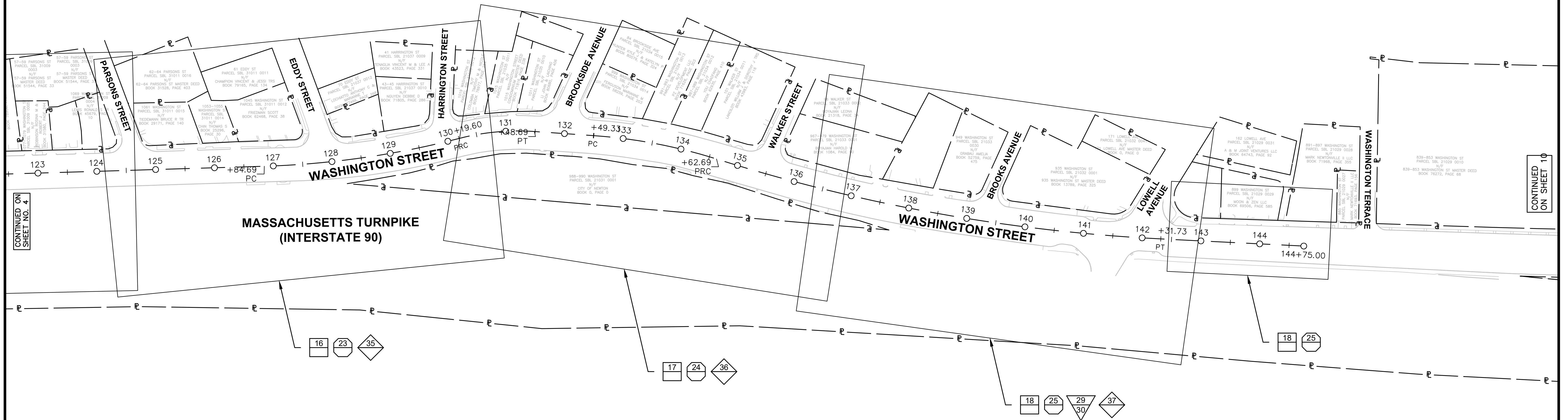
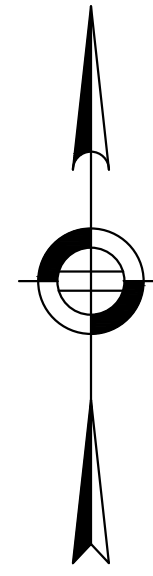
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WASHINGTON STREET PILOT KEY PLANS
SHEET 1 OF 2

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
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CONTINUED ON
SHEET NO. 4

CONTINUED ON
SHEET NO. 10

LEGEND

- CONSTRUCTION PLANS
- TRAFFIC SIGN & PAVEMENT MARKING PLANS
- TRAFFIC SIGNAL PLANS
- LANDSCAPING PLANS

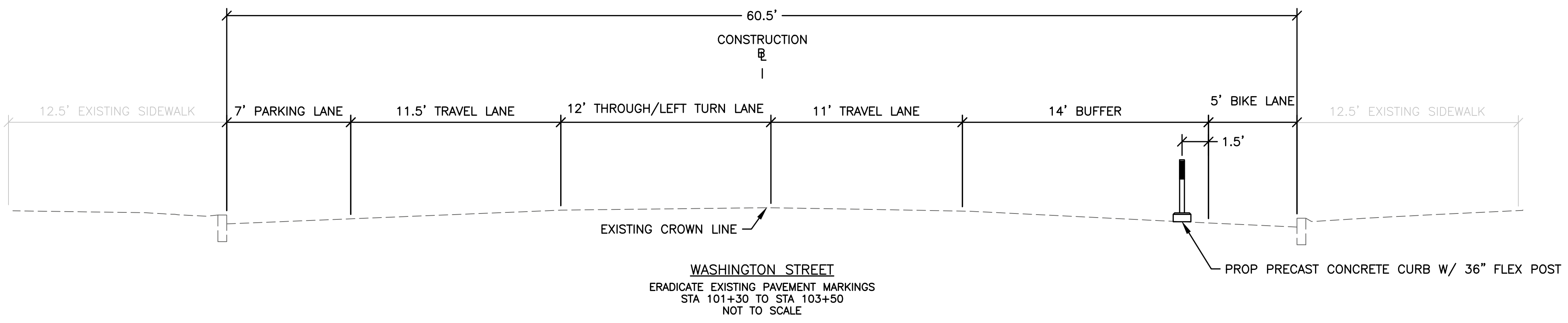
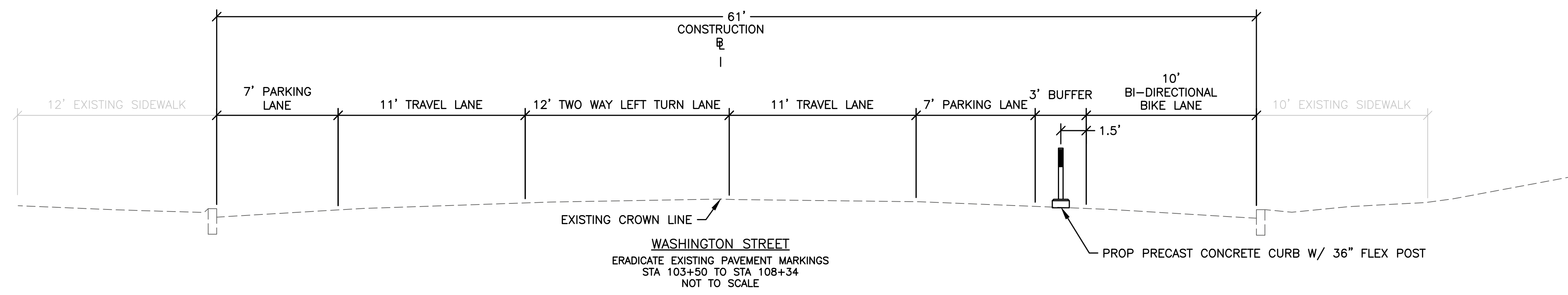
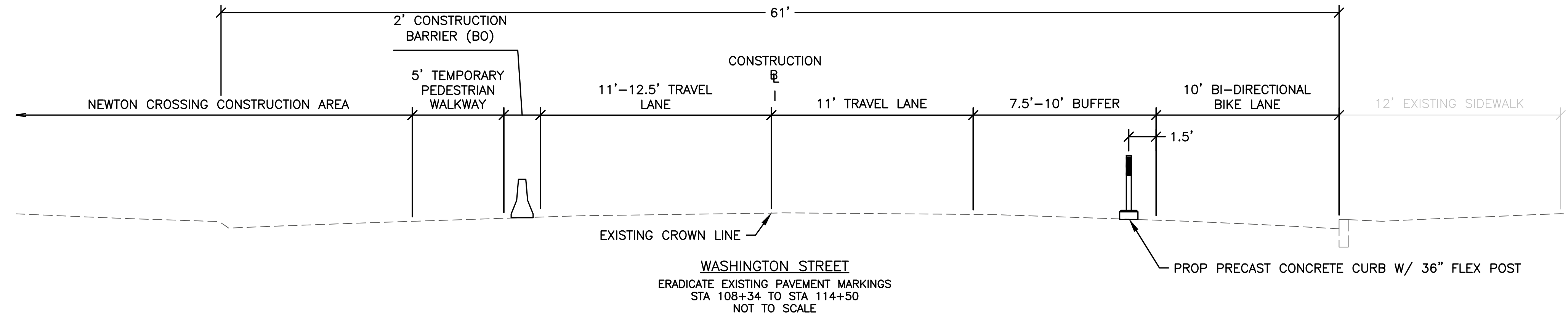
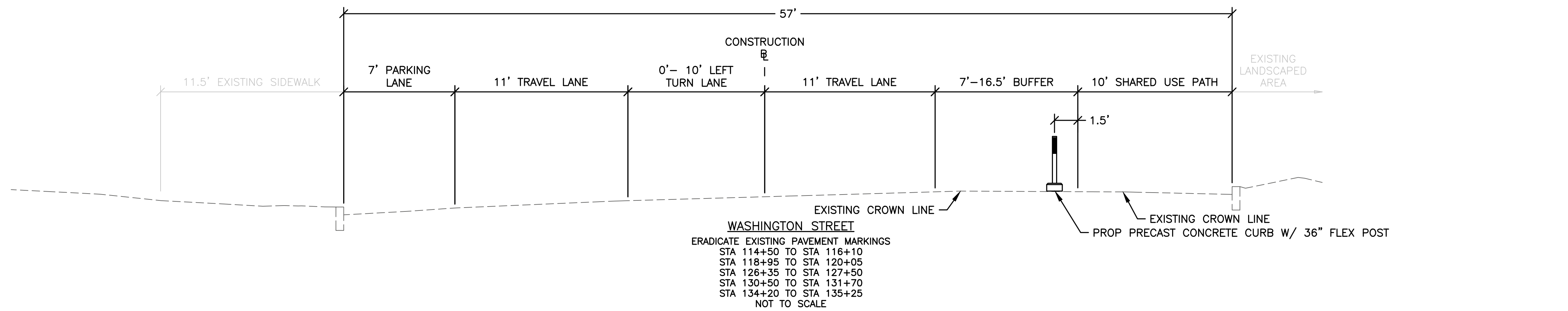


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**WASHINGTON STREET PILOT
KEY PLANS
SHEET 2 OF 2**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
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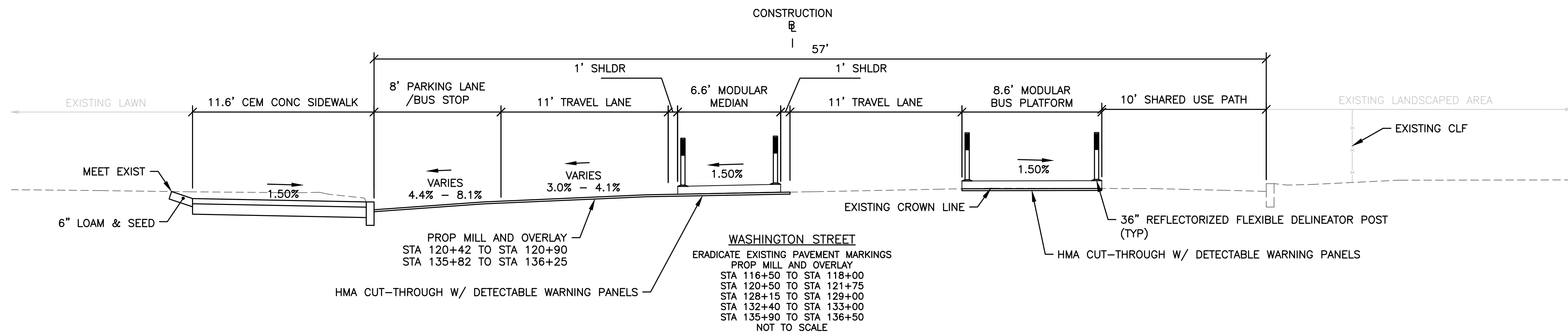
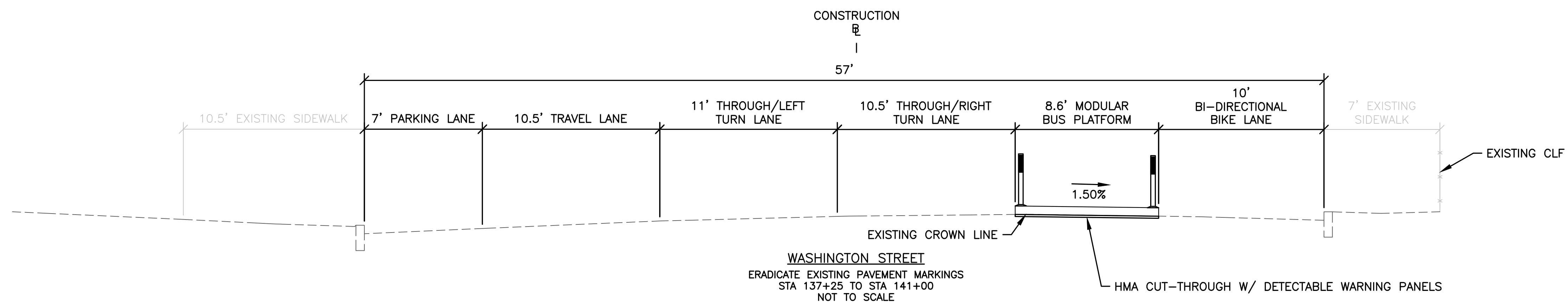


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**WASHINGTON STREET PILOT
 TYPICAL SECTIONS
 SHEET 1 OF 2**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	6	47

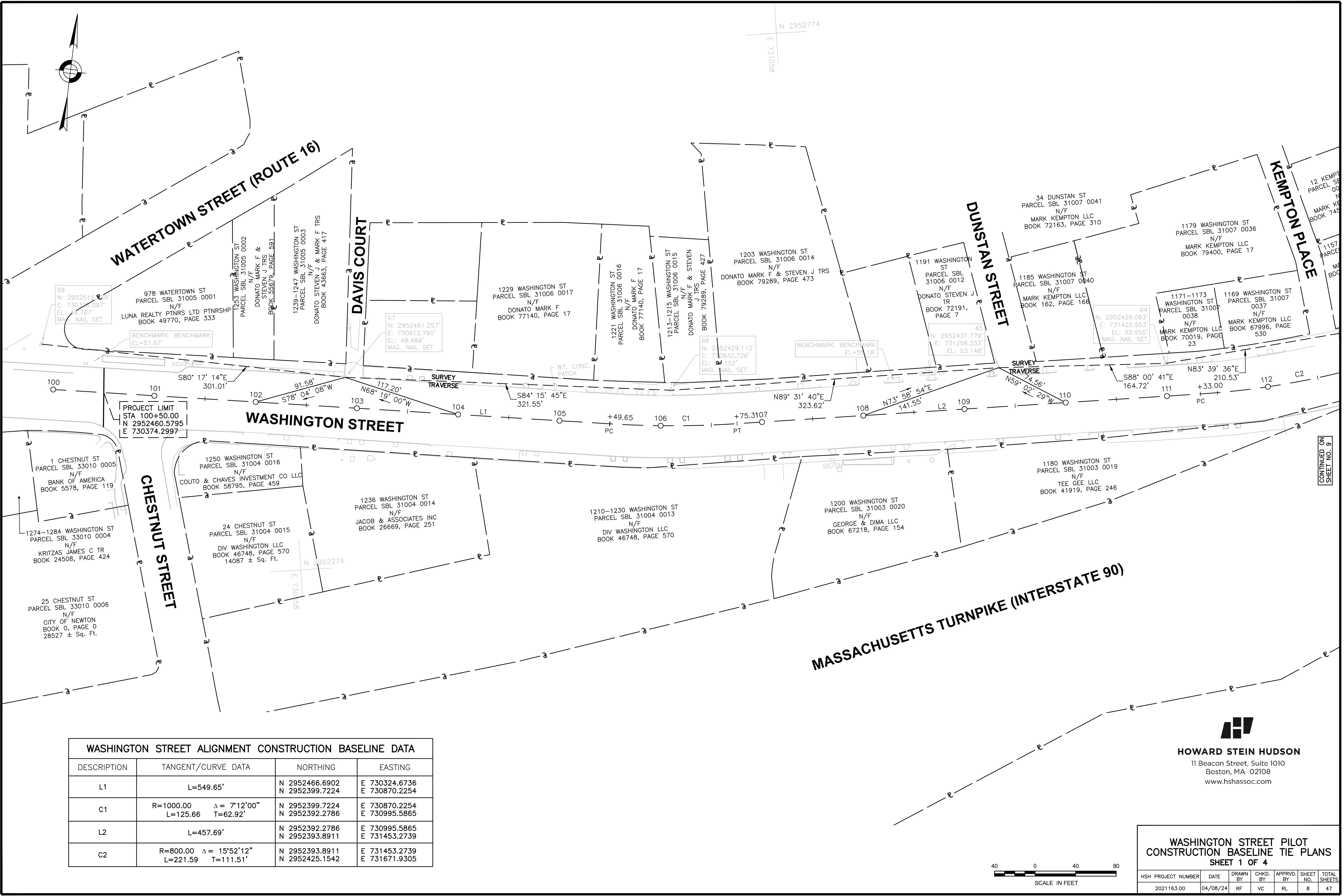
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WASHINGTON STREET PILOT
TYPICAL SECTIONS
SHEET 2 OF 2

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	7	47



PROJECT LIMIT
 STA 100+50.00
 N 2952460.5795
 E 730374.2997

WASHINGTON STREET ALIGNMENT CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
L1	L=549.65'	N 2952466.6902 N 2952399.7224	E 730324.6736 E 730870.2254
C1	R=1000.00 Δ = 7°12'00" L=125.66 T=62.92'	N 2952399.7224 N 2952392.2786	E 730870.2254 E 730995.5865
L2	L=457.69'	N 2952392.2786 N 2952393.8911	E 730995.5865 E 731453.2739
C2	R=800.00 Δ = 15°52'12" L=221.59 T=111.51'	N 2952393.8911 N 2952425.1542	E 731453.2739 E 731671.9305

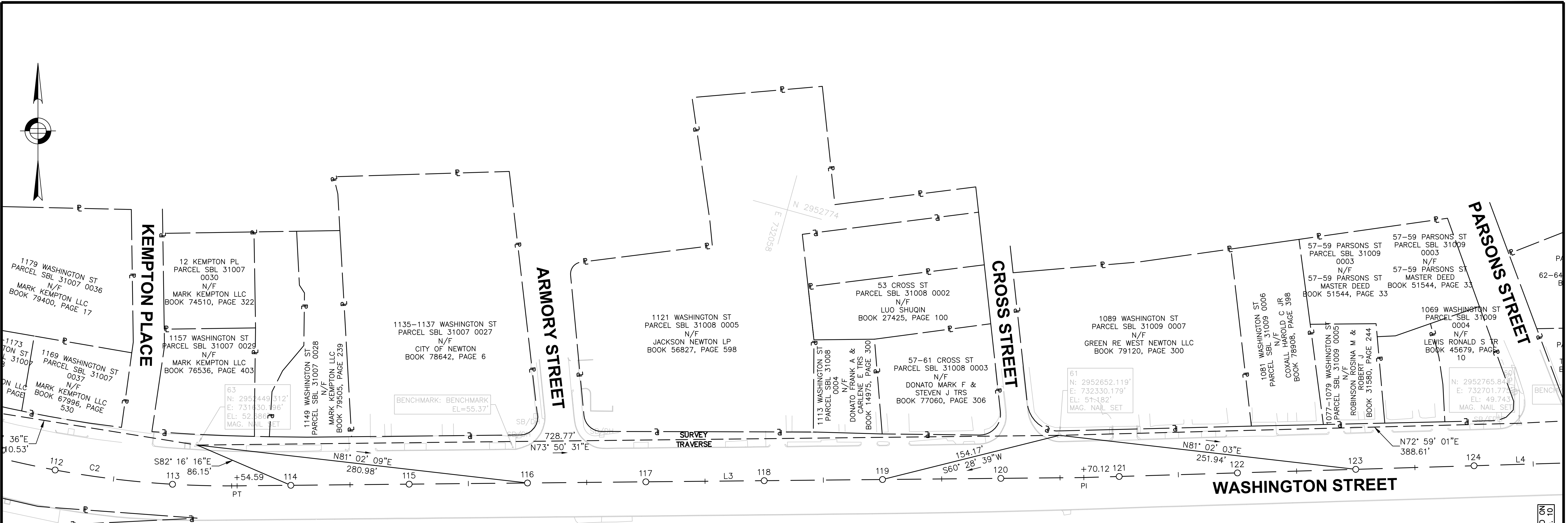
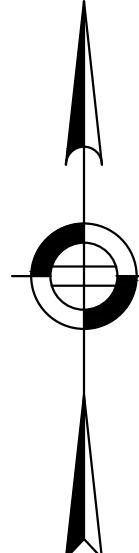


WASHINGTON STREET PILOT CONSTRUCTION BASELINE TIE PLANS SHEET 1 OF 4						
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
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CONTINUED ON
 SHEET NO. 9



MASSACHUSETTS TURNPIKE (INTERSTATE 90)

WASHINGTON STREET ALIGNMENT CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
C2	R=800.00 Δ = 15°52'12" L=221.59 T=111.51'	N 2952393.8911 N 2952425.1542	E 731453.2739 E 731671.9305
L3	L=715.53'	N 2952425.1542 N 2952623.2441	E 731671.9305 E 732359.4935
L4	L=614.57'	N 2952623.2441 N 2952805.4082	E 732359.4935 E 732946.4416

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**WASHINGTON STREET PILOT
 CONSTRUCTION BASELINE TIE PLANS
 SHEET 2 OF 4**

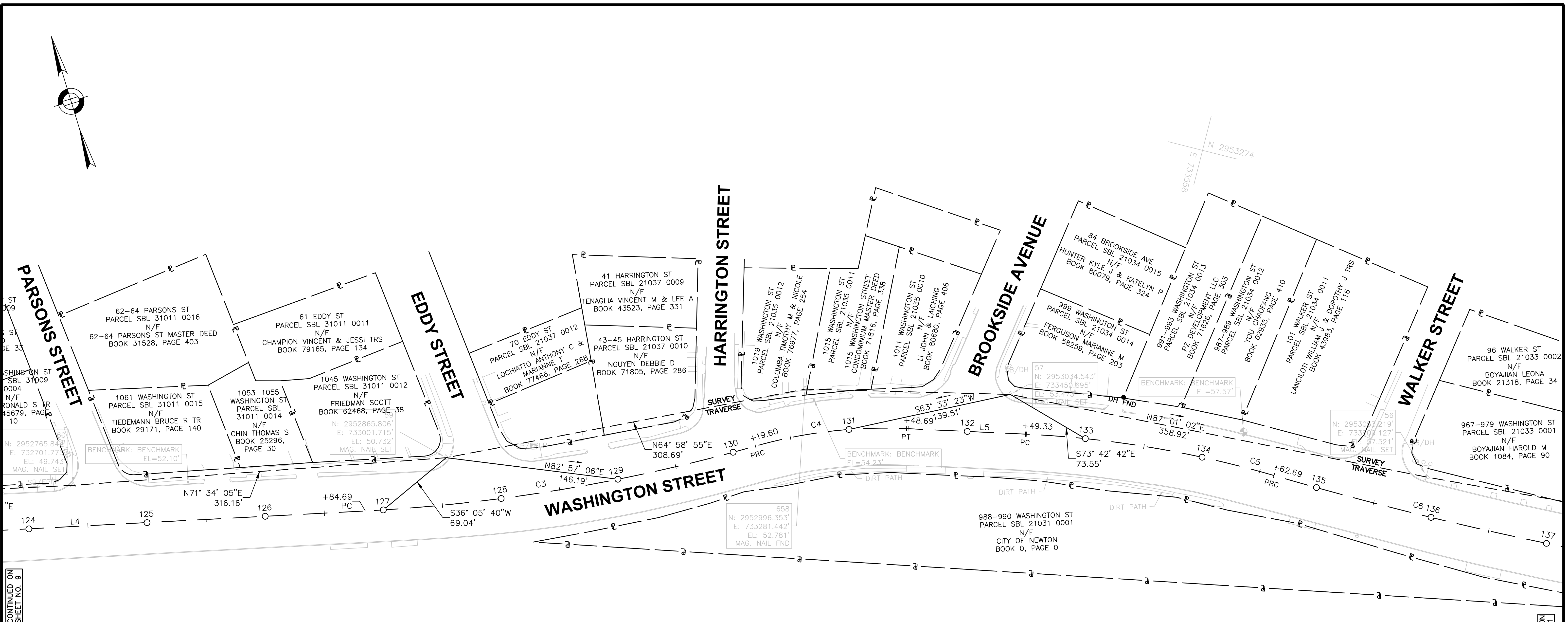
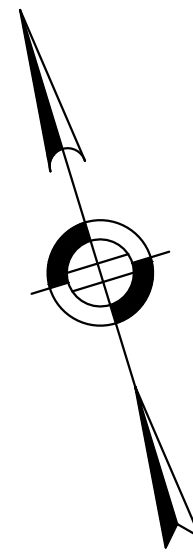
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2021163.00	04/08/24	RF	VC	RL	9	47



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 User: VCHIA
 Printed by: Vanna Chen

CONTINUED ON
 SHEET NO. 8

CONTINUED ON
 SHEET NO. 10



MASSACHUSETTS TURNPIKE (INTERSTATE 90)

WASHINGTON STREET ALIGNMENT CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
L4	L=614.57'	N 2952623.2441 N 2952805.4082	E 732359.4935 E 732946.4416
C3	R=1500.00 Δ = 12°47'34" L=334.91 T=168.16'	N 2952805.4082 N 2952939.4181	E 732946.4416 E 733252.6166
C4	R=400.00 Δ = 18°29'28" L=129.09 T=65.11'	N 2952939.4181 N 2952985.0388	E 733252.6166 E 733372.7815
C5	R=900.00 Δ = 13°34'58" L=213.36 T=107.18'	N 2953005.1785 N 2953022.8135	E 733471.3866 E 733683.5145
L5	L=100.64'	N 2952985.0388 N 2953005.1785	E 733372.7815 E 733471.3866
C6	R=3000.00 Δ = 14°41'15" L=769.04 T=386.64'	N 2953022.8135 N 2953093.7183	E 733683.5145 E 734447.1684



**WASHINGTON STREET PILOT
CONSTRUCTION BASELINE TIE PLANS
SHEET 3 OF 4**

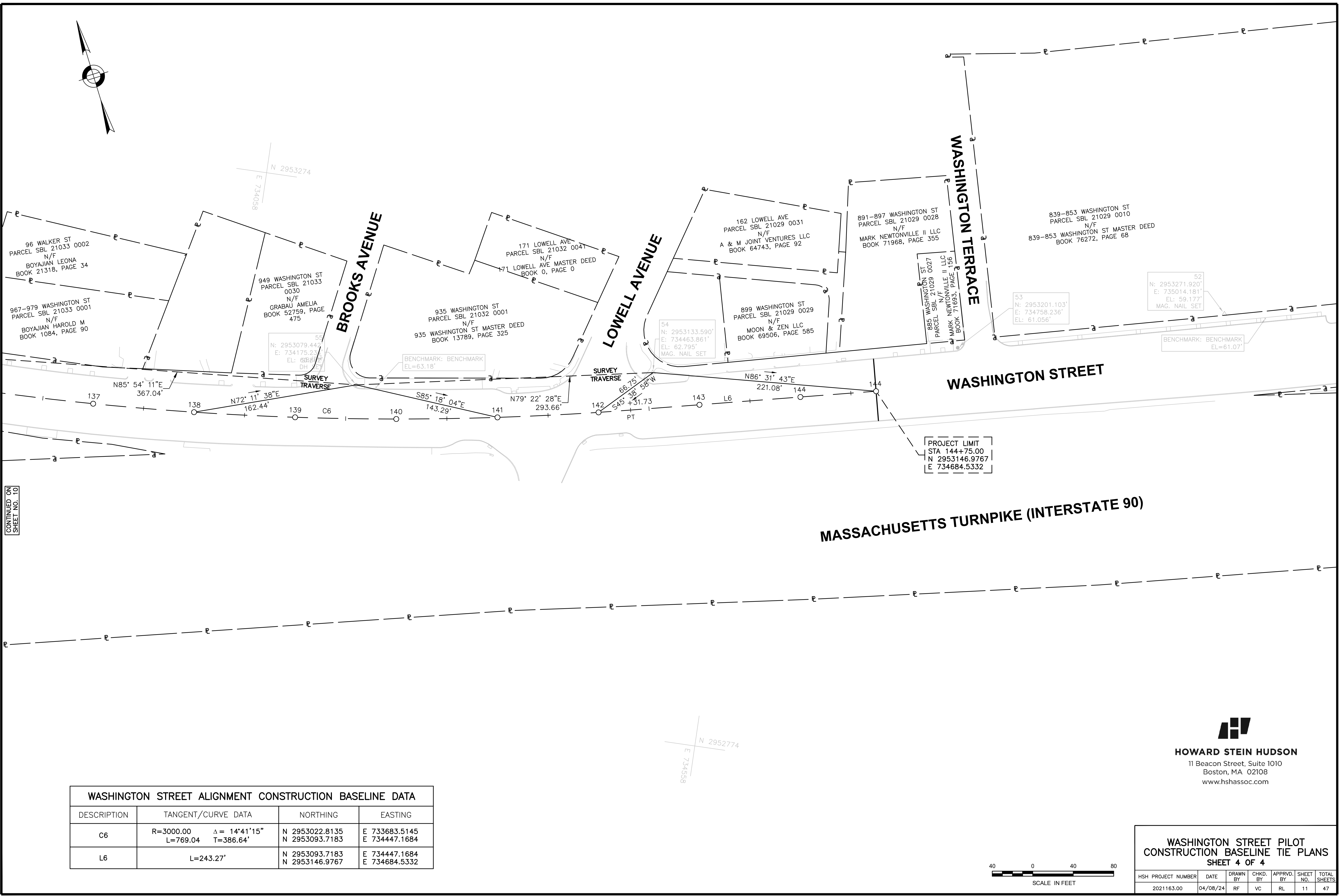
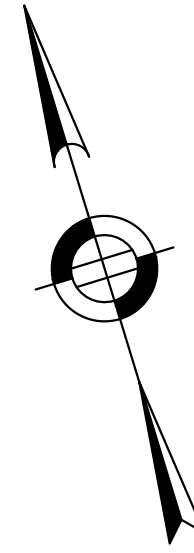
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2021163.00	04/08/24	RF	VC	RL	10	47

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CONTINUED ON
SHEET NO. 9

CONTINUED ON
SHEET NO. 11



CONTINUED ON SHEET NO. 10

WASHINGTON STREET ALIGNMENT CONSTRUCTION BASELINE DATA			
DESCRIPTION	TANGENT/CURVE DATA	NORTHING	EASTING
C6	R=3000.00 Δ = 14°41'15" L=769.04 T=386.64'	N 2953022.8135	E 733683.5145
		N 2953093.7183	E 734447.1684
L6	L=243.27'	N 2953093.7183	E 734447.1684
		N 2953146.9767	E 734684.5332

PROJECT LIMIT
 STA 144+75.00
 N 2953146.9767
 E 734684.5332

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**WASHINGTON STREET PILOT
 CONSTRUCTION BASELINE TIE PLANS
 SHEET 4 OF 4**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	11	47





WATERTOWN STREET (ROUTE 16)

DAVIS COURT

CHESTNUT STREET

WASHINGTON STREET

978 WATERTOWN ST
PARCEL SBL 31005 0001
N/F
LUNA REALTY PTNRS LTD PTNRSHIP
BOOK 49770, PAGE 333

1253 WASHINGTON ST
PARCEL SBL 31005 0002
N/F
DONATO MARK F &
STEVEN J TRS
BOOK 55679, PAGE 591

1239-1247 WASHINGTON ST
PARCEL SBL 31005 0003
N/F
DONATO STEVEN J & MARK F TRS
BOOK 43663, PAGE 417

1229 WASHINGTON ST
PARCEL SBL 31006 0017
N/F
DONATO MARK F
BOOK 77140, PAGE 17

1221 WASHINGTON ST
PARCEL SBL 31006 0016
N/F
DONATO MARK F
BOOK 77140, PAGE 17

1213-1215 WASHINGTON ST
PARCEL SBL 31006 0015
N/F
DONATO MARK F &
STEVEN J TRS
BOOK 79289, PAGE 427

1 CHESTNUT ST
PARCEL SBL 33010 0005
N/F
BANK OF AMERICA
BOOK 5578, PAGE 119

25 CHESTNUT ST
PARCEL SBL 33010 0006
N/F
CITY OF NEWTON
BOOK 0, PAGE 0
28527 ± Sq. Ft.

1250 WASHINGTON ST
PARCEL SBL 31004 0016
N/F
COUTO & CHAVES INVESTMENT CO LLC
BOOK 58795, PAGE 459

24 CHESTNUT ST
PARCEL SBL 31004 0015
N/F
DIV WASHINGTON LLC
BOOK 46748, PAGE 570
14087 ± Sq. Ft.

1236 WASHINGTON ST
PARCEL SBL 31004 0014
N/F
JACOB & ASSOCIATES INC
BOOK 26669, PAGE 251

1210-1230 WASHINGTON ST
PARCEL SBL 31004 0013
N/F
DIV WASHINGTON LLC
BOOK 46748, PAGE 570

PROJECT LIMIT
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E 730374.3011

LIMIT OF WORK (TYP)

RET EXIST PAVEMENT

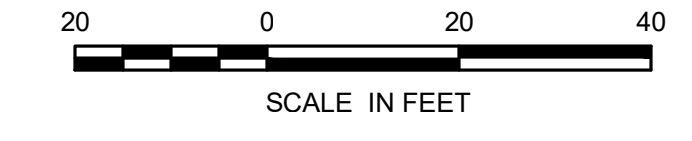
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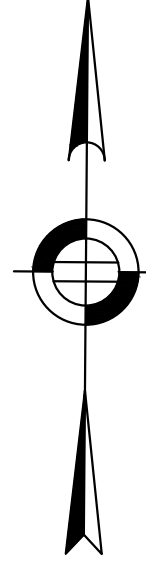
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WASHINGTON STREET PILOT CONSTRUCTION PLANS
SHEET 1 OF 7



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	12	47

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Printed by: Valerie Cha



1213-1215 WASHINGTON ST
PARCEL SBL 31006 0015
N/F
DONATO MARK F & STEVEN J TRS
BOOK 79289, PAGE 427

1203 WASHINGTON ST
PARCEL SBL 31006 0014
N/F
DONATO MARK F & STEVEN J TRS
BOOK 79289, PAGE 473

1191 WASHINGTON ST
PARCEL SBL 31006 0012
N/F
DONATO STEVEN J TR
BOOK 72191, PAGE 7

34 DUNSTAN ST
PARCEL SBL 31007 0041
N/F
MARK KEMPTON LLC
BOOK 72163, PAGE 310

1185 WASHINGTON ST
PARCEL SBL 31007 0040
N/F
MARK KEMPTON LLC
BOOK 162, PAGE 166

1179 WASHINGTON ST
PARCEL SBL 31007 0036
N/F
MARK KEMPTON LLC
BOOK 79400, PAGE 17

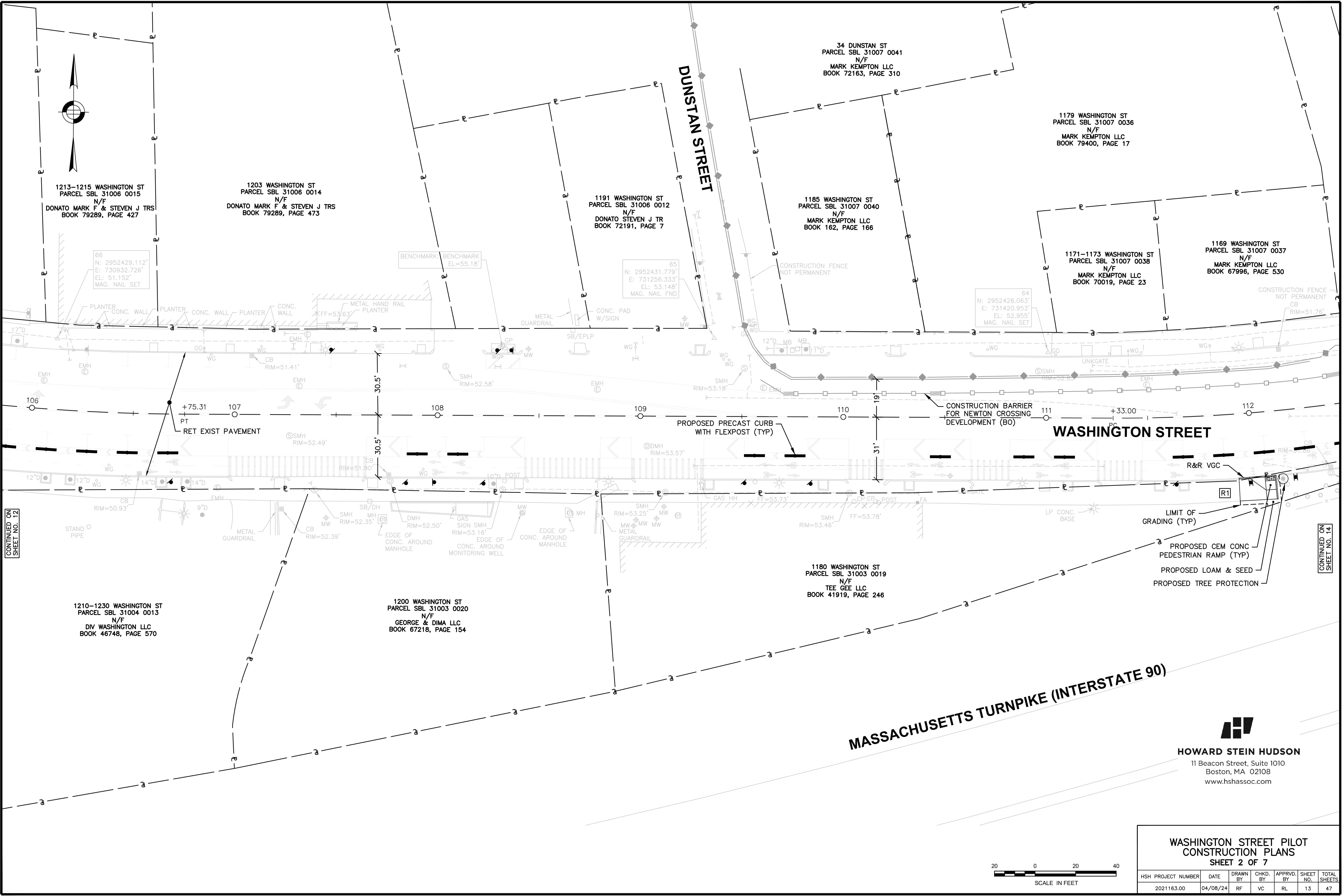
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MARK KEMPTON LLC
BOOK 70019, PAGE 23

1169 WASHINGTON ST
PARCEL SBL 31007 0037
N/F
MARK KEMPTON LLC
BOOK 67996, PAGE 530

66
N: 2952429.112'
E: 730932.726'
EL: 51.152'
MAG. NAIL SET

65
N: 2952431.779'
E: 731256.333'
EL: 53.148'
MAG. NAIL FND

64
N: 2952426.063'
E: 731420.953'
EL: 52.955'
MAG. NAIL SET



CONTINUED ON
SHEET NO. 12

CONTINUED ON
SHEET NO. 14

1210-1230 WASHINGTON ST
PARCEL SBL 31004 0013
N/F
DIV WASHINGTON LLC
BOOK 46748, PAGE 570

1200 WASHINGTON ST
PARCEL SBL 31003 0020
N/F
GEORGE & DIMA LLC
BOOK 67218, PAGE 154

1180 WASHINGTON ST
PARCEL SBL 31003 0019
N/F
TEE GEE LLC
BOOK 41919, PAGE 246

MASSACHUSETTS TURNPIKE (INTERSTATE 90)

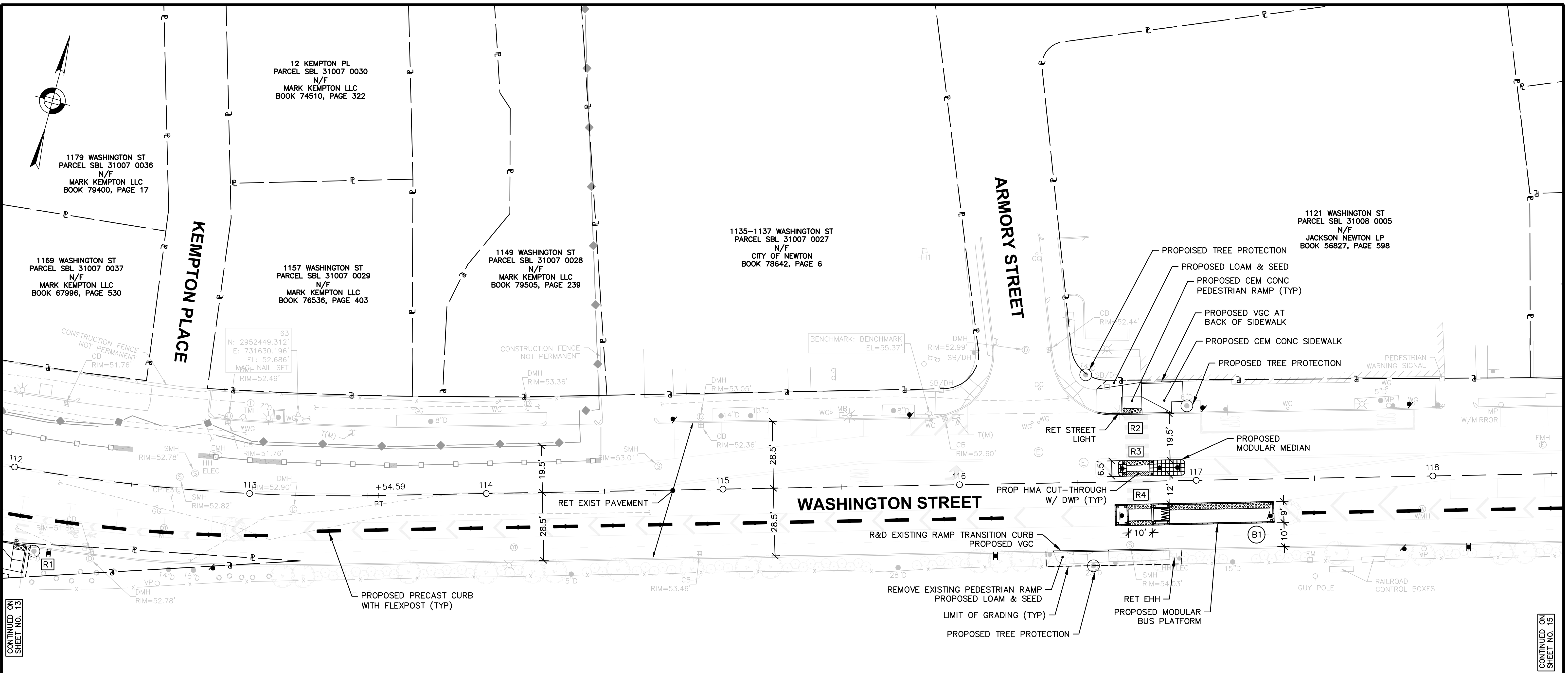


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WASHINGTON STREET PILOT CONSTRUCTION PLANS SHEET 2 OF 7						
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	13	47

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MASSACHUSETTS TURNPIKE (INTERSTATE 90)

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SHEET NO. 13

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SHEET NO. 15



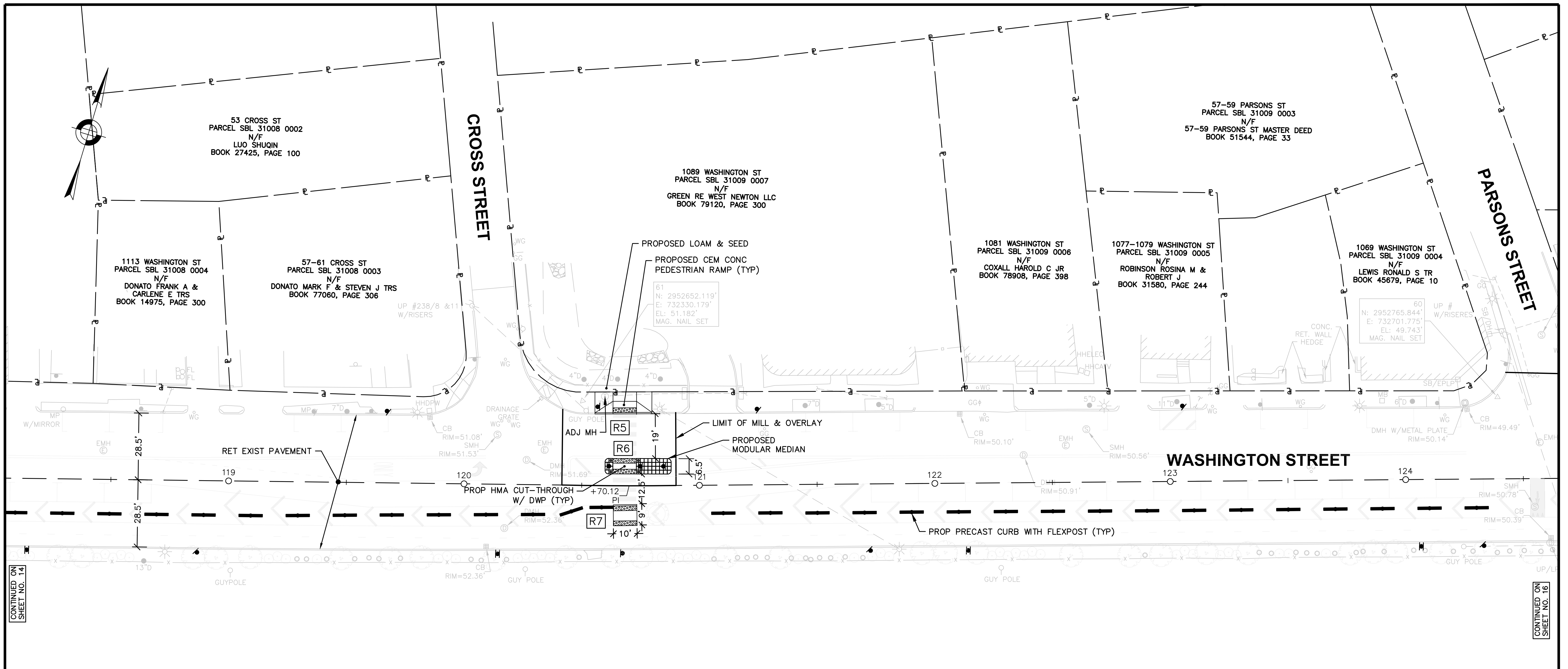
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**WASHINGTON STREET PILOT
CONSTRUCTION PLANS
SHEET 3 OF 7**



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	14	47

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MASSACHUSETTS TURNPIKE (INTERSTATE 90)



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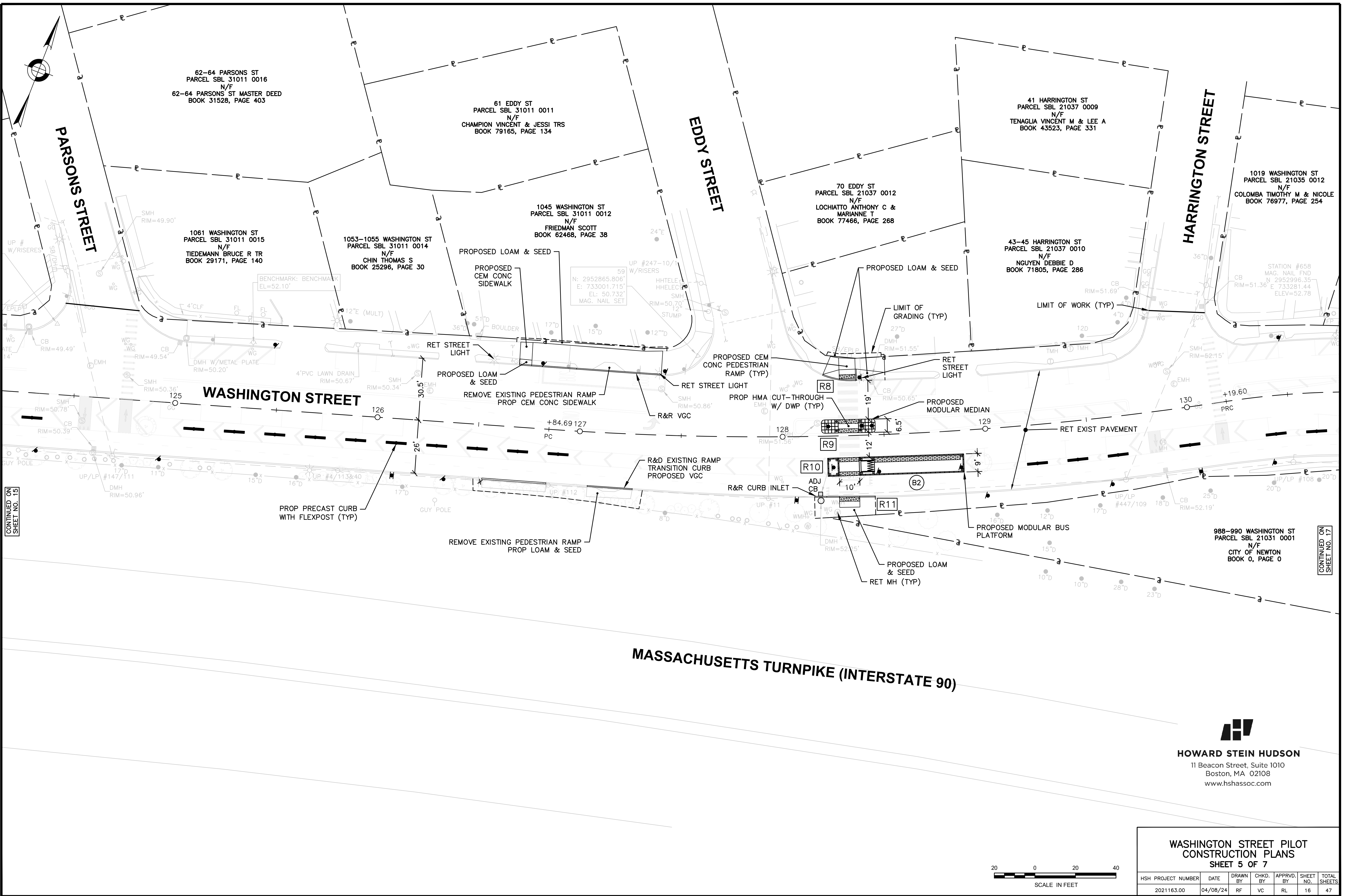


**WASHINGTON STREET PILOT
 CONSTRUCTION PLANS
 SHEET 4 OF 7**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	15	47

CONTINUED ON
SHEET NO. 14

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SHEET NO. 16



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SHEET NO. 15

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SHEET NO. 17



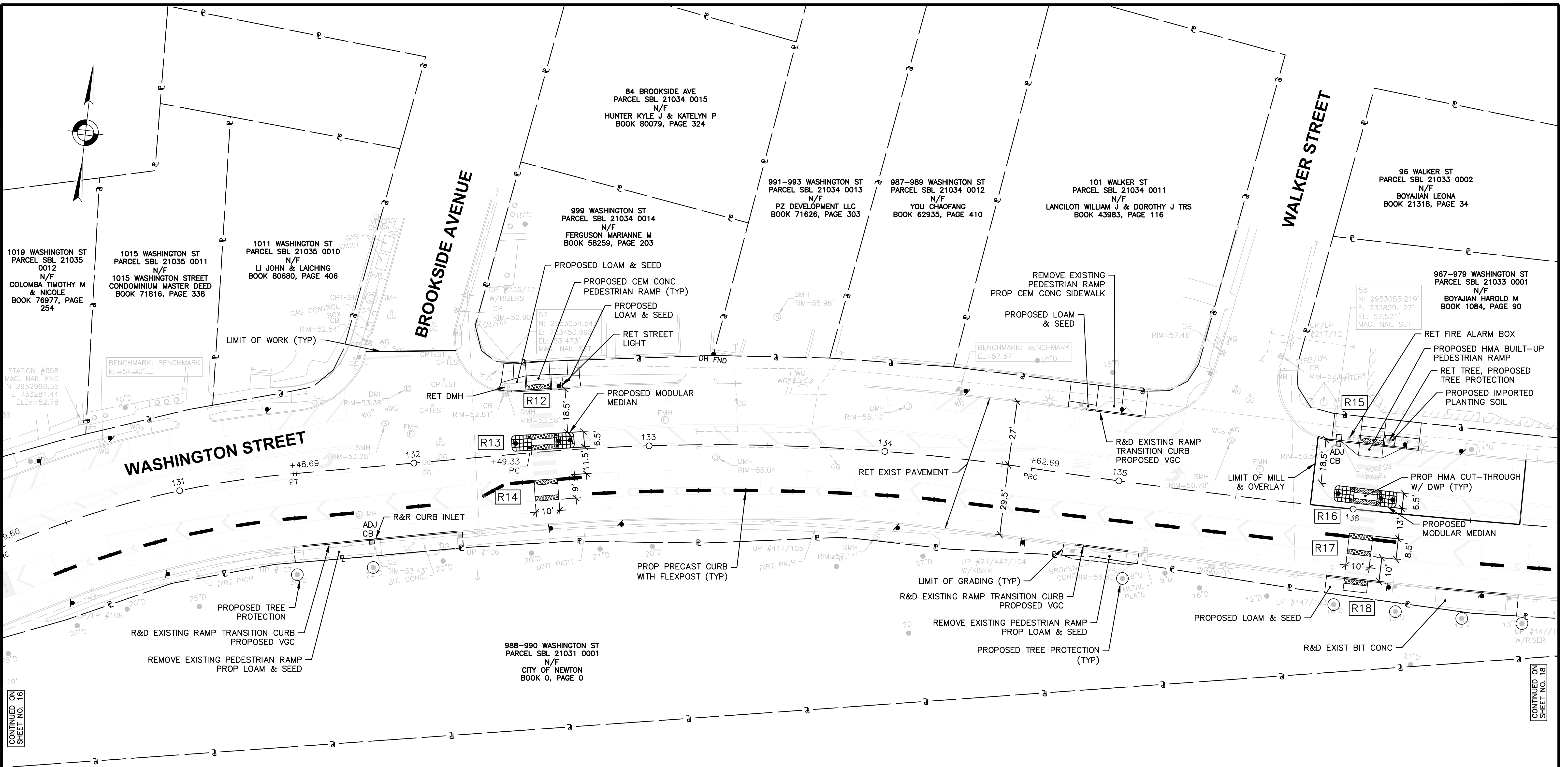
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WASHINGTON STREET PILOT
CONSTRUCTION PLANS
SHEET 5 OF 7

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
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SHEET NO. 16

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SHEET NO. 18

MASSACHUSETTS TURNPIKE (INTERSTATE 90)



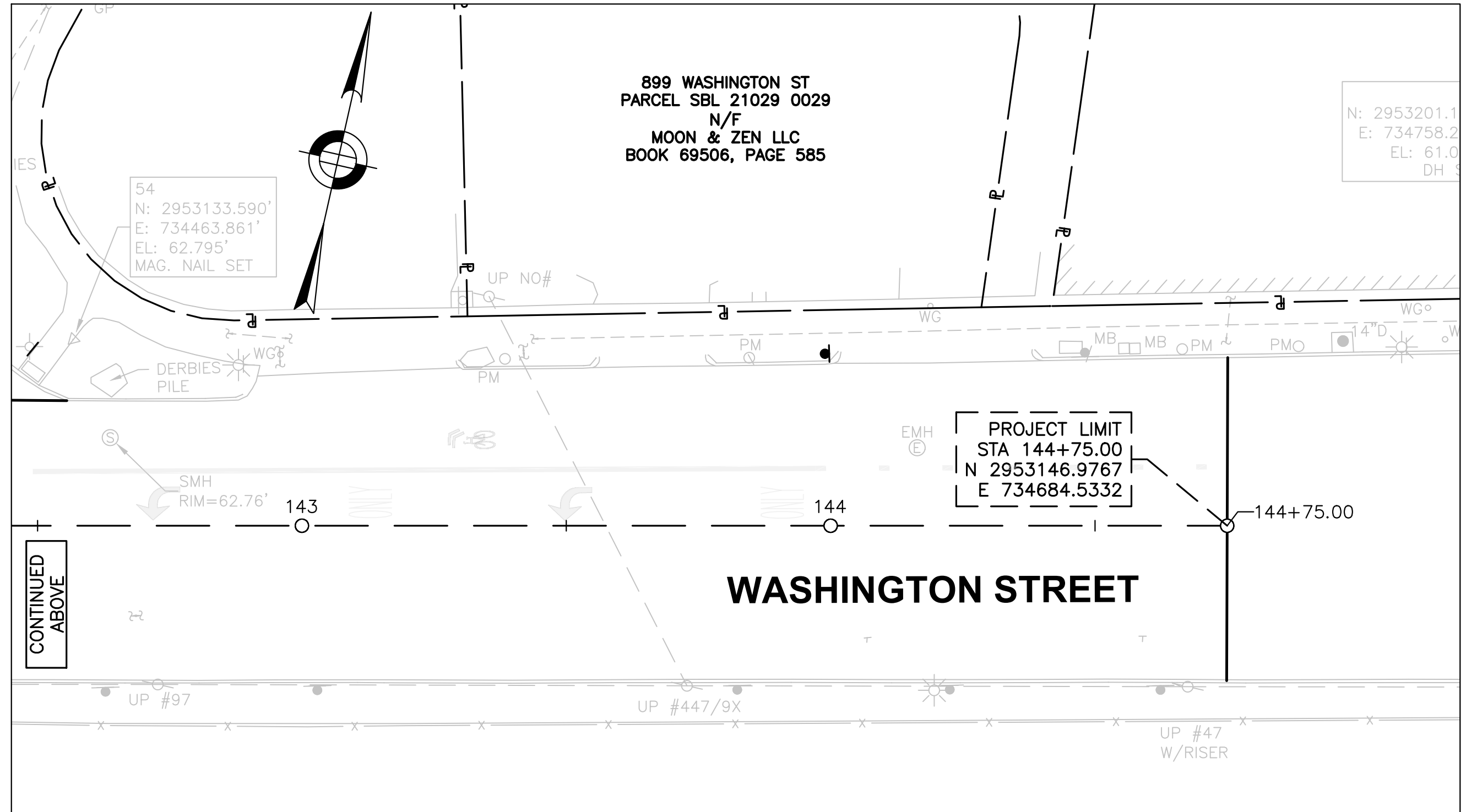
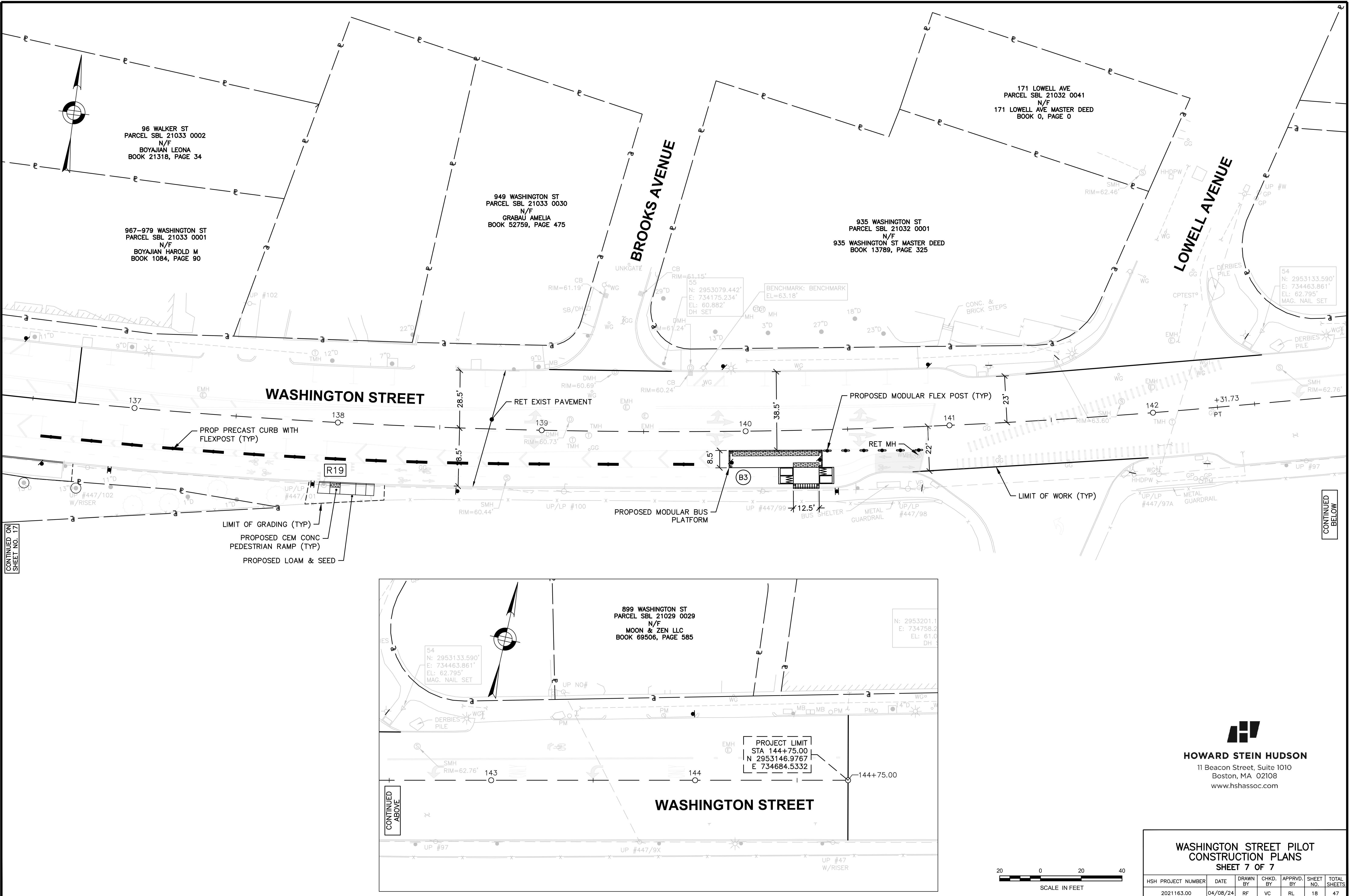
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**WASHINGTON STREET PILOT
CONSTRUCTION PLANS
SHEET 6 OF 7**



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	17	47

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WASHINGTON STREET PILOT CONSTRUCTION PLANS
SHEET 7 OF 7

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	18	47



WATERTOWN STREET (ROUTE 16)

DAVIS COURT

CHESTNUT STREET

WASHINGTON STREET



978 WATERTOWN ST
PARCEL SBL 31005 0001
N/F
LUNA REALTY PTNRS LTD PTNRSHP
BOOK 49770, PAGE 333

1253 WASHINGTON ST
PARCEL SBL 31005 0002
N/F
DONATO MARK F &
STEVEN J TRS
BOOK 55679, PAGE 59

1239-1247 WASHINGTON ST
PARCEL SBL 31005 0003
N/F
DONATO STEVEN J & MARK F TRS
BOOK 43663, PAGE 417

1229 WASHINGTON ST
PARCEL SBL 31006 0017
N/F
DONATO MARK F
BOOK 77140, PAGE 17

1221 WASHINGTON ST
PARCEL SBL 31006 0016
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DONATO MARK F
BOOK 77140, PAGE 17

1213-1215 WASHINGTON ST
PARCEL SBL 31006 0000
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DONATO MARK F & STEVEN
BOOK 79289, PAGE 4

1250 WASHINGTON ST
PARCEL SBL 31004 0016
N/F
COUTO & CHAVES INVESTMENT CO LLC
BOOK 58795, PAGE 459

24 CHESTNUT ST
PARCEL SBL 31004 0015
N/F
DIV WASHINGTON LLC
BOOK 46748, PAGE 570
14087 ± Sq. Ft.

1236 WASHINGTON ST
PARCEL SBL 31004 0014
N/F
JACOB & ASSOCIATES INC
BOOK 26669, PAGE 251

1210-1230 WASHINGTON ST
PARCEL SBL 31004 0013
N/F
DIV WASHINGTON LLC
BOOK 46748, PAGE 570

NOTES

1. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE SPECIFIED ON PLANS.
2. ERADICATE ANY EXISTING PAVEMENT MARKINGS BY MECHANICAL METHODS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS.

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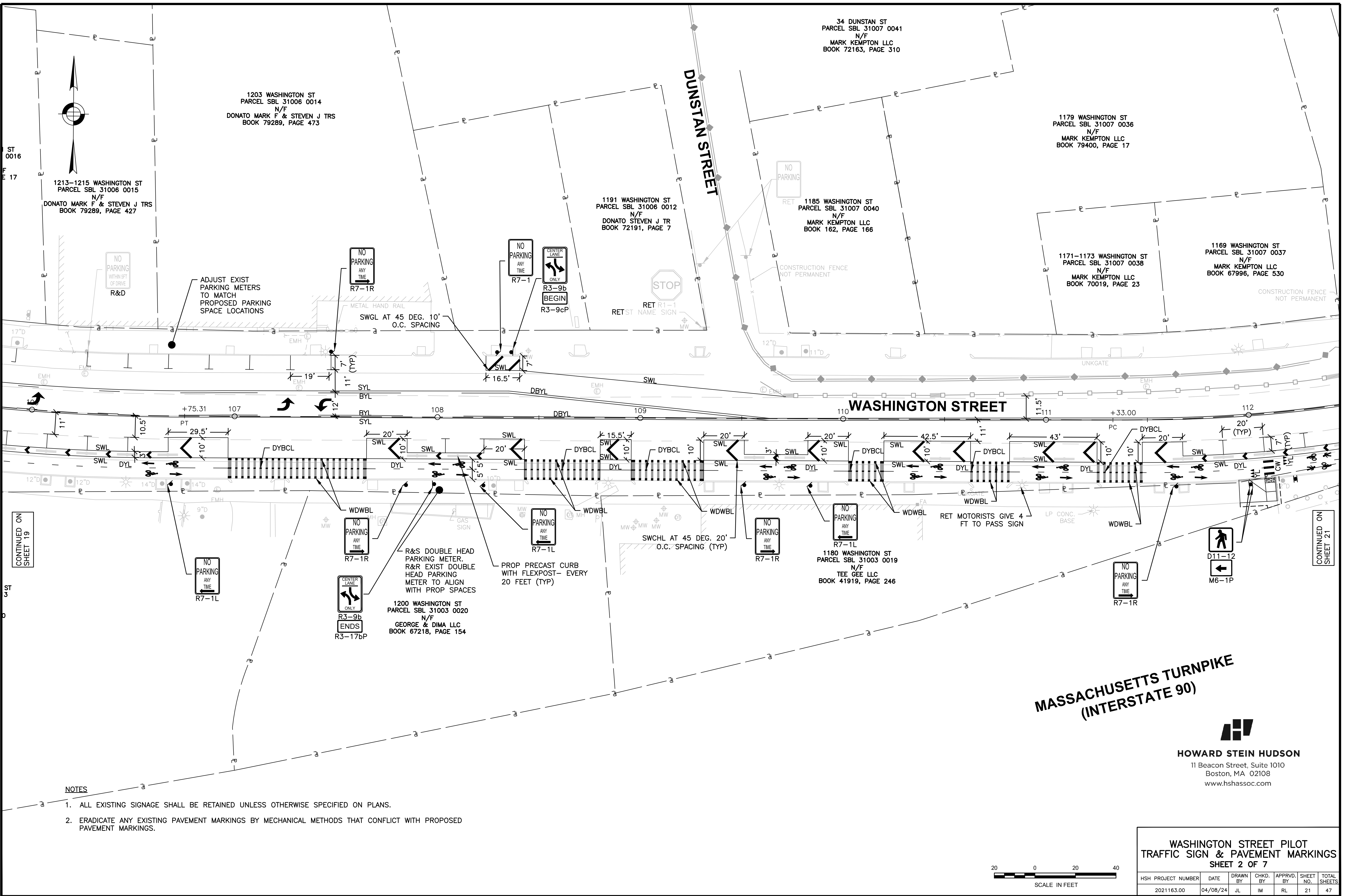
**WASHINGTON STREET PILOT
TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 1 OF 7**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JL	IM	RL	19	47



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SHEET 20



NOTES

1. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE SPECIFIED ON PLANS.
2. ERADICATE ANY EXISTING PAVEMENT MARKINGS BY MECHANICAL METHODS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS.

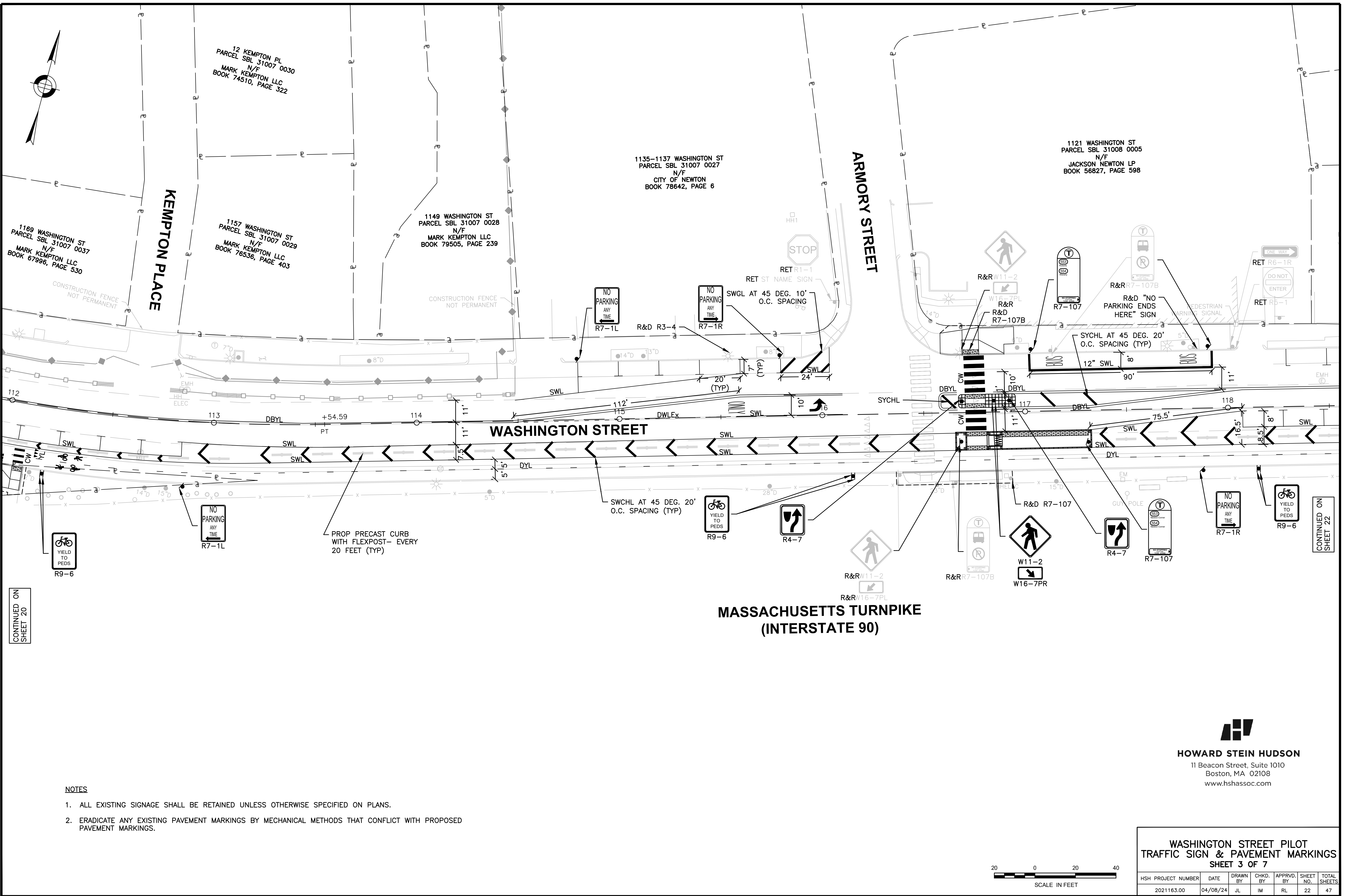


WASHINGTON STREET PILOT TRAFFIC SIGN & PAVEMENT MARKINGS SHEET 2 OF 7						
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JL	IM	RL	21	47

**MASSACHUSETTS TURNPIKE
(INTERSTATE 90)**

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NOTES

1. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE SPECIFIED ON PLANS.
2. ERADICATE ANY EXISTING PAVEMENT MARKINGS BY MECHANICAL METHODS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS.


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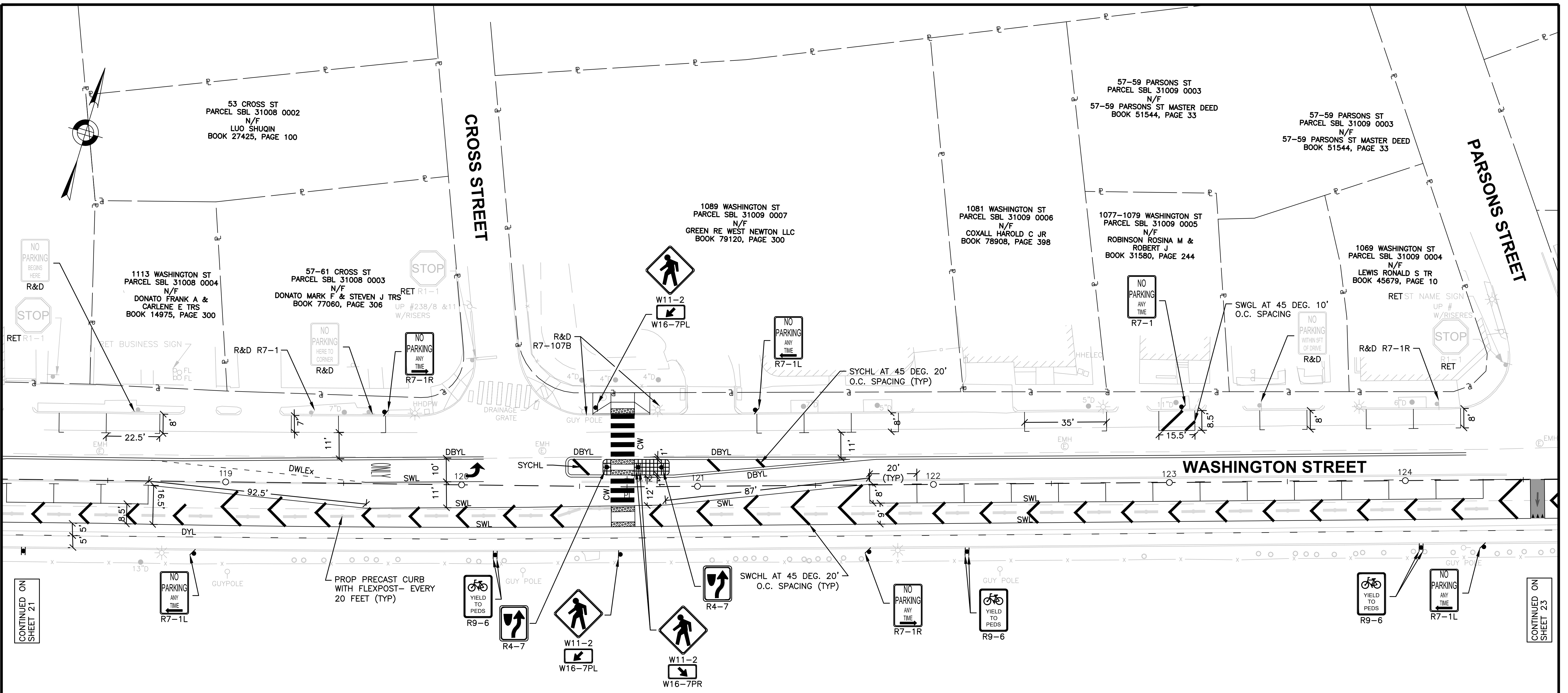
WASHINGTON STREET PILOT
TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 3 OF 7

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JL	IM	RL	22	47



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CONTINUED ON SHEET 22



**MASSACHUSETTS TURNPIKE
(INTERSTATE 90)**



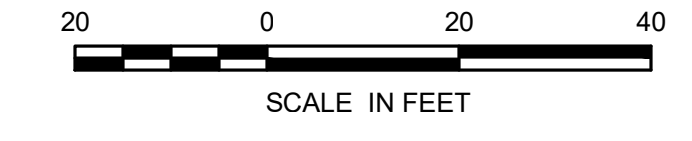
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NOTES

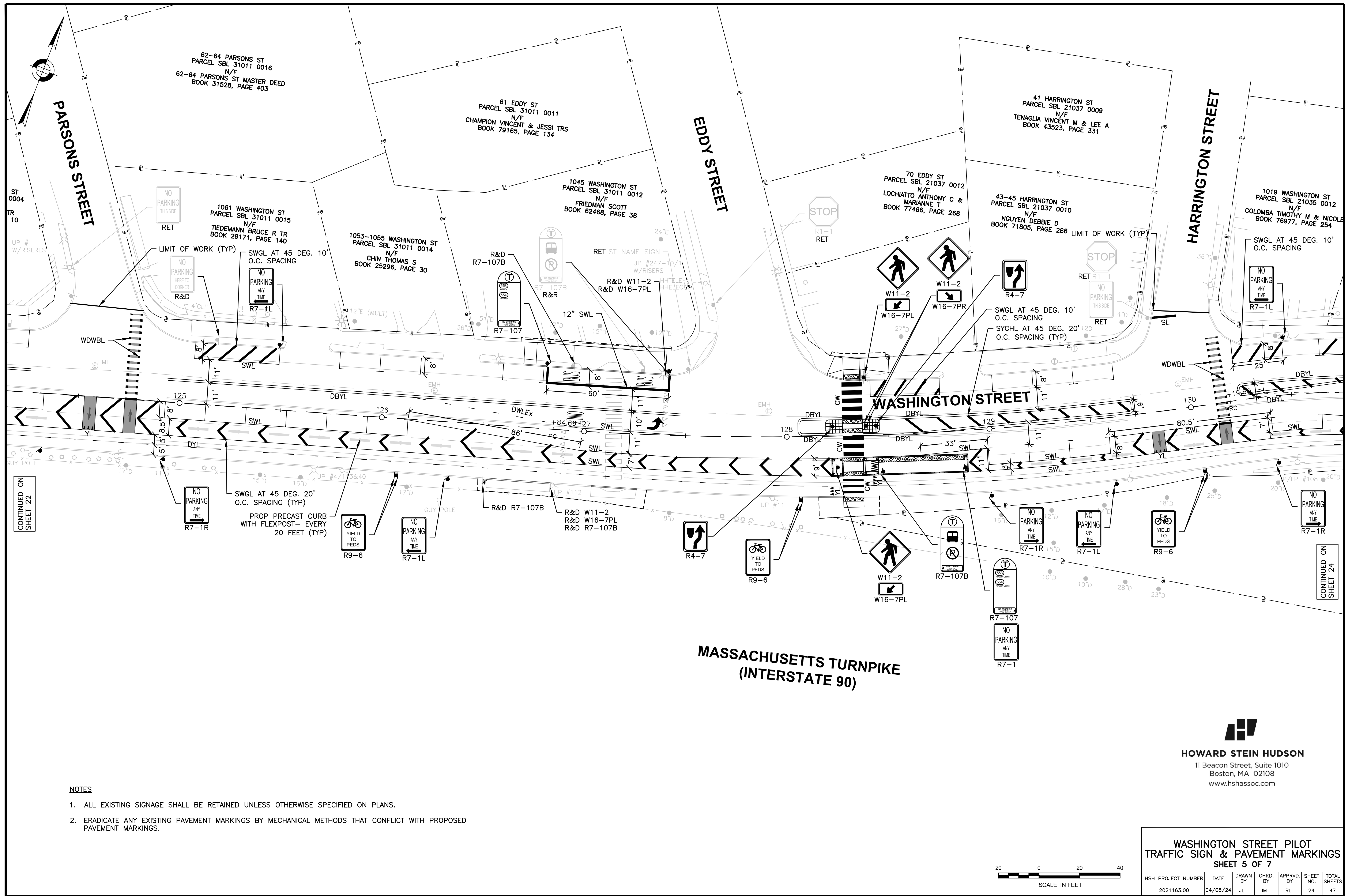
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2. ERADICATE ANY EXISTING PAVEMENT MARKINGS BY MECHANICAL METHODS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS.

**WASHINGTON STREET PILOT
TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 4 OF 7**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JL	IM	RL	23	47



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**MASSACHUSETTS TURNPIKE
(INTERSTATE 90)**



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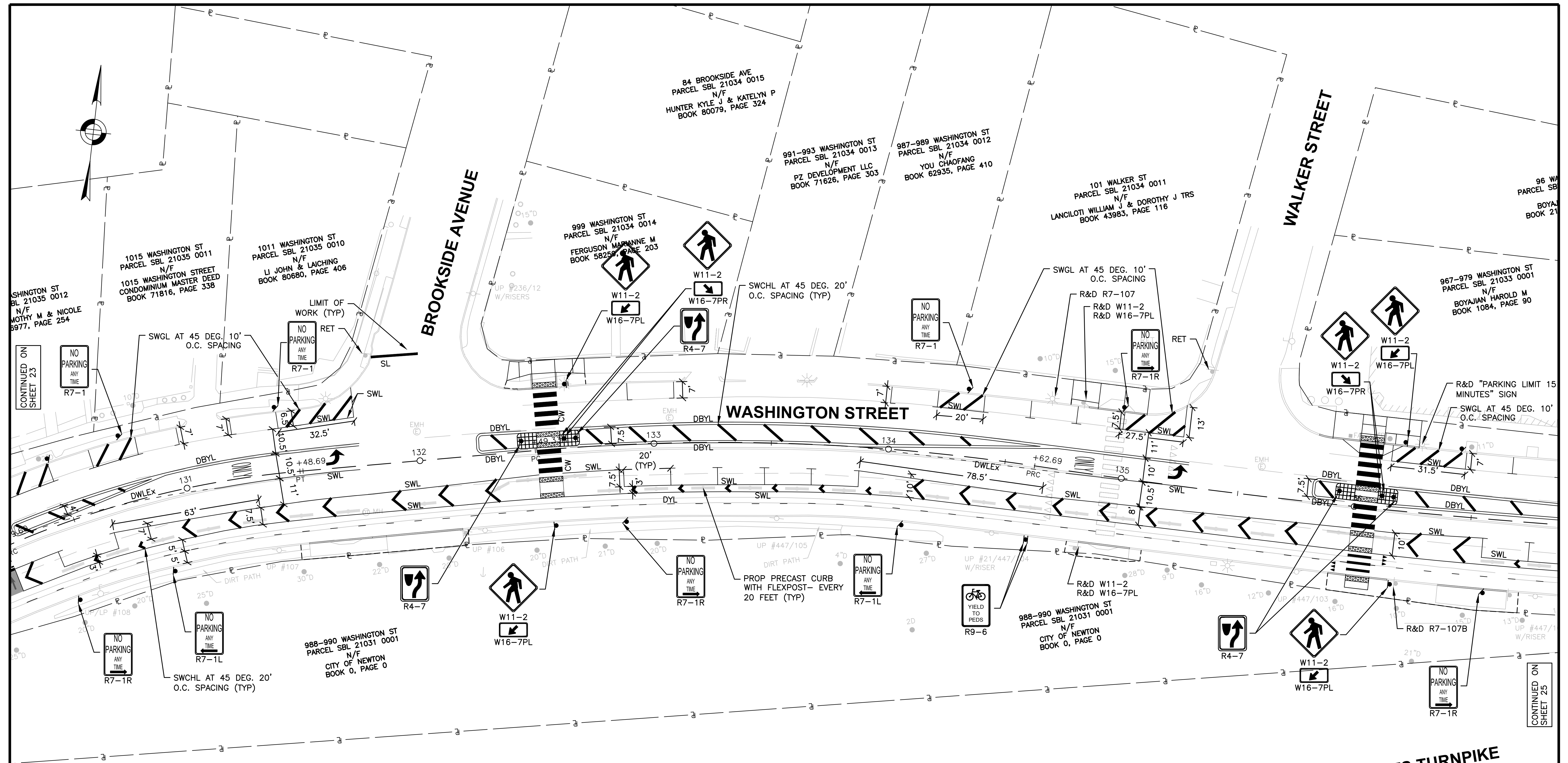
NOTES

1. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE SPECIFIED ON PLANS.
2. ERADICATE ANY EXISTING PAVEMENT MARKINGS BY MECHANICAL METHODS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS.



WASHINGTON STREET PILOT TRAFFIC SIGN & PAVEMENT MARKINGS SHEET 5 OF 7						
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JL	IM	RL	24	47

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 Last Saved by: JLZZA
 Printed by: Valerie Chen



NOTES

1. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE SPECIFIED ON PLANS.
2. ERADICATE ANY EXISTING PAVEMENT MARKINGS BY MECHANICAL METHODS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS.

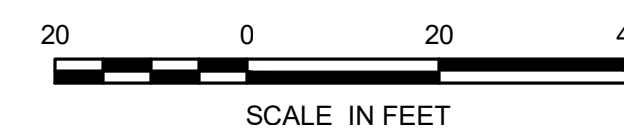
**MASSACHUSETTS TURNPIKE
(INTERSTATE 90)**



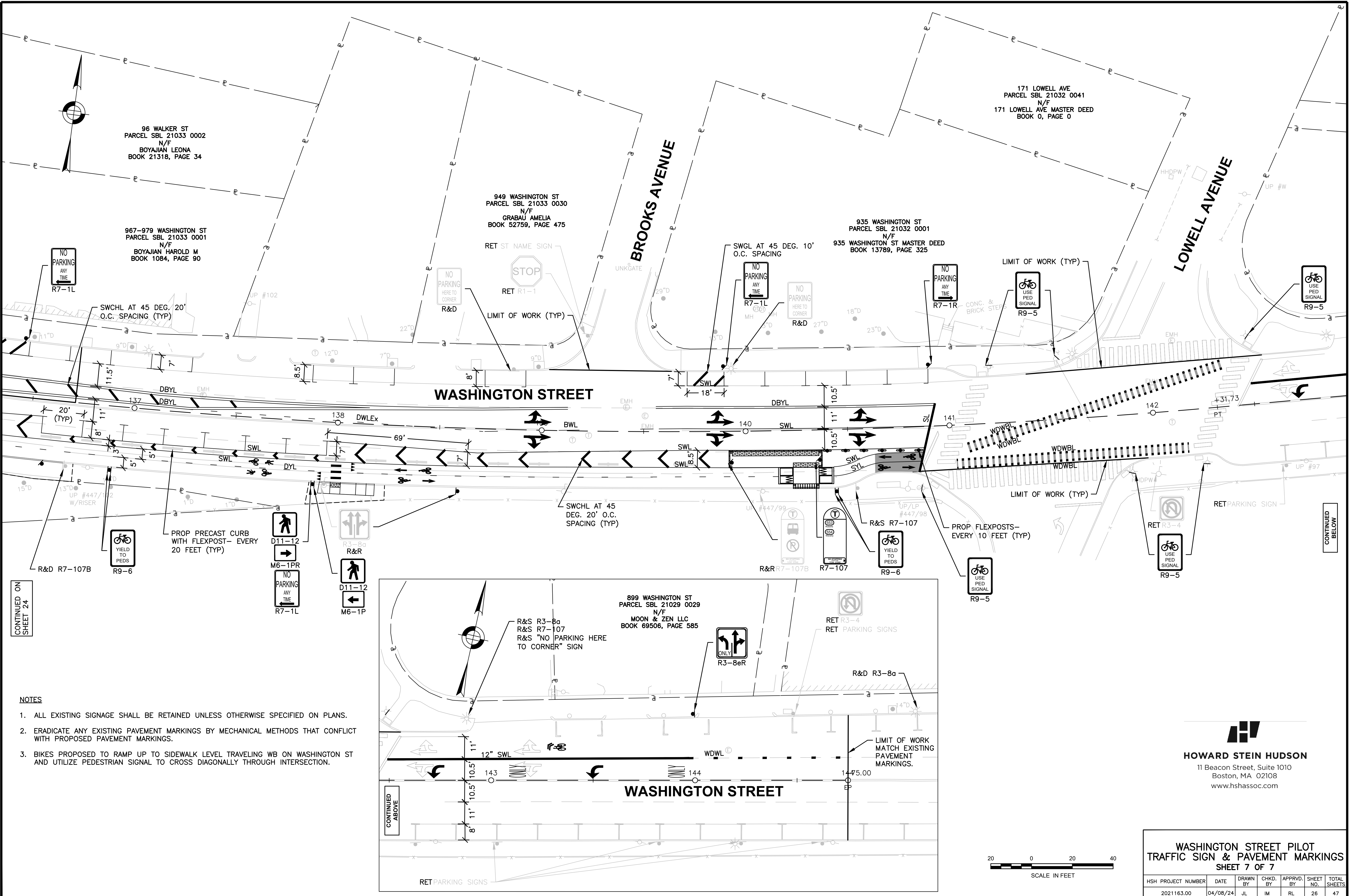
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**WASHINGTON STREET PILOT
TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 6 OF 7**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
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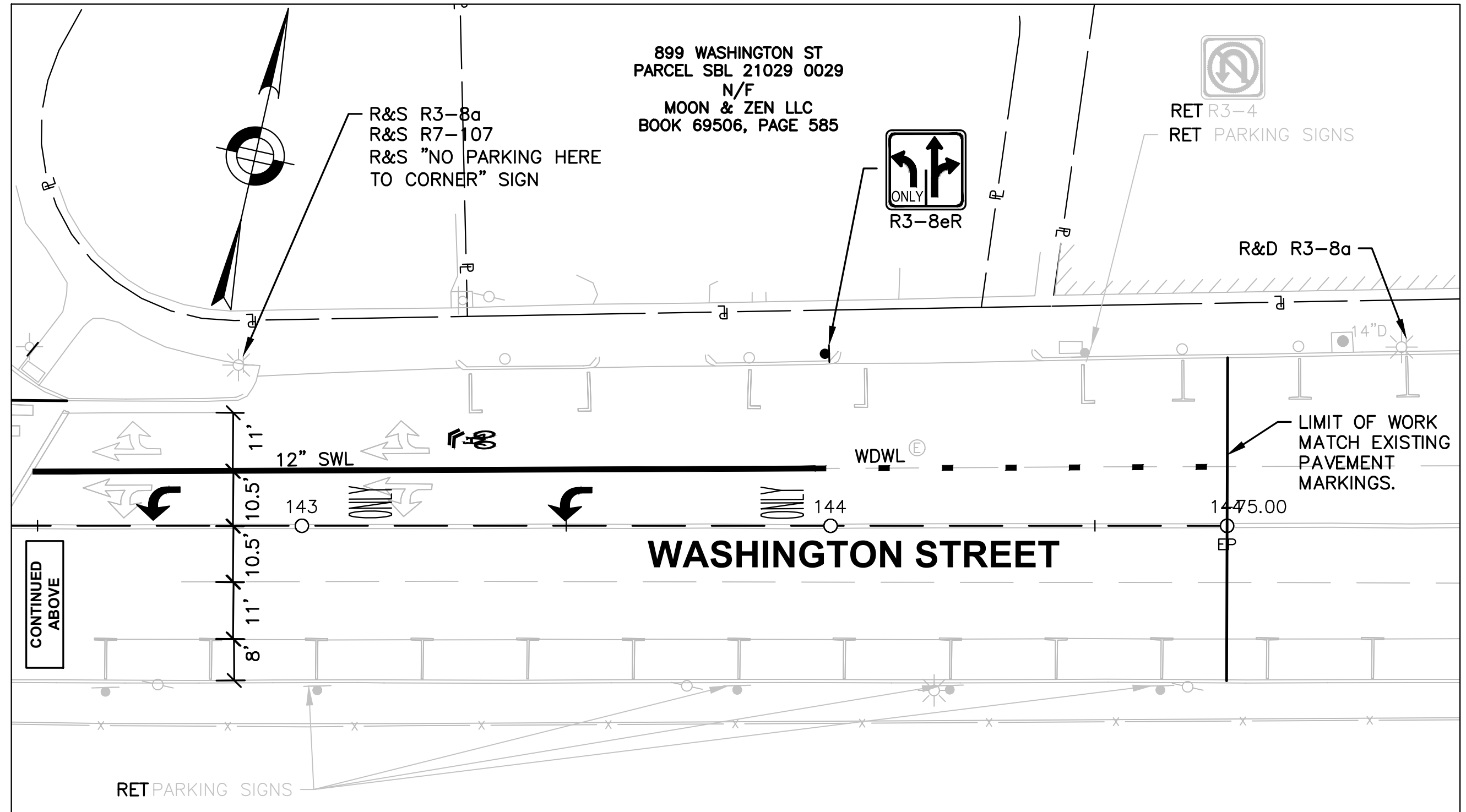


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CONTINUED ON
SHEET 24

- NOTES**
1. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE SPECIFIED ON PLANS.
 2. ERADICATE ANY EXISTING PAVEMENT MARKINGS BY MECHANICAL METHODS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS.
 3. BIKES PROPOSED TO RAMP UP TO SIDEWALK LEVEL TRAVELING WB ON WASHINGTON ST AND UTILIZE PEDESTRIAN SIGNAL TO CROSS DIAGONALLY THROUGH INTERSECTION.



CONTINUED
BELOW

HOWARD STEIN HUDSON
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Boston, MA 02108
www.hshassoc.com

**WASHINGTON STREET PILOT
TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 7 OF 7**

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JL	IM	RL	26	47



TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
D11-12	18"	18"		①	①	①	4	GREEN	WHITE	WHITE	P5(2)	2.25	9.00
M6-1P	12"	9"					3	GREEN	WHITE	WHITE	MOUNT W/ D11-12(3)	0.75	2.25
M6-1PR	12"	9"					1	GREEN	WHITE	WHITE	MOUNT W/ D11-12(1)	0.75	0.75
R2-1 (25)	24"	30"					1	WHITE	BLACK	BLACK	P5 (1)	5.00	5.00
R3-8eR	30"	30"					1	WHITE	BLACK	BLACK	P5 (1)	6.25	6.25
R3-9b	24"	36"					4	WHITE	BLACK	BLACK	P5 (1)	6.00	24.00
R3-9cP	30"	12"					2	WHITE	BLACK	BLACK	MOUNT W/ R3-9B (2)	2.50	5.00
R3-17bP	24"	8"					2	WHITE	BLACK	BLACK	MOUNT W/ R3-9B (2)	1.33	2.66
R4-7	24"	30"					10	WHITE	BLACK	BLACK	P5 (10)	5.00	50.00
R7-1	12"	18"					9	WHITE	RED	RED	P5 (9)	1.50	13.50
R7-1L	12"	18"					19	WHITE	RED	RED	P5 (19)	1.50	28.50
R7-1R	12"	18"					19	WHITE	RED	RED	P5 (19)	1.50	28.50
R7-107	12"	30"		SEE MBTA STANDARD DETAIL			5	WHITE YELLOW RED	BLACK WHITE	N/A	P5 (3) MOUNT W/ R7-1 (2)	2.50	12.50
R7-107B	12"	30"		SEE MBTA STANDARD DETAIL			1	WHITE RED	BLACK RED WHITE	RED	P5 (1) MOUNT ON EXISTING P5 (1)	2.50	2.50
R9-5	12"	18"		①	①	①	8	WHITE	BLACK	BLACK	MOUNT ON EXIST TS (8)	1.50	12.00
R9-6	12"	18"		①	①	①	28	WHITE	BLACK	BLACK	P5 (14)	1.50	42.00
R10-11B	24"	24"		①	①	①	1	WHITE	BLACK	BLACK	MOUNT ON EXIST MAST ARM POST (1)	4.00	4.00

① SEE MUTCD 11th EDITION WITH MASSACHUSETTS AMENDMENTS AND MASSDOT 2024 STANDARD SPECIFICATIONS FOR TEXT DIMENSIONS AND COLOR.

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
SP-1	12"	18"		SEE DETAIL TO RIGHT			1	WHITE	BLACK	BLACK	MOUNT ON P5 (1)	1.50	1.50
W11-2	30"	30"		①	①	①	18	FLUORESCENT YELLOW GREEN	BLACK	BLACK	P5 (11)	6.25	112.5
W16-7PL	24"	12"		①	①	①	8	FLUORESCENT YELLOW GREEN	BLACK	BLACK	MOUNT W/ W11-2 (8)	2.00	16.00
W16-7PR	24"	12"		①	①	①	10	FLUORESCENT YELLOW GREEN	BLACK	BLACK	MOUNT W/ W11-2 (10)	2.00	20.00

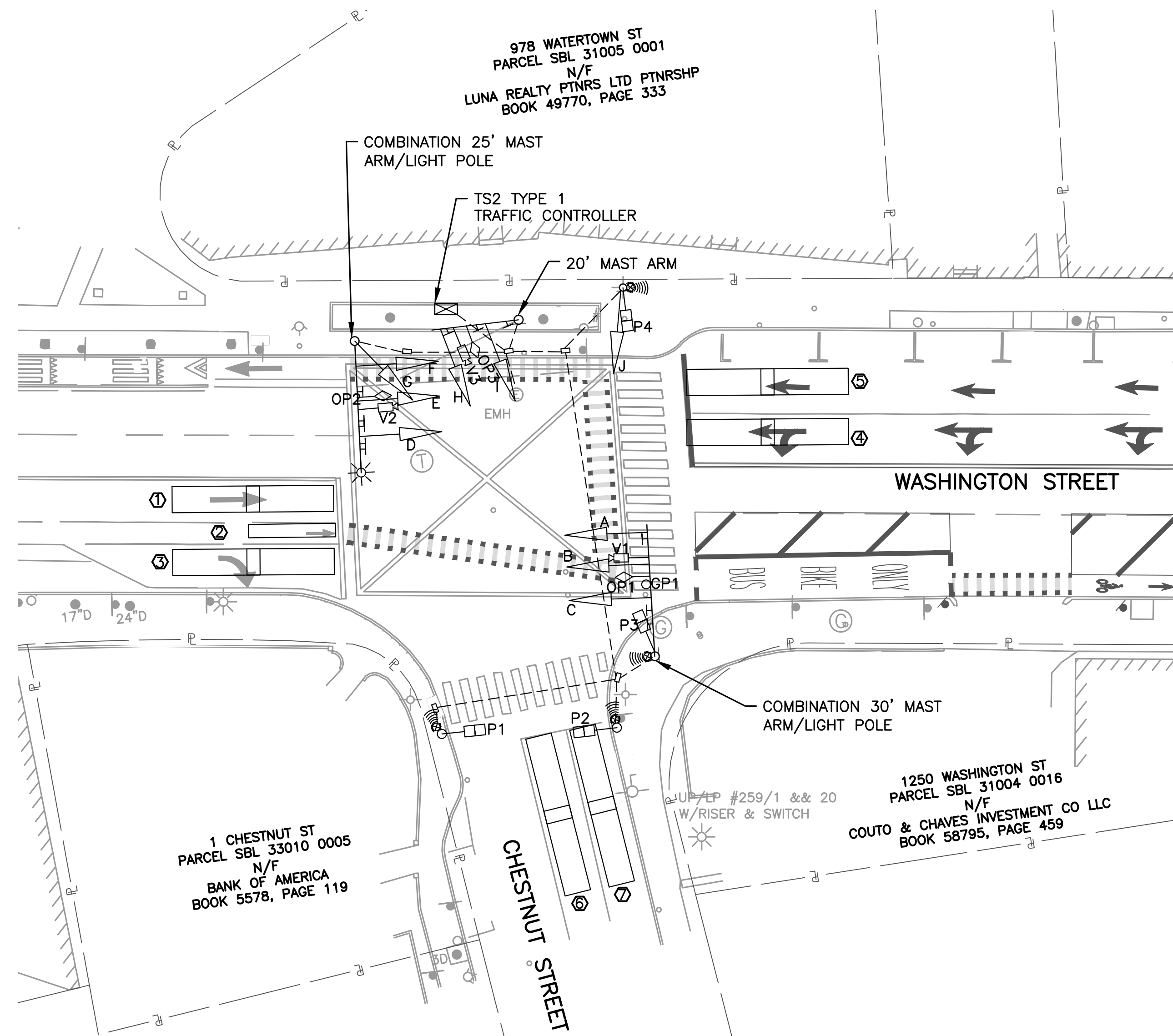
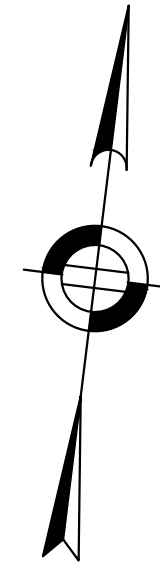


SP-1_12x18;
 1.50" Radius, 0.38" Border, 0.38" Indent, Black on, White;
 Symbol RG025;
 "WALK", C 2K specified length;
 "YOUR", C 2K specified length;
 "BIKE", C 2K specified length;

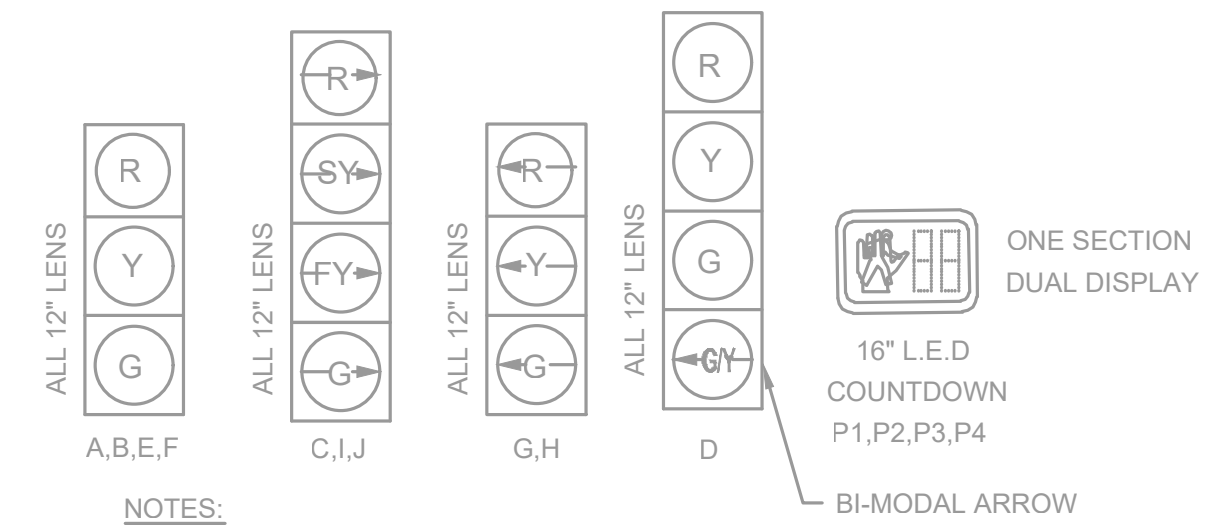
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WASHINGTON STREET PILOT
 TRAFFIC SIGN SUMMARY SHEET
 SHEET X OF X

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	XXX	XXX	RKX	27	47



EXISTING SIGNAL IDENTIFICATION



NOTES:

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

NOTE: WASHINGTON ST/CHESTNUT ST SIGNAL PLAN AND SCHEDULE PROVIDED AS REFERENCE ONLY. NO CHANGES ARE PROPOSED.

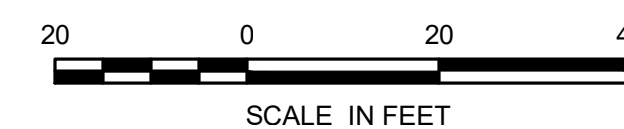


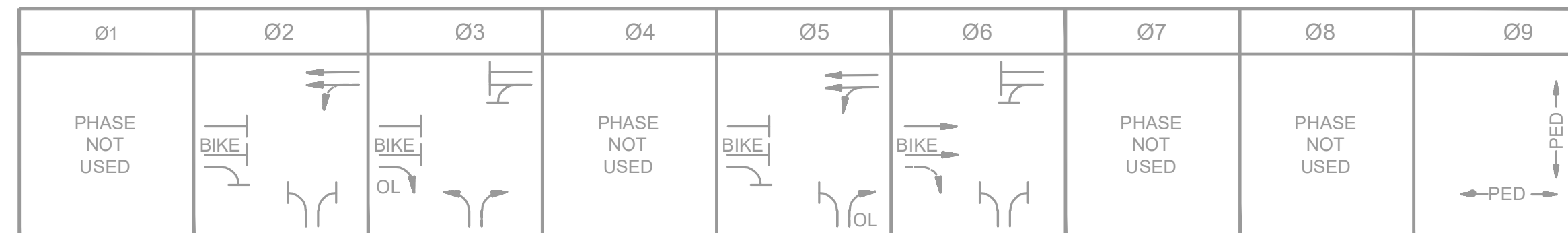
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FOR INFORMATIONAL PURPOSES

WASHINGTON STREET PILOT
 TRAFFIC SIGNAL SCHEDULE
 WASHINGTON ST AT CHESTNUT ST

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JM	HK	RL	27	47





NOTE: WASHINGTON ST/CHESTNUT ST SIGNAL PLAN AND SCHEDULE PROVIDED AS REFERENCE ONLY. NO CHANGES ARE PROPOSED.

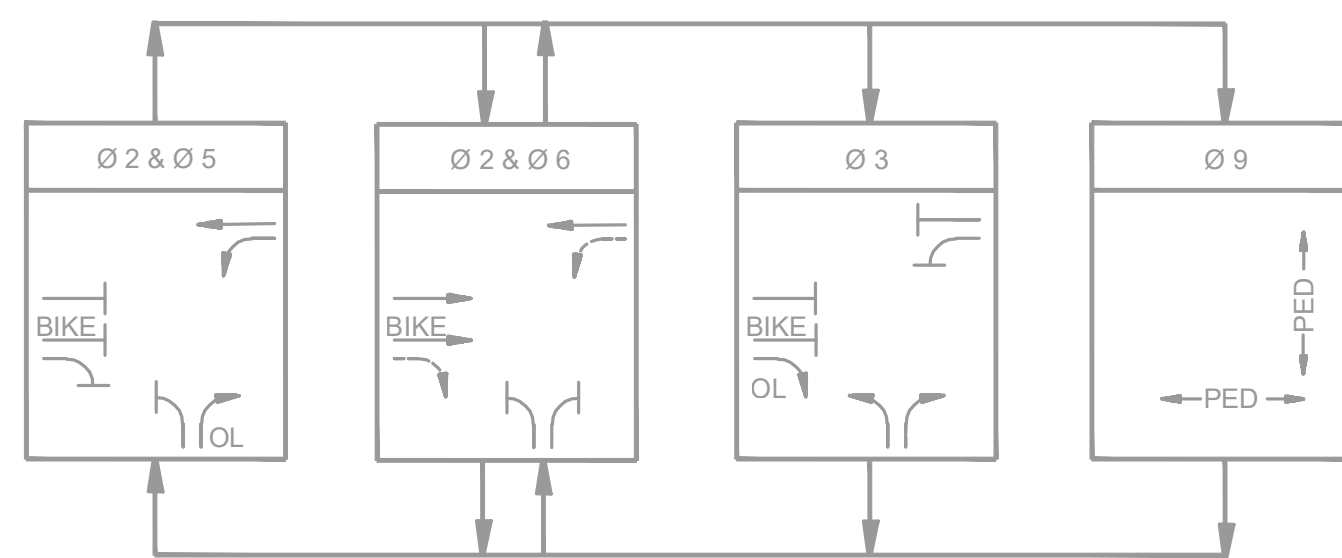
SEQUENCE AND TIMING																															
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	FLASH OPER.	
WASHINGTON STREET	EB	A,B				R	R	R	R	R	R				R	R	R	G	Y	R							R	R	R	FY	
WASHINGTON STREET	EB RIGHT	C				RR	RR	RR	GR	YR	RR				RR	RR	RR	FYR	YR	RR								RR	RR	RR	FY
WASHINGTON STREET	WB LEFT	D				G	Y	R	R	R	R				G	GL	Y	YL	R	R	R	R					R	R	R	FY	
WASHINGTON STREET	WB	E,F				G	Y	R	R	R	R				R	R	R	R	R	R							R	R	R	FY	
CHESTNUT STREET	NB LEFT	G,H				RL	RL	RL	GL	YL	RL				RL	RL	RL	RL	RL	RL							RL	RL	RL	FR	
CHESTNUT STREET	NB RIGHT	I,J				RR	RR	RR	GR	YR	RR				GR	YR	RR	RR	RR	RR							RL	RL	RL	FR	
PEDESTRIANS	EB-WB	P1,P2				DW	DW	DW	DW	DW	DW				DW	DW	DW	DW	DW	DW							W	FDW	DW	OFF	
PEDESTRIANS	NB-SB	P3,P4				DW	DW	DW	DW	DW	DW				DW	DW	DW	DW	DW	DW							W	FDW	DW	OFF	

TIMING IN SECONDS																														
MINIMUM GREEN (INITIAL)						6										6														
PASSAGE TIME (VEHICLE)						3										3														
MAXIMUM 1						83										33														
MAXIMUM 2						81										31														
YELLOW CLEARANCE							3.5									3.5														
RED CLEARANCE								3									3													4
WALK (W)																											7			
PEDESTRIAN CLEARANCE																												14		
RECALL (VEHICLE)							MIN									NONE													NONE	
MEMORY							NON-LOCKING									NON-LOCKING													LOCK	

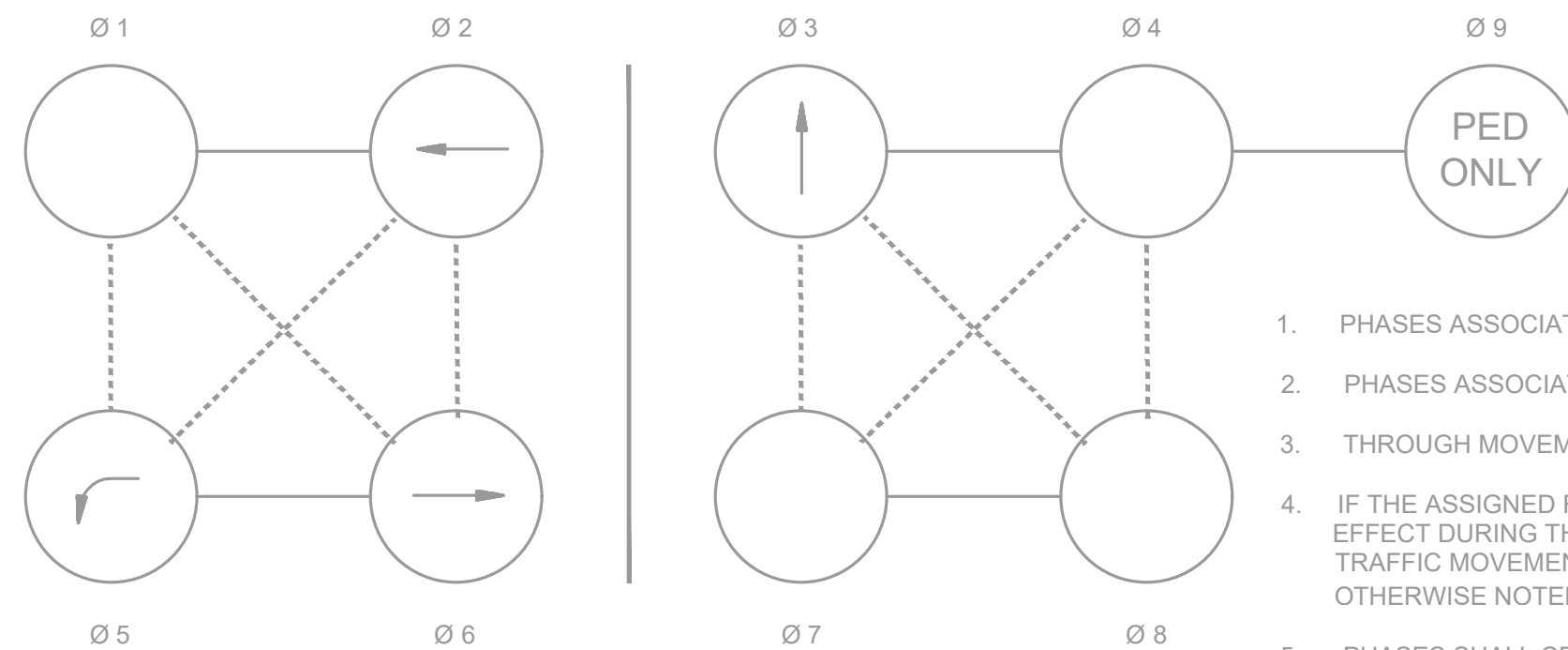
COORDINATION DATA (3)			COORDINATION PHASE TIMING								
TIMING PLAN	CYCLE LENGTH	REF/OFFSET	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	SEC.	
TP1(M-F 7AM-9AM)	125	20		83	17			20	63	25	
TP2(M-F 2PM-7PM)	120	10		74	21			19	55	25	
TP3(M-F 11AM-1PM)	95	74		52	18			14	38	25	
TP4(M-F 6-9AM, 10-11AM, 1-2PM, 7-8PM)	110	34		65	20			17	48	25	

- NOTES:
- OFFSET REFERENCES Ø2 + Ø6 START OF YELLOW
 - OFFSET SEEKING SHALL BE SHORTWAY METHOD
 - COORDINATION MODE SHALL BE YIELD
 - TP1 = COORDINATION AM, 7AM TO 9AM M-F
 - TP2 = COORDINATION PM, 2PM TO 7PM M-F
 - TP3 = COORDINATION MID-DAY, 11AM-1PM M-F
 - TP4 = COORDINATION, 6-7AM, 10-11AM, 1-2PM, 7-8PM
 - FREE OPERATION ALL OTHER TIMES

PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:



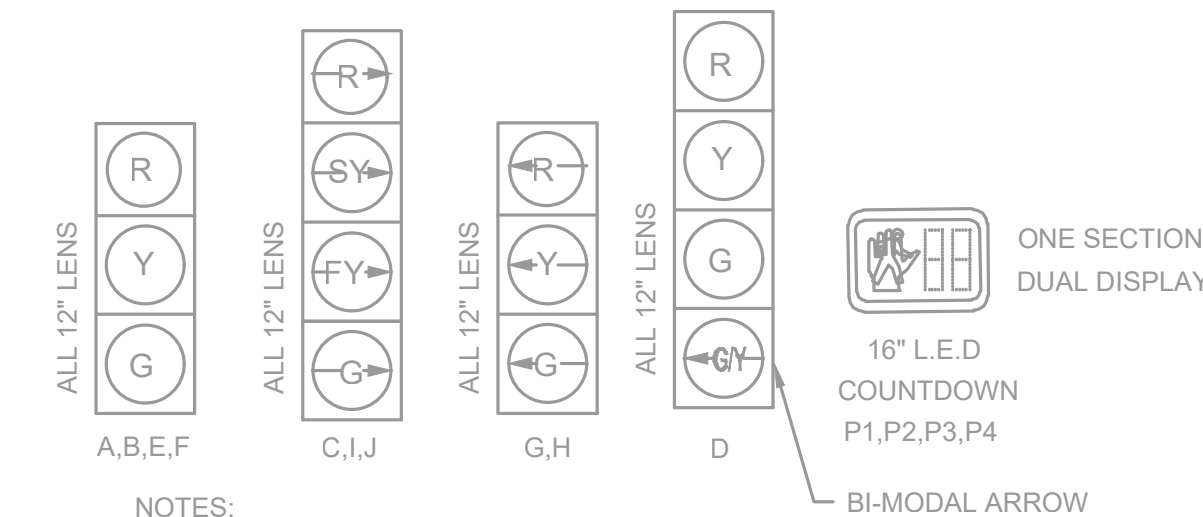
- PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
- PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
- THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
- IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS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

VIDEO DETECTOR DATA

DELAY THE EFFECTIVE ONLY DURING CALLED Ø RED TIME IN SEC.

DETECTOR NUMBER	CAMERA NUMBER	CHANNEL NUMBER	DETECTION ZONE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	V1	1	2@ 6'X20'	6	6	B	-	-
2	V1	2	1@ 3'X20'	6	6	B	-	-
3	V1	3	2@ 6'X20'	6	6	B	6	-
4	V2	1	2@ 6'X20'	2 & 5	2 & 5	B	-	-
5	V2	2	2@ 6'X20'	2	2	B	-	-
6	V3	1	2@ 6'X20'	3	3	B	-	-
7	V3	2	2@ 6'X20'	3	3	B	6	-

EXISTING SIGNAL IDENTIFICATION



- NOTES:
- ALL SIGNALS SHALL HAVE CUT AWAY VISORS.
 - ALL SIGNALS SHALL HAVE 12" LED WITH 5" LOUVERED BACK PLATES W/ 2" REFLECTIVE BORDER

EMERGENCY PRE-EMPTION DATA

APPROACH	PREEMPTION PHASE	DETECTOR OPTICAL	DETECTOR GPS
WASHINGTON ST WESTBOUND	2	OP2	GP1
WASHINGTON ST EASTBOUND	6	OP1	
CHESTNUT ST NORTHBOUND	3	OP3	

EMERGENCY VEHICLE PREEMPTION OPERATION:

- 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.
- PREEMPTION SIGNALS FROM MULTIPLE APPROACHES SHALL BE SERVICED ON A FIRST DETECTED FIRST SERVED BASIS.
- 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.
- PREEMPTION MINIMUM GREENS SHALL BE SIX SECONDS.
- NORMAL CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TERMINATED BY PREEMPTION DEMAND.
- 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.



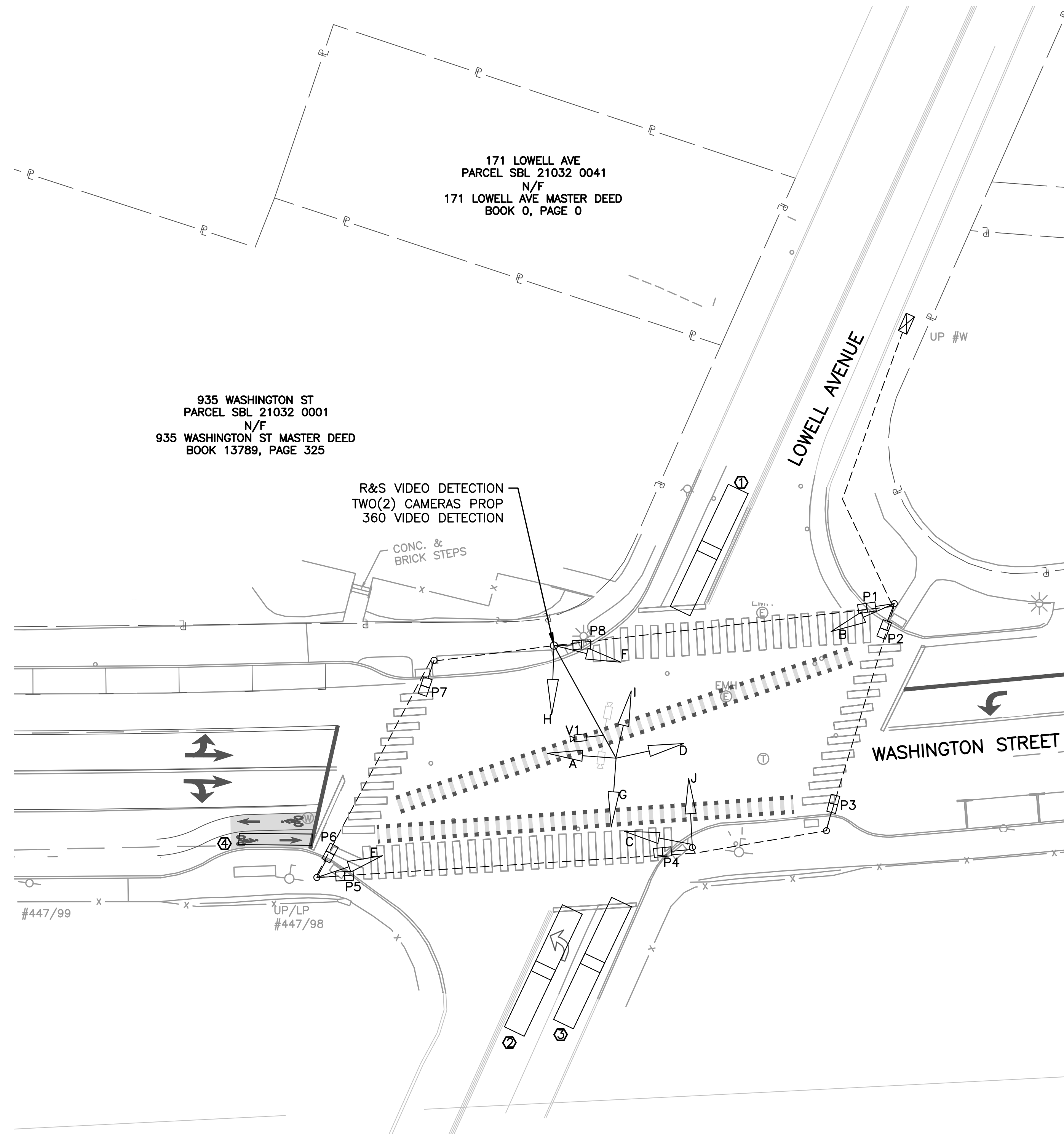
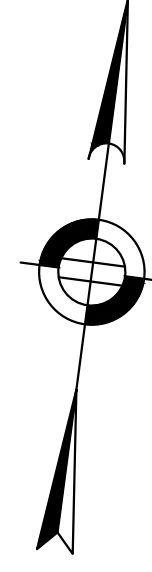
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FOR INFORMATIONAL PURPOSES

WASHINGTON STREET PILOT TRAFFIC SIGNAL SCHEDULE
WASHINGTON ST AT CHESTNUT ST

HS#	PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
	2021163.00	04/08/24	JM	HK	RL	28	47

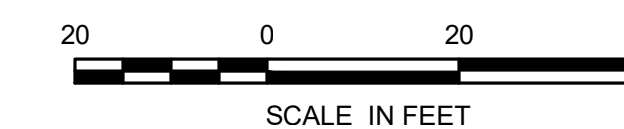




EXIST SIGNAL HEAD DATA		
A,B,C,D,F,H,I,J	H	P1-P8
ALL 12" LENS		

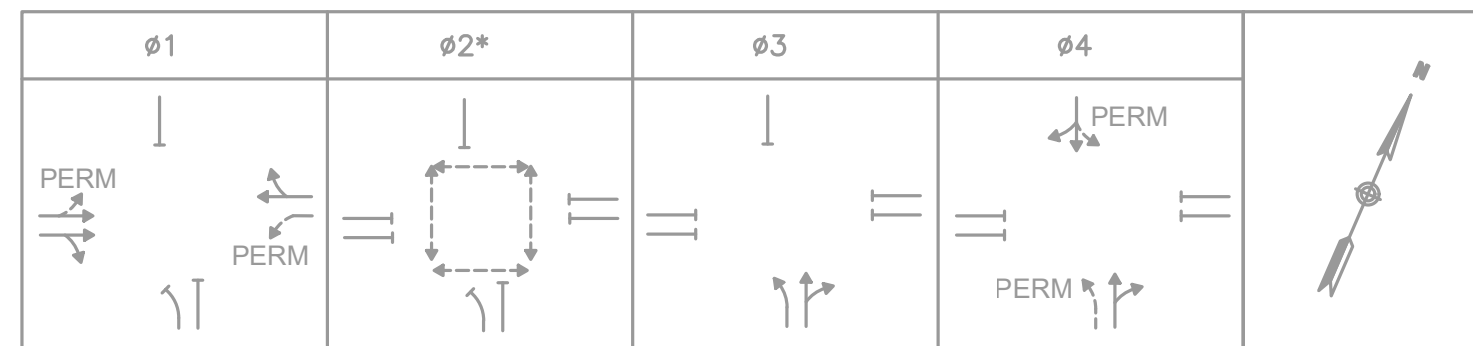


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WASHINGTON STREET PILOT TRAFFIC SIGNAL PLAN						
WASHINGTON ST AT LOWELL AVE						
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JM	HK	RL	29	47

4/8/2024 L:\21163\CURRENT\CUTSHEETS\21163_TR(Traffic Signal Plans).dwg
 Last Saved by: JIJZA
 Printed by: Valerie Chen



SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

APPROACH	DIRECTION	HOUSING	1	2	3	4	5	6	7	8	9	10	11	12	FLASH
WASHINGTON ST	EB	A,B,C	G	Y	R	R	R	R	R	R	R	R	R	R	FY
WASHINGTON ST	WB	D,E,F	G	Y	R	R	R	R	R	R	R	R	R	R	FY
LOWELL AVE	NB	G	R	R	R	R	R	R	Y	R	G	Y	R	R	FR
LOWELL AVE	NB	H	R	R	R	R	R	R	Y	R	G	Y	R	R	FR
LOWELL AVE	SB	I,J	R	R	R	R	R	R	R	R	G	Y	R	R	FR
PEDESTRIAN X-ING	EB-WB	P1-P8	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	OUT

TIMING IN SECONDS

MINIMUM GREEN (INITIAL)	15							6				8			
PASSAGE TIME (VEHICLE)	4							2				3			
MAXIMUM 1	45							10				35			
MAXIMUM 2	45							10				35			
YELLOW CLEARANCE		4							3				4		
RED CLEARANCE			1							2				1	
PEDESTRIAN WALK					7										
PEDESTRIAN CLEARANCE							20								
DETECTOR MEMORY			LOCK			LOCK			NON-LOCK			NON-LOCK			
RECALL			MAX			OFF			OFF			OFF			

CONFLICT FLASH OPERATION ONLY

COORDINATION DATA

TIMING PLAN	CYCLE	OFFSET	Ø1	Ø2	Ø3	Ø4
1/1/1 M-F 7AM-9AM	120	91	49	27	11	20
2/1/1 M-F 4PM-6PM	110	91	51	27	14	20

NOTES:

- AUTOMATIC FLASHING OPERATION PER M.U.T.C.D. 11th EDITION, AS AMENDED.
- * UPON PEDESTRIAN PUSH BUTTON ACTUATION
- PERM = PERMISSIVE
- MAXIMUM 1 = NORMAL OPERATION
- MAXIMUM 2 = NOT USED
- STOP AND GO OPERATION FOR 24 HOURS PER DAY. FLASHING OPERATION FOR EMERGENCY ONLY.
- DURING PEDESTRIAN INTERVAL, FDW THROUGH YELLOW OPERATION SHALL BE IN EFFECT.
- INHIBIT MAX TERMINATION SHALL BE IN EFFECT DURING COORDINATION.
- WHEN PEDESTRIAN PHASE IS ACTUATED THAT CANNOT BE ACCOMMODATED IN THE GIVEN SPLIT TIME, THE INTERSECTION SHALL DROP OUT OF COORDINATION.

SEQUENCE & TIMING NOTES:

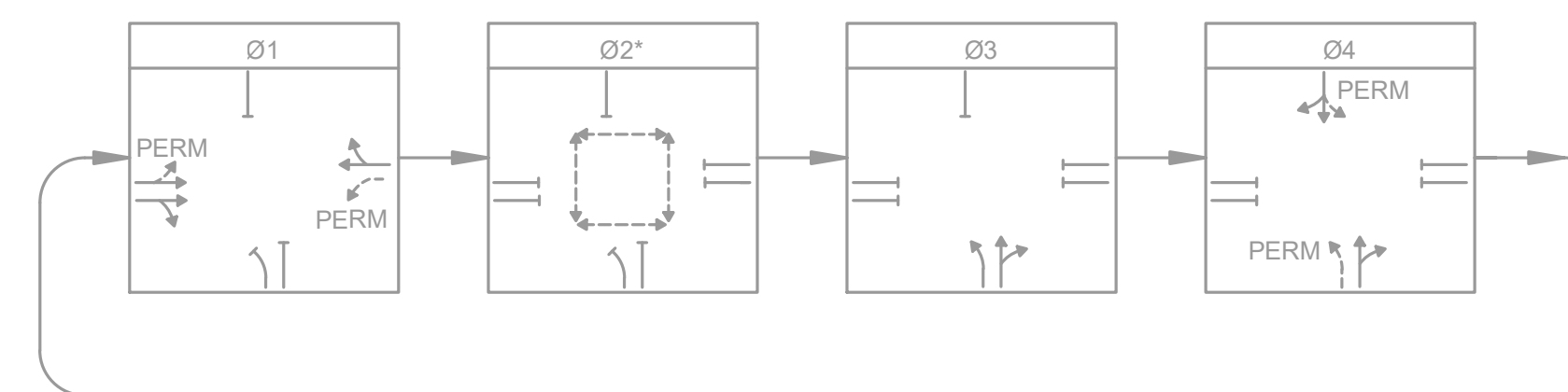
- IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
- THE RIGHT OF WAY MAY BE ASSIGNED TO ANY PHASE OR ANY COMBINATION OF NON-CONFLICTING PHASES.
- IF CALLS EXIST ON ALL PHASES, THE ASSIGNMENT OF RIGHT OF WAY SHALL BE IN ACCORDANCE WITH THE PREFERENTIAL PHASE SEQUENCE.
- IF THE ASSIGNED RIGHT-OF-WAY FOR ANY TRAFFIC MOVEMENT IS TO CHANGE DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATION FOR THAT MOVEMENT WILL DISPLAY THE APPROPRIATE CLEARANCE INTERVALS.

LIST OF MAJOR ITEMS REQUIRED

WASHINGTON STREET AT LOWELL AVENUE

PAY ITEM	QUANTITY	DESCRIPTION
816.02	1	REPROGRAM CONTROLLER
816.02	1	360° VIDEO DETECTION CAMERA

PREFERENTIAL PHASE SEQUENCE

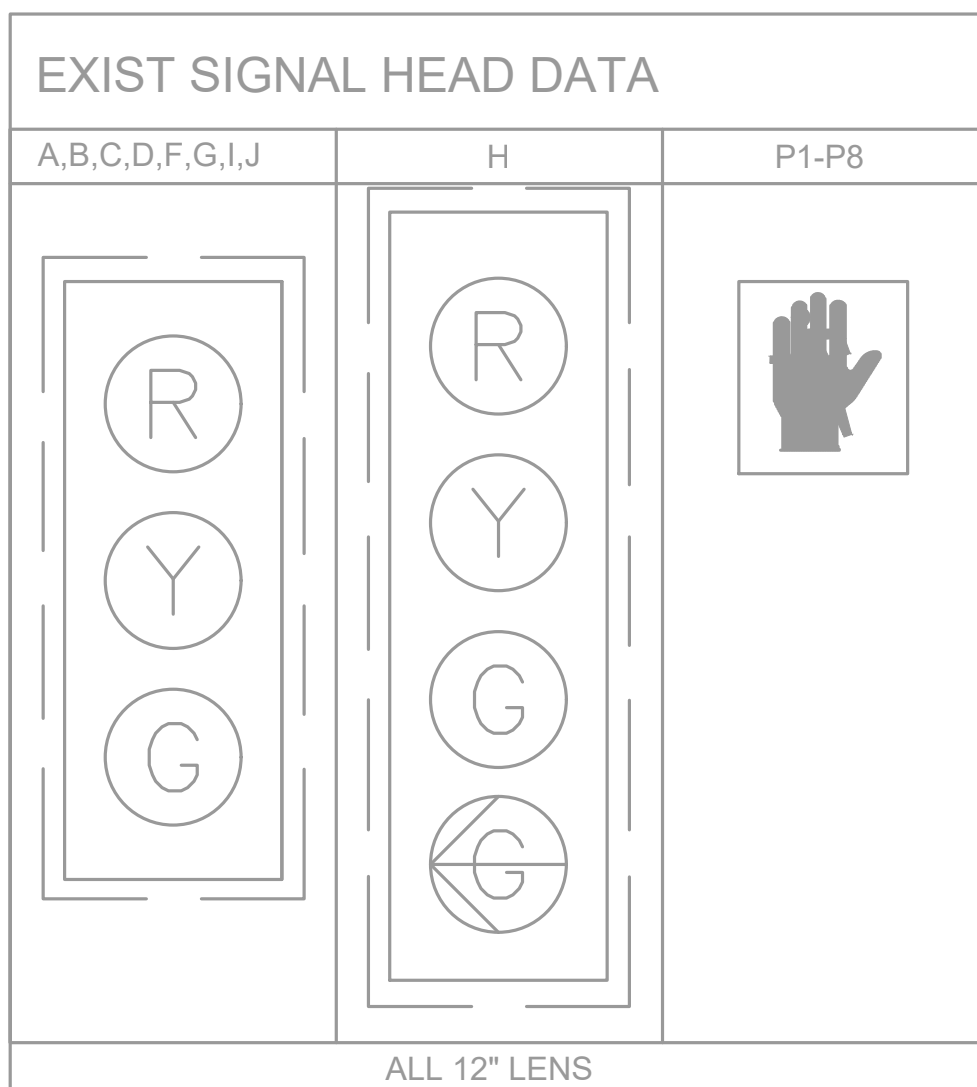


* UPON PEDESTRIAN PUSH BUTTON ACTUATION

VIDEO DETECTOR DATA

DELAY THE EFFECTIVE ONLY DURING CALLED Ø RED TIME IN SEC.

DETECTOR NUMBER	CAMERA NUMBER	CHANNEL NUMBER	DETECTION ZONE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	V1	1	2@ 6'X20'	4	4	B	-	-
2	V1	2	2@ 6'X20'	4 & 5	4 & 5	B	-	-
3	V1	3	2@ 6'X20'	4 & 5	4 & 5	B	-	-
4	V1	4	1@ 3'X20'	2	2	B	-	-



CONTROLLER COORDINATION SETUP

SET-UP	CODE	0	1	2	3
OPERATION	1	FREE	AUTO	MANUAL	---
MODE (NORMAL)	0	PERM	YIELD	PM YLD	PM OMT
MAXIMUM	0	M INH	MAX 1	MAX 2	---
CORRECTION	2	DWELL	MX DW	SH WAY	SW+
OFFSET	1	BEGIN	END	---	---
FORCE	1	PLAN	CYCLE	---	---

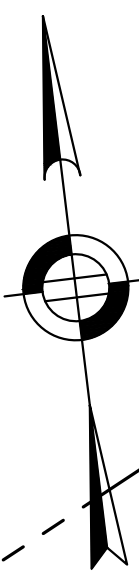


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WASHINGTON STREET PILOT TRAFFIC SIGNAL SCHEDULE WASHINGTON ST AT LOWELL AVE

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	JM	HK	RL	30	47



WATERTOWN STREET (ROUTE 16)

978 WATERTOWN ST
PARCEL SBL 31005 0001
N/F
LUNA REALTY PTNRS LTD PTNRSHP
BOOK 49770, PAGE 333

1253 WASHINGTON ST
PARCEL SBL 31005 0002
N/F
DONATO MARK F &
STEVEN J TRS
BOOK 55679, PAGE 591

1239-1247 WASHINGTON ST
PARCEL SBL 31005 0003
N/F
DONATO STEVEN J & MARK F TRS
BOOK 43663, PAGE 417

DAVIS COURT

1229 WASHINGTON ST
PARCEL SBL 31006 0017
N/F
DONATO MARK F
BOOK 77140, PAGE 17

1221 WASHINGTON ST
PARCEL SBL 31006 0016
N/F
DONATO MARK F
BOOK 77140, PAGE 17

1213-1215 WASHINGTON
PARCEL SBL 31006 00
N/F
DONATO MARK F & STEVE
BOOK 79289, PAGE

NO LANDSCAPE SCOPE

WASHINGTON STREET

CHESTNUT STREET

1 CHESTNUT ST
PARCEL SBL 33010 0005
N/F
BANK OF AMERICA
BOOK 5578, PAGE 119

1250 WASHINGTON ST
PARCEL SBL 31004 0016
N/F
COUTO & CHAVES INVESTMENT CO LLC
BOOK 58795, PAGE 459

1236 WASHINGTON ST
PARCEL SBL 31004 0014
N/F
JACOB & ASSOCIATES INC
BOOK 26669, PAGE 251

1210-1230 WASHINGTON ST
PARCEL SBL 31004 0013
N/F
DIV WASHINGTON LLC
BOOK 46748, PAGE 570

24 CHESTNUT ST
PARCEL SBL 31004 0015

PLANTING LEGEND

SYM.	DESCRIPTION	DETAIL	DESCRIPTION	DETAIL
	PROPOSED GROUNDCOVER			EXISTING PLANT MATERIAL TO REMAIN
	PROPOSED SHRUB			PROPERTY LINE
	PROPOSED TREE			LANDSCAPE LIMIT OF WORK
	PROPOSED EVERGREEN TREE			
	PROPOSED PLANTER POT - 5 TOTAL			

HALVORSON
Tight&Bond STUDIO

25 KINOSTON ST, BOSTON MA 02111-2300
PHONE: 617-238-0380
WWW.HALVORSONDESIGN.COM



HOWARD STEIN HUDSON

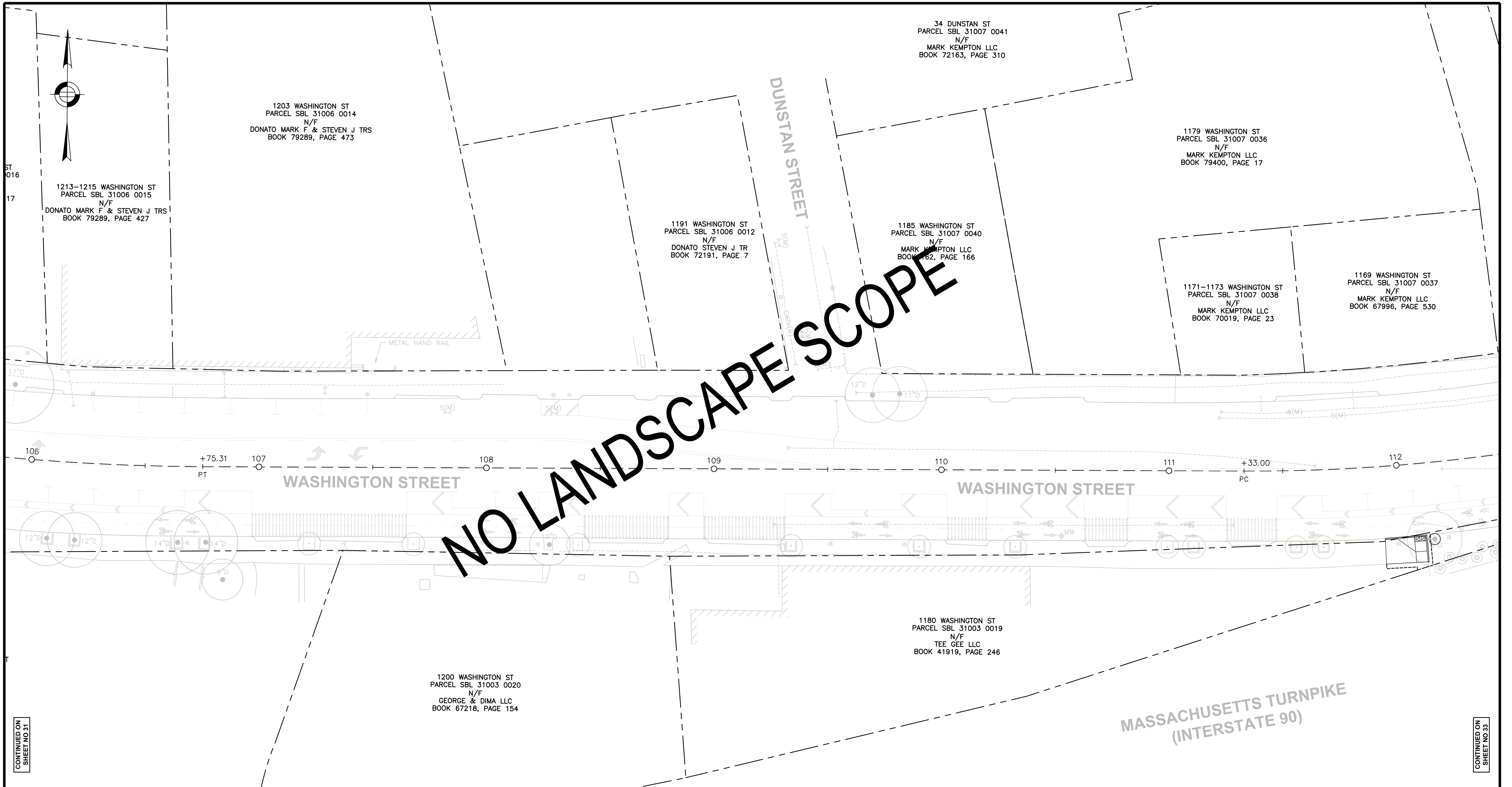
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www.hshassoc.com

WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 1 OF 9



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRD. BY	SHEET NO.	TOTAL SHEETS
2021163	04/08/24	PC	BJ	BJ	31	47

CONTINUED ON
SHEET NO. 32



NO LANDSCAPE SCOPE

PLANTING LEGEND

SYM.	DESCRIPTION	DETAIL	DESCRIPTION	DETAIL
	PROPOSED GROUNDCOVER			EXISTING PLANT MATERIAL TO REMAIN
	PROPOSED SHRUB			PROPERTY LINE
	PROPOSED TREE			LANDSCAPE LIMIT OF WORK
	PROPOSED EVERGREEN TREE			
	PROPOSED PLANTER POT - 5 TOTAL			

HALVORSON
Tight & Bond STUDIO

25 KIMBOSTON ST., BOSTON MA 02111-2500
PHONE: 617-235-0300
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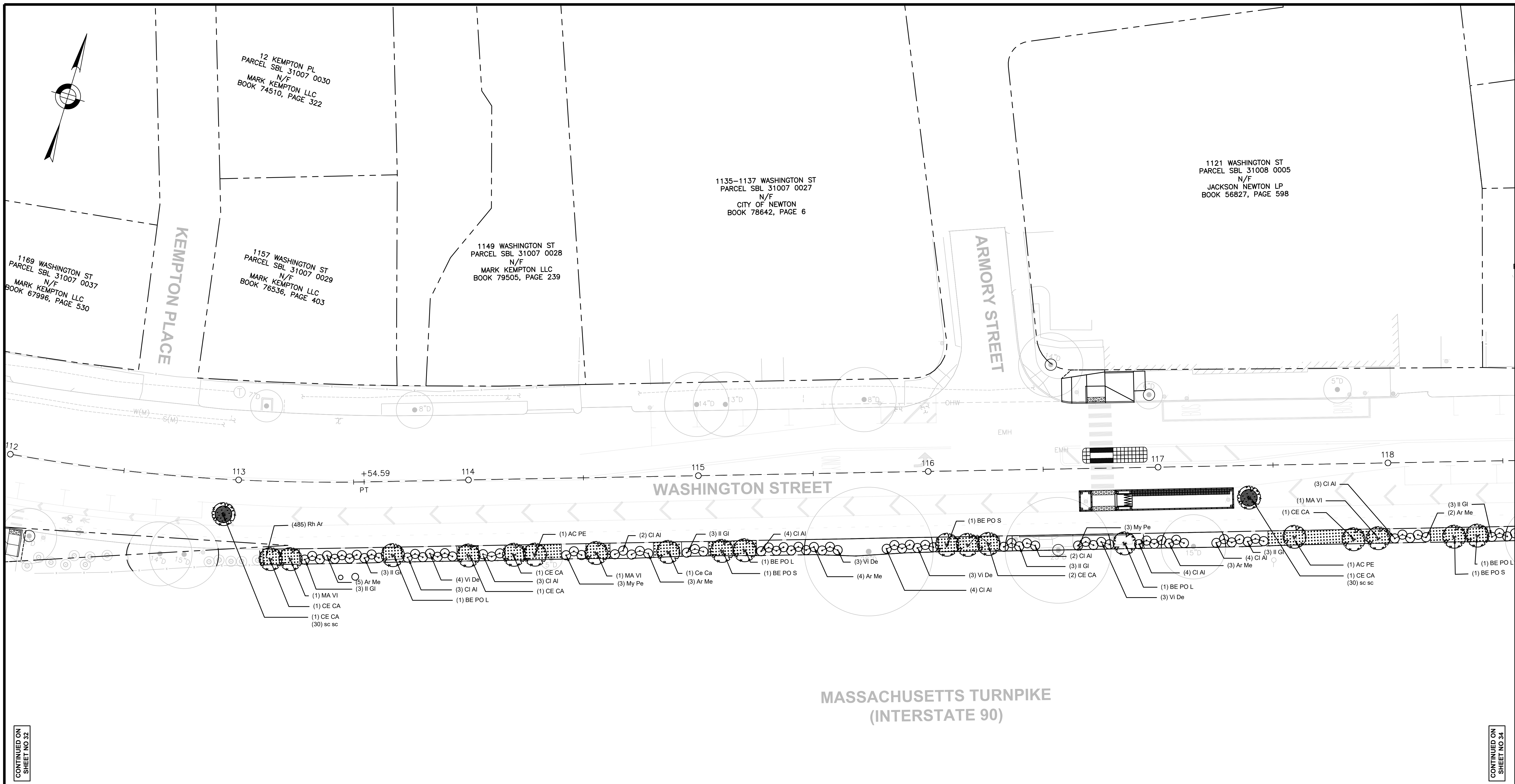
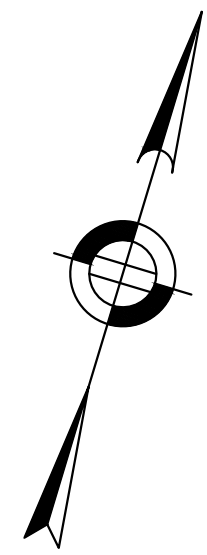
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WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 2 OF 9



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163	04/08/24	PC	BJ	BJ	32	47

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CONTINUED ON SHEET NO 32

CONTINUED ON SHEET NO 34

PLANTING LEGEND

SYM.	DESCRIPTION	DETAIL	DESCRIPTION	DETAIL
	PROPOSED GROUNDCOVER			EXISTING PLANT MATERIAL TO REMAIN
	PROPOSED SHRUB			PROPERTY LINE
	PROPOSED TREE			LANDSCAPE LIMIT OF WORK
	PROPOSED EVERGREEN TREE			
	PROPOSED PLANTER POT - 5 TOTAL			

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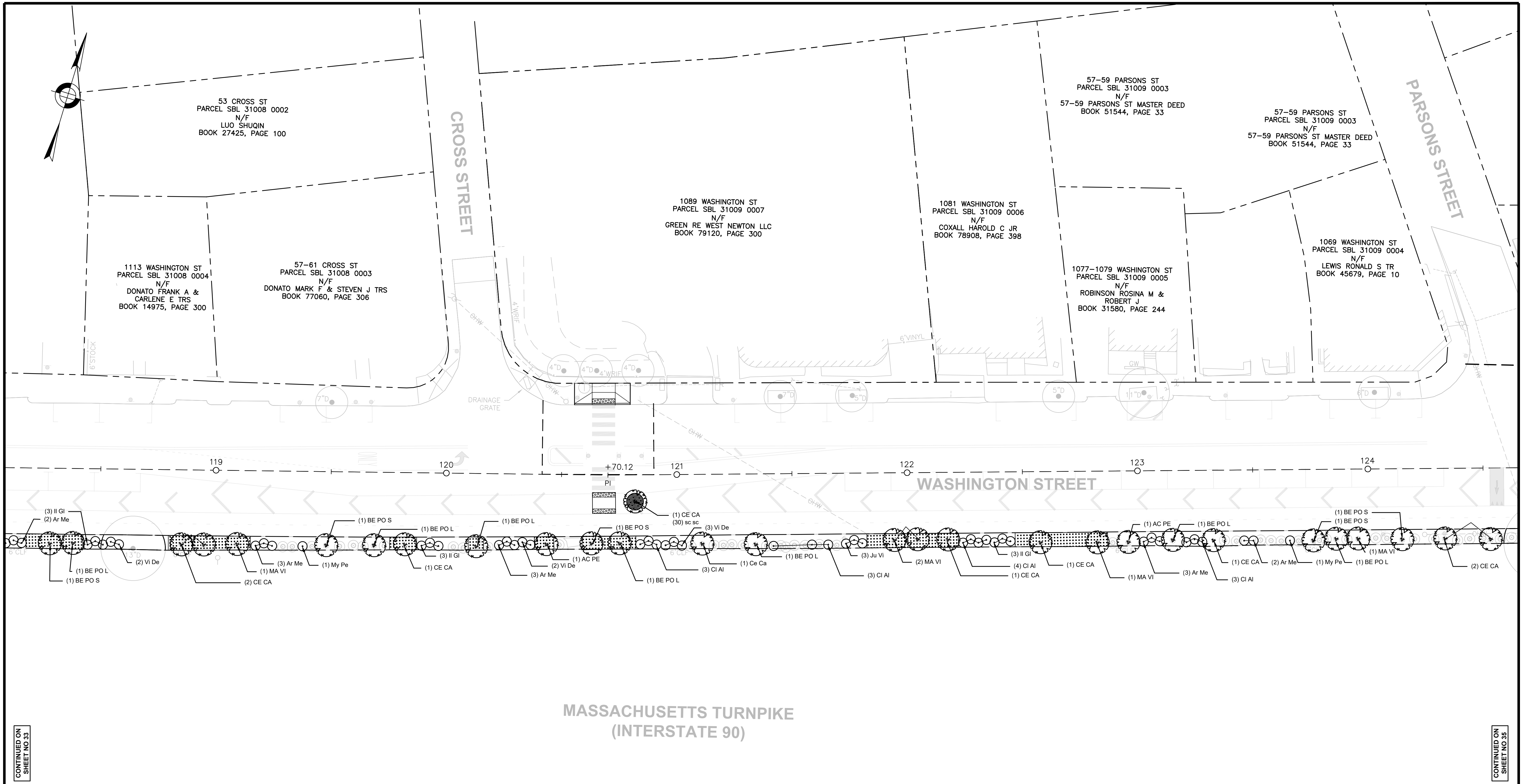
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WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 3 OF 9



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163	04/08/24	PC	BJ	BJ	33	47

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CONTINUED ON
SHEET NO 33

CONTINUED ON
SHEET NO 35

PLANTING LEGEND

SYM.	DESCRIPTION	DETAIL	DESCRIPTION	DETAIL
	PROPOSED GROUNDCOVER			EXISTING PLANT MATERIAL TO REMAIN
	PROPOSED SHRUB			PROPERTY LINE
	PROPOSED TREE			LANDSCAPE LIMIT OF WORK
	PROPOSED EVERGREEN TREE			
	PROPOSED PLANTER POT - 5 TOTAL			

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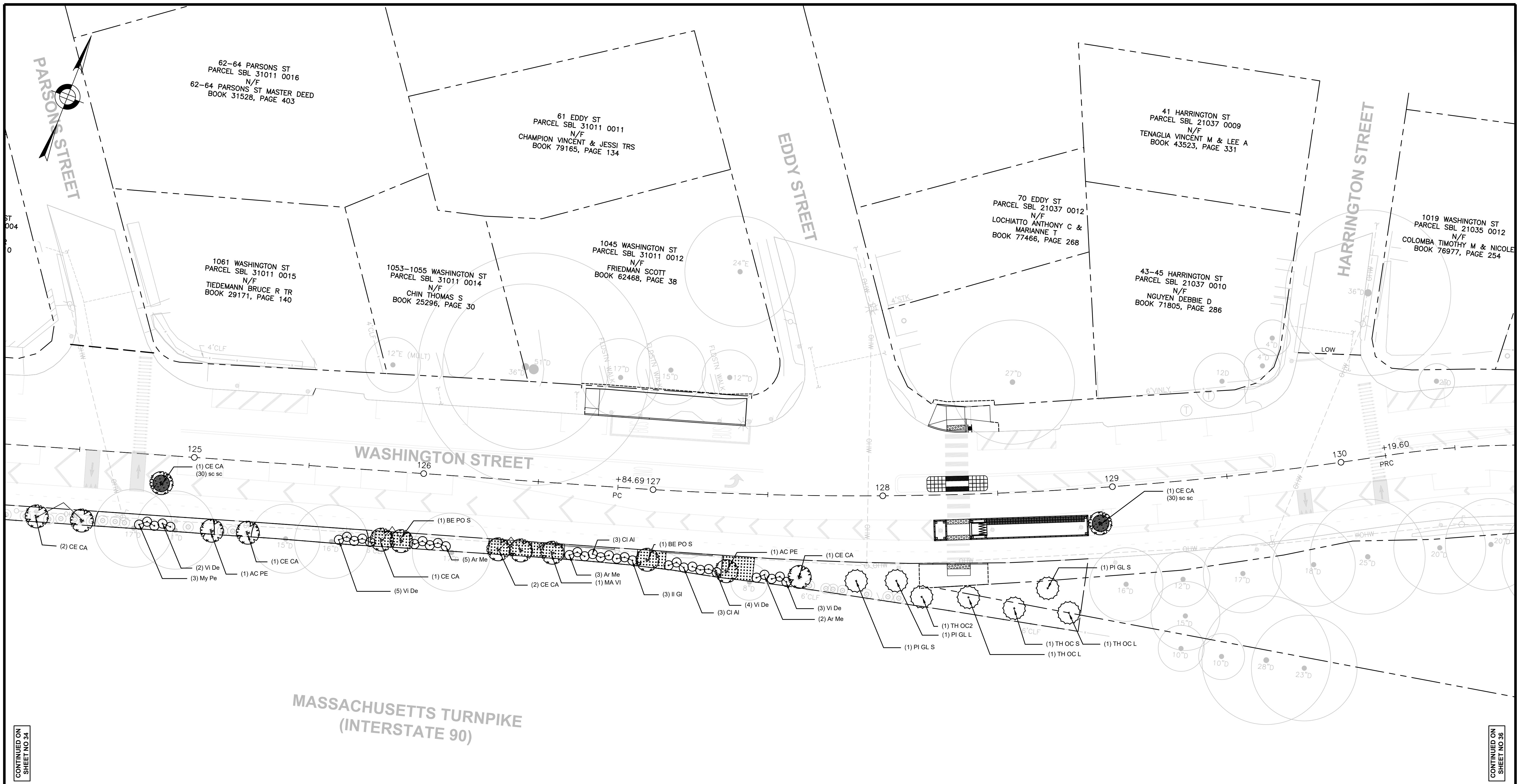
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WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 4 OF 9

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163	04/08/24	PC	BJ	BJ	34	47



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CONTINUED ON
SHEET NO 34

CONTINUED ON
SHEET NO 38

PLANTING LEGEND

SYM.	DESCRIPTION	DETAIL	DESCRIPTION	DETAIL
	PROPOSED GROUNDCOVER			EXISTING PLANT MATERIAL TO REMAIN
	PROPOSED SHRUB			PROPERTY LINE
	PROPOSED TREE			LANDSCAPE LIMIT OF WORK
	PROPOSED EVERGREEN TREE			
	PROPOSED PLANTER POT - 5 TOTAL			

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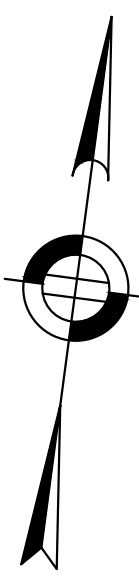
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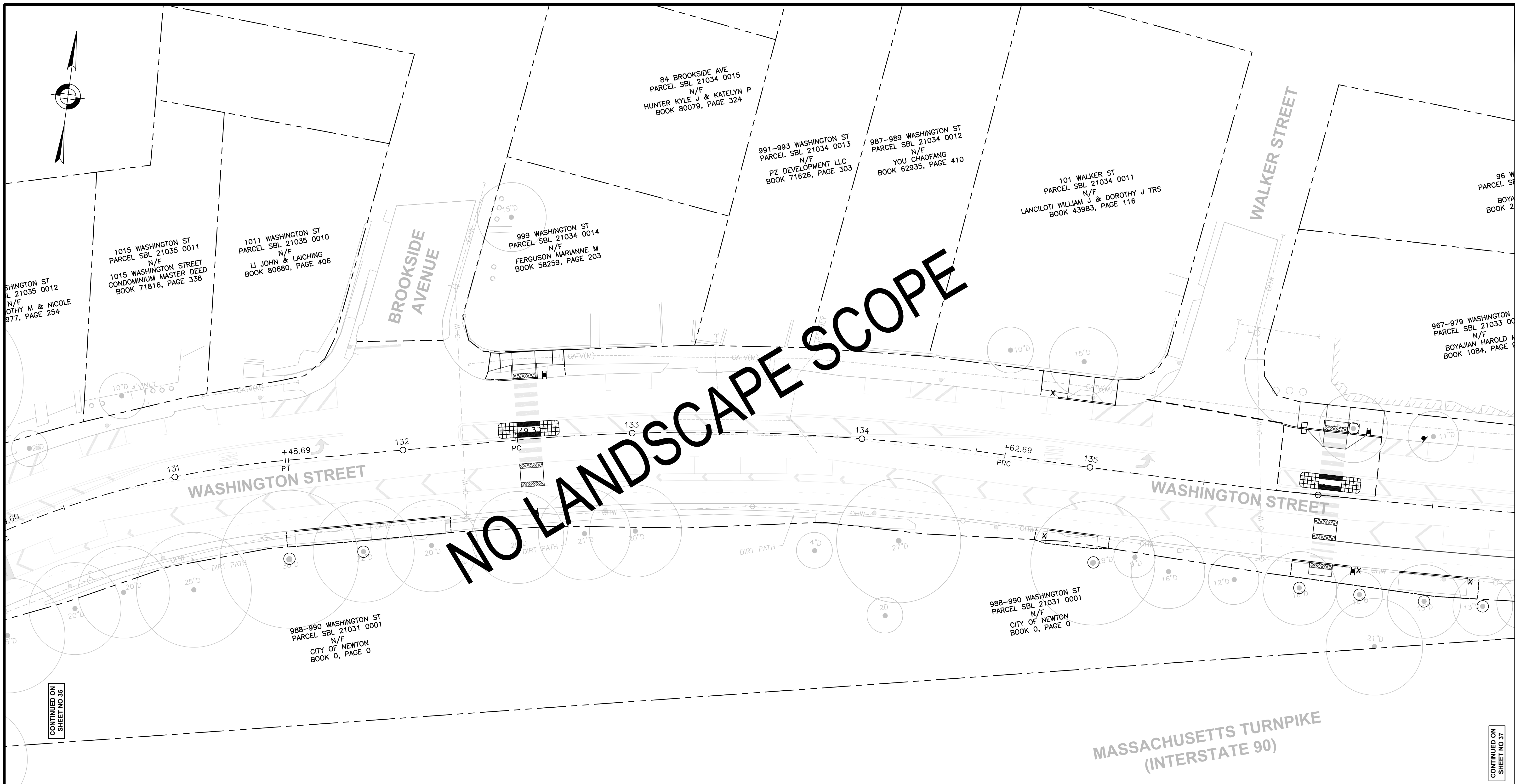
WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 5 OF 9



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163	04/08/24	PC	BJ	BJ	35	47



NO LANDSCAPE SCOPE



PLANTING LEGEND

SYM.	DESCRIPTION	DETAIL	DESCRIPTION	DETAIL
	PROPOSED GROUNDCOVER			EXISTING PLANT MATERIAL TO REMAIN
	PROPOSED SHRUB			PROPERTY LINE
	PROPOSED TREE			LANDSCAPE LIMIT OF WORK
	PROPOSED EVERGREEN TREE			
	PROPOSED PLANTER POT - 5 TOTAL			

MASSACHUSETTS TURNPIKE
(INTERSTATE 90)

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WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 6 OF 9



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
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96 WALKER ST
PARCEL SBL 21033 0002
N/F
BOYAJIAN LEONA
BOOK 21318, PAGE 34

967-979 WASHINGTON ST
PARCEL SBL 21033 0001
N/F
BOYAJIAN HAROLD M
BOOK 1084, PAGE 90

949 WASHINGTON ST
PARCEL SBL 21033 0030
N/F
GRABAU AMELIA
BOOK 52759, PAGE 475

935 WASHINGTON ST
PARCEL SBL 21032 0001
N/F
935 WASHINGTON ST MASTER DEED
BOOK 13789, PAGE 325

171 LOWELL AVE
PARCEL SBL 21032 0041
N/F
171 LOWELL AVE MASTER DEED
BOOK 0, PAGE 0

BROOKS AVENUE

LOWELL AVENUE

WASHINGTON STREET

MASSACHUSETTS TURNPIKE
(INTERSTATE 90)

137

138

139

140

141

142

+31.73
PT

(1) TH OC S
(1) PI GL S
(1) TH OC L

(1) PI GL L
(1) PI GL S

CONTINUED ON
SHEET NO 36

PLANTING LEGEND

SYM.	DESCRIPTION	DETAIL	DESCRIPTION	DETAIL
	PROPOSED GROUNDCOVER			EXISTING PLANT MATERIAL TO REMAIN
	PROPOSED SHRUB			PROPERTY LINE
	PROPOSED TREE			LANDSCAPE LIMIT OF WORK
	PROPOSED EVERGREEN TREE			
	PROPOSED PLANTER POT - 5 TOTAL			

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WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 7 OF 9



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163	04/08/24	PC	BJ	BJ	37	47

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PLANTING NOTES

- LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL AT THE NURSERY AND AGAIN AT SITE PRIOR TO PLANTING.
- PLANT MATERIAL SHALL CONFORM TO "THE AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY AMERICANHORT (WWW.AMERICANHORT.ORG).
- NO SUBSTITUTIONS OF PLANT SPECIES WITHOUT LANDSCAPE ARCHITECT'S WRITTEN APPROVAL.
- LOCATE AND VERIFY UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICT TO LANDSCAPE ARCHITECT.
- PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM ALL PLANTING AREAS.
- NO PLANTING TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
- ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. REFER TO LAYOUT AND PLANTING SHEETS FOR LAYOUT INFORMATION. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF ALL PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- TOTAL QUANTITY OF PLANTS FOR EACH AREA TO BE AVAILABLE ON SITE AT THE TIME OF PLANTING FOR FIELD LAYOUT BY ENGINEER. NO PARTIAL LAYOUT AND PLANTING OF AREAS WILL BE ACCEPTABLE.
- INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE OR TOP OF STRUCTURAL SOIL. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE.
- PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
- LOOSE OR CRACKED ROOT BALLS ARE UNACCEPTABLE.
- DO NOT USE TREE WRAP.
- REMOVE TOP 2/3 OF WIRE BASKETS. REMOVE TOP 1/3 OF BURLAP. SYNTHETIC BURLAP WILL NOT BE ACCEPTED. FOR CONTAINER PLANTS, REMOVE CONTAINER AND SCARIFY EDGES OF ROOT BALL 1/2" DEEP IN A MINIMUM OF FOUR LOCATIONS.
- WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
- RAISE AND REPLANT PLANTS THAT SETTLE AFTER PLANTING AND WATERING.

PLANT SCHEDULE

Symbol	Quantity	Botanical Name	Common Name	Size	Spacing	Notes	Bloom
TREES							
AC PE	6	<i>Acer pensylvanica</i>	Striped Maple	8-10' ht, B&B	see plan	single stem, matched specimen	
ORNAMENTAL TREES							
BE PO S	9	<i>Betula populifolia</i>	Gray Birch	8-10' ht, B&B	see plan	multi stem, matched specimen	
BE PO L	10	<i>Betula populifolia</i>	Gray Birch	10-12' ht, B&B	see plan	multi stem, matched specimen	
CE CA	26	<i>Cercis canadensis</i>	Redbud	8-10' ht, B&B	see plan	multi stem, matched specimen	Pink;March-April
MA VI	9	<i>Magnolia virginiana</i>	Sweetbay Magnolia	8-10' ht, B&B	see plan	multi stem, matched specimen	White;May- June
EVEDRGREEN TREES							
PI GL S	4	<i>Picea glauca</i>	white spruce	6-8' ht, B&B	see plan		
PI GL L	2	<i>Picea glauca</i>	white spruce	6-8' ht, B&B	see plan		
TH OC S	2	<i>Thuja occidentalis 'Green Giant'</i>	Arbovitae	8-10' ht, B&B	see plan		
TH OC L	3	<i>Thuja occidentalis 'Green Giant'</i>	Arbovitae	8-10' ht, B&B	see plan		
SHRUBS							
Ar Me	38	<i>Aronia melanocarpa</i>	Black Chokeberry	30"-36" B&B	48" O.C.		White;May-June
CI Al	48	<i>Clethra alnifolia</i>	Sweet Pepperbush	30"-36" B&B	48" O.C.		White;May-June
II Gl	28	<i>Ilex glabra</i>	Inkberry	30"-36" B&B	48" O.C.		
Ju Vi	3	<i>Jumiperus virginiana</i>	Eastern Red Cedar	30"-36" B&B	48" O.C.		
My Pe	11	<i>Myrica pensylvanica</i>	Bayberry	36"-42" B&B	48" O.C.		
Rh Ar	485	<i>Rhus aromatica 'Gro-Low'</i>	Gro Low Sumac	18-24"	30" O.C.		
Vi De	34	<i>Viburnum dentatum</i>	Arrowood Viburnum	36"-42" B&B	48" O.C.		White;March-May
GRASSES							
sc sc	150	<i>Schizachyrium scoparium</i>	Little Bluestem	2 Gallon	see plan	Planter pots	

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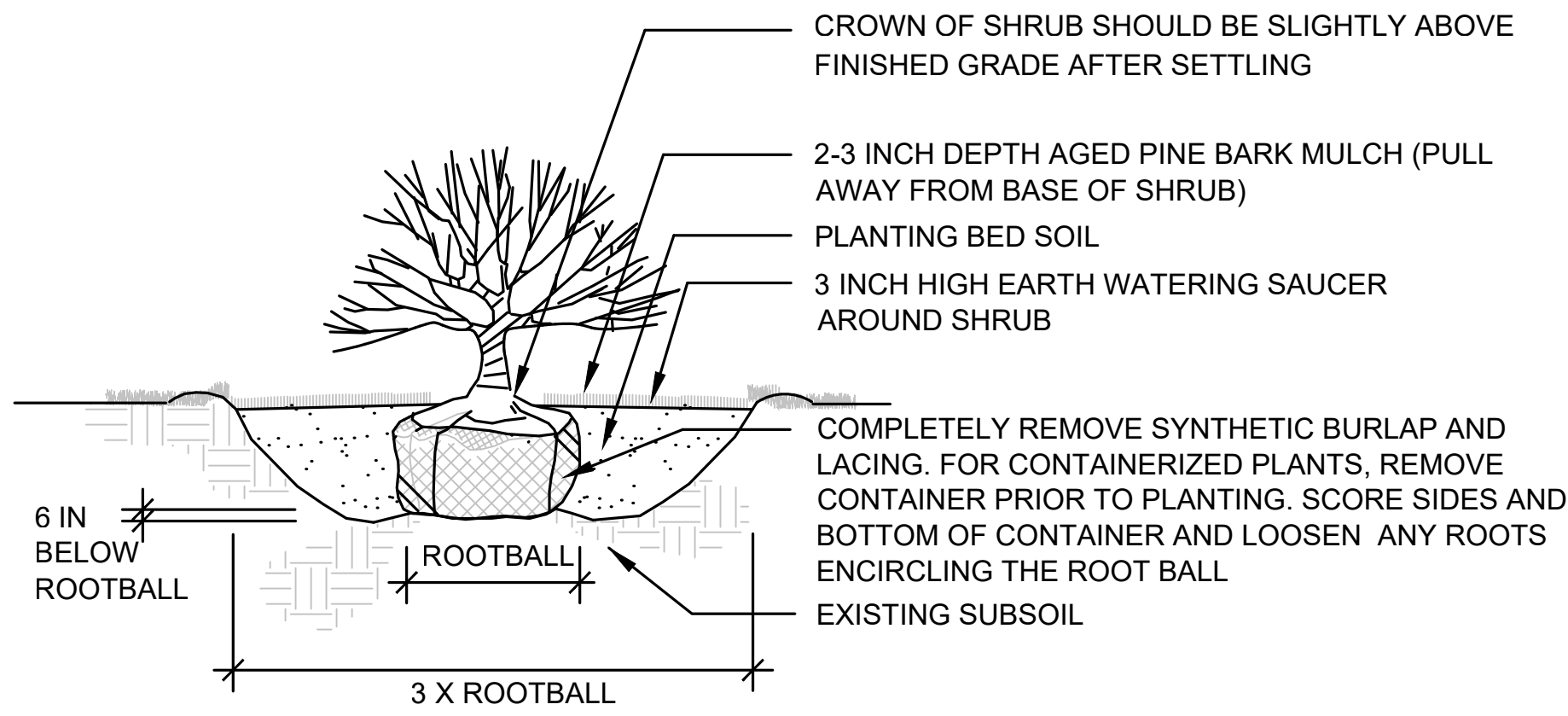
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WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 8 OF 9

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163	04/08/24	PC	BJ	BJ	38	47

NOTES:

1. EXCAVATE TO REQUIRED DEPTH AND BACKFILL WITH PLANTING BED SOIL.
2. SHRUBS SHALL BE SET PLUMB.
3. WATER BY FLOODING TWICE IN FIRST TWO HOURS AFTER PLANTING.
4. WATER & MAINTAIN AS PER STANDARD SPECIFICATIONS.
5. LOOSE OR CRACKED ROOTBALLS WILL NOT BE ACCEPTED FOR PLANTING.

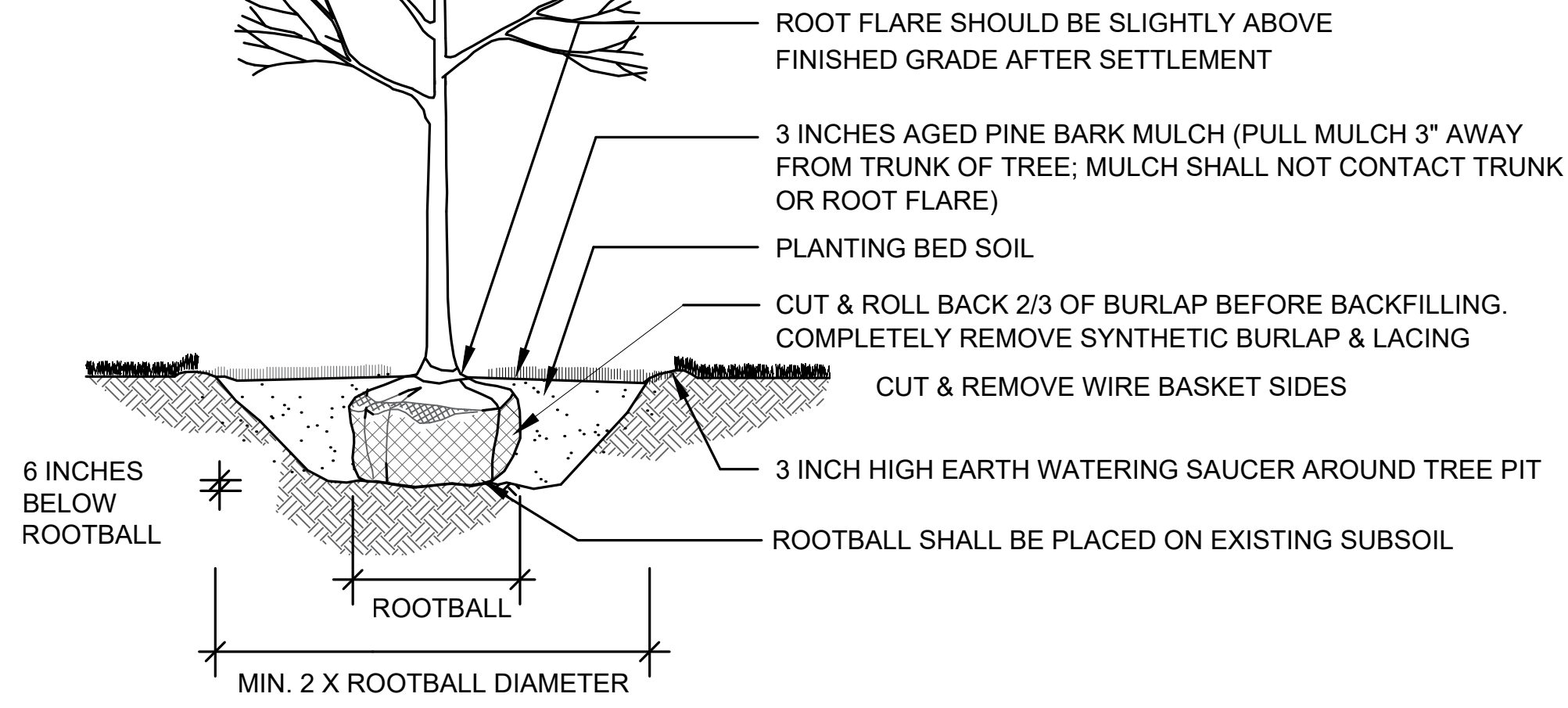


1 SHRUB PLANTING

NOT TO SCALE

NOTES:

1. DO NOT CUT LEADER.
2. TREE WRAP SHALL NOT BE USED.
3. TREE SHALL BE SET PLUMB.
4. WATERING SAUCER SHALL BE FLOODED TWICE DURING THE FIRST 72 HOURS AFTER PLANTING.
5. REMOVE EXCESS SOIL TO EXPOSE ROOT FLARE.



2 DECIDUOUS TREE PLANTING

NOT TO SCALE

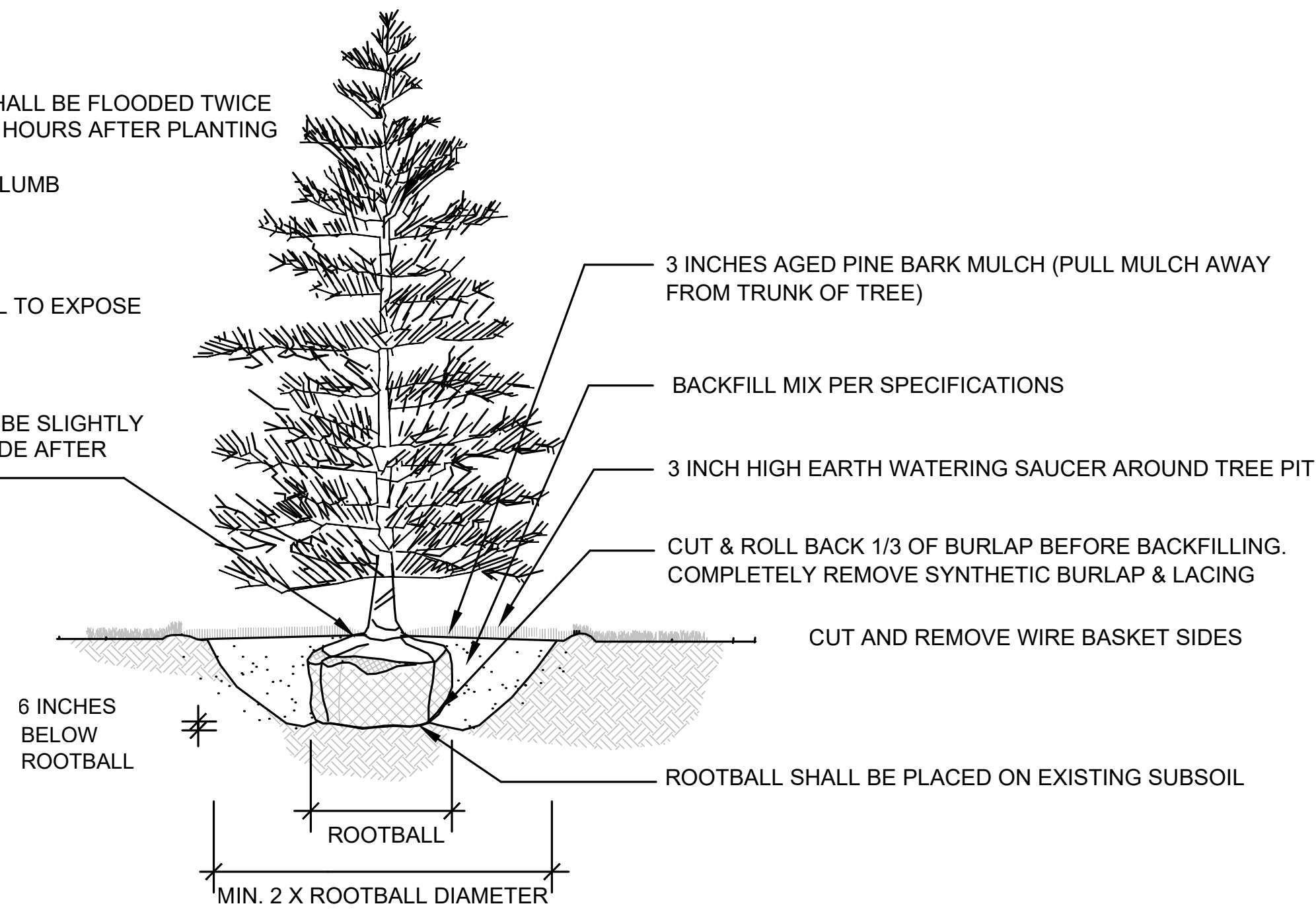
WATERING SAUCER SHALL BE FLOODED TWICE DURING THE FIRST 24 HOURS AFTER PLANTING

TREE SHALL BE SET PLUMB

DO NOT CUT LEADER

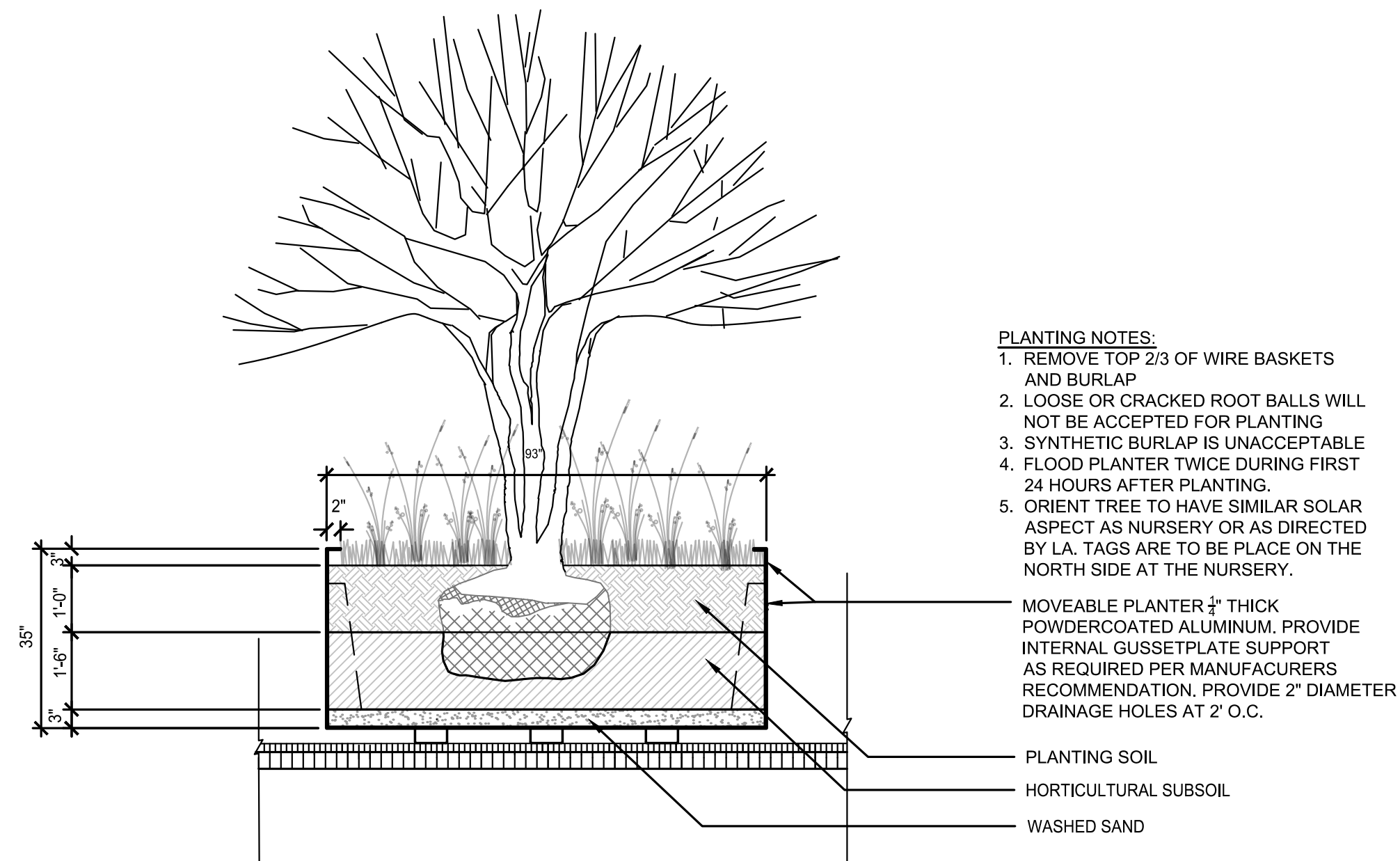
REMOVE EXCESS SOIL TO EXPOSE ROOT FLARE

ROOT FLARE SHOULD BE SLIGHTLY ABOVE FINISHED GRADE AFTER SETTLEMENT



3 EVERGREEN TREE PLANTING

NOT TO SCALE



PLANTING NOTES:

1. REMOVE TOP 2/3 OF WIRE BASKETS AND BURLAP
2. LOOSE OR CRACKED ROOT BALLS WILL NOT BE ACCEPTED FOR PLANTING
3. SYNTHETIC BURLAP IS UNACCEPTABLE
4. FLOOD PLANTER TWICE DURING FIRST 24 HOURS AFTER PLANTING
5. ORIENT TREE TO HAVE SIMILAR SOLAR ASPECT AS NURSERY OR AS DIRECTED BY LA. TAGS ARE TO BE PLACE ON THE NORTH SIDE AT THE NURSERY.

4 TREE PLANTING IN PLANTER POT

NOT TO SCALE

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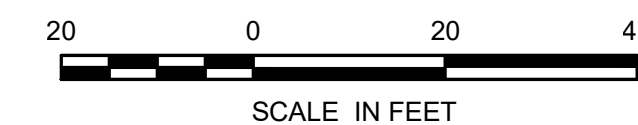
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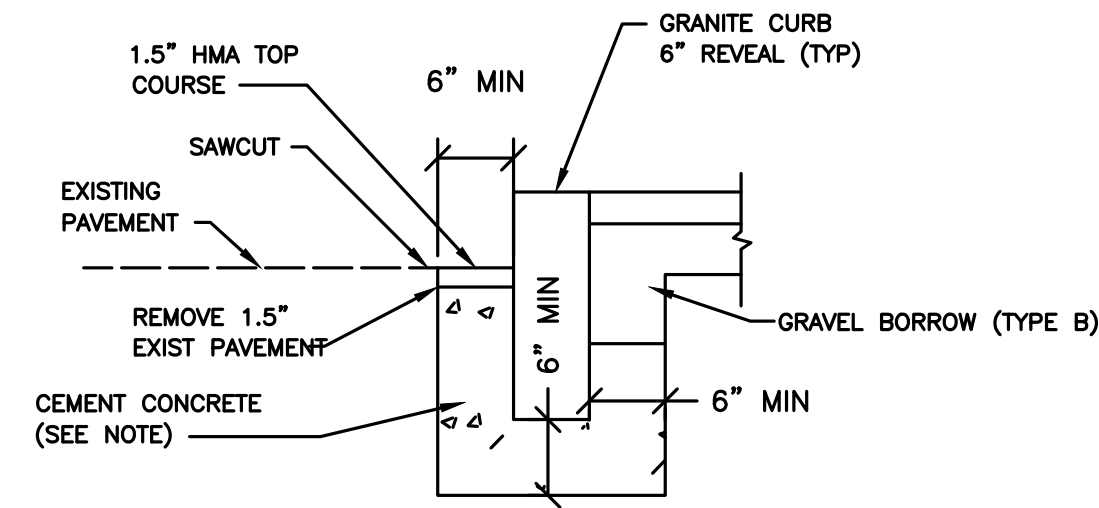
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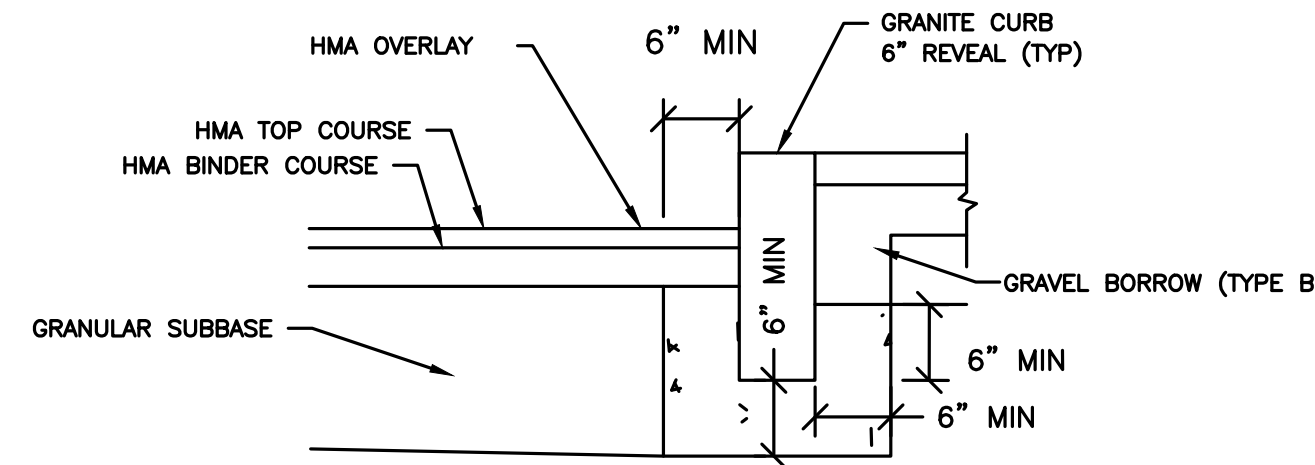
WASHINGTON STREET PILOT
LANDSCAPE PLANS
SHEET 9 OF 9



HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163	04/08/24	PC	BJ	BJ	39	47

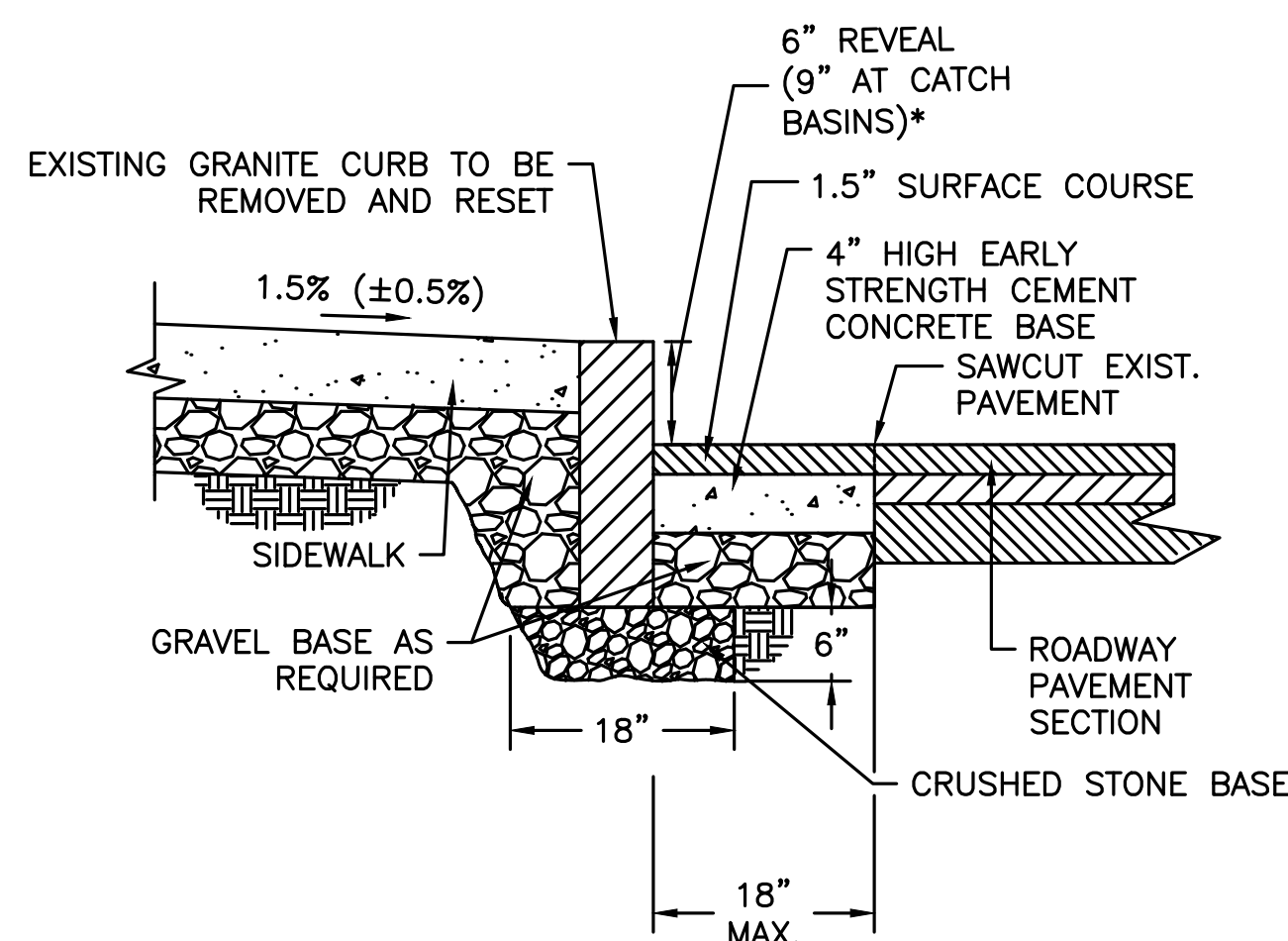


GRANITE CURB IN EXISTING PAVEMENT
NOT TO SCALE



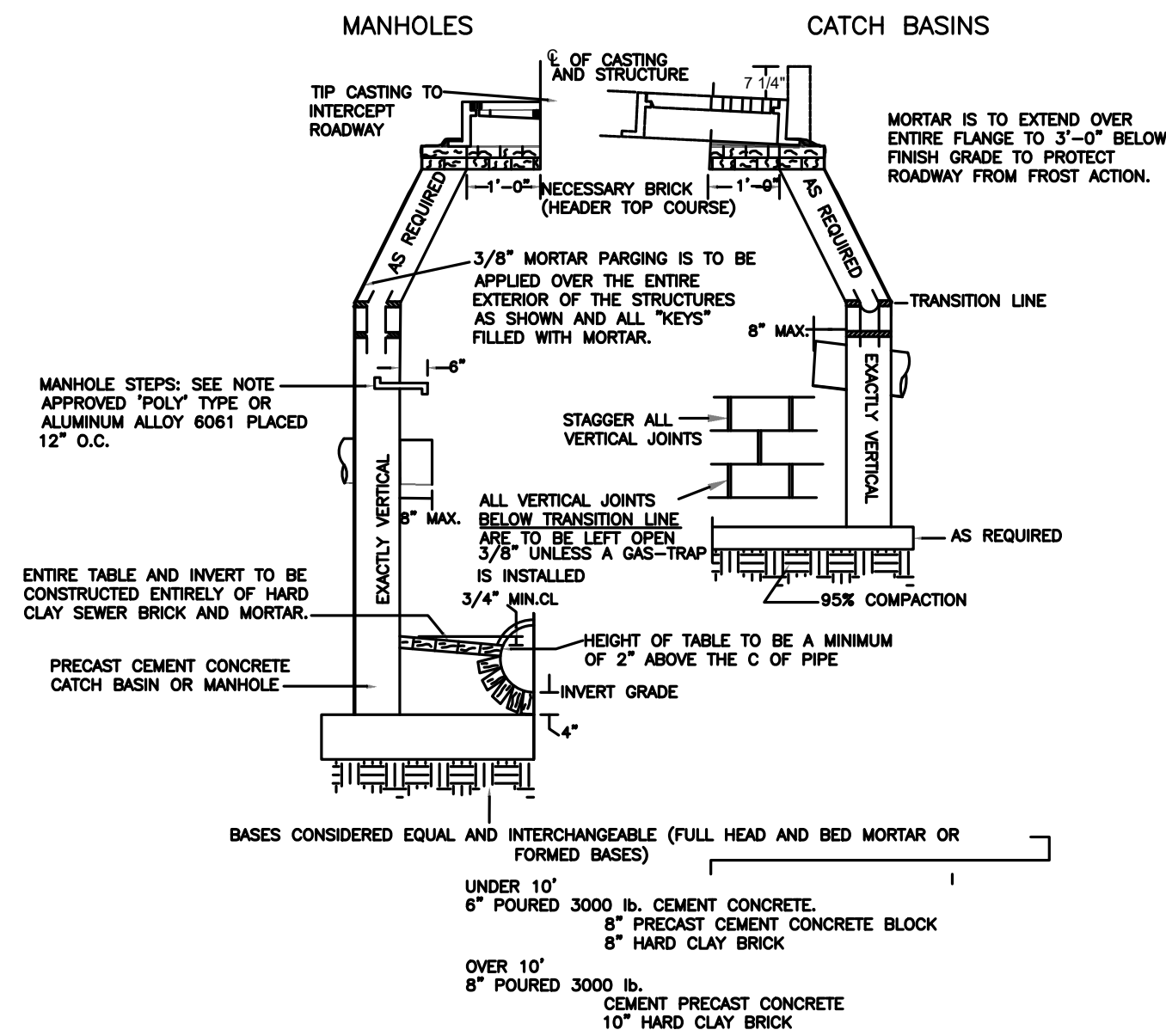
GRANITE CURB IN EXISTING PAVEMENT WITH FULL DEPTH PAVEMENT
NOT TO SCALE

- NOTES:**
1. THIS PROCEDURE IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE COURSE IS IN PLACE PRIOR TO BINDER AND TOP PLACEMENT.
 2. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.



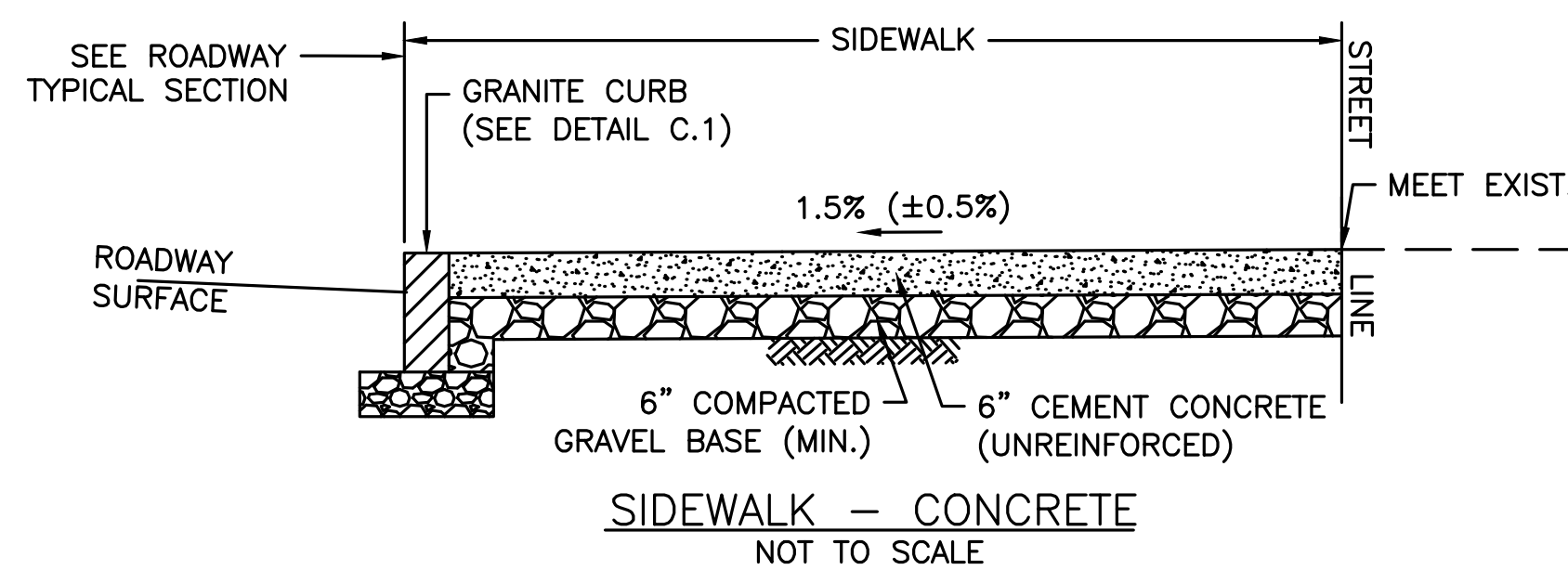
*6" REVEAL TYPICAL. REVEAL MAY VARY FROM 3" TO 9" WITH PWD APPROVAL.

CURB - GRANITE RESET
NOT TO SCALE

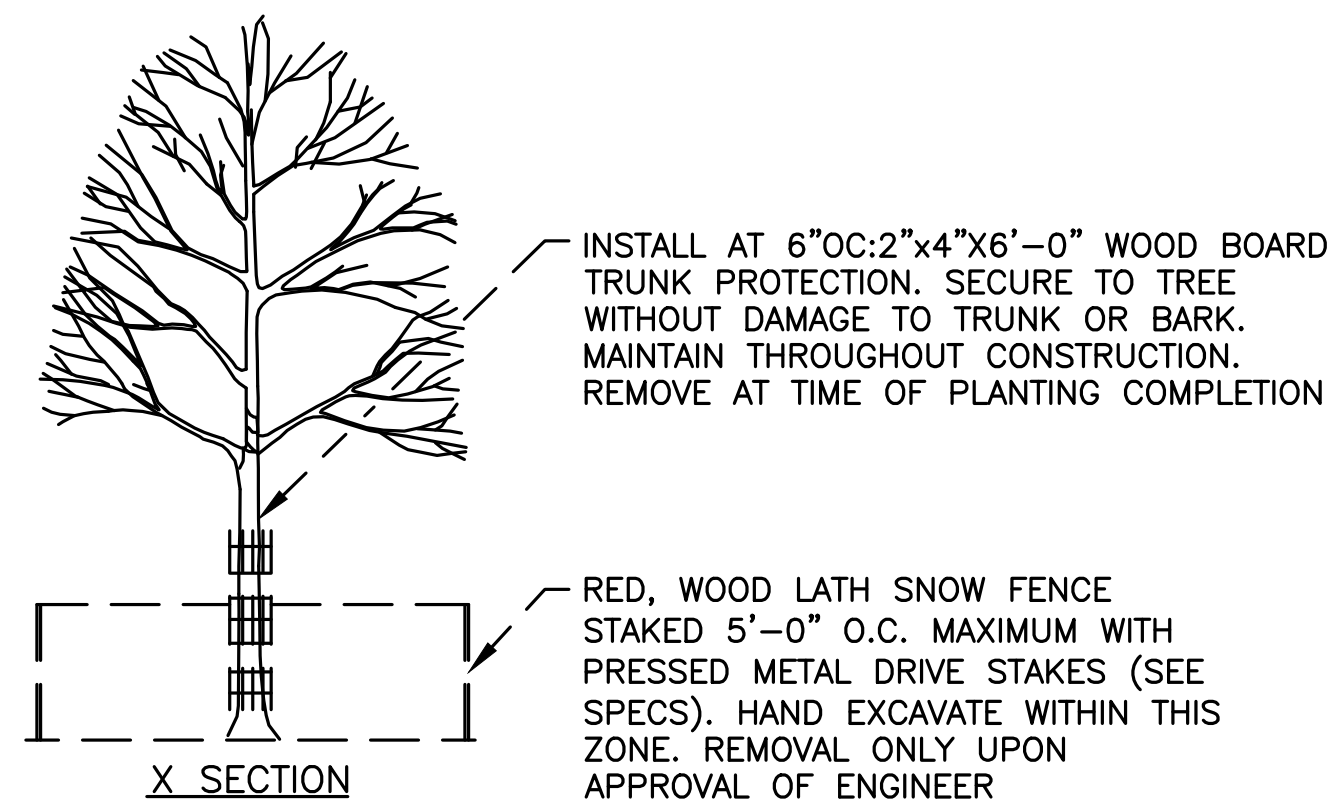


MORTAR: ALL MORTAR TO BE ONE PART CEMENT TO TWO PARTS CLEAN WASHED SAND BY VOLUME.
BLOCK: ALL BLOCK IS TO BE SOLID PRECAST CEMENT CONCRETE.
BRICK: ALL BRICK IS TO BE COILED HARD CLAY TYPE M SEWER BRICK.
MANHOLE STEPS: ALL MANHOLE STEPS TO BE PLACED WITHIN THE STRUCTURE VERTICALLY ABOVE ONE ANOTHER AND PLACED SO AS NOT TO BE INTERFERED WITH BY MANHOLE STRUCTURAL COMPONENTS OR INFLUENTS. STEPS TO EXTEND INTO CONE SECTION.
COMPACTION AROUND FRAMES: AFTER THE FRAME HAS BEEN SET BOTH THE BACKFILL MATERIAL AND THE SUBSEQUENT BITUMINOUS BINDER ARE TO BE INDEPENDENTLY COMPACTED WITH AN APPROVED PNEUMATIC "HAMMER" AND TAMPING ALL STRUCTURES ARE TO BE BUILT AS SHOWN UNLESS A MODIFICATION IS NECESSARY TO MEET EXISTING FIELD CONDITIONS. NO ADJUSTMENT IN THE BID PRICE WILL BE MADE.

NEWTON DPW REQUIREMENTS FOR CATCH BASIN AND MANHOLES
NOT TO SCALE



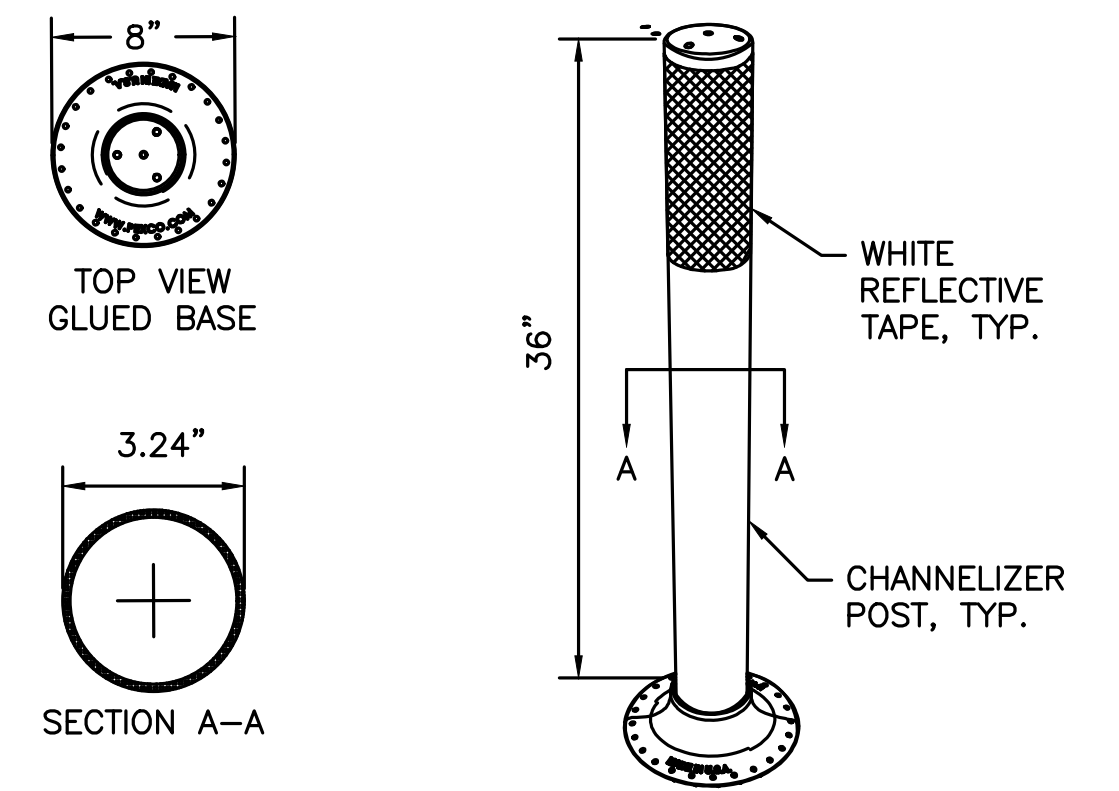
SIDEWALK - CONCRETE
NOT TO SCALE



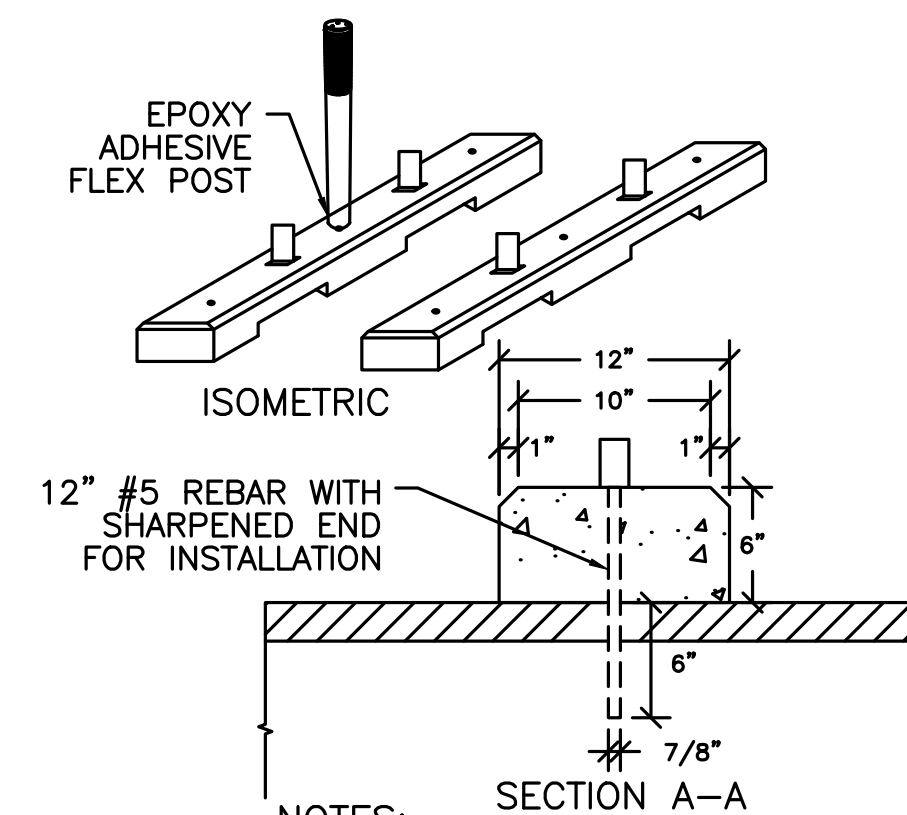
TREE PROTECTION
NOT TO SCALE

FLEXPOST NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DIMENSIONS, MATERIALS, AND ATTACHMENTS MAY VARY BETWEEN MANUFACTURERS.
3. COLOR OF POST SHALL BE WHITE.
4. SUGGESTED MANUFACTURERS INCLUDE: PEXCO, FILTRONA EXTRUSIONS, SAFE-HIT, CARSONITE, COMPOSITES, QWICK KURB, BENT MANUFACTURING, AND IMPACT RECOVERY SYSTEMS.



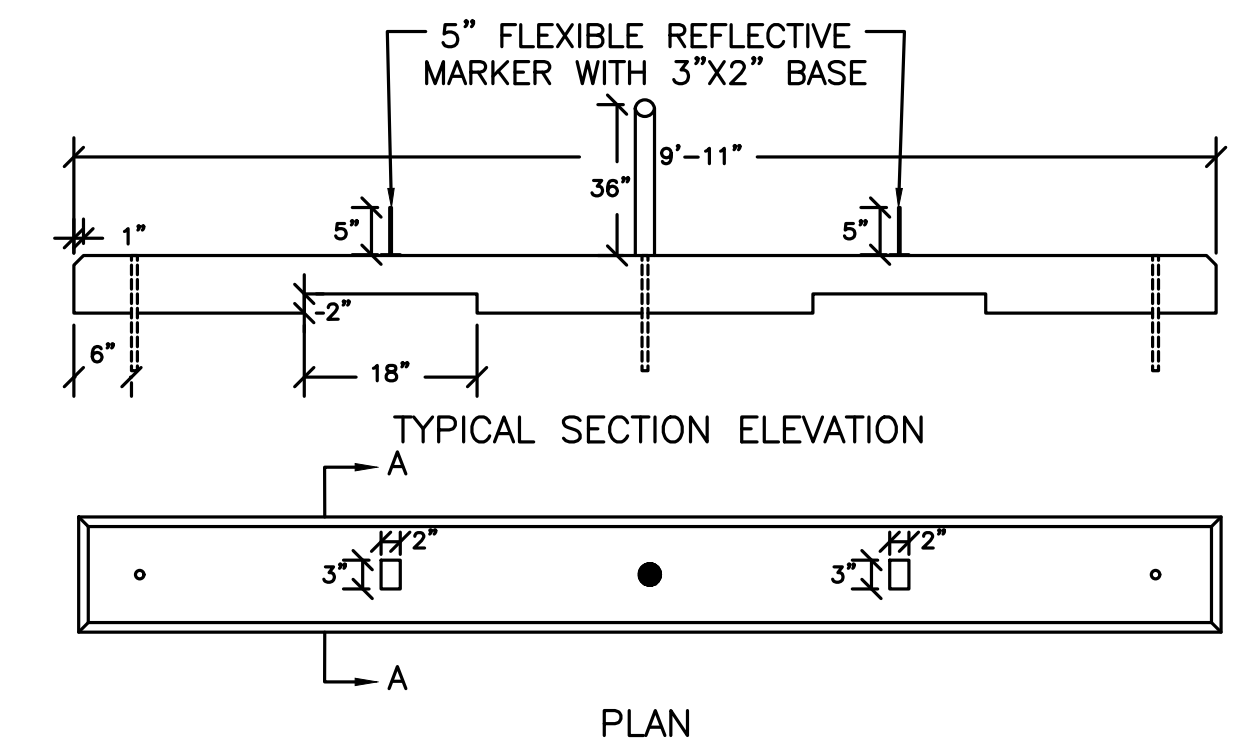
36" REFLECTORIZED FLEXIBLE DELINEATOR POST
NOT TO SCALE



NOTES:

1. CONCRETE TO BE 5000 PSI, SULFATE RESISTANT WITH FIBER REINFORCEMENT.
2. UNITS TO BE SECURED USING #5 CORROSION RESISTANT REBAR HAND DRIVEN TO DEPTHS INDICATED.
3. FLEX POSTS SHALL BE PLACED ON EVERY PRECAST CURB AGAINST TRAVEL LANE AND ON EVERY OTHER CURB AGAINST PARKING LANE.

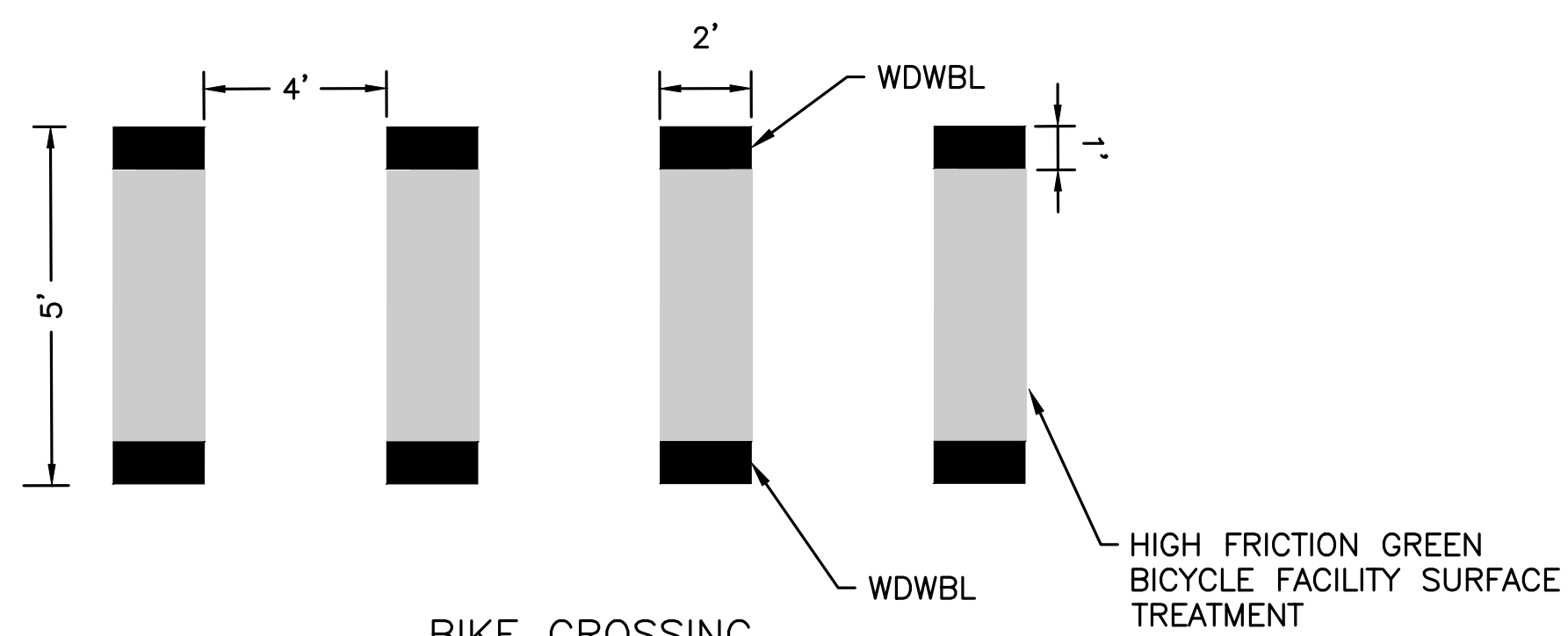
12" PRECAST CONCRETE CURBING FOR BICYCLE LANES
(NOT TO SCALE)



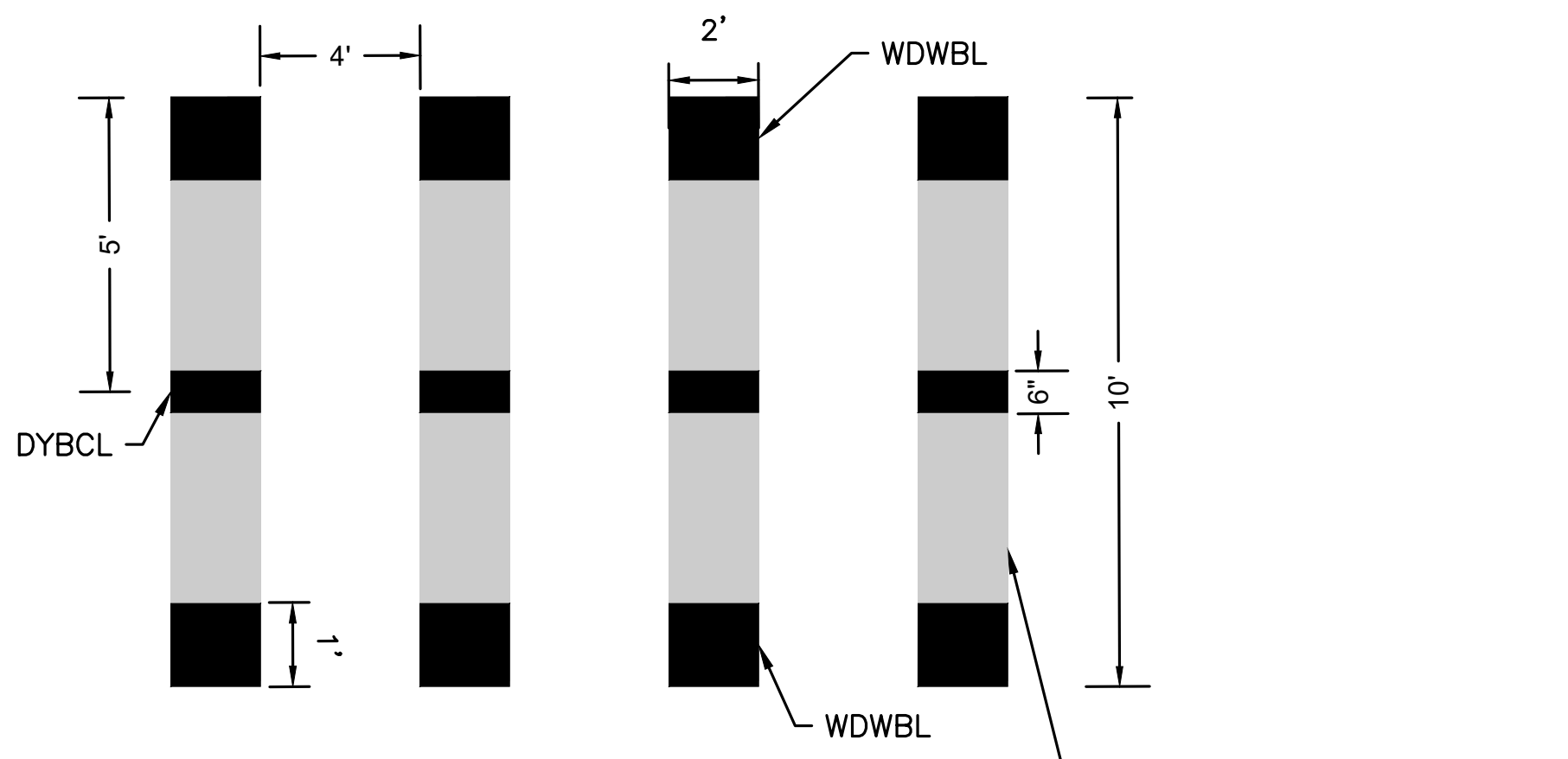
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WASHINGTON STREET PILOT CONSTRUCTION DETAILS

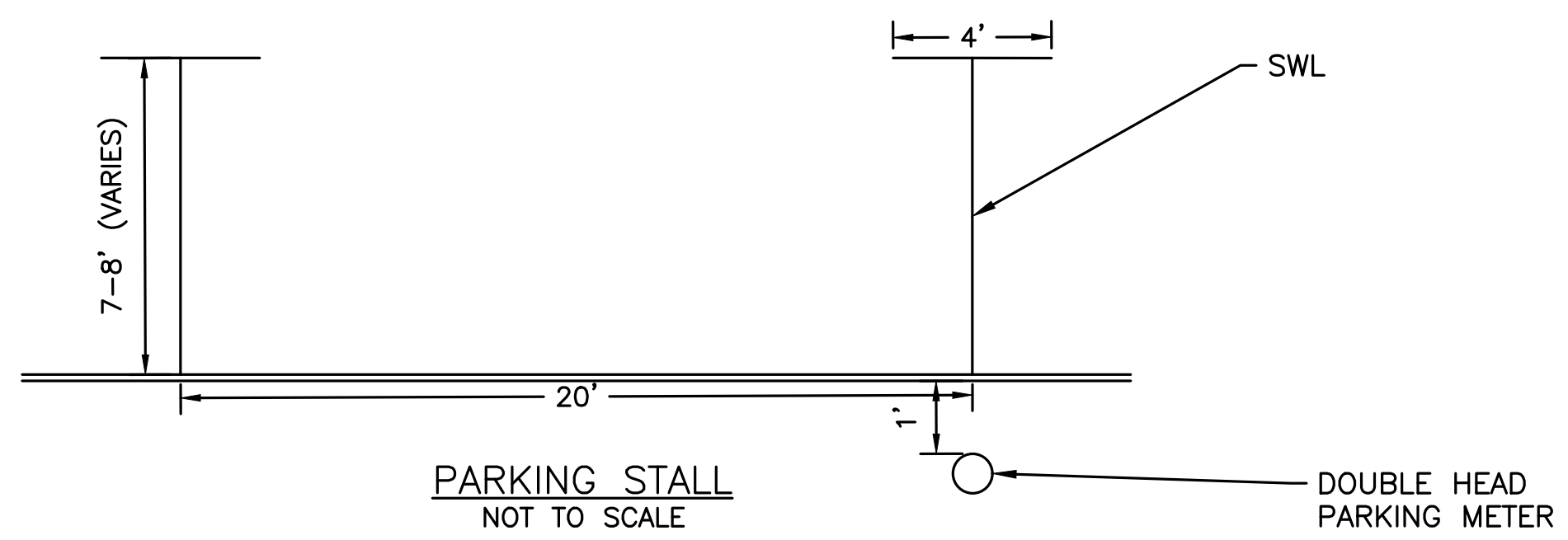
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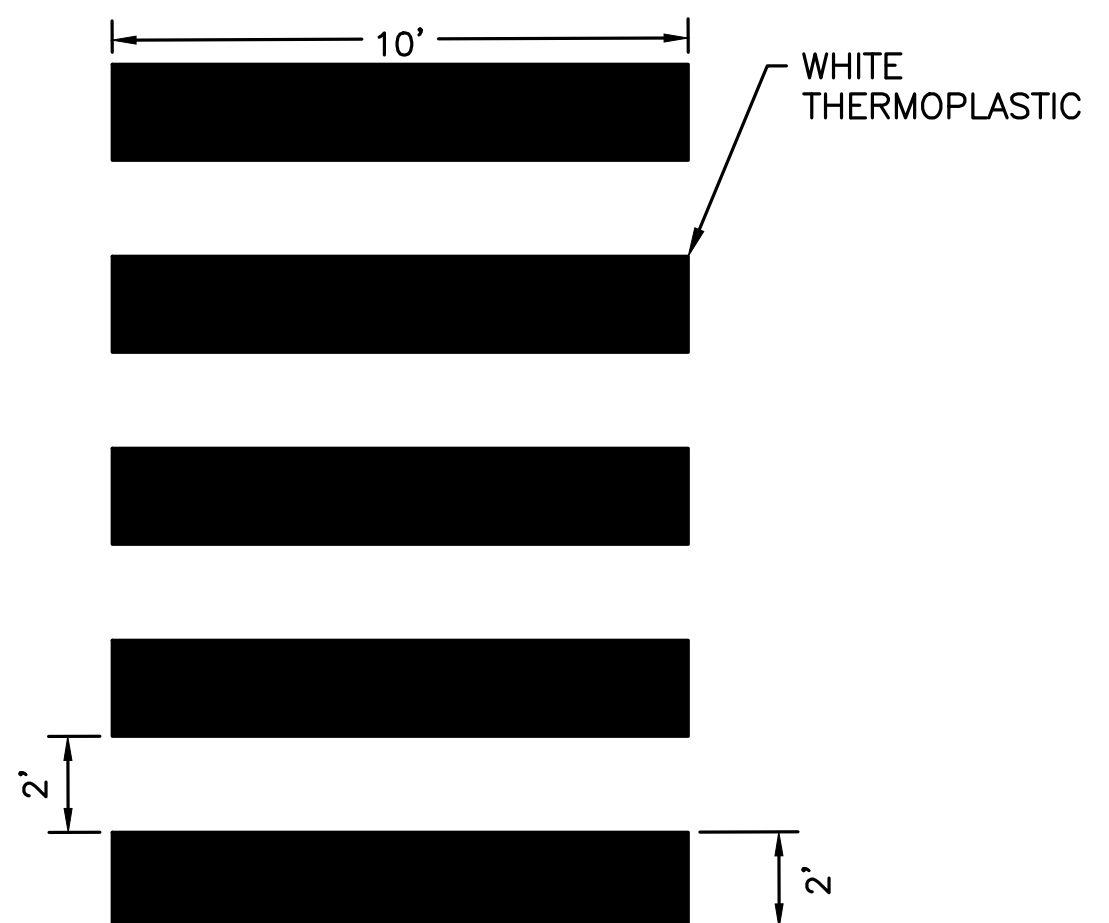
BIKE CROSSING
NOT TO SCALE



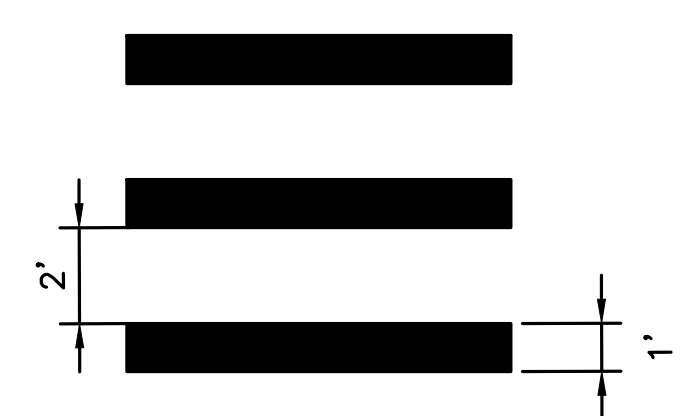
BI-DIRECTIONAL BIKE CROSSING
NOT TO SCALE



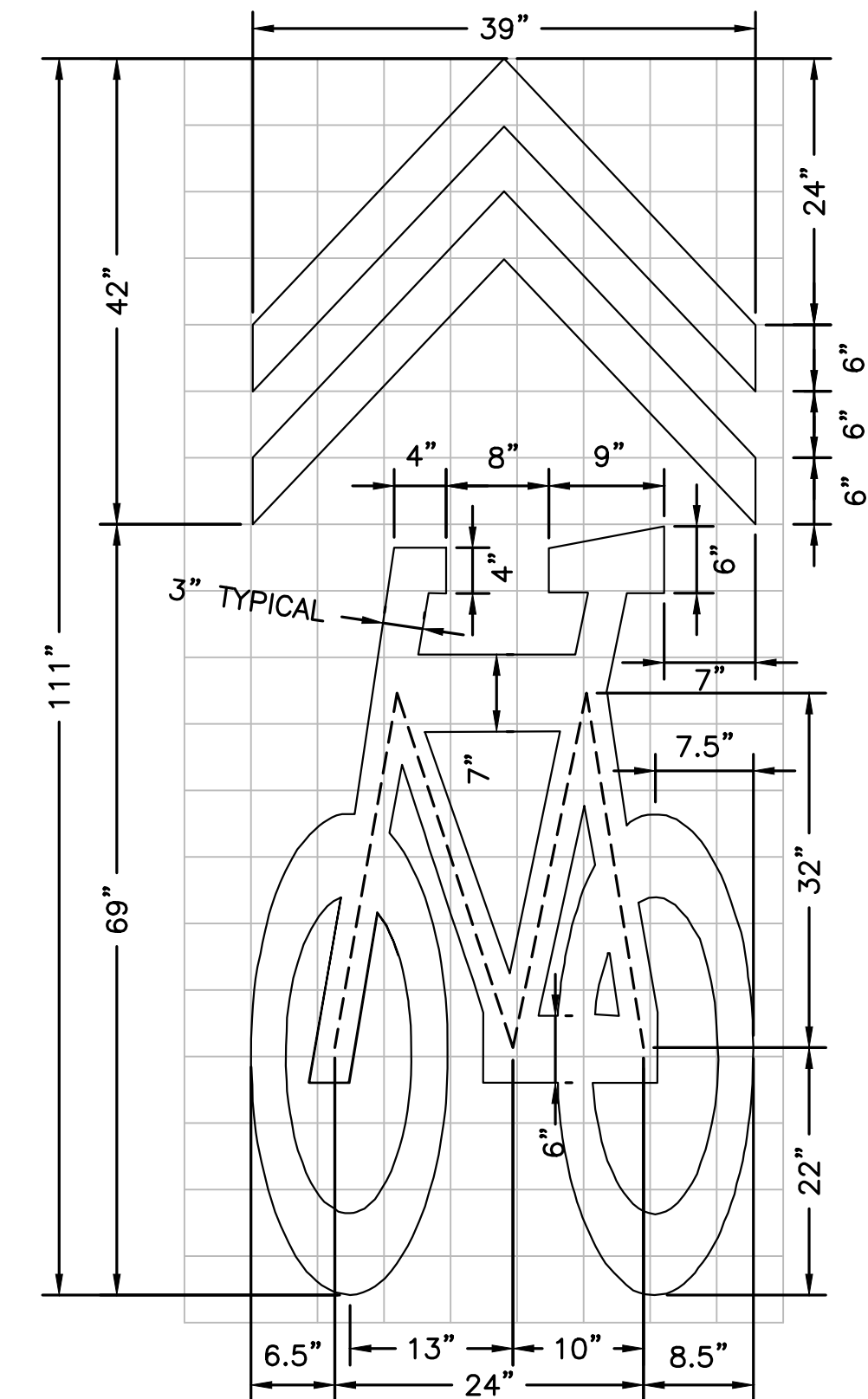
PARKING STALL
NOT TO SCALE



CROSSWALK MARKING



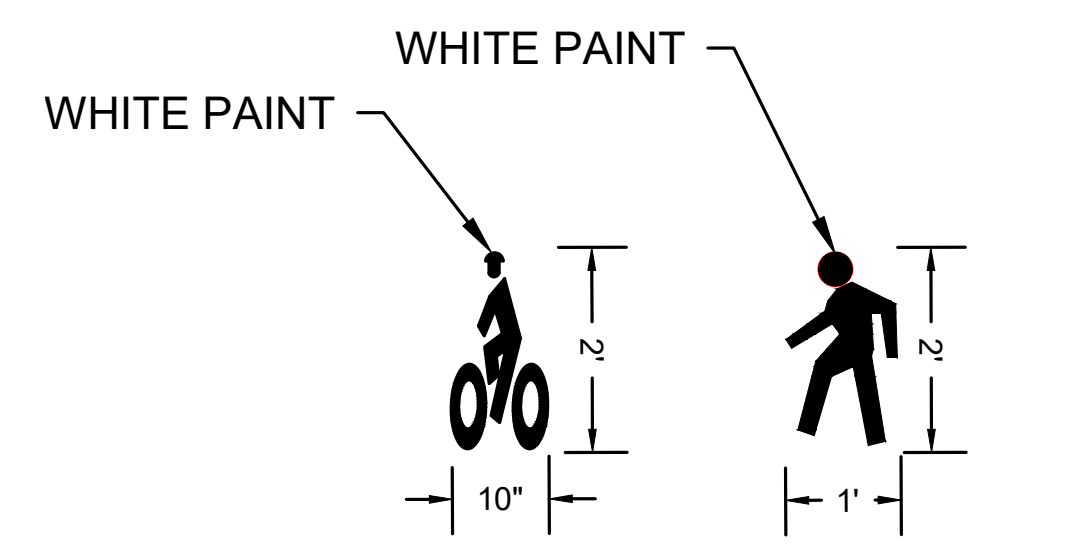
CROSSWALK MARKING IN BICYCLE LANE



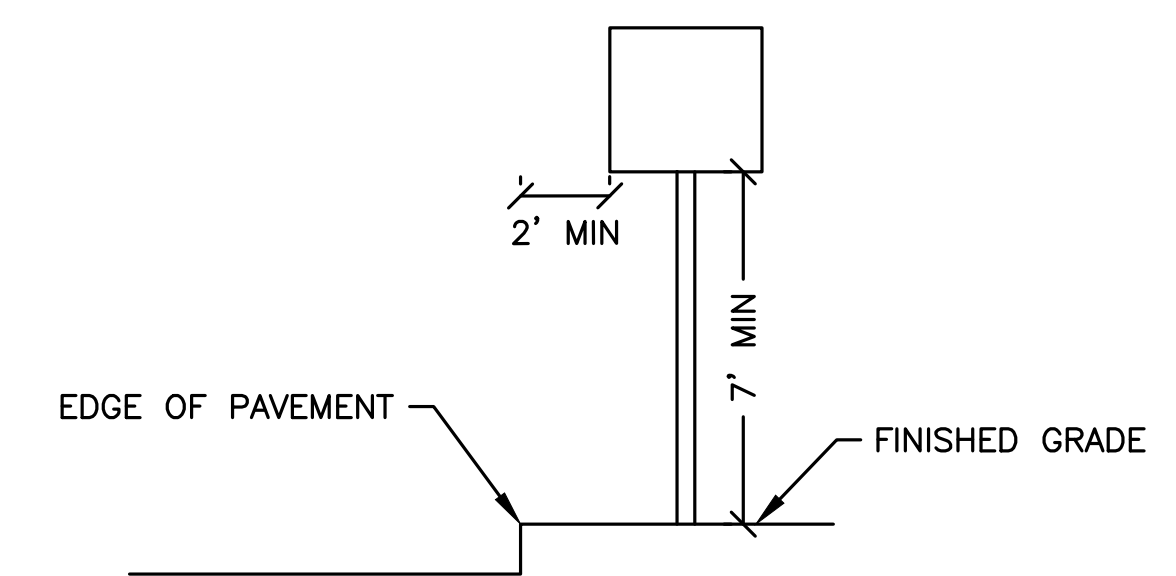
NOTES:

1. IN LOCATIONS WITH ON-STREET PARKING, SHARED LANE MARKING SYMBOLS SHALL BE PLACED SO THAT THE CENTER IS A MINIMUM OF 11 FEET FROM THE ADJACENT FACE OF CURB.
2. IN LOCATIONS WITHOUT ON-STREET PARKING, SHARE LANE MARKING SYMBOLS SHALL BE PLACED SO THAT THE CENTER IS 4 FEET FROM THE ADJACENT FACE OF CURB.
3. IF LOCATED IN A TURN LANE, SHARED LANE MARKING SYMBOLS SHALL BE CENTERED IN THE LANE.
4. DO NOT PLACE SYMBOLS ON LANE LINES.
5. SHARED LANE SYMBOLS SHALL BE PLACED A MAXIMUM OF 500 FEET APART.

SHARED LANE SYMBOL DETAIL
NOT TO SCALE



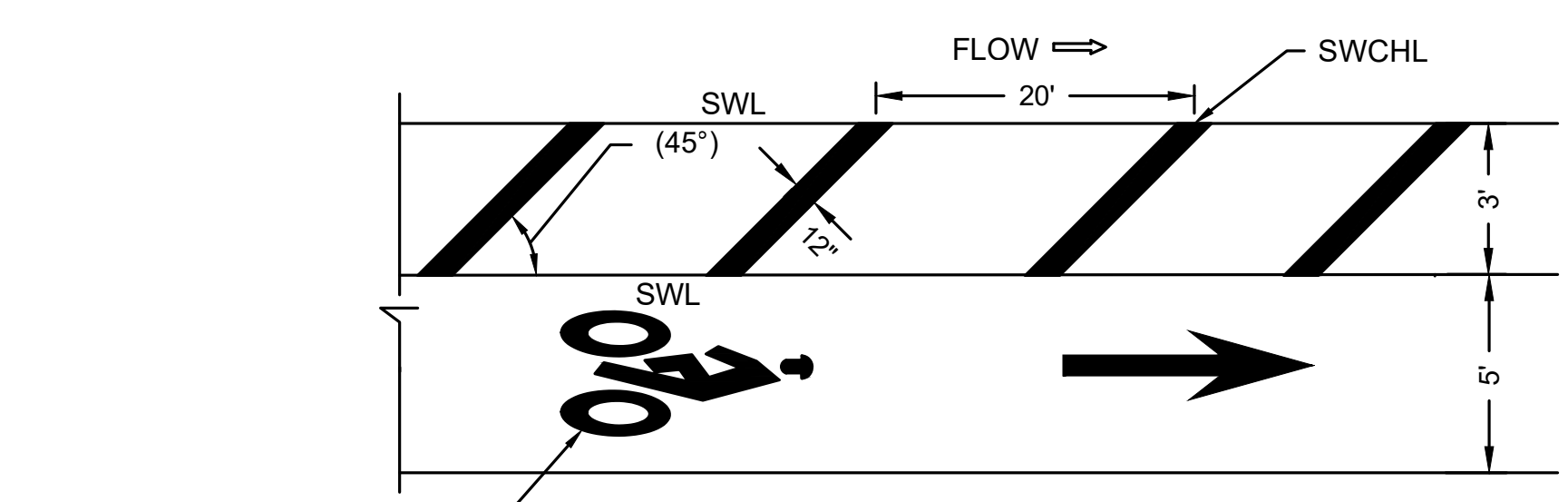
SHARED USE PATH LEGENDS
NOT TO SCALE



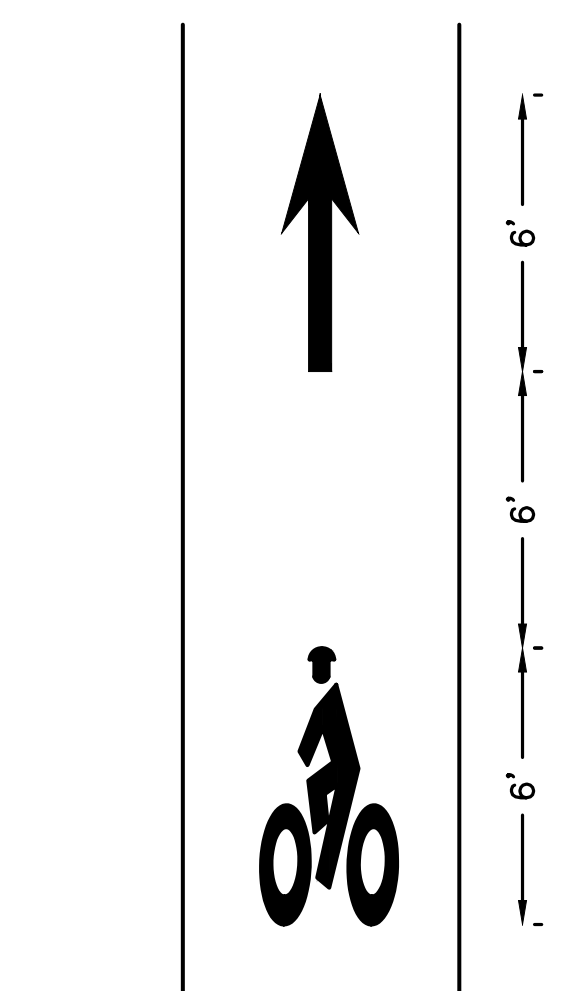
NOTES:

1. SIGN AND POST INSTALLATION SHALL NOT OBSTRUCT PEDESTRIAN CLEAR PATH, MAINTAINING A MINIMUM OF 36" OF CLEAR SPACE PER ADA STANDARDS FOR ACCESSIBLE DESIGN.

SIGN AND POST INSTALLATION
NOT TO SCALE



BUFFERED BIKE LANE
NOT TO SCALE



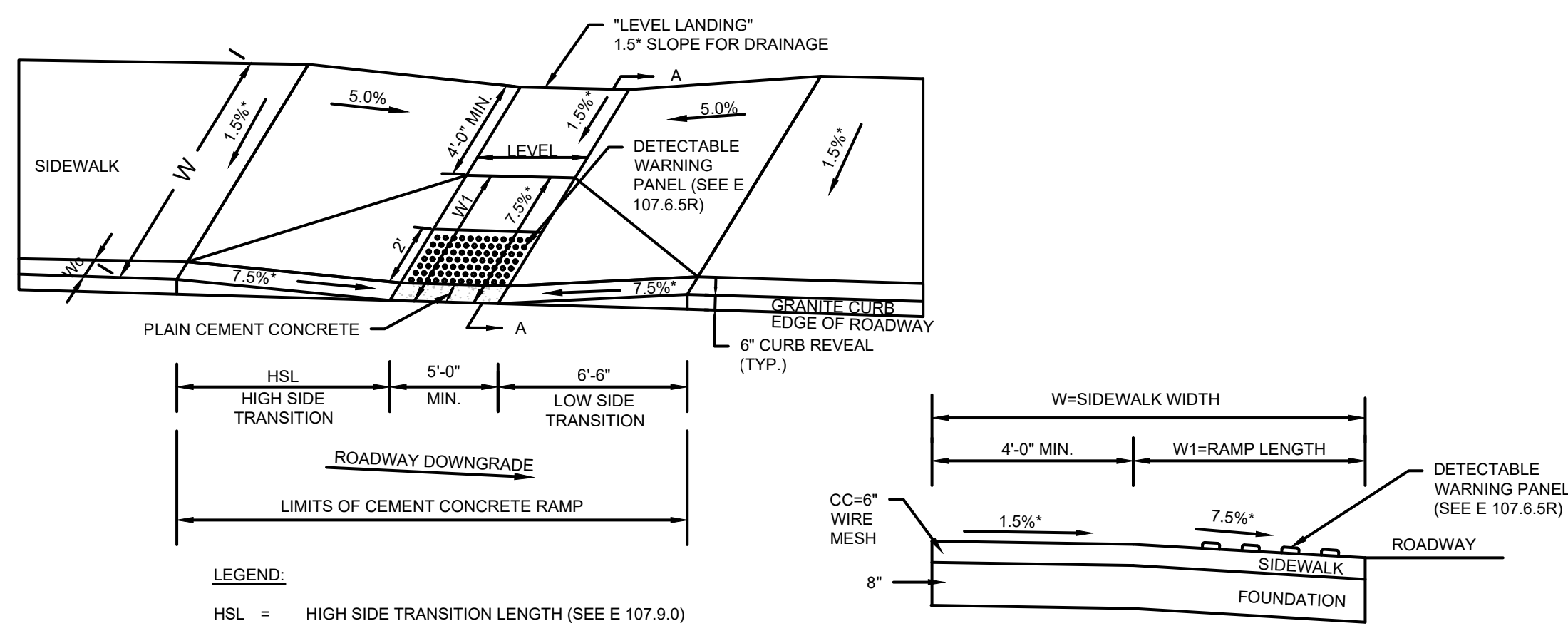
BICYCLE LANE MARKING
NOT TO SCALE



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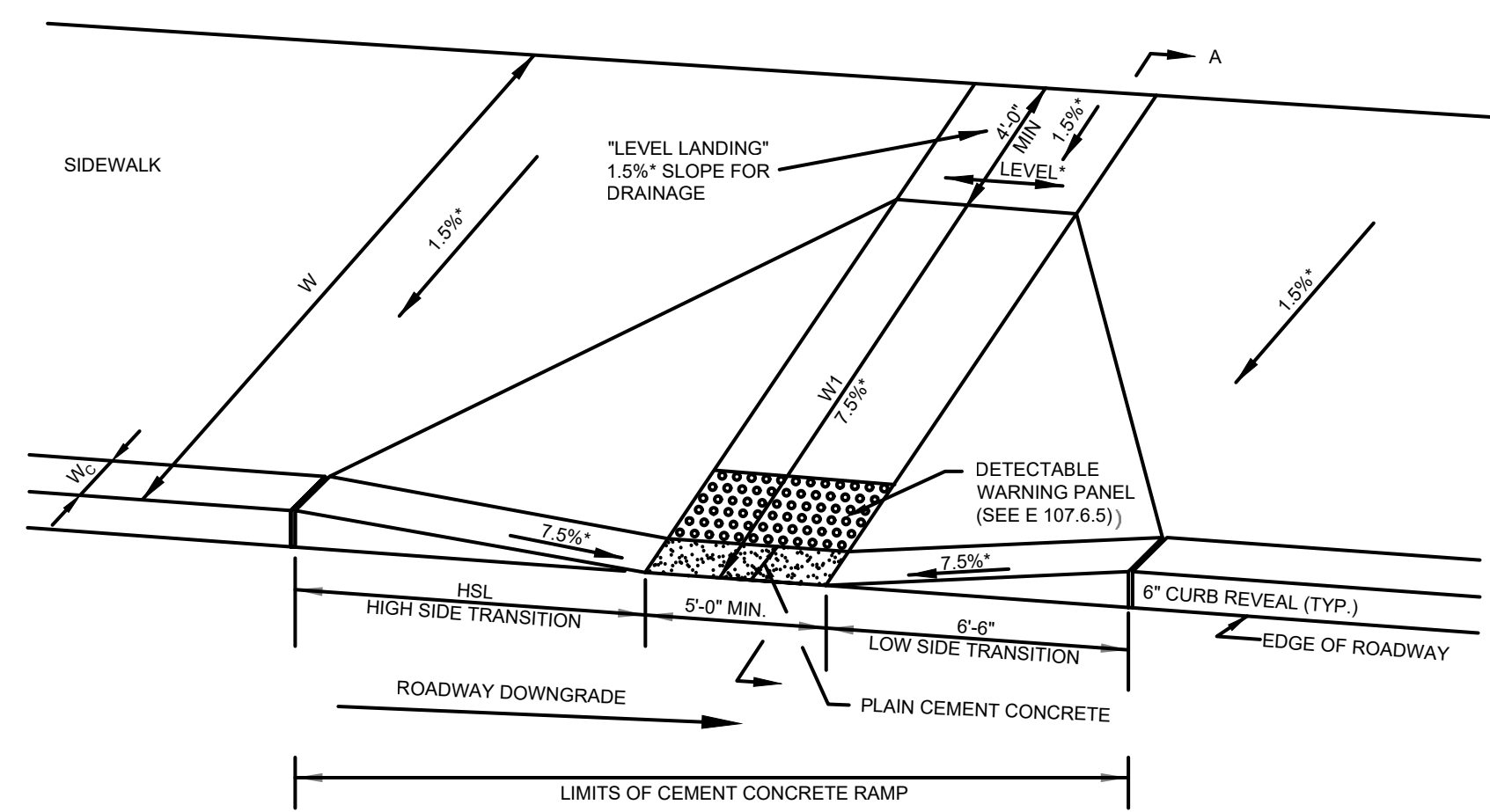
WASHINGTON STREET PILOT CONSTRUCTION DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	40	47



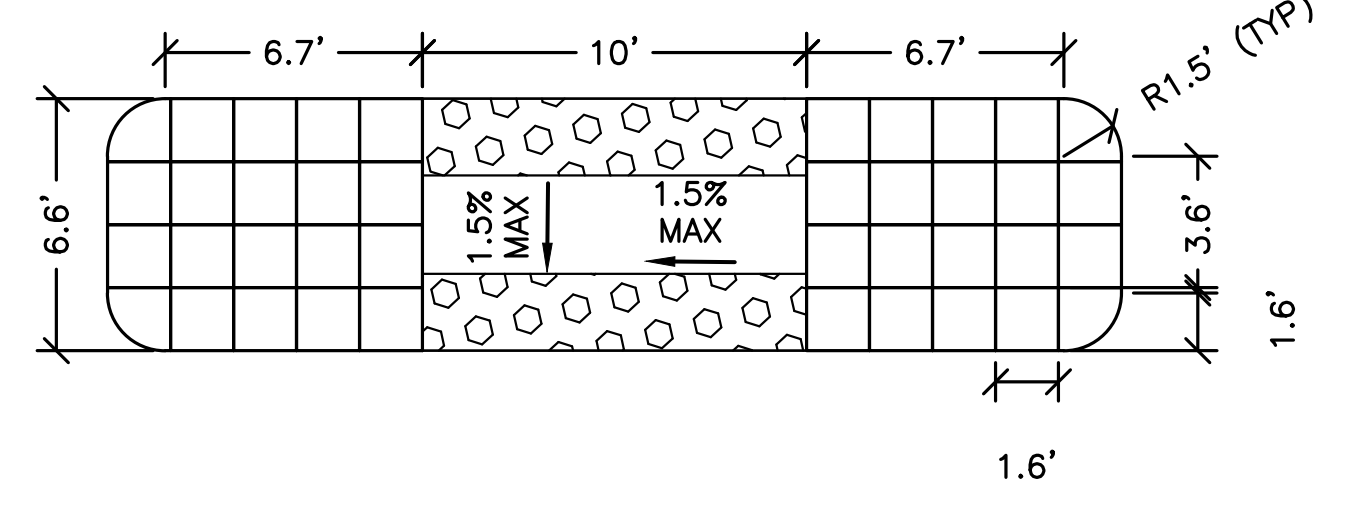
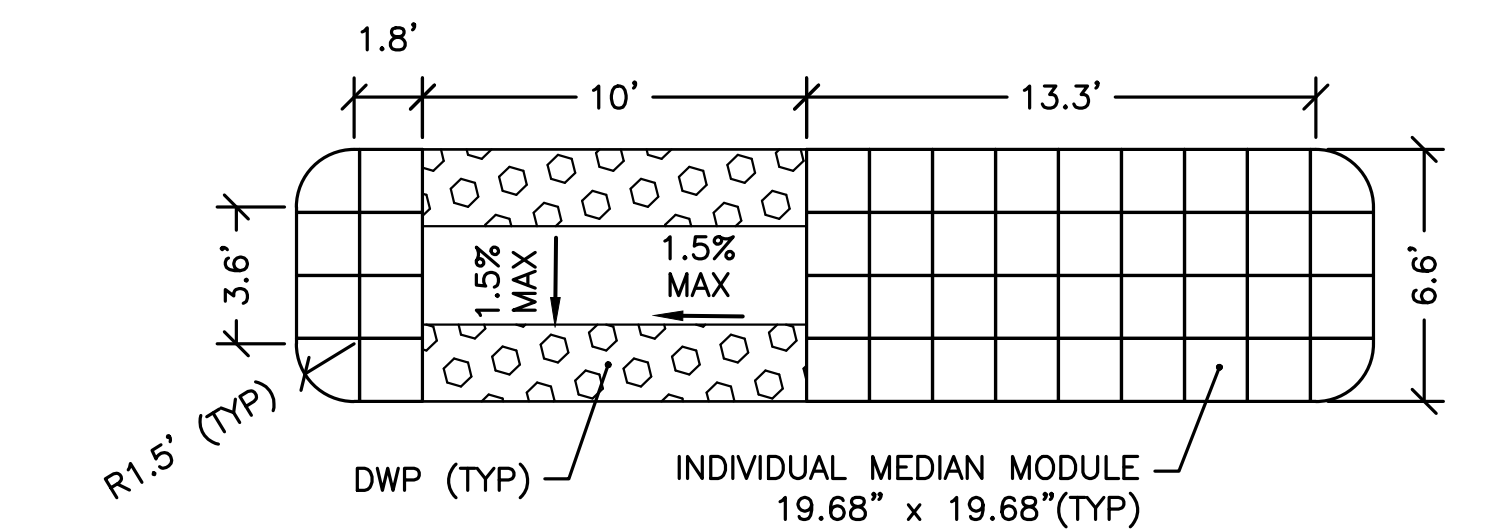
LEGEND:
 HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
 W = SIDEWALK WIDTH
 Wc = CURB WIDTH
 W1 = PERPENDICULAR RAMP LENGTH
 CC = CEMENT CONCRETE
 * = MAX SLOPE SHOWN. CONSTRUCTION TOLERANCE = ±0.5%
 USABLE SIDEWALK WIDTH PER AAB = W-Wc
 RAMP LENGTH = W1 = W - 4'-0" MIN

PEDESTRIAN CURB RAMP LESS THAN 12'-4" SIDEWALK (E 107.2.0)
 NOT TO SCALE

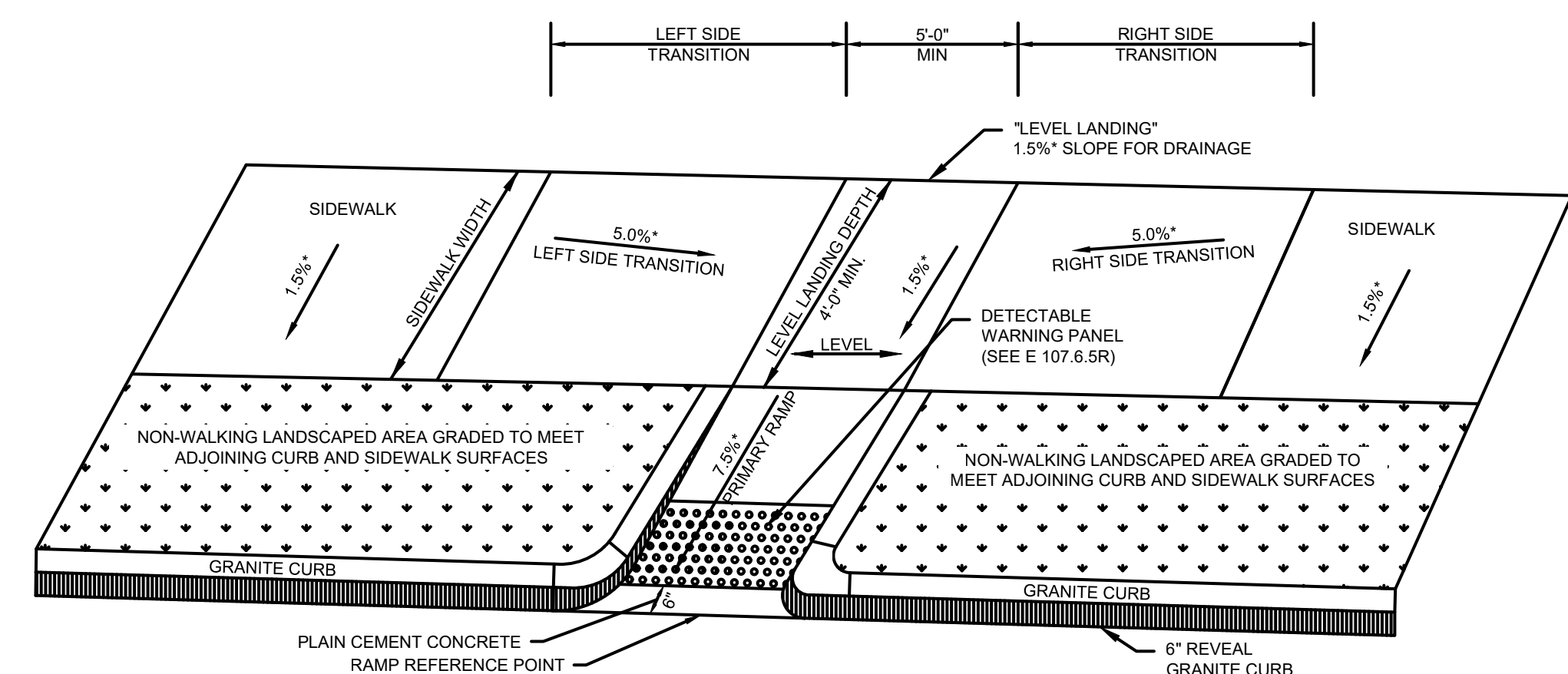


LEGEND:
 HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
 W = SIDEWALK WIDTH
 Wc = CURB WIDTH
 W1 = PERPENDICULAR RAMP LENGTH
 CC = CEMENT CONCRETE
 * = MAX SLOPE SHOWN. CONSTRUCTION TOLERANCE = ±0.5%
 USABLE SIDEWALK WIDTH PER AAB = W-Wc
 RAMP LENGTH, W1 = W - 4'-0" MIN

PEDESTRIAN CURB RAMP GREATER THAN 12'-4" SIDEWALK (E 107.3.0)
 NOT TO SCALE



MODULAR MEDIAN
 NOT TO SCALE

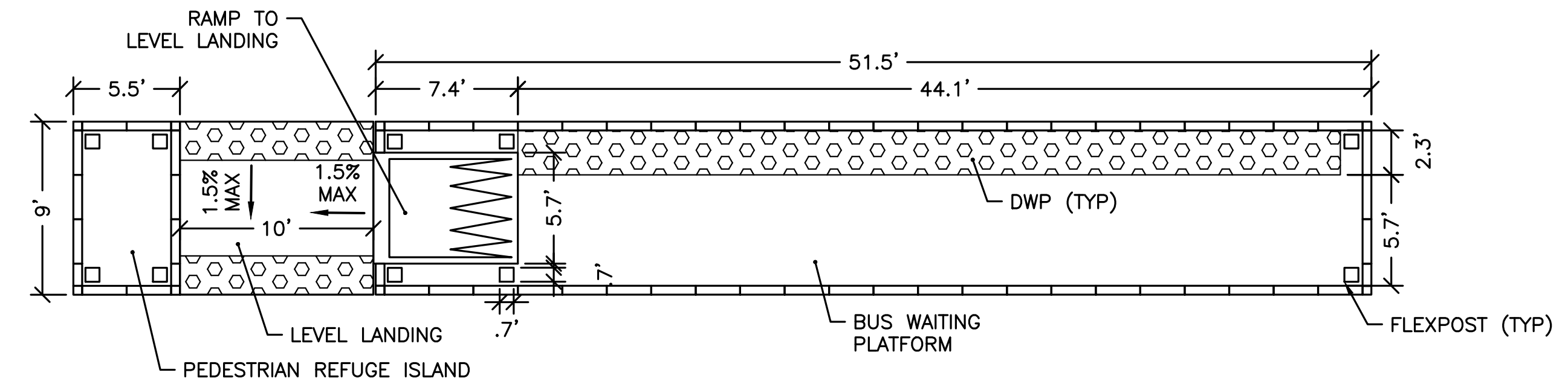


LEGEND:
 * = TOLERANCE FOR CONSTRUCTION ± 0.5%

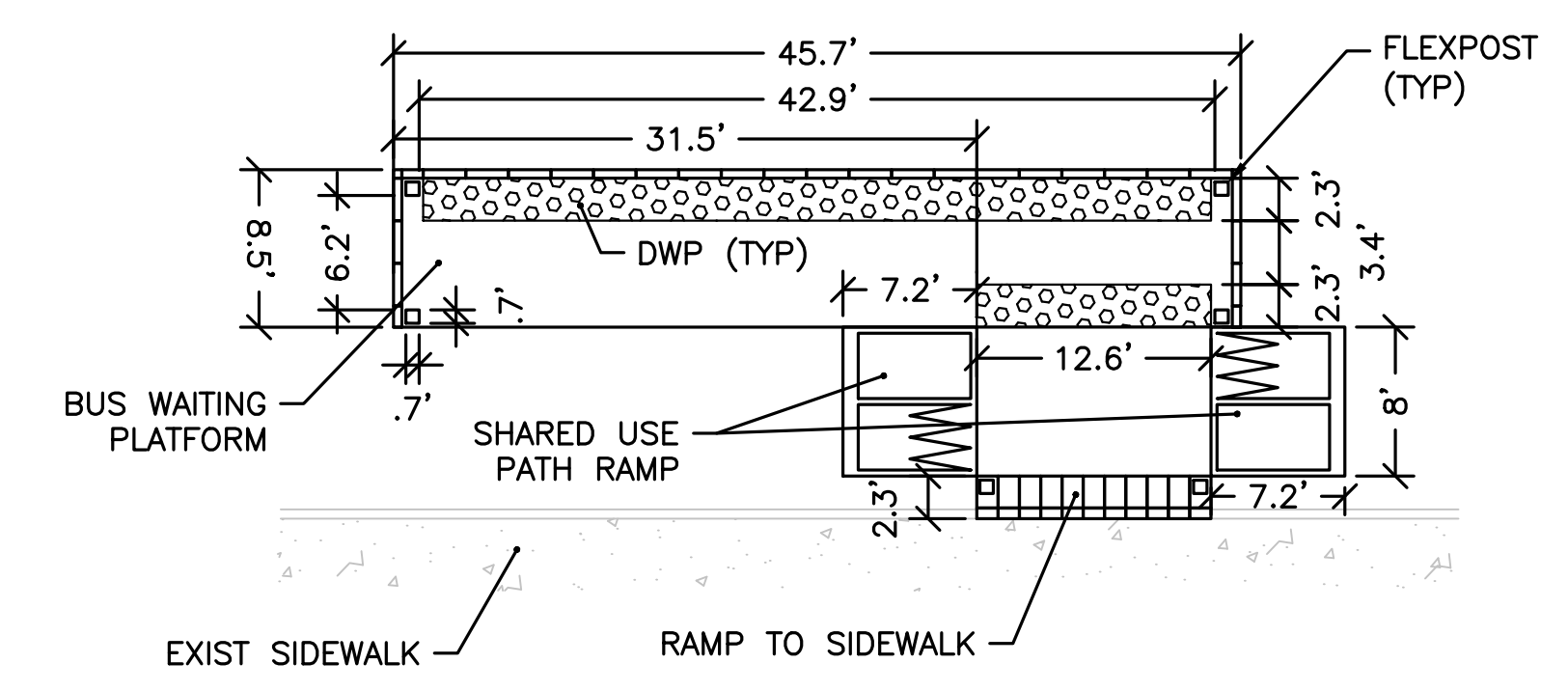
PEDESTRIAN CURB RAMP WITH LANDSCAPE STRIP
 NOT TO SCALE

NOTES:
 DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE). TRUNCATED DOMES TO BE ALIGNED WITH DIRECTION OF TRAVEL.

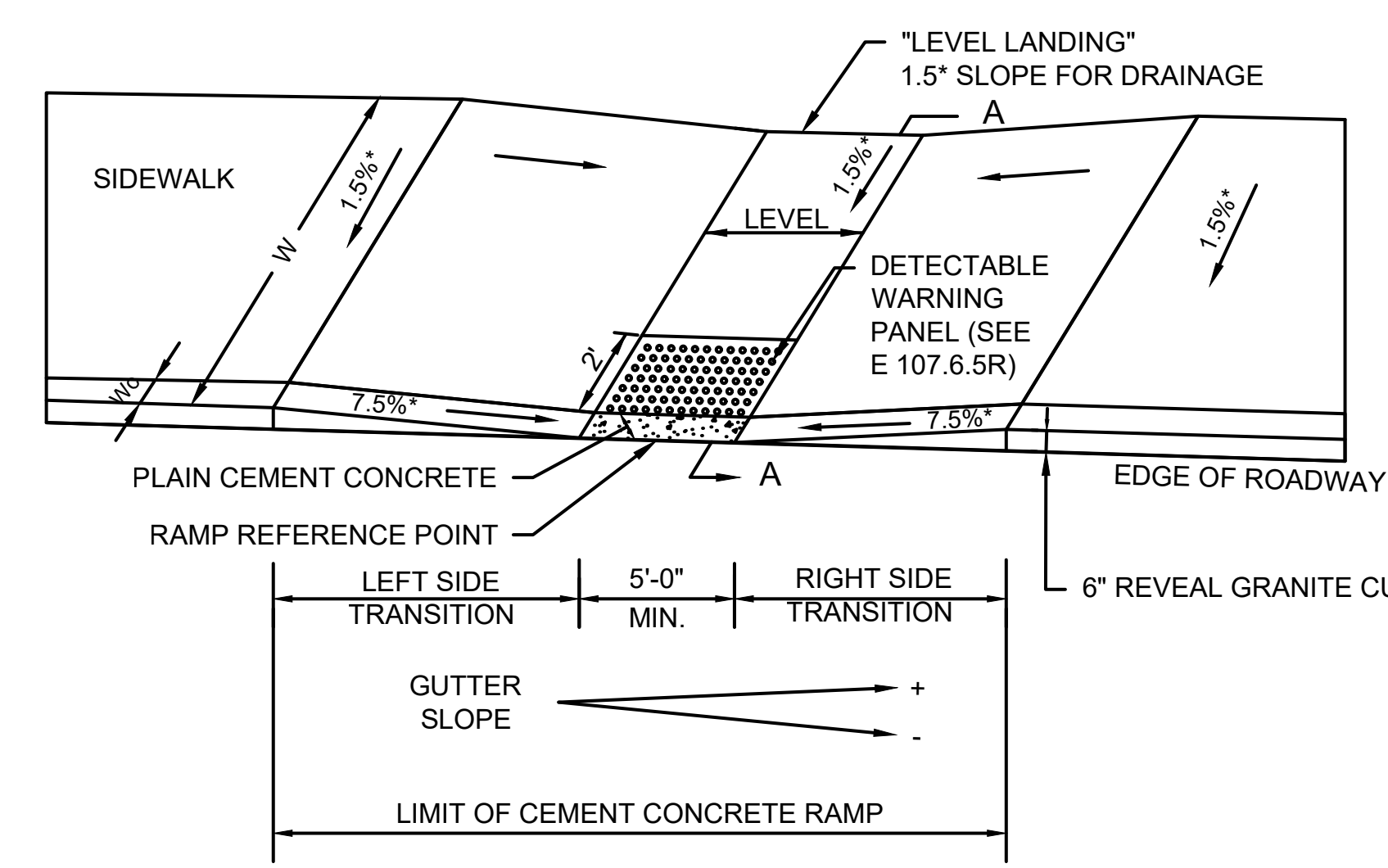
FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.
 ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.



MODULAR ISLAND BUS PLATFORM
 NOT TO SCALE

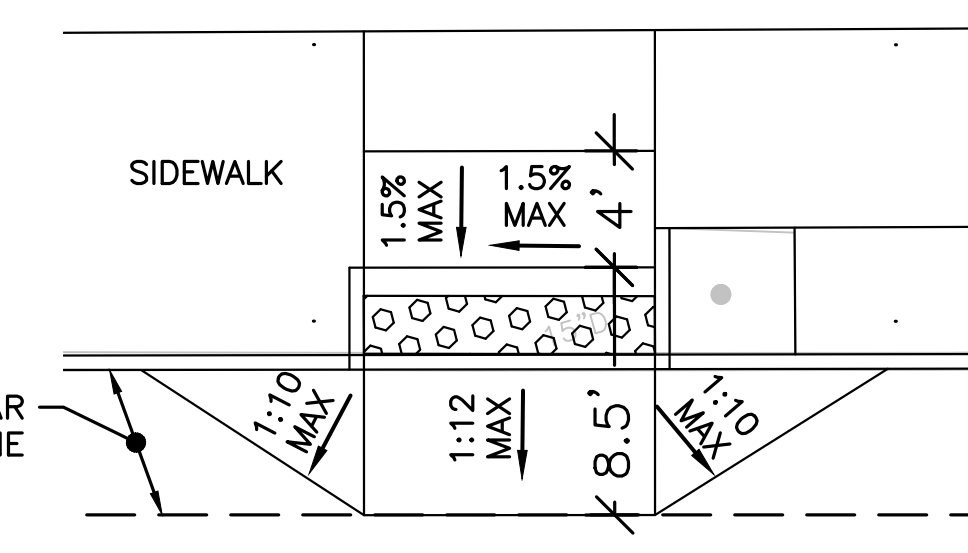
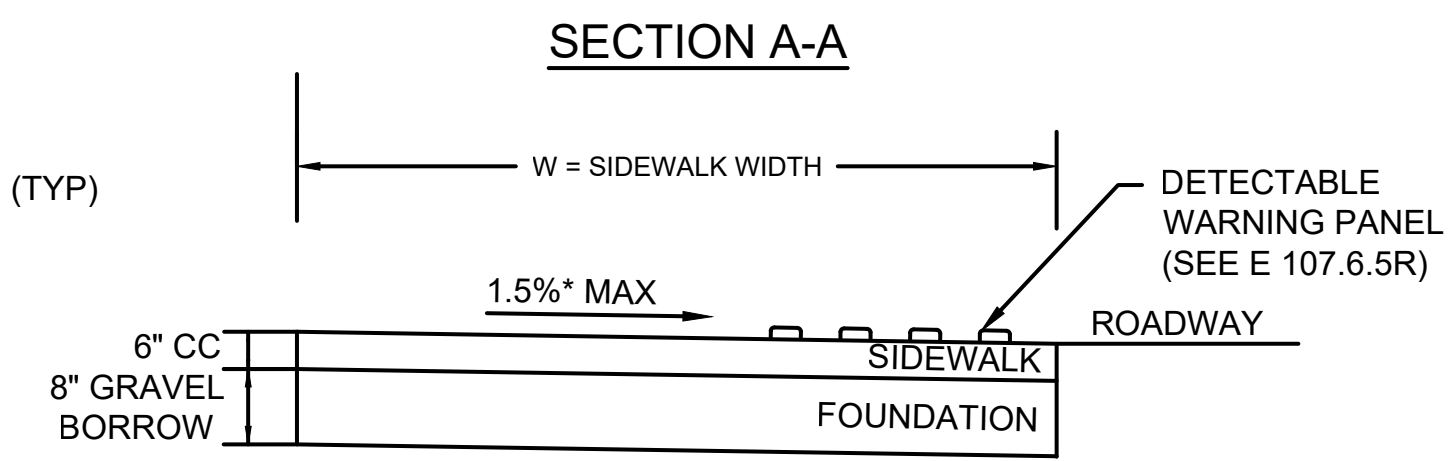


MODULAR ISLAND BUS PLATFORM WITH ACCESS BRIDGE
 NOT TO SCALE



LEGEND:
 HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
 W = SIDEWALK WIDTH
 Wc = CURB WIDTH
 CC = CEMENT CONCRETE
 * = TOLERANCE FOR CONSTRUCTION ±0.5%
 USEABLE SIDEWALK WIDTH PER AAB = W-Wc

PEDESTRIAN CURB RAMP ON NARROW STRAIGHT SIDEWALK WITH DETECTABLE WARNING PANEL
 NOT TO SCALE



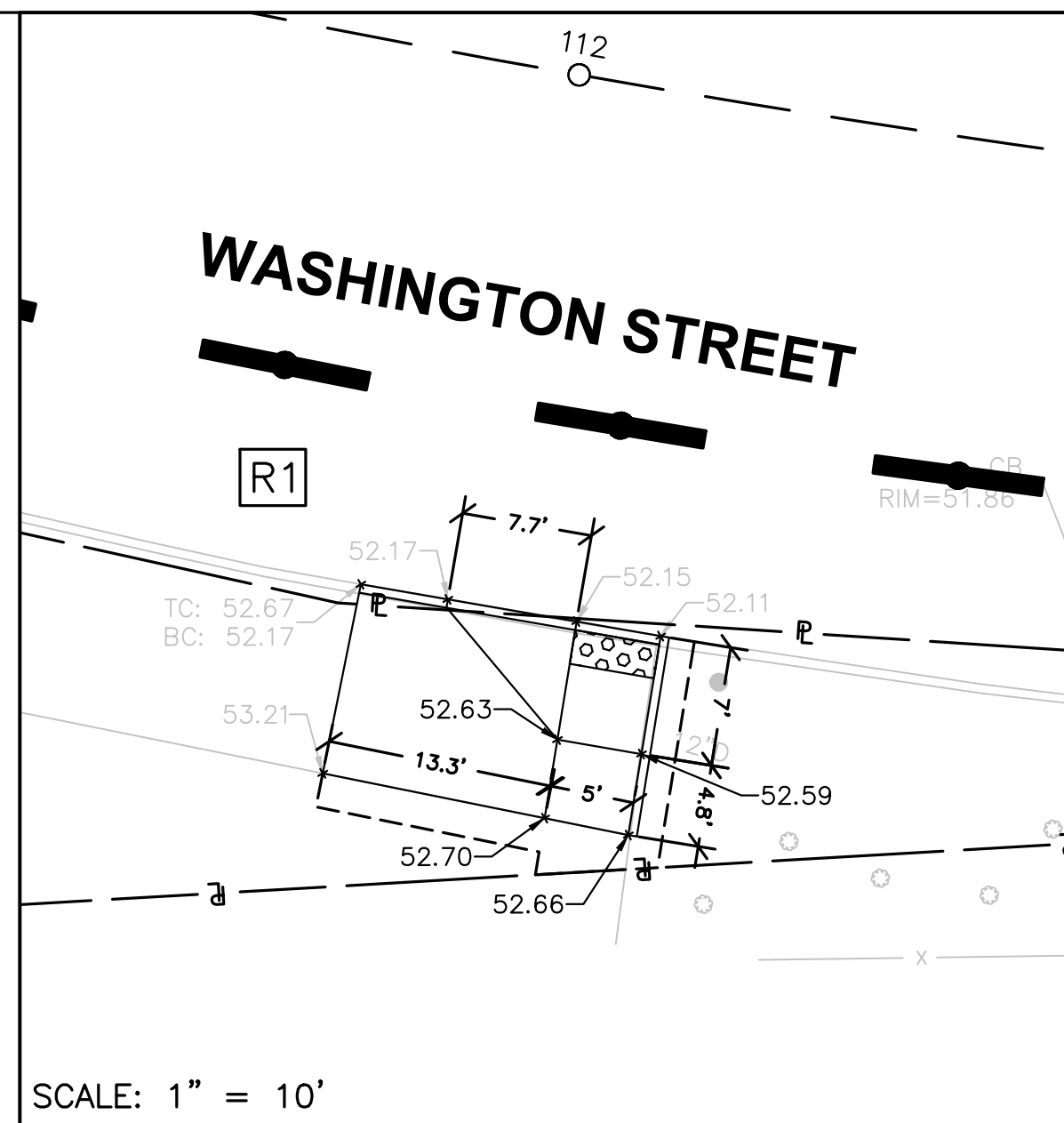
BUILT-UP PEDESTRIAN RAMP
 NOT TO SCALE



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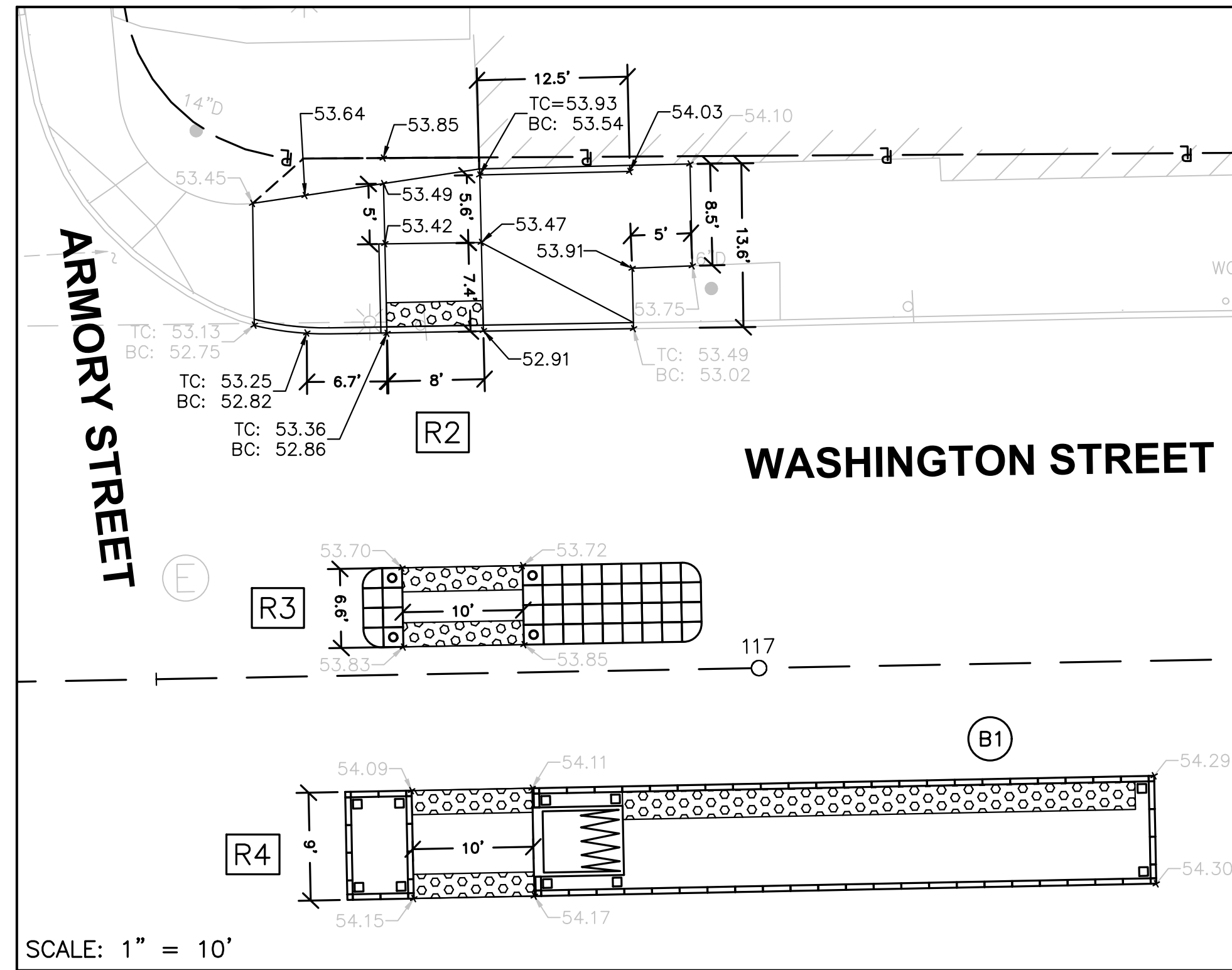
WASHINGTON STREET PILOT CONSTRUCTION DETAILS

HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	RF	VC	RL	40	47



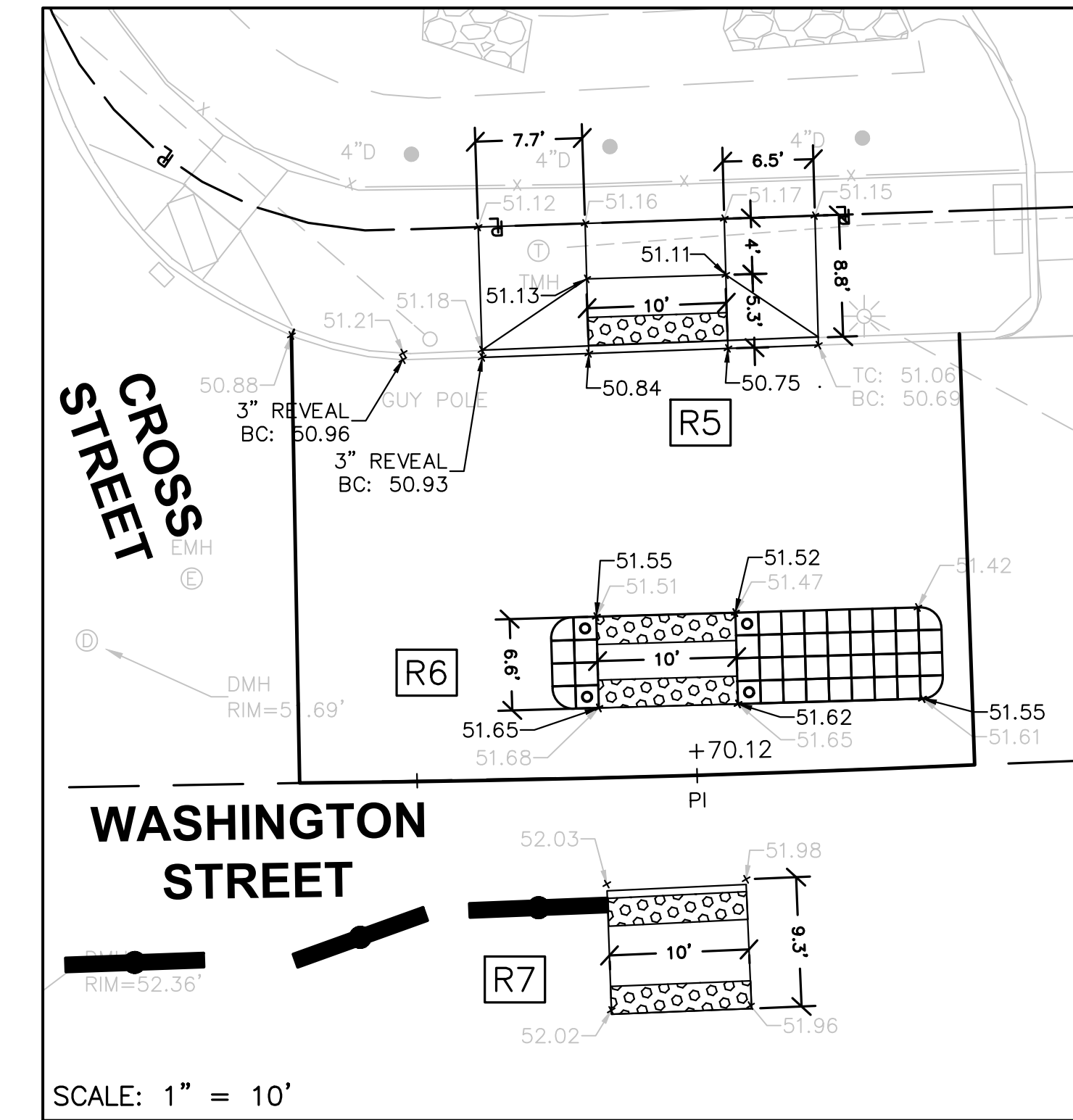
SCALE: 1" = 10'

RAMP R1



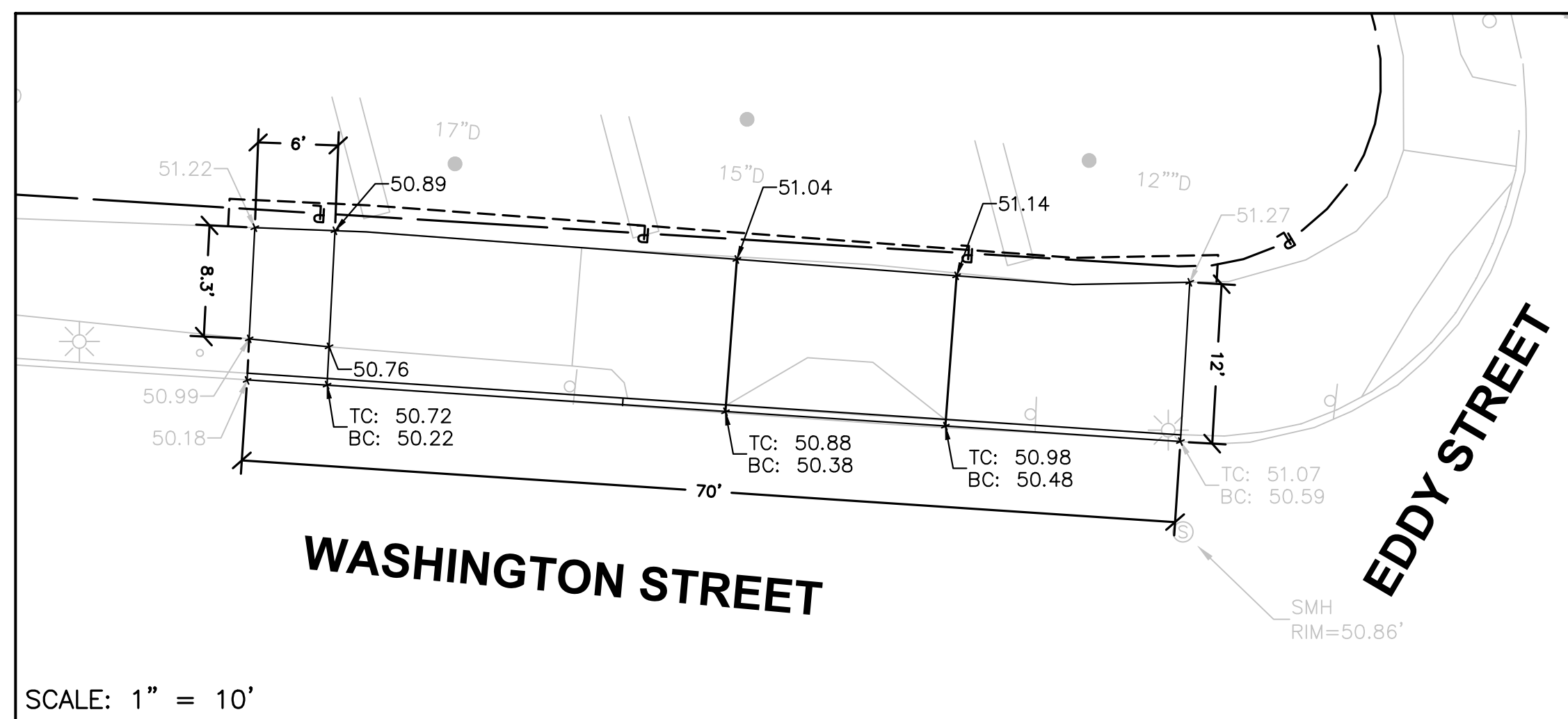
SCALE: 1" = 10'

RAMPS R2, R3, R4, & BUS PLATFORM B1



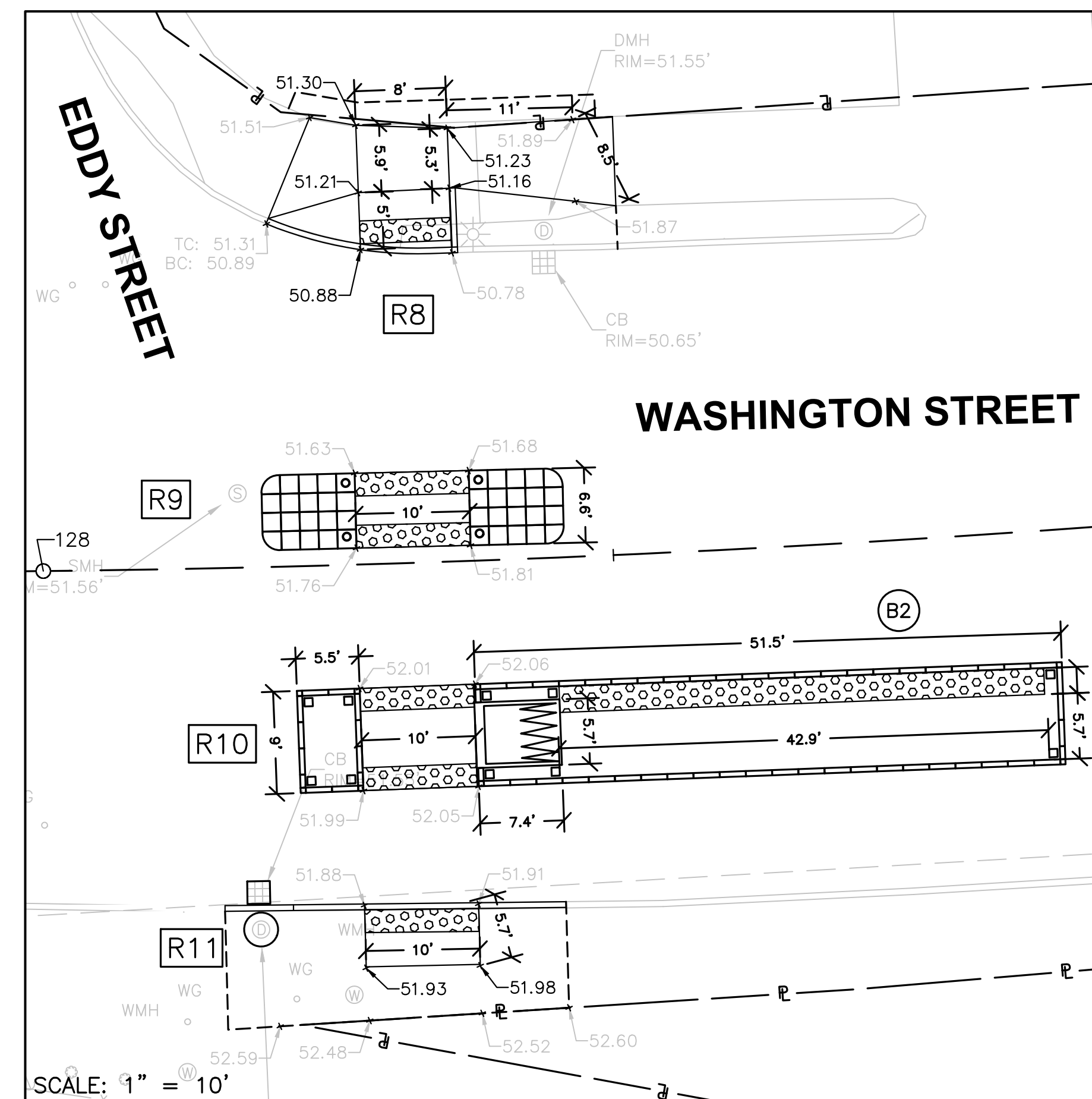
SCALE: 1" = 10'

RAMPS R5, R6, & R7



SCALE: 1" = 10'

SIDEWALK AT WASHINGTON ST & EDDY ST

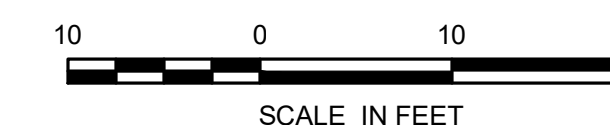


SCALE: 1" = 10'

RAMPS R8, R9, R10, R11, & BUS PLATFORM B2

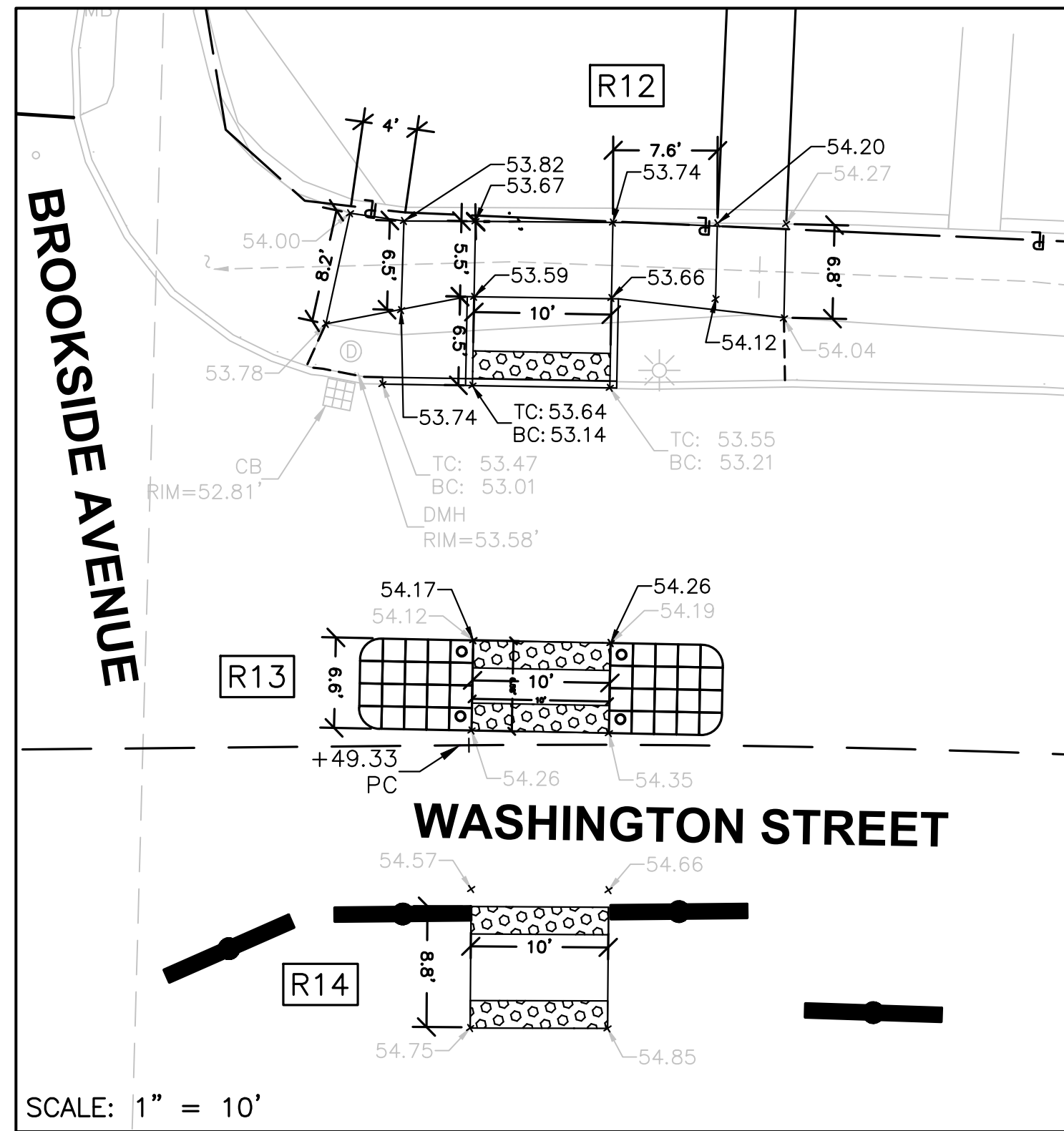


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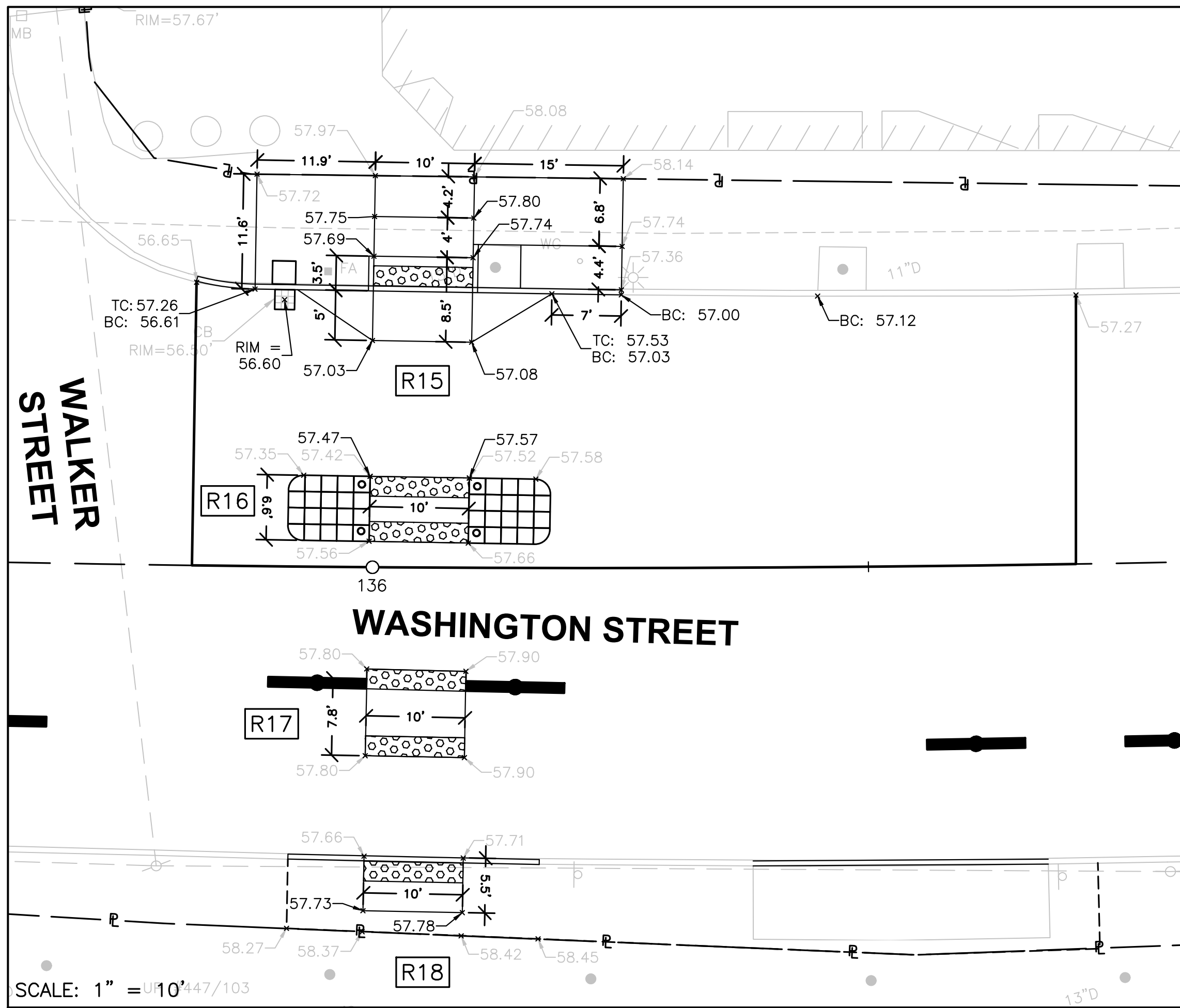


**WASHINGTON STREET PILOT
PEDESTRIAN RAMP DETAILS
SHEET 1 OF 2**

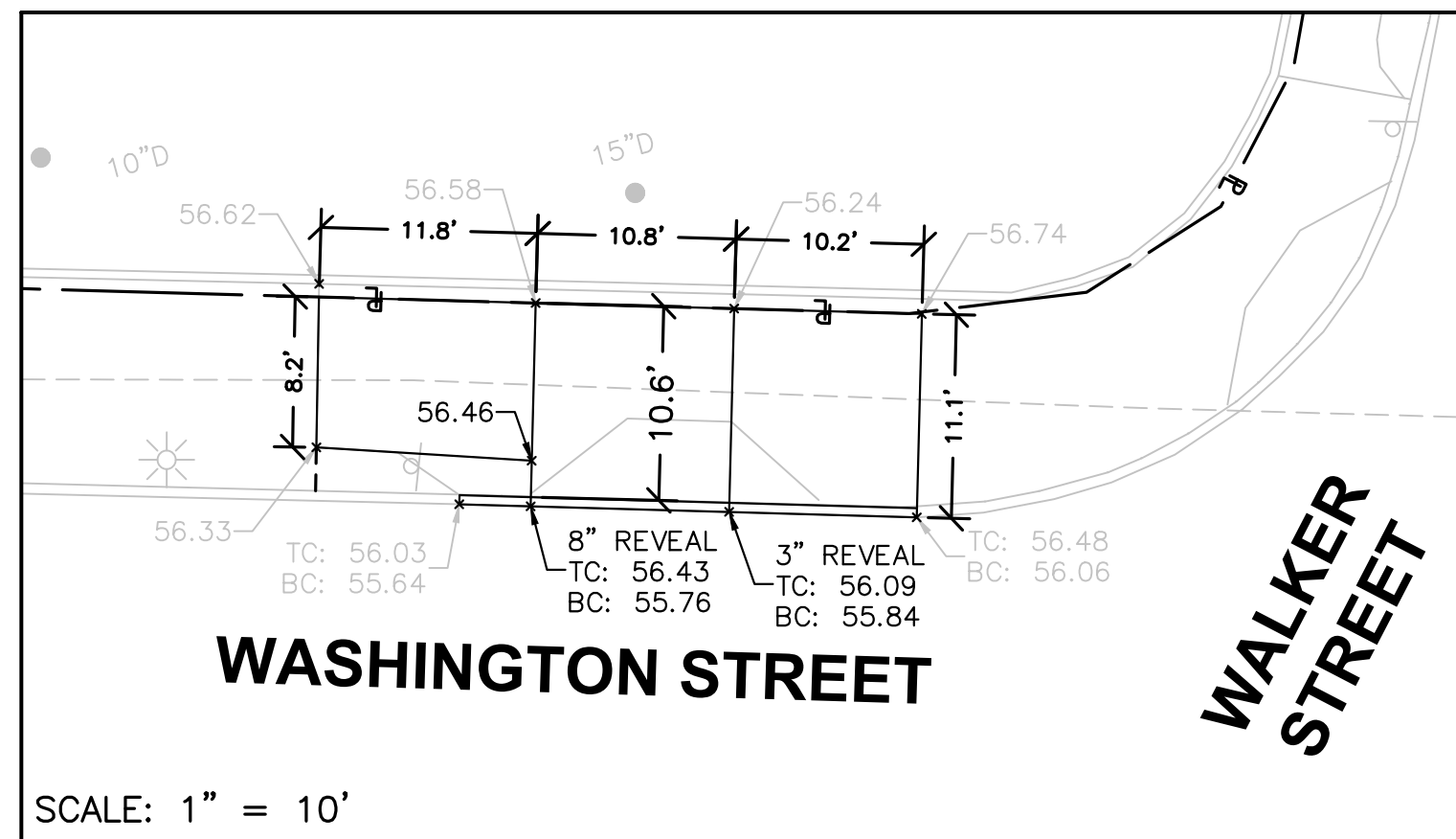
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2021163.00	04/08/24	RF	VC	RL	43	47



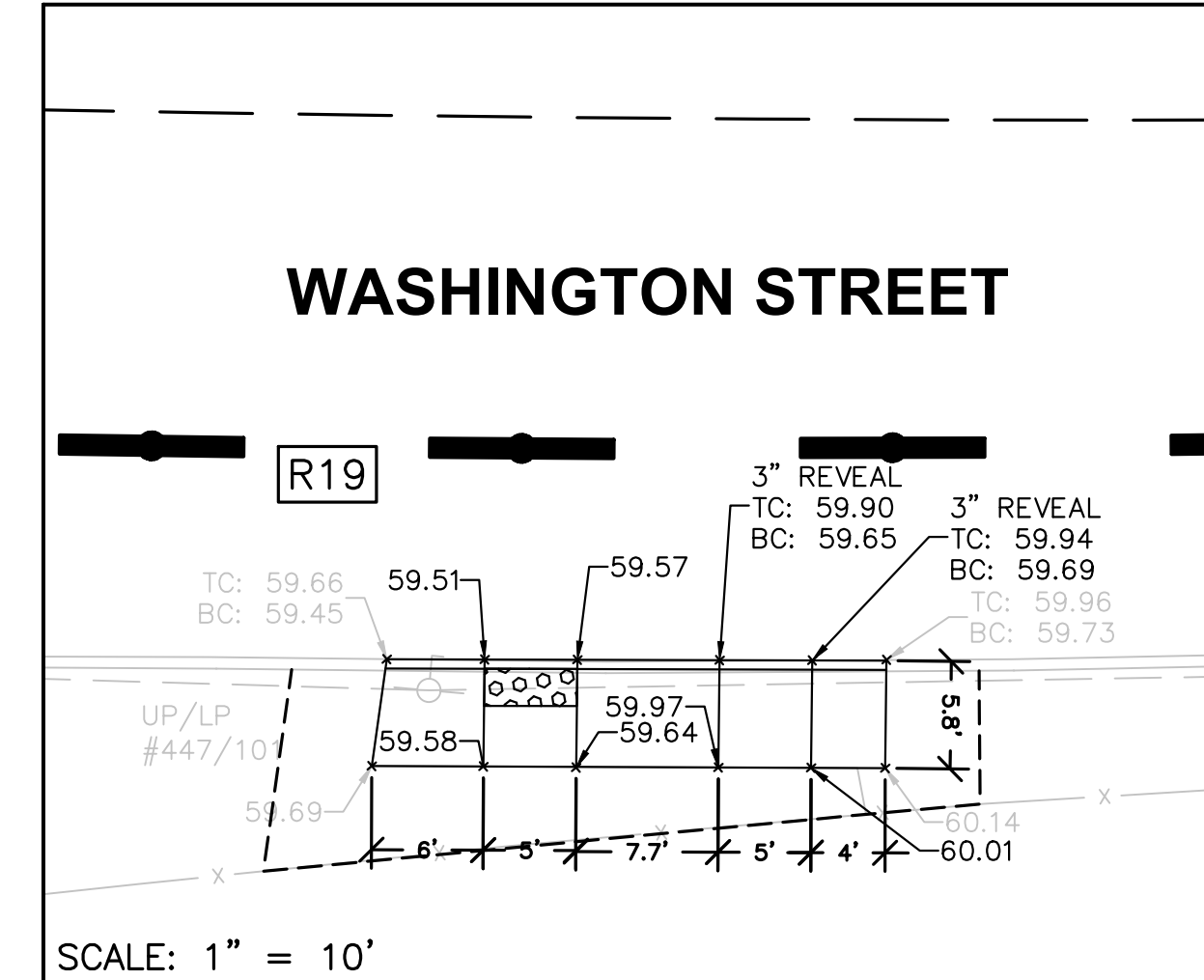
SCALE: 1" = 10'
RAMPS R12, R13, & R14



SCALE: 1" = 10'^{447/103}
RAMPS R15, R16, R17 & R18



SCALE: 1" = 10'
SIDEWALK AT WASHINGTON ST & WALKER ST



SCALE: 1" = 10'
RAMP R19



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WASHINGTON STREET PILOT PEDESTRIAN RAMP DETAILS SHEET 2 OF 2						
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Last Saved by: RFKING
Printed by: Valerie Cha

NOTES:

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS INCLUDING MASSDOT REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH MUTCD AND MASSDOT REVISIONS.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- 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.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- 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.
- THE FIRST TEN REFLECTORIZED PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- 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.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS AND SIGNAGE THAT CONFLICT WITH PROPOSED WORK. CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC SIGNAL EQUIPMENT.
- AN EXCAVATION GREATER THAN OR EQUAL TO 4" IN DEPTH MUST BE BACKFILLED WITH A 4:1 SLOPE DURING NON-WORKING HOURS.
- POLICE OFFICER DETAIL SHALL BE PROVIDED WHEN NECESSARY. POLICE DETAILS AND POST LOCATION WILL BE DETERMINED BY THE OFFICER.
- THE CONTRACTOR SHALL COORDINATE WITH THE MBTA TO DETERMINE BUS OPERATIONS DURING CONSTRUCTION.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THE PLAN SET SHALL REFER TO MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".
- CONTRACTOR SHALL REMOVE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED TEMPORARY MARKINGS AND SHALL BAG OR REMOVE SIGNAGE THAT CONFLICTS WITH CONSTRUCTION PERIOD TRAFFIC PATTERNS.

SUGGESTED ADVANCE WARNING SIGN MINIMUM SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
URBAN (30MPH OR LESS)	100 FEET	100 FEET	100 FEET
URBAN (35MPH OR GREATER)	350 FEET	350 FEET	350 FEET
RURAL	500 FEET	500 FEET	500 FEET
EXPRESSWAY/FREEWAY	1,000 FEET	1,500 FEET	2,640 FEET

BASED ON: TABLE 6C-1 MUTCD LATEST EDITION

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH
MERCING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FEET MINIMUM, 100 FEET MAXIMUM
DOWNSTREAM TAPER	50 FEET MINIMUM, 100 FEET MAXIMUM

NOTE: USE TABLE 6C-4 SHOWN BELOW TO CALCULATE L
SOURCE: TABLE 6C-3 2009 MUTCD

WHERE: L = TAPER LENGTH IN FEET

W = WIDTH OF OFFSET IN FEET

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

BUFFER SPACE TABLE

POSTED SPEED (MPH)	LENGTH (FT)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

SOURCE: TABLE 6C-2 2009 MUTCD

FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH L (FT)
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

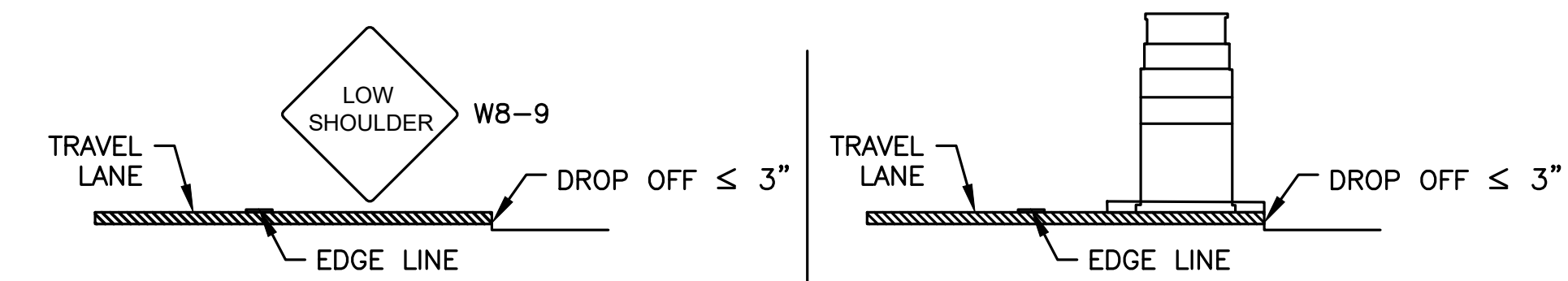
SOURCE: TABLE 6C-4 2009 MUTCD

WORKZONE DISTANCES

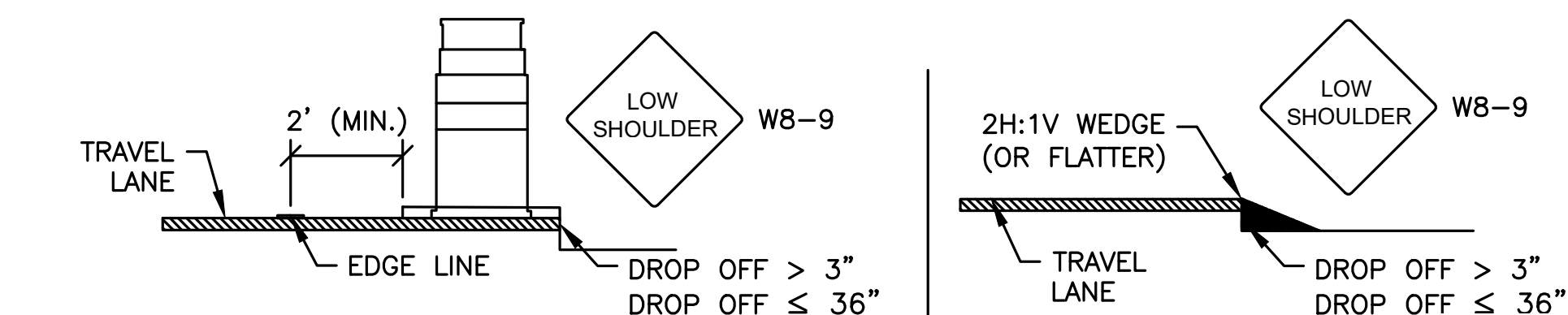
THIS GUIDANCE IS ADOPTED FROM THE ROADSIDE DESIGN GUIDE, 4TH EDITION.

PAVEMENT DROP-OFFS MAY OCCUR DURING PAVING, EXCAVATION, AND OTHER CONSTRUCTION ACTIVITIES. DROP-OFFS CREATE HAZARDS FOR VEHICLES IF NOT PROPERLY MITIGATED. THE FOLLOWING APPLIES FOR ALL ROADS WITH SPEED LIMITS GREATER THAN 30 MPH; FOR ROADS WITH SPEEDS OF 30 MPH OR LESS, TREATMENTS FOR PAVEMENT EDGE DROP-OFFS SHALL BE AT THE DISCRETION OF THE ENGINEER. DROP-OFFS BETWEEN ADJACENT, OPEN TRAVEL LANES SHALL NOT EXCEED 2", AND ANY DROP-OFF IN EXCESS OF 3" SHALL NOT BE LEFT UNATTENDED WITHOUT ONE OF THESE MITIGATION MEASURES APPLIED.

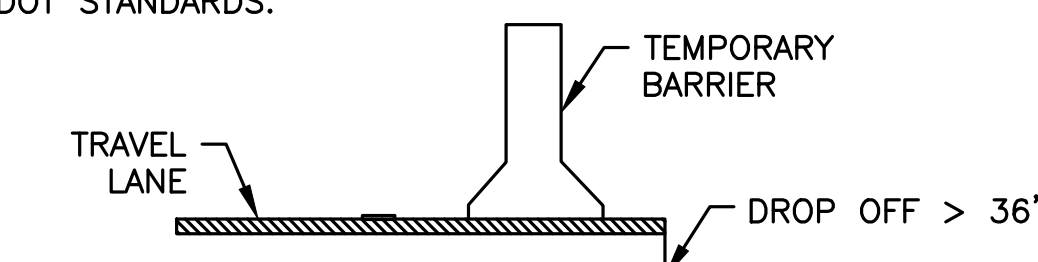
SHOULDER DROP-OFFS 3" OR LESS ADJACENT TO A SHOULDER OR ACTIVE LANE SHOULD BE MITIGATED BY: A W8-9 (LOW SHOULDER) SIGN IN ADVANCE OF AND AT REGULAR INTERVALS THROUGHOUT THE TREATMENT; OR THE PLACEMENT OF DRUMS ON THE TRAFFIC SIDE OF THE DROP OFF.



SHOULDER DROP-OFFS GREATER THAN 3" BUT LESS THAN OR EQUAL TO 36" MUST BE MITIGATED BY: A W8-9 (LOW SHOULDER) SIGN IN ADVANCE OF AND AT REGULAR INTERVALS THROUGHOUT THE TREATMENT AND THE PLACEMENT OF DRUMS ON THE TRAFFIC SIDE OF THE DROP-OFF, OFFSET AT LEAST 2' FROM THE TRAVEL LANE; OR A W8-9 (LOW SHOULDER) SIGN IN ADVANCE OF AND AT REGULAR INTERVALS THROUGHOUT THE TREATMENT AND THE PLACEMENT OF A TEMPORARY WEDGE OF MATERIAL ALONG THE FACE OF THE DROP-OFF. THE WEDGE SHOULD CONSIST OF STABLE MATERIAL PLACED ON A 2H:1V OR FLATTER SLOPE.



SHOULDER DROP-OFFS GREATER THAN 36" MUST BE PROTECTED BY TEMPORARY BARRIER DESIGNED TO MASSDOT STANDARDS.



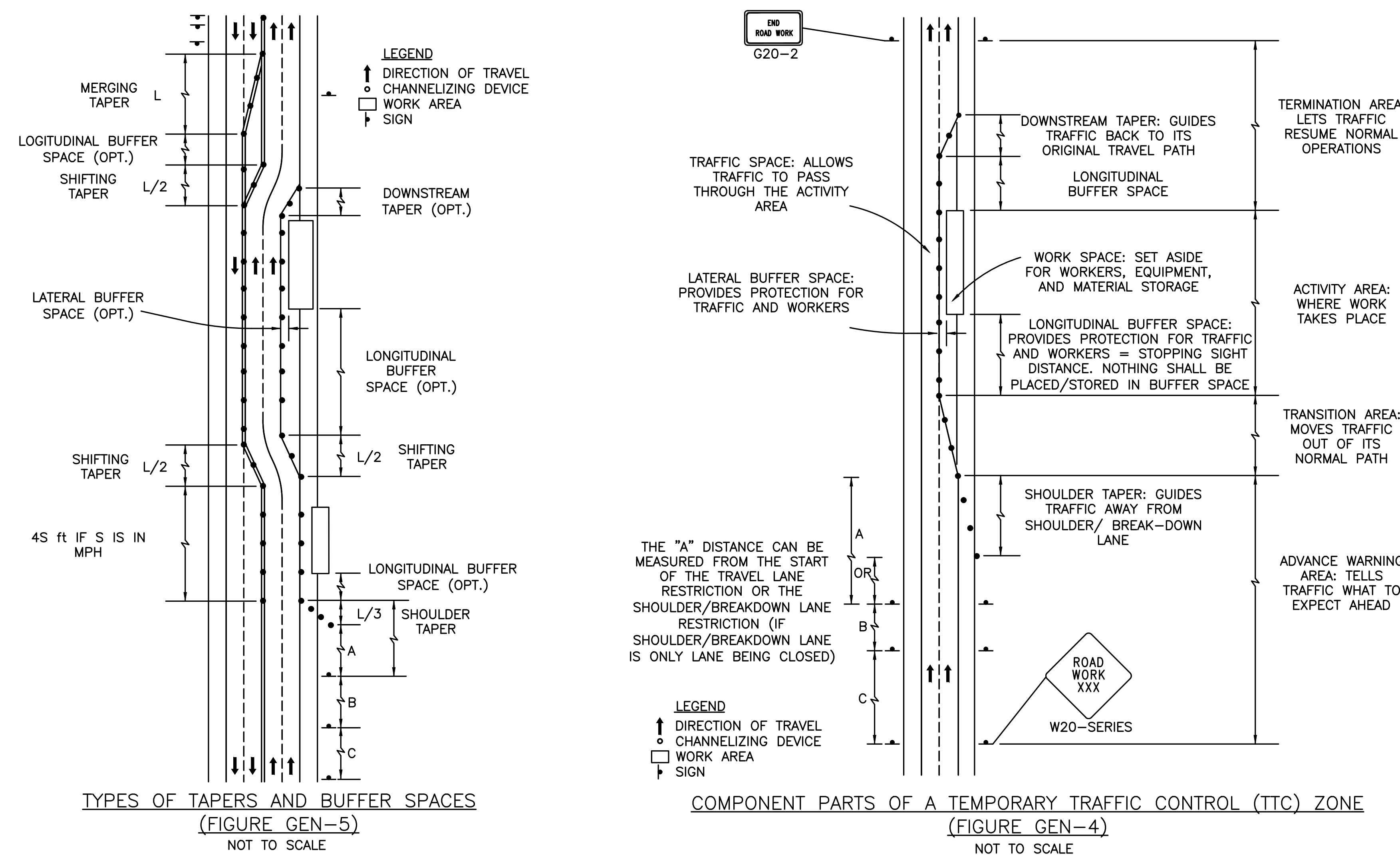
SHORT-TERM PAVEMENT EDGE DROP-OFFS

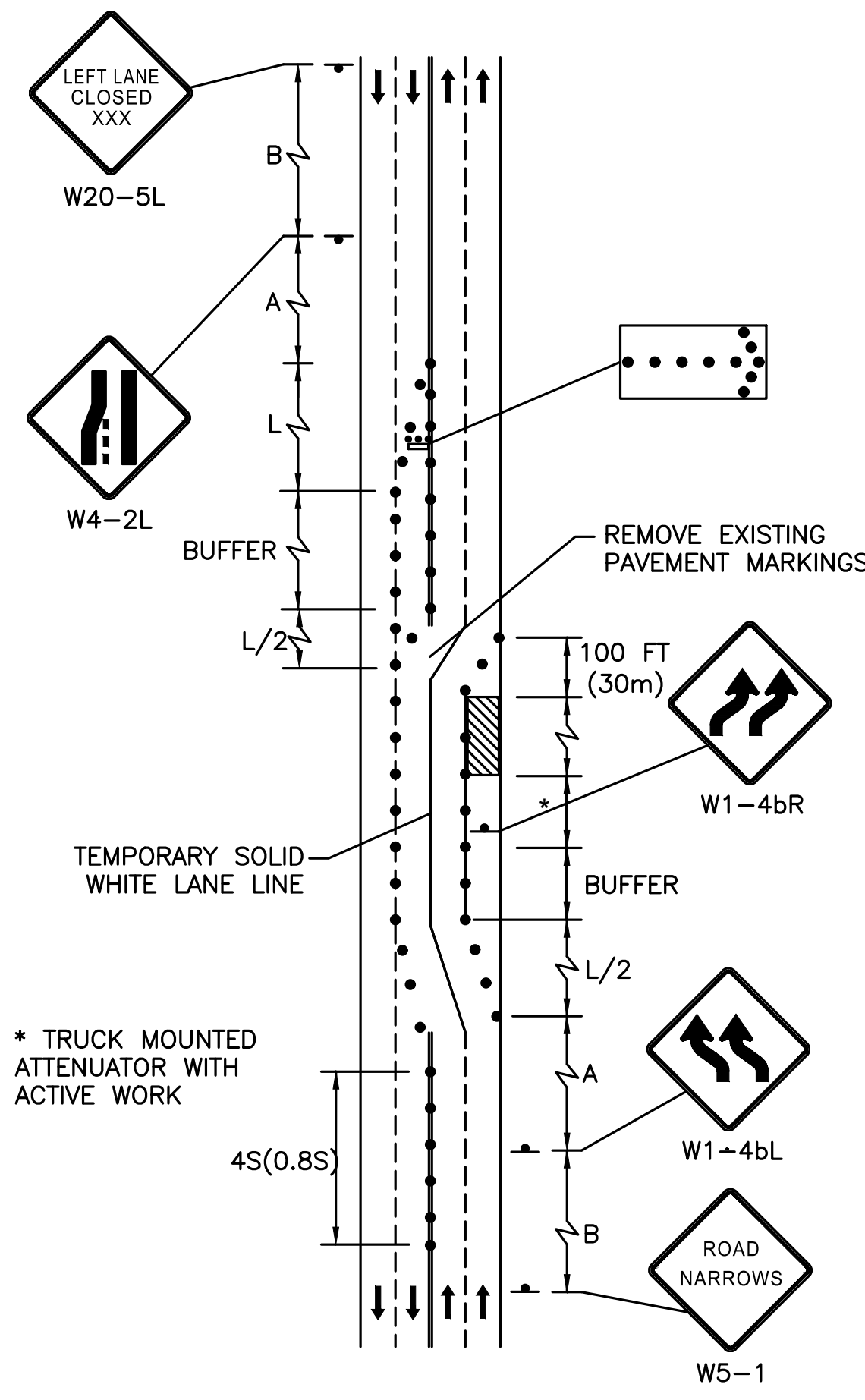
NOT TO SCALE

**WASHINGTON STREET PILOT
TTCP DETAILS I
SHEET 1 OF 3**

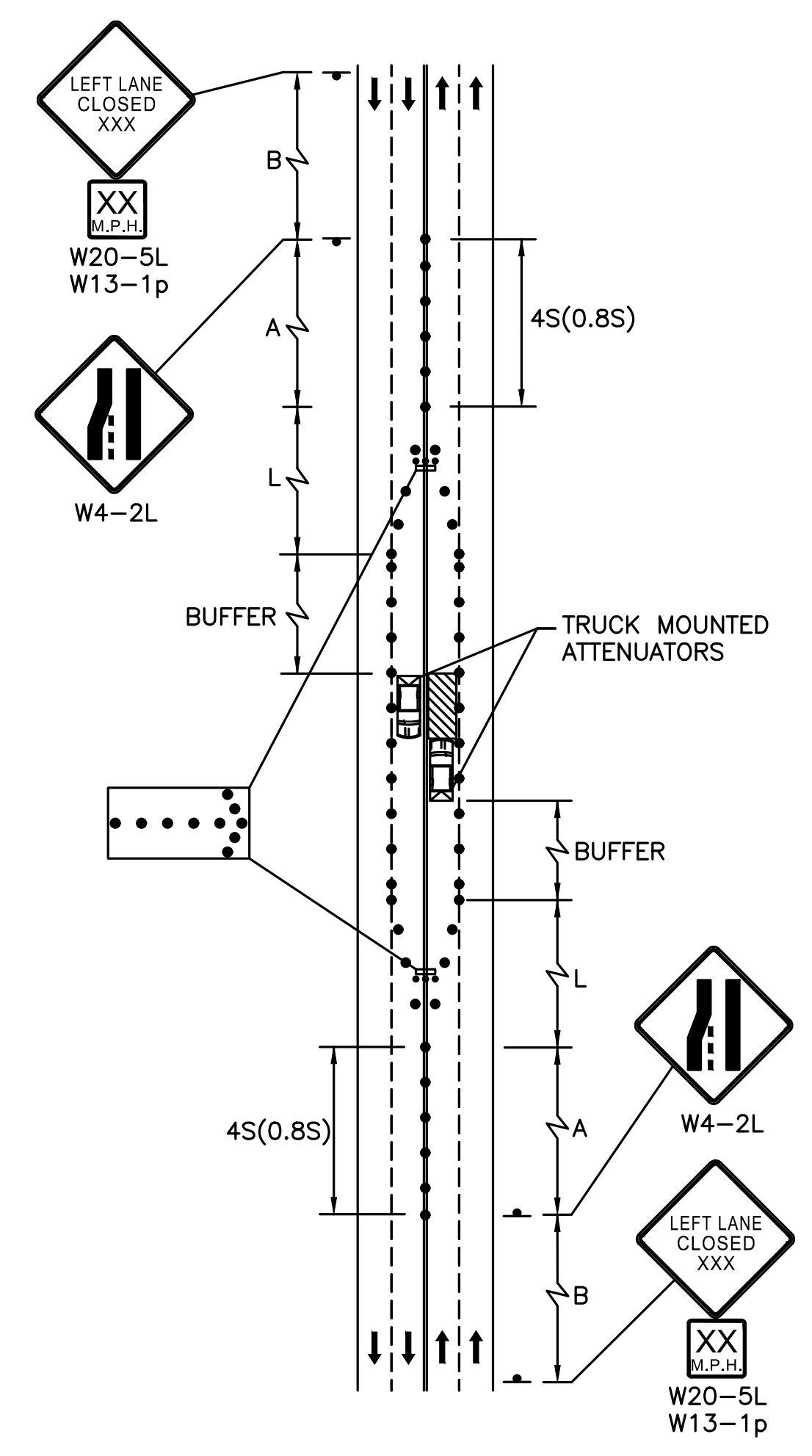
HSH PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
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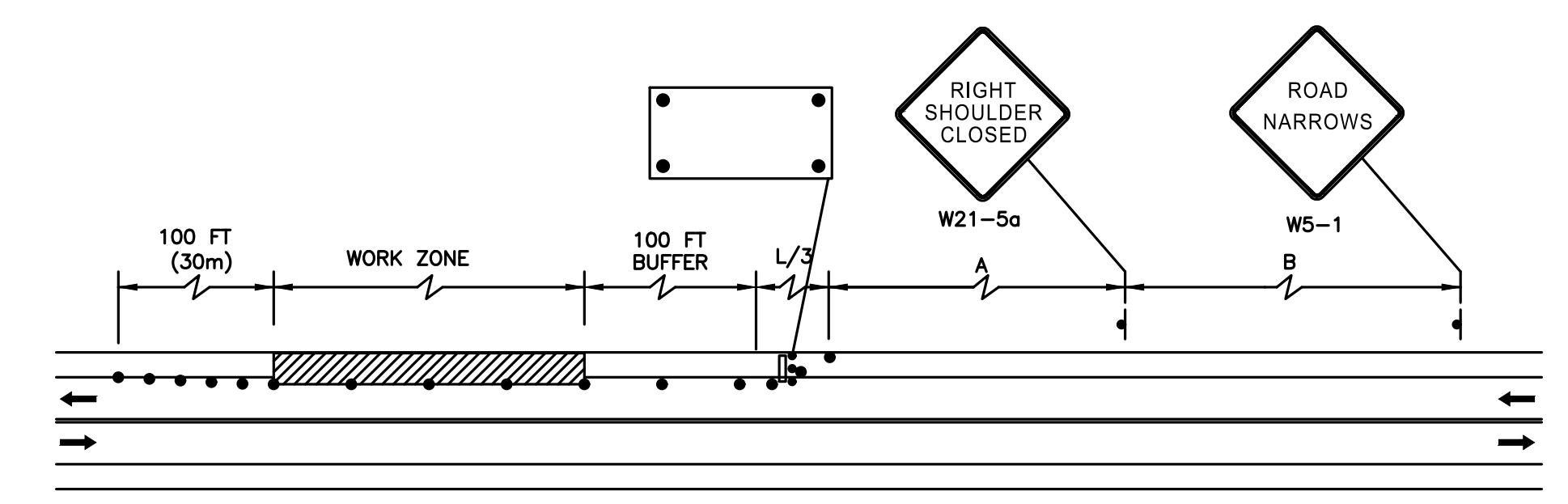




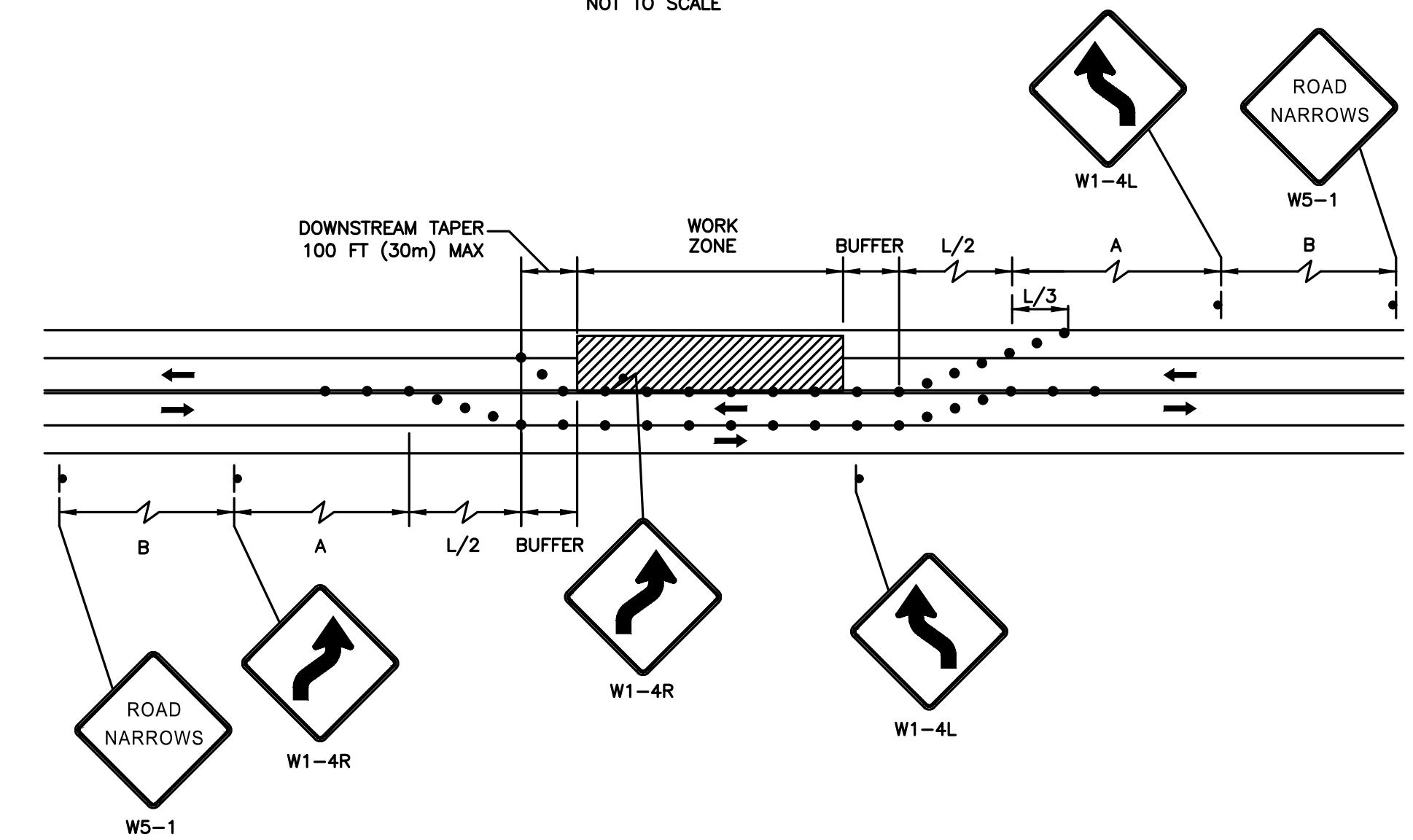
MULTIPLE LANE ROAD INTERIOR LANE CLOSURE W/ UNEVEN VOLUMES
(FIGURE MLR-2)
 NOT TO SCALE



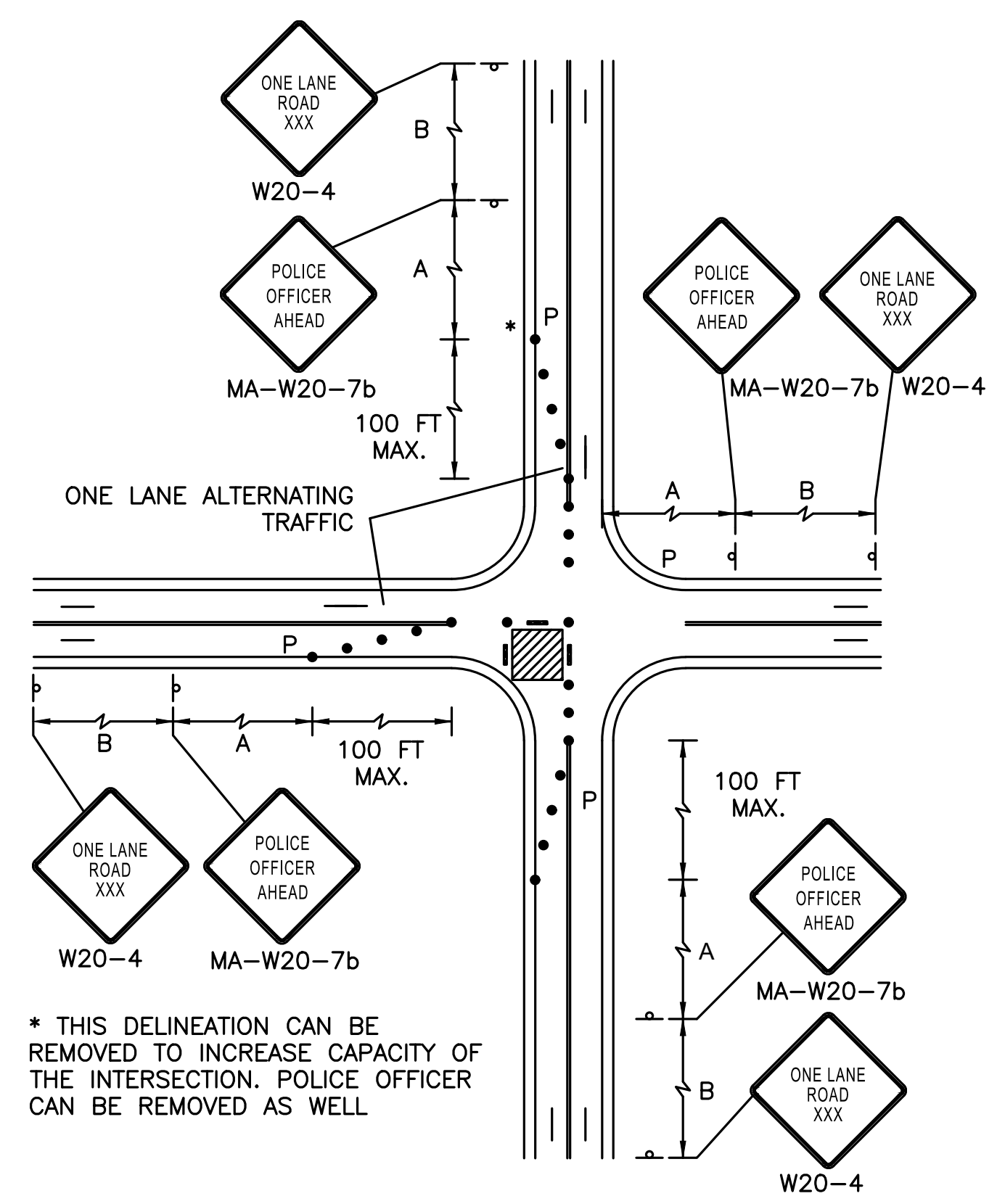
MULTIPLE LANE ROAD INTERIOR LANE CLOSURE
(FIGURE MLR-1)
 NOT TO SCALE



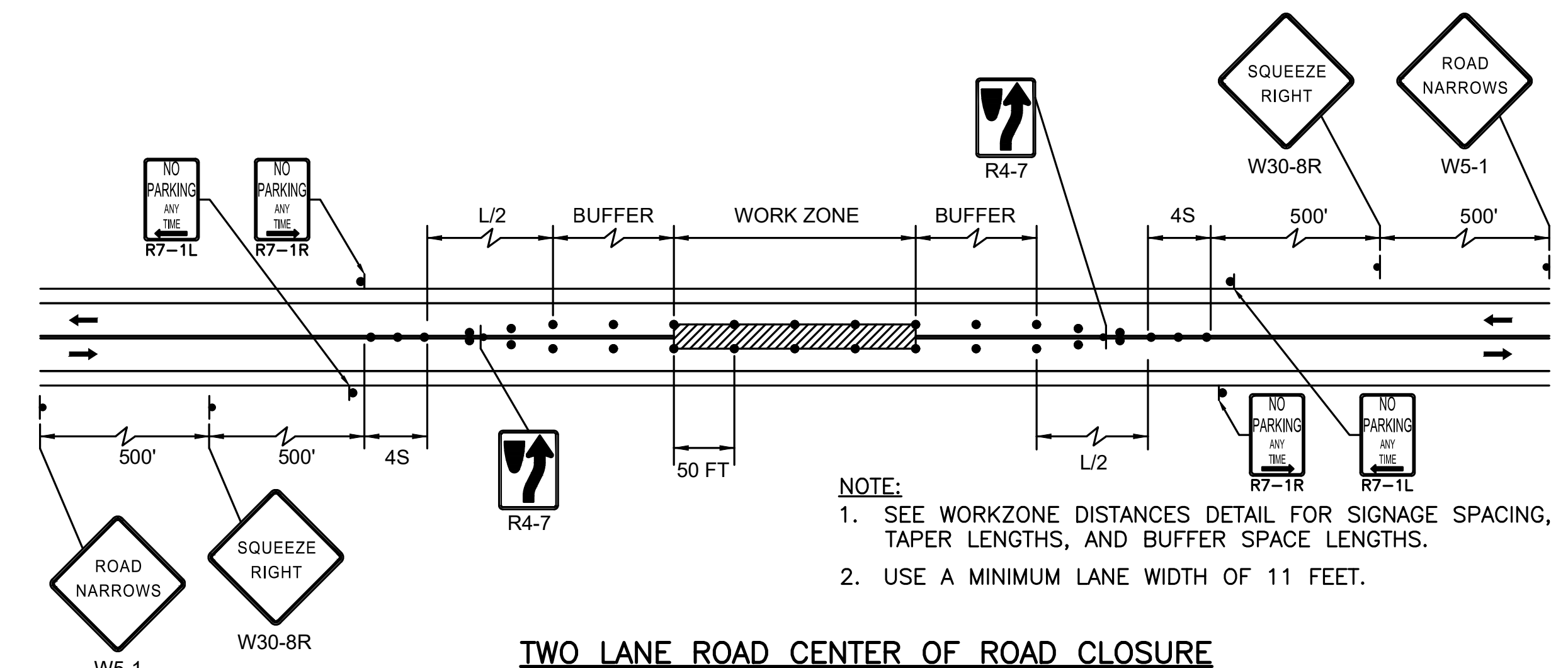
TWO LANE ROAD (SHOULDER CLOSED)
(FIGURE TLR-1)
 NOT TO SCALE



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



SINGLE LANE APPROACH ONE QUADRANT CLOSURE
(FIGURE INT-2)
 NOT TO SCALE

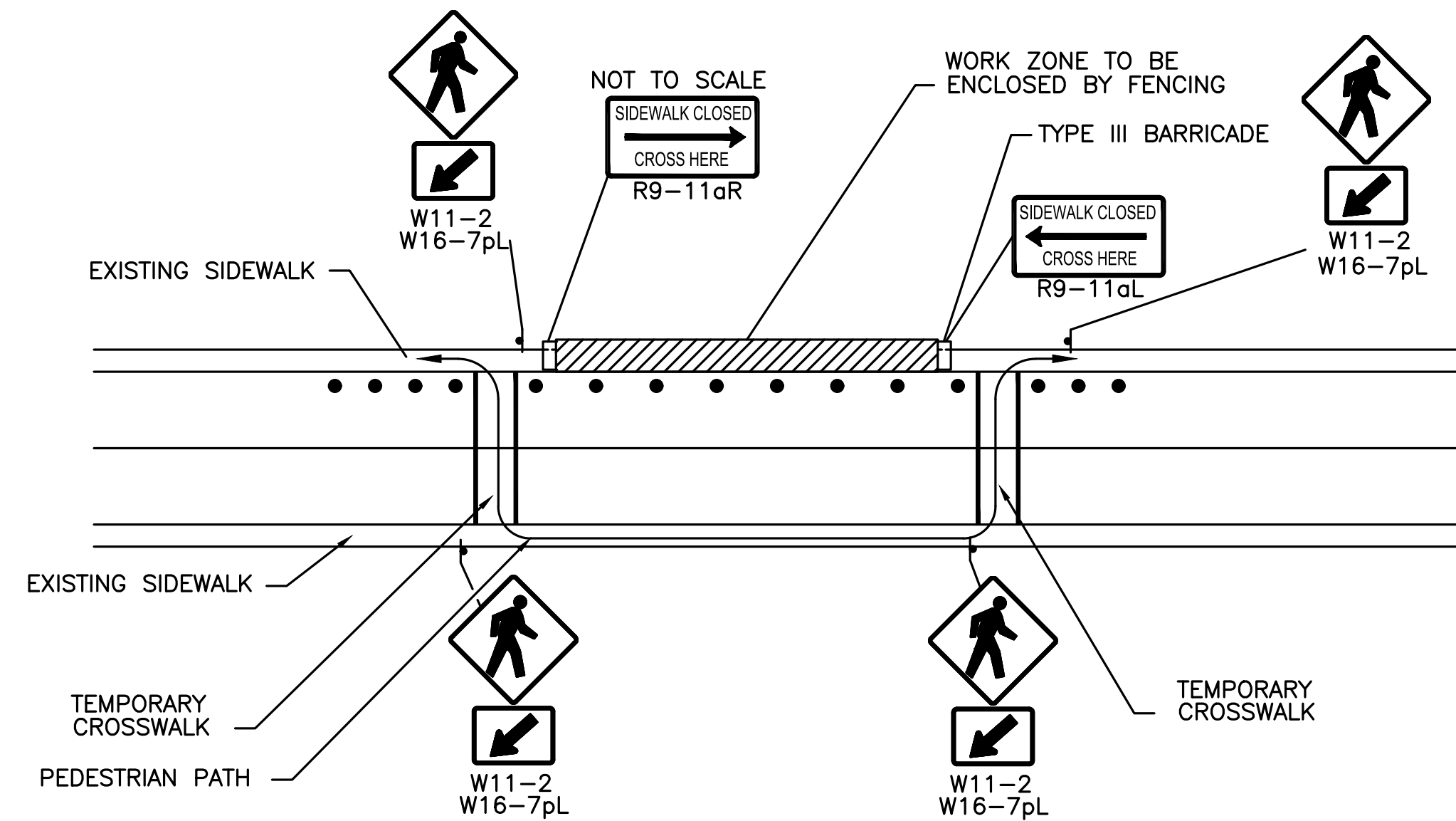


TWO LANE ROAD CENTER OF ROAD CLOSURE
(FIGURE TLR-3) - MOD
 NOT TO SCALE

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WASHINGTON STREET PILOT TTCP DETAILS II SHEET 2 OF 3						
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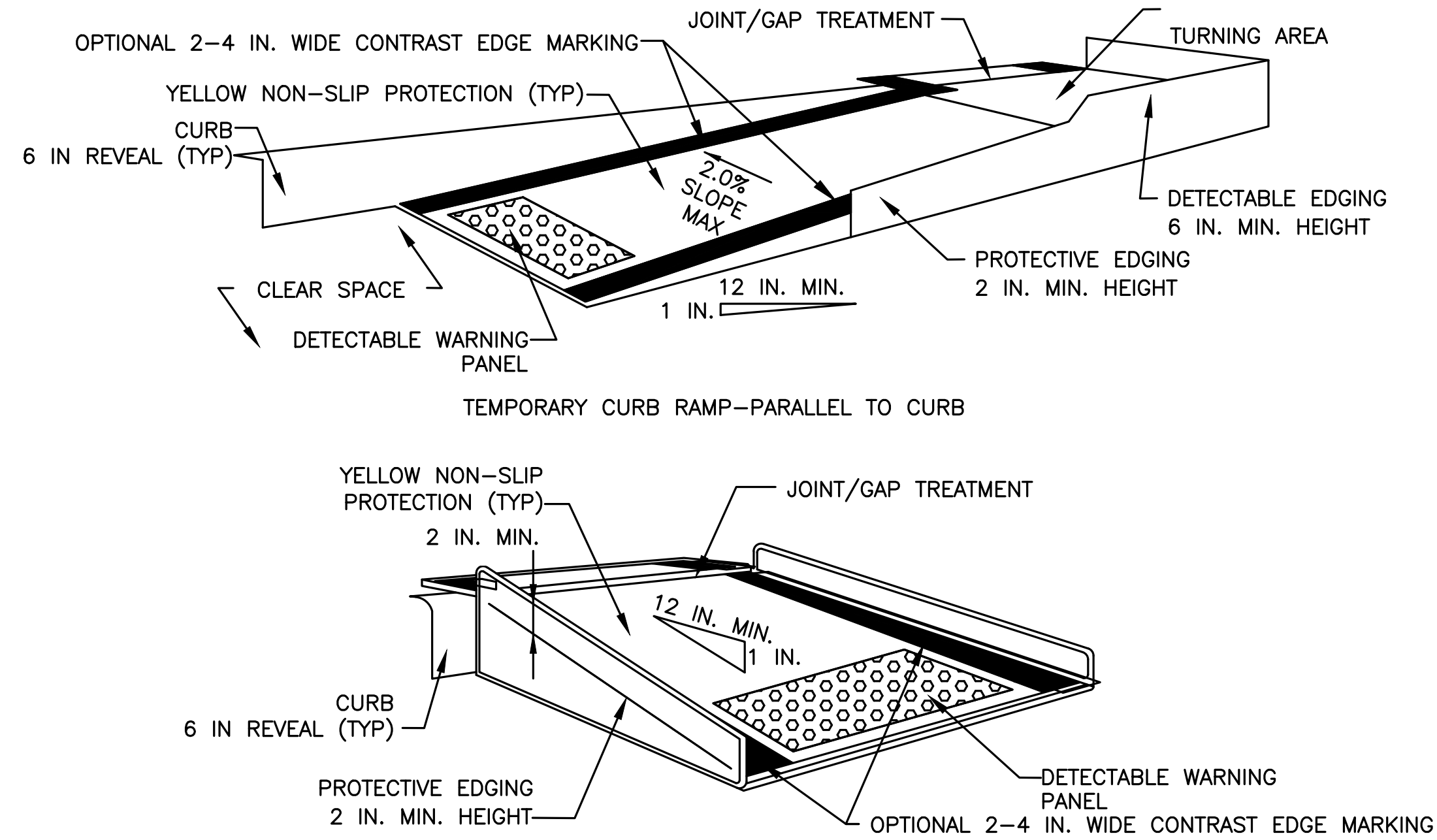
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 Printed by: Valerie Chen



NOTES

- ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
- STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
- TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS DETAIL, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMP WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
- BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
- 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.)

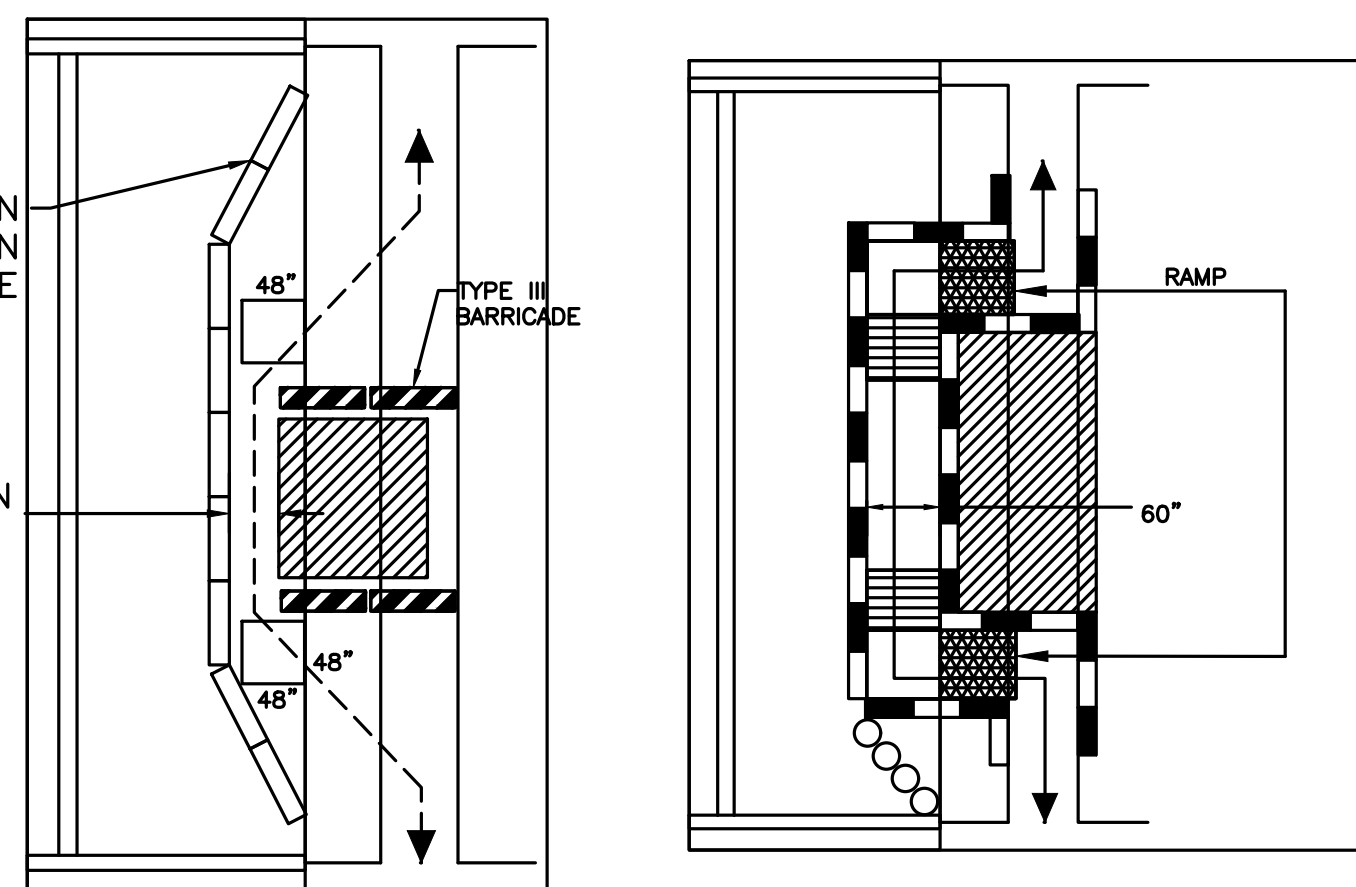
**PEDESTRIAN BYPASS
(FIGURE PED-7)
NOT TO SCALE**



NOTES:

- CONTRACTOR MAY USE PREFABRICATED RAMP PER APPROVAL OF THE ENGINEER.
- CURB RAMP SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE, AND NON-SLIP SURFACE.
- 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 SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
- PROTECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
- CURB RAMP AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
- CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
- 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.
- 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.

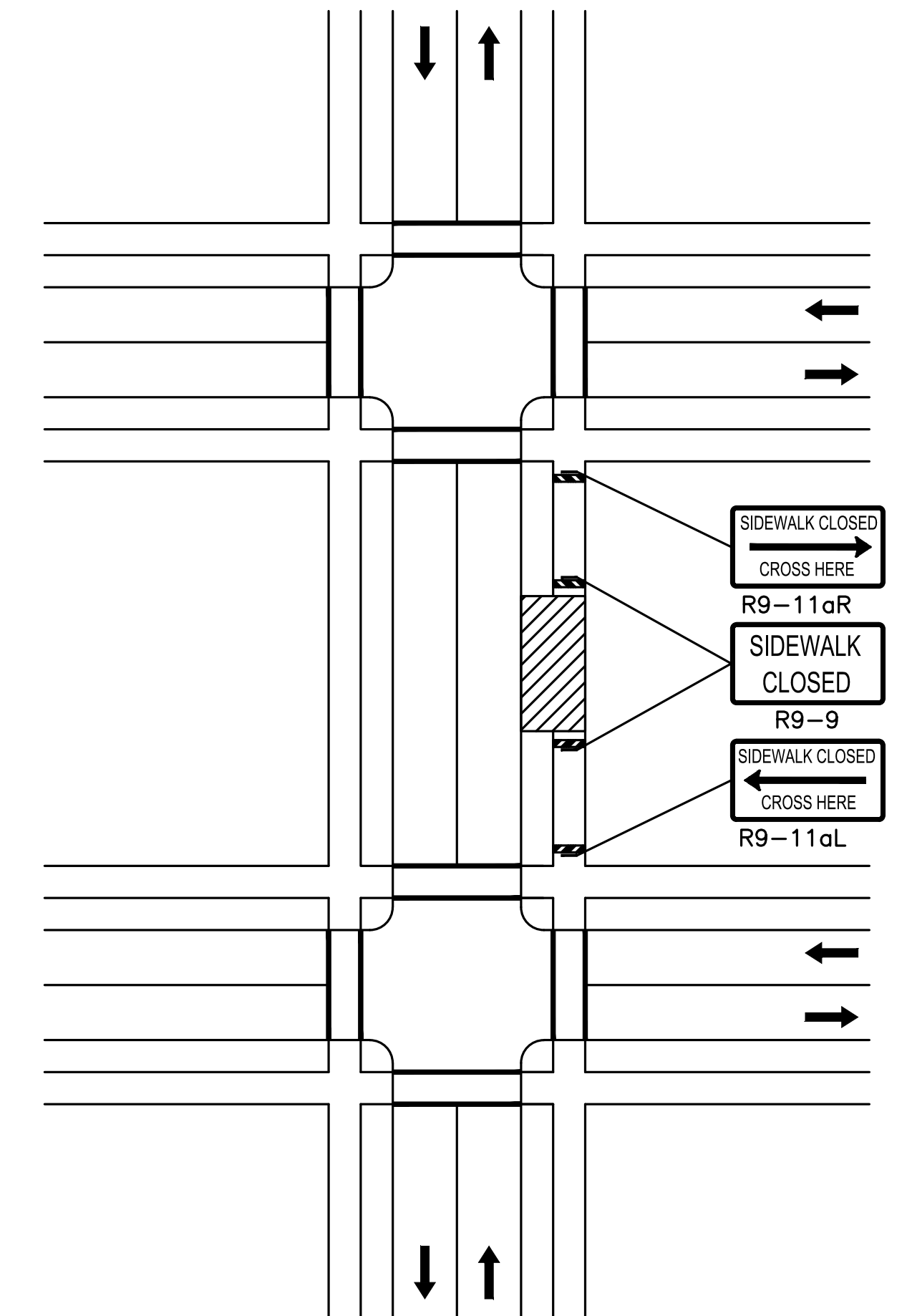
**PEDESTRIAN DETAILS
(FIGURE PED-1)
NOT TO SCALE**



NOTES:

- 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 CHANNELIZATION DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ALONG THE FULL LENGTH OF THE TEMPORARY PEDESTRIAN ROUTE.
- WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT.
- 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 BY 5 FOOT PASSING ZONE SHALL BE PROVIDED NEAR THE MID-POINT OF THE CLOSURE.
- 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.
- ON-DEMAND PEDESTRIAN ASSISTANCE PERSONNEL TO ASSIST WITH NAVIGATION AROUND THE CLOSURE/WORK AREA MAY BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAAB DEVICES FOR WORK FOR CLOSURES LASTING 4 HOURS OR LESS.
- 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.

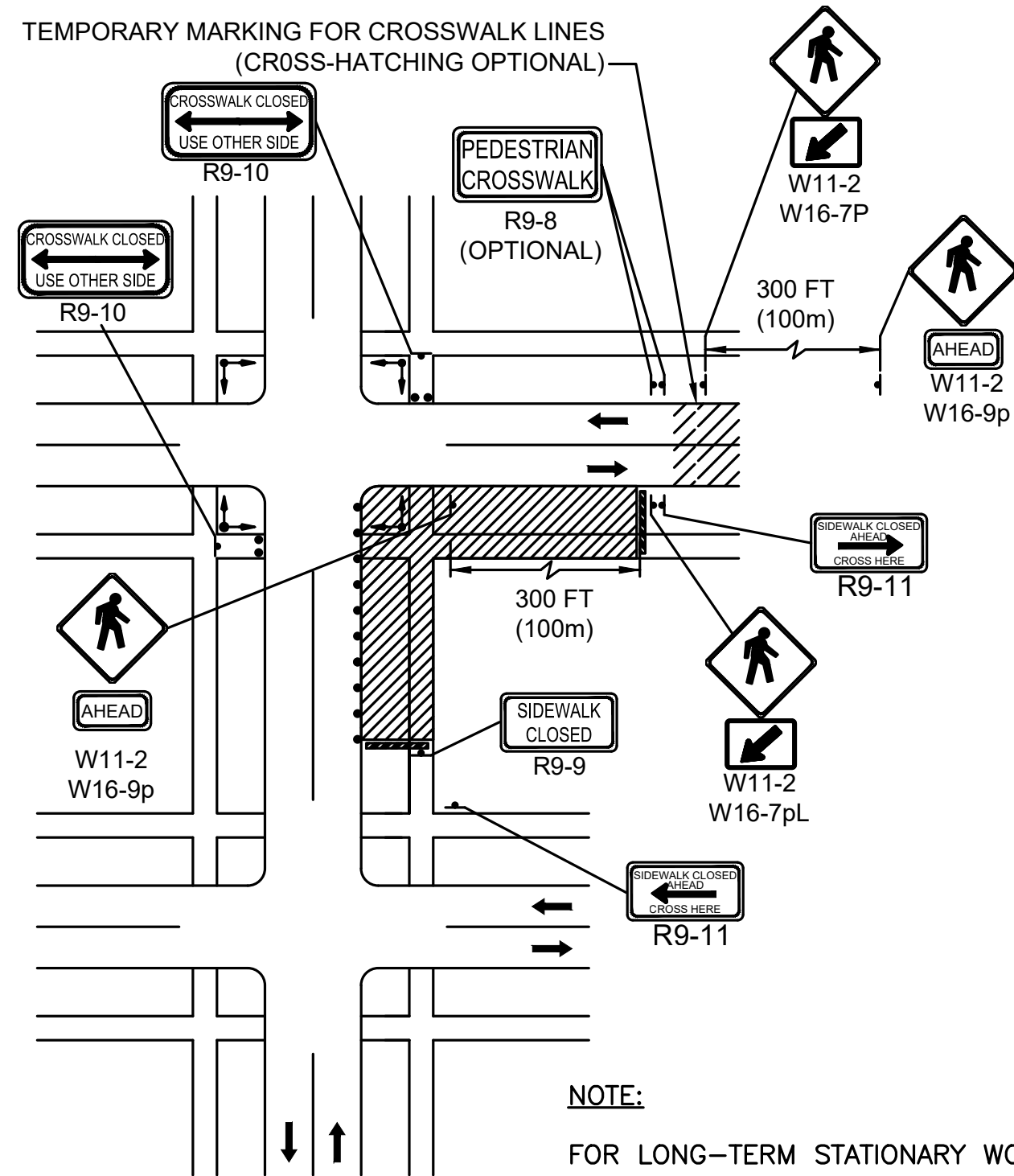
**PEDESTRIAN DETAILS
(FIGURE PED-3)
NOT TO SCALE**



NOTE:

IF A MINIMUM WIDTH OF 48" OF SOLID SMOOTH UNOBSTRUCTED SURFACE REMAINS ALONG THE WORK AREA THEN THE DETAIL CAN BE DISREGARDED. DELINEATION OF THE WORK AREA WILL STILL BE REQUIRED. ALL PEDESTRIAN DETOUR ROUTES SHALL BE ADA/MAAB COMPLIANT IN THEIR ENTIRETY.

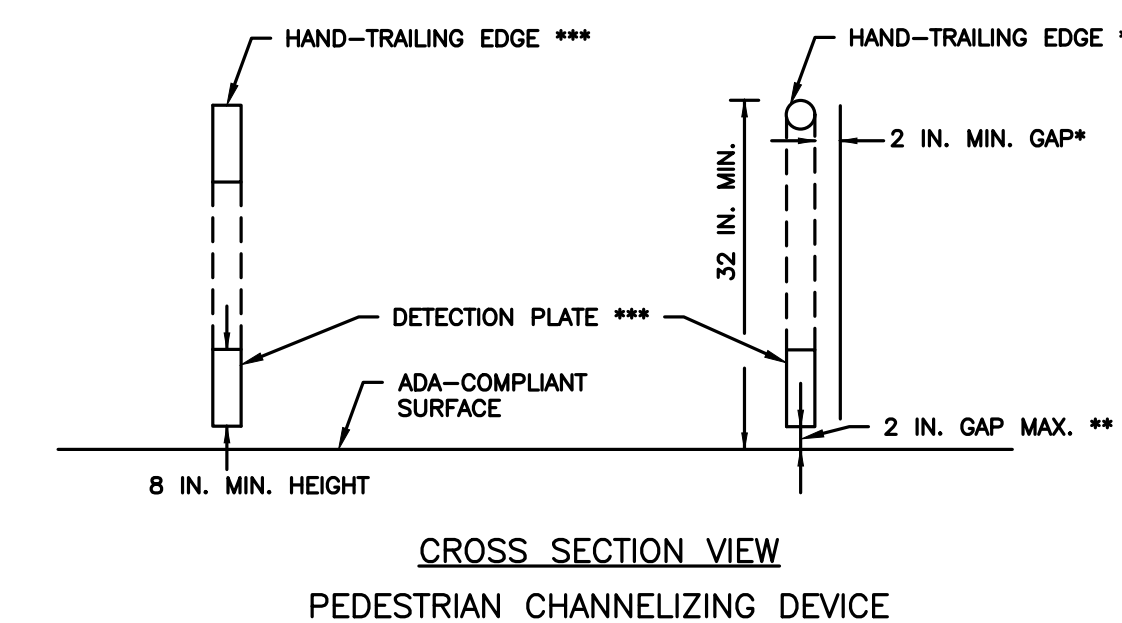
**SIDEWALK CLOSED WITHOUT DETOUR
(FIGURE PED-5)
NOT TO SCALE**



NOTE:

FOR LONG-TERM STATIONARY WORK, THE DOUBLE YELLOW CENTERLINE AND/OR LANE LINES SHOULD BE REMOVED BETWEEN THE CROSSWALK LINES.

**PEDESTRIAN DETOUR
(FIGURE PED-6)
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.

**PEDESTRIAN DETAILS
(FIGURE PED-4)
NOT TO SCALE**

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**WASHINGTON STREET PILOT
TTCP DETAILS III
SHEET 3 OF 3**

HS PROJECT NUMBER	DATE	DRAWN BY	CHKD. BY	APPRVD. BY	SHEET NO.	TOTAL SHEETS
2021163.00	04/08/24	SW	RB	RL	47	47