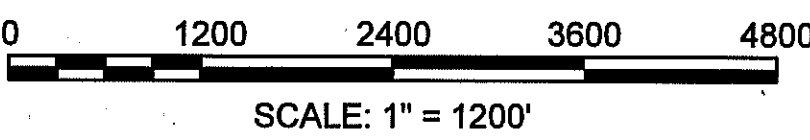
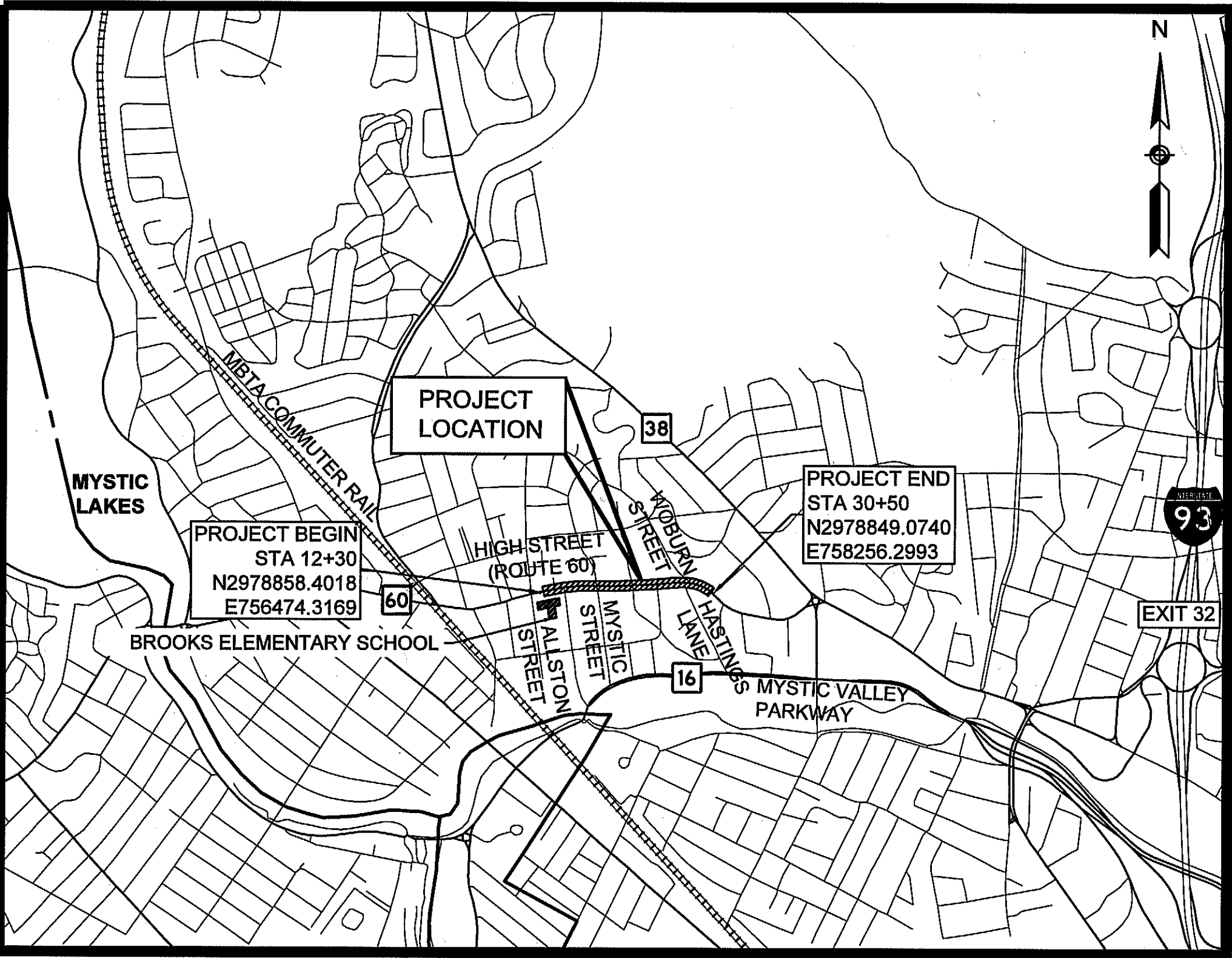


MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	1	36
PROJECT FILE NO.		608835	
TITLE SHEET & INDEX			

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1988 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
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3	LEGEND & ABBREVIATIONS
4	KEY PLAN
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18	TRAFFIC SIGN SUMMARY SHEET
19-21	TEMPORARY TRAFFIC CONTROL PLANS
22-25	UTILITY PLANS
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28-29	WHEELCHAIR RAMP/DRIVEWAY DETAILS
30-36	CROSS SECTIONS



LENGTH OF PROJECT = 1820.00 FEET = 0.345 MILES

DESIGN SPEED	30 MPH
ADT (2017)	17,728
ADT (2024)	18,358
K	8.6%
D	57.0% NB
T (PEAK HOUR)	4.2%
T (AVERAGE DAY)	4.9%
DHV	1582
DDHV	902
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL



146 Dascomb Road Andover, MA 01810 978-794-1792	311 Main Street 2nd Floor Worcester, MA 01608 508-868-5104	169 Ocean Blvd, Unit 3 PO Box 249 Hampton, NH 03842 603-601-8154
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APPROVED


CHIEF ENGINEER *PE*

6-30-70
DATE

CONSTRUCTION NOTES:

1.

EXISTING CONDITIONS INFORMATION FROM SURVEY BY TEC, INC., LAWRENCE, MA PERFORMED IN JULY 2017.

HORIZONTAL DATUM = NAD83 (MASSACHUSETTS STATE PLANE COORDINATES)
VERTICAL DATUM = NAVD88
2.

ALL EXISTING STATE, COUNTY, AND TOWN LOCATION LINES HAVE BEEN ESTABLISHED FROM AN ACTUAL ON-THE-GROUND SURVEY AND FROM PLANS AND DEEDS OF RECORD. ALL PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.
3.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT DIGSAFE (1-888-DIGSAFE) A MINIMUM OF 72 HOURS PRIOR TO ANY CONSTRUCTION TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
4.

WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
5.

ALL MUNICIPALLY OWNED UTILITY STRUCTURES (CATCH BASINS, DRAIN MANHOLES, WATER GATES, ETC.) SHALL BE ADJUSTED BY THE CONTRACTOR TO FINISHED GRADE UNLESS DIRECTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH THE MEDFORD DEPARTMENT OF PUBLIC WORKS (DPW) TO ALLOW FOR THE REPLACEMENT OF EXISTING UTILITY STRUCTURES IN POOR CONDITION. THESE REPLACEMENT UTILITY STRUCTURES TO BE PROVIDED AND INSTALLED BY THE DPW.
6.

ALL PRIVATELY OWNED UTILITY STRUCTURES (GAS GATES, ELECTRIC /TELEPHONE MANHOLES, ETC.) SHALL BE ADJUSTED TO FINISHED GRADE BY THE PRIVATE UTILITY COMPANY, UNLESS DIRECTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES FOR THE ALTERATION AND ADJUSTMENT, AS NECESSARY.
7.

PROPOSED LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 1.0% (MINIMUM) UNLESS OTHERWISE NOTED.
8.

AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE.
9.

ALL DISTURBED AREAS OUTSIDE THE CURBLINE SHALL BE STABILIZED WITH 4" LOAM AND SEED, UNLESS OTHERWISE NOTED.
10.

THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R), AS DIRECTED BY THE ENGINEER.
11.

THE TERM "MEET EXIST" MEANS TO MEET BOTH THE EXISTING ALIGNMENT AND ELEVATION.
12.

ALL EXISTING TREES WITHIN THE PROJECT LIMITS SHALL BE RETAINED AND PROTECTED WITH TREE PROTECTION UNLESS INDICATED OTHERWISE ON THE DRAWINGS. ALL PROVIDED DIMENSIONS REFER TO THE DIAMETER AT BREAST HEIGHT.
13.

AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" (EXCLUDING THE WIDTH OF CURB) SHALL BE MAINTAINED PAST ALL OBSTRUCTIONS (UTILITY POLES, LIGHT POLES, SIGNS, MAILBOXES, ALONG DRIVEWAY OPENINGS, ETC.)
14.

DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED WHEELCHAIR RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.

15.

EXISTING SIDEWALKS SHALL BE SAWCUT AT THE NEAREST JOINT TO THE LIMIT OF PROPOSED SIDEWALK SHOWN ON THE PLANS AND THE ENTIRE PANEL SHALL BE REPLACED.
16.

U.S. MAIL BOXES LOCATED WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND RESET BY OTHERS. THE CONTRACTOR SHALL COORDINATE IN ADVANCE WITH THE LOCAL POST MASTER GENERAL TO FACILITATE ACCESS FOR MAIL BOXES IMPACTED BY THE CONSTRUCTION TO BE REMOVED, RELOCATED, AND/OR RESET.
17.

IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING (IF RECIPROCAL OR WITHIN PROJECT LIMITS) ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE
18.

THE CONTRACTOR SHALL REPLACE ADDITIONAL EXISTING CEMENT CONCRETE SIDEWALK PANELS WITHIN THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER.

GENERAL SYMBOLS		
EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN OR GUTTER INLET
		CATCH BASIN OR GUTTER INLET W/ 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
		WATER SHUTOFF/CURB STOP
		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
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		TREE LINE
		EDGE OF PAVEMENT
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF MICROMILLING 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 CABINET, FOUNDATION
		CONTROLLER CABINET, FOUNDATION, CONC. PAD
		MAST ARM FOUNDATION (SCALE OF BLOCK = DIAMETER IN INCHES)
		MAST ARM (LENGTH NOTED)
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD
		MAST ARM OR TS POLE MOUNTED SIGN
		EMERGENCY PRE-EMPTION RECEIVER
		EMERGENCY PRE-EMPTION CONFIRMATION STROBE
		PEDESTRIAN PUSH BUTTON
		YAGI ANTENNA
		BICYCLE WIRE LOOP DETECTOR (SIZE AS NOTED)
		WIRE LOOP DETECTOR (SIZE AND TYPE NOTED)
		TRAFFIC SIGN (1 POST)
		TRAFFIC SIGN (2 POST)
		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
		BIKE LANE LEGEND - WHITE
		STOP LINE
		CROSSWALK
		SOLID WHITE LINE
		SOLID YELLOW LINE
		BROKEN WHITE LINE
		BROKEN YELLOW LINE
		DOTTED WHITE LINE
		DOTTED YELLOW LINE
		DOTTED WHITE LINE EXTENSION
		DOTTED YELLOW LINE EXTENSION
		DOUBLE WHITE LINE
		DOUBLE YELLOW LINE

ABBREVIATIONS		ABBREVIATIONS (cont.)	
GENERAL		GENERAL	
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PVC	POINT OF VERTICAL CURVATURE
ABAN	ABANDON	PVI	POINT OF VERTICAL INTERSECTION
ADJ	ADJUST	PVT	POINT OF VERTICAL TANGENCY
APPROX.	APPROXIMATE	PVMT	PAVEMENT
A.C.	ASPHALT CONCRETE	PWW	PAVED WATERWAY
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE	R	RADIUS OF CURVATURE
BIT.	BITUMINOUS	R&D	REMOVE AND DISPOSE
BC	BOTTOM OF CURB	RCP	REINFORCED CONCRETE PIPE
BD.	BOUND	RD	ROAD
BL	BASELINE	RDWY	ROADWAY
BLDG	BUILDING	REM	REMOVE
BM	BENCHMARK	RET	RETAIN
BO	BY OTHERS	RET WALL	RETAINING WALL
BOS	BOTTOM OF SLOPE	ROW	RIGHT OF WAY
BR.	BRIDGE	RR	RAILROAD
CB	CATCH BASIN	RRFB	RECTANGULAR RAPID FLASHING BEACON
CBCI	CATCH BASIN WITH CURB INLET	R&R	REMOVE AND RESET
CC	CEMENT CONCRETE	R&S	REMOVE AND STACK
CCM	CEMENT CONCRETE MASONRY	RT	RIGHT
CEM	CEMENT	SB	STONE BOUND
CI	CURB INLET	SHLD	SHOULDER
CIT	CHANGE IN TYPE	SMH	SEWER MANHOLE
CIP	CAST IRON PIPE	ST	STREET
CLF	CHAIN LINK FENCE	STA	STATION
CL	CENTERLINE	SSD	STOPPING SIGHT DISTANCE
CMP	CORRUGATED METAL PIPE	SHLO	STATE HIGHWAY LAYOUT LINE
CSP	CORRUGATED STEEL PIPE	SW	SIDEWALK
CO.	COUNTY	T	TANGENT DISTANCE OF CURVE/TRUCK %
CONC	CONCRETE	TAN	TANGENT
CONT	CONTINUOUS	TEMP	TEMPORARY
CONST	CONSTRUCTION	TC	TOP OF CURB
CR GR	CROWN GRADE	TOS	TOP OF SLOPE
DHV	DESIGN HOURLY VOLUME	TYP	TYPICAL
DI	DROP INLET	UP	UTILITY POLE
DIA	DIAMETER	VAR	VARIES
DIP	DUCTILE IRON PIPE	VERT	VERTICAL
DMH	DRAINAGE MANHOLE	VC	VERTICAL CURVE
DW	STEADY DON'T WALK - PORTLAND ORANGE	WCR	WHEEL CHAIR RAMP
DWY	DRIVEWAY	WG	WATER GATE
ELEV (or EL.)	ELEVATION	WIP	WROUGHT IRON PIPE
EMB	EMBANKMENT	WM	WATER METER/WATER MAIN
EOP	EDGE OF PAVEMENT	X-SECT	CROSS SECTION
EXIST (or EX)	EXISTING	TRAFFIC SIGNAL ABBREVIATIONS	
EXC	EXCAVATION	CAB.	CABINET
F&C	FRAME AND COVER	CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
F&G	FRAME AND GRATE	DW	STEADY DON'T WALK
FDN.	FOUNDATION	FDW	FLASHING DON'T WALK
FLDSTN	FIELDSTONE	FR	FLASHING CIRCULAR RED
GAR	GARAGE	FRL	FLASHING RED LEFT ARROW
GC	GRANITE CURB	FRR	FLASHING RED RIGHT ARROW
GD	GROUND	FY	FLASHING CIRCULAR YELLOW
GG	GAS GATE	FYL	FLASHING YELLOW LEFT ARROW
GI	GUTTER INLET	FYR	FLASHING YELLOW RIGHT ARROW
GIP	GALVANIZED IRON PIPE	G	STEADY CIRCULAR GREEN
GRAN	GRANITE	GL	STEADY GREEN LEFT ARROW
GRAV	GRAVEL	GR	STEADY GREEN RIGHT ARROW
GRD	GUARD	GSL	STEADY GREEN SLASH LEFT ARROW
HDW	HEADWALL	GSR	STEADY GREEN SLASH RIGHT ARROW
HMA	HOT MIX ASPHALT	GV	STEADY GREEN VERTICAL ARROW
HOR	HORIZONTAL	OL	OVERLAP
HYD	HYDRANT	PED	PEDESTRIAN
INV	INVERT	PTZ	PAN, TILT, ZOOM
JCT	JUNCTION	R	STEADY CIRCULAR RED
L	LENGTH OF CURVE	RL	STEADY RED LEFT ARROW
LB	LEACH BASIN	RR	STEADY RED RIGHT ARROW
LOG	LIMIT OF GRADING	TR SIG	TRAFFIC SIGNAL
LP	LIGHT POLE	TSC	TRAFFIC SIGNAL CONDUIT
L&S	LOAM AND SEED	W	STEADY WALKING PERSON
LT	LEFT	Y	STEADY CIRCULAR YELLOW
MAX	MAXIMUM	YL	STEADY YELLOW LEFT ARROW
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		

MEDFORD
BROOKS ELEMENTARY SCHOOL

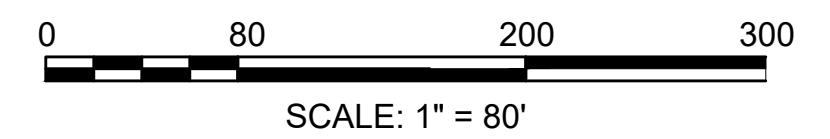
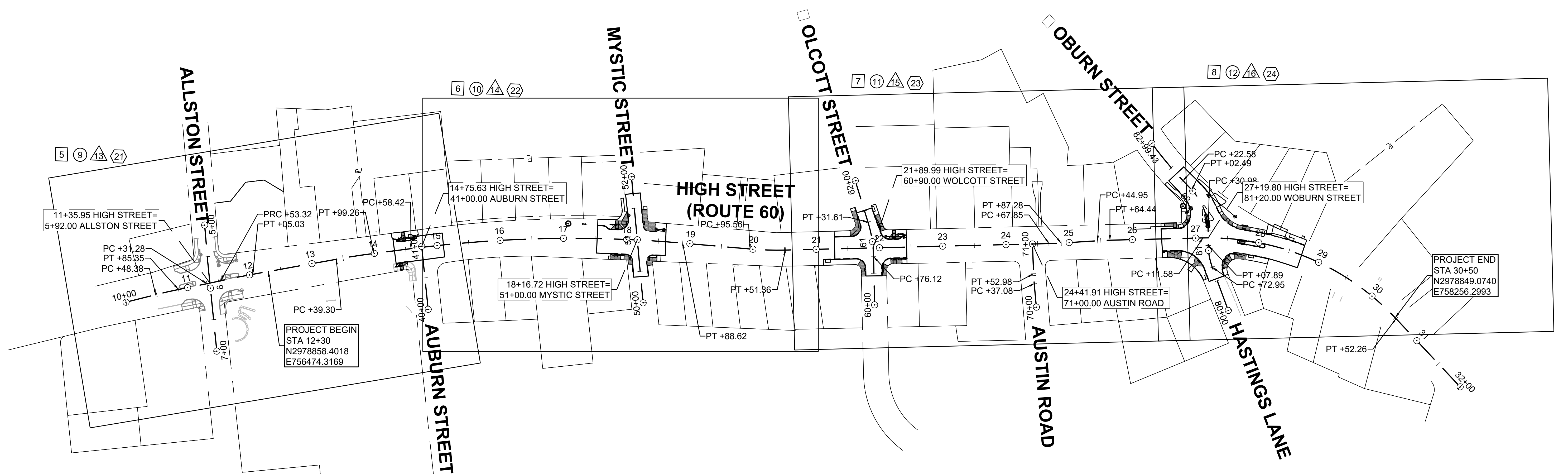
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	3	36
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LEGEND



MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	4	36
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KEY PLAN			

LEGEND	
	CONSTRUCTION PLANS
	CURB TIE & GRADING PLANS
	TRAFFIC SIGN & PAVEMENT MARKING PLANS
	UTILITY PLANS



HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

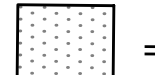
WATER SUPPLY ALTERATIONS

SEE SHEET 22

DRAINAGE DETAILS

SEE SHEET 22

LEGEND

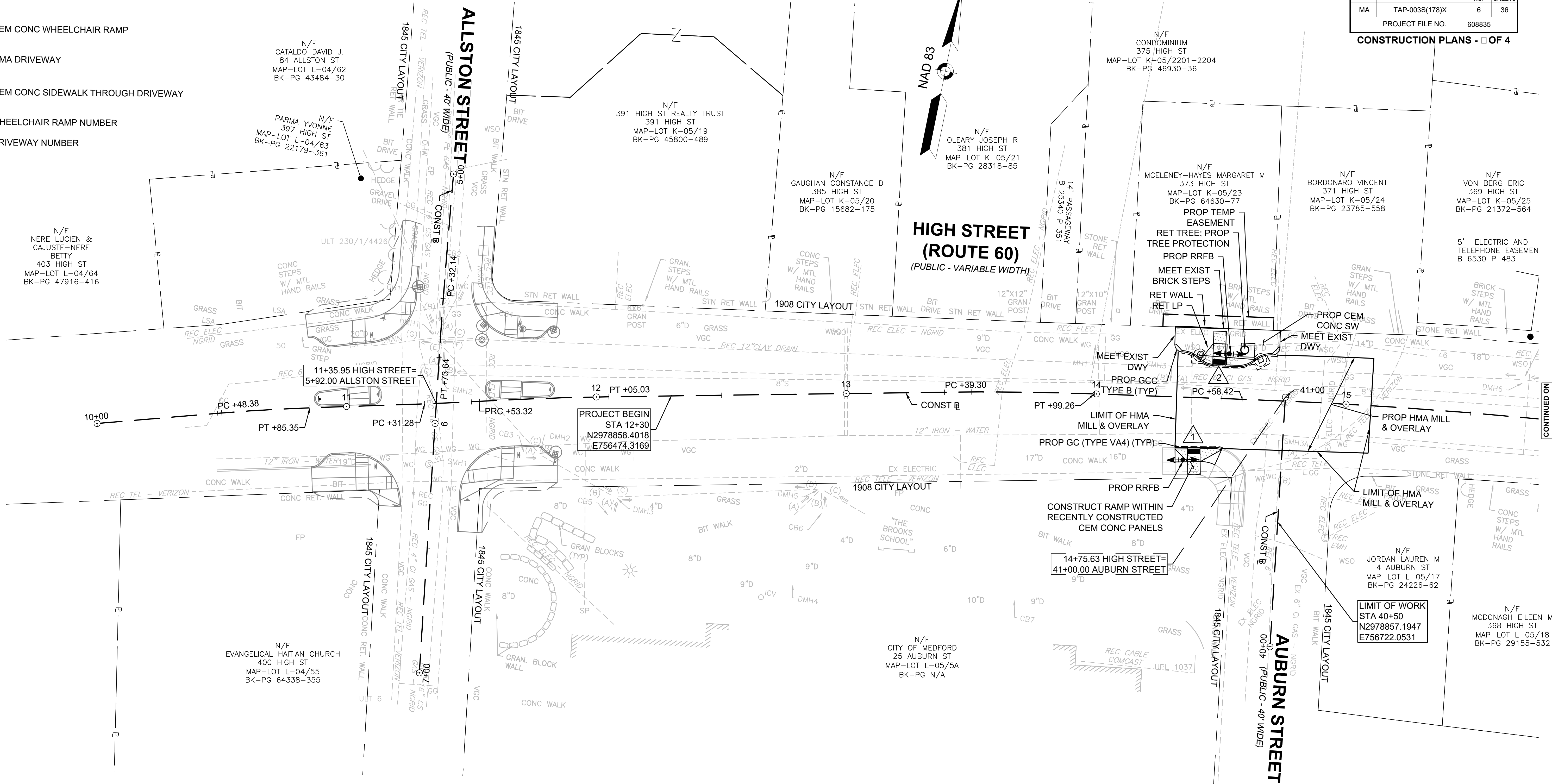
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-  = HMA DRIVEWAY
-  = CEM CONC SIDEWALK THROUGH DRIVEWAY
-  = WHEELCHAIR RAMP NUMBER
-  = DRIVEWAY NUMBER

MEDFORD

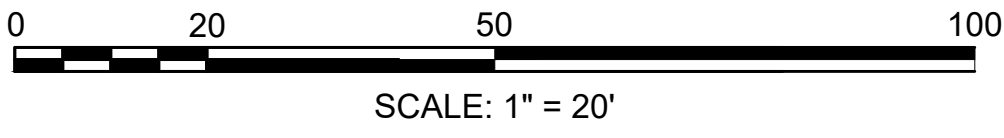
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	6	36
PROJECT FILE NO. 608835			

CONSTRUCTION PLANS - OF 4



SMH1 RIM EL=29.01' NVP WL=22.9' SUMP=21.7'	SMH2 RIM EL=30.34' I=22.2'(A) 8" CLAY I=22.2'(B) 8" CLAY I=22.1'(C) 8" CLAY	SMH3 RIM EL=38.22' I=30.4'(A) 8" UNKN I=30.3'(B) 8" UNKN	SMH3A RIM EL=39.22' I=33.3'(A) 6" UNKN I=33.2'(B) 6" UNKN	DMH1 RIM EL=30.43' I=27.6'(A) 12" PVC I=27.4'(B) 12" CLAY I=27.2'(C) 12" CLAY I=24.1'(D) 15" CLAY I=23.8'(E) 12" CLAY I=23.7'(F) 18" CLAY I=23.7'(G) 24" MTL	DMH2 RIM EL=30.23' I=26.5'(A) 12" MTL I=26.3'(B) 12" PVC NVP (C)	DMH3 RIM EL=31.83' I=27.2'(A) 12" HDPE I=27.2'(B) 12" HDPE I=27.2'(C) 12" HDPE	DMH4 RIM EL=34.65' I=29.9'(A) 6" HDPE I=29.6'(B) 12" HDPE I=29.6'(C) 18" HDPE I=29.5'(D) 12" HDPE	MH1 (NO INFO)	CB1 RIM EL=30.40' NVP WL=28.1' SUMP=24.7'	CB2 RIM EL=30.76' I=28.4' (12" PVC) WL=27.5' SUMP=25.9'	CB3 RIM EL=30.06' WL=26.0' SUMP=24.1'	CB4 RIM EL=30.45' I=26.3' (12" CLAY) WL=26' SUMP=24.3'	CB5 RIM EL=31.65' NVP (HOODED) WL=27.4' SUMP=24.0'	CB6 RIM EL=34.42' NVP (HOODED) WL=30.6' SUMP=26.9'	CB7 RIM EL=34.38' NVP (HOODED) SUMP=28.6'	CB8 RIM EL=38.39' I=35.0' (12" CLAY)
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HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 23

DRAINAGE DETAILS

SEE SHEET 23

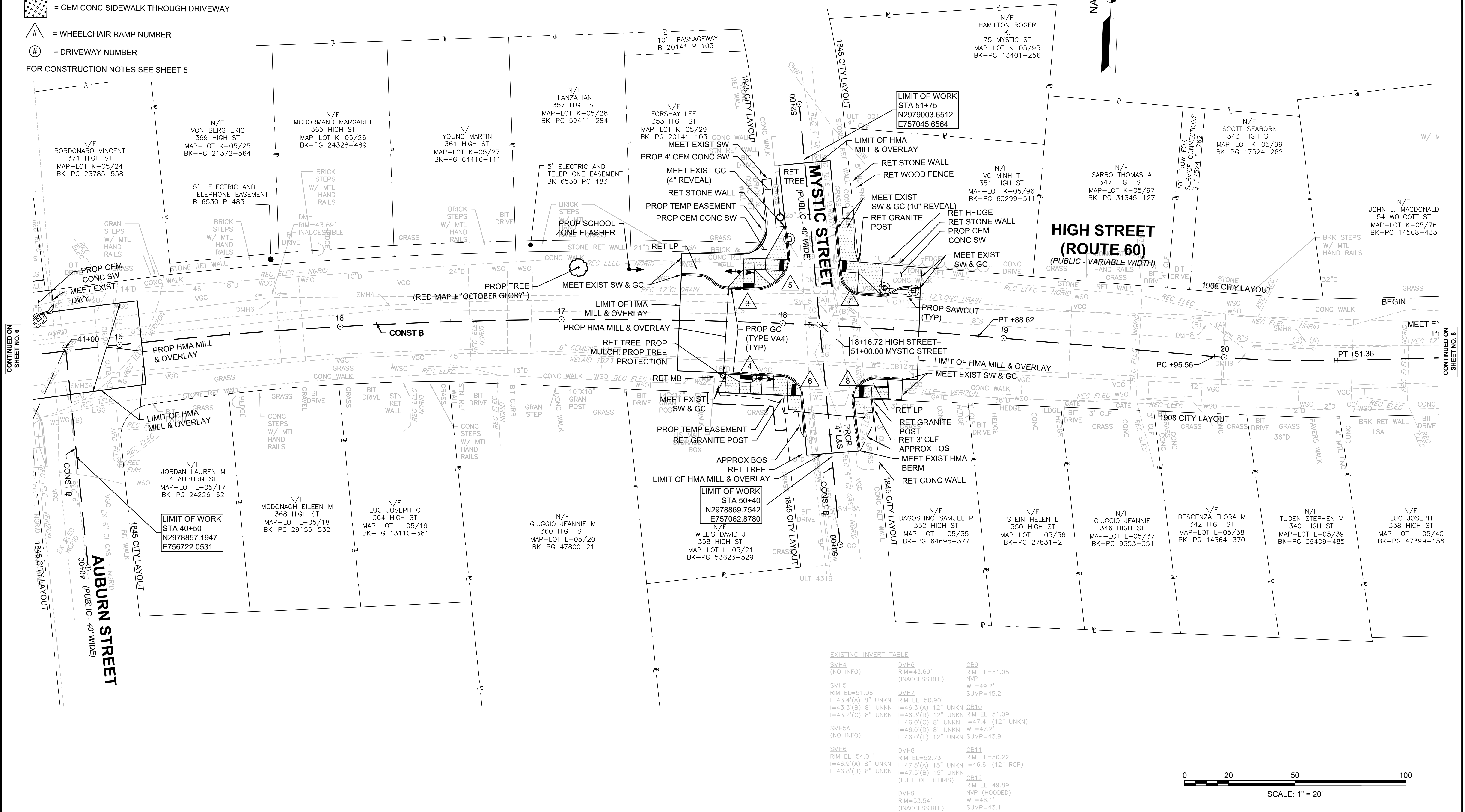
LEGEND

- = CEM CONC WHEELCHAIR RAMP
- = HMA DRIVEWAY
- = CEM CONC SIDEWALK THROUGH DRIVEWAY

- = WHEELCHAIR RAMP NUMBER
- = DRIVEWAY NUMBER

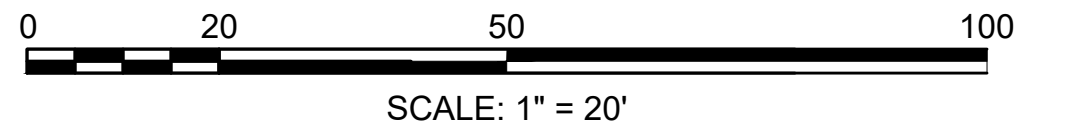
FOR CONSTRUCTION NOTES SEE SHEET 5

MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	7	36
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CONSTRUCTION PLANS - 2 OF 4			



EXISTING INVERT TABLE

SMH4 (NO INFO)	DMH6 RIM=43.69' (INACCESSIBLE)	CB9 RIM EL=51.05' NVP WL=49.2' SUMP=45.2'
SMH5 RIM EL=51.06' =43.4'(A) 8" UNKN =43.3'(B) 8" UNKN =43.2'(C) 8" UNKN	DMH7 RIM EL=50.90' =46.3'(A) 12" UNKN =46.3'(B) 12" UNKN =46.0'(C) 8" UNKN =46.0'(D) 8" UNKN =46.0'(E) 12" UNKN	CB10 RIM EL=51.09' =47.4' (12" UNKN)
SMH5A (NO INFO)	DMH8 RIM EL=52.73' =47.5'(A) 15" UNKN =47.5'(B) 15" UNKN (FULL OF DEBRIS)	CB11 RIM EL=50.22' =46.6' (12" RCP)
DMH9 RIM=53.54' (INACCESSIBLE)	CB12 RIM EL=49.89' NVP (HOODED) WL=46.1' SUMP=43.1'	



HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 24

DRAINAGE DETAILS

SEE SHEET 24

EXISTING INVERT TABLE

SMH7 RIM EL=58.06' I=50.6'(A) 8" UNKN I=50.5'(B) 6" UNKN I=50.5'(C) 8" UNKN	DMH10 RIM EL=57.88' I=54.6'(A) 8" UNKN I=54.4'(B) 8" UNKN I=53.5'(C) 8" UNKN SUMP=53.4'	CB13 RIM EL=57.76' NVP WL=54.9' SUMP=54.8'	CB14 RIM EL=52.33' NVP WL=49.9' SUMP=47.0'
SMH8 RIM EL=61.49' NVP SUMP=54.5'			
SMH9 RIM EL=61.40' I=53.5'(A) 8" UNKN I=53.4'(B) 6" UNKN I=53.3'(C) 6" UNKN			

MEDFORD
BROOKS ELEMENTARY SCHOOL

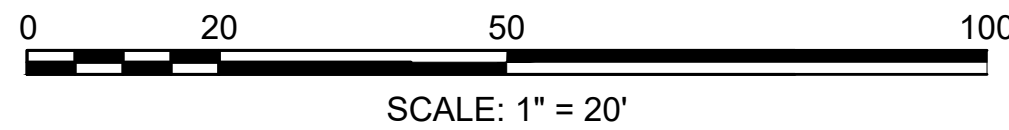
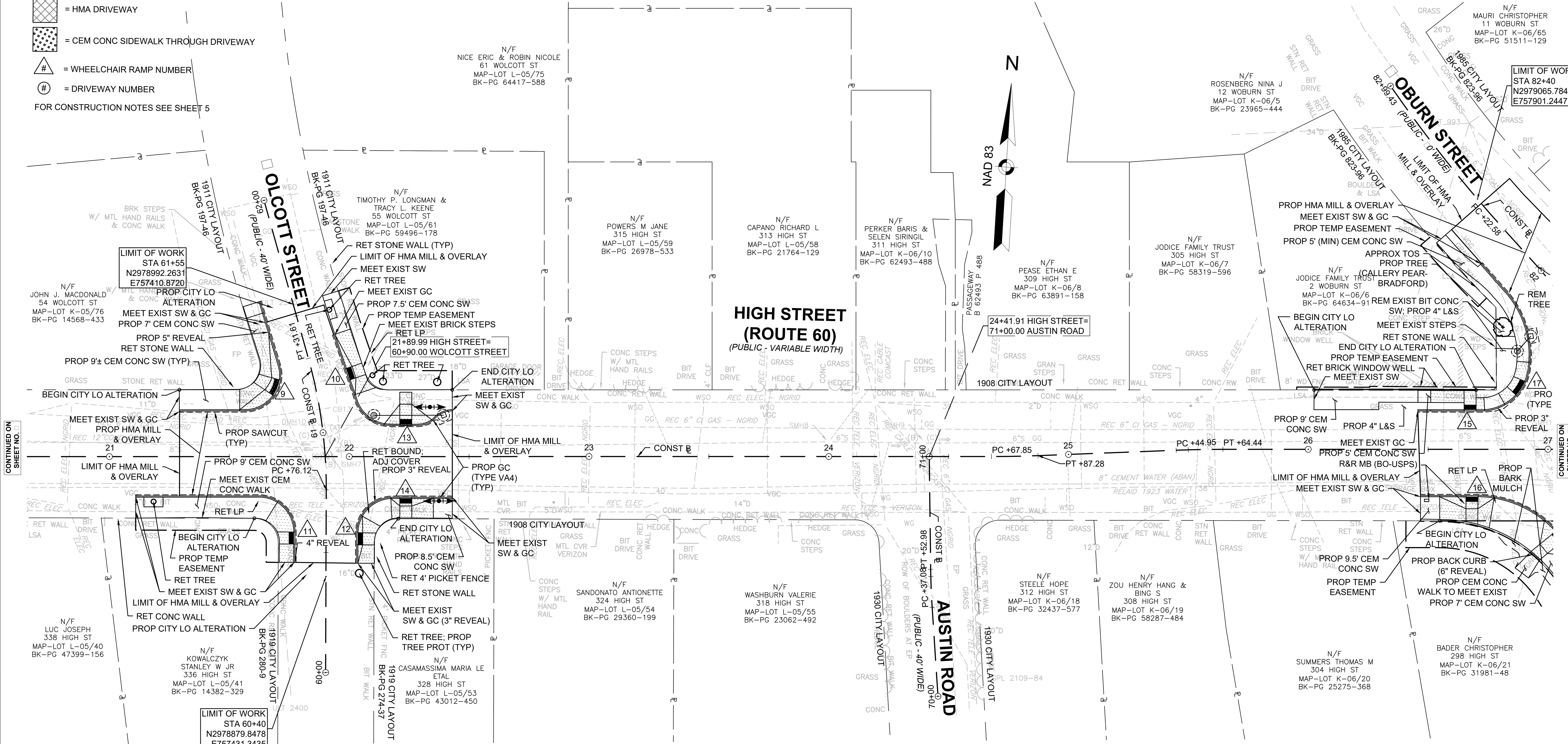
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	8	36
PROJECT FILE NO. 608835			

CONSTRUCTION PLANS - OF 4

LEGEND

- = CEM CONC WHEELCHAIR RAMP
- = HMA DRIVEWAY
- = CEM CONC SIDEWALK THROUGH DRIVEWAY
- = WHEELCHAIR RAMP NUMBER
- = DRIVEWAY NUMBER

FOR CONSTRUCTION NOTES SEE SHEET 5



HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 25

DRAINAGE DETAILS

SEE SHEET 25

MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	9	36
PROJECT FILE NO.		608835	

CONSTRUCTION PLANS - 4 OF 4

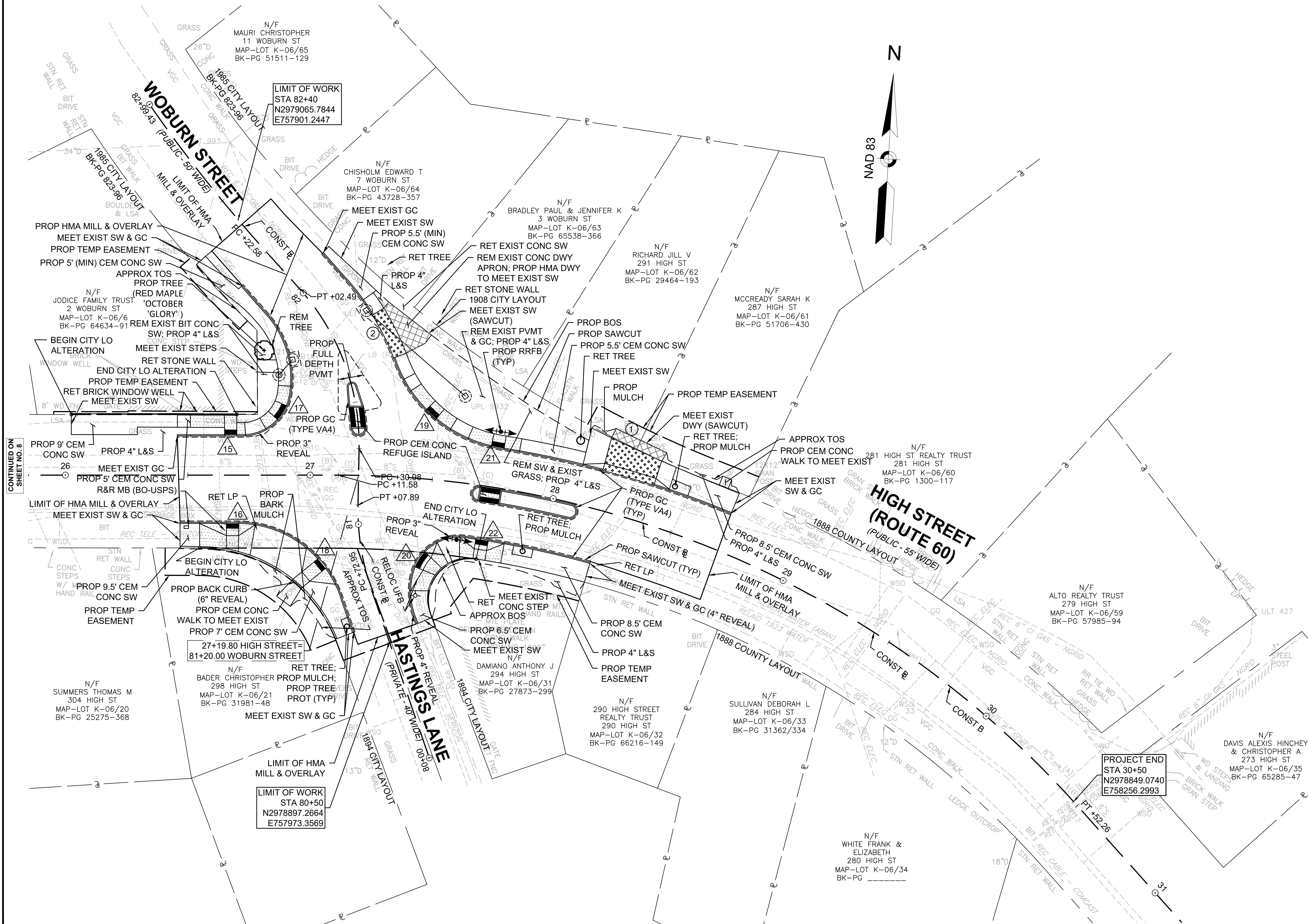
LEGEND

- = CEM CONC WHEELCHAIR RAMP
- = HMA DRIVEWAY
- = CEM CONC SIDEWALK THROUGH DRIVEWAY
- = WHEELCHAIR RAMP NUMBER
- = DRIVEWAY NUMBER

FOR CONSTRUCTION NOTES SEE SHEET 5

EXISTING INVERT TABLE

SMH10 RIM EL=52.32' I=4.3.0'(A) I=42.8'(B) I=42.8'(C)	MH4 (NO INFO)
SMH11 RIM EL=51.51' I=42.5'(A) I=42.4'(B) I=42.3'(C)	CB14 RIM=52.33' WL=50.2' SUMP=45.5'
SMH12 (INACCESSIBLE)	
SMH13 RIM EL=40.87' I=33.5'(A) 8" UNKN I=33.4'(B) 8" UNKN	



CONTINUED ON
SHEET NO. 8

HIGH STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	2978801.958	756251.415		N73°43'21"E 48.38'	10+48.38	2978815.518	756297.854
C1	10+48.38	2978815.518	756297.854	R=750.00' Δ=2°49'29" L=36.97' T=18.49'		10+85.35	2978825.002	756333.587
L2	10+85.35	2978825.002	756333.587		N76°32'49"E 45.93'	11+31.28	2978835.688	756378.256
C2	11+31.28	2978835.688	756378.256	R=1000.00' Δ=1°15'46" L=22.04' T=11.02'		11+53.32	2978841.050	756399.631
C3	11+53.32	2978841.050	756399.631	R=1200.00' Δ=2°28'08" L=51.71' T=25.86'		12+05.03	2978853.104	756449.911
L3	12+05.03	2978853.104	756449.911		N77°45'12"E 134.27'	13+39.30	2978881.586	756581.127
C4	13+39.30	2978881.586	756581.127	R=1200.00' Δ=2°51'47" L=59.96' T=29.99'		13+99.26	2978892.837	756640.019
L4	13+99.26	2978892.837	756640.019		N80°36'58"E 59.16'	14+58.42	2978902.483	756698.388
C5	14+58.42	2978902.483	756698.388	R=2000.00' Δ=12°19'27" L=430.19' T=215.93'		18+88.62	2978926.613	757127.073

CURVE TABLE								
CURVE #	DELTA	RADIUS	LENGTH	TANGENT	PC STATION	OFFSET	PT STATION	OFFSET
C1	41° 40' 12"	10.00	7.27	3.81	14+33.68	18.06 LT	14+40.32	15.53 LT
C2	41° 40' 20"	10.00	7.27	3.81	14+40.32	15.53 LT	14+46.97	13.00 LT
C3	42° 04' 12"	10.00	7.34	3.85	14+56.24	13.00 LT	14+62.91	15.58 LT
C4	42° 23' 24"	10.00	7.40	3.88	14+62.91	15.58 LT	14+69.60	18.18 LT
C5	15° 47' 32"	13.00	3.58	1.80	14+47.45	19.67 RT	14+51.01	20.00 LT

ALLSTON STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L10	5+00.00	2978928.065	756371.302		S6°40'17"E 32.14'	5+32.14	2978896.141	756375.036
C10	5+32.14	2978896.141	756375.036	R=2000.00' Δ=1°11'19" L=41.49' T=20.75'		5+73.64	2978854.981	756380.284
L11	5+73.64	2978854.981	756380.284		S7°51'37"E 126.36'	7+00.00	2978729.804	756397.565

AUBURN STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L12	40+00.00	2978807.675	756728.964		N7°56'39"W 100.00'	41+00.00	2978906.715	756715.143

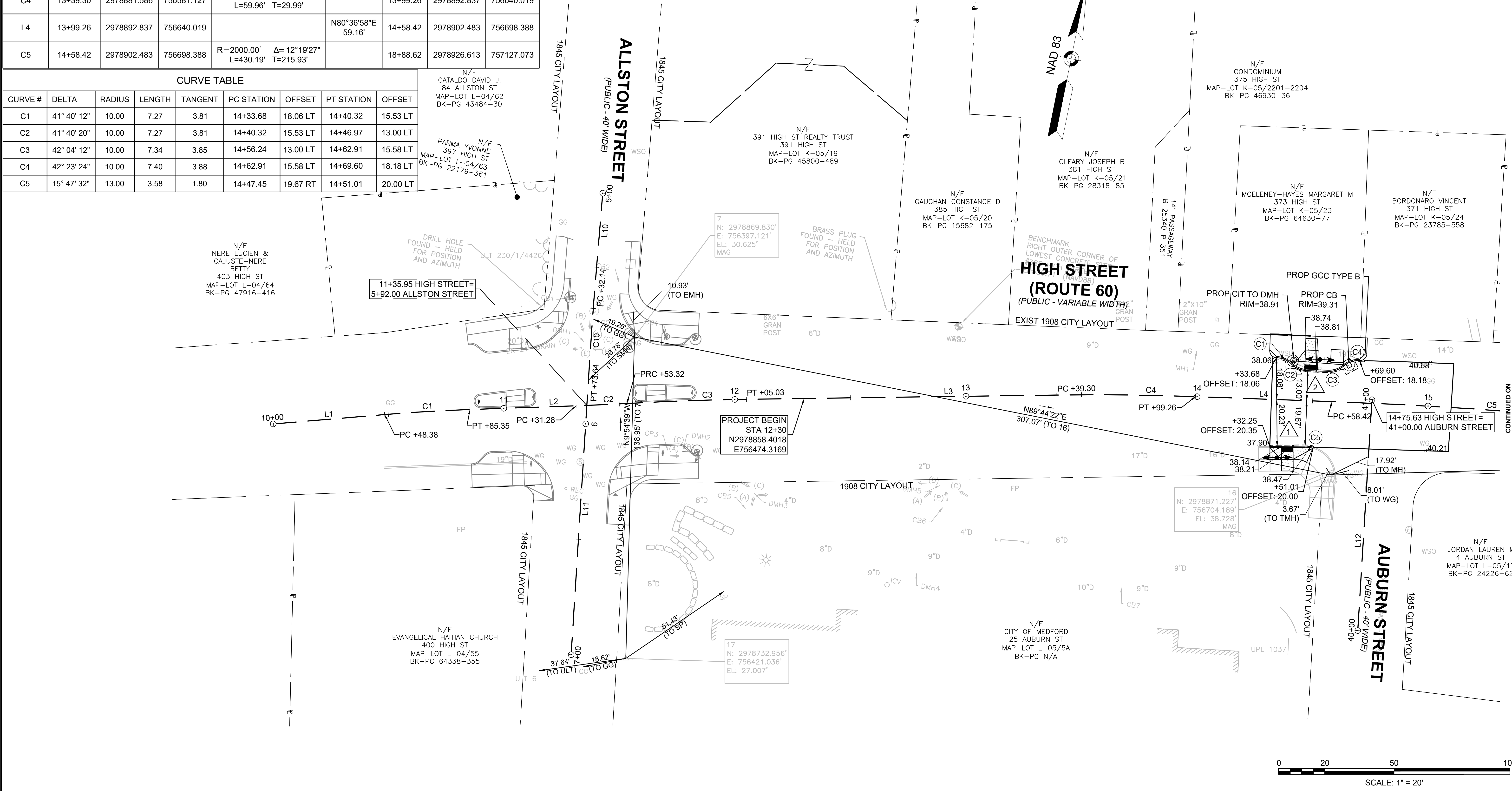
MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	10	36
PROJECT FILE NO.		608835	

CURB TIE GRADING PLANS - OF 4

Survey Traverse Point Table				
Point #	Northing	Easting	Elevation	Raw Description
7	2978869.830	756397.121	30.625	MTRV MAG
16	2978871.227	756704.189	38.728	MTRV MAG
17	2978732.956	756421.036	27.007	MTRV

- # = WHEELCHAIR RAMP NUMBER
- # = DRIVEWAY NUMBER
- # = CURB CURVE NUMBER



CONTINUED ON
SHEET NO. 11

HIGH STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C5	14+58.42	2978902.483	756698.388	R=2000.00' Δ=12°19'27" L=430.19' T=215.93'		18+88.62	2978926.613	757127.073
L5	18+88.62	2978926.613	757127.073		S87°03'35"E 106.94'	19+95.56	2978921.127	757233.876
C6	19+95.56	2978921.127	757233.876	R=500.00' Δ=6°23'39" L=55.80' T=27.93'		20+51.36	2978921.377	757289.647
L6	20+51.36	2978921.377	757289.647		N86°32'46"E 416.48'	24+67.85	2978946.468	757705.376

AUBURN STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L12	40+00.00	2978807.675	756728.964		N7°56'39"W 100.00'	41+00.00	2978906.715	756715.143

MYSTIC STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L13	50+00.00	2978830.081	757067.981		N7°19'45"W 200.00'	52+00.00	2979028.447	757042.467

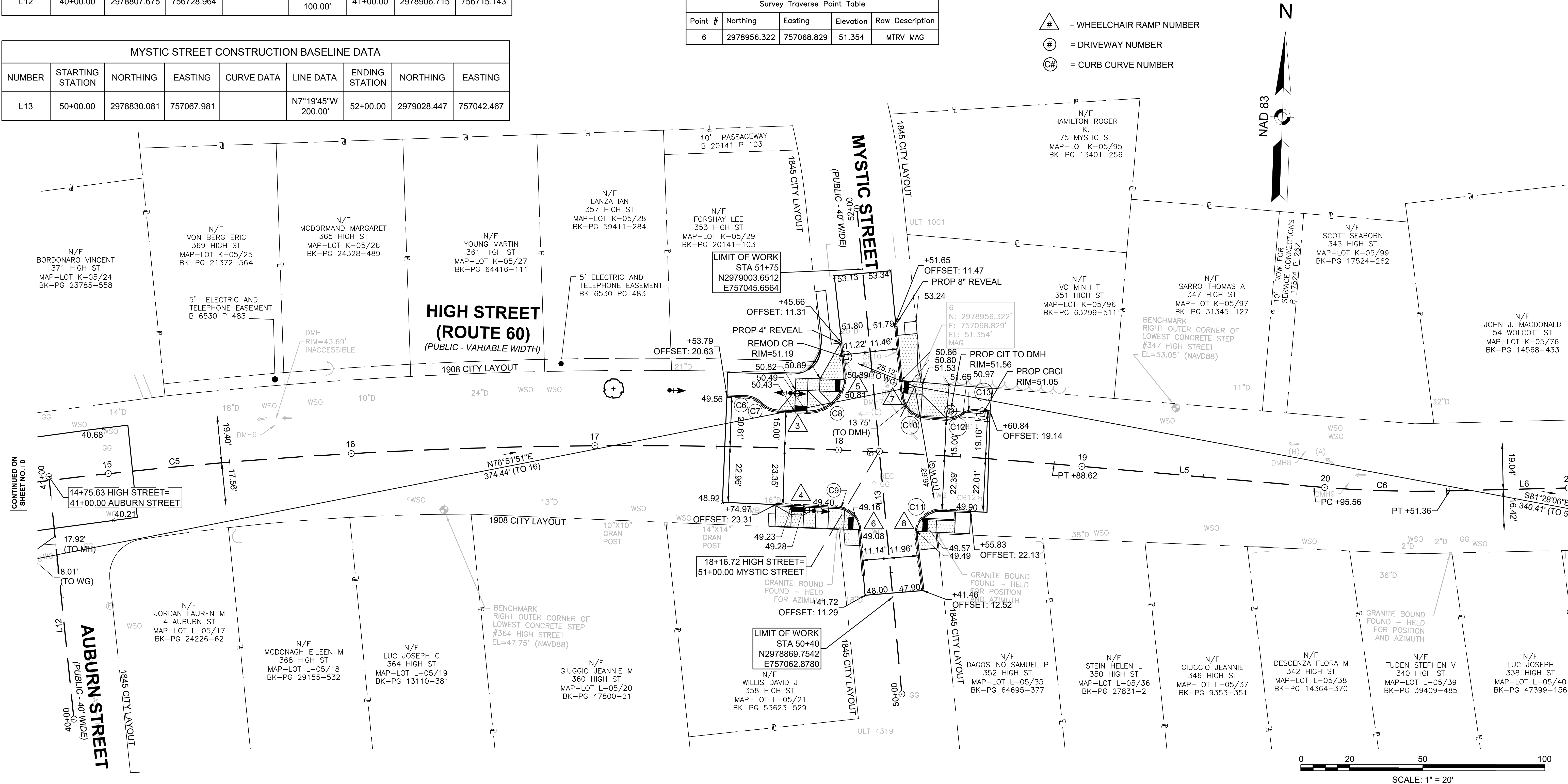
CURVE TABLE							
CURVE #	DELTA	RADIUS	LENGTH	TANGENT	PC STATION	OFFSET	PT STATION
C6	43° 16' 08"	10.00	7.55	3.97	17+61.11	20.54 LT	17+67.88
C7	43° 29' 49"	10.00	7.59	3.99	17+67.88	17.76 LT	17+74.70
C8	98° 21' 49"	15.00	25.75	17.37	17+86.53	15.00 LT	51+33.84
C9	82° 47' 01"	10.00	14.45	8.81	18+00.13	23.53 RT	50+68.72
C10	80° 50' 59"	10.00	14.11	8.52	51+21.75	11.56 RT	18+34.70
C11	98° 50' 25"	10.00	17.25	11.68	50+63.52	11.83 RT	18+43.76
C12	37° 42' 47"	10.00	6.58	3.42	18+43.26	15.00 LT	18+49.32
C13	38° 03' 43"	10.00	6.64	3.45	18+49.32	17.10 LT	18+55.44

Survey Traverse Point Table				
Point #	Northing	Easting	Elevation	Raw Description
6	2978956.322	757068.829	51.354	MTRV MAG

- # = WHEELCHAIR RAMP NUMBER
= DRIVEWAY NUMBER
= CURB CURVE NUMBER

MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	11	36
PROJECT FILE NO.		608835	

CURB TIE GRADING PLANS - 2 OF 4



WOLCOTT STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L15	61+31.61	2978970.164	757418.547		N19°09'04"W 68.39'	62+00.00	2979034.773	757396.109
C11	60+76.12	2978915.909	757429.292	R=200.00' Δ=15°53'45" L=55.49' T=27.92'		61+31.61	2978970.164	757418.547
L14	60+00.00	2978839.912	757433.615		N3°15'19"W 76.12'	60+76.12	2978915.909	757429.292

AUSTIN ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L16	70+00.00	2978845.403	757689.130		N7°12'20"W 37.08'	70+37.08	2978882.191	757684.479
C12	70+37.08	2978882.191	757684.479	R=300.00' Δ=3°02'14" L=15.90' T=7.95'		70+52.98	2978898.014	757682.904
L17	70+52.98	2978898.014	757682.904		N4°10'06"W 47.02'	71+00.00	2978944.906	757679.486

HIGH STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L6	20+51.36	2978921.377	757289.647		N86°32'46"E 416.48'	24+67.85	2978946.468	757705.376
C7	24+67.85	2978946.468	757705.376	R=500.00' Δ=2°13'39" L=19.44' T=9.72'		24+87.28	2978948.016	757724.752
L7	24+87.28	2978948.016	757724.752		N84°19'07"E 57.66'	25+44.95	2978953.725	757782.131
C8	25+44.95	2978953.725	757782.131	R=500.00' Δ=2°14'02" L=19.49' T=9.75'		25+64.44	2978955.276	757801.563
L8	25+64.44	2978955.276	757801.563		N86°33'09"E 147.14'	27+11.58	2978964.124	757948.433

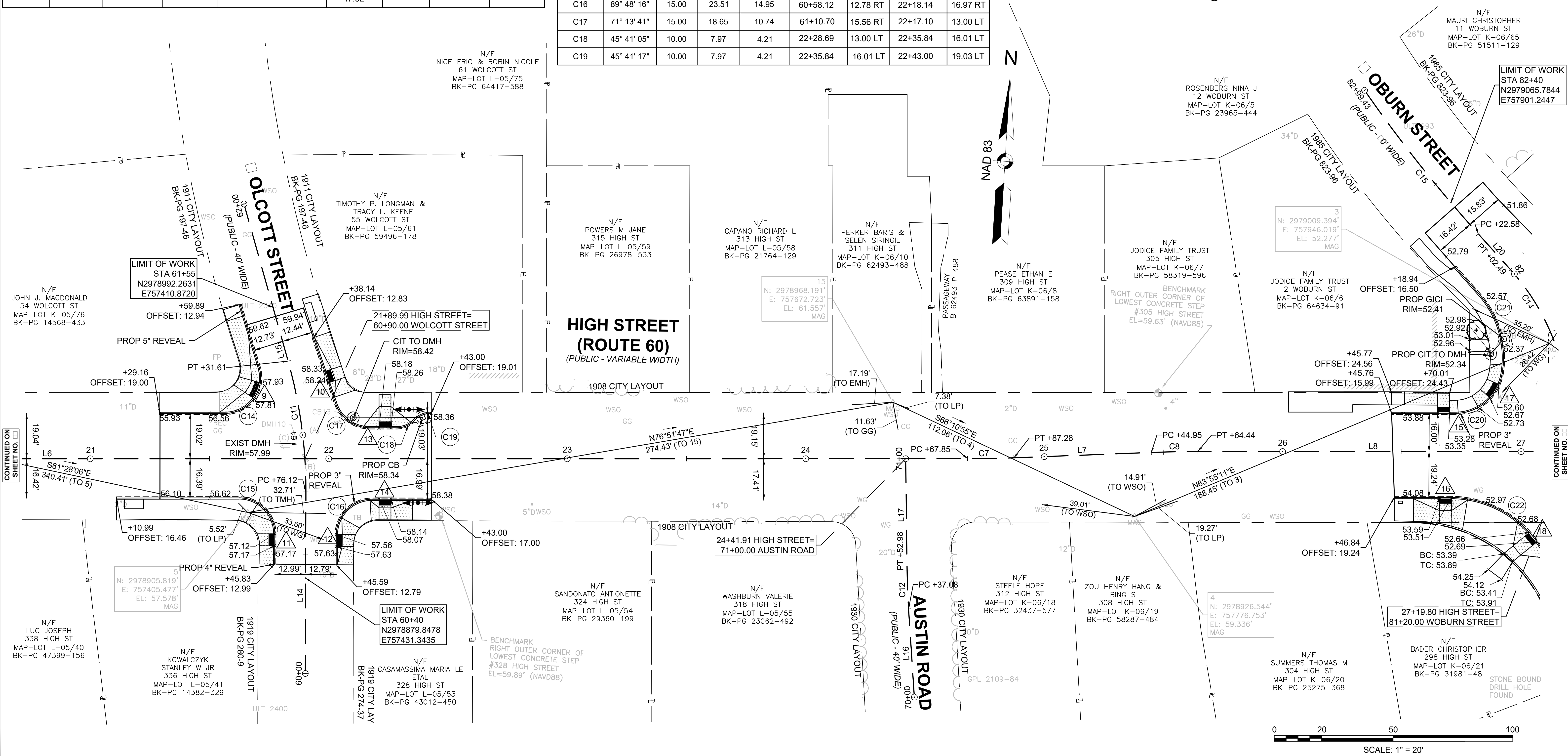
CURVE TABLE							
CURVE #	DELTA	RADIUS	LENGTH	TANGENT	PC STATION	OFFSET	PT STATION
C14	107° 07' 37"	15.00	28.05	20.32	21+56.43	19.03 LT	61+32.52
C15	90° 11' 44"	15.00	23.61	15.05	21+62.37	16.40 RT	60+58.50
C16	89° 48' 16"	15.00	23.51	14.95	60+58.12	12.78 RT	22+18.14
C17	71° 13' 41"	15.00	18.65	10.74	61+10.70	15.56 RT	22+17.10
C18	45° 41' 05"	10.00	7.97	4.21	22+28.69	13.00 LT	22+35.84
C19	45° 41' 17"	10.00	7.97	4.21	22+35.84	16.01 LT	22+43.00

MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	12	36
PROJECT FILE NO.		608835	

CURB TIE GRADING PLANS - 1 OF 4

Survey Traverse Point Table				
Point #	Northing	Easting	Elevation	Raw Description
4	2978926.544	757776.753	59.336	MTRV MAG
5	2978905.819	757405.477	57.578	MTRV MAG
15	2978968.191	757672.723	61.557	MTRV MAG

- # = WHEELCHAIR RAMP NUMBER
= DRIVEWAY NUMBER
C# = CURB CURVE NUMBER



Survey Traverse Point Table				
Point #	Northing	Easting	Elevation	Raw Description
1	2978863.772	758271.762	39.868	MTRV MAG
3	2979009.394	757946.019	52.277	MTRV MAG
18	2978905.574	758107.301	49.924	MTRV MAG

CURVE TABLE								
CURVE #	DELTA	RADIUS	LENGTH	TANGENT	PC STATION	OFFSET	PT STATION	OFFSET
C20	80° 33' 39"	20.00	28.13	16.95	26+72.32	16.00 LT	81+60.38	25.02 LT
C21	50° 49' 26"	40.00	35.48	19.00	81+60.38	25.02 LT	82+03.31	16.69 LT
C22	71° 02' 34"	45.00	55.80	32.12	26+70.27	19.24 RT	80+73.86	12.50 LT
C23	166° 10' 55"	2.00	5.80	16.51	81+56.67	1.96 LT	81+56.45	2.00 RT
C24	180° 00' 00"	3.00	9.42	INFINITY	81+39.52	3.00 LT	81+39.01	3.00 RT
C25	21° 14' 53"	106.00	39.31	19.88	81+60.82	19.74 RT	81+93.66	16.98 RT
C26	60° 44' 44"	55.00	58.31	32.23	27+75.49	16.00 LT	81+60.82	19.74 RT
C27	35° 51' 14"	30.00	18.77	9.71	80+56.27	12.87 RT	80+74.25	17.98 RT
C28	82° 46' 04"	20.00	28.89	17.62	80+74.25	17.98 RT	27+66.77	21.50 RT
C29	180° 00' 00"	3.00	9.42	INFINITY	27+69.67	6.50 RT	27+69.69	0.50 RT
C30	180° 00' 06"	3.00	9.42	206722.38	28+07.71	0.50 RT	28+07.71	6.50 RT

MEDFORD
BROOKS ELEMENTARY SCHOOL

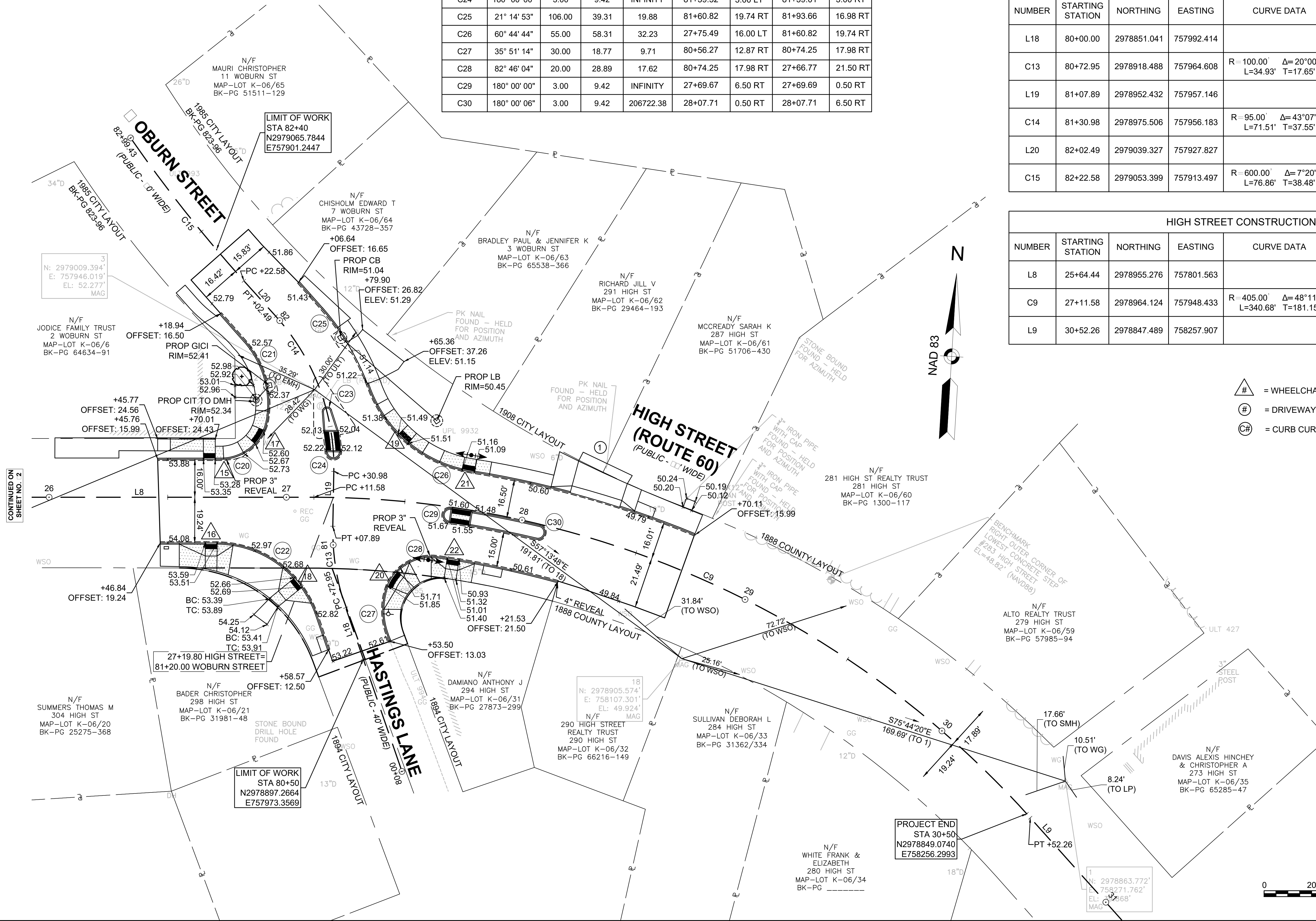
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	13	36
PROJECT FILE NO.		608835	

CURB TIE GRADING PLANS - 4 OF 4

WOBURN STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L18	80+00.00	2978851.041	757992.414		N22°24'18"W 72.95'	80+72.95	2978918.488	757964.608
C13	80+72.95	2978918.488	757964.608	R = 100.00' Δ= 20°00'52" L=34.93' T=17.65'		81+07.89	2978952.432	757957.146
L19	81+07.89	2978952.432	757957.146		N2°23'26"W 23.09'	81+30.98	2978975.506	757956.183
C14	81+30.98	2978975.506	757956.183	R = 95.00' Δ= 43°07'51" L=71.51' T=37.55'		82+02.49	2979039.327	757927.827
L20	82+02.49	2979039.327	757927.827		N45°31'17"W 20.08'	82+22.58	2979053.399	757913.497
C15	82+22.58	2979053.399	757913.497	R = 600.00' Δ= 7°20'22" L=76.86' T=38.48'		82+99.43	2979110.608	757862.252

HIGH STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L8	25+64.44	2978955.276	757801.563		N86°33'09"E 147.14'	27+11.58	2978964.124	757948.433
C9	27+11.58	2978964.124	757948.433	R = 405.00' Δ= 48°11'47" L=340.68' T=181.15'		30+52.26	2978847.489	758257.907
L9	30+52.26	2978847.489	758257.907		S45°15'05"E 147.74'	32+00.00	2978743.479	758362.834

- # = WHEELCHAIR RAMP NUMBER
= DRIVEWAY NUMBER
= CURB CURVE NUMBER



NOTES:

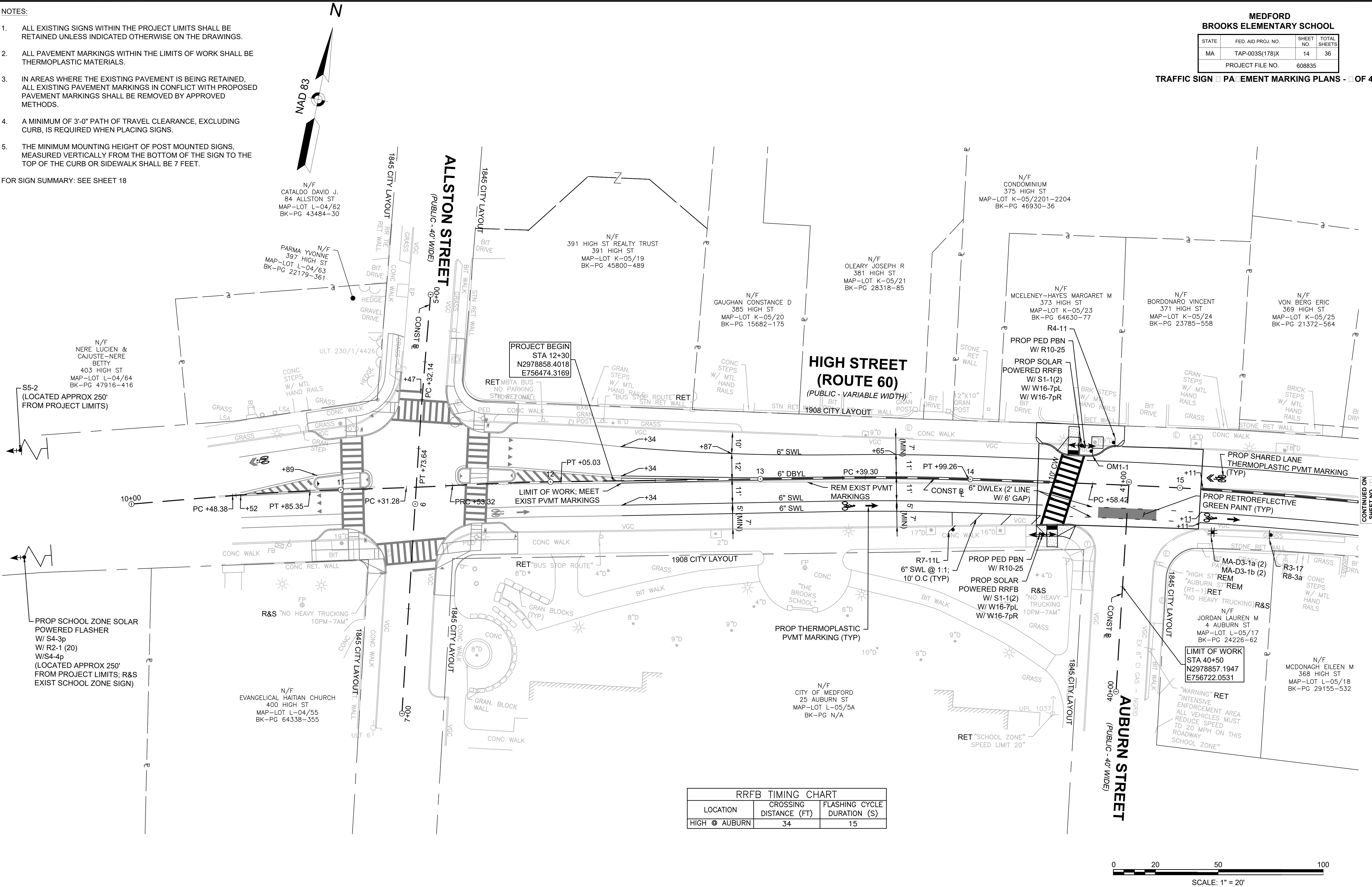
- ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC MATERIALS.
- IN AREAS WHERE THE EXISTING PAVEMENT IS BEING RETAINED, ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY APPROVED METHODS.
- A MINIMUM OF 3'-0" PATH OF TRAVEL CLEARANCE, EXCLUDING CURB, IS REQUIRED WHEN PLACING SIGNS.
- THE MINIMUM MOUNTING HEIGHT OF POST MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK SHALL BE 7 FEET.

FOR SIGN SUMMARY: SEE SHEET 18

MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	14	36
PROJECT FILE NO.		608835	

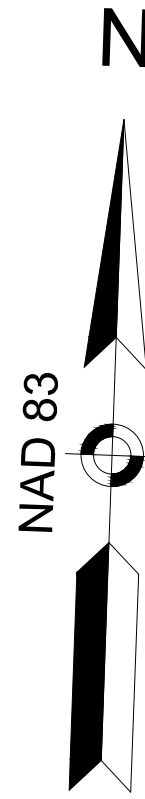
TRAFFIC SIGN PA EMENT MARKING PLANS - 4 OF 4



NOTES:

- ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC MATERIALS.
- IN AREAS WHERE THE EXISTING PAVEMENT IS BEING RETAINED, ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY APPROVED METHODS.
- A MINIMUM OF 3'-0" PATH OF TRAVEL CLEARANCE, EXCLUDING CURB, IS REQUIRED WHEN PLACING SIGNS.
- THE MINIMUM MOUNTING HEIGHT OF POST MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK SHALL BE 7 FEET.

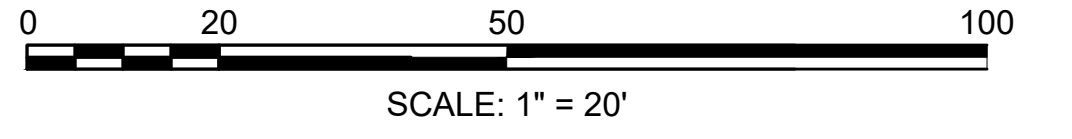
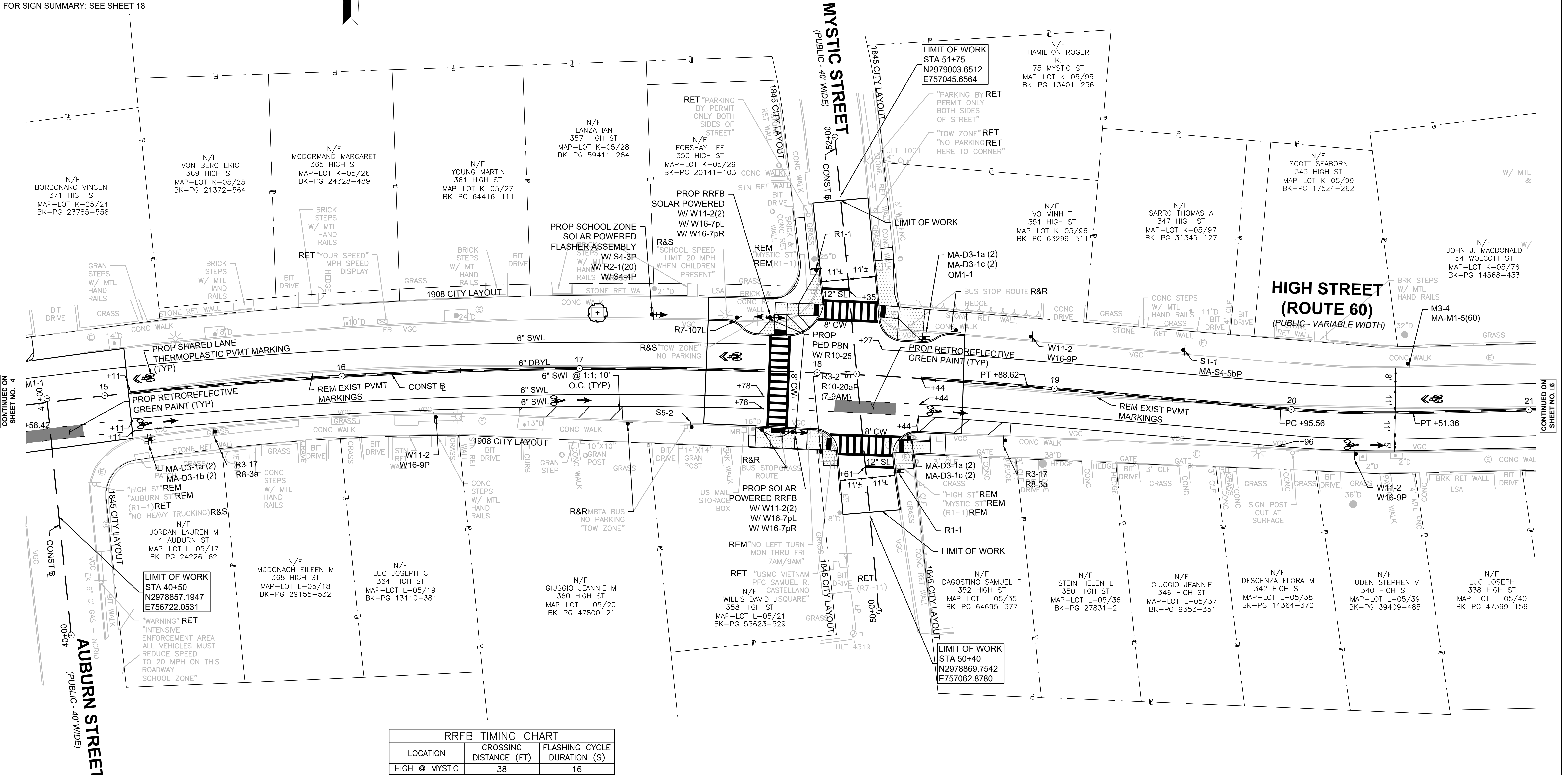
FOR SIGN SUMMARY: SEE SHEET 18



MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	15	36
PROJECT FILE NO.		608835	

TRAFFIC SIGN ☐ PAVEMENT MARKING PLANS - 2 OF 4

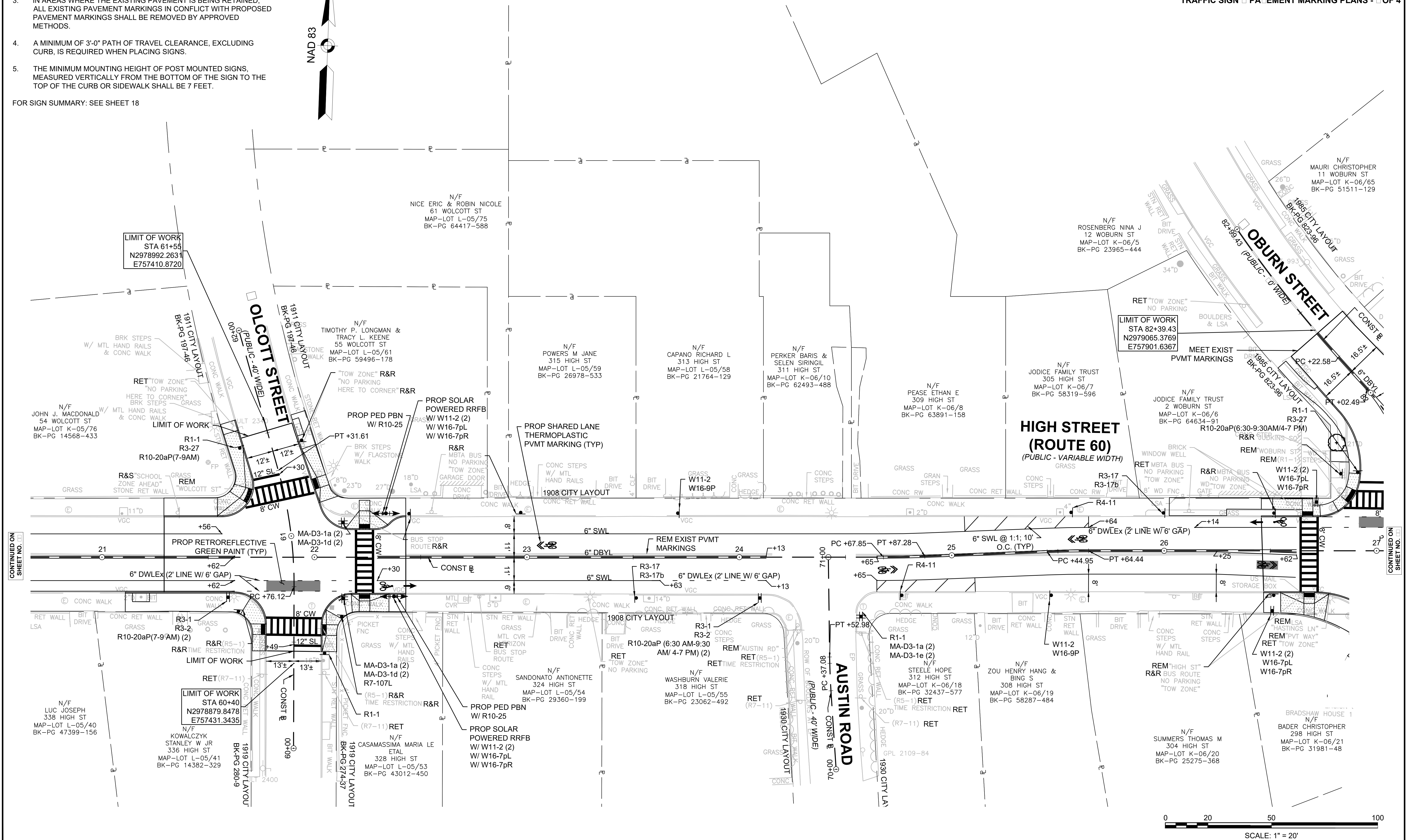


1. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
2. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC MATERIALS.
3. IN AREAS WHERE THE EXISTING PAVEMENT IS BEING RETAINED, ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY APPROVED METHODS.
4. A MINIMUM OF 3'-0" PATH OF TRAVEL CLEARANCE, EXCLUDING CURB, IS REQUIRED WHEN PLACING SIGNS.
5. THE MINIMUM MOUNTING HEIGHT OF POST MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK SHALL BE 7 FEET.

RRFB TIMING CHART		
LOCATION	CROSSING DISTANCE (FT)	FLASHING CYCLE DURATION (S)
HIGH @ WOLCOTT	30	14

MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	16	36
PROJECT FILE NO.		608835	

TRAFFIC SIGN □ PAVEMENT MARKING PLANS - □ OF 4



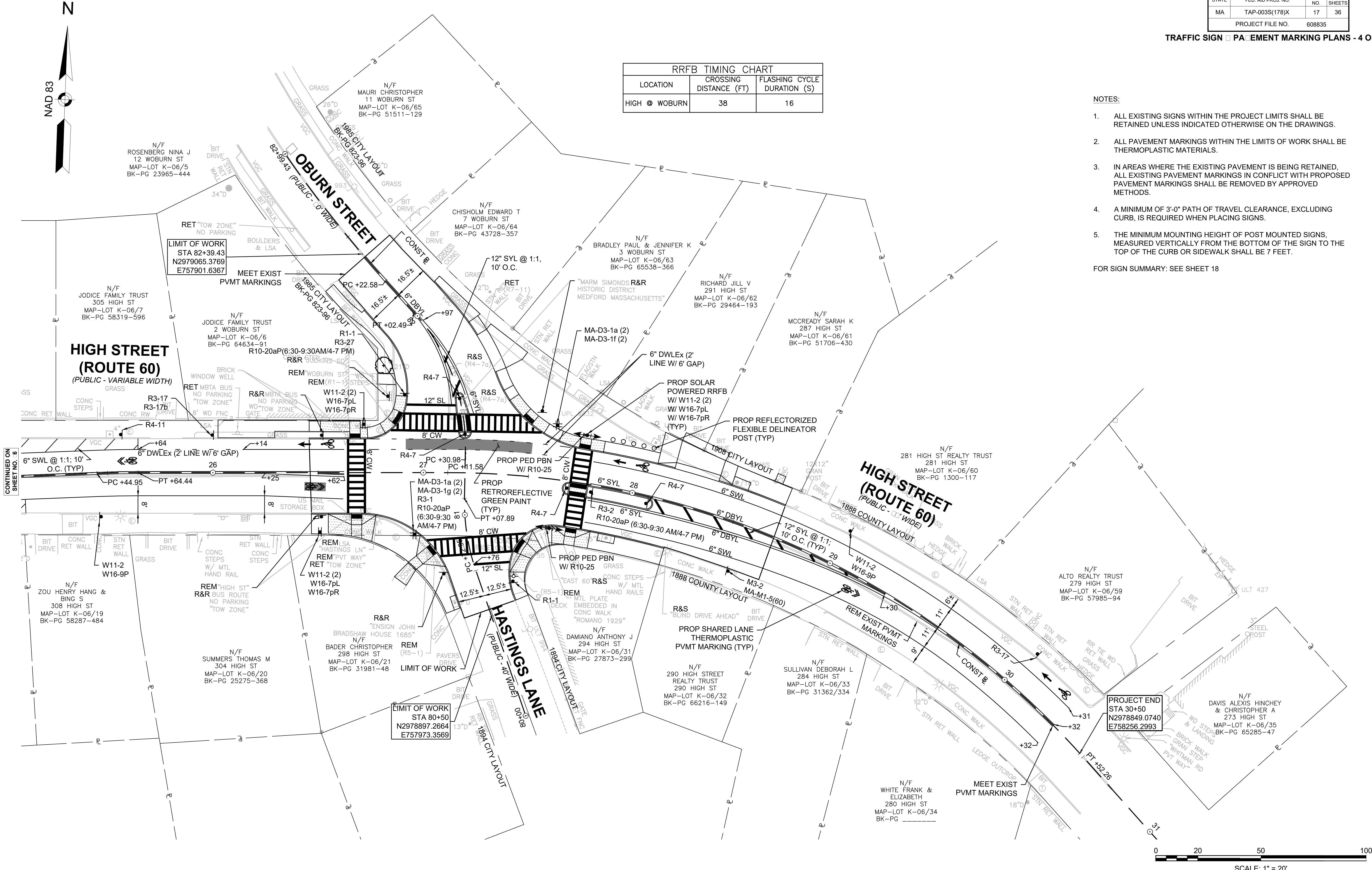
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	17	36
PROJECT FILE NO.		608835	

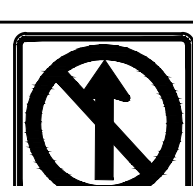
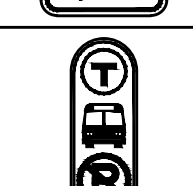
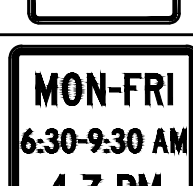
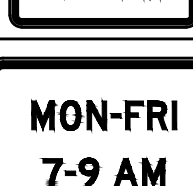
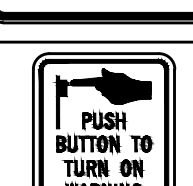
TRAFFIC SIGN □ PA□EMENT MARKING PLANS - 4 OF 4

RRFB TIMING CHART		
LOCATION	CROSSING DISTANCE (FT)	FLASHING CYCLE DURATION (S)
HIGH @ WOBURN	38	16

1. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
2. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC MATERIALS.
3. IN AREAS WHERE THE EXISTING PAVEMENT IS BEING RETAINED, ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED BY APPROVED METHODS.
4. A MINIMUM OF 3'-0" PATH OF TRAVEL CLEARANCE, EXCLUDING CURB, IS REQUIRED WHEN PLACING SIGNS.
5. THE MINIMUM MOUNTING HEIGHT OF POST MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK SHALL BE 7 FEET.

FOR SIGN SUMMARY: SEE SHEET 18



TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			SIZE AND NUMBER OF POSTS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR		BACK-GROUND	LEGEND	BORDER			
R1-1	30	30		①			7	RED	WHITE	WHITE	7	6.25	43.75
R2-1(20)	24	30					2	WHITE	BLACK	BLACK	0 MOUNT 2 ON SCHOOL ZONE FLASHER	5.00	10.00
R3-1	24	24					3	WHITE	RED/BLACK	BLACK	2 MOUNT 1 W/ MA-D3-1a	4.00	12.00
R3-2	24	24					4	WHITE	RED/BLACK	BLACK	2 MOUNT 2 W/ R3-1	4.00	16.00
R3-17	24	18					5	BLACK/WHITE	WHITE/BLACK	BLACK	5	3.00	15.00
R3-17b	24	8					2	WHITE	BLACK	BLACK	0 MOUNT 2 W/ R3-17	1.33	2.67
R3-27	24	24					2	WHITE	RED/BLACK	BLACK	0 MOUNT 2 W/ R1-1	4.00	8.00
R4-7	24	30					4	WHITE	BLACK	BLACK	4	5.00	20.00
R4-11	30	30					3	WHITE	BLACK	BLACK	3	6.25	18.75
R7-11L	12	18					1	WHITE	RED	RED	1	1.50	1.50
R7-107L	30	12					2	WHITE	RED	RED	1 MOUNT 1 W/ MA-D3-1a	2.50	5.00
R8-3a	24	30					2	WHITE	RED	RED	0 MOUNT 2 W/ R3-17	5.00	10.00
R10-20aP(6:30 AM-9:30 AM/ 4-7 PM)	24	24					5	WHITE	BLACK	BLACK	0 MOUNT W/ R1-1, R3-1, & R3-2	4.00	20.00
R10-20aP(7-9 AM)	24	18					4	WHITE	BLACK	BLACK	0 MOUNT W/ R3-2	3.00	12.00
R10-25	9	12					8	WHITE	BLACK	BLACK	0 MOUNT 8 ON RRFB	PAID UNDER ITEM 824.22x	
S1-1	36	36					1	FL. YELLOW-GREEN	BLACK	BLACK	1	9.00	9.00
							4 (ON RRFB)	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 4 ON RRFB	PAID UNDER ITEM 824.22x	

High St

MA-D3-1a

Auburn St

MA-D3-1b

Mystic St

MA-D3-1c

Wolcott St

MA-D3-1d

Austin Rd

MA-D3-1f

Woburn St

MA-D3-1e

Hastings Ln

MA-D3-1g

NOTES:

1. SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS FOR TEXT AND LEGEND DIMENSIONS.

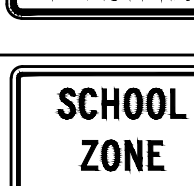
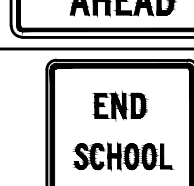
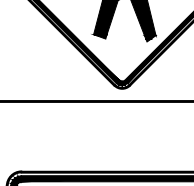
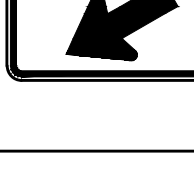
② THE MINIMUM MOUNTING HEIGHT OF POST-MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF CURB OR SIDEWALK, OR THE ELEVATION OF THE NEAR EDGE OF TRAVEL WAY, SHALL BE 7 FEET UNLESS OTHERWISE SPECIFIED.

3. A MINIMUM OF 3'-0" PATH OF TRAVEL CLEARANCE, EXCLUDING CURB, IS REQUIRED WHEN PLACING SIGNS.

MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	18	36
PROJECT FILE NO. 608835			

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			SIZE AND NUMBER OF POSTS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR		BACK-GROUND	LEGEND	BORDER					
S4-3P	24	8		①			2	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 2 ON SCHOOL ZONE FLASHER	1.33	2.67		
S4-4P	24	10		↓			2	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 2 ON SCHOOL ZONE FLASHER	1.67	3.33		
MA-S4-5bP	36	30		MASSDOT STANDARD			1	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 1 W/ S1-1	7.50	7.50		
S5-2	24	30		①			2	WHITE	BLACK	BLACK	2	5.00	10.00		
W11-2	30	30					18	FL. YELLOW-GREEN	BLACK	BLACK	12	6.25	112.50		
							4 (ON RRFB)	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 16 ON RRFB	PAID UNDER ITEM 824.22x			
W16-7pL	24	12					6	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 6 W/ W11-2	2.00	12.00		
							4	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 4 ON RRFB	PAID UNDER ITEM 824.22x			
W16-7pR	24	12					6	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 6 W/ W11-2	2.00	12.00		
							4	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 4 ON RRFB	PAID UNDER ITEM 824.22x			
W16-9P	24	12		↓			6	FL. YELLOW-GREEN	BLACK	BLACK	0 MOUNT 6 W/ W11-2	2.00	12.00		
MA-M1-5(60)	24	24		MASSDOT STANDARD			2	WHITE	BLACK	BLACK	2	4.00	8.00		
M3-2	24	12		①			1	WHITE	BLACK	BLACK	0 MOUNT 1 W/ MA-M1-5(60)	2.00	2.00		
M3-4	24	12		↓			1	WHITE	BLACK	BLACK	0 MOUNT 1 W/ MA-M1-5(60)	2.00	2.00		
OM1-1	18	18		↓			2	FL. YELLOW	YELLOW	YELLOW	1 MOUNT 1 W/ MA-D3-1a	2.25	4.50		

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			SIZE AND NUMBER OF POSTS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)	
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR		BACK-GROUND	LEGEND	BORDER				
MA-D3-1a	36	12	SEE LEFT	6D / 4D	2.75 3.25	N/A	16	GREEN	WHITE	WHITE	7 MOUNT 1 W/ R1-1	PAID UNDER ITEM 874.		
MA-D3-1b	45	12	SEE LEFT	6D / 4D	3 3	N/A	2	GREEN	WHITE	WHITE	0 MOUNT W/ MA-D3-1a	PAID UNDER ITEM 874.		
MA-D3-1c	42	12	SEE LEFT	6D / 4D	2.75 3.25	N/A	4	GREEN	WHITE	WHITE	0 MOUNT W/ MA-D3-1a	PAID UNDER ITEM 874.		
MA-D3-1d	45	12	SEE LEFT	6D / 4D	3 3	N/A	4	GREEN	WHITE	WHITE	0 MOUNT W/ D3-1a	PAID UNDER ITEM 874.		
MA-D3-1e	42	12	SEE LEFT	6D / 4D	3 3	N/A	2	GREEN	WHITE	WHITE	0 MOUNT W/ R1-1	PAID UNDER ITEM 874.		
MA-D3-1f	45	12	SEE LEFT	6D / 4D	3 3	N/A	2	GREEN	WHITE	WHITE	0 MOUNT W/ MA-D3-1a	PAID UNDER ITEM 874.		
MA-D3-1g	48	12	SEE LEFT	6D / 4D	2.75 3.25	N/A	2	GREEN	WHITE	WHITE	0 MOUNT W/ MA-D3-1a	PAID UNDER ITEM 874.		

TEMPORARY TRAFFIC CONTROL NOTES

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- 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 THE "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 PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A 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.
- NO LANE CLOSURES SHALL BE PERMITTED DURING PEAK-HOUR TRAFFIC. PEAK HOUR IS DEFINED AS BETWEEN 7-9 AM AND 4-6 PM ON WEEKDAYS.

LEGEND:

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

SUGGESTED WORK ZONE WARNING SIGN SPACING

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

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

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

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

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

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

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

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN. 100 FT MAX.
DOWNSTREAM TAPER	50 FT MIN. 100 FT MAX. PER LANE

FORMULAS FOR DETERMINING TAPER LENGTHS

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

WHERE: L = TAPER LENGTH IN FEET

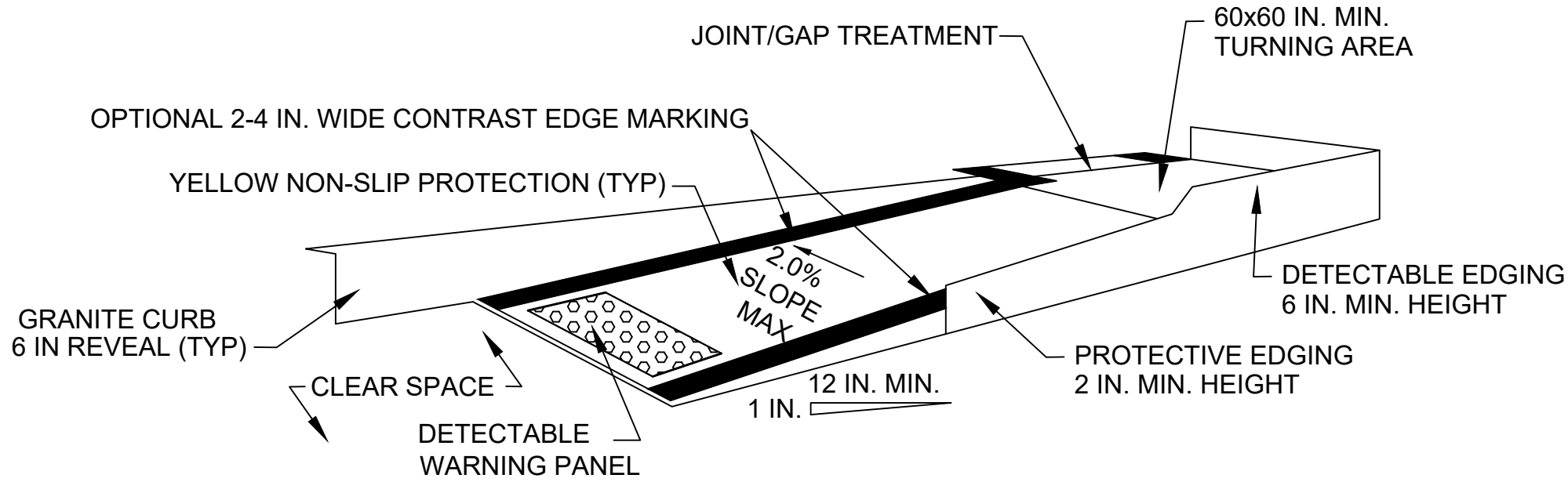
W = WIDTH OF OFFSET IN FEET

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

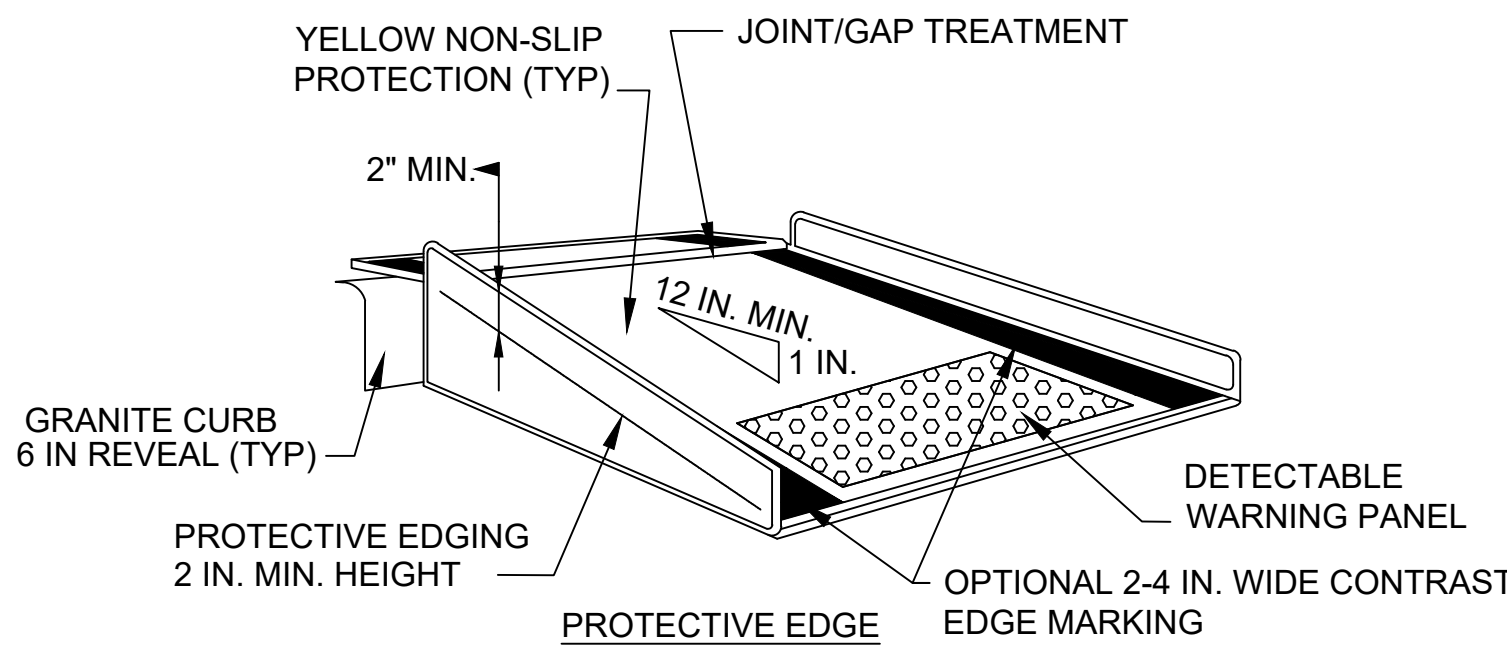
TYPICAL PEDESTRIAN DETAILS

NOTES:

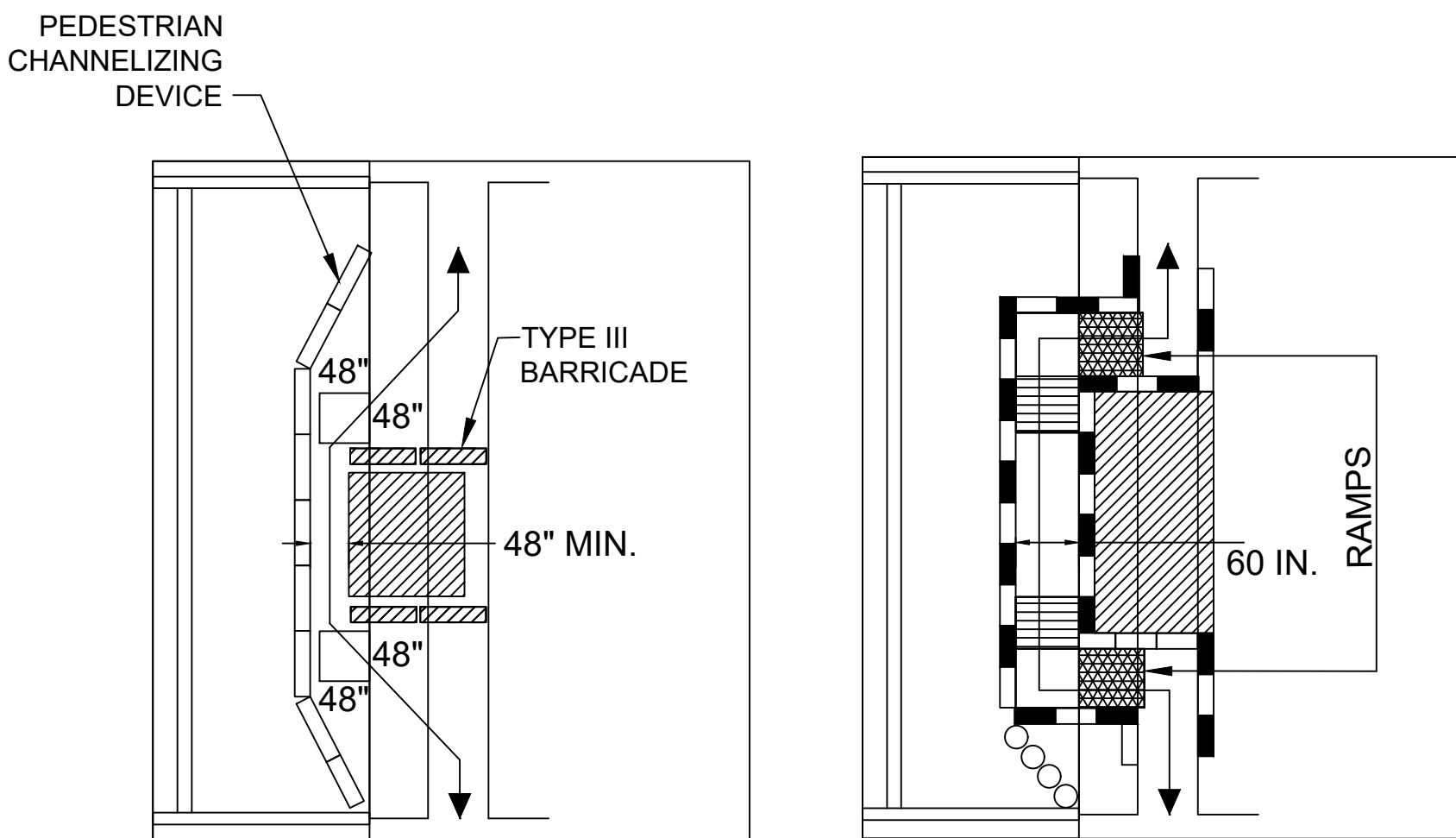
- WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- A PEDESTRIAN CHANNELIZING DEVICE 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 MIDPOINT 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 JUDGEMENT.
- 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/AAB DEVICES FOR WORK 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.



TEMPORARY CURB RAMP PARALLEL TO CURB



TEMPORARY CURB RAMP-PERPENDICULAR TO CURB



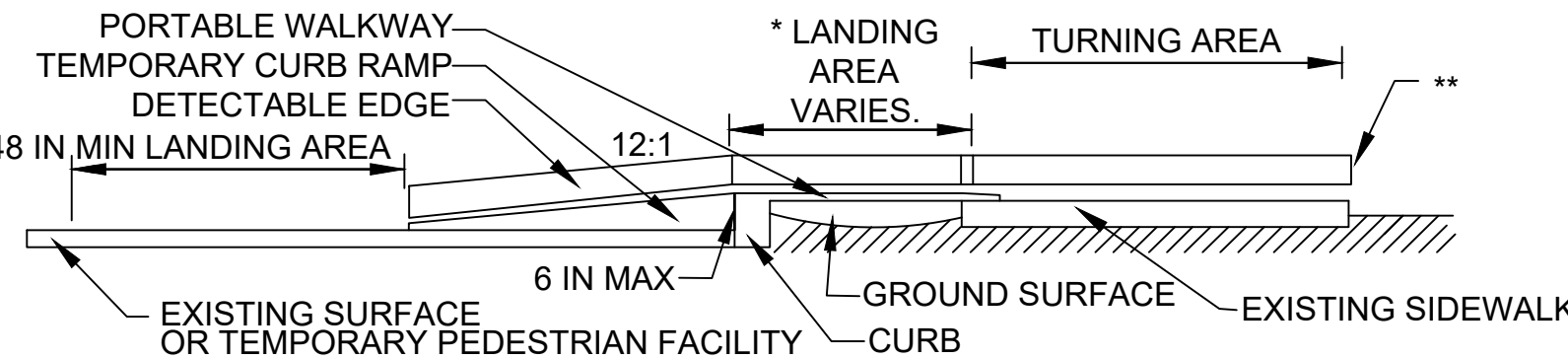
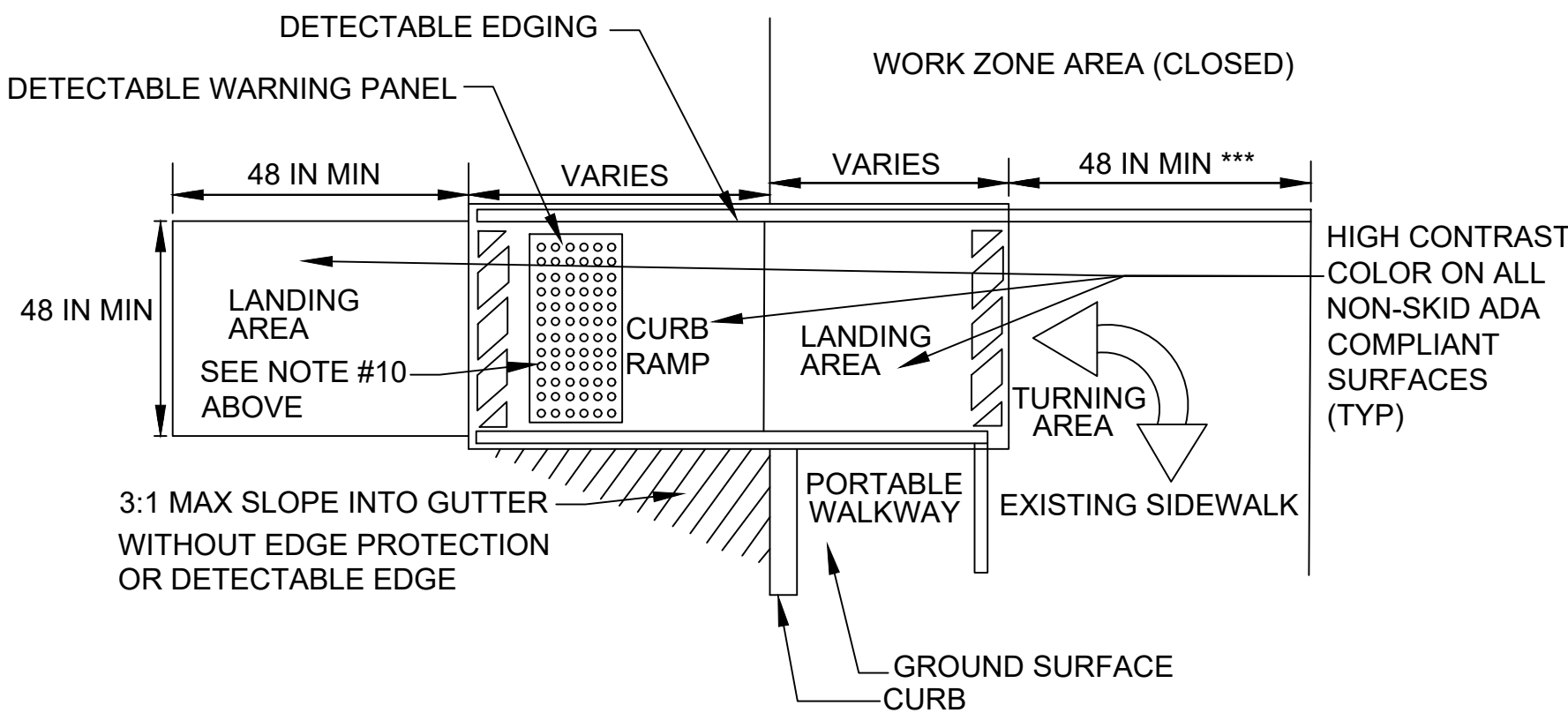
PEDESTRIAN BYPASS

MEDFORD
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STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	19	36
PROJECT FILE NO.		608835	

TEMPORARY TRAFFIC CONTROL PLAN - 19 OF 36

TYPICAL PEDESTRIAN DEVICES

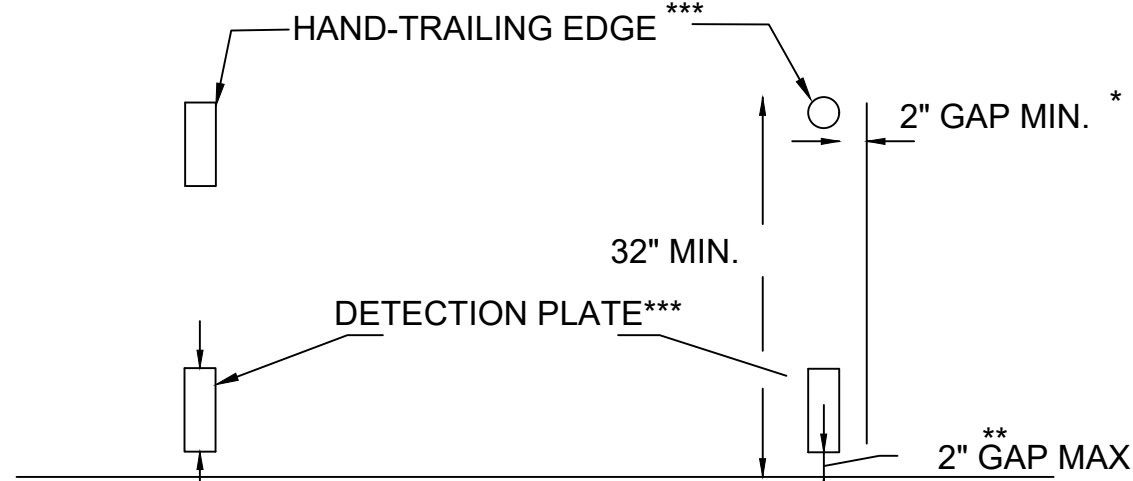


* -LANDING AREA USED TO OVERLAP NON-ADA COMPLIANT SURFACES.

** -DETECTABLE EDGE REMOVED IF A CONTINUOUS SIDEWALK.

*** -60 IN. IF AN OBSTRUCTION IS AT BACK OF SIDEWALK

TEMPORARY CURB RAMP-TYPE 2



CROSS SECTION VIEW

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 CHANNELIZING DEVICE

TYPICAL PEDESTRIAN DEVICE NOTES:

- CURB RAMPS 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 RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
- DETECTABLE 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 RAMPS 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.



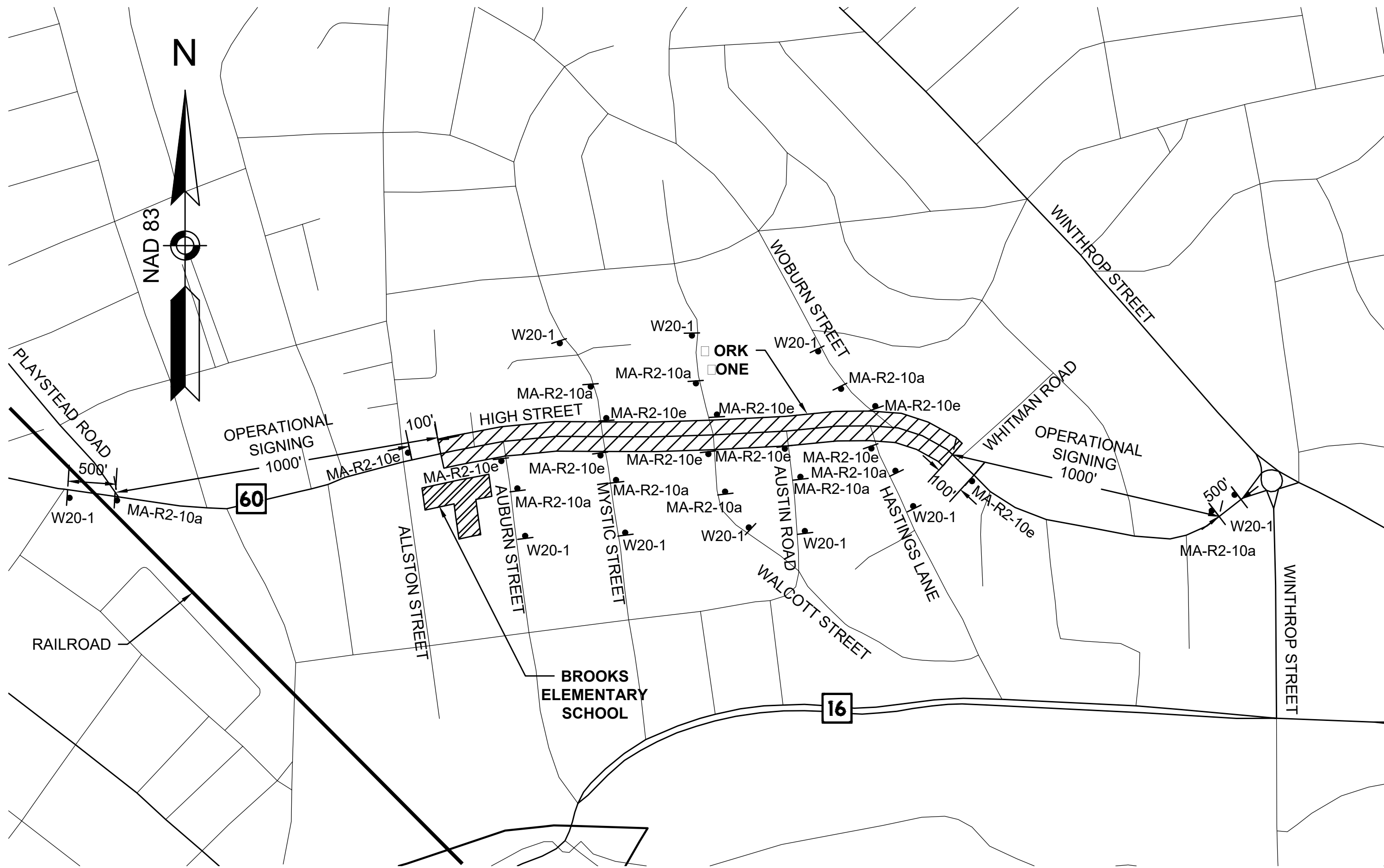
TRAFFIC SIGN SUMMARY												
IDENTIFICATION NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			COLOR			NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR	BACK-GROUND	LEGEND	BORDER			
MA-R2-10a	48	36		MASSDOT STANDARD SIGN			FL. ORANGE WHITE	BLACK BLACK	BLACK BLACK	10	12.00	120.00
MA-R2-10e	36	48					FL. ORANGE WHITE	BLACK BLACK	BLACK BLACK	10	12.00	120.00
R3-17	30	24					SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			WHITE	BLACK	BLACK
R3-17bp	30	12					WHITE	BLACK	BLACK	1	2.50	2.50
R4-7	24	30					WHITE	BLACK	BLACK	4	5.00	20.00
R4-11	30	30					WHITE	BLACK	BLACK	1	6.25	6.25
R8-3a	18	24					WHITE	RED	RED	2	3.00	6.00
R9-11aL	24	12					WHITE	BLACK	BLACK	1	2.00	2.00
R9-11aR	24	12					WHITE	BLACK	BLACK	1	2.00	2.00
R11-2e	48	30					WHITE	BLACK	BLACK	1	10.00	10.00
W1-4L	36	36					FL. ORANGE	BLACK	BLACK	2	9.00	18.00
W1-4R	36	36					FL. ORANGE	BLACK	BLACK	2	9.00	18.00
W5-1	36	36					FL. ORANGE	BLACK	BLACK	4	9.00	36.00
W8-1	36	36					FL. ORANGE	BLACK	BLACK	2	9.00	18.00
W8-15	36	36					FL. ORANGE	BLACK	BLACK	2	9.00	18.00
W11-2	30	30					YELLOW	BLACK	BLACK	4	6.25	25.00
W13-1p	18	18					FL. ORANGE	BLACK	BLACK	2	2.25	4.50
W16-7pL	24	12					YELLOW	BLACK	BLACK	4	2.00	8.00

MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	21	36
PROJECT FILE NO.		608835	

TEMPORARY TRAFFIC CONTROL PLAN - 21 OF 36

TRAFFIC SIGN SUMMARY												
IDENTIFICATION NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			COLOR			NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR	BACK-GROUND	LEGEND	BORDER			
W20-1	36	36		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			FL. ORANGE	BLACK	BLACK	10	9.00	90.00
W20-4	36	36					FL. ORANGE	BLACK	BLACK	4	9.00	36.00
W20-7	36	36					FL. ORANGE	BLACK	BLACK	2	9.00	18.00
MA-W20-7b	36	36		MASSDOT STANDARD SIGN			FL. ORANGE	BLACK	BLACK	4	9.00	36.00
W21-5a	36	36		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			FL. ORANGE	BLACK	BLACK	1	9.00	9.00
W21-5b	36	36					FL. ORANGE	BLACK	BLACK	1	9.00	9.00
W21-5c	36	36					FL. ORANGE	BLACK	BLACK	1	9.00	9.00



ADVANCED SIGNING SCHEMATIC

N.T.S.

NOTE:
ON SIDE STREETS, W20-1 SIGNS SHALL BE LOCATED 350' FROM THE LIMIT OF WORK AND MA-R2-10a SIGNS SHALL BE LOCATED 175' FROM THE LIMIT OF WORK.

EXISTING INVERT TABLE

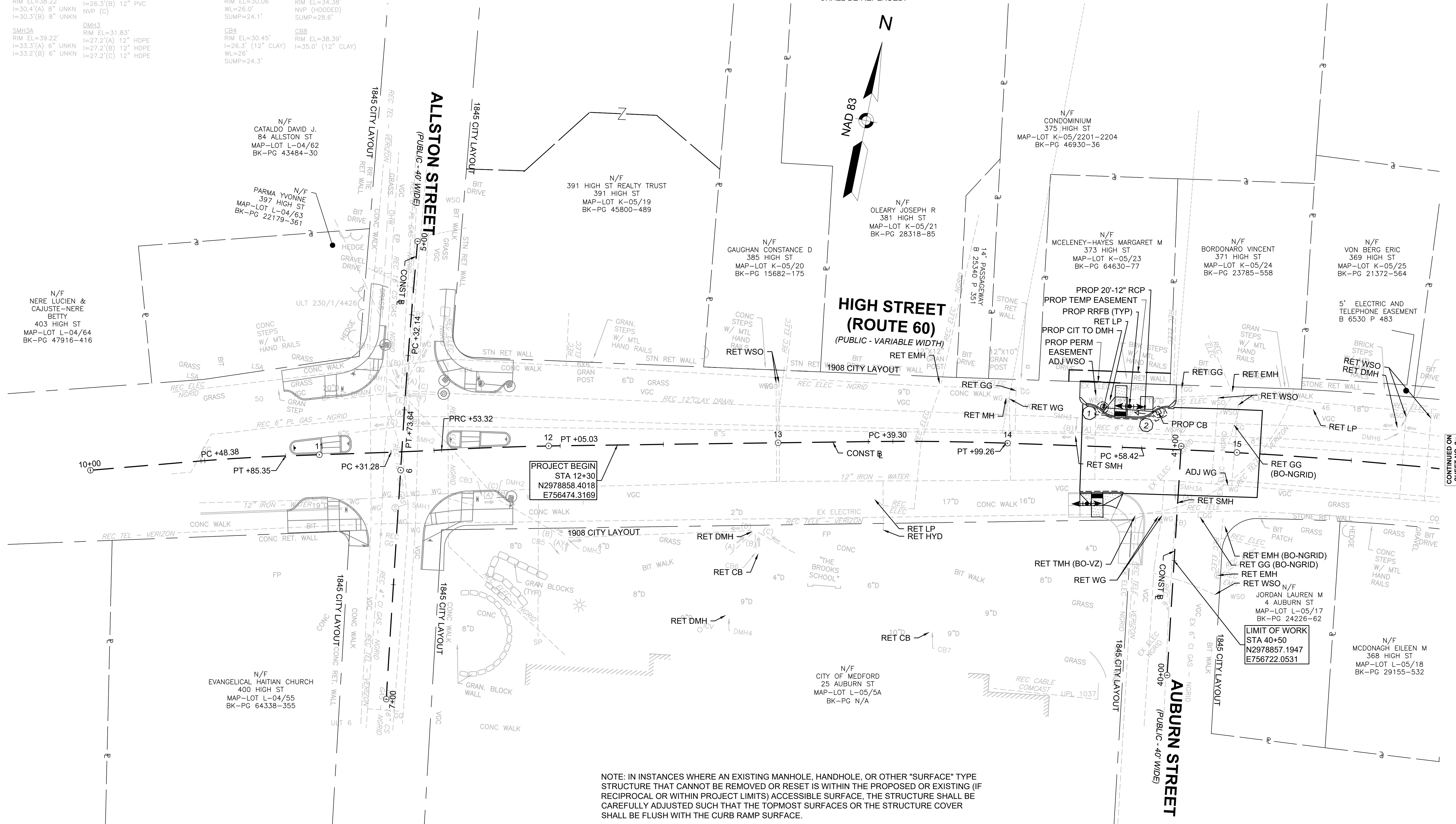
SMH1 RIM EL=29.01' NVP WL=22.9' SUMP=21.7'	DMH1 RIM EL=30.43' I=27.6'(A) 12" PVC I=27.2'(C) 12" CLAY I=24.1'(D) 15" CLAY I=23.8'(E) 12" CLAY I=23.7'(F) 18" CLAY I=22.1'(C) 8" CLAY	DMH4 RIM=34.65' DMH5 RIM EL=34.48' I=29.9'(A) 6" HDPE I=29.6'(B) 12" HDPE I=29.6'(C) 18" HDPE I=29.5'(D) 12" HDPE	CB1 RIM EL=30.40' NVP WL=28.1' SUMP=24.7'	CB5 RIM EL=31.65' NVP (HOODED) WL=27.4' SUMP=24.0'
SMH2 RIM EL=30.34' I=22.2'(A) 8" CLAY I=22.2'(B) 8" CLAY I=22.1'(C) 8" CLAY	DMH2 RIM EL=30.23' I=26.5'(A) 12" MTL I=26.3'(B) 12" PVC NVP (C)	MH1 (NO INFO)	CB2 RIM EL=30.76' I=28.4' (12" PVC) WL=27.5' SUMP=25.9'	CB6 RIM EL=34.42' NVP (HOODED) WL=30.6' SUMP=26.9'
SMH3 RIM EL=38.22' I=30.4'(A) 8" UNKN I=30.3'(B) 8" UNKN	DMH3 RIM EL=31.83' I=27.2'(A) 12" HDPE I=27.2'(B) 12" HDPE I=27.2'(C) 12" HDPE		CB3 RIM EL=30.06' WL=26.0' SUMP=24.1'	CB7 RIM EL=34.38' NVP (HOODED) SUMP=28.6'
SMH3A RIM EL=39.22' I=33.3'(A) 6" UNKN I=33.2'(B) 6" UNKN			CB4 RIM EL=30.45' I=26.3' (12" CLAY) WL=26' SUMP=24.3'	CB8 RIM EL=38.39' I=35.0' (12" CLAY)

PROPOSED DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
①	CIT TO DMH	14+40.84, 17.0' LT	38.91	35.10 (FROM 2)	35.00 (EX)	OFFSET TOP
②	PROP CB	14+65.15, 16.0' LT	39.31	-	35.31	4' SUMP

PROPOSED UTILITY STRUCTURE ADJUSTMENTS			
TYPE	STATION	EXIST ELEV.	PROP ELEV.
WSO	14+37.71, 22.2' LT	38.97	38.85
WG	14+96.85, 14.4' RT	40.17	40.17

MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	22	36
PROJECT FILE NO.		608835	
UTILITY PLANS - ☐ OF 4			

PRIVATE MANHOLE COVERS SHALL HAVE SURFACES RIDEABLE BY A WHEELCHAIR. ANY MANHOLE COVERS WITH LARGE GROOVES SHALL BE REPLACED.



NOTE: IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE, OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING (IF RECIPROCAL OR WITHIN PROJECT LIMITS) ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.

EXISTING INVERT TABLE

SMH7 RIM EL=58.06' I=50.6'(A) 8" UNKN I=50.5'(B) 8" UNKN I=50.5'(C) 8" UNKN	DMH10 RIM EL=57.88' I=54.6'(A) 8" UNKN I=54.4'(B) 8" UNKN I=53.5'(C) 8" UNKN SUMP=53.4'	CB13 RIM EL=57.76' NVP WL=54.9' SUMP=54.8'
SMH8 RIM EL=61.49' NVP SUMP=54.5'	CB14 RIM=52.33' NVP WL=49.9' SUMP=47.0'	
SMH9 RIM EL=61.40' I=53.5'(A) 8" UNKN I=53.4'(B) 6" UNKN I=53.3'(C) 6" UNKN		

PROPOSED UTILITY STRUCTURE ADJUSTMENTS			
TYPE	STATION	EXIST ELEV.	PROP ELEV.
WSO	21+42.19, 18.3' RT	56.94	56.94
GG	21+50.35, 15.8' LT	56.70	56.70
CMH	21+78.32, 14.6' RT	57.32	57.32
DMH	21+87.02, 6.2' LT	57.88	57.88
SMH	21+92.65, 3.6' LT	59.07	59.07
EMH	22+19.08, 24.6' LT	58.49	58.79

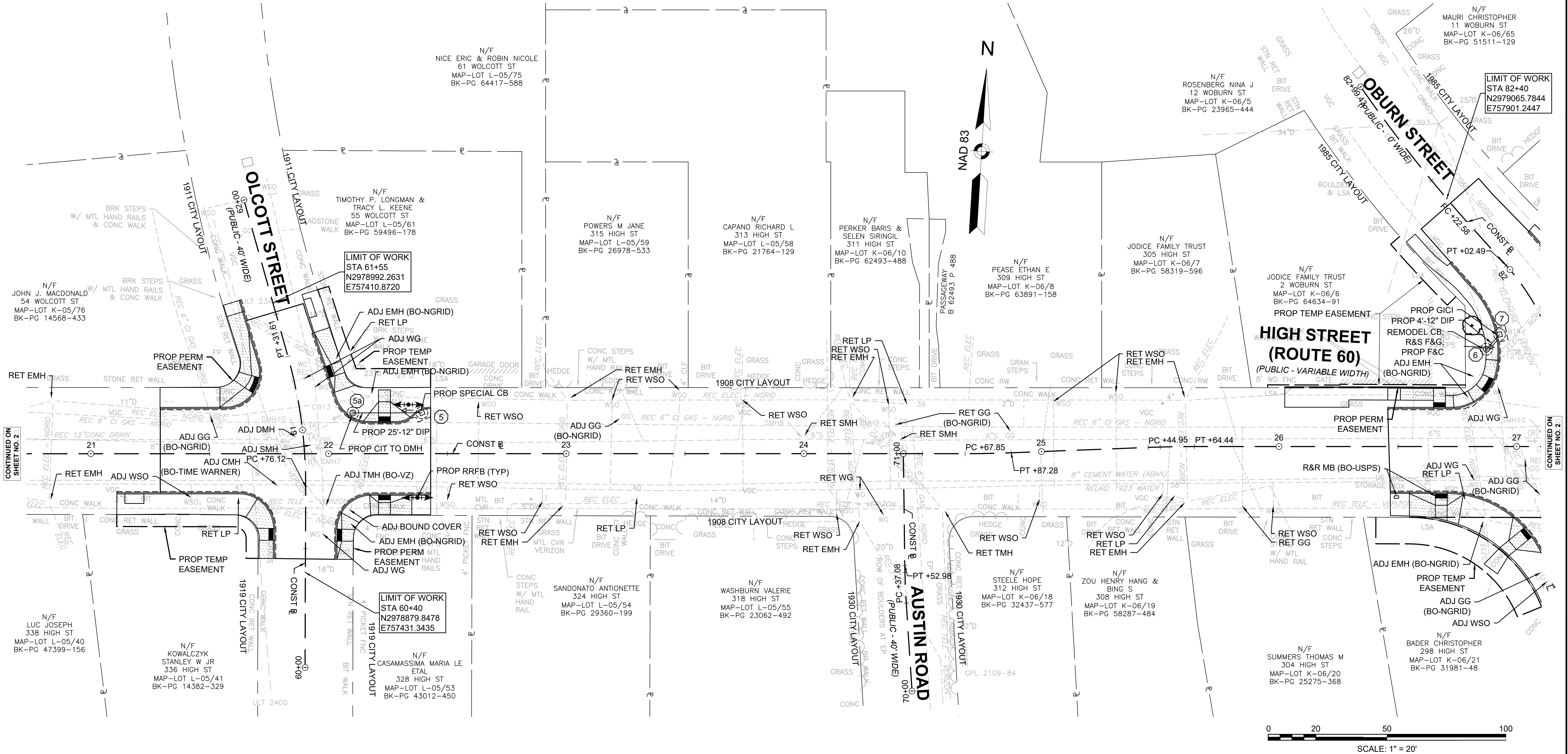
PRIVATE MANHOLE COVERS SHALL HAVE SURFACES RIDEABLE BY A WHEELCHAIR. ANY MANHOLE COVERS WITH LARGE GROOVES SHALL BE REPLACED.

PROPOSED UTILITY STRUCTURE ADJUSTMENTS			
TYPE	STATION	EXIST ELEV.	PROP ELEV.
EMH	61+25.61, 18.0' RT	59.11	58.69
WG	61+21.10, 4.5' RT	58.43	58.43
WG	61+16.67, 8.0' RT	58.22	58.22
TMH	60+67.10, 8.4' RT	57.59	57.59
BOUND COVER	60+66.34, 17.8' RT	58.18	58.00
EMH	60+61.45, 18.0' RT	57.98	58.85
WG	60+56.21, 7.3' RT	57.69	57.69

NOTE: IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE, OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING (IF RECIPROCAL OR WITHIN PROJECT LIMITS) ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.

MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	24	36
PROJECT FILE NO.		608835	
UTILITY PLANS - ☐ OF 4			

PROPOSED DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
5	PROP SPECIAL CB	22+39.34, 17.2' LT	58.35	-	55.35	SHALLOW CB; 4' SUMP
5a	CIT TO DMH	22+10.26, 17.2' LT	58.42	54.92	MATCH EXIST (54.8±)	



EXISTING INVERT TABLE

SMH10 RIM EL=52.32' I=43.0'(A) I=42.8'(B) I=42.8'(C)	MH4 (NO INFO)
SMH11 RIM EL=51.51' I=42.5'(A) I=42.4'(B) I=42.3'(C)	CB14 RIM=52.33' I=50.41'(A) WL=50.2' SUMP=45.5'
SMH12 (INACCESSIBLE)	
SMH13 RIM EL=40.87' I=33.5'(A) 8" UNKN I=33.4'(B) 8" UNKN	

PROPOSED DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
6	EXIST CB	81+73.27, 26.4' LT	53.04	50.45 (FROM 7)	50.41	REMODEL CORE INV. IN
7	PROP GICI	81+77.44, 18.9' LT	52.41	-	50.50	
8	PROP CB	81+81.07, 17.1' RT	51.04	-	47.05	4' SUMP
9	PROP LB	81+46.05, 44.8' RT	50.79	46.05	-	4' SUMP

PROPOSED UTILITY STRUCTURE ADJUSTMENTS			
TYPE	STATION	EXIST ELEV.	PROP ELEV.
EMH	26+79.05, 20.3' LT	53.35	53.06
EMH	26+82.83, 28.8' LT	53.11	52.73
WG	26+92.17, 24.6' LT	52.59	52.59
WG	26+82.09, 14.2' RT	53.17	53.17
EMH	26+86.81, 30.4' RT	53.47	53.48
SMH	27+11.35, 3.7' LT	52.52	52.52
GG	81+00.66, 10.1' LT	52.36	52.36
GG	81+13.92, 16.1' LT	53.01	53.01

PROPOSED UTILITY STRUCTURE ADJUSTMENTS			
TYPE	STATION	EXIST ELEV.	PROP ELEV.
WG	80+94.36, 8.4' RT	52.05	52.05
TMH	80+90.23, 12.7' RT	52.06	52.06
GG	80+71.56, 16.2' LT	53.46	52.53
WG	80+67.18, 14.9' LT	53.52	53.44
GG	81+88.22, 8.1' RT	51.63	51.63
SMH	27+66.62, 3.1' LT	51.51	51.51
EMH	28+38.94, 20.5' LT	50.41	50.30
EMH	28+18.90, 25.2' RT	50.73	50.73

MEDFORD
BROOKS ELEMENTARY SCHOOL

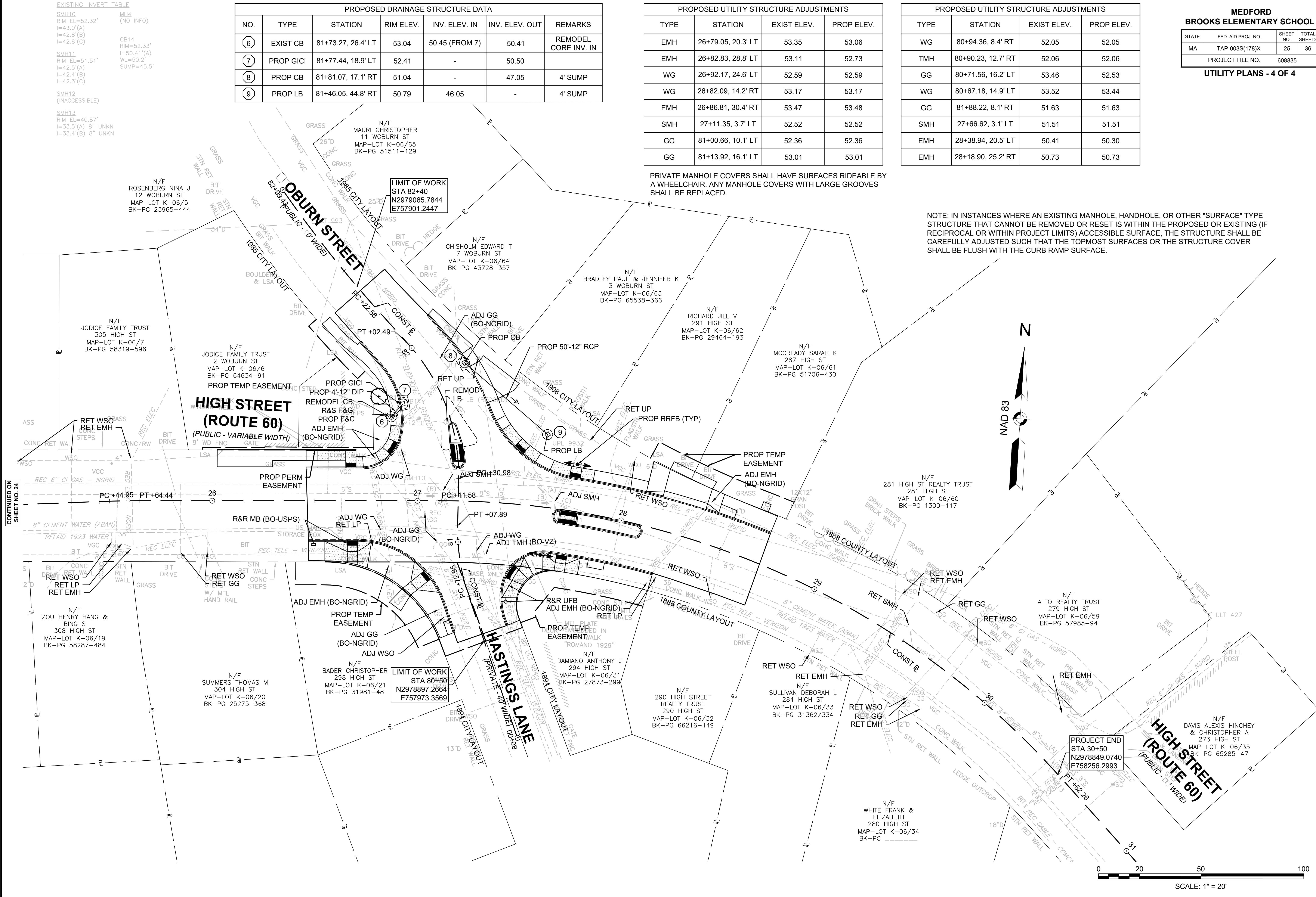
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	25	36

PROJECT FILE NO. 608835

UTILITY PLANS - 4 OF 4

PRIVATE MANHOLE COVERS SHALL HAVE SURFACES RIDEABLE BY A WHEELCHAIR. ANY MANHOLE COVERS WITH LARGE GROOVES SHALL BE REPLACED.

NOTE: IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE, OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING (IF RECIPROCAL OR WITHIN PROJECT LIMITS) ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.



CONTINUED ON
SHEET NO. 24

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	26	36
PROJECT FILE NO.		608835	

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N.T.S.

- INLET PROTECTION SILT SACK IN CATCH BASIN



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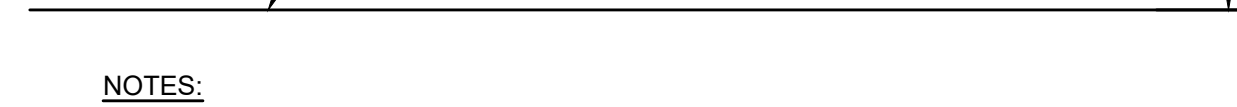


N.T.S.

5. COVER



N.T.S.



N.T.S.

- ## SHARED LANE PAVEMENT MARKING



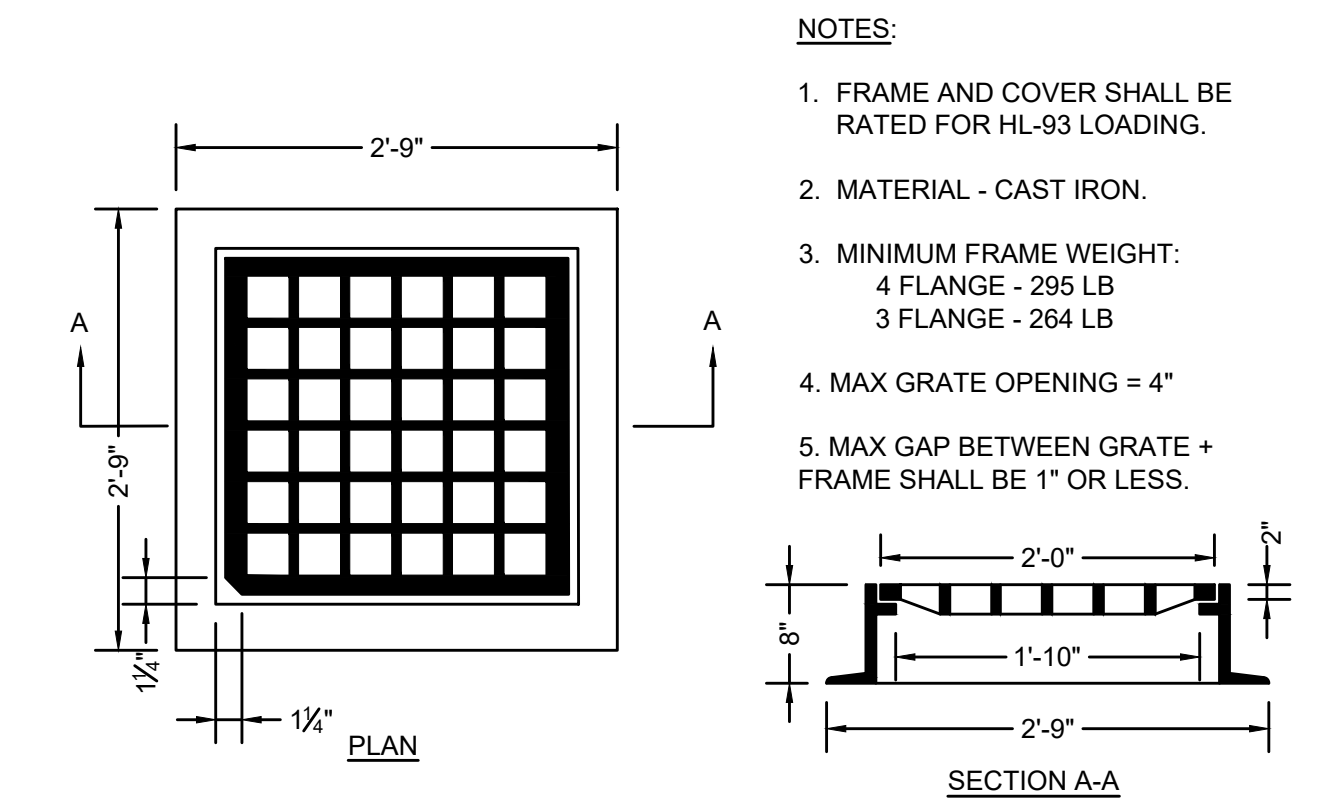
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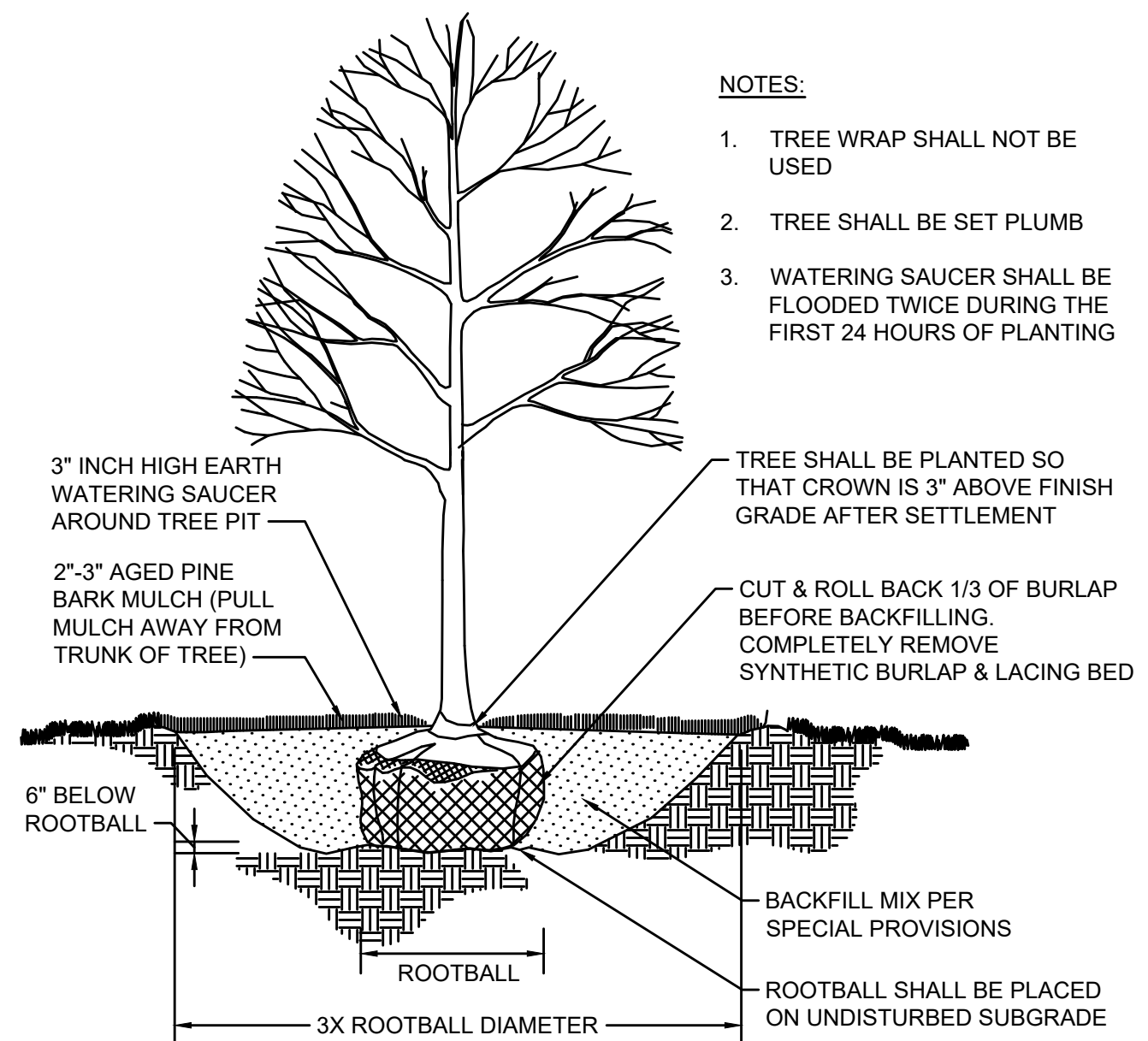


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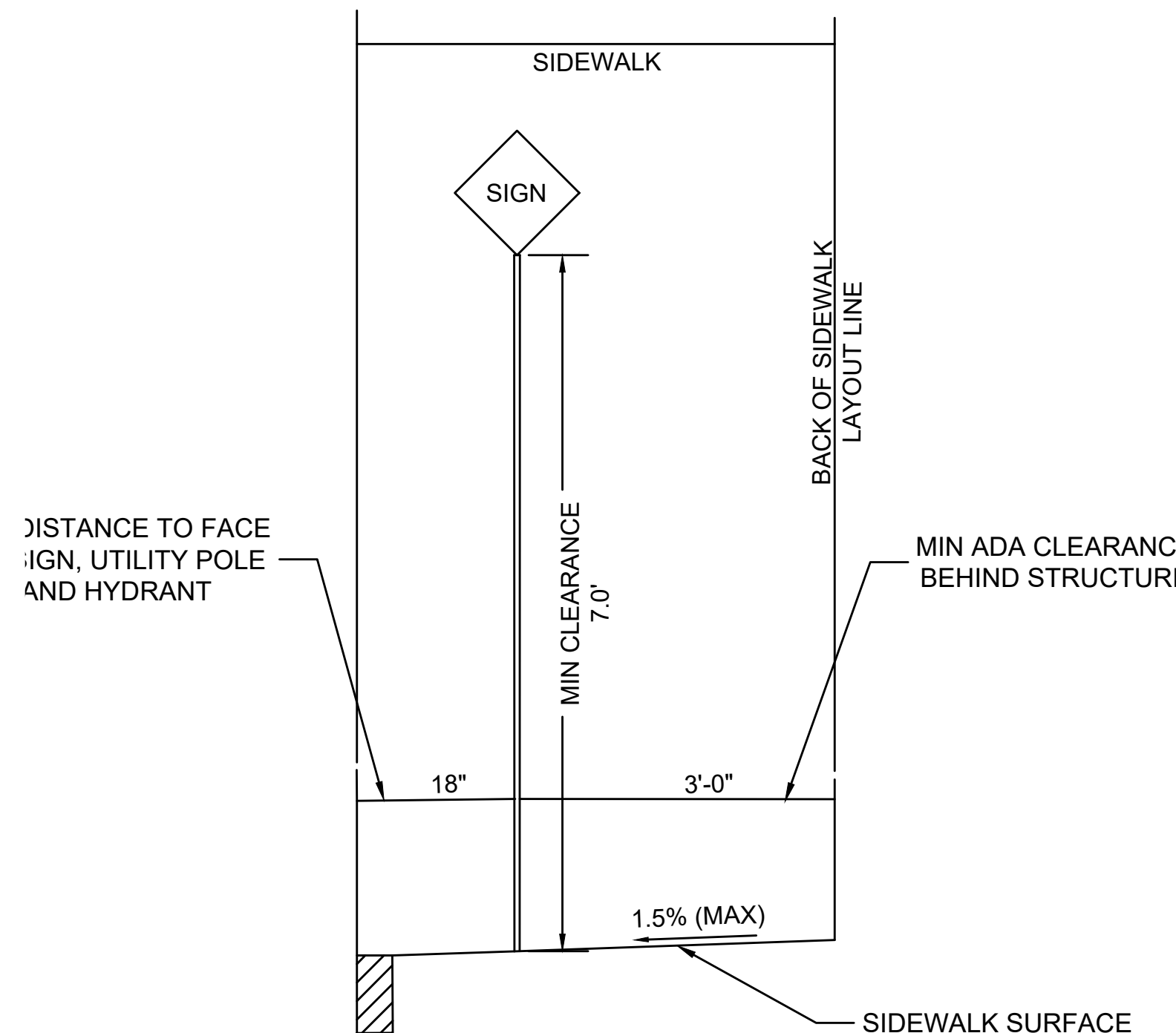
- CROSSWALK PAVEMENT MARKING
N.T.S.



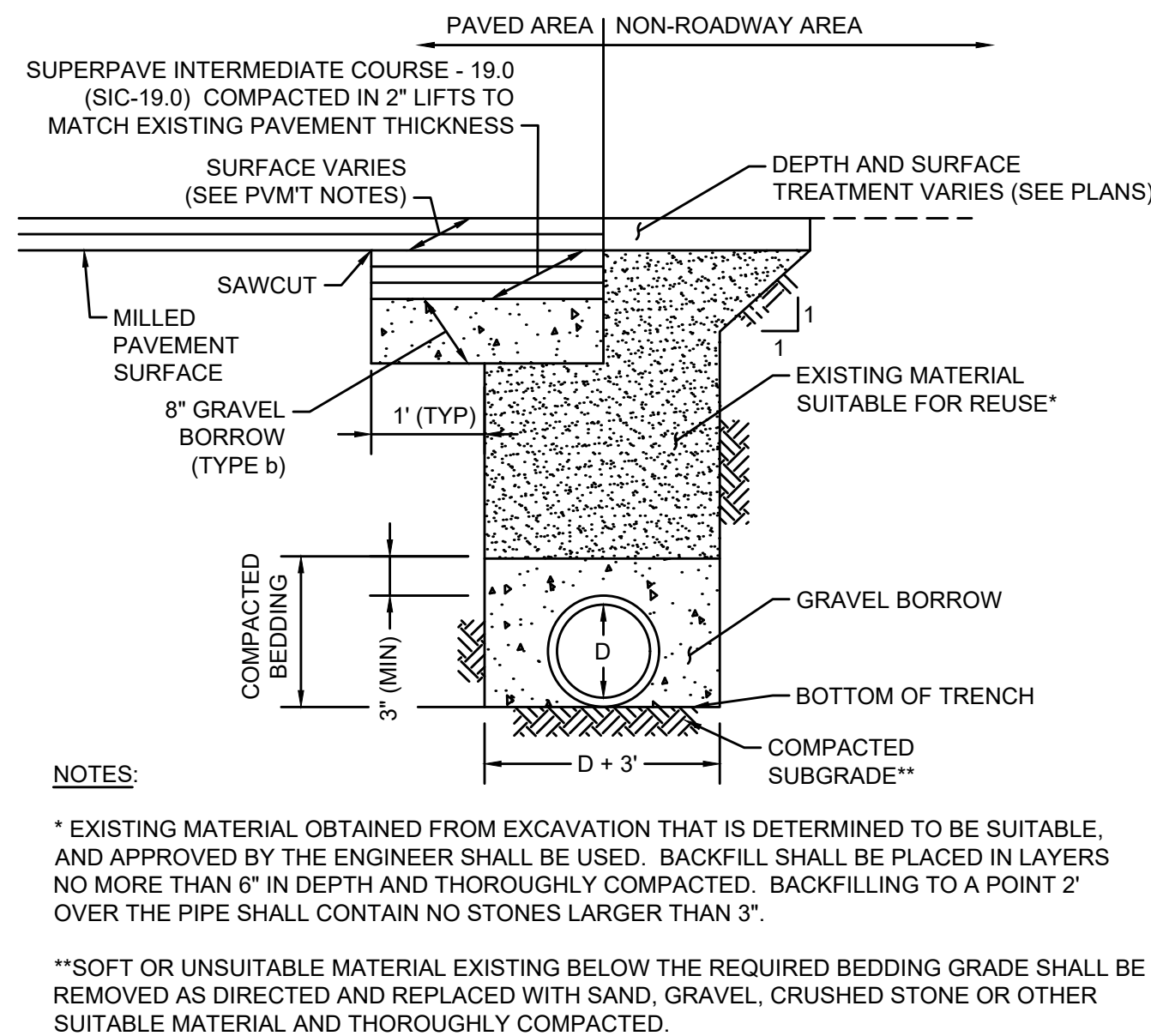
CATCH BASIN FRAME & GRATE (MUNICIPAL STANDARD)
N.T.S.



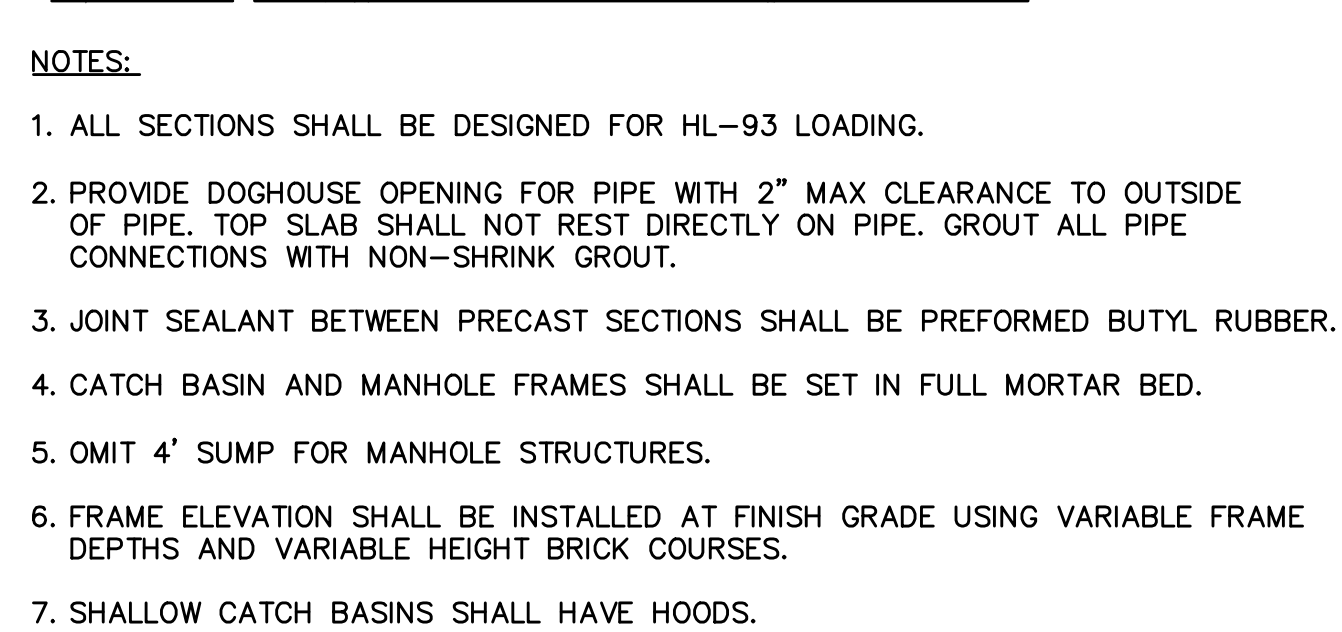
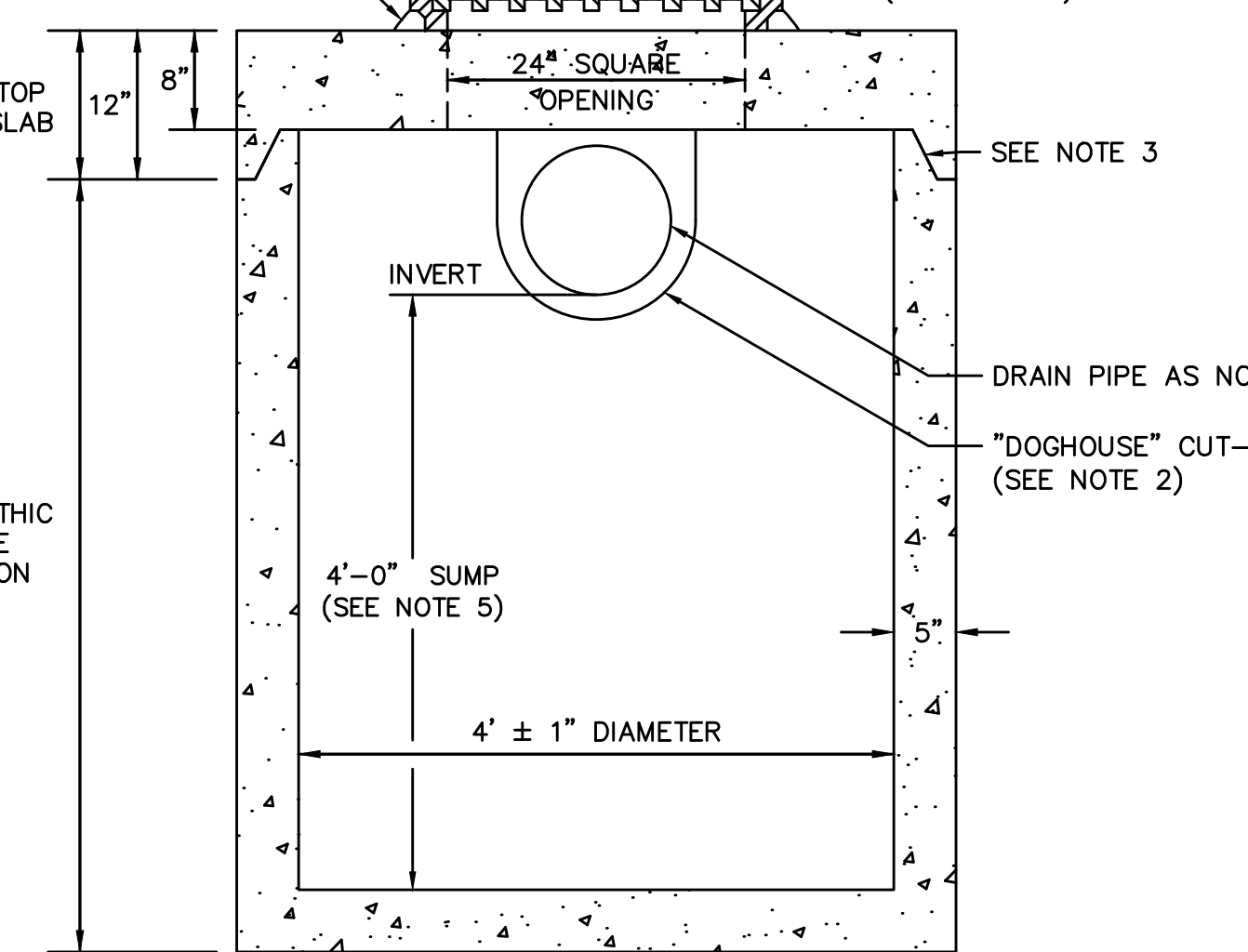
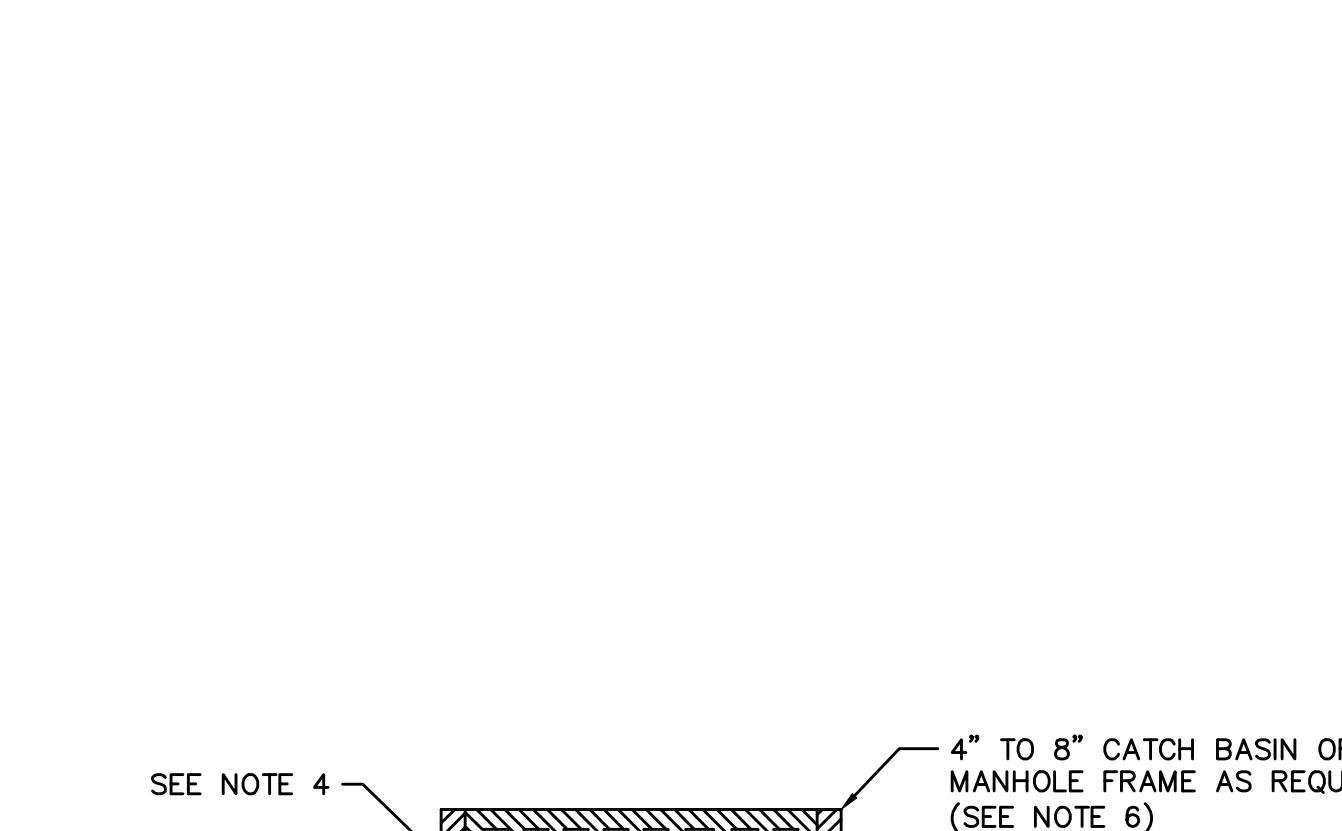
DECIDUOUS TREE PLANTING
N.T.S.



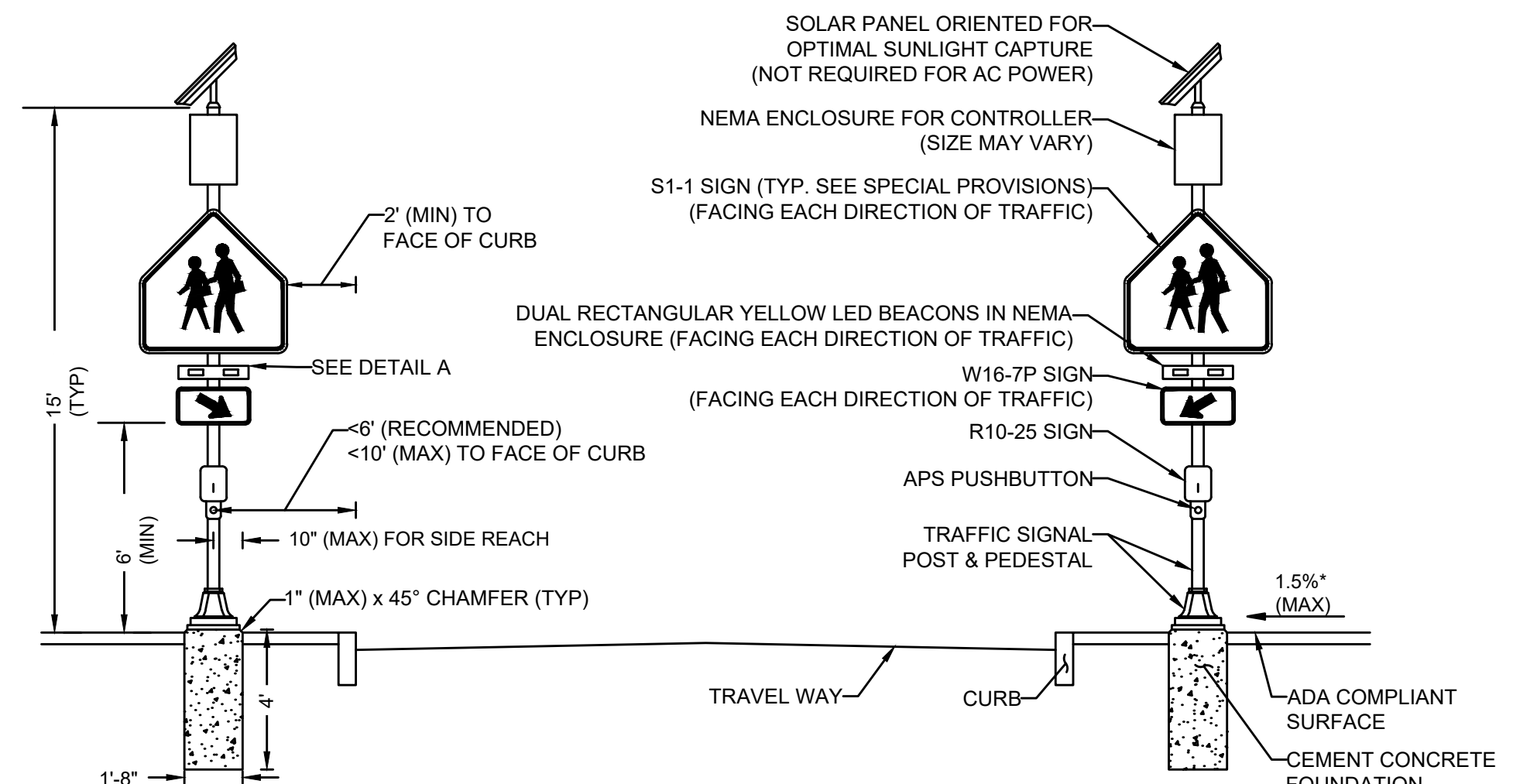
VERTICAL OBJECT R&R WITHIN PEDESTRIAN ACCESS ROUTE
N.T.S.



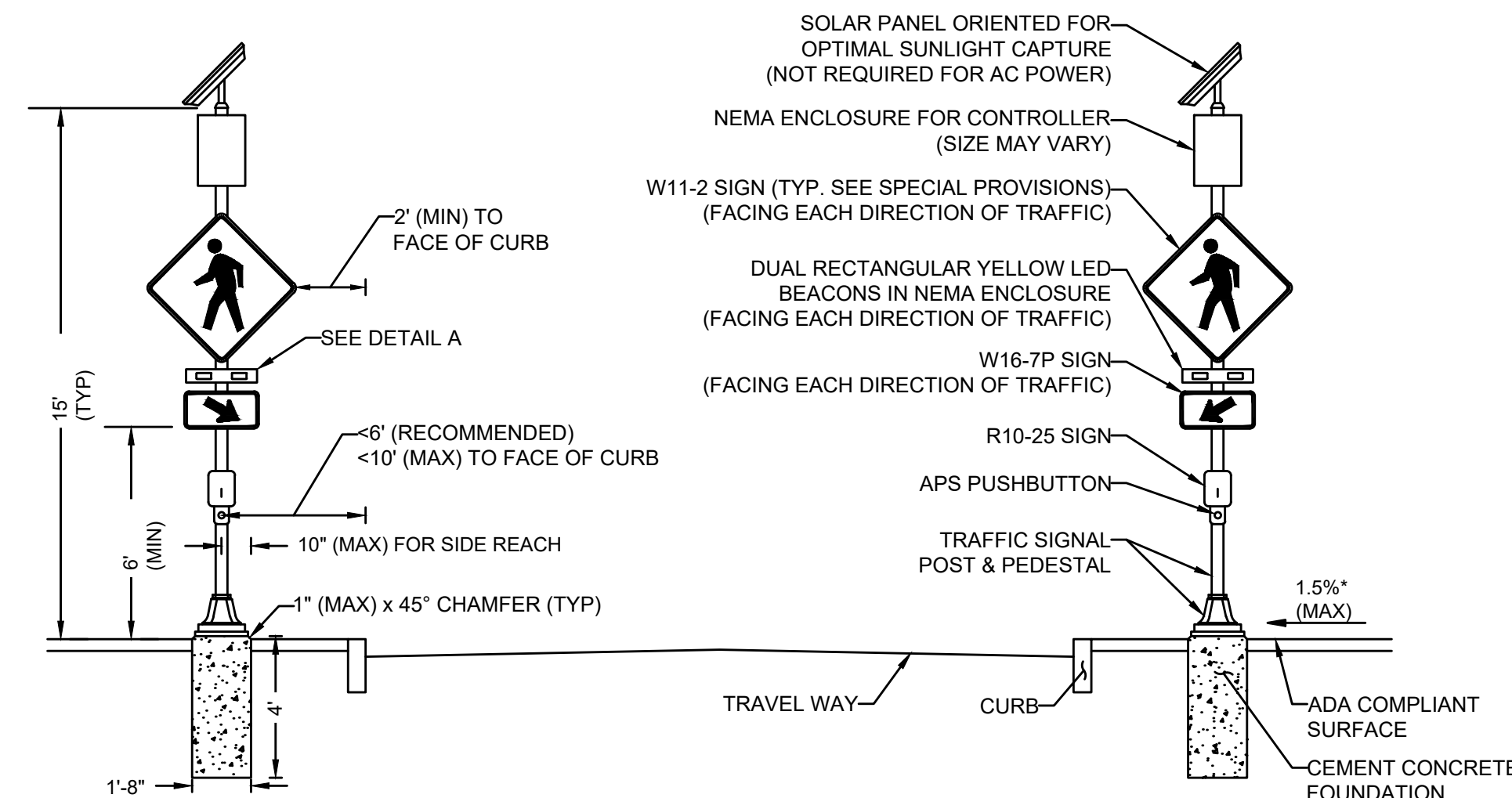
UTILITY TRENCH
N.T.S.



SPECIAL CATCH BASIN (SHALLOW)
NOT TO SCALE



RECTANGULAR RAPID FLASHING BEACON (RRFB), LOCATION 1
N.T.S.



RECTANGULAR RAPID FLASHING BEACON (RRFB), LOCATION 2
N.T.S.

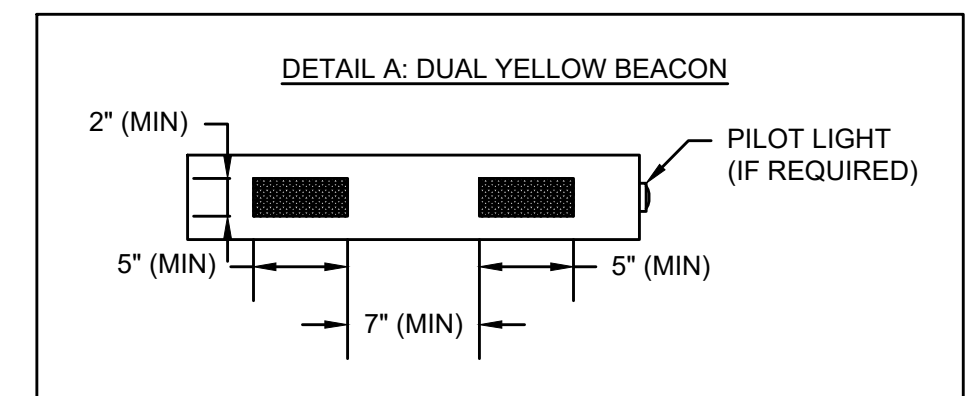
MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	27	36
PROJECT FILE NO.		608835	

CONSTRUCTION DETAILS - 2 OF 2

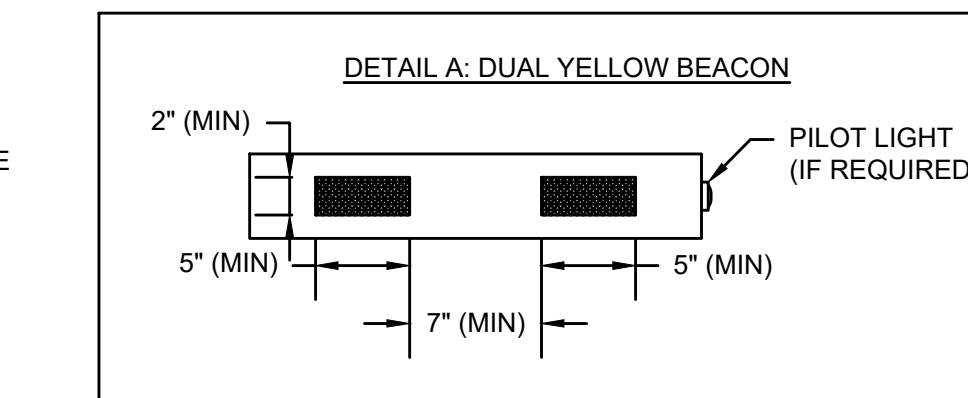
- NOTES:**
1. CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
 2. REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
 3. ALL CONDUIT, PULL BOXES, SERVICE CONNECTIONS, AND EQUIPMENT GROUNDING REQUIRED FOR AC POWER IS NOT SHOWN IN THIS DETAIL AND SHALL BE PAID FOR SEPARATELY UNDER THE RESPECTIVE PAY ITEMS.
 4. ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
 5. *0.5% CONSTRUCTION TOLERANCE FOR CROSS SLOPE.

- MAJOR ITEMS LIST**
- 2 CEMENT CONCRETE FOUNDATIONS PER 812.30.1
 - 2 15' TRAFFIC SIGNAL POSTS & PEDESTALS
 - 2 APS PUSHBUTTON SYSTEMS
 - 4 DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
 - 2 R10-25 SIGNS
 - 4 S1-1 SIGNS
 - 2 W16-7PR SIGNS
 - 2 W16-7PL SIGNS
 - 2 SOLAR PANEL SYSTEMS (NOT REQUIRED FOR AC POWER)
 - 2 NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISIONS
 - 2 BATTERY SYSTEMS
- PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.



- NOTES:**
1. CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
 2. REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
 3. ALL CONDUIT, PULL BOXES, SERVICE CONNECTIONS, AND EQUIPMENT GROUNDING REQUIRED FOR AC POWER IS NOT SHOWN IN THIS DETAIL AND SHALL BE PAID FOR SEPARATELY UNDER THE RESPECTIVE PAY ITEMS.
 4. ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
 5. *0.5% CONSTRUCTION TOLERANCE FOR CROSS SLOPE.

- MAJOR ITEMS LIST**
- 2 CEMENT CONCRETE FOUNDATIONS PER 812.30.1
 - 2 15' TRAFFIC SIGNAL POSTS & PEDESTALS
 - 2 APS PUSHBUTTON SYSTEMS
 - 4 DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
 - 2 R10-25 SIGNS
 - 4 W11-2 SIGNS
 - 2 W16-7PR SIGNS
 - 2 W16-7PL SIGNS
 - 2 SOLAR PANEL SYSTEMS (NOT REQUIRED FOR AC POWER)
 - 2 NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISIONS
 - 2 BATTERY SYSTEMS
- PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.



MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	28	36
PROJECT FILE NO.		608835	

HEELCHAIR RAMP DRIAY DETAILS - OF 2

WHEELCHAIR RAMP NOTES:

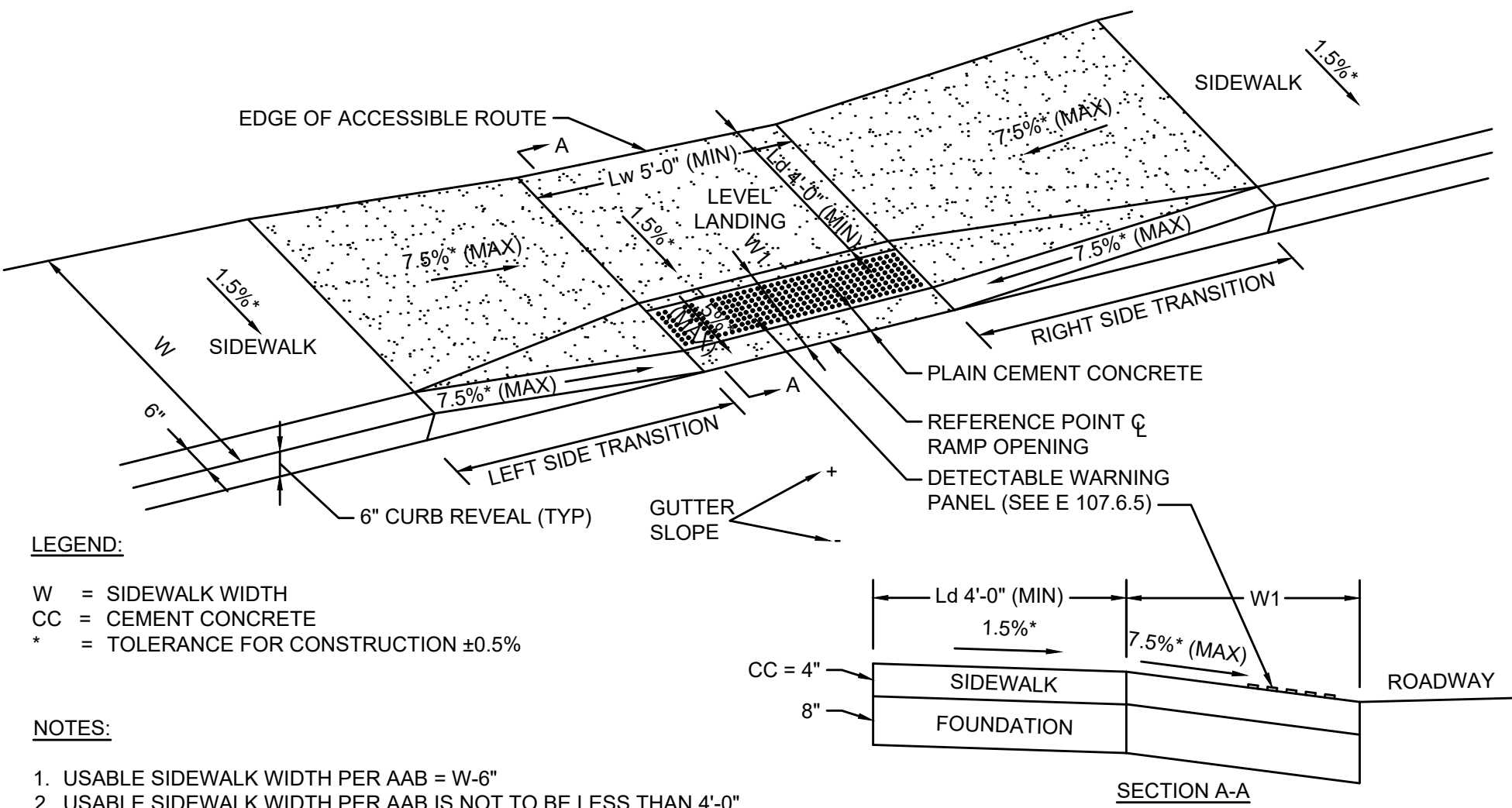
- A MINIMUM OF 3'-0" CLEAR (EXCLUDING CURB WIDTH) SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
- CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
- RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
- WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5x5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FT.
- ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY.
- DETECTABLE WARNING PANELS ARE REQUIRED ON ALL OF THE PROPOSED WHEELCHAIR RAMP AND ARE TO BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD E 107.6.5 (OCTOBER 2017). CONTRACTOR SHALL PROVIDE 6" BETWEEN DETECTABLE WARNING PANEL AND EDGE OF CONCRETE WHERE IT ABUTS LOAM & SEED.
- WHEELCHAIR RAMP SLOPES AND CROSS SLOPES SHALL HAVE A CONSTRUCTION TOLERANCE OF $\pm 0.5\%$.
- DETECTABLE WARNING PANELS SHALL BE BRICK RED IN COLOR AS APPROVED BY THE CITY DPW.

WHEELCHAIR RAMP NOTES

N.T.S.

WHEELCHAIR RAMP #9

N.T.S.



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$

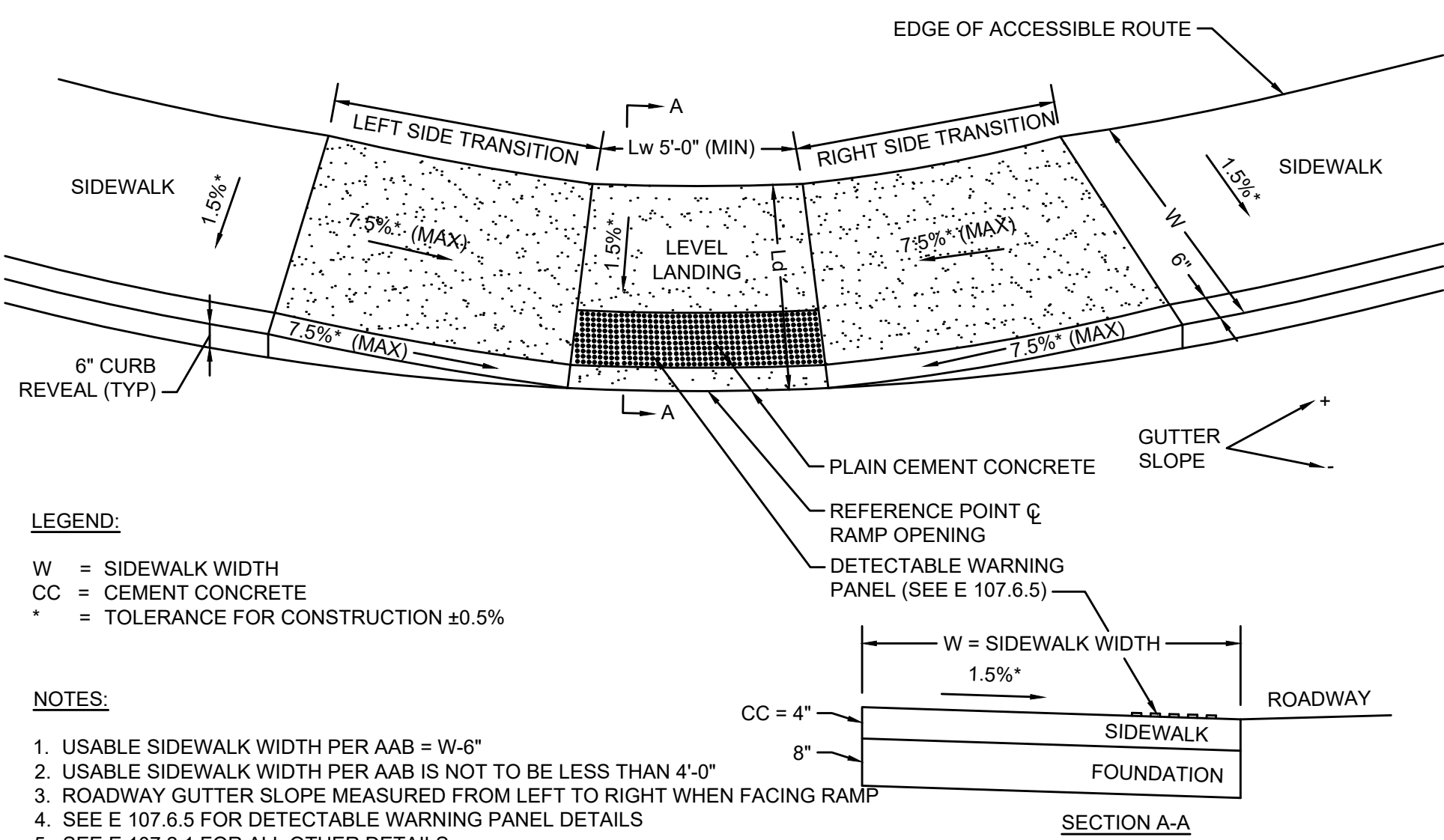
NOTES:

- USABLE SIDEWALK WIDTH PER AAB = W-6"
- USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
- ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP
- SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
- SEE E 107.2.1 FOR ALL OTHER DETAILS

WHEELCHAIR RAMP TYPE A

N.T.S.

WHEELCHAIR RAMP DATA													
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	RAMP LENGTH (W1)	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)			TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
4	HIGH STREET	17+84	24' RT	5'-0"	5'-0"	-1.8%	3'-10"	5'-0"	6"	5'-0"	6'-6"	6"	5'-0"
14	HIGH STREET	22+24	17' RT	5'-0"	5'-0"	-1.4%	3'-7 1/2"	9'-0"	6"	8.5' (MIN)	3'-3"	3"	9' (MIN)



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$

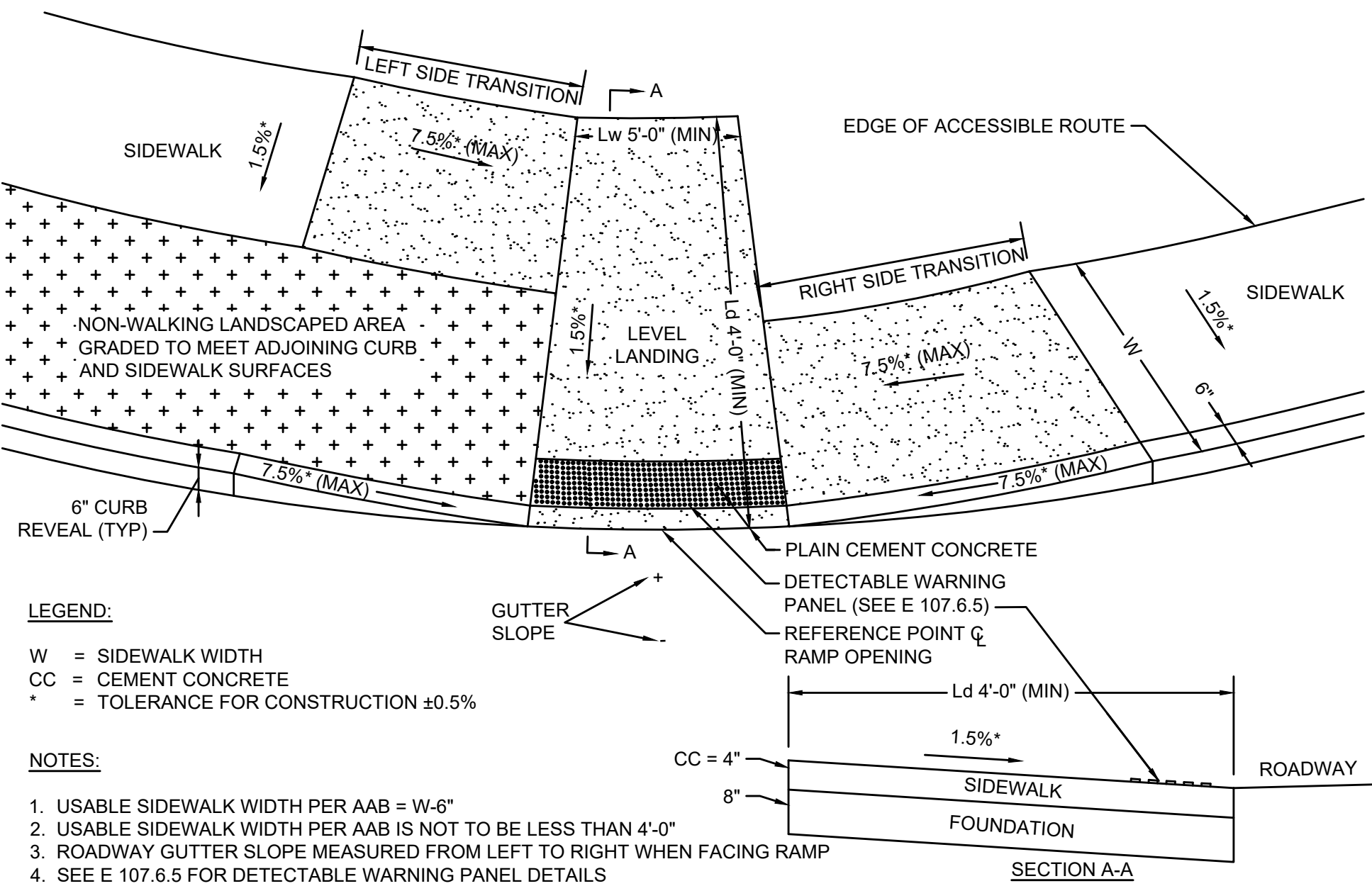
NOTES:

- USABLE SIDEWALK WIDTH PER AAB = W-6"
- USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
- ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP
- SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
- SEE E 107.2.1 FOR ALL OTHER DETAILS

WHEELCHAIR RAMP TYPE B

N.T.S.

WHEELCHAIR RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
11	WOLCOTT STREET	60+56	13' LT	5'-0"	6' (MIN)	-0.5%	6'-6"	4"	6'-6"	6'-6"	6"	9' (MIN)
17	WOBURN STREET	81+51	30' LT	5'-0"	5'-6"	-1.0%	4'-6"	3"	5'-6"	6'-6"	6"	5'-6"
19	WOBURN STREET	81+42	30' RT	5'-0"	5'-6"	LT: +1.3% RT: -0.9%	9'-0"	6"	5'-6"	6'-6"	6"	5'-6"
21	HIGH STREET	27+74	16' LT	5'-0"	5'-6"	-1.7%	9'-0"	6"	5'-6"	6'-6"	6"	5'-6"



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$

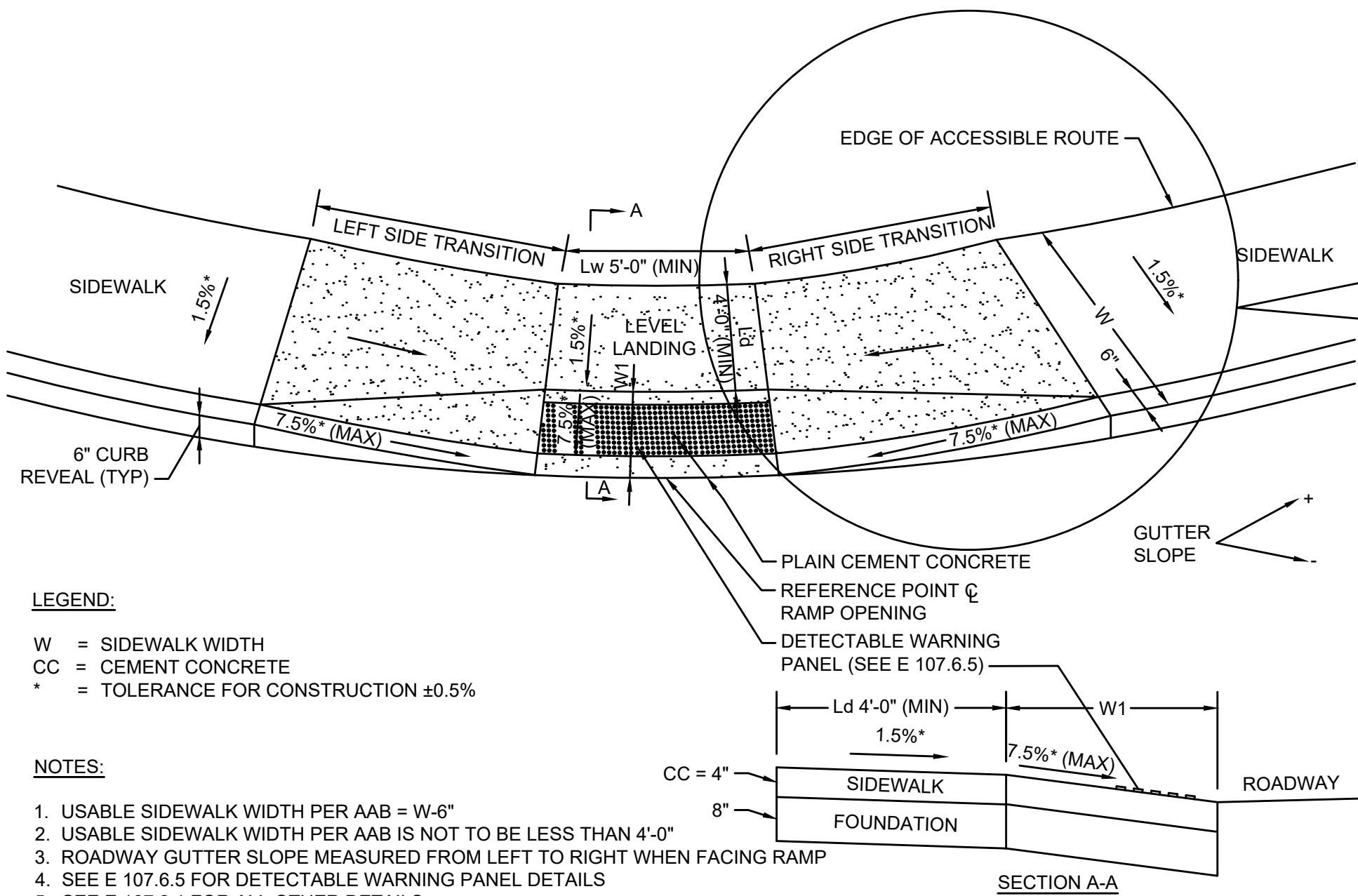
NOTES:

- USABLE SIDEWALK WIDTH PER AAB = W-6"
- USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
- ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP
- SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

WHEELCHAIR RAMP TYPE C

N.T.S.

WHEELCHAIR RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
15	HIGH STREET	26+67	16' LT	5'-0"	8'-0"	-3.5%	14'-0"	6"	5'-0"	3'-3"	3"	5'-6"



LEGEND:

W = SIDEWALK WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION $\pm 0.5\%$

NOTES:

- USABLE SIDEWALK WIDTH PER AAB = W-6"
- USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
- ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP
- SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
- SEE E 107.2.1 FOR ALL OTHER DETAILS

WHEELCHAIR RAMP TYPE E

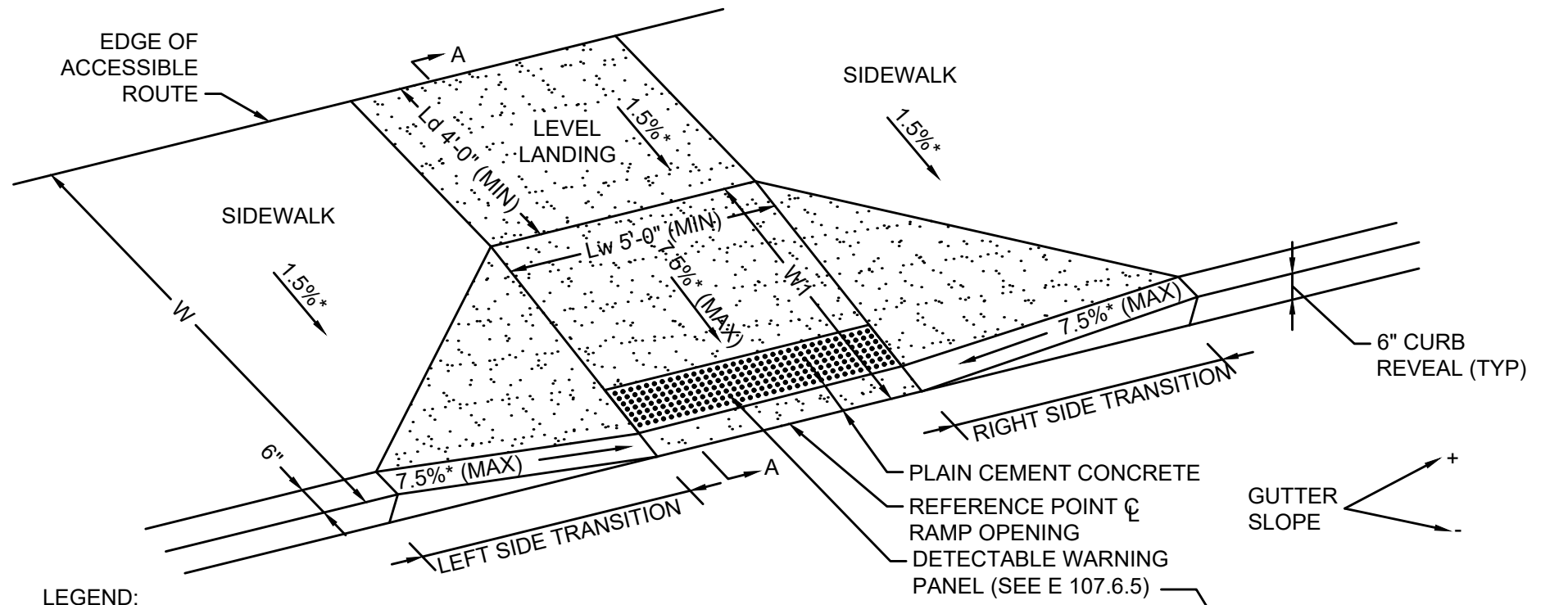
N.T.S.

WHEELCHAIR RAMP DATA													
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	RAMP LENGTH (W1)	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)			TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
9	WOLCOTT STREET	61+22	15' LT	5'-0"	5'-6" (MIN)	+7.0%	3'-9" (MIN)	6'-6"	6"	8.5' (MIN)	24'-0"	5"	7' (MIN)
10	WOLCOTT STREET	61+17	15' RT	5'-0"	7' (MIN)	-6.0%	3'-0"	15'-0"	6"	7'-6"	6'-6"	6"	8.5' (MIN)
12	WOLCOTT STREET	60+56	13' RT	5'-0"	4'-11" (MIN)	+0.5%	2'-6"	3'-3"	3"	9' (MIN)	6'-6"	3"	7' (MIN)
16	HIGH STREET	26+68	19' RT	5'-0"	5' (MIN)	+2.7%	5'-6"	5'-0"	6"	13' (MIN)	11'-0"	6"	10' (MIN)
20	WOBURN STREET	80+81	23' RT	5'-0"	5' (MIN)	+3.2%	4'-0"	3'-3"	3"	9' (MIN)	7'-0"	4"	6.5' (MIN)
22	HIGH STREET	27+74	22' RT	5'-0"	4'-0"	+2.7%	4'-6"	6'-6"	6"	8'-6"	5'-6"	3"	9' (MIN)

MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	29	36
PROJECT FILE NO.		608835	

HEELCHAIR RAMP DRIVEWAY DETAILS - 2 OF 2



LEGEND:

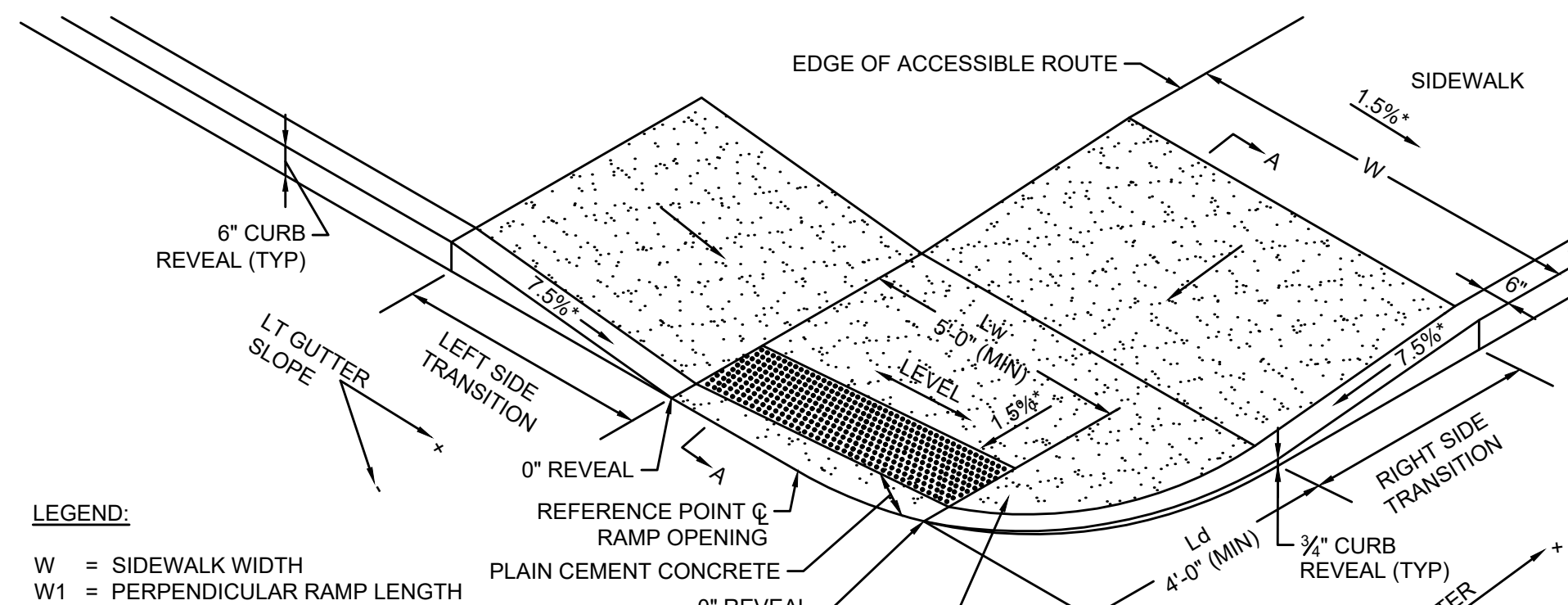
W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W-6"
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

WHEELCHAIR RAMP TYPE F

N.T.S.



LEGEND:

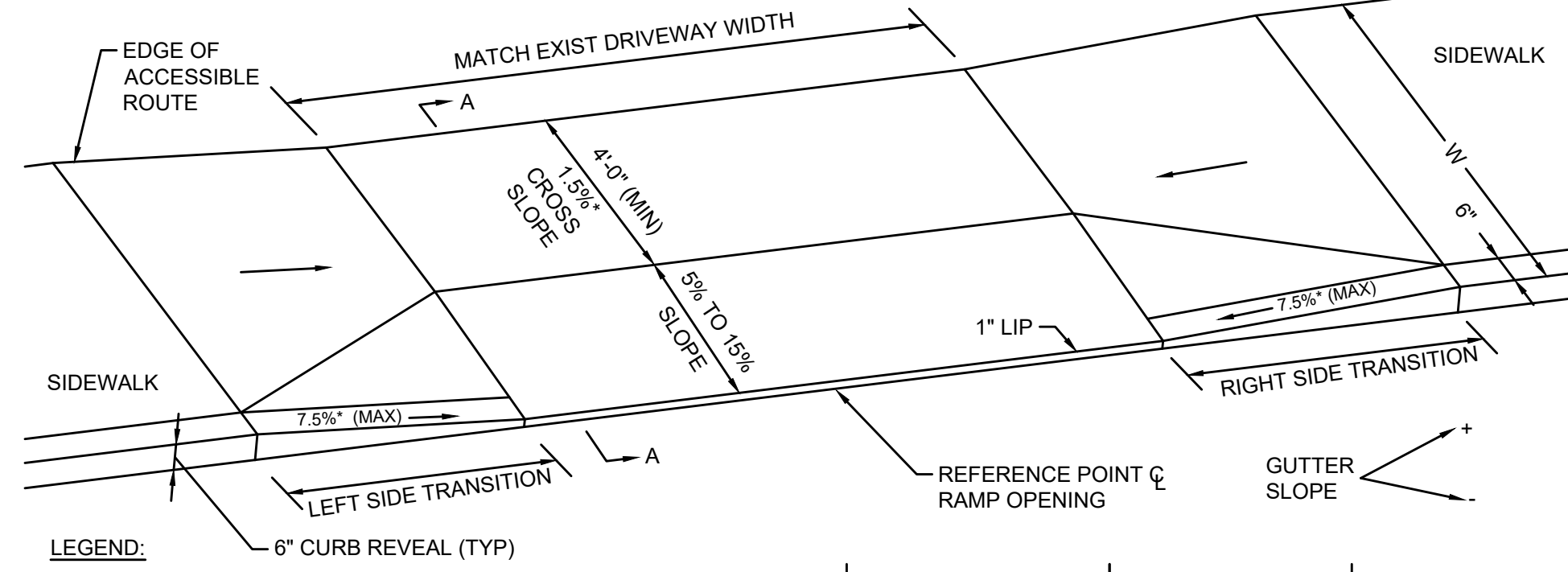
W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED LEFT TO RIGHT FACING TRANSITION
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

WHEELCHAIR RAMP TYPE G

N.T.S.



LEGEND:

W = SIDEWALK WIDTH
Wc = CURB WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W-6"
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING DRIVEWAY
4. SURFACE TREATMENT VARIES; SEE PLANS

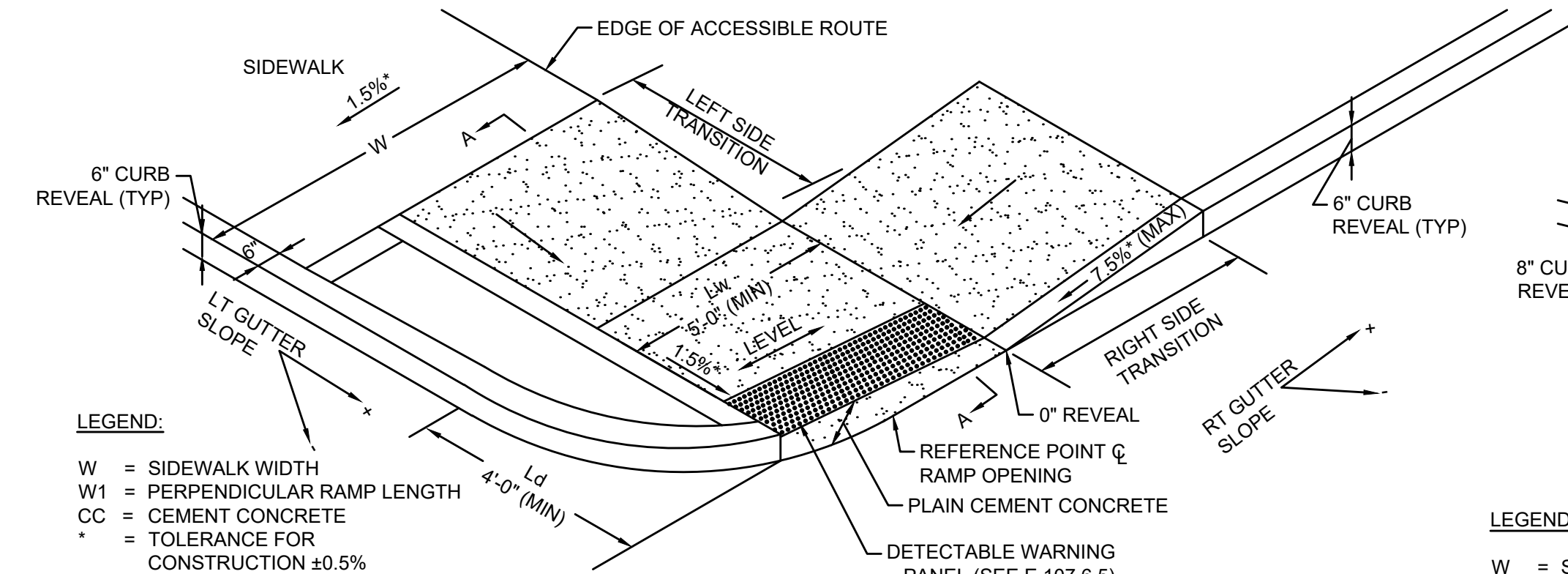
SIDEWALK THROUGH DRIVEWAY TYPE A

N.T.S.

WHEELCHAIR RAMP DATA													
RAMP #	BASELINE REFERENCE	STATION	OFFSE T	LEVEL LANDING		ROADWAY GUTTER SLOPE	RAMP LENGTH (W1)	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)			TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
1	HIGH STREET	14+40	20' RT	5'-0"	5' (MIN)	-3.3%	5'-5"	9'-0"	3"	13'	5'-0"	3"	10.5' (MIN)
2	HIGH STREET	14+49	13' LT	5'-0"	5'-0"	+3.6%	8'-10"	5'-6"	6"	10' (MIN)	N/A	6"	10' (MIN)
3	HIGH STREET	17+84	15' LT	5'-0"	5'-0"	LT: +1.8% RT: +0.8%	8'-10"	6'-6"	6"	9' (MIN)	7'-8"	6"	7' (MIN)
5	MYSTIC STREET	51+28	12' LT	5'-0"	4'-11"	LT: +0.8% RT: +4.8%	8'-10" (MIN)	6'-6"	6"	7' (MIN)	15'-0"	4"	4' (MIN)
13	HIGH STREET	22+24	13' LT	5'-0"	5'-0"	+1.9%	8'-10"	6'-6"	6"	8.5' (MIN)	9'-0"	6"	8.5' (MIN)
18	WOBURN STREET	80+87	16' LT	5'-0"	4' (MIN)	-0.6%	8'-10"	7'-8"	6"	7' (MIN)	6'-6"	6"	14' (MIN)

WHEELCHAIR RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
6	MYSTIC STREET	50+71	11' LT	5'-0"	4' (MIN)	LT: +3.2% RT: -0.8%	6'-6"	6"	N/A	6'-6"	6"	8'-10"

DRIVEWAY DATA													
DWY #	BASELINE REFERENCE	STATION	OFFSET	DRIVEWAY SURFACE	DWY WIDTH @ GUTTER	ROADWAY GUTTER SLOPE	WIDTH OF ACCESSIBLE ROUTE	LEFT SIDE			RIGHT SIDE		
								LENGTH	CURB REVEAL	SW WIDTH	LENGTH	CURB REVEAL	SW WIDTH
①	HIGH STREET	28+27	16' LT	CEM CONC	22'-0"	-1.7%	7' (MIN)	9'-0"	6"	15'-0"	6'-6"	6"	9' (MIN)

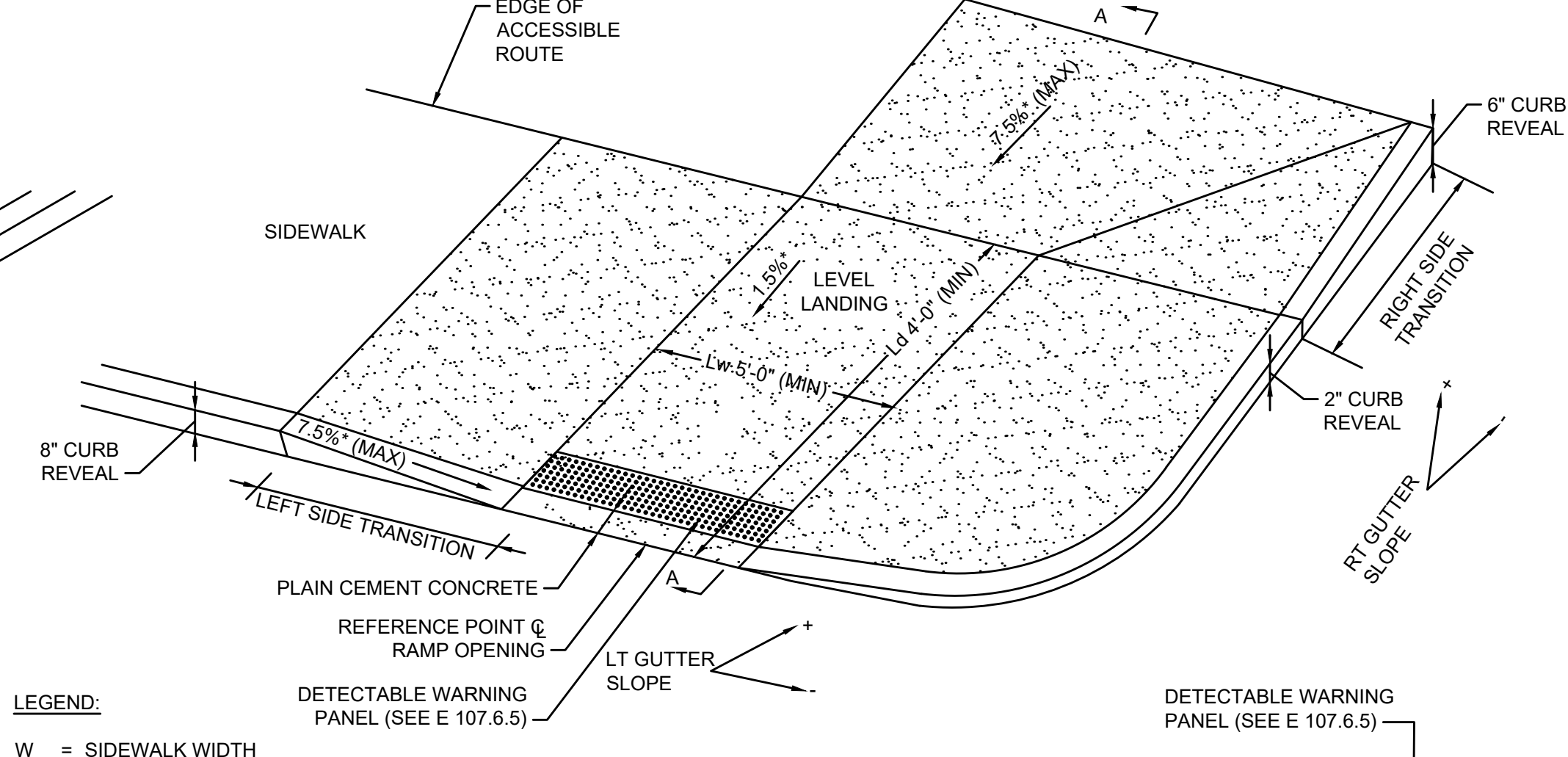


LEGEND:

W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED LEFT TO RIGHT FACING TRANSITION
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS



LEGEND:

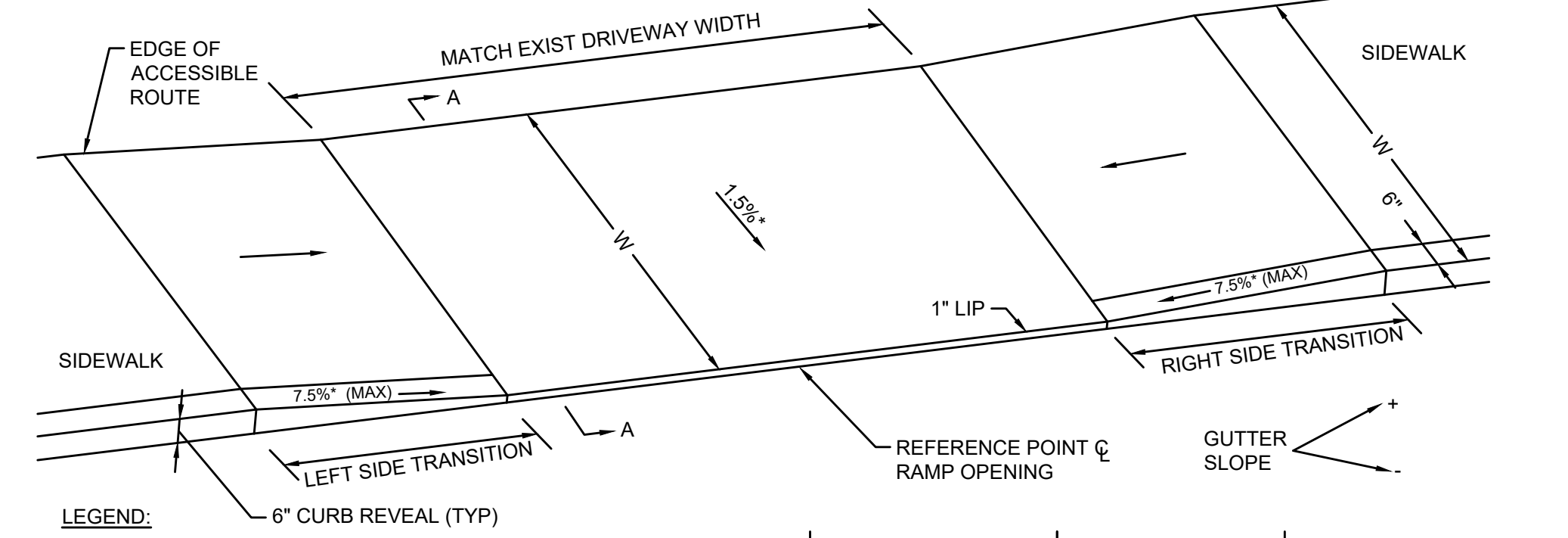
W = SIDEWALK WIDTH
W1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W-6"
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS

WHEELCHAIR RAMP NUMBER 7

N.T.S.



LEGEND:

W = SIDEWALK WIDTH
Wc = CURB WIDTH
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

1. USABLE SIDEWALK WIDTH PER AAB = W-6"
2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0"
3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING DRIVEWAY
4. SURFACE TREATMENT VARIES; SEE PLANS

SIDEWALK THROUGH DRIVEWAY TYPE B

N.T.S.

WHEELCHAIR RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
6	MYSTIC STREET	50+68	13' RT	5'-0"	6' (MIN)	LT: -0.2% RT: -3.8%	7'-8"	6"	5'-0"	6'-6"	6"	N/A

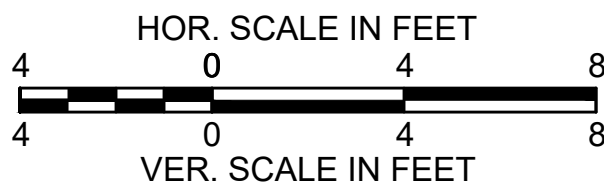
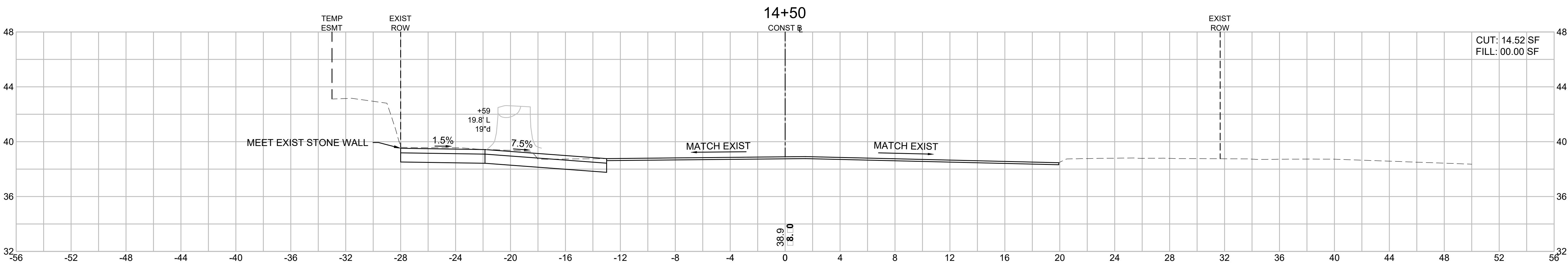
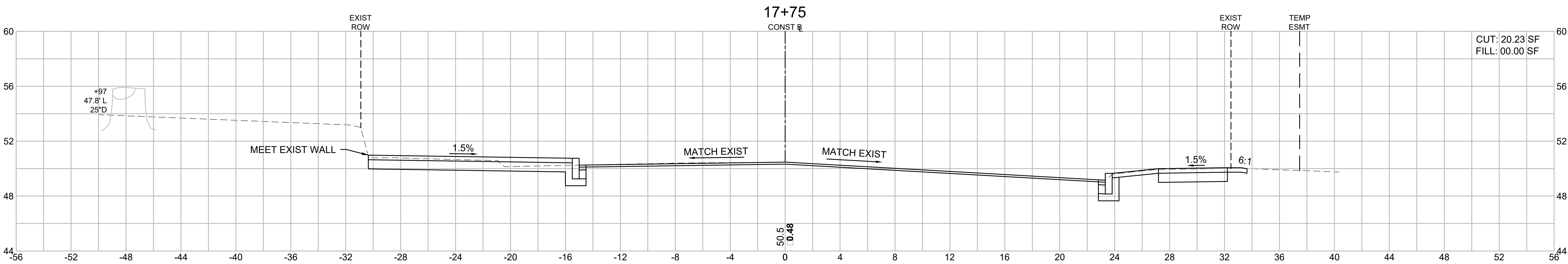
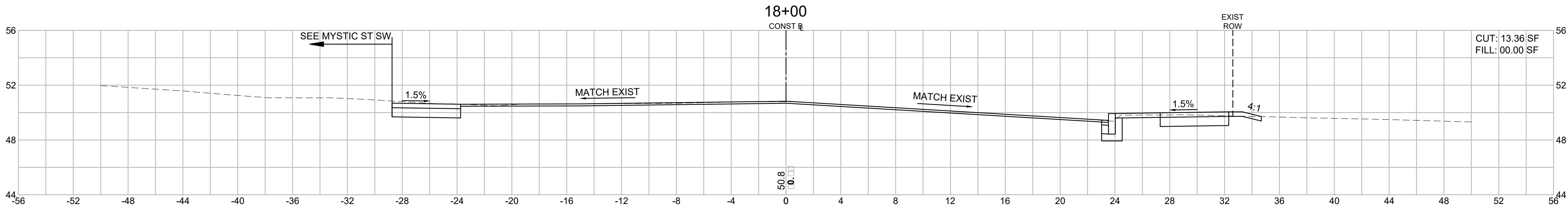
WHEELCHAIR RAMP DATA												
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)		TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
7	MYSTIC STREET	51+25	12' RT	5'-0"	8' (MIN)	LT: -3.0% RT: +0.7%	20'-0"	8"	8'-0"	9'-0"	6"	9.5' (MIN)

DRIVEWAY DATA													
DWY #	BASELINE REFERENCE	STATION	OFFSET	DRIVEWAY SURFACE	DWY WIDTH @ GUTTER	ROADWAY GUTTER SLOPE	WIDTH OF ACCESSIBLE ROUTE	LEFT SIDE			RIGHT SIDE		
								LENGTH	CURB REVEAL	SW WIDTH	LENGTH	CURB REVEAL	SW WIDTH
②	WOBURN STREET	81+70	19' RT	CEM CONC	19'-6"	LT: -0.4% RT: +1.3%	5'-0"	7'-8"	6"	5'-6"	9'-0"	6"	5'-6"

MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	30	36
PROJECT FILE NO.		608335	

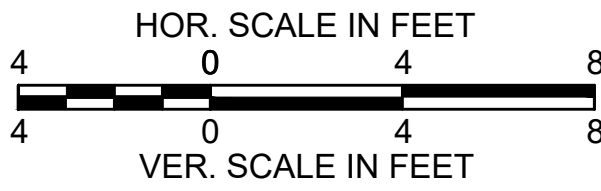
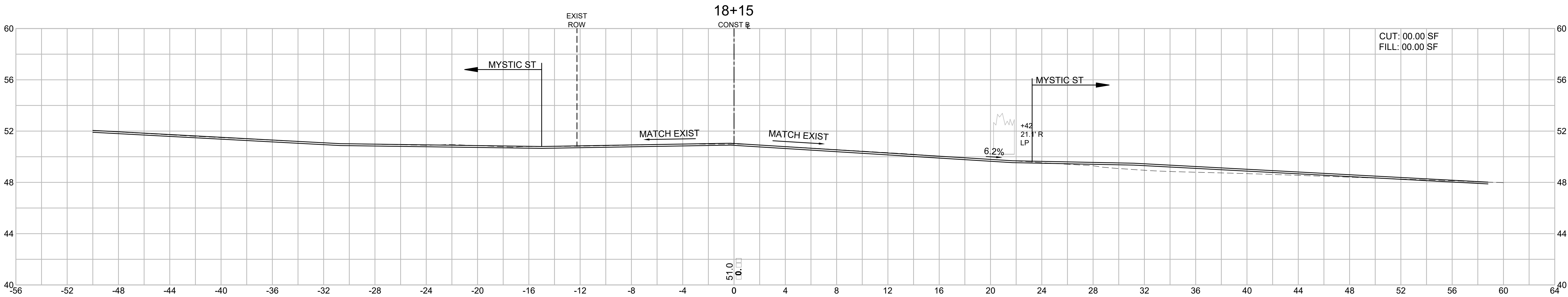
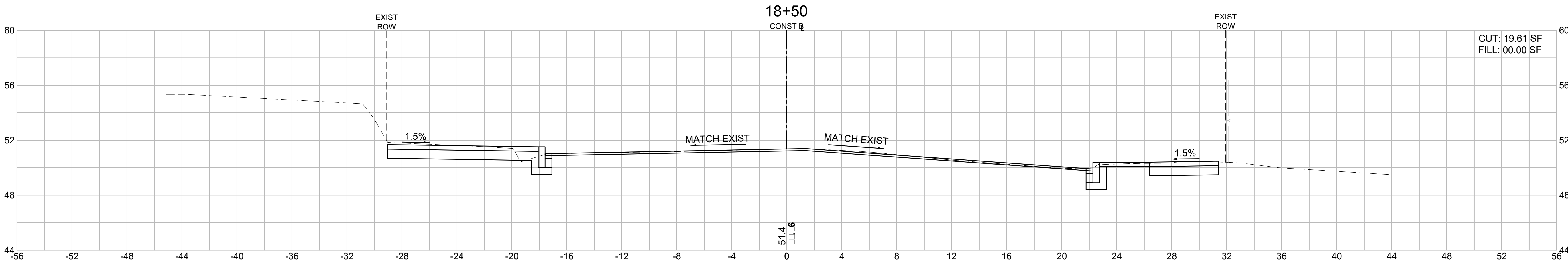
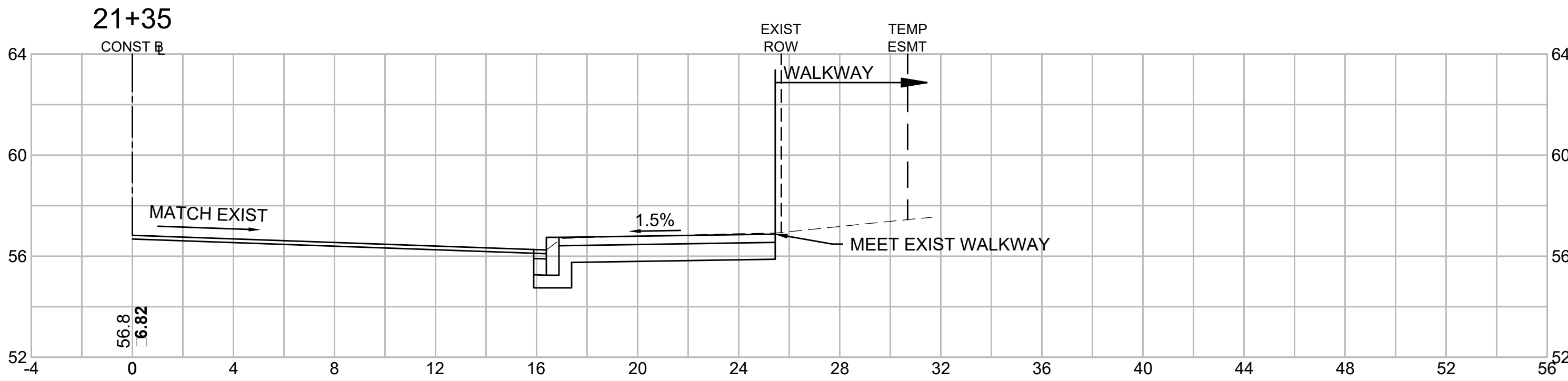
CROSS SECTIONS - 30 OF 36
HIGH STREET



MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	31	36
PROJECT FILE NO.		608335	

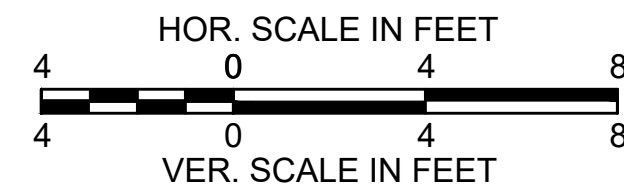
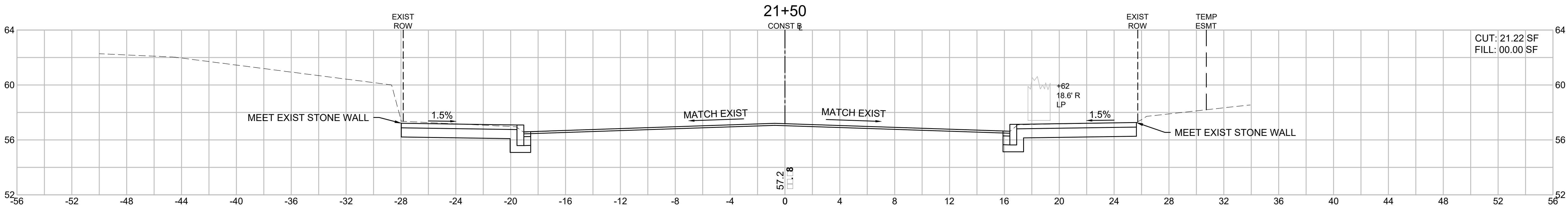
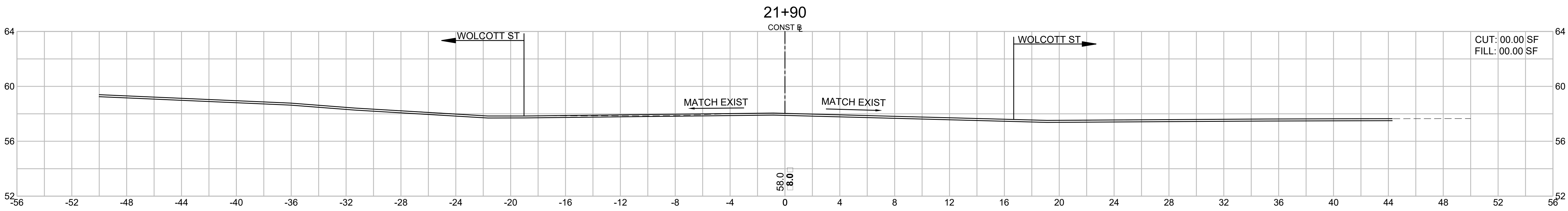
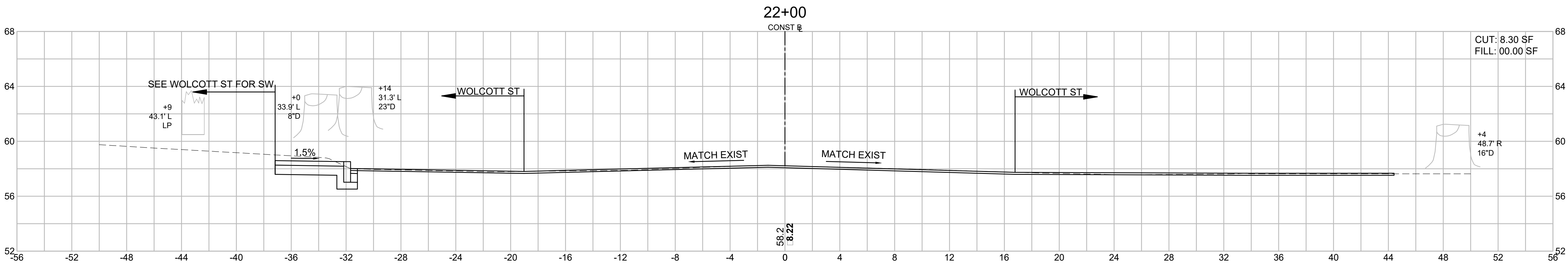
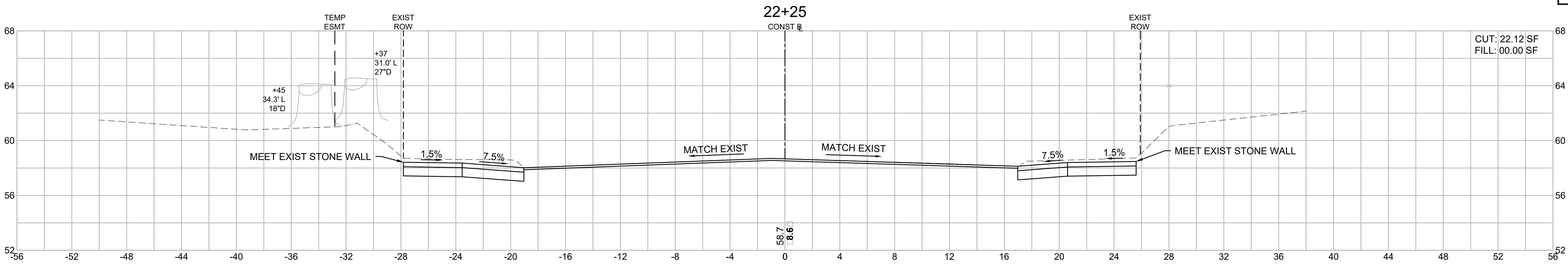
CROSS SECTIONS - 2 OF 3
HIGH STREET

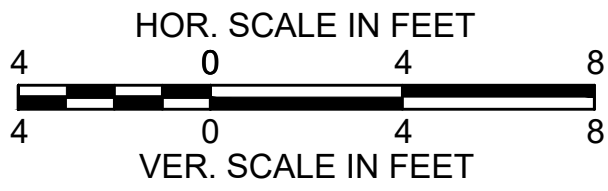
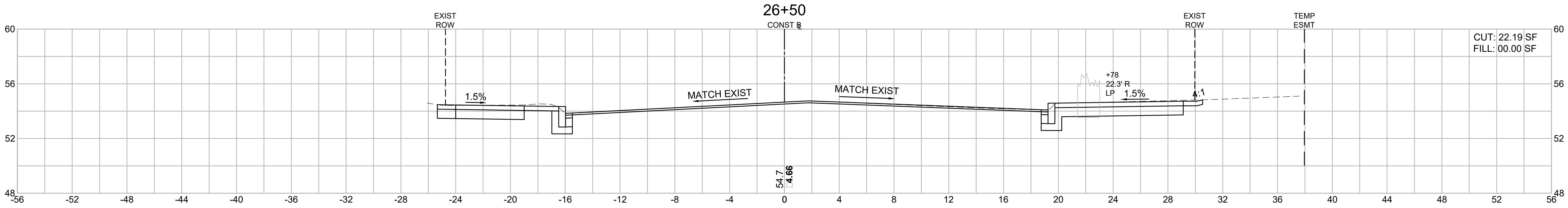
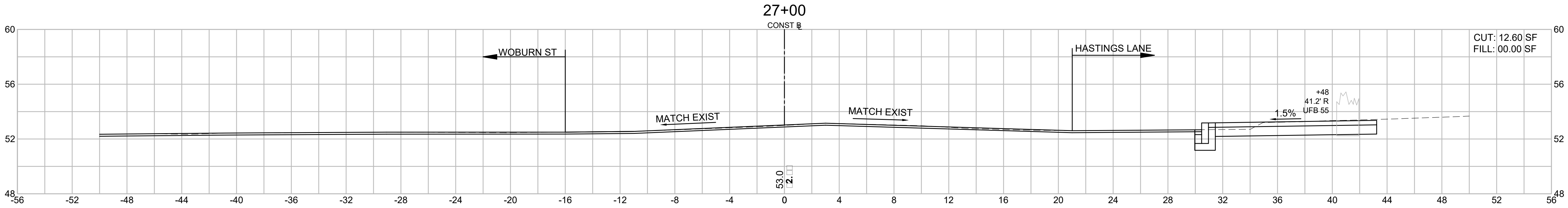
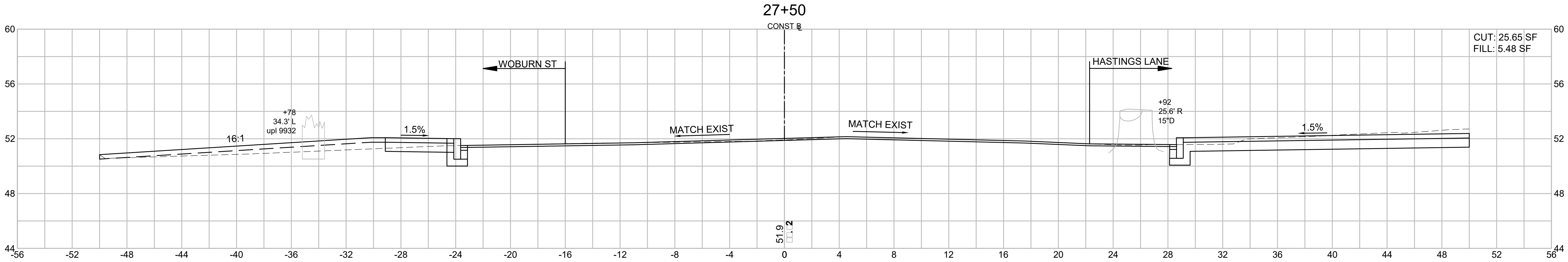


MEDFORD
BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	32	36
PROJECT FILE NO.		608335	

CROSS SECTIONS - 1 OF 3
HIGH STREET





MEDFORD

BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	34	36
PROJECT FILE NO.		608335	

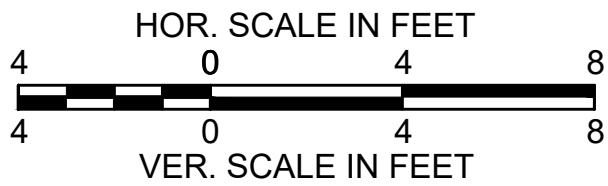
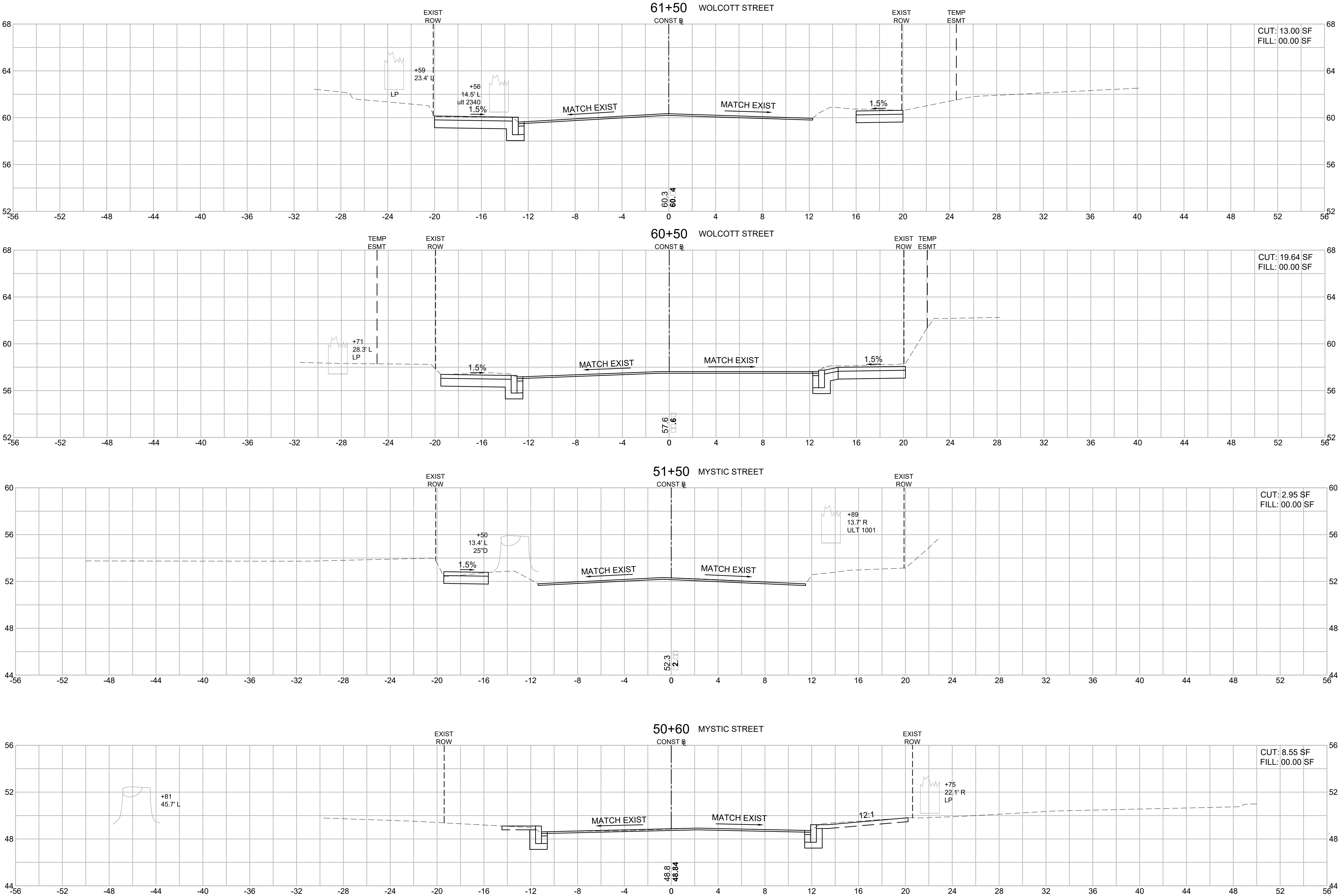
CROSS SECTIONS - 1 OF 1

HIGH STREET

608335|PS&E2|HD11(CROSS SECTIONS).DWG Plotted on 6/9/2020 11:12 AM

MEDFORD BROOKS ELEMENTARY SCHOOL			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	35	36
PROJECT FILE NO.		608335	

CROSS SECTIONS - 6 OF 36
SIDE STREETS



MEDFORD

BROOKS ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	TAP-003S(178)X	36	36
PROJECT FILE NO.		608335	

CROSS SECTIONS - 1 OF 1
SIDE STREETS

