

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN OF
HIGH STREET (ROUTE 113)
IN THE CITY OF
NEWBURYPORT
ESSEX COUNTY
FEDERAL AID PROJECT NO. -

NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

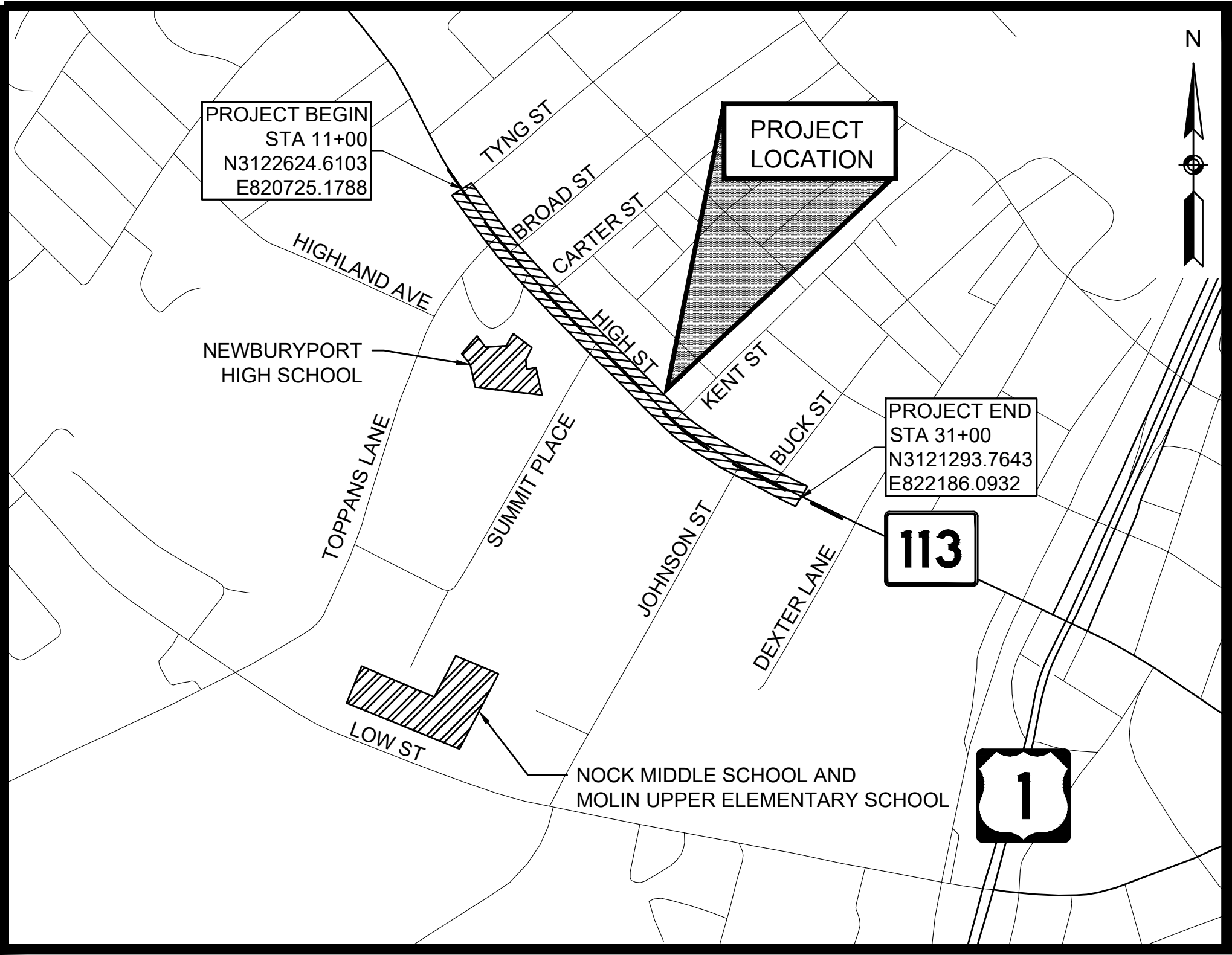
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	50
PROJECT FILE NO.		608792	

TITLE SHEET & INDEX

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015, THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WTH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

PS&E SUBMITTAL

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DESIGN DESIGNATION (HIGH STREET (ROUTE 113))

DESIGN SPEED	35 MPH
ADT (2017)	17,772
ADT (2024)	19,724
K	8.5%
D	52.8% NB
T (PEAK HOUR)	1.0%
T (AVERAGE DAY)	0.6%
DHV	1,678 VPH
DDHV	885 VPH
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL



DATE	DESCRIPTION	REV #
01/14/19	PS&E SUBMITTAL	2
08/16/18	100% SUBMITTAL	1
10/20/17	25/75% SUBMITTAL	-

TEC, Inc.
146 Dascomb Rd
Andover, MA 01810

RECOMMENDED FOR APPROVAL

CHIEF ENGINEER
DATE

APPROVED
DIVISION ADMINISTRATOR
DATE

HIGHWAY ADMINISTRATOR
DATE

LENGTH OF PROJECT = 2,000.00 FEET = 0.379 MILES

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
		6" DOTTED WHITE LINE (3' LINE W/ 9" GAP)
		6" DOTTED YELLOW LINE (3' LINE W/ 9" GAP)
		6" DOTTED WHITE LINE EXTENSION (2' LINE W/ 6' GAP)
		6" DOTTED YELLOW LINE EXTENSION (2' LINE W/ 6' GAP)
		DOUBLE WHITE LINE
		DOUBLE YELLOW LINE
		12" YELLOW GORE LINE (3:1, 10' O.C.)

ABBREVIATIONS	
GENERAL	
AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
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
GC	GRANITE CURB
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
LOG	LIMIT OF GRADING
LP	LIGHT POLE
L&S	LOAM AND SEED
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

NEWBURYPORT

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LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATERWAY
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
RRFB	RECTANGULAR RAPID FLASHING BEACON
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 DON'T WALK
FDW	FLASHING DON'T WALK
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

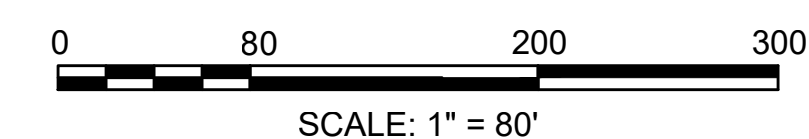
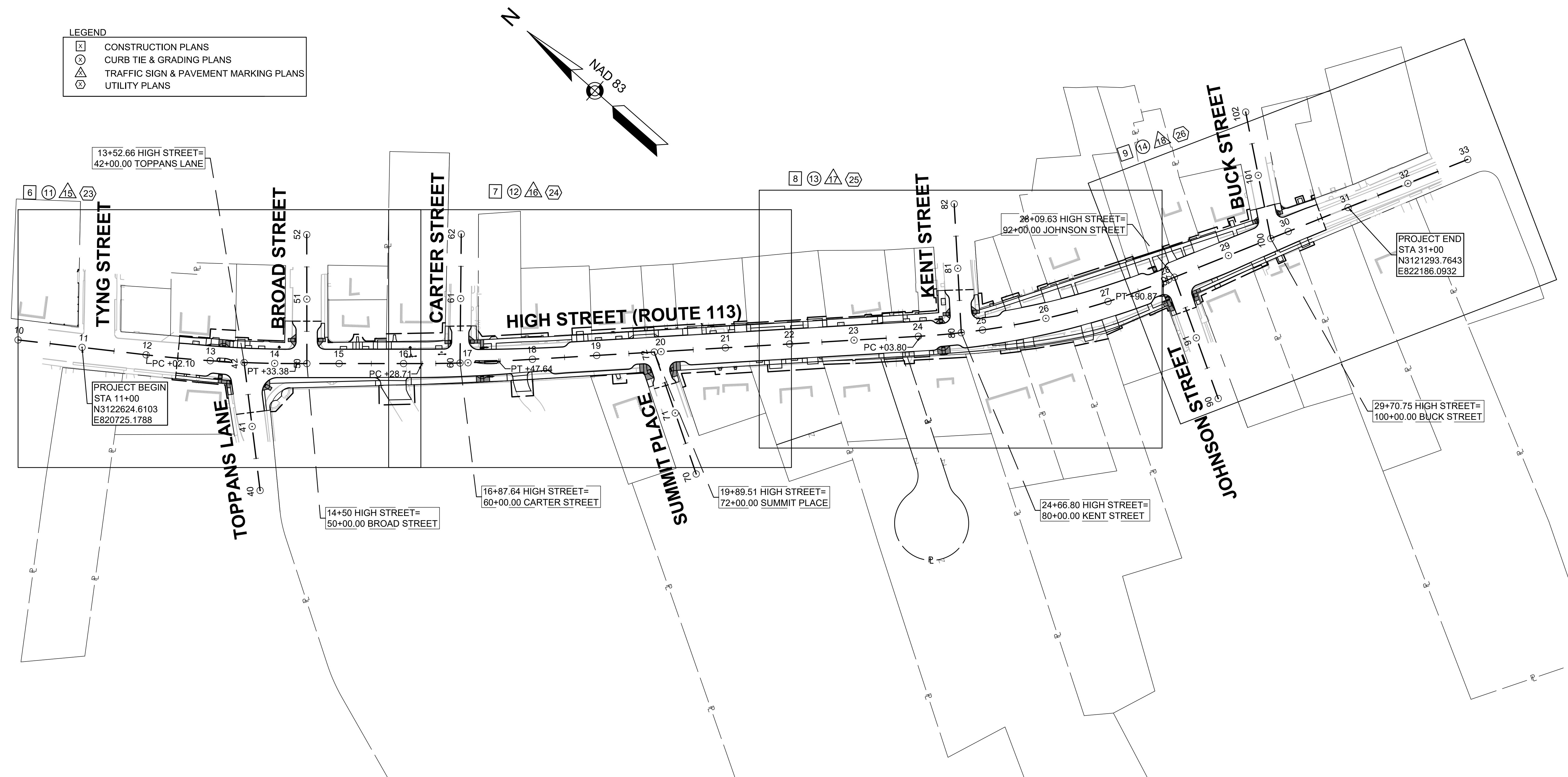
NEWBURYPORT
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MA	-	3	49
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KEY PLAN

LEGEND

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



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TYPICAL SECTIONS & PAVEMENT NOTES - 1 OF 2

PAVEMENT NOTES

PROPOSED MILL & HOT MIX ASPHALT (HMA) OVERLAY

SURFACE: 1¾" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
1¾" ±2" PAVEMENT MICROMILLING
(VARIABLE DEPTH AS REQUIRED TO MEET LINES AND PROPOSED GRADES)

PROPOSED FULL DEPTH PAVEMENT

SURFACE: 1¾" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER
2¼" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER

BASE: 4" SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE OVER
8" GRAVEL BORROW, TYPE b (COMPACTED)

PROPOSED PERMANENT PAVEMENT TRENCH PATCH

SURFACE: VARIABLE DEPTH HMA FOR PATCHING TO MATCH EXISTING PAVEMENT PER SECTION 450.53
(COMPACTED IN 2" (MAX) LIFTS TO MATCH EXIST PAVEMENT THICKNESS)

BASE: 8" GRAVEL BORROW, TYPE b (COMPACTED) OVER

SUBBASE: EXISTING MATERIAL SUITABLE FOR RE-USE (SEE VARIOUS TRENCH DETAILS)

PROPOSED TEMPORARY PAVEMENT TRENCH PATCH

SURFACE: 2½" HMA FOR MISCELLANEOUS WORK

BASE: EXISTING MATERIAL SUITABLE FOR RE-USE (SEE VARIOUS TRENCH DETAILS)

PROPOSED HMA DRIVEWAY (TO MATCH EXISTING)

SURFACE: 1½" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 12.5) (ITEM 703) OVER
2" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5) (ITEM 703) OVER

BASE: EXCAVATE EXISTING HMA TO SAWCUT LINE,
FINE GRADE AND COMPACT EXISTING BASE;
ADD GRAVEL BORROW, TYPE b AS REQUIRED TO MATCH PROPOSED GRADES

PROPOSED CEMENT CONCRETE SIDEWALK THROUGH DRIVEWAY

SURFACE: 6" CEMENT CONCRETE (AIR ENTRAINED, 4000 PSI, ¾", 610)

BASE: 8" GRAVEL BORROW, TYPE b (COMPACTED)

PROPOSED CEMENT CONCRETE SIDEWALKS / WHEELCHAIR RAMPS / WALKWAYS /
REFUGE ISLANDS

SURFACE: 4" CEMENT CONCRETE (AIR ENTRAINED, 4000 PSI, ¾", 610)

BASE: 8" GRAVEL BORROW, TYPE b (COMPACTED)

PROPOSED BRICK SIDEWALKS / BRICK SIDEWALK THROUGH DRIVEWAY

SURFACE: WIRE CUT BRICK OVER
¾" SAND BORROW OVER
4" HMA INTERMEDIATE COURSE (ITEM 702) (FOR SIDEWALKS) OVER
(USE 6" HMA INTERMEDIATE COURSE (ITEM 703) FOR SIDEWALK THROUGH DRIVEWAY
COMPACTED IN 2" (MAX) LIFTS TO MATCH EXIST PAVEMENT THICKNESS)

BASE: 8" GRAVEL BORROW, TYPE b (COMPACTED)

PROPOSED PEASTONE DRIVEWAY & WALKWAY

SURFACE: 2" PEASTONE OVER

BASE: 8" GRAVEL BORROW, TYPE b (COMPACTED)

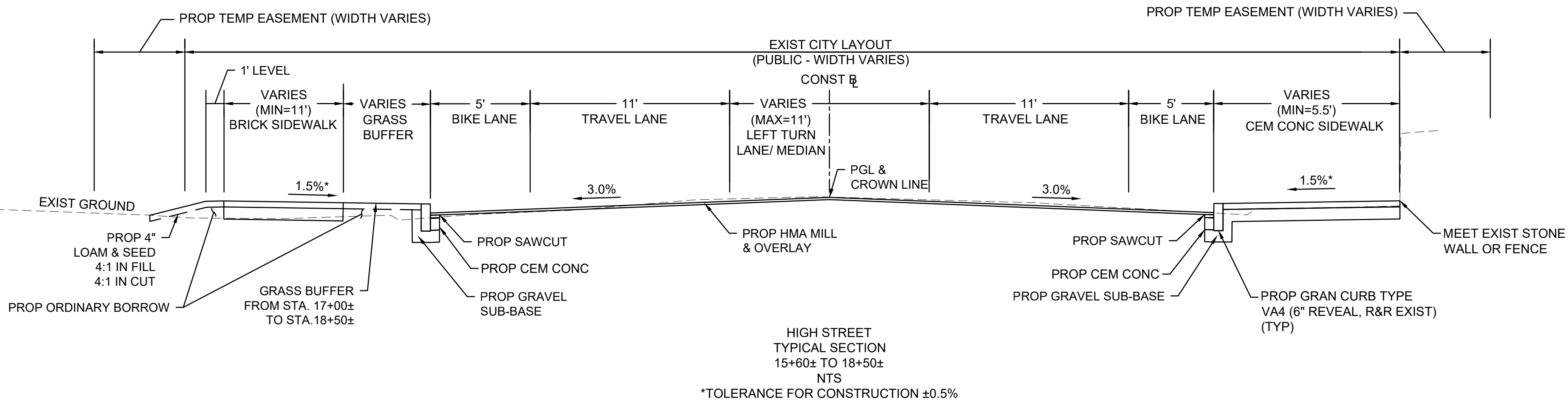
PROPOSED HMA SIDEWALK

SURFACE: 1" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER
1½" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC - 12.5) OVER

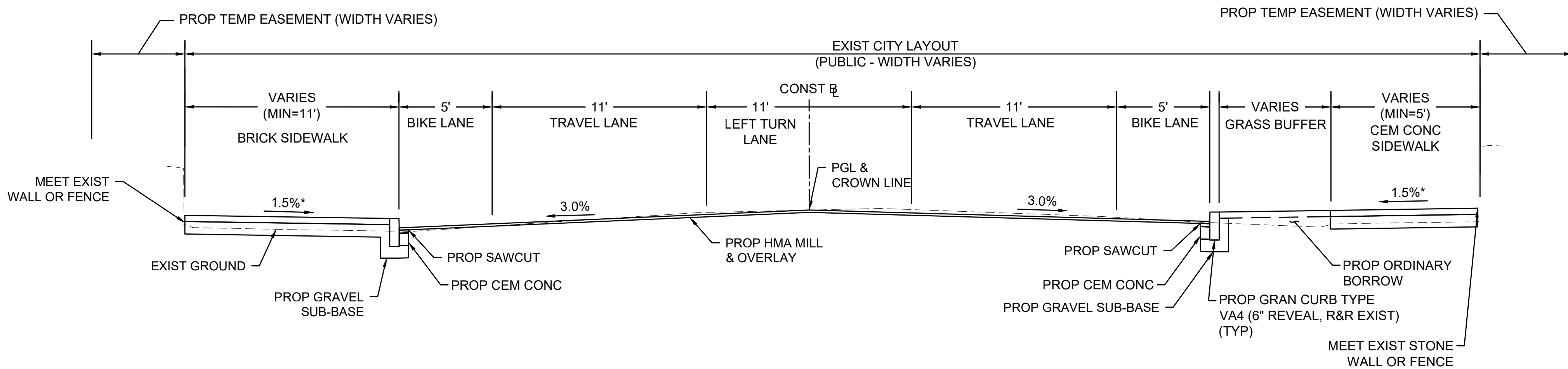
BASE: 8" GRAVEL BORROW, TYPE B (COMPACTED)

GENERAL PAVEMENT NOTES:

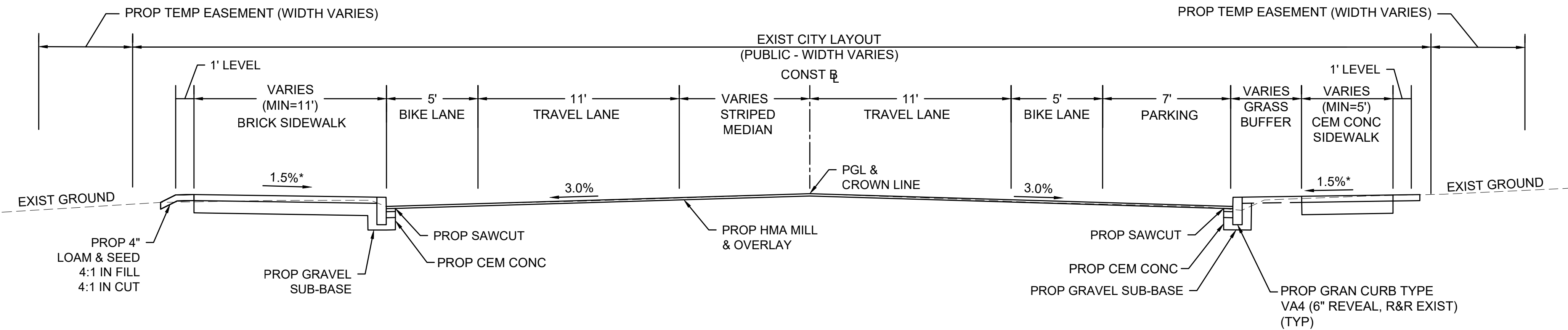
- ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED BETWEEN ALL ASPHALT SURFACES AND SAWCUT JOINTS BEFORE PAVING. HMA JOINT SEALANT SHALL BE APPLIED TO ALL COLD JOINTS (LONGITUDINAL AND TRANSVERSE) BEFORE PAVING SURFACE COURSE. ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED AT A RATE OF 0.05 GAL/SY, EXCEPT OVER MILLED AND CEMENT CONCRETE SURFACES, WHERE THE APPLICATION RATE SHALL BE 0.07 GAL/SY. ALL SURFACES SHALL BE CLEAN OF ALL ORGANICS, DEBRIS, AND SAND PRIOR TO PAVING.
- ALL HMA SHALL BE PRODUCED WITH WMA ADDITIVE.
- ALL HMA SHALL BE IN ACCORDANCE WITH SECTION 450.
- ASPHALT EMULSION FOR TACK COAT SHALL BE RS-1H TO RESIST TRACKING OF TACK BY HAUL VEHICLES.
- HMA FOR WALKS AND DRIVEWAYS SHALL BE IN ACCORDANCE WITH SECTION 700.
- ALL GRAVEL BORROW MEETING SPECIFICATION SHALL BE RETAINED IN PLACE, COMPACTED, AND LEVELED AS REQUIRED.



*TOLERANCE FOR CONSTRUCTION ±0.5%



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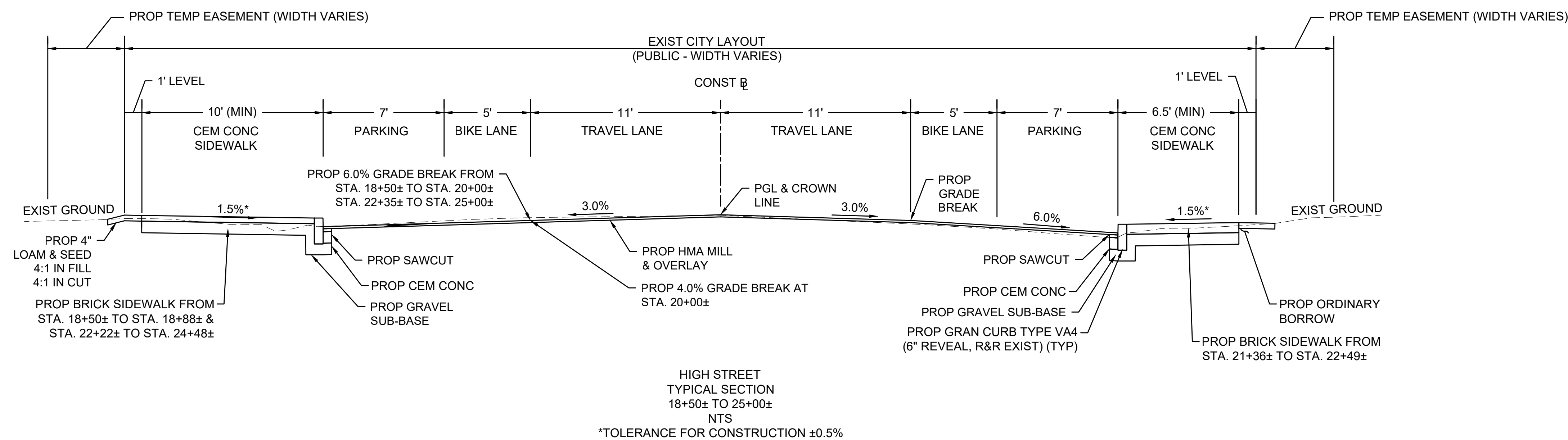
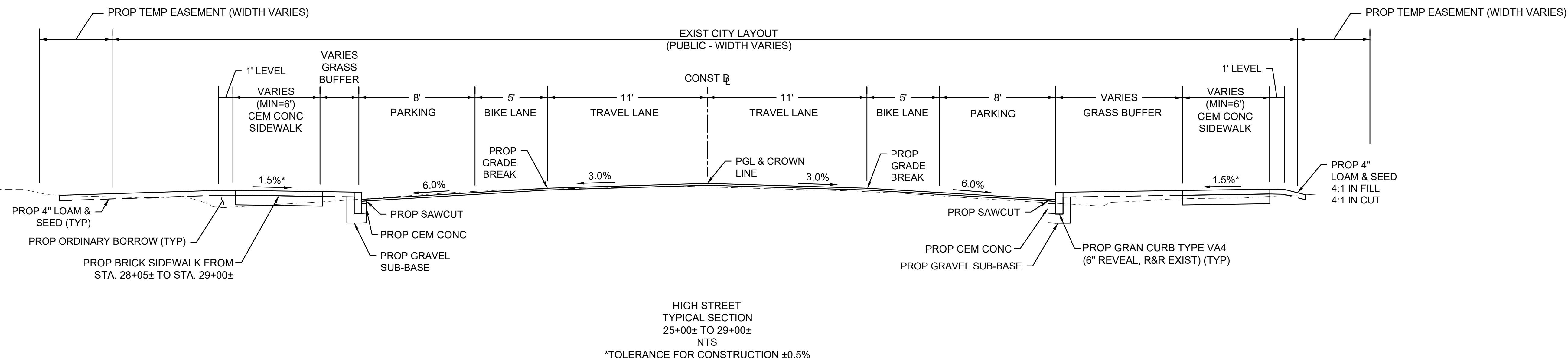
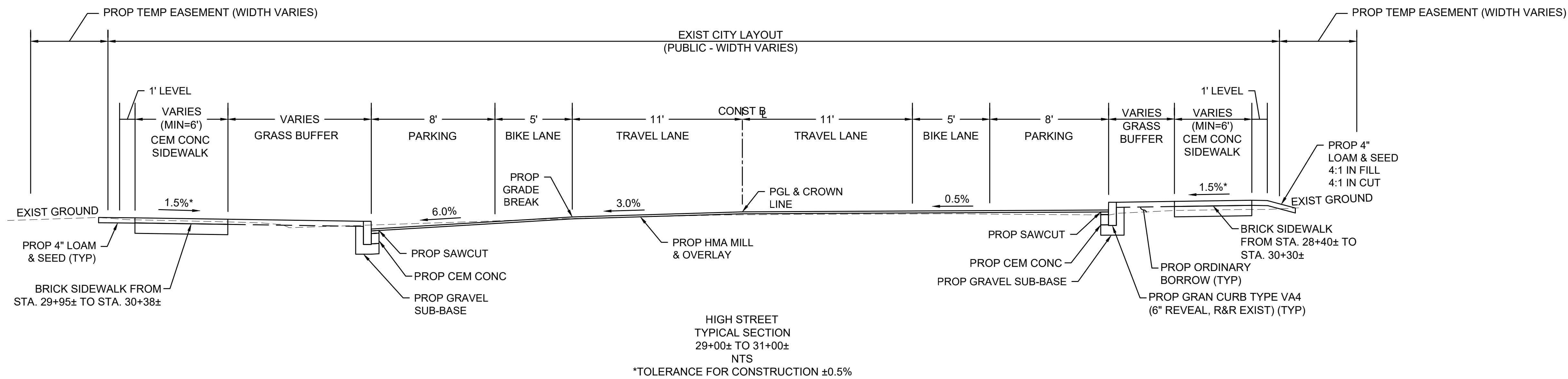


*TOLERANCE FOR CONSTRUCTION ±0.5%

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MA	-	5	49
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TYPICAL SECTIONS & PAVEMENT NOTES - 2 OF 2



GUARDRAIL DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

DRAINAGE DETAILS

SEE SHEET 23

WATER SUPPLY ALTERATIONS

SEE SHEET 23

NEWBURYPORT
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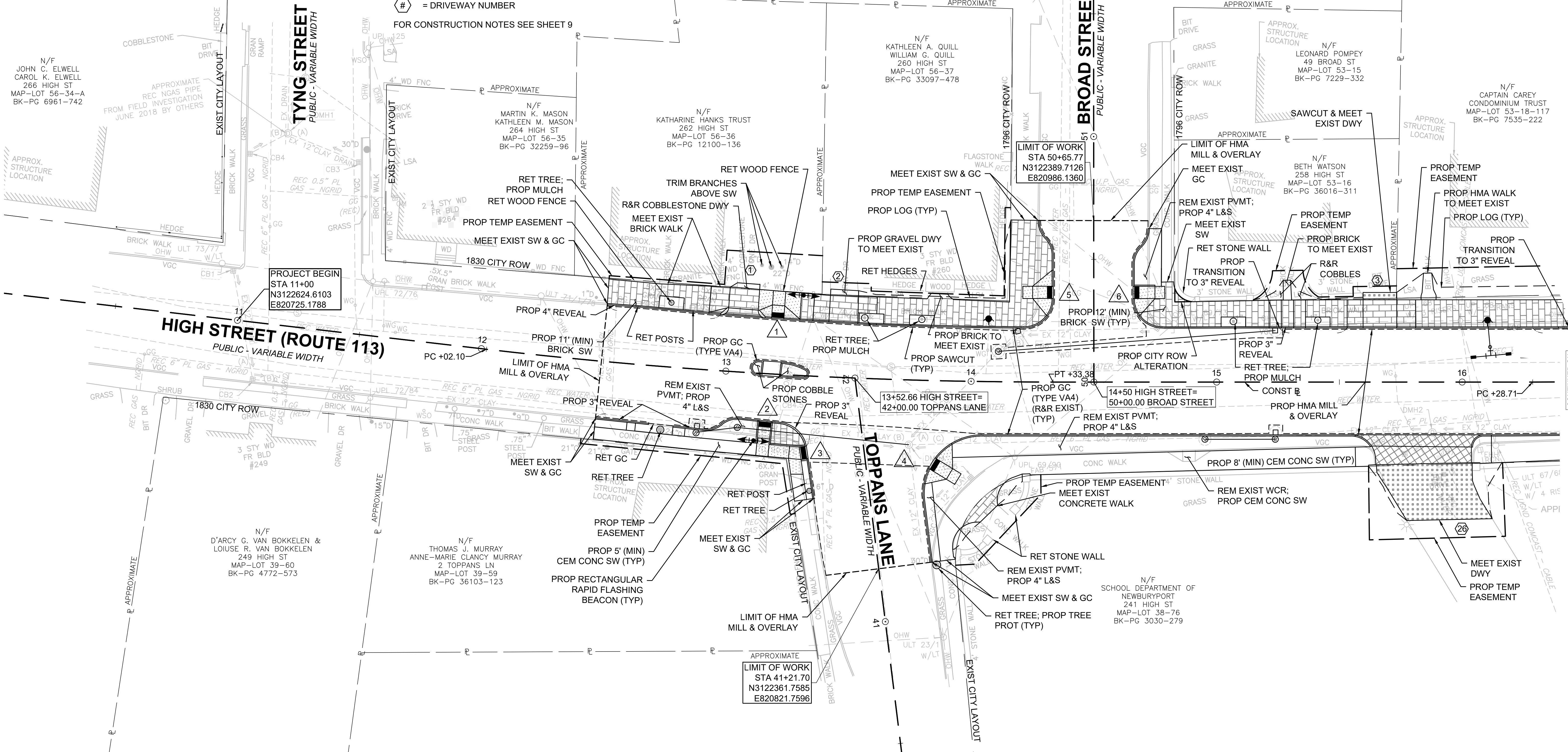
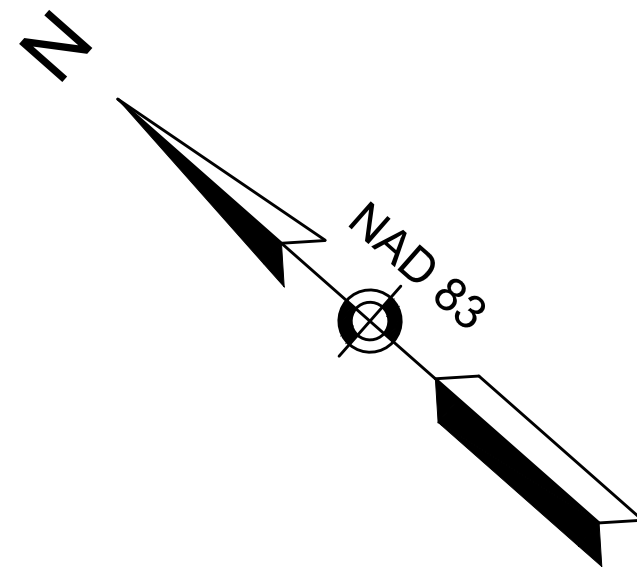
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MA	-	6	49
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CONSTRUCTION PLANS - 1 OF 4

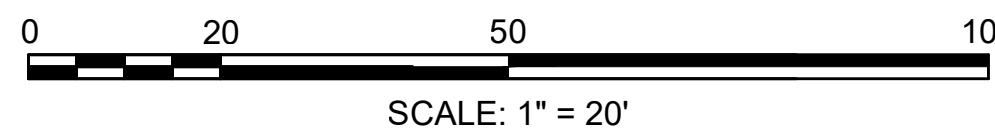
LEGEND

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

FOR CONSTRUCTION NOTES SEE SHEET 9

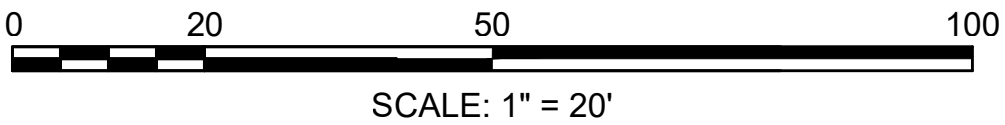


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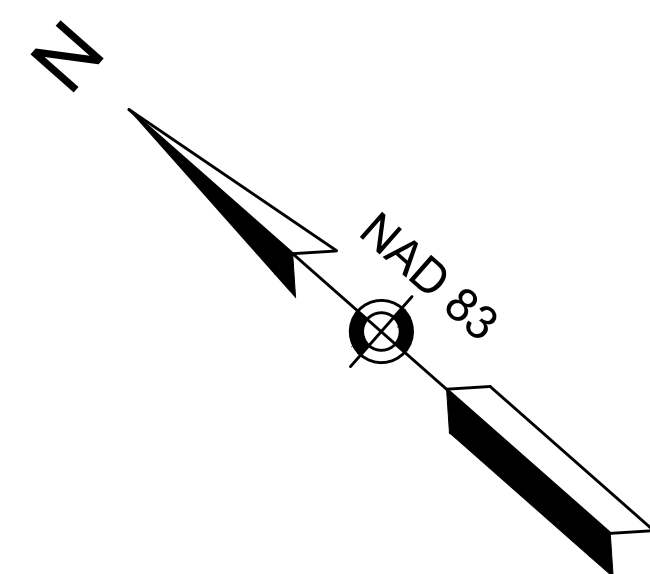


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MA	-	7	49
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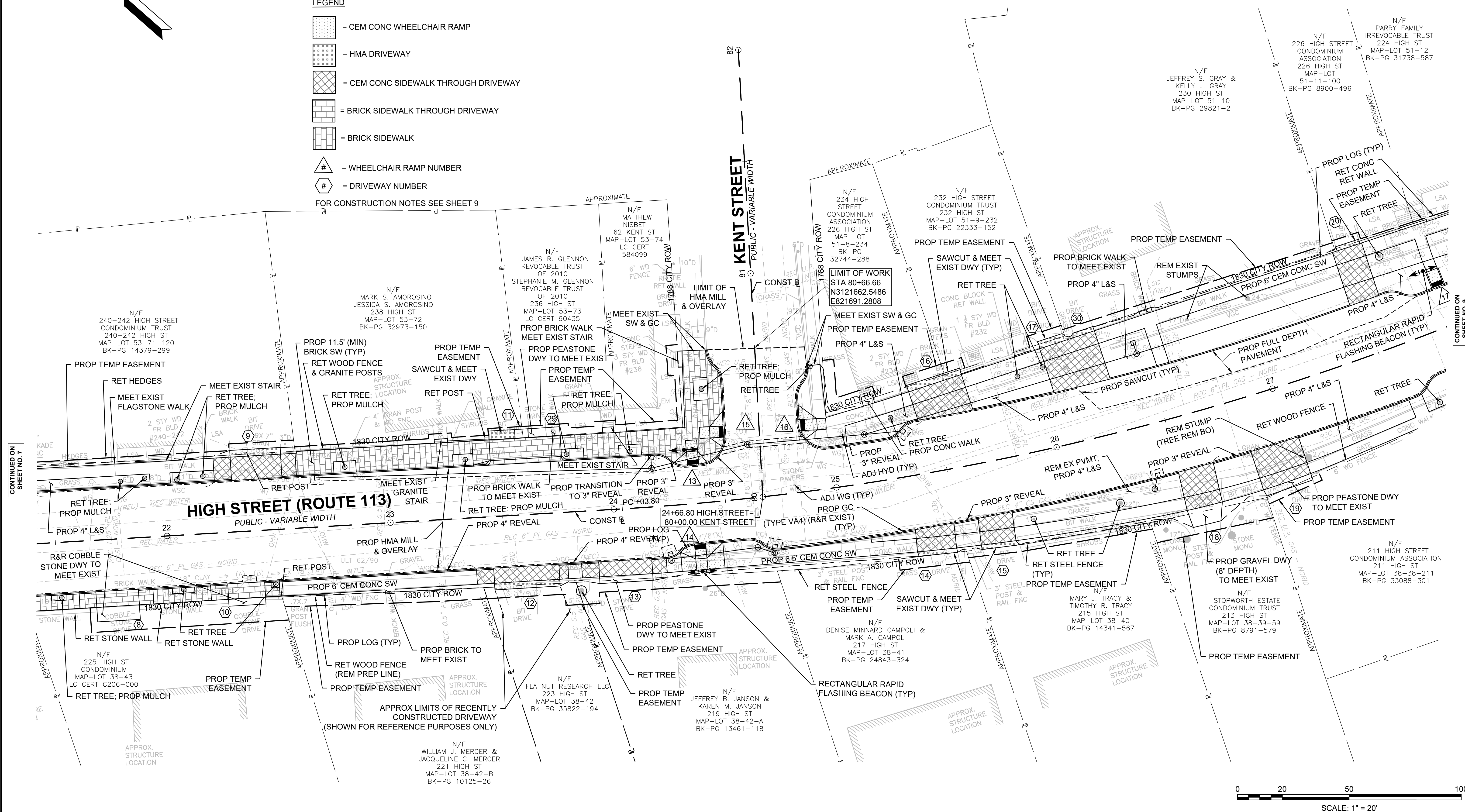


WATER SUPPLY ALTERATIONS
SEE SHEET 25



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

FOR CONSTRUCTION NOTES SEE SHEET 9



NEWBURYPORT
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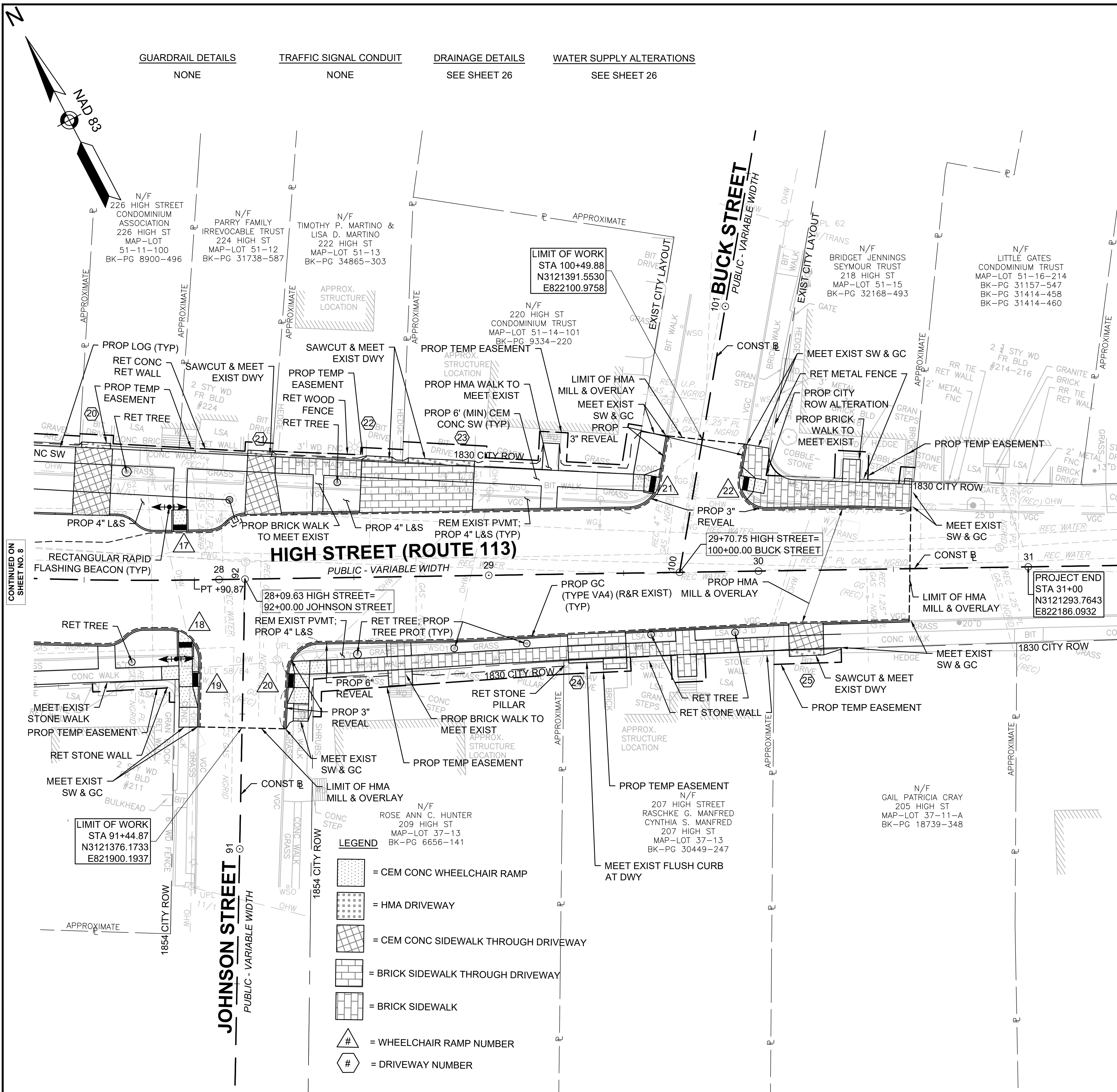
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	50
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CONSTRUCTION PLANS - 4 OF 4

CONSTRUCTION NOTES:

- EXISTING CONDITIONS INFORMATION FROM SURVEY BY TEC, INC., ANDOVER, MA PERFORMED IN JUNE 2017.

HORIZONTAL DATUM = NAD83 (MASSACHUSETTS STATE PLANE COORDINATES)
VERTICAL DATUM = NAVD88
- ALL EXISTING STATE, COUNTY, AND TOWN LOCATION LINES HAVE BEEN ESTABLISHED FROM AN ACTUAL ON-THE-GROUND SURVEY. ALL PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.
- NO LAYOUT WAS PROVIDED FOR HIGH STREET, TOPPANS LANE, BROAD STREET, CARTER STREET, SUMMIT PLACE, KENT STREET, JOHNSON STREET, OR BUCK STREET. A BOUND WAS HELD FOR POSITION, OCCUPATION WAS HELD FOR DIRECTION, AND A 50' WIDTH WAS HELD FROM OCCUPATION.
- 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.
- 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.
- 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 NEWBURYPORT DEPARTMENT OF PUBLIC SERVICES (DPS) TO ALLOW FOR THE REPLACEMENT OF EXISTING UTILITY STRUCTURES IN POOR CONDITION. THESE REPLACEMENT UTILITY STRUCTURES TO BE PROVIDED AND INSTALLED BY THE DPS.
- 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.
- PROPOSED LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 1.0% (MINIMUM) UNLESS OTHERWISE NOTED.
- 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.
- ALL DISTURBED AREAS OUTSIDE THE CURBLINE SHALL BE STABILIZED WITH 4" LOAM AND SEED, UNLESS OTHERWISE NOTED.
- 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.
- THE TERM "MEET EXIST" MEANS TO MEET BOTH THE EXISTING ALIGNMENT AND ELEVATION.
- 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.
- 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.)
- DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED WHEELCHAIR RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS.
- 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.
- TREES WITHIN THE CONSTRUCTION ZONE SHALL BE PROTECTED IN ACCORDANCE WITH THE TREE PROTECTION DETAIL ON SHEET 27. TREES OUTSIDE THE CONSTRUCTION ZONE SHALL BE PROTECTED WITH ORANGE CONSTRUCTION FENCING.
- PROPOSED SIDEWALK MEASUREMENTS ADJACENT TO CURBING ARE MEASURED FROM THE FACE OF CURB, AND INCLUDE THE 6" CURB WIDTH.
- TREE PITS SHALL HAVE MINIMUM DIMENSIONS OF 4' X 10'.
- ALL EXISTING CURB THAT IS SUITABLE FOR REUSE SHALL BE USED IN THE PROPOSED WORK, CURB SUITABLE FOR REUSE WILL BE DETERMINED BY THE ENGINEER IN FIELD.
- ALL EXISTING BRICKS EXCAVATED FROM EXISTING BRICK WALKS SHALL BE STACKED ON PALLETS AT THE NEWBURYPORT DEPARTMENT OF PUBLIC SERVICES STORAGE FACILITY.
- CONTRACTOR SHALL INSTALL TEMPORARY SNOW FENCING IN AREAS WHERE FENCE IS TO BE TEMPORARILY REMOVED TO KEEP APPLICABLE YARDS ENCLOSED DURING CONSTRUCTION.
- ALL NEW GRANITE CURB SHALL BE FURNISHED WITH AN EASED EDGE.
- CONTRACTOR SHALL STORE THE UNUSED CURBING ON-STIE AND COORDINATE WITH THE CITY DPS DIRECTOR AT 978-465-4465 (EXT 1702) TO ARRANGE THE PICK-UP. CONTRACTOR SHALL DISPOSE OF ANY EXISTING DAMAGE SECTIONS OF CURBING THAT ARE NOT SALVAGEABLE OR PICKED UP BY THE CITY.



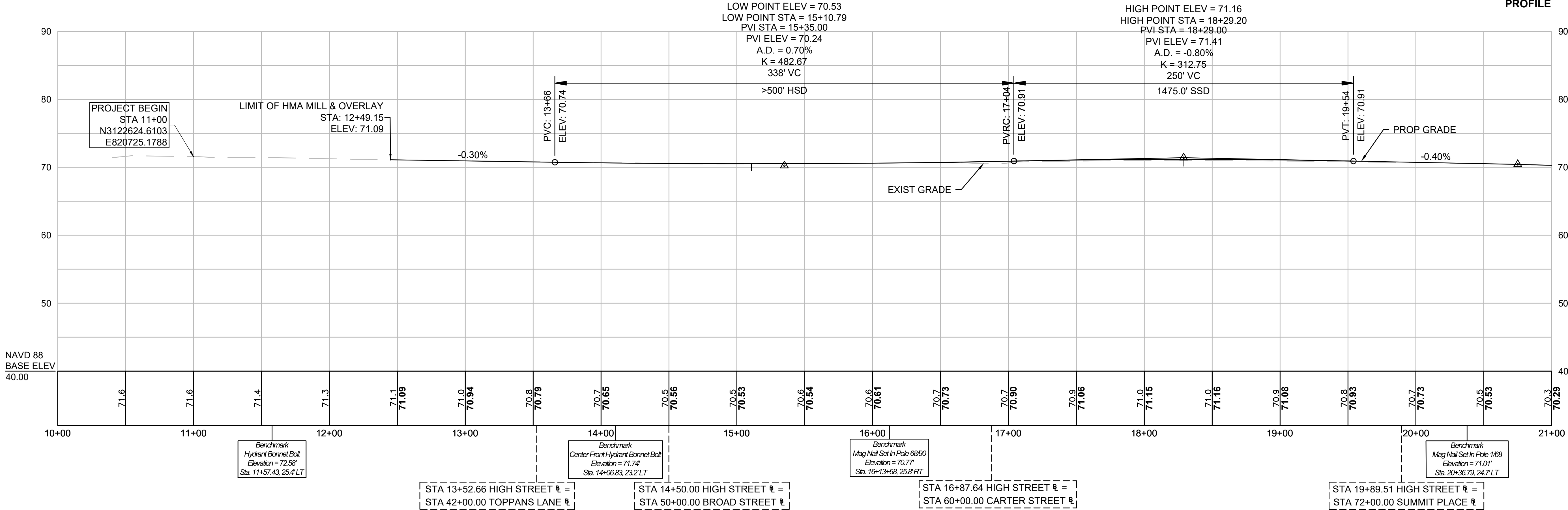
CONTINUED ON
SHEET NO. 8

HIGH STREET

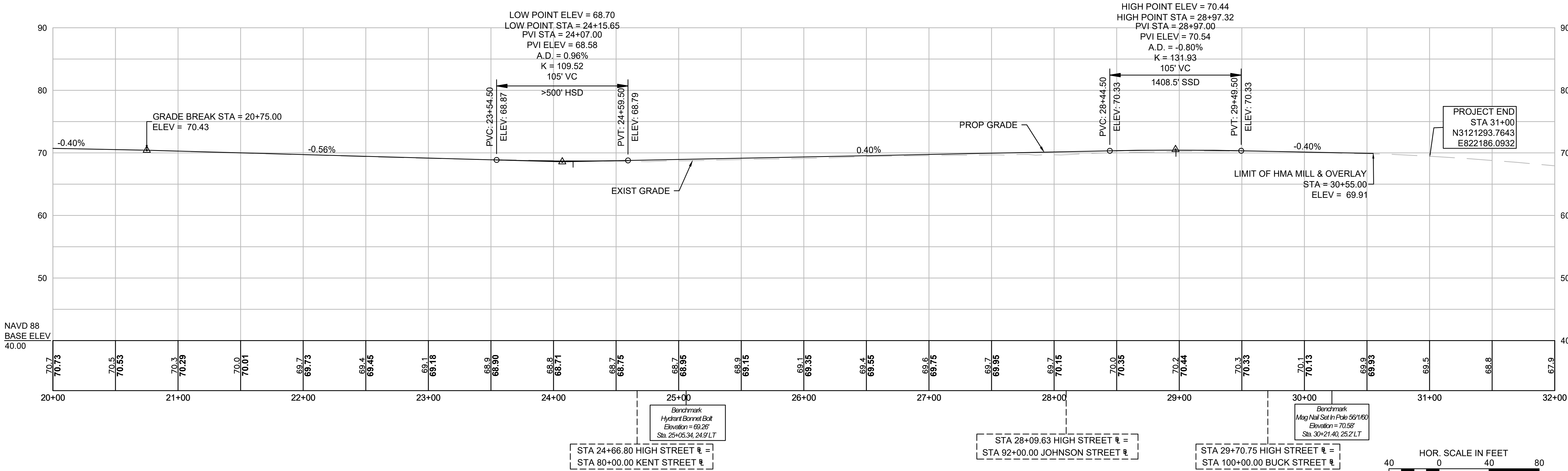
NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	49
PROJECT FILE NO.		608792	

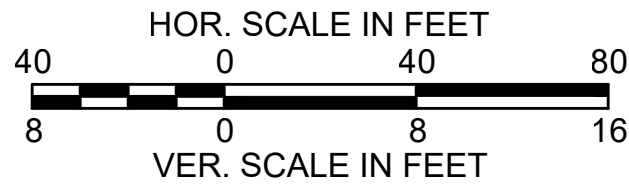
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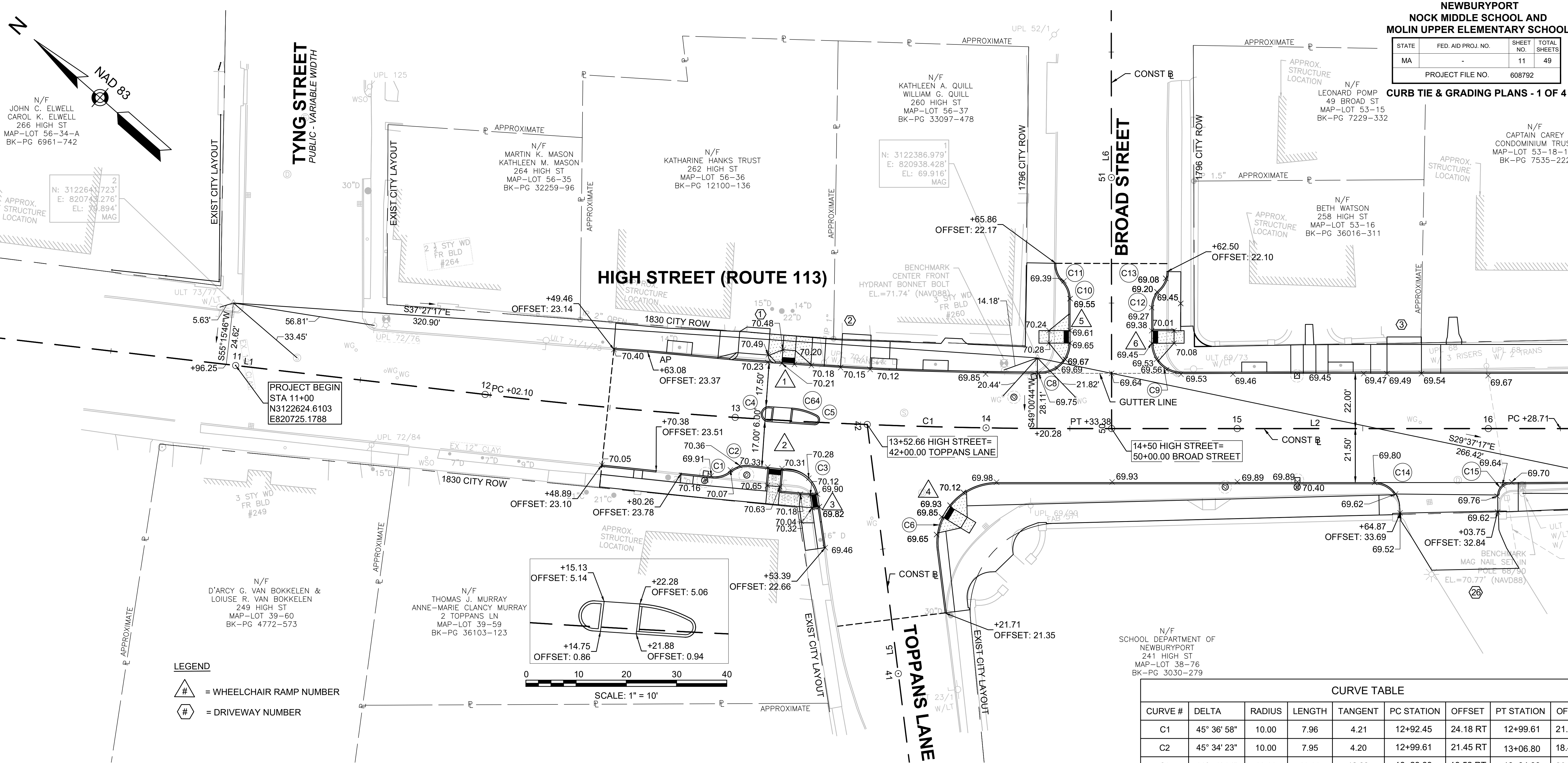
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CONTINUED
ABOVE



FOR CONSTRUCTION PLAN: SEE SHEET NO. 6 - 9



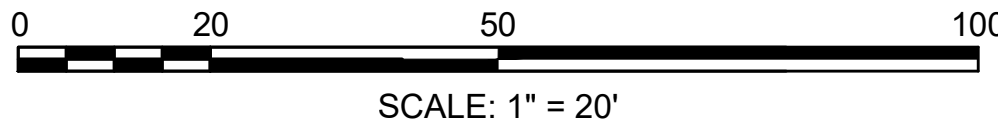
HIGH STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	3122706.788	820668.197		S34°44'14"E 202.10'	12+02.10	3122540.708	820783.356
C1	12+02.10	3122540.708	820783.356	R=2000.00' Δ=6°37'32" L=231.28' T=115.77'		14+33.38	3122358.686	820925.824
L2	14+33.38	3122358.686	820925.824		S41°21'46"E 195.34'	16+28.71	3122212.077	821054.908
C2	16+28.71	3122212.077	821054.908	R=2000.00' Δ=3°24'26" L=118.93' T=59.48'		17+47.64	3122125.204	821136.106
L3	17+47.64	3122125.204	821136.106		S44°46'12"E 656.16'	24+03.80	3121659.369	821598.216
C3	24+03.80	3121659.369	821598.216	R=1200.00' Δ=18°28'52" L=387.06' T=195.23'		27+90.87	3121432.899	821910.044
L4	27+90.87	3121432.899	821910.044		S63°15'03"E 509.13'	33+00.00	3121203.747	822364.690

TOPPANS LANE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L5	40+00.00	3122270.603	820741.121		N41°31'49"E 200.00'	42+00.00	3122420.323	820873.724

BROAD STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L6	50+00.00	3122346.208	820936.810		N48°35'19"E 200.00'	52+00.00	3122478.501	821086.806

Survey Traverse Point Table				
Point #	Northing	Easting	Elevation	Raw Description
1	3122386.979	820938.428	69.916	MTRV MAG
2	3122641.723	820743.276	70.894	MTRV MAG

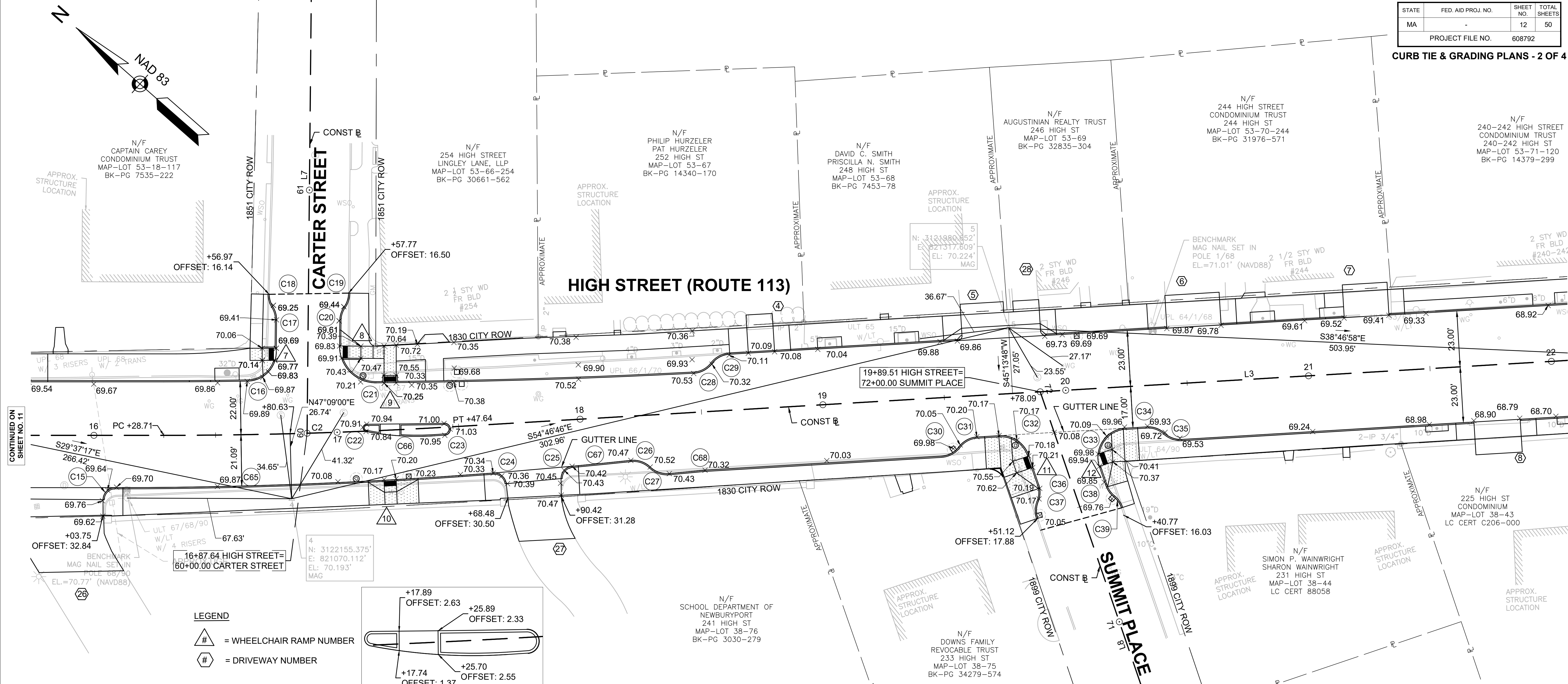
CURVE TABLE							
CURVE #	DELTA	RADIUS	LENGTH	TANGENT	PC STATION	OFFSET	PT STATION
C1	45° 36' 58"	10.00	7.96	4.21	12+92.45	24.18 RT	12+99.61
C2	45° 34' 23"	10.00	7.95	4.20	12+99.61	21.45 RT	13+06.80
C3	86° 59' 04"	12.68	19.26	12.03	13+23.39	19.52 RT	13+34.39
C4	180° 00' 00"	3.00	9.42	INFINITY	13+13.24	0.85 RT	13+13.29
C5	155° 55' 47"	2.00	5.44	9.38	13+31.14	1.07 RT	13+31.21
C6	97° 07' 09"	24.00	40.68	27.18	13+81.86	49.15 RT	14+04.72
C8	90° 23' 44"	12.00	18.93	12.08	14+21.27	22.00 LT	14+33.47
C9	54° 41' 50"	12.00	11.46	6.21	14+65.97	33.99 LT	14+78.06
C10	44° 13' 25"	10.00	7.72	4.06	50+51.77	16.50 LT	50+58.75
C11	45° 00' 36"	10.00	7.86	4.14	50+58.75	19.33 LT	50+65.86
C12	46° 03' 43"	10.00	8.04	4.25	50+48.16	16.00 RT	50+55.36
C13	45° 41' 51"	10.00	7.98	4.21	50+55.36	19.06 RT	50+62.50
C14	85° 52' 52"	10.00	14.99	9.31	15+54.69	21.50 RT	15+64.67
C15	90° 05' 24"	5.00	7.86	5.01	16+03.74	26.50 RT	16+08.74
C64	24° 04' 12"	25.00	10.50	5.33	13+22.28	5.06 LT	13+32.46



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

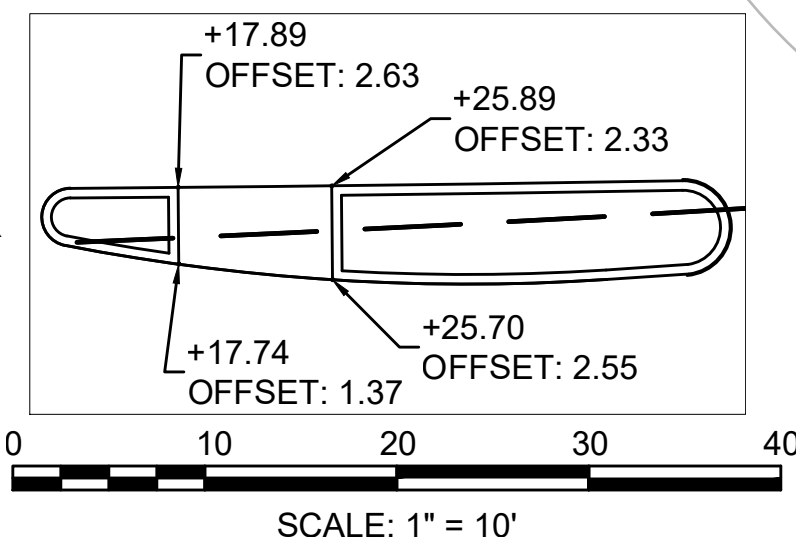
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	50
PROJECT FILE NO.		608792	

CURB TIE & GRADING PLANS - 2 OF 4



LEGEND

- # = WHEELCHAIR RAMP NUMBER
= DRIVEWAY NUMBER



CARTER STREET CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L7	60+00.00	3122168.429	821094.495		N49°10'57"E 200.00'	62+00.00	3122299.160	821245.854

SUMMIT PLACE CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L8	70+00.00	3121779.718	821207.440		N29°40'15"E 200.00'	72+00.00	3121953.494	821306.443

Survey Traverse Point Table

Point #	Northing	Easting	Elevation	Raw Description
4	3122155.375	821070.112	70.193	MTRV MAG
5	3121980.652	821317.609	70.224	MTRV MAG

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	TANGENT	PC STATION	OFFSET	PT STATION	OFFSET
C15	90° 05' 24"	5.00	7.86	5.01	16+03.74	26.50 RT	16+08.74	21.50 RT
C16	88° 27' 26"	12.00	18.53	11.68	16+63.54	22.00 LT	16+75.74	33.64 LT
C17	32° 31' 54"	10.00	5.68	2.92	60+46.48	13.00 LT	60+51.86	14.57 LT
C18	31° 00' 20"	10.00	5.41	2.77	60+51.86	14.57 LT	60+56.97	16.13 LT
C19	34° 33' 50"	10.00	6.03	3.11	60+52.09	14.75 RT	60+57.77	16.50 RT
C20	34° 23' 22"	10.00	6.00	3.09	60+46.45	13.00 RT	60+52.09	14.75 RT
C21	91° 01' 12"	15.00	23.83	15.27	17+02.29	35.42 LT	17+17.00	19.67 LT
C22	168° 29' 14"	1.50	4.41	14.88	17+11.88	0.14 RT	17+12.28	2.82 LT
C23	176° 26' 02"	2.50	7.70	80.31	17+44.20	3.23 RT	17+44.16	1.63 LT
C24	87° 31' 08"	5.00	7.64	4.79	17+63.04	19.98 RT	17+68.12	24.67 RT
C25	85° 26' 28"	5.00	7.46	4.62	17+90.76	23.90 RT	17+95.58	19.13 RT
C26	49° 39' 54"	10.00	8.67	4.63	18+19.84	18.16 RT	18+27.61	21.33 RT
C27	49° 14' 25"	10.00	8.59	4.58	18+27.61	21.33 RT	18+35.32	24.50 RT
C28	49° 36' 25"	10.00	8.66	4.62	18+47.77	16.08 LT	18+55.41	19.55 LT

CURVE TABLE

CURVE #	DELTA	RADIUS	LENGTH	TANGENT	PC STATION	OFFSET	PT STATION	OFFSET
C29	49° 18' 37"	10.00	8.61	4.59	18+55.41	19.55 LT	18+63.00	23.00 LT
C30	49° 11' 38"	10.06	8.63	4.60	19+47.31	24.00 RT	19+54.92	20.50 RT
C31	49° 28' 38"	10.00	8.64	4.61	19+54.92	20.50 RT	19+62.52	17.00 RT
C32	74° 26' 27"	12.00	15.59	9.12	19+71.63	17.00 RT	19+83.19	25.78 RT
C33	105° 37' 01"	12.00	22.12	15.81	20+11.98	32.23 RT	20+23.54	17.00 RT
C34	45° 34' 23"	10.00	7.95	4.20	20+32.32	17.00 RT	20+39.46	20.00 RT
C35	45° 34' 23"	10.00	7.95	4.20	20+39.46	20.00 RT	20+46.60	23.00 RT
C36	40° 53' 54"	10.00	7.14	3.73	71+57.62	15.44 LT	71+64.19	13.00 LT
C37	40° 38' 00"	10.00	7.09	3.70	71+51.12	17.88 LT	71+57.62	15.44 LT
C38	29° 38' 11"	10.00	5.17	2.65	71+49.42	14.53 RT	71+54.30	13.00 LT
C39	32° 29' 55"	10.00	5.67	2.91	71+44.03	16.06 RT	71+49.42	14.53 RT
C65	4° 26' 42"	2005.00	155.55	77.81	16+08.74	21.50 RT	17+63.04	19.98 RT
C66	14° 45' 24"	110.00	28.33	14.24	17+12.28	2.82 LT	17+39.93	3.28 RT
C67	0° 41' 37"	2005.00	24.27	12.14	17+95.58	19.13 RT	18+19.84	18.16 RT
C68	0° 25' 05"	1988.00	14.50	7.25	18+35.32	24.50 RT	18+49.81	23.99 RT

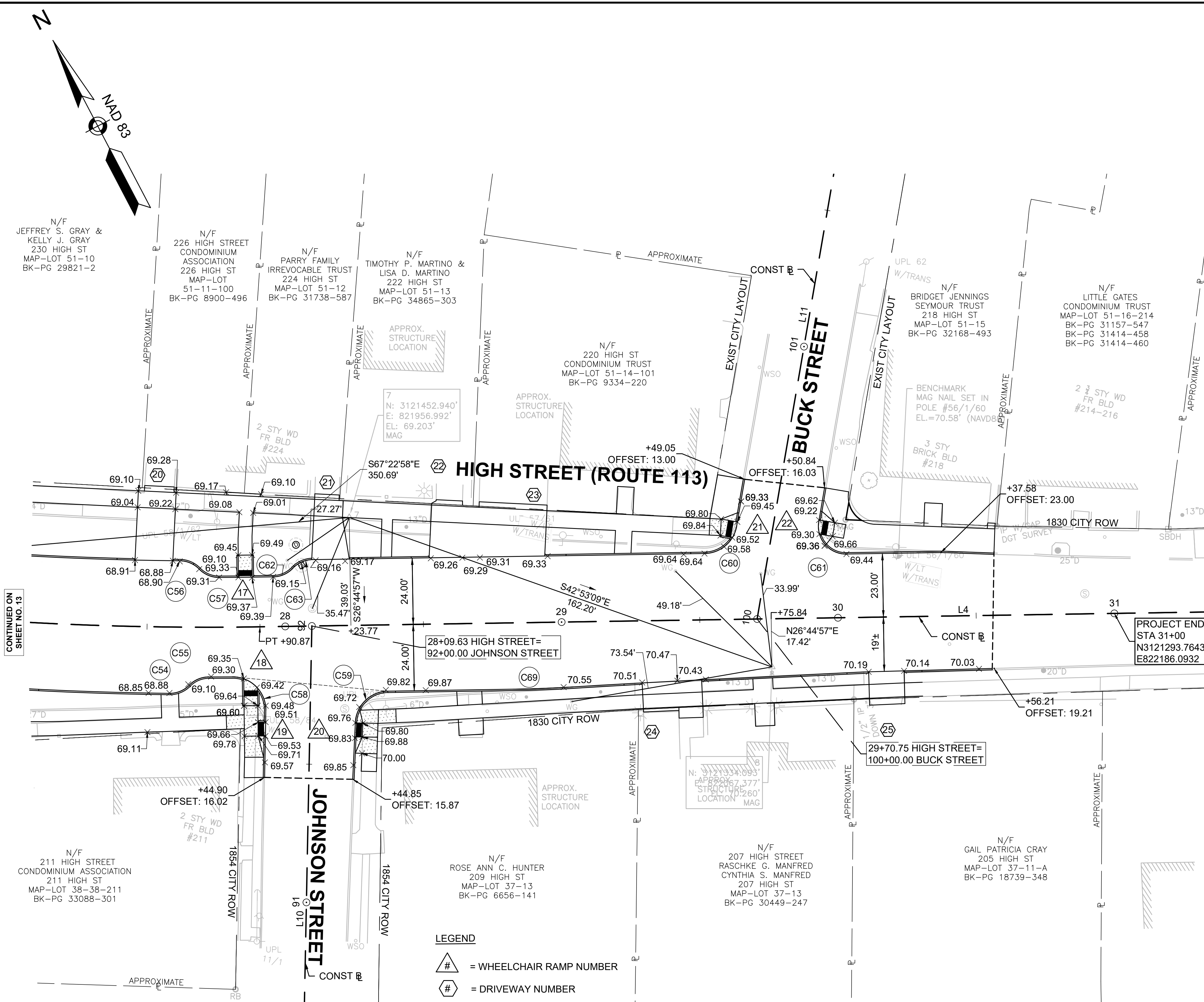
SCALE: 1" = 20'

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	50
PROJECT FILE NO.		608792	

CURVE TABLE								
CURVE #	DELTA	RADIUS	LENGTH	TANGENT	PC STATION	OFFSET	PT STATION	OFFSET
C54	45° 54' 50"	10.00	8.01	4.24	27+58.34	24.00 RT	27+65.40	20.98 RT
C55	45° 14' 20"	10.00	7.90	4.17	27+65.40	20.98 RT	27+72.38	18.00 RT
C56	45° 13' 37"	10.00	7.89	4.17	27+61.59	24.00 LT	27+68.82	21.00 LT
C57	45° 55' 16"	10.00	8.01	4.24	27+68.82	21.00 LT	27+76.13	18.00 LT
C58	90° 58' 31"	12.00	19.05	12.21	27+80.75	18.00 RT	27+92.50	30.26 RT
C59	86° 26' 44"	12.00	18.11	11.28	28+24.81	35.26 RT	28+36.79	24.00 RT
C60	79° 20' 02"	12.00	16.62	9.95	29+52.09	24.00 LT	29+63.88	33.78 LT
C61	100° 35' 26"	10.00	17.56	12.04	29+93.60	34.84 LT	30+03.43	23.00 LT
C62	45° 42' 14"	10.00	7.98	4.21	27+95.91	18.00 LT	28+03.07	21.00 LT
C63	45° 34' 23"	10.00	7.95	4.20	28+03.07	21.00 LT	28+10.22	24.00 LT
C69	2° 29' 50"	500.00	21.79	10.90	28+82.10	24.00 RT	29+03.89	23.53 RT

JOHNSON STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L10	90+00.00	3121249.153	821830.520		N28°46'31"E 200.00'	92+00.00	3121424.456	821926.795

BUCK STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L11	100+00.00	3121351.939	822070.672		N37°24'55"E 200.00'	102+00.00	3121510.790	822192.189



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	50
PROJECT FILE NO.		608792	

0 20 50 100

SCALE: 1" = 20'

- FOR SIGN SUMMARY: SEE SHEET 19



NOTES:

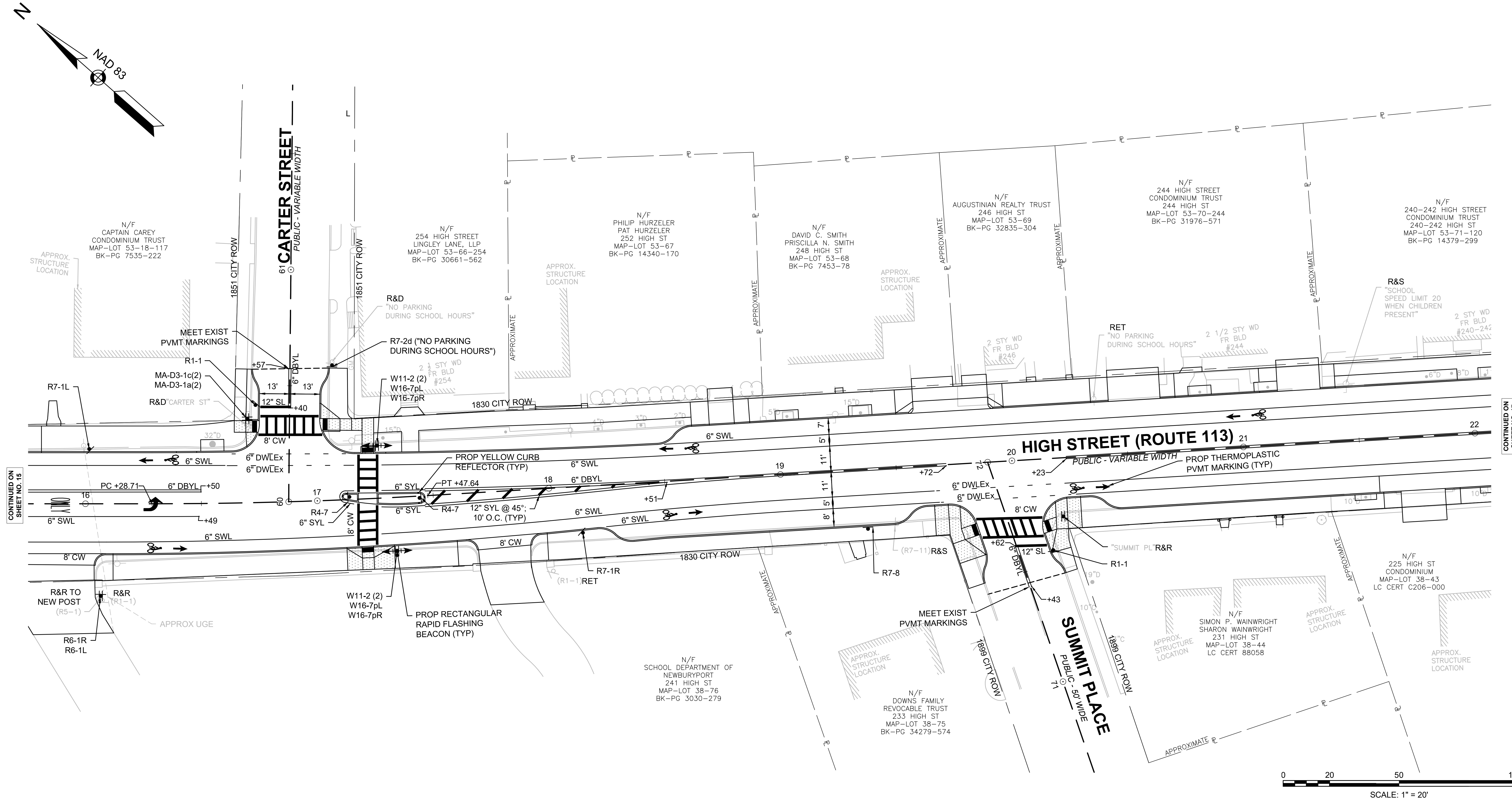
- ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC MATERIALS.
- IN AREAS WHERE THE EXISTING PAVEMENT IS BEING RETAINED, ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED 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 19

NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	50
PROJECT FILE NO.		608792	

TRAFFIC SIGN & PAVEMENT MARKING - 2 OF 4



CONTINUED ON
SHEET NO. 17

NOTES:

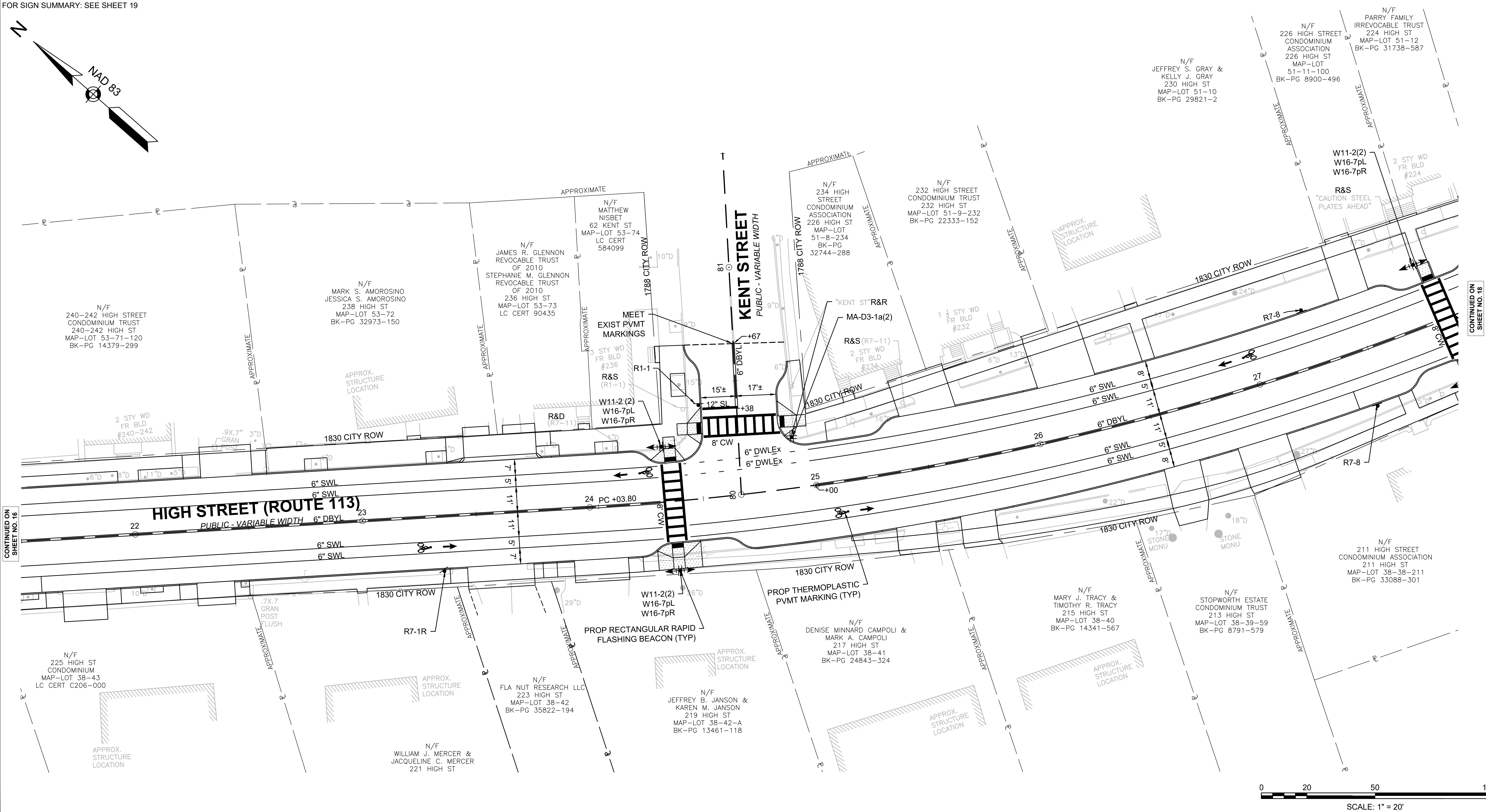
- ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC MATERIALS.
- IN AREAS WHERE THE EXISTING PAVEMENT IS BEING RETAINED, ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH PROPOSED 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 19

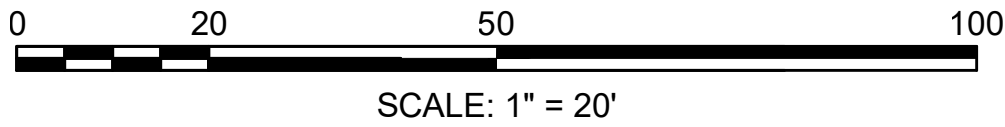
NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	50
PROJECT FILE NO.		608792	

TRAFFIC SIGN & PAVEMENT MARKING - 3 OF 4



CONTINUED ON
SHEET NO. 18

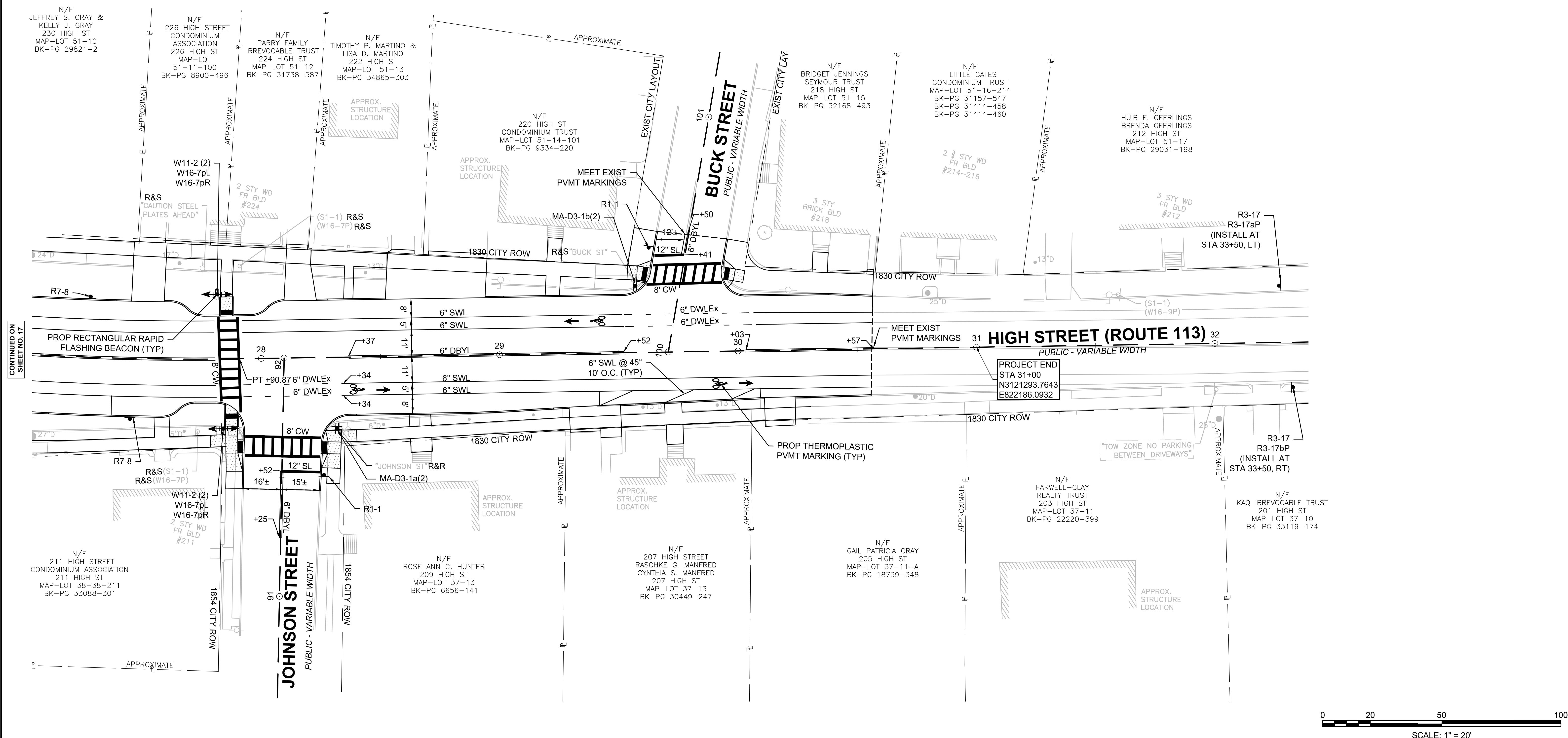
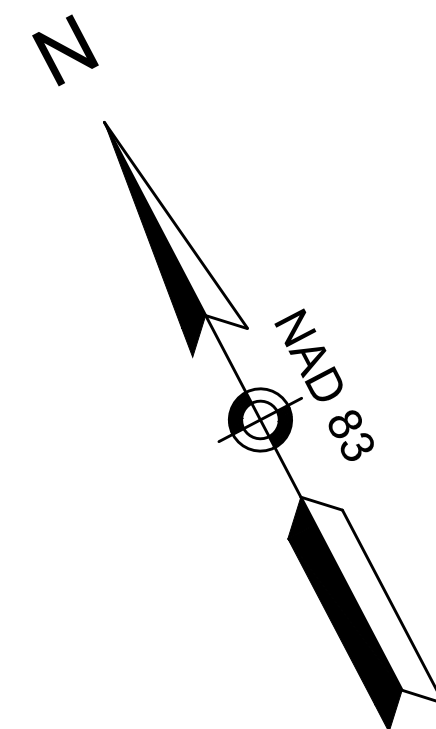


STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	50
PROJECT FILE NO.		608792	

TRAFFIC SIGN & PAVEMENT MARKING - 4 OF 4

- FOR SIGN SUMMARY: SEE SHEET 19

FOR SIGN SUMMARY: SEE SHEET 19



TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (in)			TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			SIZE AND NUMBER OF POSTS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT	LEGEND	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
R3-7L	30	30					2	WHITE	BLACK	BLACK	2	6.25	12.50
R3-17	30	24					2	WHITE	BLACK	BLACK	2	5.00	10.00
R3-17aP	30	12					1	WHITE	BLACK	BLACK	0 MOUNT W/ R3-17	2.50	2.50
R3-17bP	30	12					1	WHITE	BLACK	BLACK	0 MOUNT W/ R3-17	2.50	2.50
R3-8(15)	30	30					1	WHITE	BLACK	BLACK	1	6.25	6.25
R4-7	24	30					4	WHITE	BLACK	BLACK	4	5.00	20.00
R6-1L	36	12					2	BLACK	WHITE	WHITE	2	3.00	6.00
R6-1R	36	12					2	BLACK	WHITE	WHITE	0 MOUNT W/ R6-1L	3.00	6.00
R7-1L	12	18					2	WHITE	RED	RED	2	1.50	3.00
R7-1R	12	18					2	WHITE	RED	RED	2	1.50	3.00
R7-2d	12	18					1	WHITE	RED	RED	1	1.50	1.50
R7-8	12	18					4	WHITE	GREEN/ BLUE	GREEN	4	1.50	6.00
R10-25	9	12					9	WHITE	BLACK	BLACK	0 MOUNT W/ RRFB	PAID UNDER ITEMS 824.22x	
W11-2	30	30					18	FLUORESCENT YELLOW-GREEN	BLACK	BLACK	0 MOUNT W/ RRFB	PAID UNDER ITEMS 824.22x	
W16-7P(R)	24	12					9	FLUORESCENT YELLOW-GREEN	BLACK	BLACK	0 MOUNT W/ RRFB	PAID UNDER ITEMS 824.22x	
W16-7P(L)	24	12		↓			9	FLUORESCENT YELLOW-GREEN	BLACK	BLACK	0 MOUNT W/ RRFB	PAID UNDER ITEMS 824.22x	

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.
4. CONTRACTOR SHALL OBTAIN CITY SEAL DETAIL AND SUBMIT SHEET SIGN LAYOUTS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	49
PROJECT FILE NO.		608792	

TRAFFIC SIGN SUMMARY

TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (in)			TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			SIZE AND NUMBER OF POSTS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT	LEGEND	LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR		BACK- GROUND	LEGEND	BORDER			
MA-D3-1a	39	12	SEE BELOW	6D / 4.5D	2.75 3.25	N/A	8	GREEN	WHITE	WHITE	2	PAID UNDER ITEM 874.	
MA-D3-1b	39	12	SEE BELOW	6D / 4.5D	3 3	N/A	2	GREEN	WHITE	WHITE	1	PAID UNDER ITEM 874.	
MA-D3-1c	45	12	SEE BELOW	6D / 4.5D	3 3	N/A	2	GREEN	WHITE	WHITE	0 MOUNT W/ MA-D3-1a	PAID UNDER ITEM 874.	



MA-D3-1a



MA-D3-1b



MA-D3-1c

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 WARNING 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 ON HIGH STREET SHALL BE PERMITTED DURING PEAK HOUR TRAFFIC. PEAK HOUR IS CONSIDERED TO BE FROM 7-9:00 AM AND 4-6:00 PM ON WEEKDAYS.
- ADDITIONALLY, NO LANE CLOSURES SHALL BE ALLOWED ON HIGH STREET FROM 2:30-4:00 PM WHEN SCHOOL IS IN SESSION.

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
- ARROW BOARD
- MEDIAN BARRIER WITH WARNING LIGHTS

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

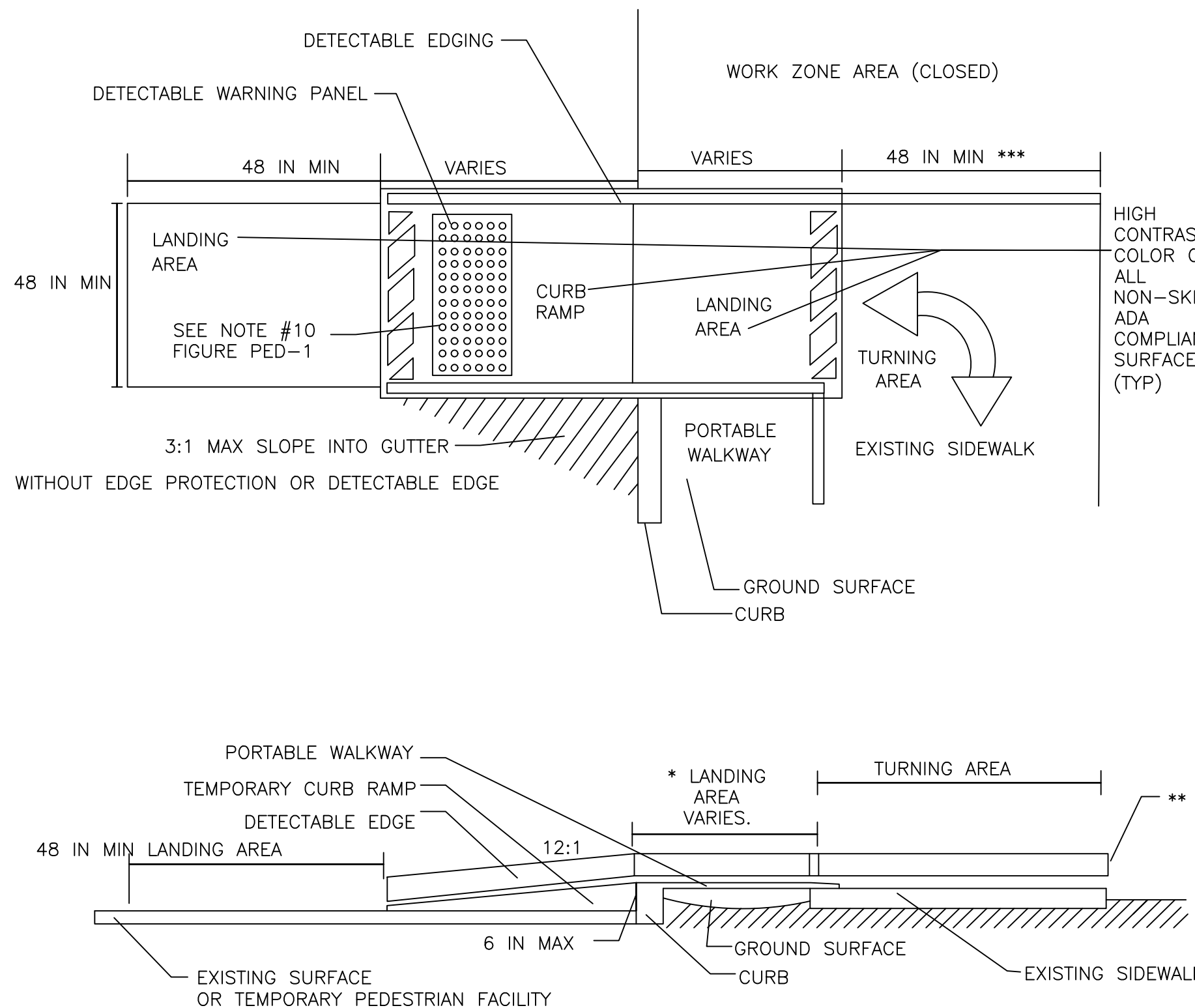
FORMULAS FOR DETERMINING TAPER LENGTHS

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

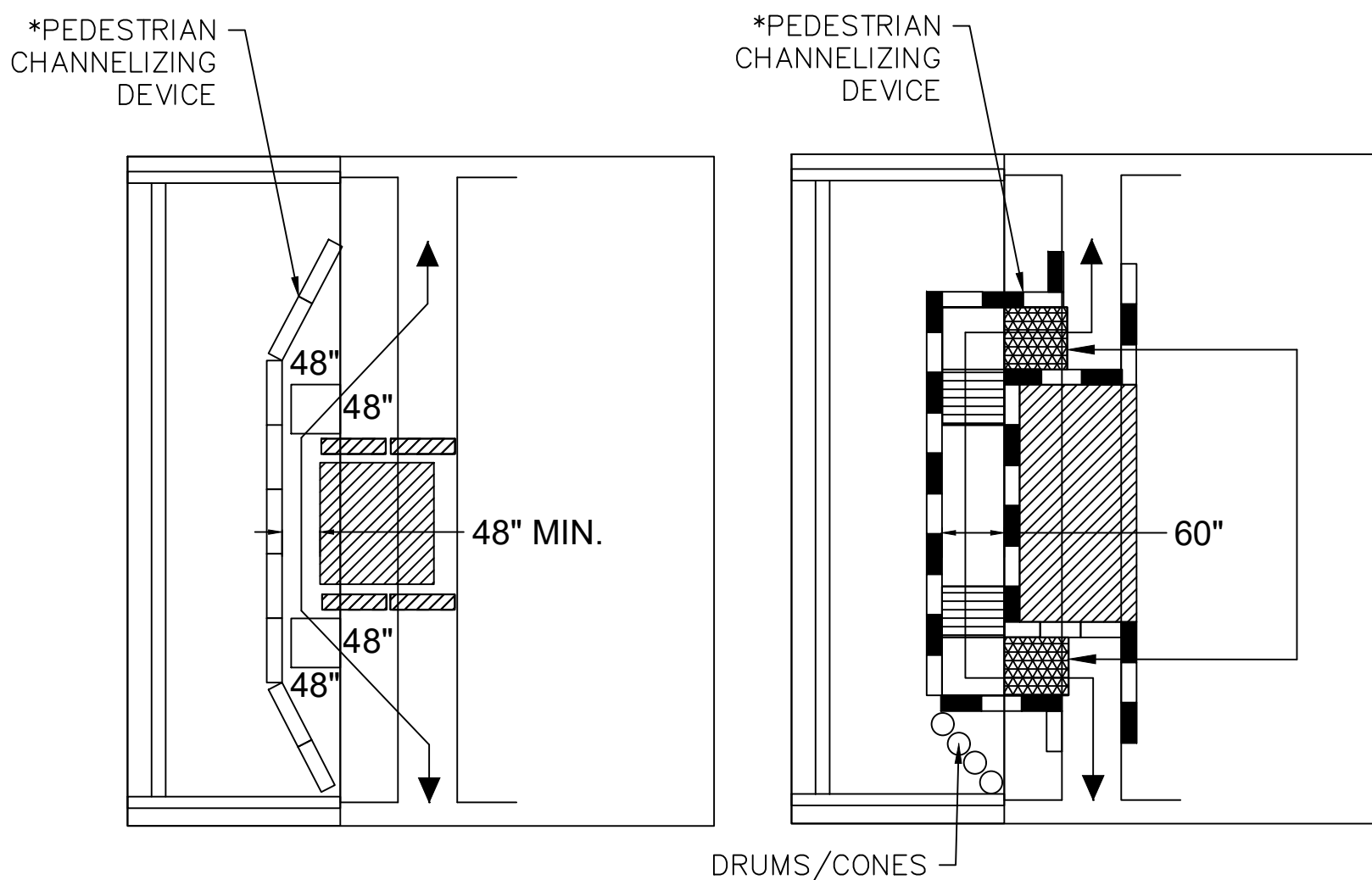
WHERE: L = TAPER LENGTH IN FEET

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



TEMPORARY CURB RAMP



DRUMS/CONES

- WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
- A PEDESTRIAN CHANNELIZING DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ACROSS THE FULL WIDTH OF THE CLOSED SIDEWALK.
- WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT (SEE FIGURES PED-1 & PED-2).
- THE ALTERNATE PATHWAY SHOULD HAVE A SMOOTH CONTINUOUS HARD SURFACE FOR THE ENTIRE LENGTH OF THE TEMPORARY PEDESTRIAN FACILITY.
- THE PROTECTIVE REQUIREMENTS OF A TTC SITUATION HAVE PRIORITY IN DETERMINING THE NEED FOR TEMPORARY TRAFFIC BARRIERS AND THEIR USE IN THIS SITUATION SHOULD BE BASED ON ENGINEERING JUDGMENT.
- AUDIBLE INFORMATION DEVICES SHOULD BE CONSIDERED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.

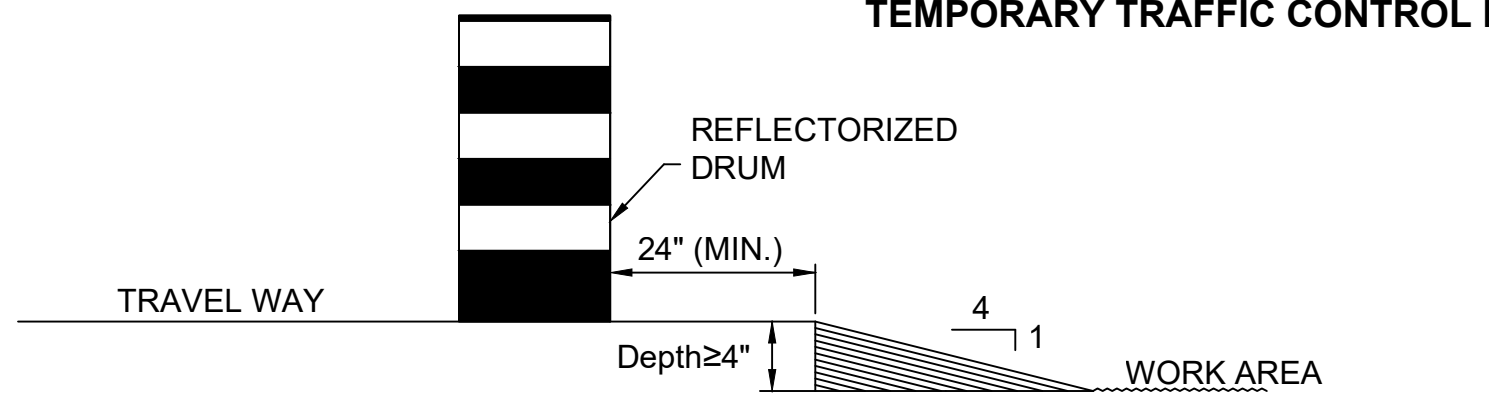
AUDIBLE DEVICES

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

NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

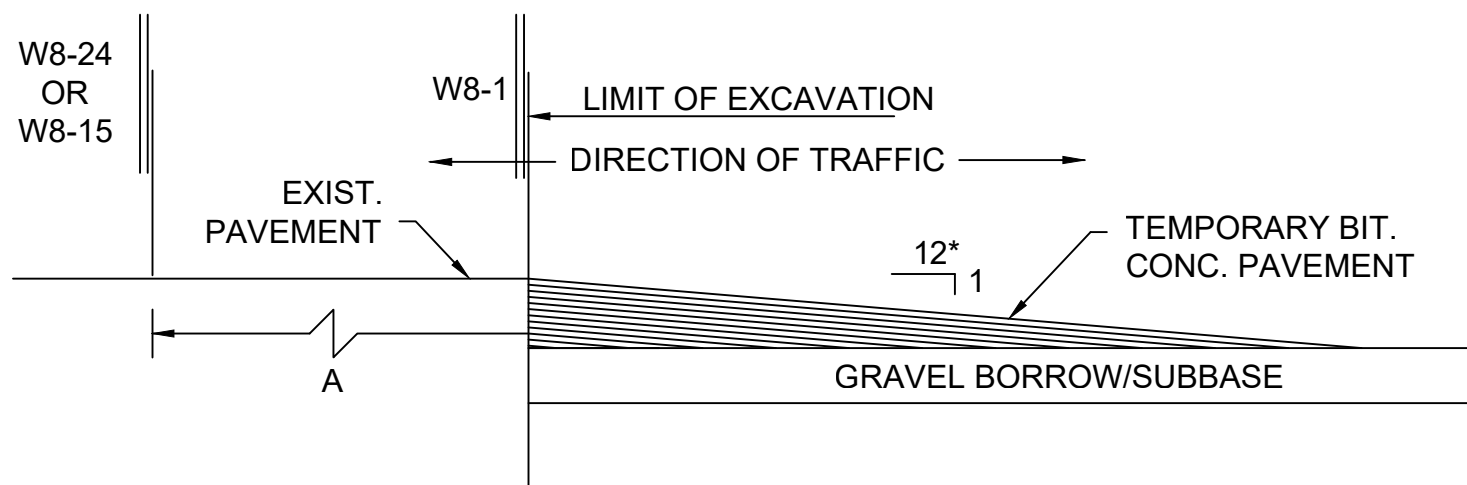
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	49
PROJECT FILE NO.		608792	

TEMPORARY TRAFFIC CONTROL PLANS - 1 OF 3



LATERAL DROP-OFF DETAIL

NOT TO SCALE



LONGITUDINAL DROP-OFF DETAIL

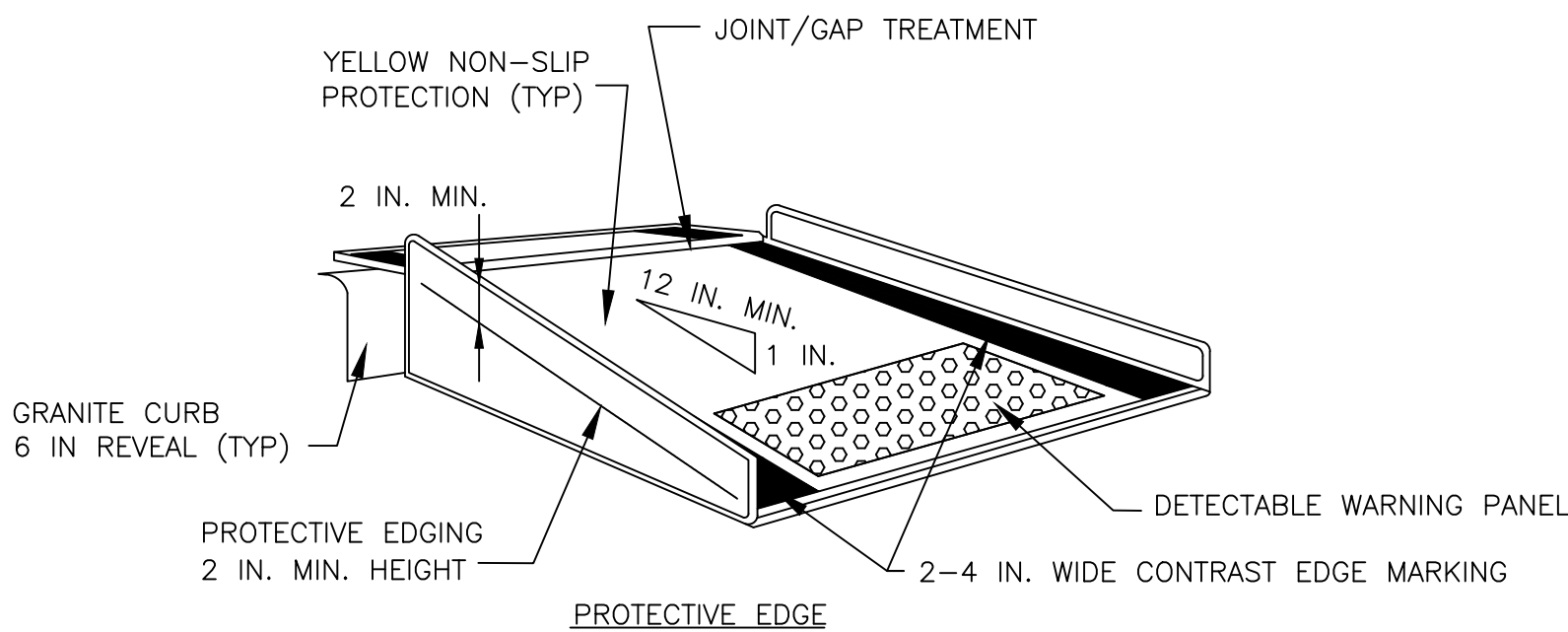
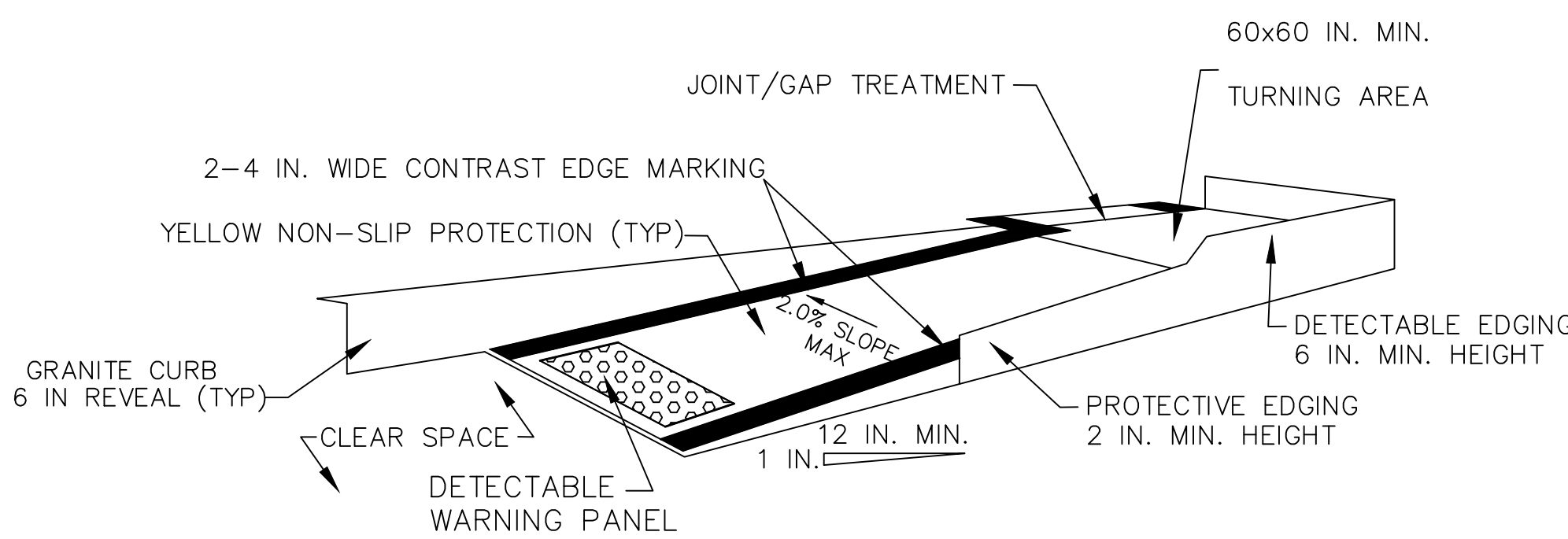
NOT TO SCALE

* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS

PEDESTRIAN TYPICAL DETAILS

NOTES:

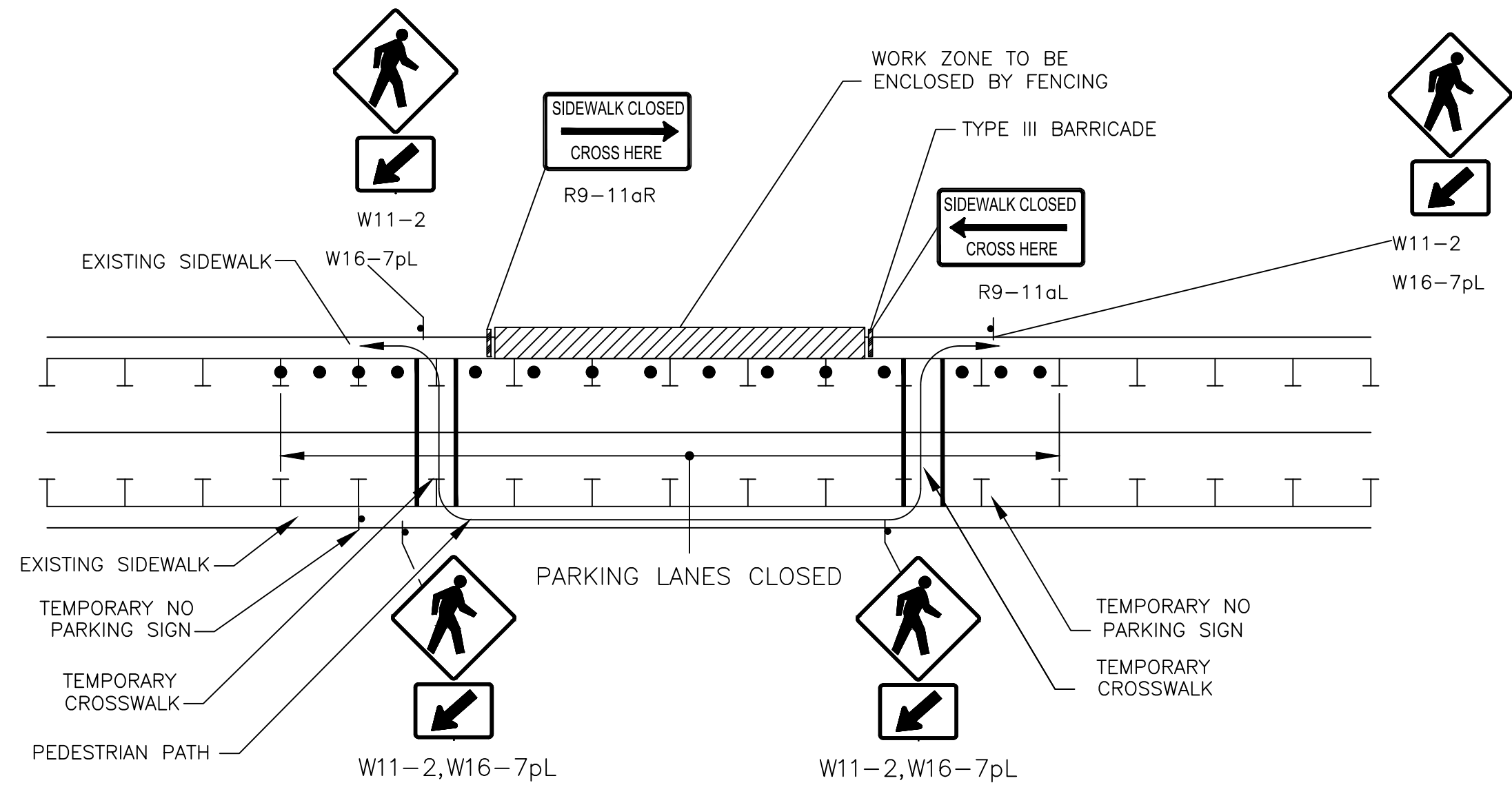
- CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
- PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
- 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.



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	49
PROJECT FILE NO.		608792	

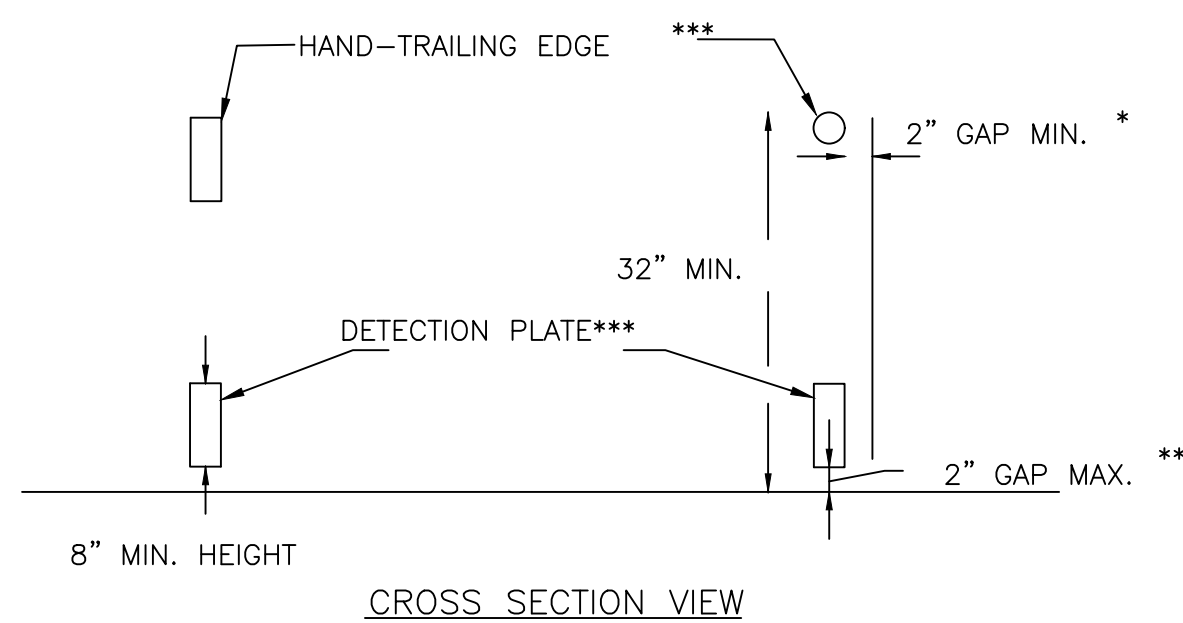
TEMPORARY TRAFFIC CONTROL PLANS - 2 OF 3



NOTES

1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT AS SHOWN IN PEDESTRIAN BYPASS TYPE I, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS TYPE II, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMP WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
5. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE. (FOR SHORT TERM SETUPS < 10 HOURS, THIS CONDITION MAY BE WAIVED. A NOTE WOULD NEED TO BE INCLUDED IN THE TTCP THAT STATES HOW THE CONTRACTOR SHOULD ADDRESS THIS ISSUE.)
7. NO LANE CLOSURES ON HIGH STREET SHALL BE PERMITTED DURING PEAK HOUR TRAFFIC. PEAK HOUR IS CONSIDERED TO BE FROM 7-9 AM & 4-6 PM ON WEEKDAYS.

PEDESTRIAN
BYPASS



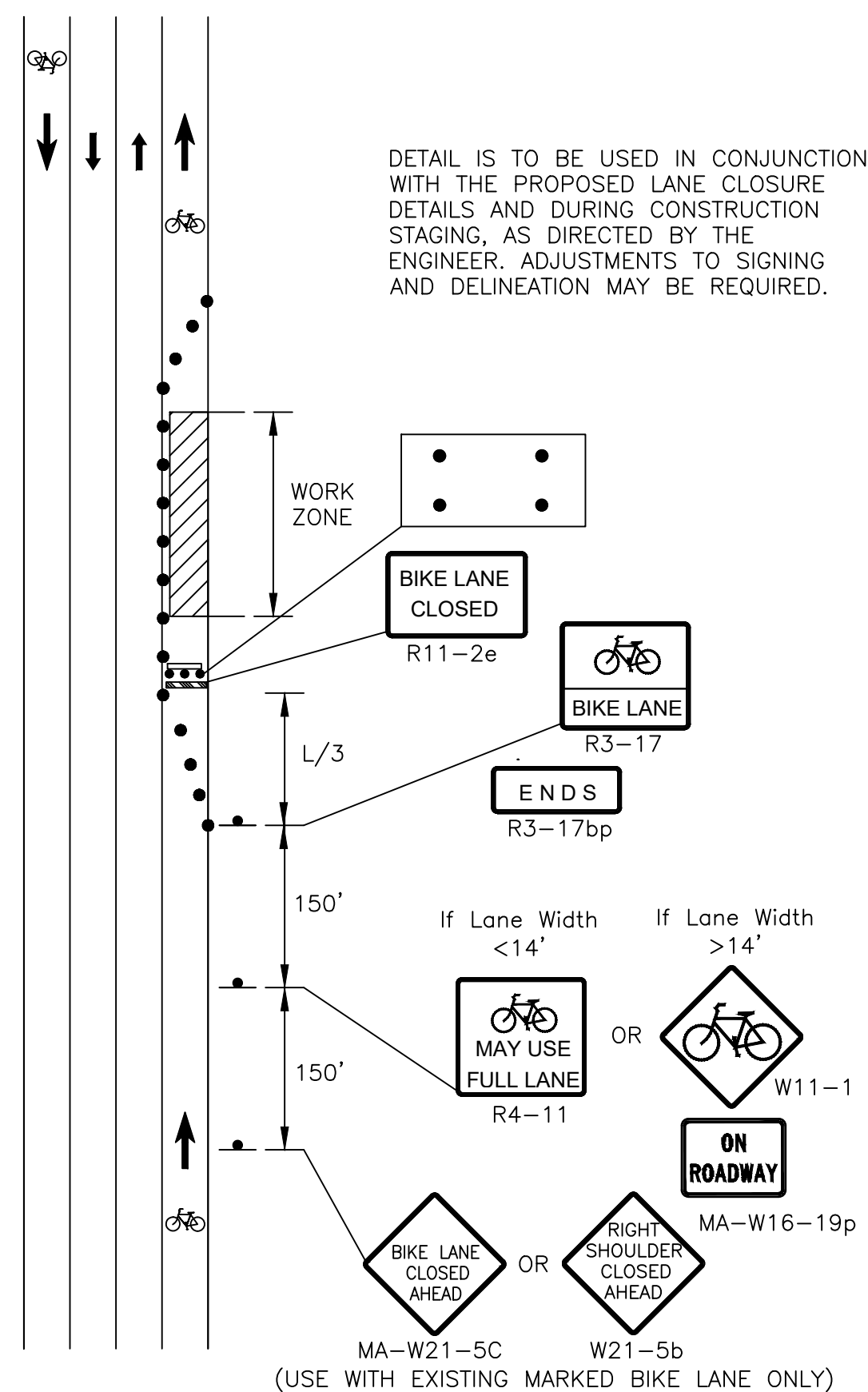
CROSS SECTION VIEW

PEDESTRIAN CHANNELIZING DEVICE

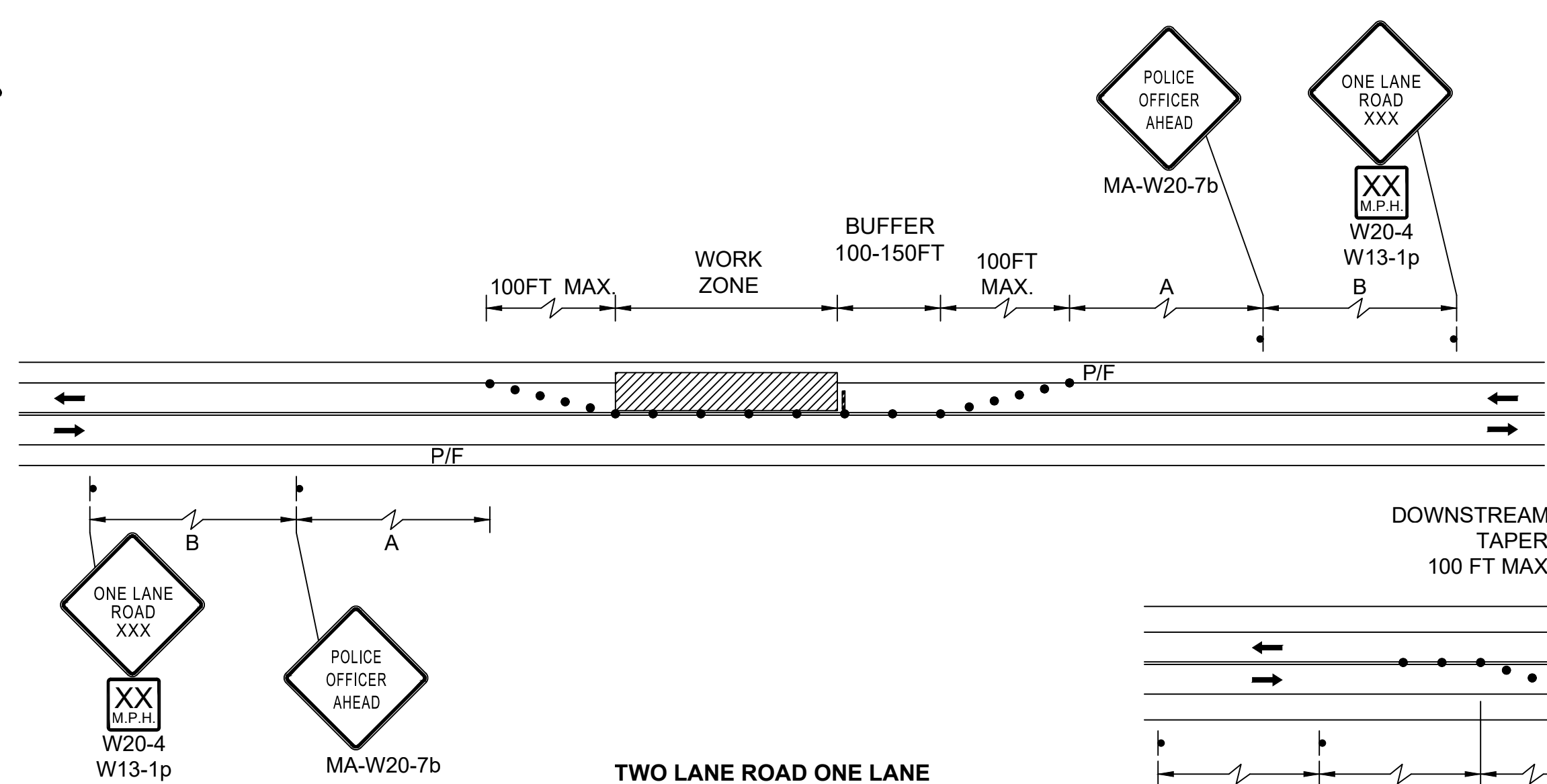
NOTES:

- * 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.

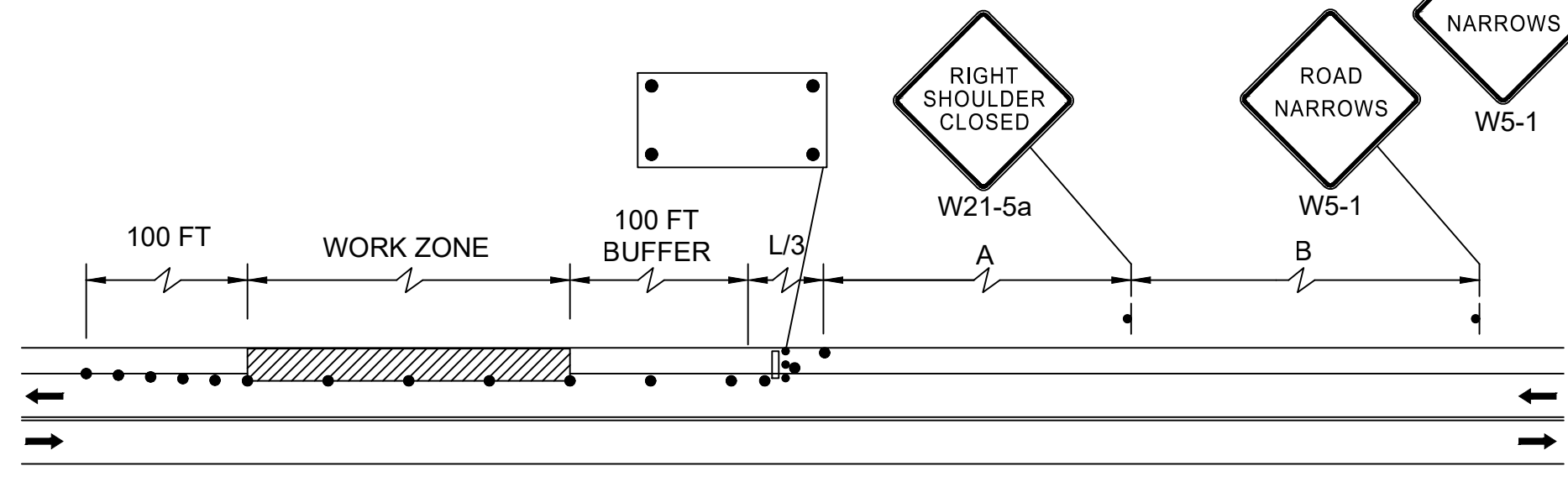
PEDESTRIAN
DETAILS



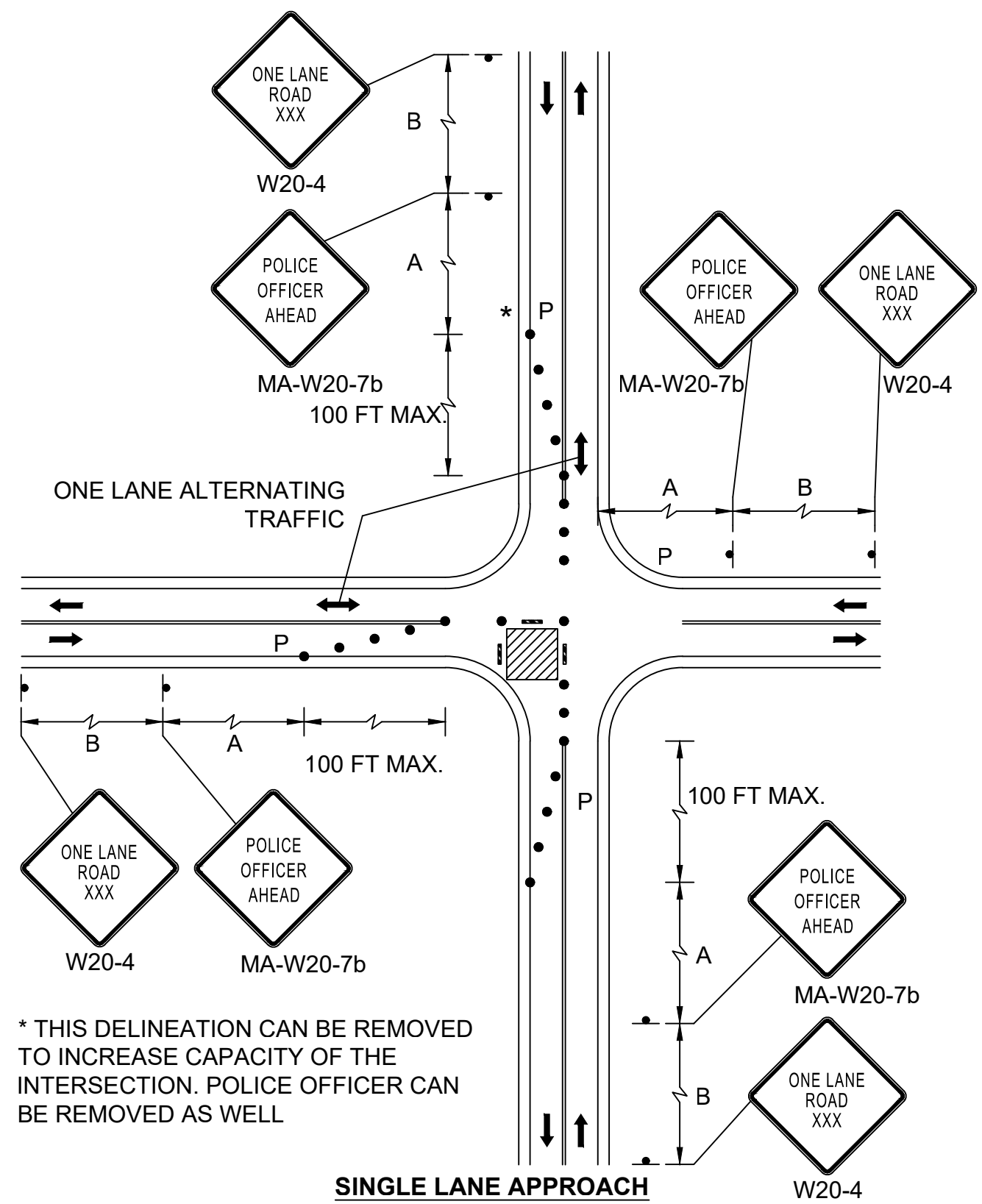
BICYCLE LANE CLOSURE
WITHOUT DETOUR



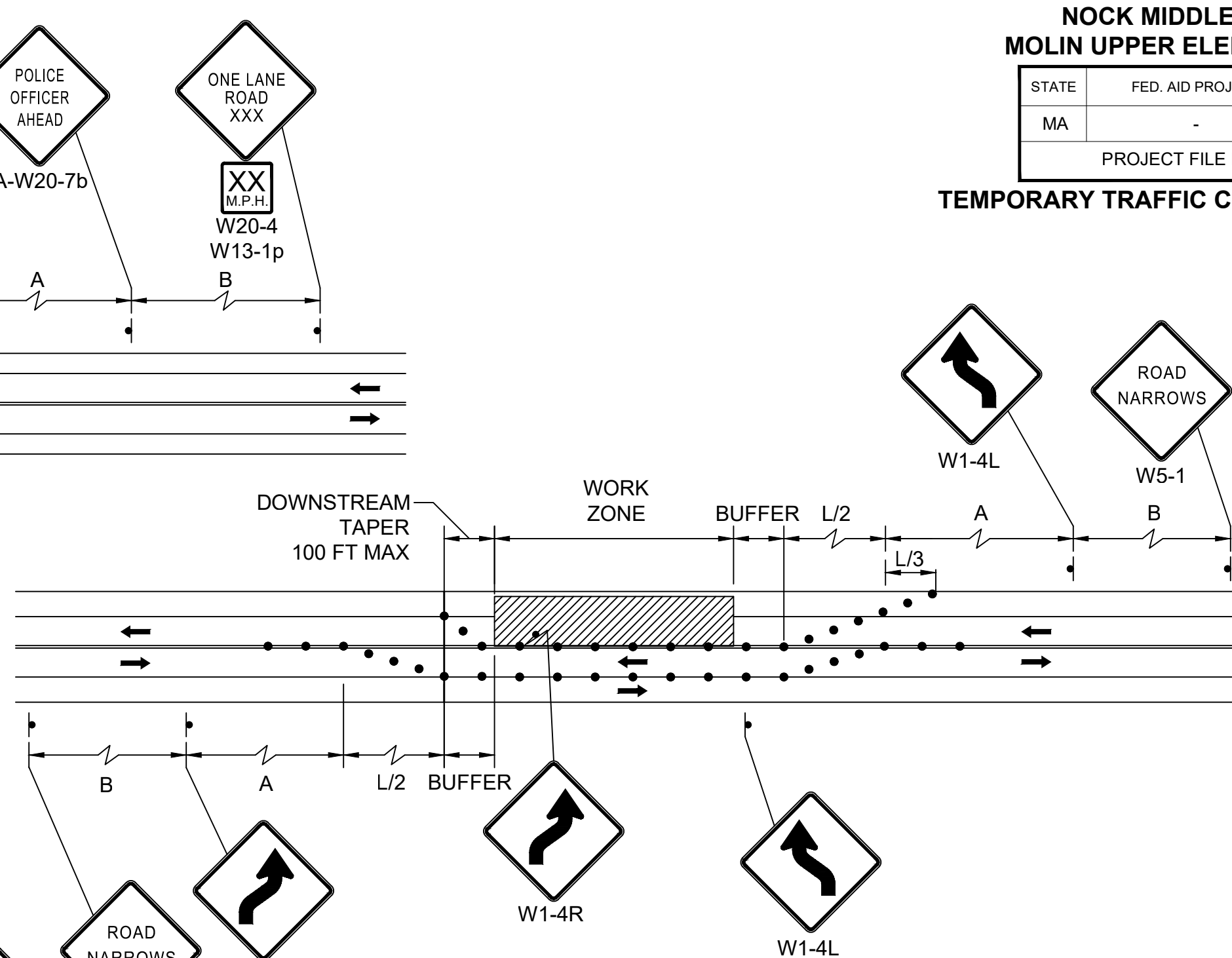
TWO LANE ROAD ONE LANE
ALTERNATING TRAFFIC



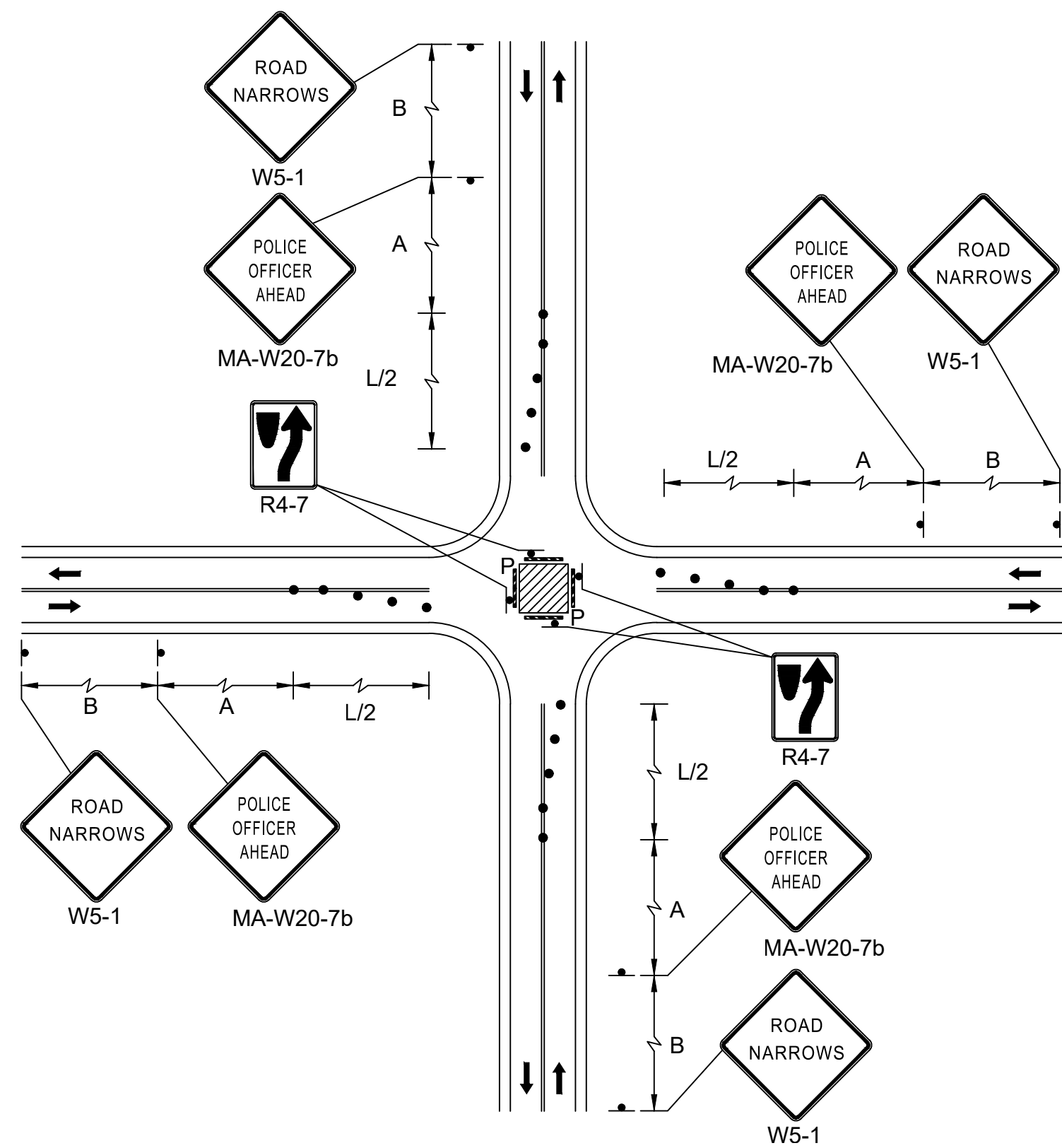
TWO LANE ROAD
SHOULDER CLOSED



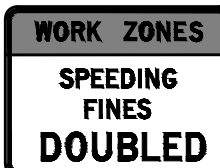
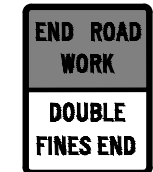
SINGLE LANE APPROACH
ONE QUADRANT CLOSURE



TWO LANE ROAD SHOULDER
AND TRAVEL LANE CLOSED



SINGLE LANE APPROACH
CENTER CLOSURE

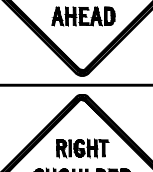
TRAFFIC SIGN SUMMARY												
IDENTIFICATION NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			COLOR			NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR	BACK- GROUND	LEGEND	BORDER			
MA-R2-10a	48	36		MASSDOT STANDARD SIGN			FL. 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	24	18		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			BLACK WHITE	WHITE BLACK	BLACK	2	3.00	6.00
R3-17bP	24	8					WHITE	BLACK	BLACK	2	1.33	2.67
R4-7	24	30					WHITE	BLACK	BLACK	4	5.00	20.00
R4-11	30	30					WHITE	BLACK	BLACK	4	6.25	25.00
R8-3a	18	24					WHITE	RED	RED	2	3.00	6.00
R9-9	24	12					WHITE	BLACK	BLACK	2	2.00	4.00
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	2	10.00	20.00
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	7	9.00	63.00
W8-1	36	36					FL. ORANGE	BLACK	BLACK	1	9.00	9.00
W8-15	36	36					FL. ORANGE	BLACK	BLACK	1	9.00	9.00
W8-24	36	36					FL. ORANGE	BLACK	BLACK	1	9.00	9.00
W11-1	36	36					FL. ORANGE	BLACK	BLACK	1	9.00	9.00
W11-2	30	30					FL. YELLOW- GREEN	BLACK	BLACK	4	6.25	25.00
W13-1p	18	18					FL. ORANGE	BLACK	BLACK	2	2.25	4.50

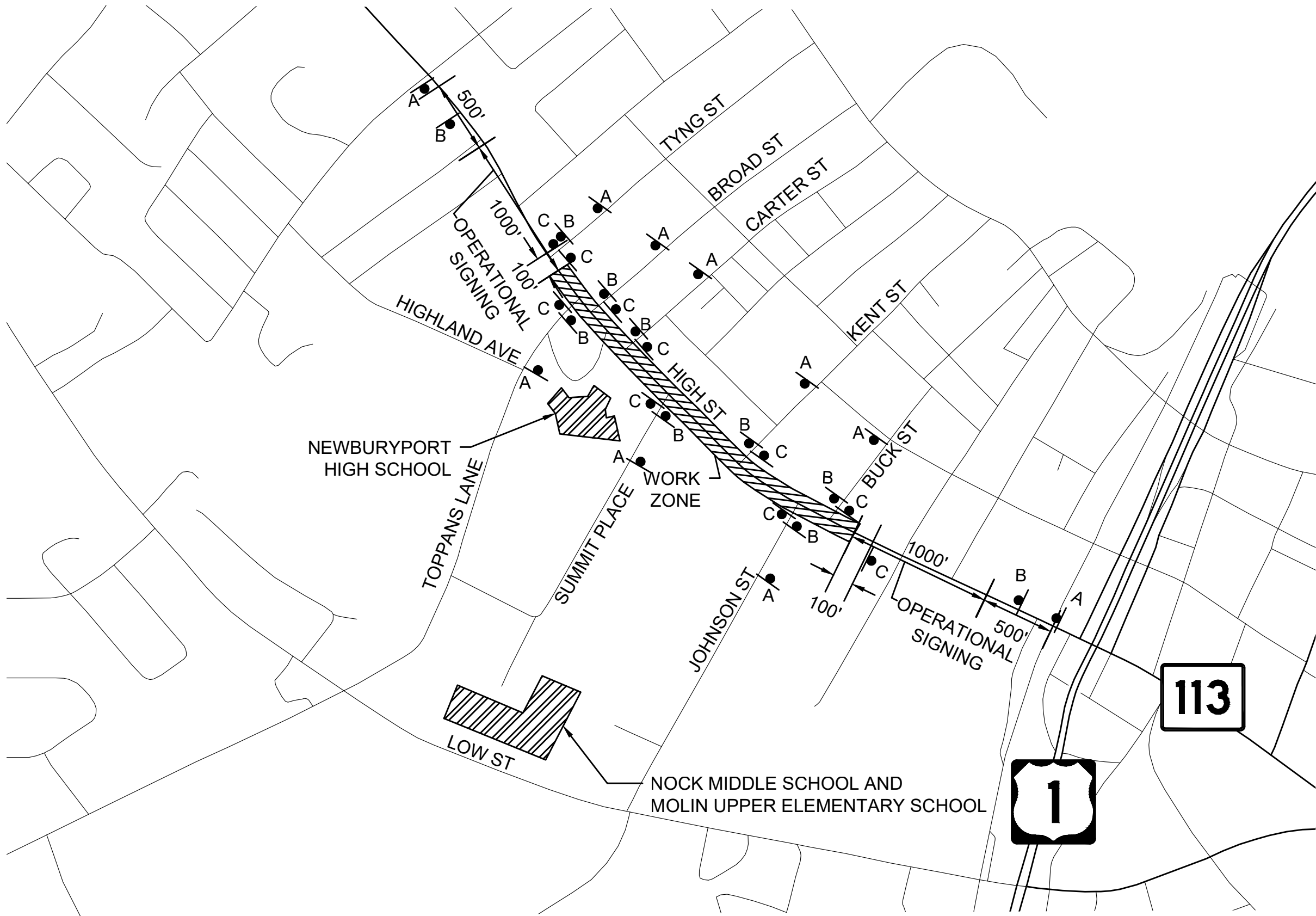
NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	50

PROJECT FILE NO. 608792

TEMPORARY TRAFFIC CONTROL PLANS - 3 OF 3

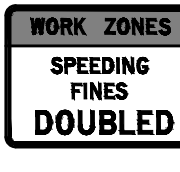
TRAFFIC SIGN SUMMARY												
IDENTIFICATION NUMBER	SIZE OF SIGN (in)			TEXT DIMENSIONS (in)			COLOR			NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT	LEGEND	LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR	BACK-GROUND	LEGEND	BORDER			
MA-W16-19p	24	18					FL. ORANGE	BLACK	BLACK	2	3.00	6.00
W16-7pL	24	12					FL. YELLOW-GREEN	BLACK	BLACK	4	2.00	8.00
W20-1	36	36		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			FL. ORANGE	BLACK	BLACK	2	9.00	18.00
W20-4	36	36					FL. ORANGE	BLACK	BLACK	6	9.00	54.00
W20-7	36	36					FL. ORANGE	BLACK	BLACK	8	9.00	72.00
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
MA-W21-5c	24	24					FL. ORANGE	BLACK	BLACK	2	4.00	8.00



LEGEND

A	B	C
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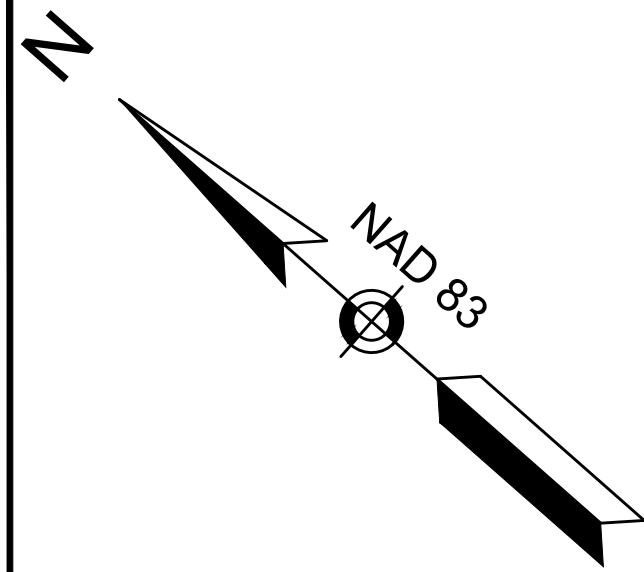

W20-1


MA-R2-10a


MA-R2-10e

N.T.S.

NOTE: "B" & "C" SIGNS ON SIDE-STREETS SHALL BE PLACED APPROXIMATELY 50' FROM HIGH STREET, AND "A" SIGNS SHALL BE PLACED APPROXIMATELY 150' FROM HIGH STREET.



PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
①	PROP DMH	13+06.1	22.6 RT	70.66	64.3 (EX CB) 66.06 (2)	63.78 (EX DMH)	5' DIAMETER, CONNECT TO EXISTING INV IN
②	PROP SPECIAL CB	12+89.7	25.9 RT	70.16 69.66 (GUTTER)	-	66.16 (1)	4' SUMP
③	PROP DMH	14+11.0	12.0 LT	70.12	65.56 (EX CB) 65.53 (4)	65.43 (EX DMH)	REMOVE PIPE SECTION
④	PROP CB	15+23.8	21.0 LT	69.47	-	66.08 (3)	4' SUMP, OFFSET SLAB TOP

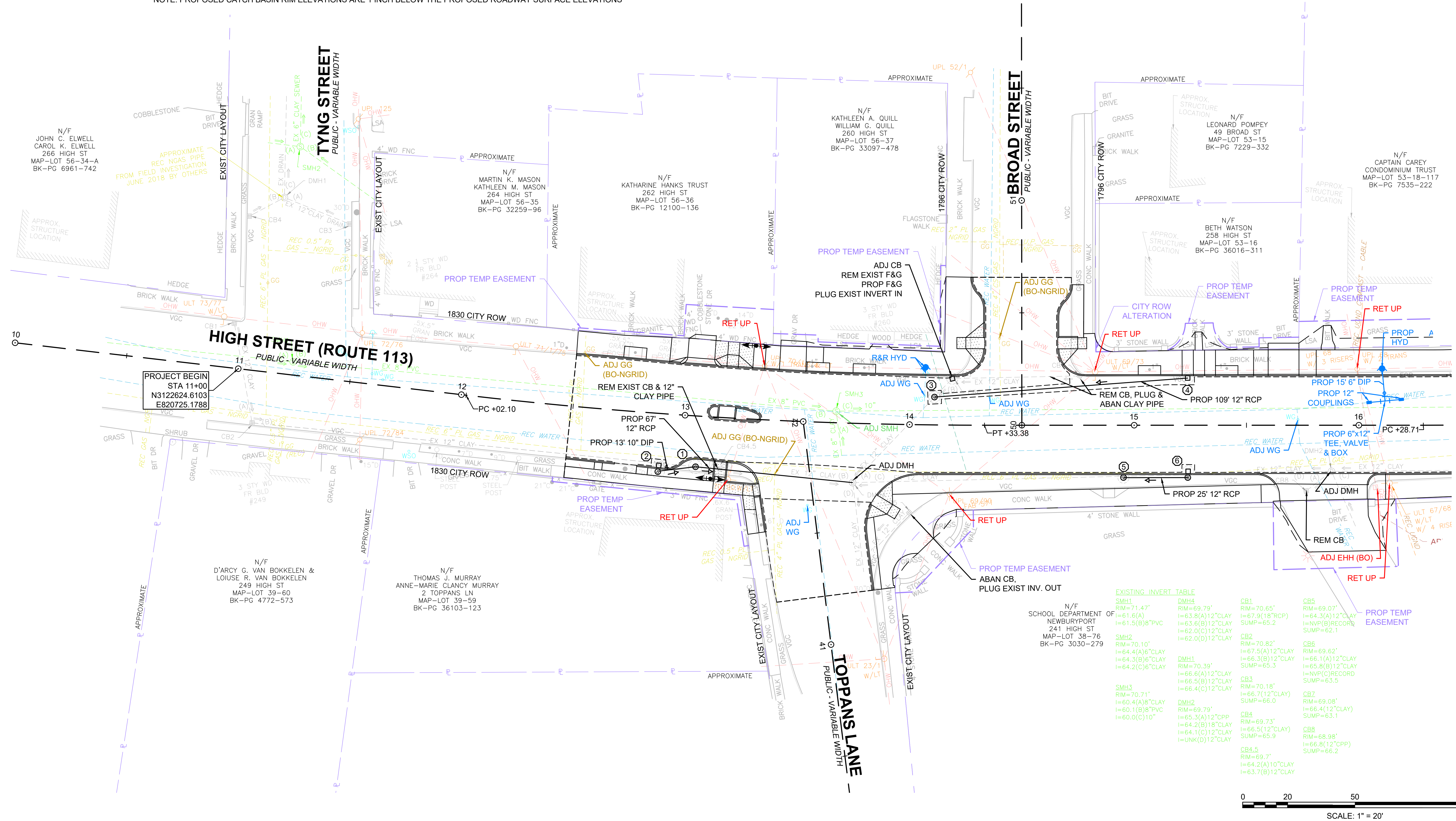
NOTE: PROPOSED CATCH BASIN RIM ELEVATIONS ARE 1 INCH BELOW THE PROPOSED ROADWAY SURFACE ELEVATIONS

PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
⑤	PROP DMH	14+95.3	23.4 RT	70.34	63.21 (EX DMH) 65.67 (6)	63.17 (EX DMH)	CONSTRUCT OVER EXIST PIPE, OFFSET TOP
⑥	PROP SPECIAL CB	15+23.8	20.5 RT	69.82	-	66.17 (5)	1.5' SUMP

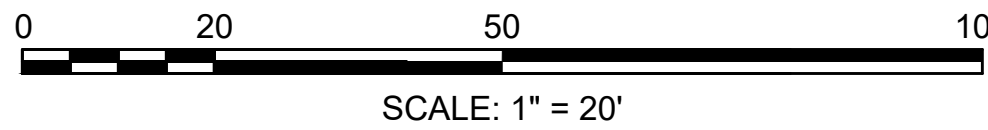
NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	50
PROJECT FILE NO.		608792	

UTILITY PLANS - 1 OF 4



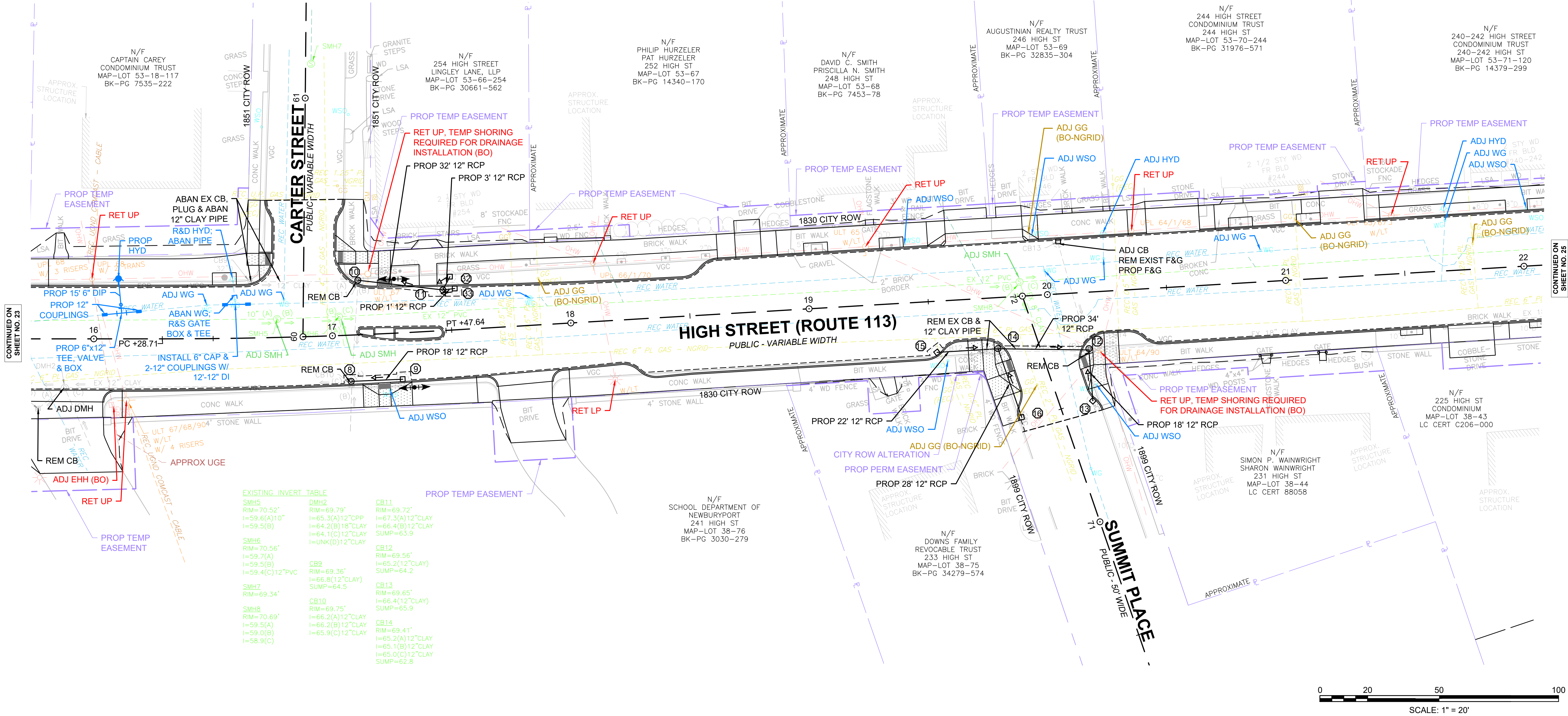
EXISTING INVERT TABLE			
SMH1 RIM=71.47' I=63.8(A)12"CLAY I=61.5(B)8"PVC	DMH4 RIM=69.79' I=63.8(A)12"CLAY I=63.6(B)12"CLAY I=62.0(C)12"CLAY I=62.0(D)12"CLAY	CB1 RIM=70.65' I=67.9(18"RCP) SUMP=65.2	CB5 RIM=69.07' I=64.3(A)12"CLAY I=NVP(B)RECORD SUMP=62.1
SMH2 RIM=70.10' I=64.4(A)8"CLAY I=64.3(B)6"CLAY I=64.2(C)6"CLAY	DMH1 RIM=70.39' I=66.6(A)12"CLAY I=66.5(B)12"CLAY I=66.4(C)12"CLAY	CB2 RIM=70.82' I=67.5(A)12"CLAY I=66.3(B)12"CLAY SUMP=65.3	CB6 RIM=69.62' I=66.1(A)12"CLAY I=65.8(B)12"CLAY I=NVP(C)RECORD SUMP=63.5
SMH3 RIM=70.71' I=60.4(A)8"CLAY I=60.1(B)8"PVC I=60.0(C)10"	DMH2 RIM=69.79' I=65.3(A)12"CPP I=64.2(B)18"CLAY I=64.1(C)12"CLAY I=UNK(D)12"CLAY	CB3 RIM=70.18' I=66.7(12"CLAY) SUMP=66.0	CB7 RIM=69.08' I=66.4(12"CLAY) SUMP=63.1
		CB4 RIM=69.73' I=66.5(12"CLAY) SUMP=65.9	CB8 RIM=68.98' I=66.8(12"CPP) SUMP=66.2
		CB4.5 RIM=69.7' I=64.2(A)10"CLAY I=63.7(B)12"CLAY	



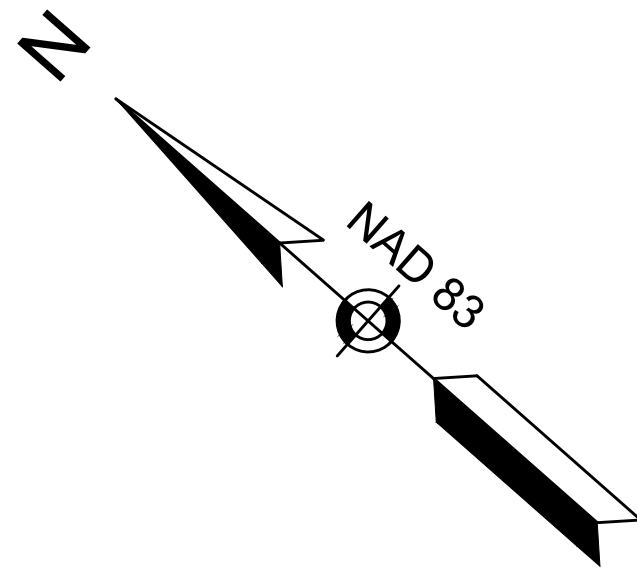
CONTINUED ON
SHEET NO. 24

PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
8	PROP DMH	17+07.1	19.4 RT	70.13	66.20 (EX 10) 66.15 (9)	65.90 (EXIST)	REM EXIST CB, CONNECT TO EXIST INVERTS
9	PROP CBCI	17+28.5	20.4 RT	70.18	-	66.51 (8)	4' SUMP, OFFSET SLAB TOP
10	PROP DMH	17+11.6	22.8 LT	70.72	66.65 (11) 67.30 (33)	66.4 (EXIST)	REMOVE EXIST CB, CONNECT TO EXIST INVERT OUT
11	PROP DMH	17+47.3	17.0 LT	70.46	67.50 (32) 67.30 (33)	67.25 (10)	
12	PROP DMH	20+16.0	19.0 RT	70.37	65.10 (14) 65.80 (13) 65.2 (EXIST)	65.0 (EXIST)	4' SUMP, OFFSET TOP, CONNECT TO EXIST INVERTS, REMOVE EXIST CB
13	PROP CB	71+49.0	14.5 RT	69.68	-	66.18 (12)	4' SUMP, OFFSET SLAB TOP
14	PROP DMH	19+78.0	21.8 RT	70.72	65.55 (15) 65.55 (16)	65.30 (12)	
15	PROP CB	19+52.8	22.0 RT	69.81	-	66.01 (14)	4' SUMP, OFFSET SLAB TOP, TEST PIT TO LOCATE GAS SERVICE PRIOR TO ORDERING STRUCTURE
16	PROP CB	71+52.1	17.8 LT	69.96	-	66.11 (14)	4' SUMP, OFFSET SLAB TOP
32	PROP DI	17+50.6	22.4 LT	69.96	-	67.62 (11)	
33	PROP CB	17+52.3	17.3 LT	70.46	-	67.38 (11)	

NOTE: PROPOSED CATCH BASIN RIM ELEVATIONS ARE 1 INCH BELOW THE PROPOSED ROADWAY SURFACE ELEVATIONS



CONTINUED ON
SHEET NO. 25



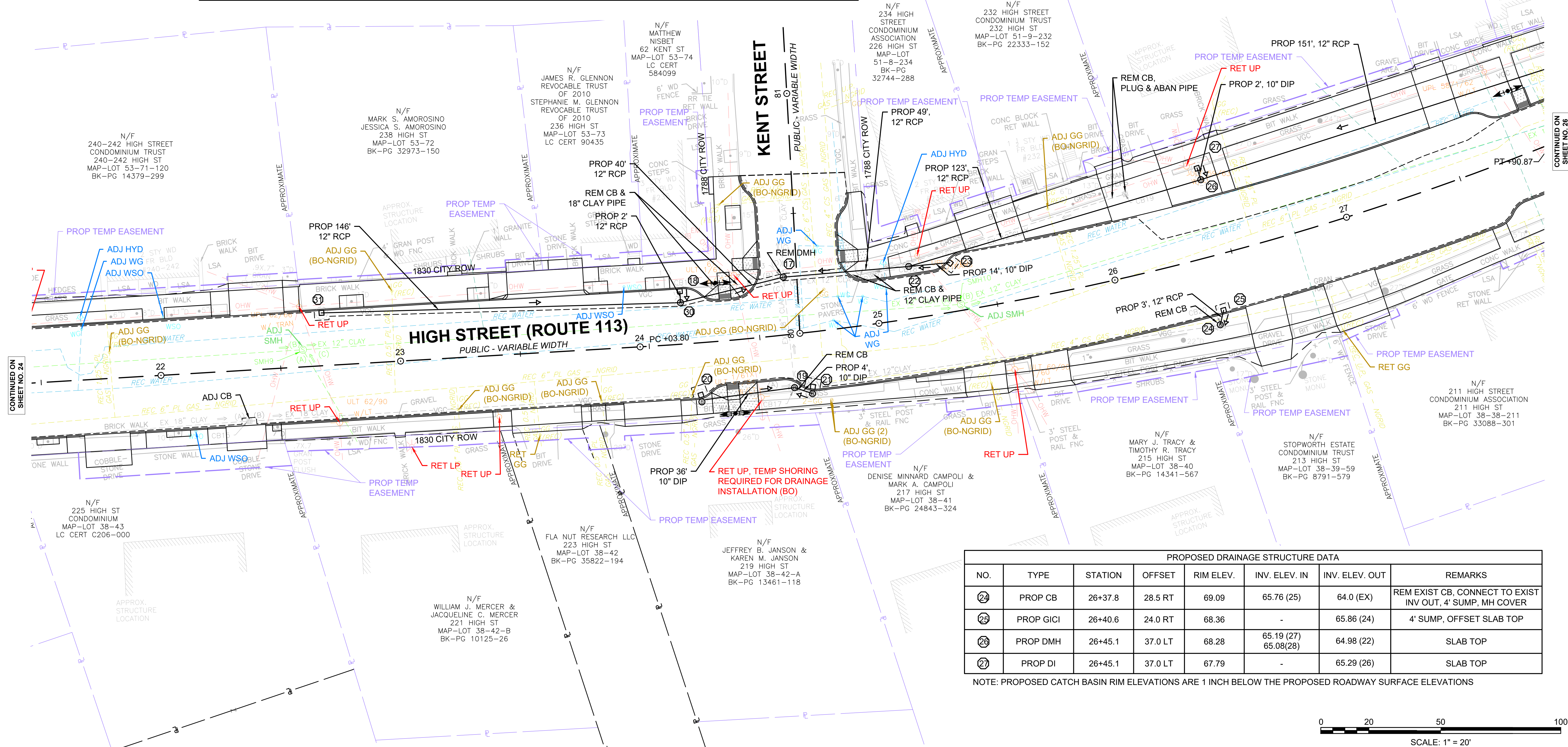
PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
17	PROP DMH	24+62.2	24.6 LT	67.68	60.30 (22) 60.30 (EX) 63.20 (30)	60.2 (EX)	REM EXIST DMH, CONNECT TO EXIST INVERTS
18	PROP GICI	24+23.8	22.0 LT	67.72	-	65.22 (30)	4' SUMP, OFFSET SLAB TOP, CONNECT TO EXIST DMH
19	PROP DMH	24+62.2	22.3 RT	68.41	62.60 (EX) 62.60 (EX) 65.40 (21) 65.40 (20)	62.3 (EX)	REM EXIST CB, CONNECT TO EXIST INVERTS, 5' DIAMETER, SLAB TOP
20	PROP SPECIAL CB	24+23.9	24.6 RT	68.17 67.67 (GUTTER)	-	65.67 (19)	4' SUMP
21	PROP SPECIAL CB	24+69.2	25.5 RT	68.22 67.72 (GUTTER)	-	65.72 (19)	4' SUMP
22	PROP CB	25+15.9	21.6 LT	67.9	63.87 (26) 65.37 (23)	63.77 (17)	5' DIAMETER, 4' SUMP, SLAB TOP, MH COVER
23	PROP GICI	25+32.7	21.0 LT	67.97	-	65.47 (22)	
30	PROP CB	24+18.1	17.3 LT	68.01	65.12 (18) 63.84 (31)	63.74 (17)	4' SUMP W/ DMH COVER
31	PROP GICI	22+68.2	22.0 LT	68.37	-	65.87 (30)	

EXISTING INVERT TABLE		
SMH9 RIM=69.22' I=62.7(A) 6" PVC I=58.4(B) I=58.4(C) 12" CLAY	CB14 RIM=69.41' I=65.2(A) 12" CLAY I=65.1(B) 12" CLAY I=65.0(C) 18" CLAY SUMP=62.8	CB18 RIM=67.44' I=64.1(A) 14" CLAY I=62.7(B) 12" CLAY SUMP=61.2
SMH10 RIM=69.78' I=63.7(A) 12" CLAY I=60.3(B) 18" CLAY I=60.2(D) 18" CLAY	CB15 RIM=68.42' I=63.5(A) 18" CLAY I=63.4(B) 18" CLAY SUMP=63.5	CB19 RIM=67.65' I=NVP (12" CLAY)
DMH3 RIM=68.56' I=60.3(A) 12" CLAY I=60.3(B) 18" CLAY I=60.2(D) 18" CLAY	CB16 RIM=67.44' I=63.4(A) 18" CLAY I=62.6(B) 18" CLAY I=62.3(C) 18" CLAY SUMP=60.6	CB20 RIM=67.62' I=64.0' (12" CLAY)

NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

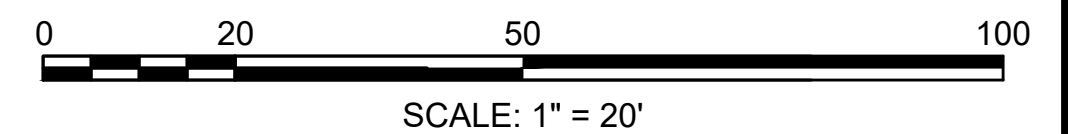
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	50
PROJECT FILE NO.		608792	

UTILITY PLANS - 3 OF 4



PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
24	PROP CB	26+37.8	28.5 RT	69.09	65.76 (25)	64.0 (EX)	REM EXIST CB, CONNECT TO EXIST INV OUT, 4' SUMP, MH COVER
25	PROP GICI	26+40.6	24.0 RT	68.36	-	65.86 (24)	4' SUMP, OFFSET SLAB TOP
26	PROP DMH	26+45.1	37.0 LT	68.28	65.19 (27) 65.08(28)	64.98 (22)	SLAB TOP
27	PROP DI	26+45.1	37.0 LT	67.79	-	65.29 (26)	SLAB TOP

NOTE: PROPOSED CATCH BASIN RIM ELEVATIONS ARE 1 INCH BELOW THE PROPOSED ROADWAY SURFACE ELEVATIONS



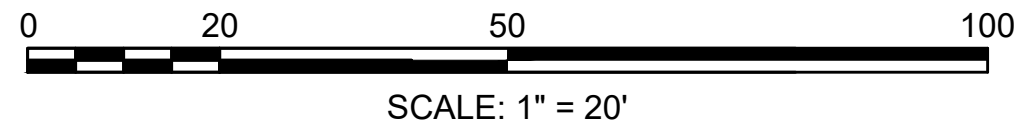
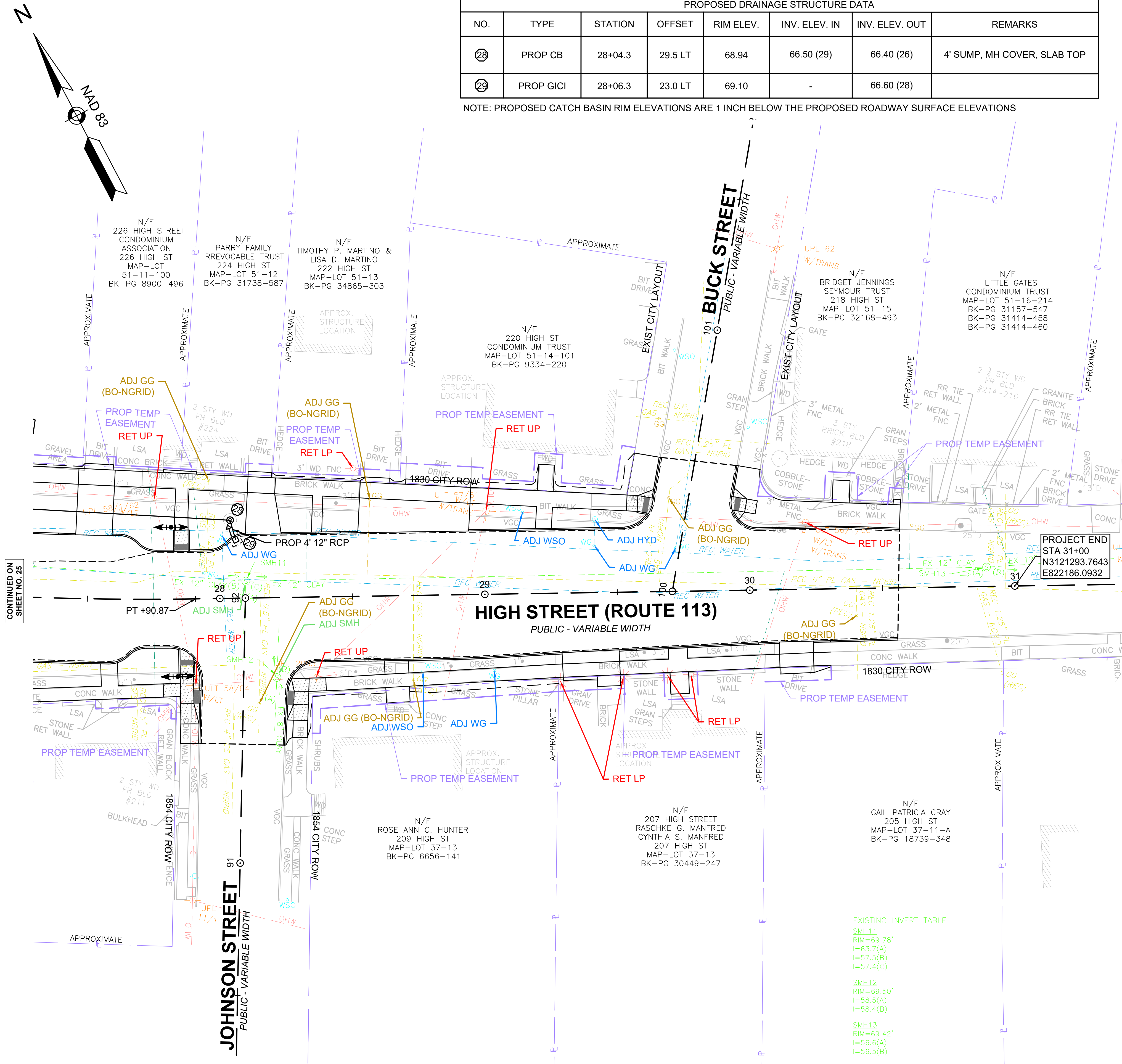
NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

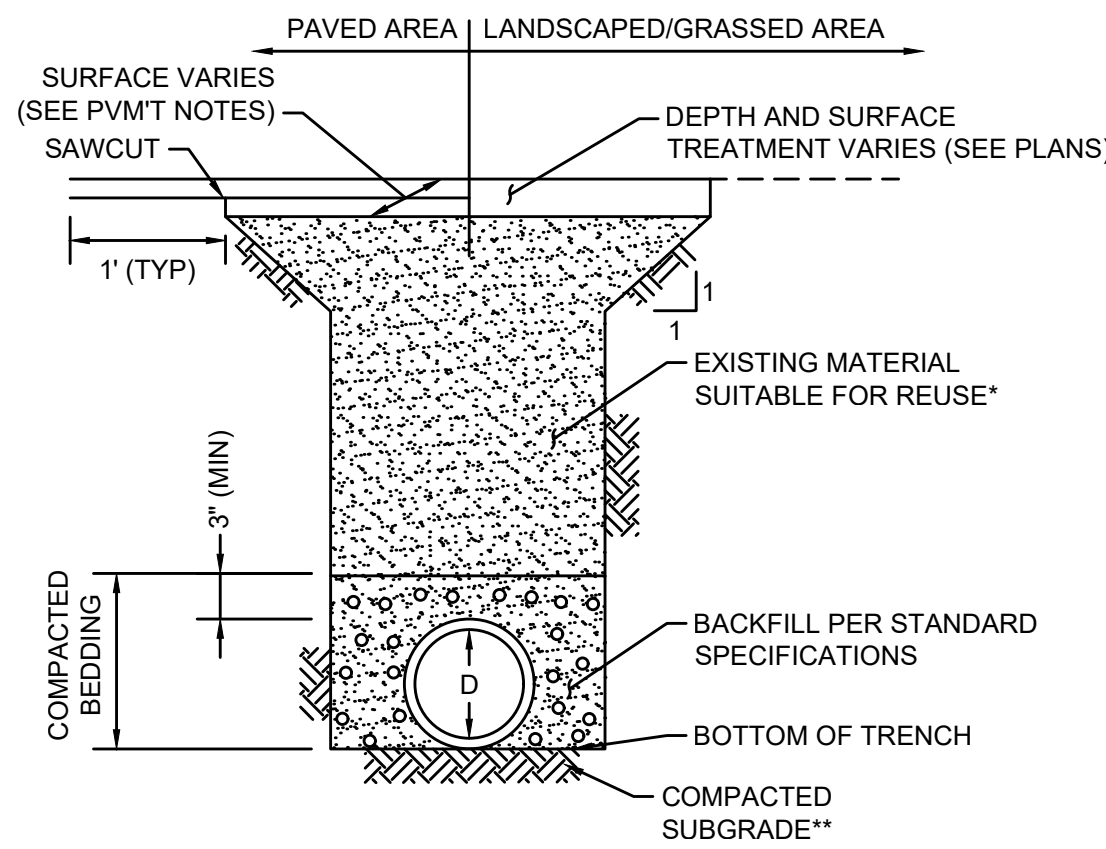
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	50
PROJECT FILE NO.		608792	

UTILITY PLANS - 4 OF 4

PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
28	PROP CB	28+04.3	29.5 LT	68.94	66.50 (29)	66.40 (26)	4' SUMP, MH COVER, SLAB TOP
29	PROP GICI	28+06.3	23.0 LT	69.10	-	66.60 (28)	

NOTE: PROPOSED CATCH BASIN RIM ELEVATIONS ARE 1 INCH BELOW THE PROPOSED ROADWAY SURFACE ELEVATIONS





NOTES:

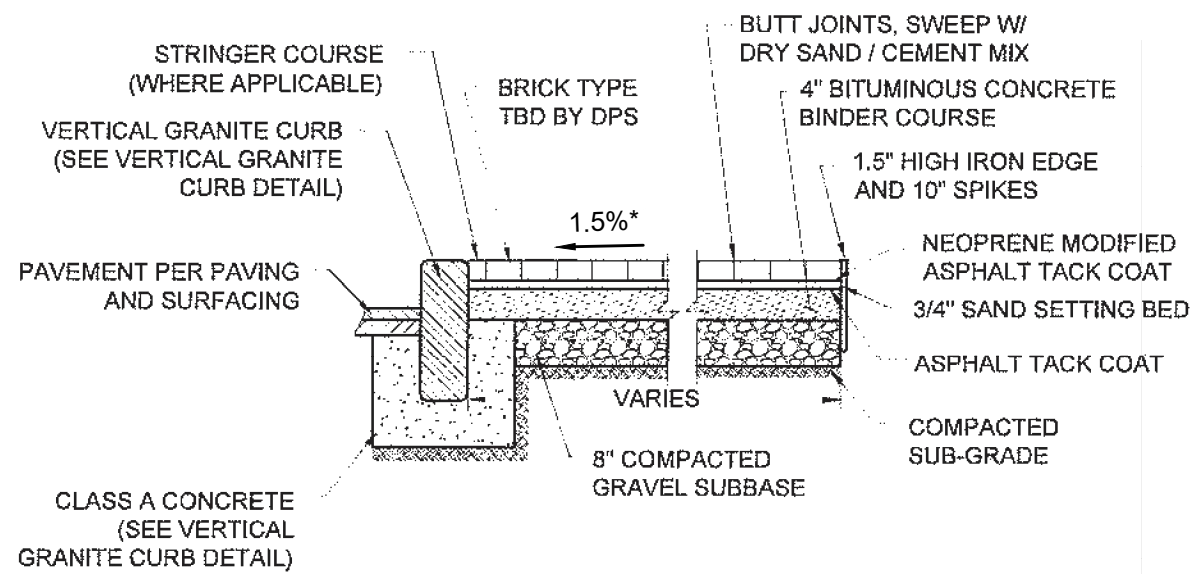
* EXISTING MATERIAL OBTAINED FROM EXCAVATION THAT IS DETERMINED TO BE SUITABLE, AND APPROVED BY THE ENGINEER SHALL BE USED. BACKFILL SHALL BE PLACED IN LAYERS NO MORE THAN 6" IN DEPTH AND THOROUGHLY COMPACTED. BACKFILLING TO A POINT 2' OVER THE PIPE SHALL CONTAIN NO STONES LARGER THAN 3".

**SOFT OR UNSUITABLE MATERIAL EXISTING BELOW THE REQUIRED BEDDING GRADE SHALL BE REMOVED AS DIRECTED AND REPLACED WITH SAND, GRAVEL, CRUSHED STONE OR OTHER SUITABLE MATERIAL AND THOROUGHLY COMPACTED.

UTILITY TRENCH

N.T.S.

NOTE: BRICK TYPE TO BE DETERMINED BY DPS.
(S&H TYPE; OLD CITY HALL TYPE; WIRE CUT TYPE)

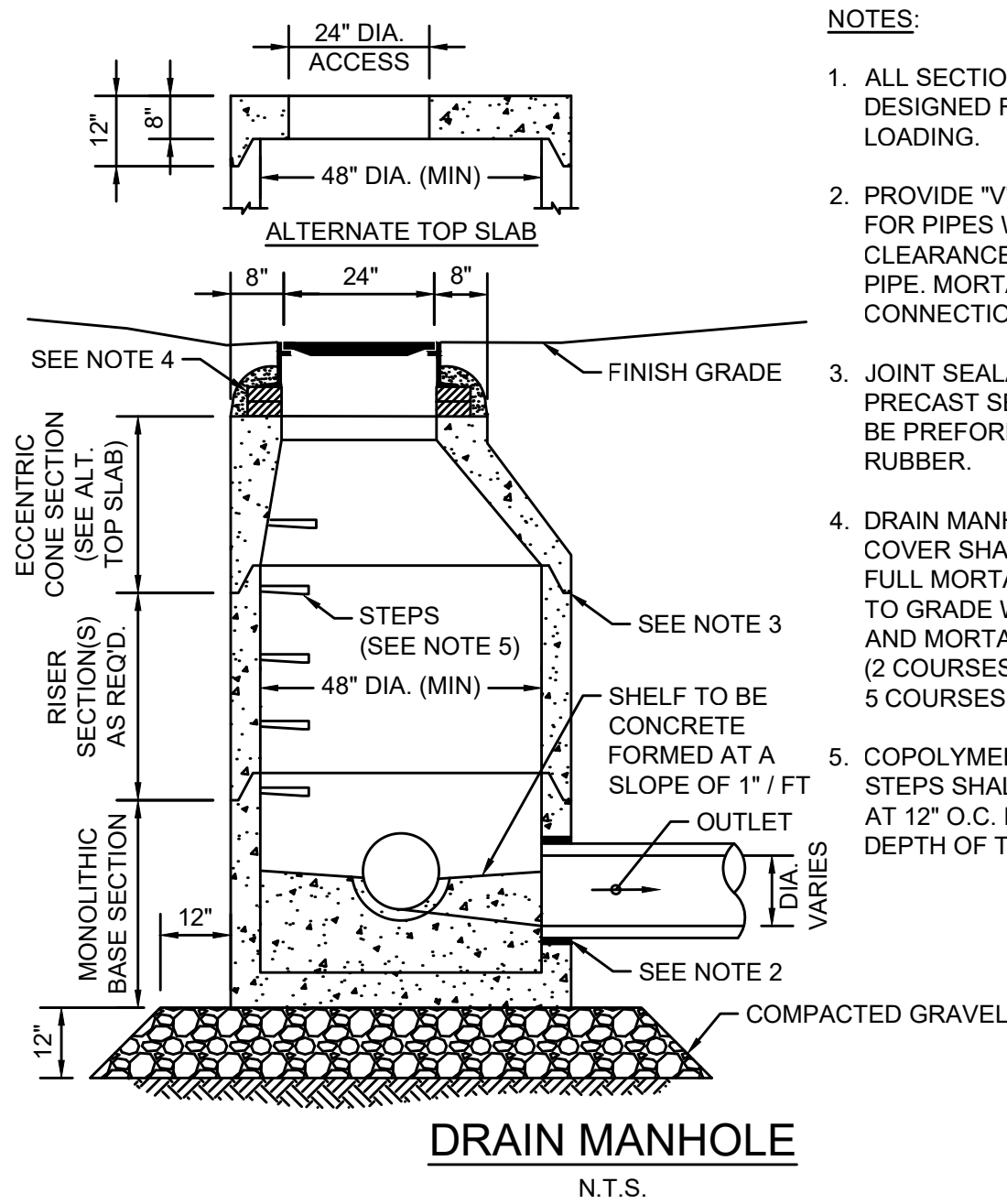


NOTES:

1. SIDEWALKS SHALL MATCH WIDTH AND SLOPE OF EXISTING SIDEWALKS UNLESS REVISION IS NECESSARY TO COMPLY WITH ADA/ABAS REGULATIONS OR OTHERWISE NOTED.
2. BITUMINOUS CONCRETE BINDER COURSE SHALL BE 4" DEPTH (IN TWO 3" COURSES) AT DRIVEWAYS. REFER TO PROJECT DRAWINGS OR ENGINEER'S INSTRUCTIONS FOR LOCATIONS

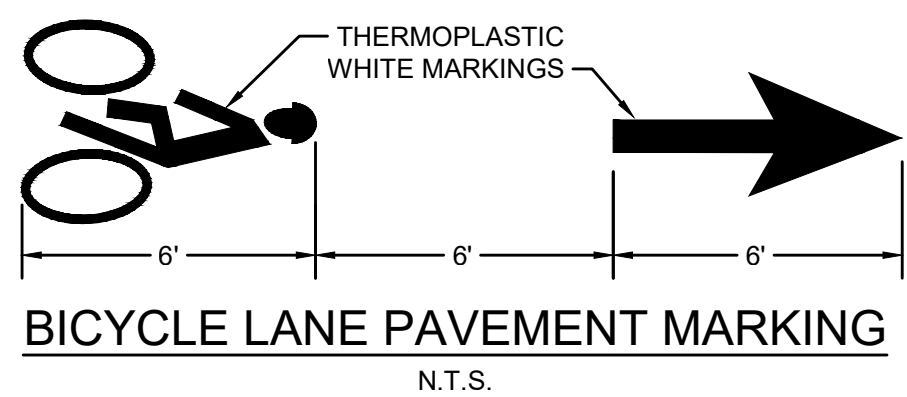
ASPHALT BASE BRICK SIDEWALK

N.T.S.



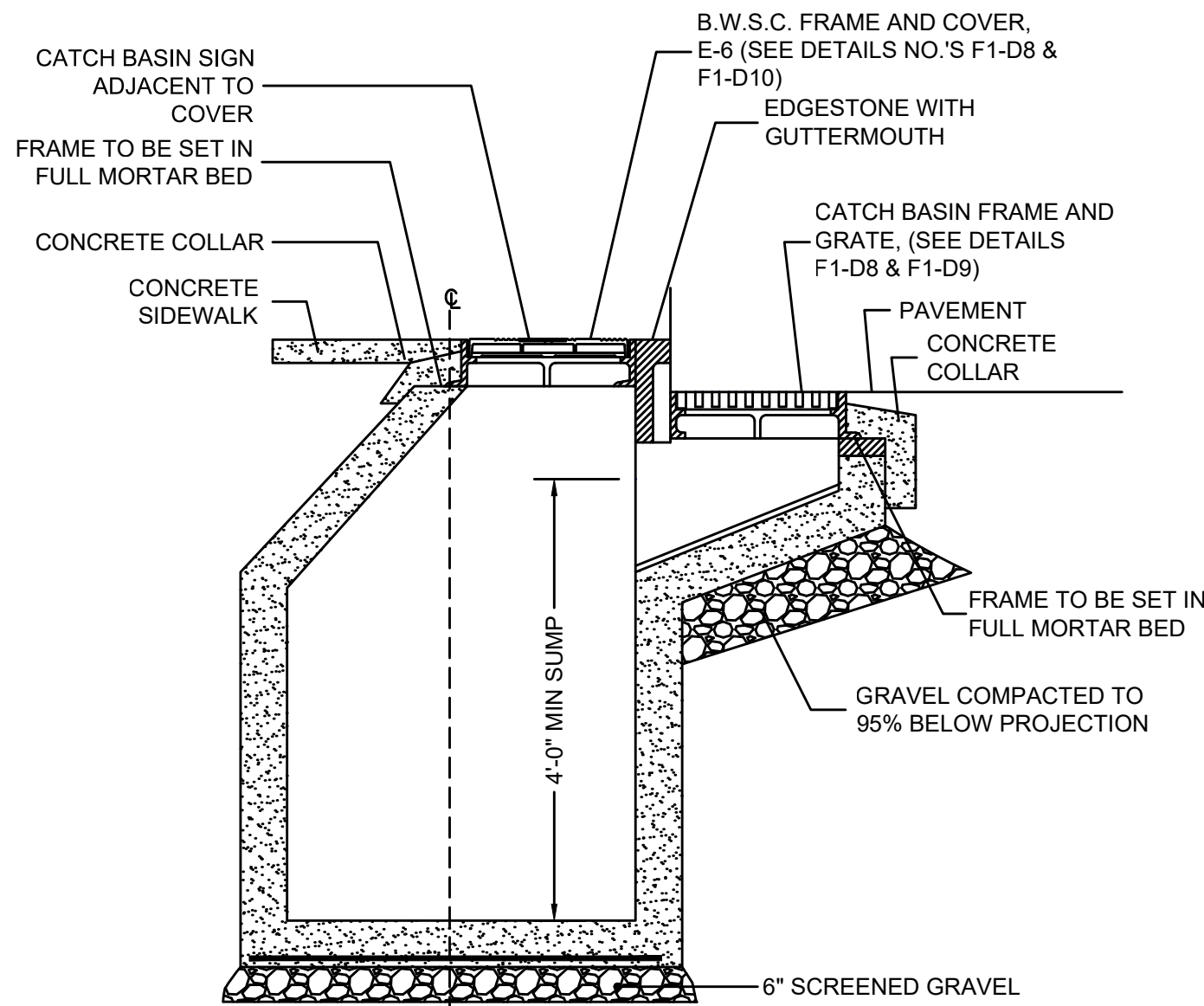
DRAIN MANHOLE

N.T.S.



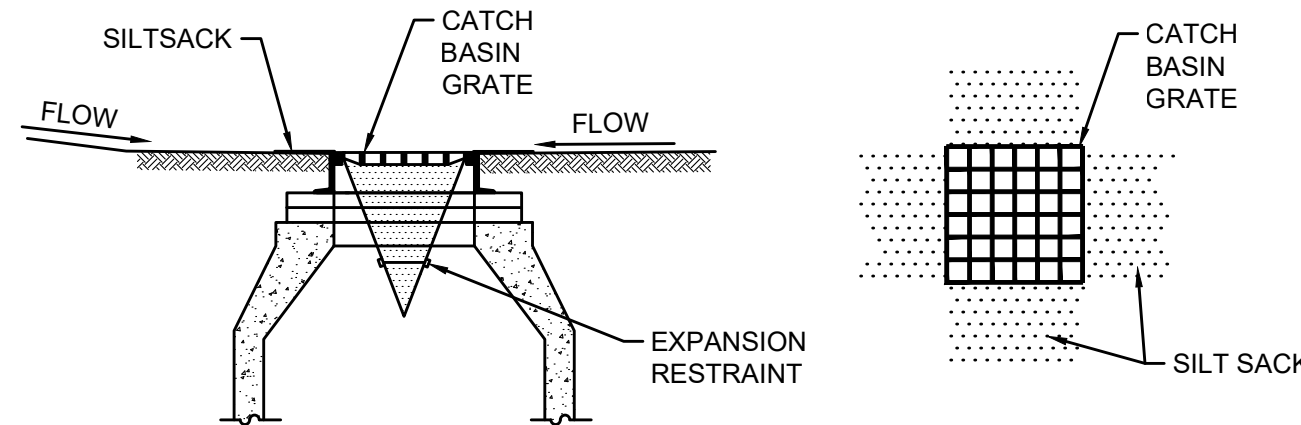
BICYCLE LANE PAVEMENT MARKING

N.T.S.



SPECIAL CATCH BASIN

N.T.S.

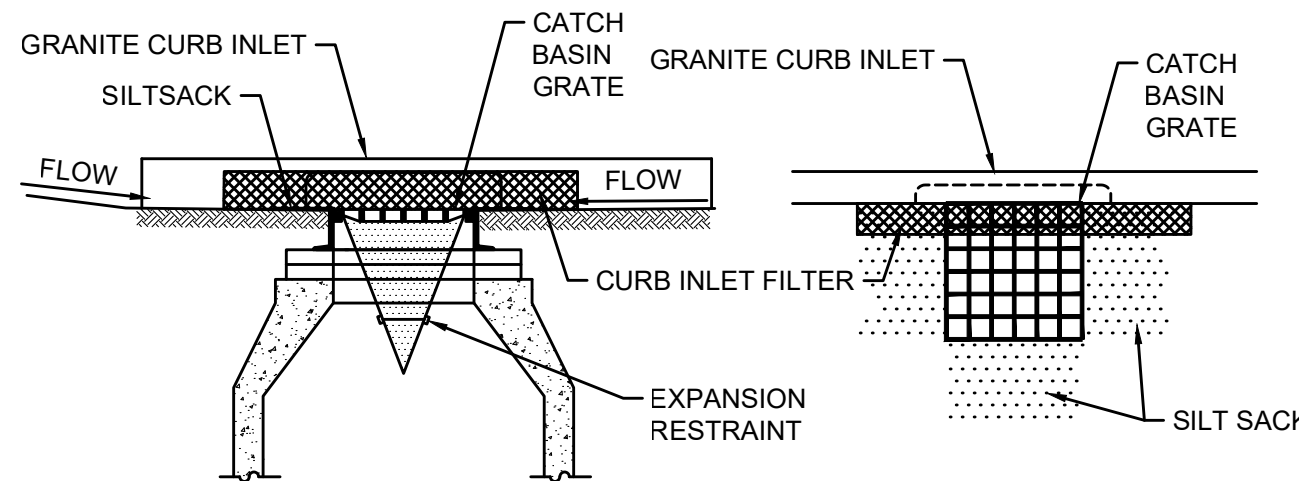


NOTES:

1. INSTALL SILT SACK IN EXISTING CATCH BASINS BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

INLET PROTECTION SILT SACK IN CATCH BASIN

N.T.S.

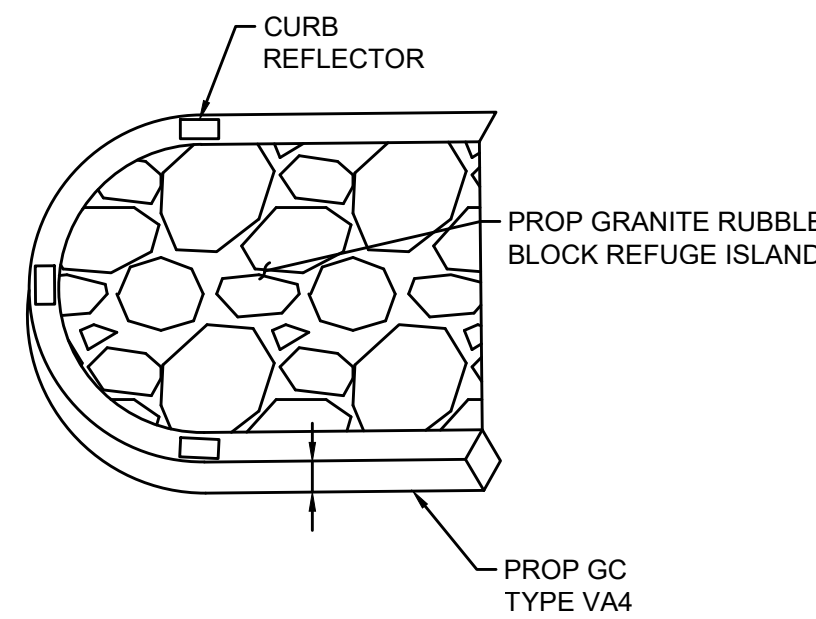


NOTES:

1. INSTALL SILT SACK IN EXISTING CATCH BASINS BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

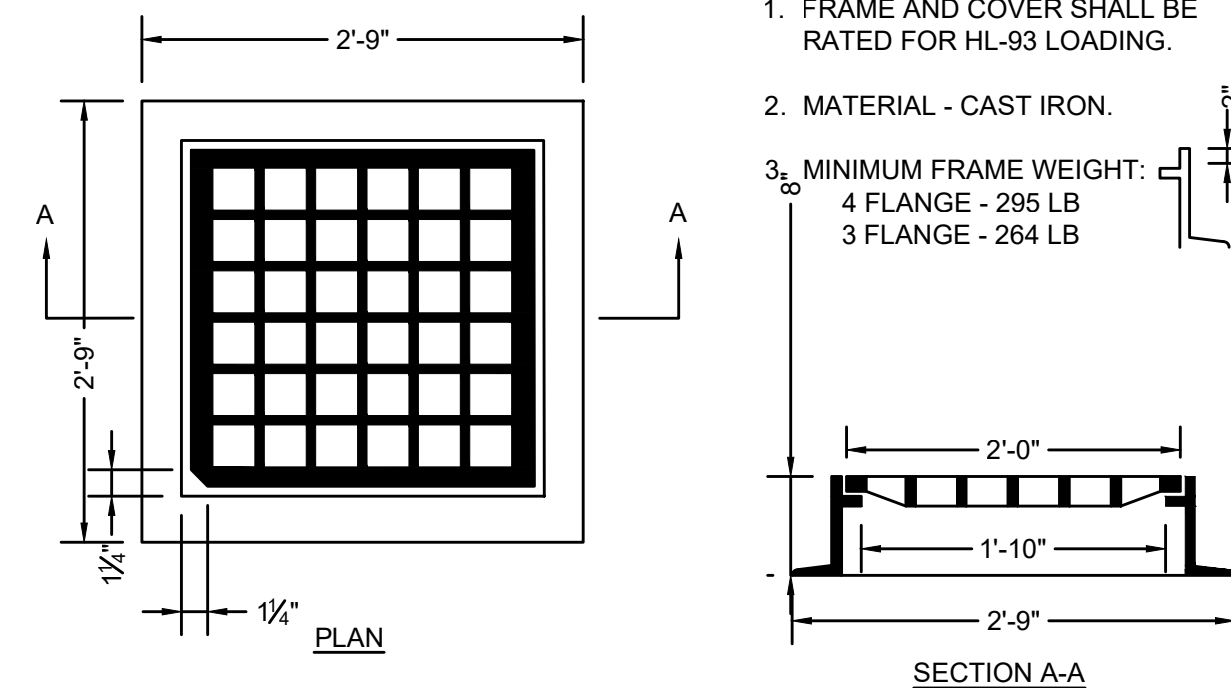
INLET PROTECTION SILT SACK IN CATCH BASIN WITH CURB INLET

N.T.S.



CURB REFLECTOR PLACEMENT

N.T.S.

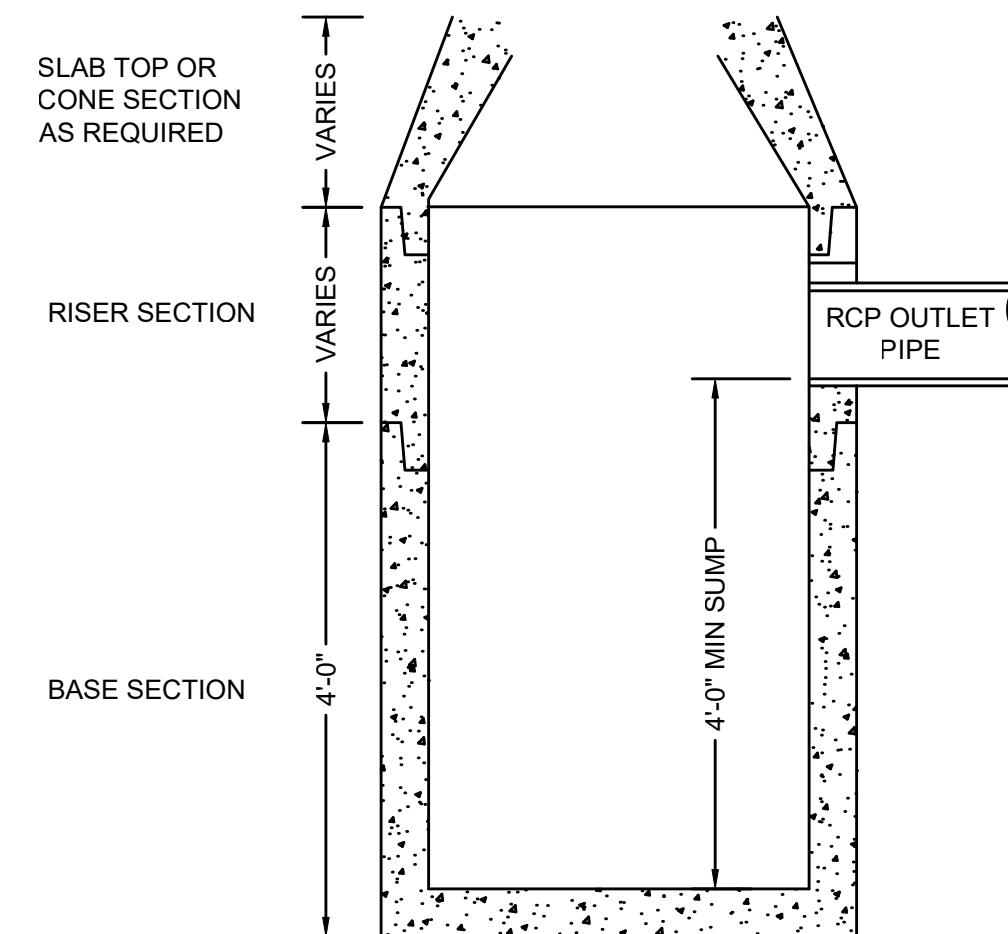


NOTES:

1. FRAME AND COVER SHALL BE RATED FOR HL-93 LOADING.
2. MATERIAL - CAST IRON.
3. MINIMUM FRAME WEIGHT:
4 FLANGE - 295 LB
3 FLANGE - 264 LB

CATCH BASIN FRAME & GRATE (MUNICIPAL STANDARD)

N.T.S.



NOTE:

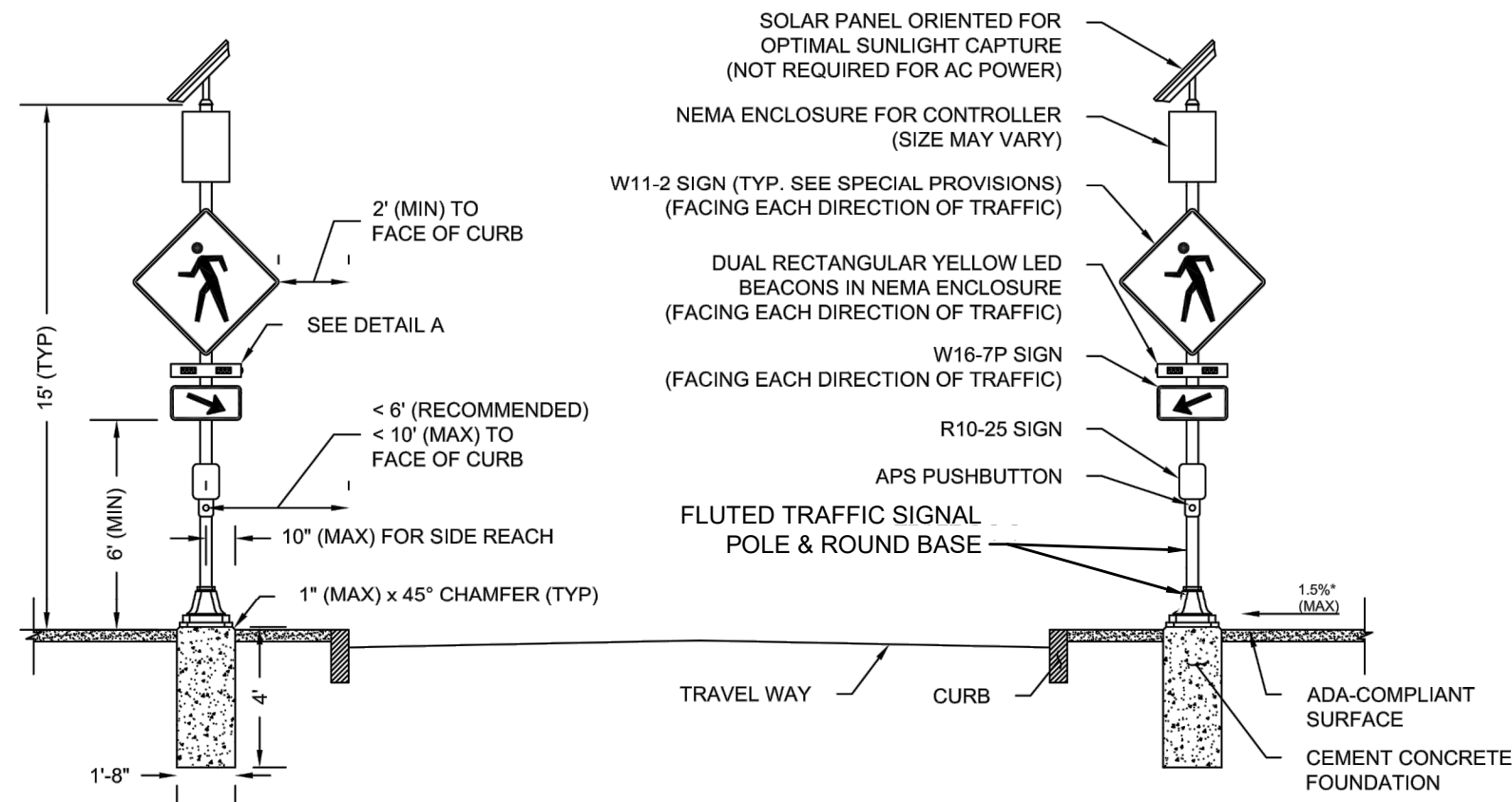
ALL CATCH BASINS SHALL CONFORM TO MASSDOT CONSTRUCTION STANDARD E 201.4.0 EXCEPT FOR 4' SUMP DEPTH AS SHOWN

DEEP SUMP CATCH BASIN

N.T.S.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	50
PROJECT FILE NO.		608792	

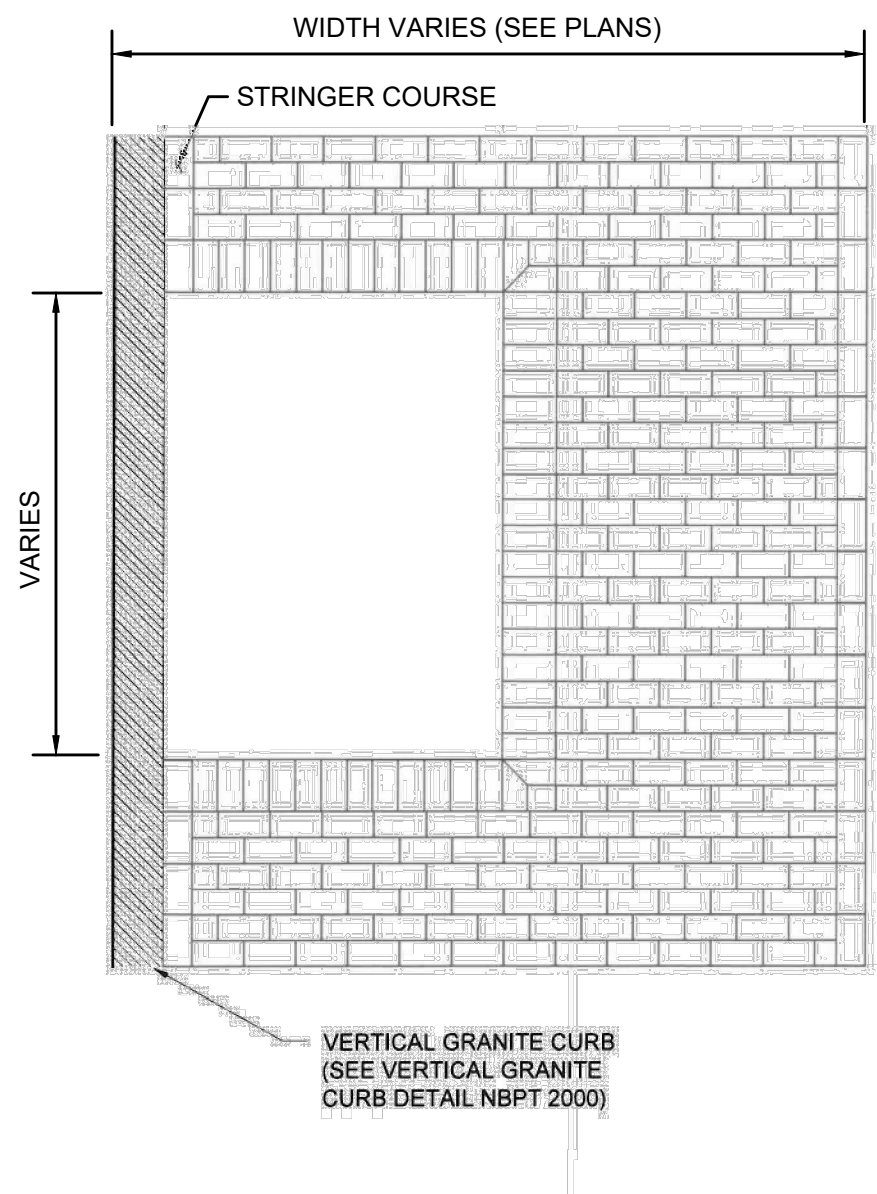
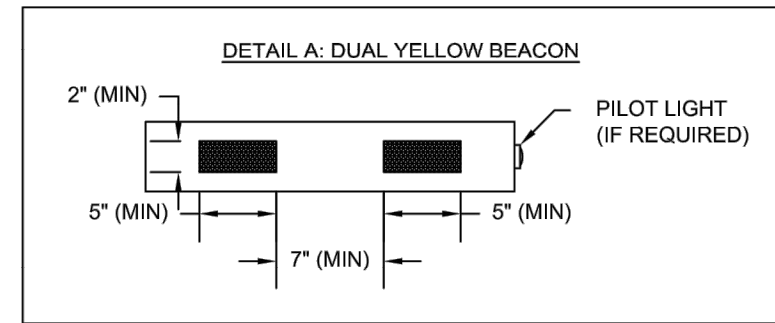
FLASH CYCLE DURATION			
LOCATION	CROSSING DISTANCE (FT)	WALKING SPEED (FT/S)	FLASHING CYCLE DURATION (S)
@ TOPPANS	41	3	14
@ CARTER	40	3	14
@ KENT	35	3	12
@ JOHNSON	40	3	14
EQ: FLASH CYCLE = CROSSING DISTANCE / WALKING SPEED			



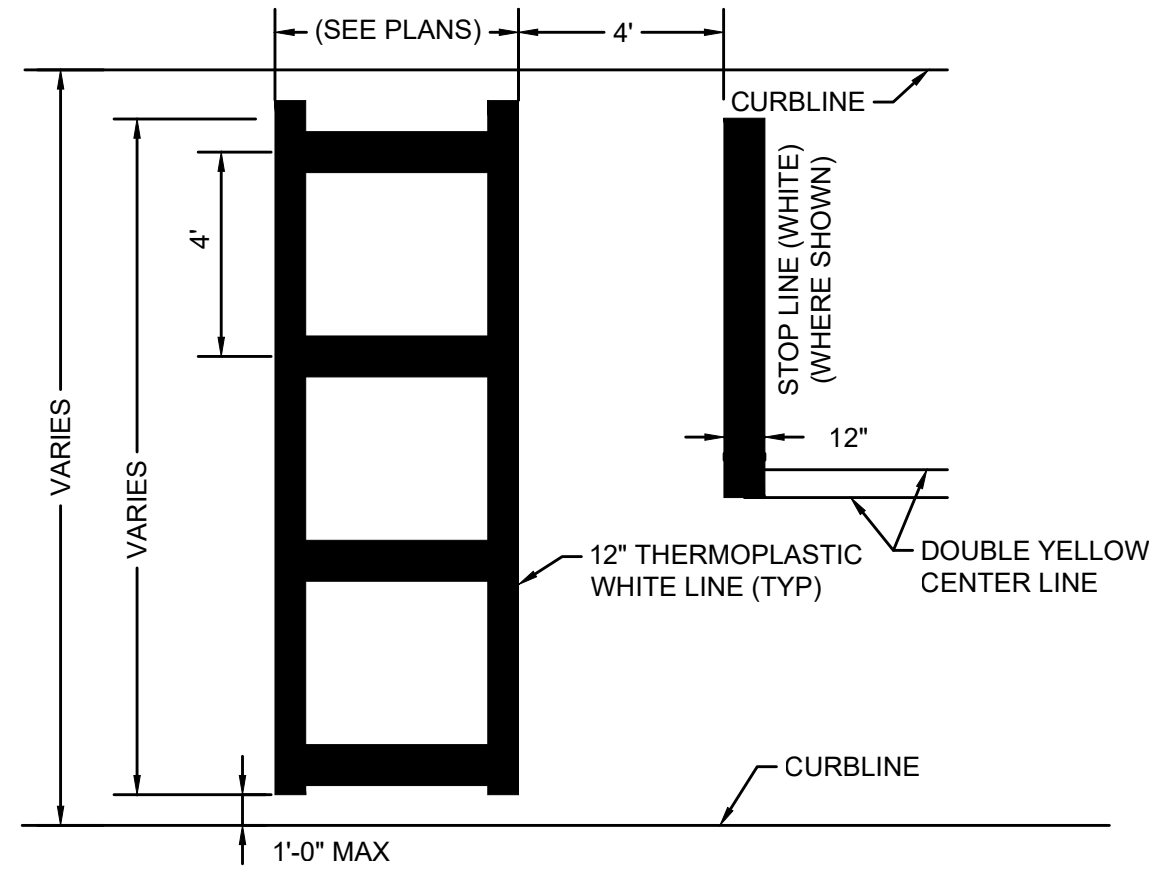
RECTANGULAR RAPID FLASHING BEACON
N.T.S.

- NOTES:
- CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
 - REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
 - 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 THEIR RESPECTIVE PAY ITEMS.
 - ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AB COMPLIANT.
 - 0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.

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

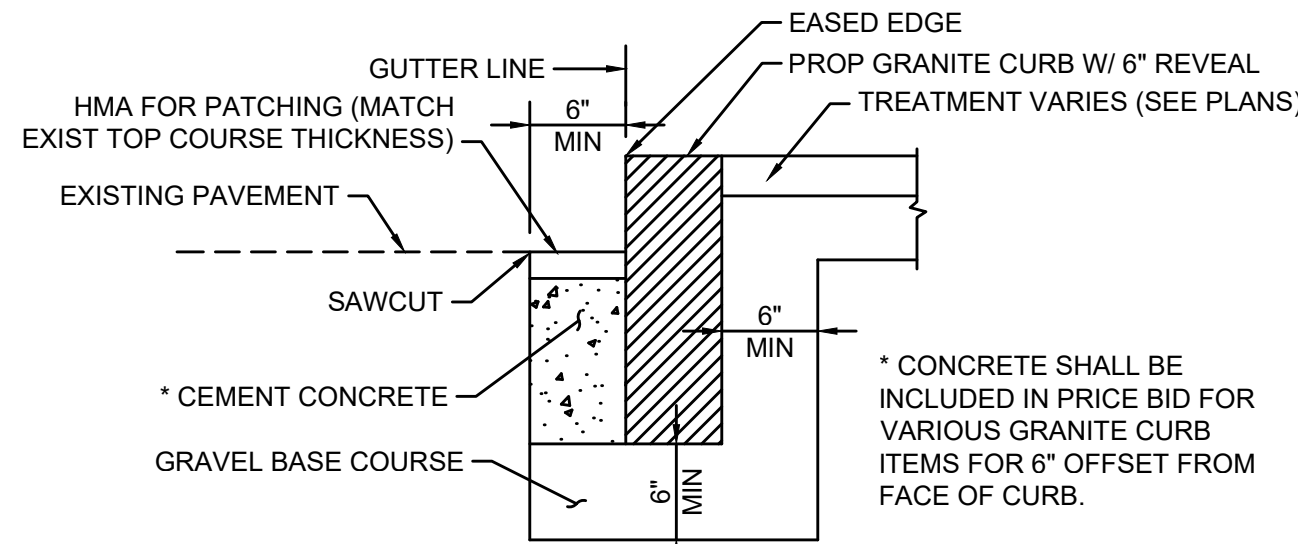


BRICK SIDEWALK PATTERN DETAIL
N.T.S.

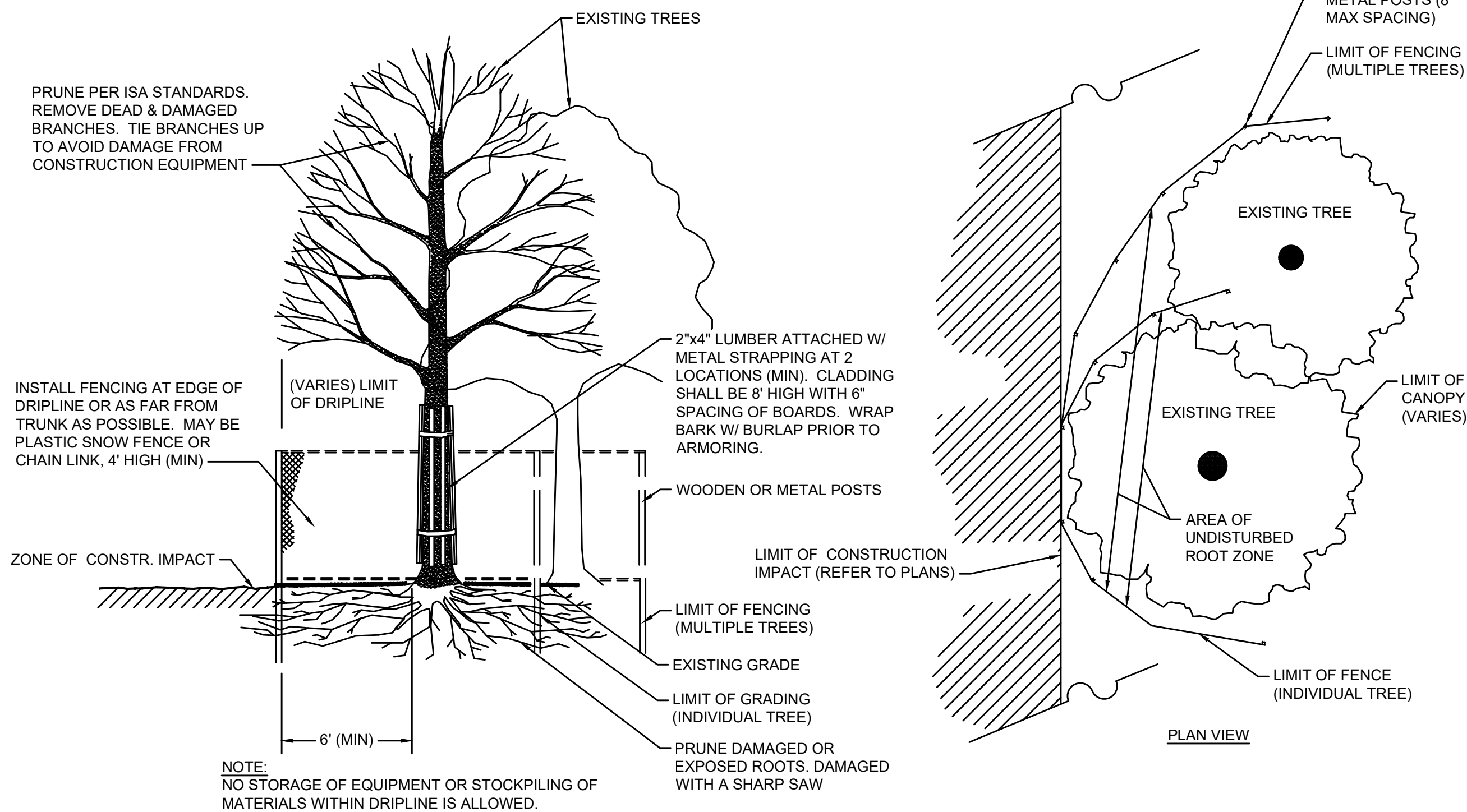


- NOTES:
- ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION. NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED.
 - LAYOUT OF CROSSWALKS SHALL BE APPROVED BY THE ENGINEER PRIOR TO APPLICATION.

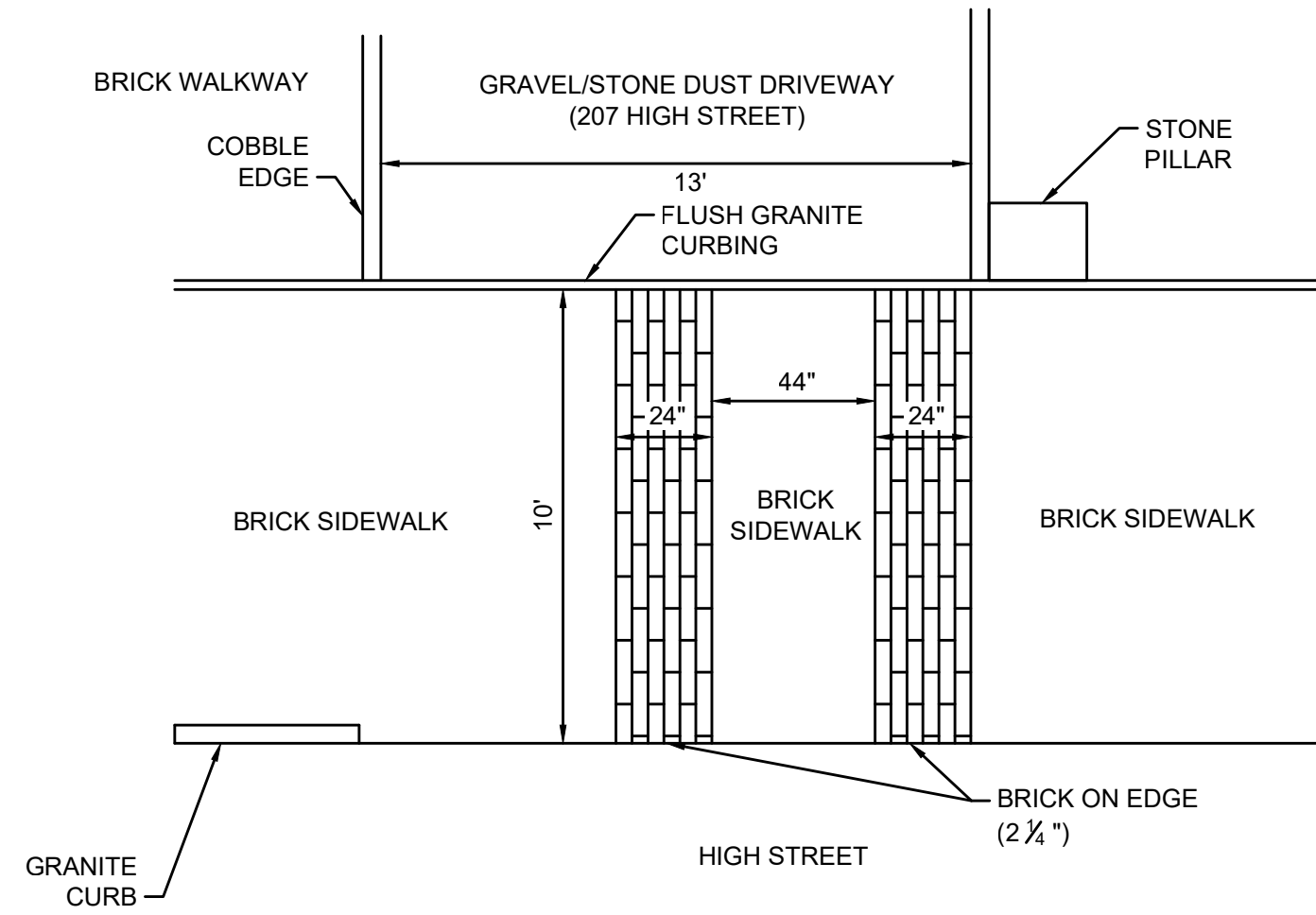
CROSSWALK PAVEMENT MARKING
N.T.S.



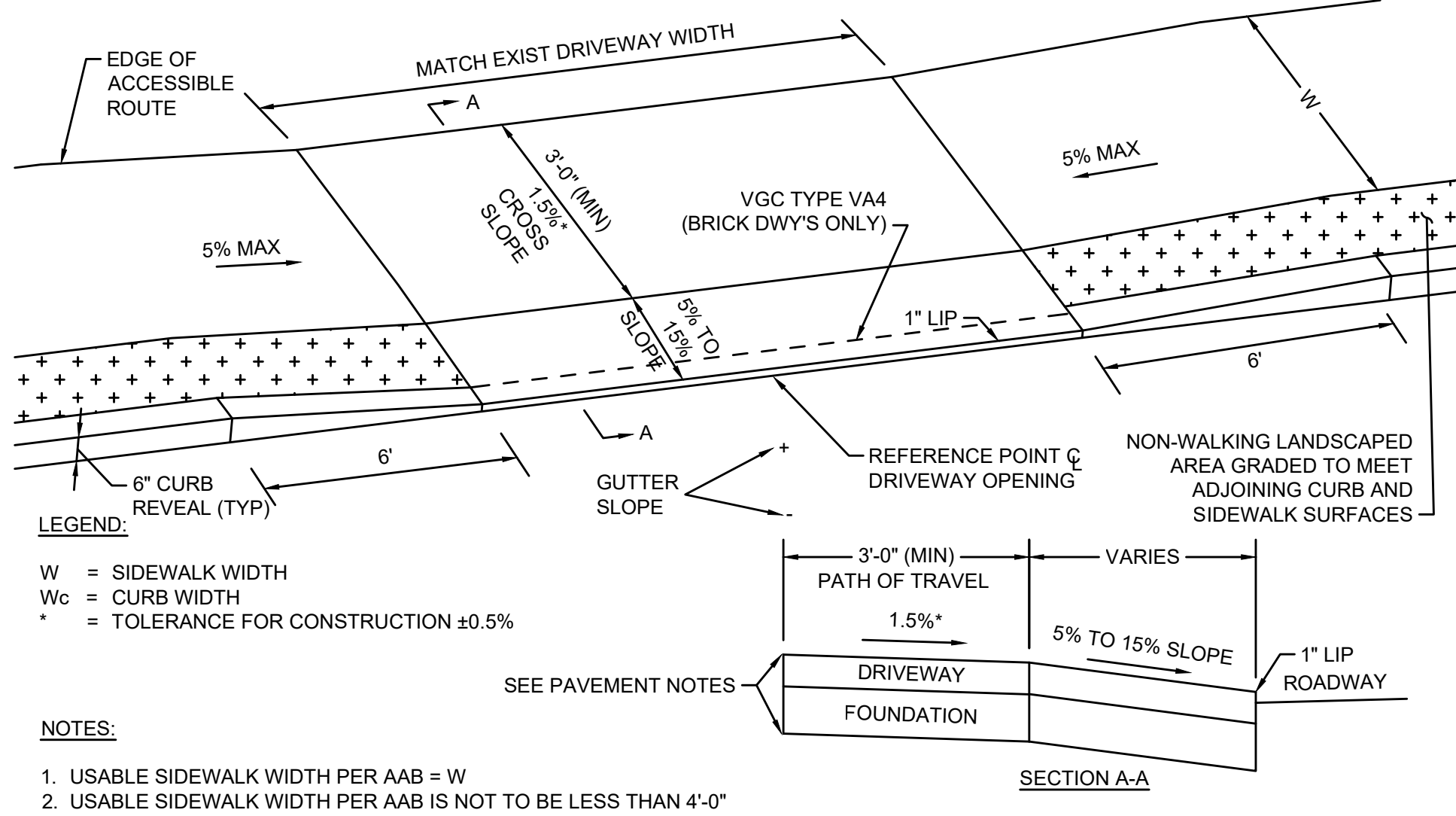
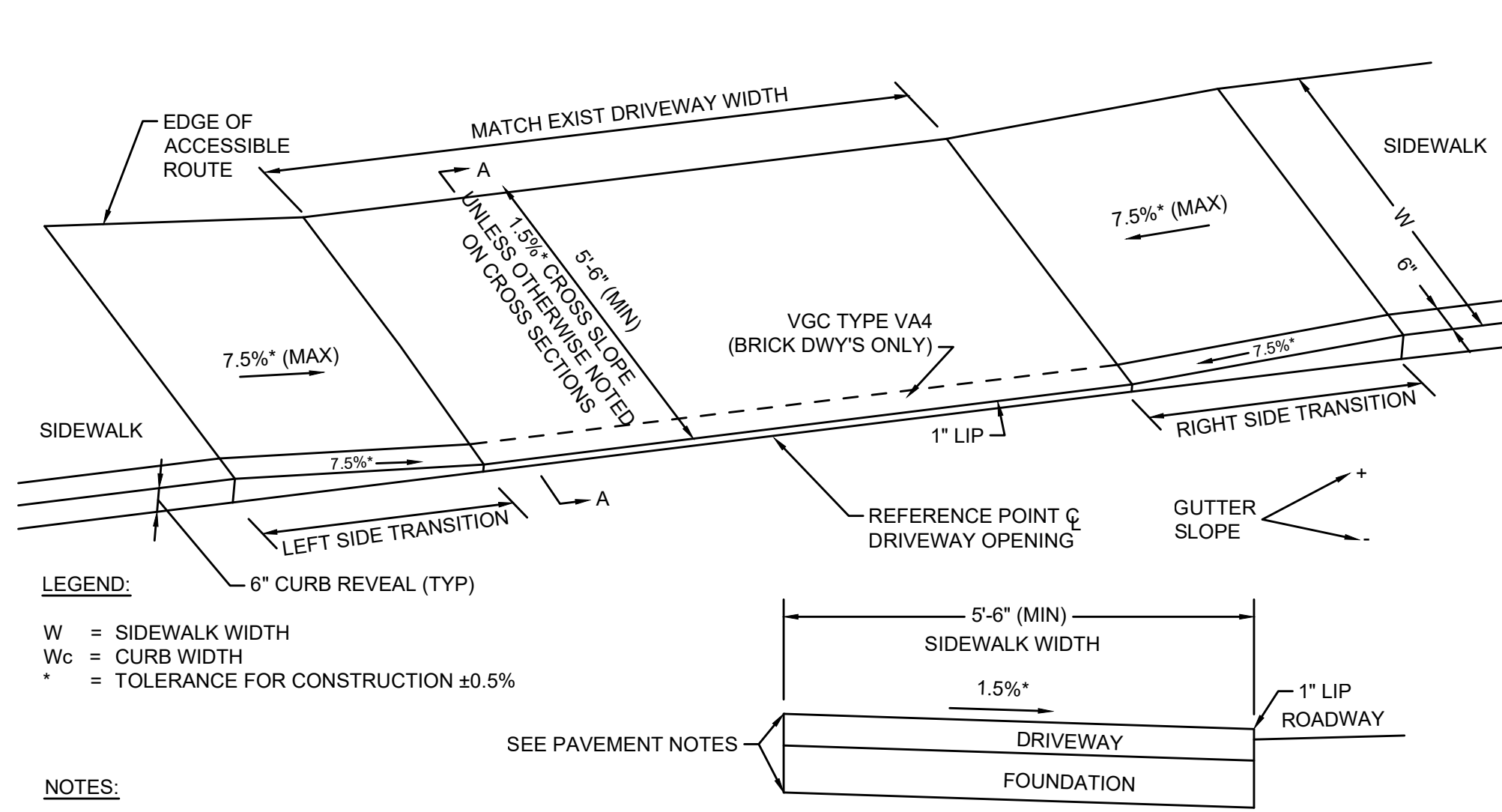
GRANITE CURB IN EXISTING PAVEMENT
N.T.S.



TREE PROTECTION
N.T.S.

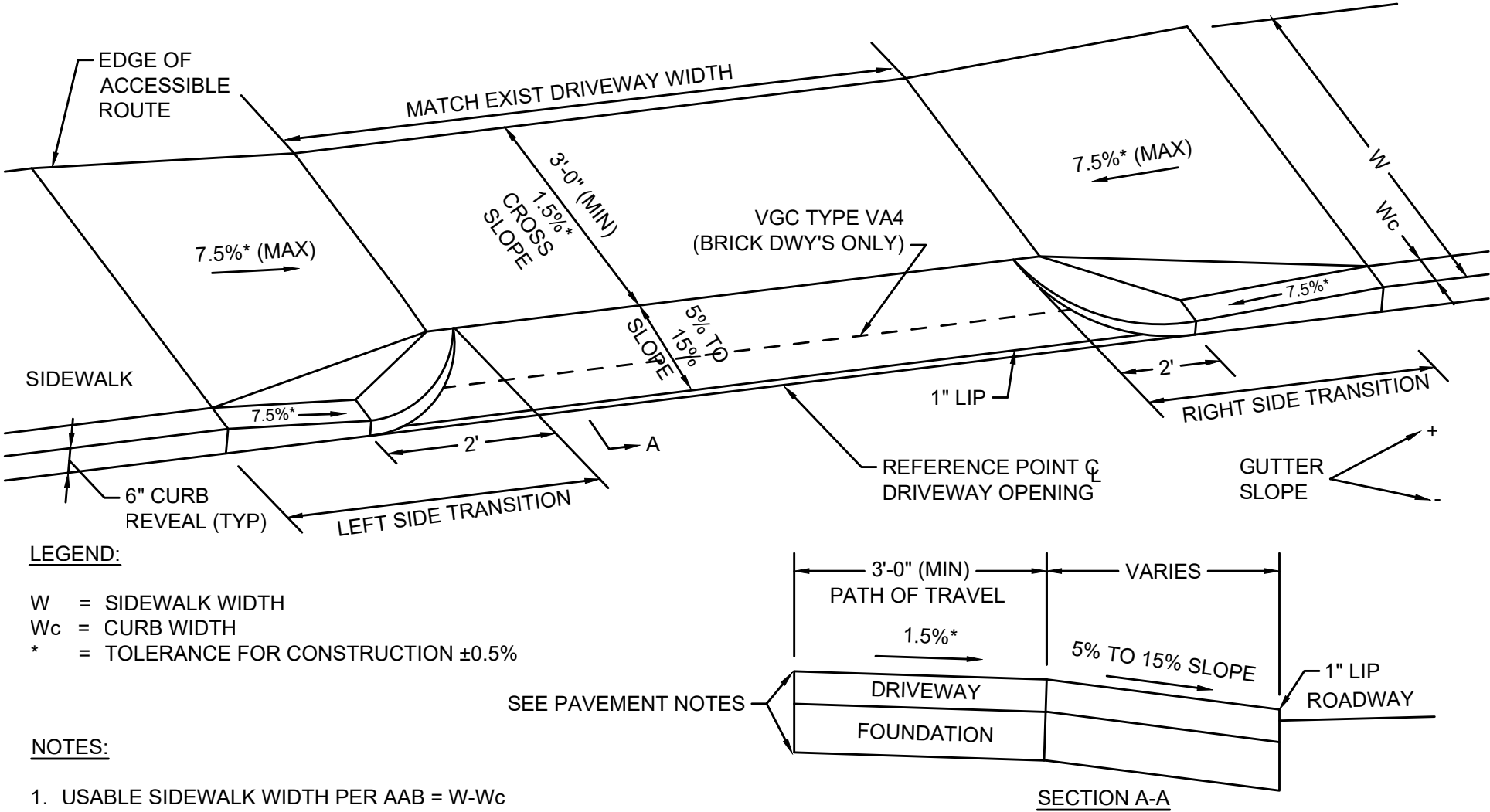


207 HIGH STREET DRIVEWAY APRON
N.T.S.



SIDEWALK THROUGH DRIVEWAY TYPE A

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
③	HIGH STREET	15+67	30' LT	BRICK	14'	+0.40%	11'-0"	6'-6"	6"	11'-6"	7'-8"	6"	11'-6"
④	HIGH STREET	18+76	23' LT	BRICK	11'	-0.18%	10'-0"	7'-8"	6"	10'-6"	6'-6"	6"	10'-6"
⑥	HIGH STREET	20+55	23' LT	CEM CONC	22'	-0.30%	10'-0"	7'-8"	6"	10'-6"	6'-6"	6"	10'-6"
⑦	HIGH STREET	21+25	23' LT	CEM CONC	18'	-0.48%	10'-0"	7'-8"	6"	10'-6"	6'-6"	4"	10'-6"
⑧	HIGH STREET	21+76	23' RT	BRICK	19'	+0.59%	6'-6"	6'-6"	6"	7'-0"	7'-6"	6"	7'-0"
⑨	HIGH STREET	22+42	23' LT	BRICK	23'	-0.45%	10'-0"	7'-8"	4"	10'-6"	6'-6"	6"	10'-6"
⑩	HIGH STREET	22+34	23' RT	BRICK	17'	+0.50%	6'-6"	6'-6"	4"	7'-0"	7'-8"	6"	7'-0"
⑫	HIGH STREET	23+54	23' RT	CEM CONC	19'	+0.94%	6'-3"	6'-6"	4"	6'-9"	7'-8"	4"	6'-9"
⑬	HIGH STREET	24+04	23' RT	CEM CONC	24'	+0.15%	6'-3"	6'-6"	6"	6'-9"	7'-8"	4"	6'-9"



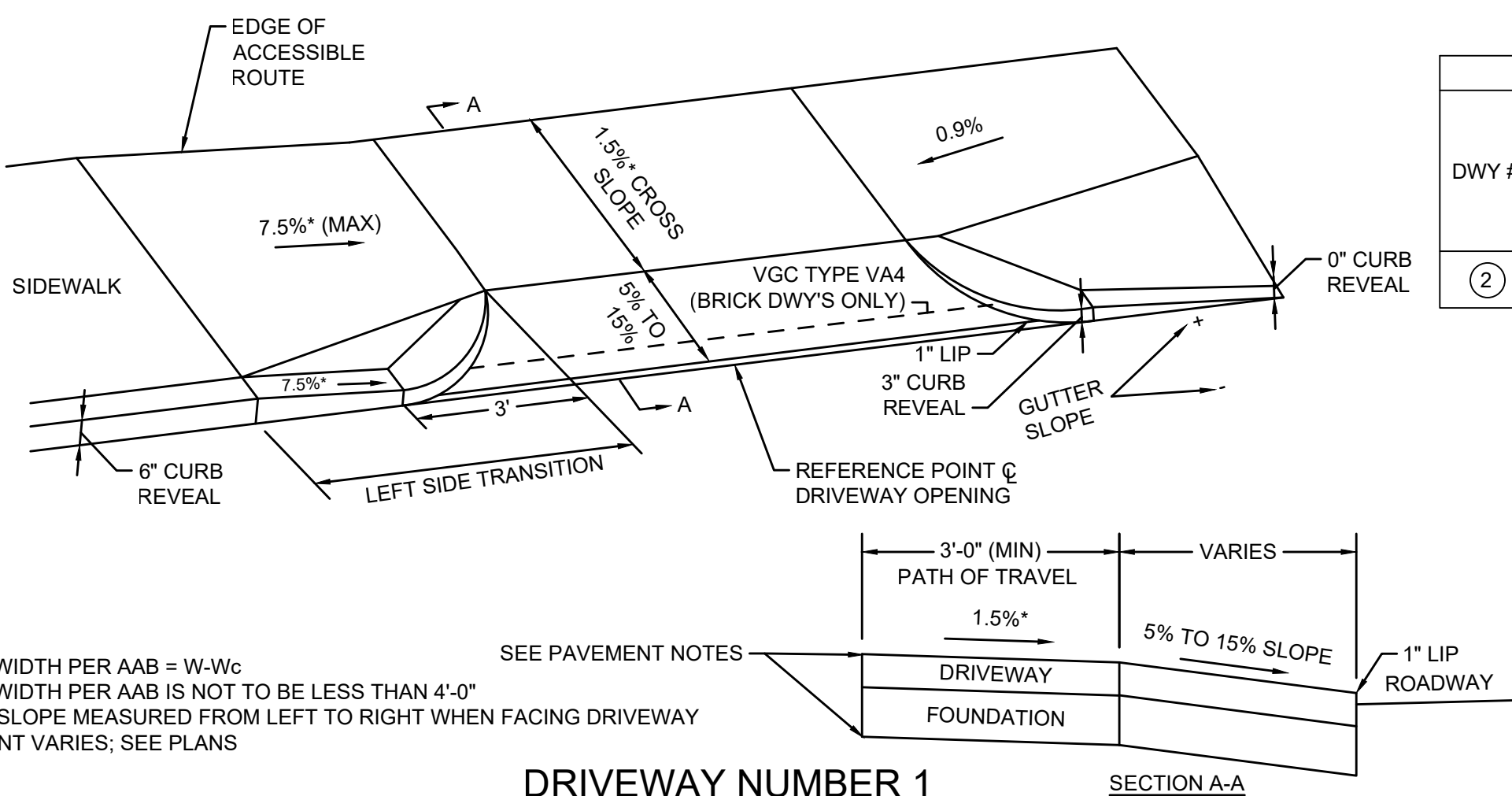
SIDEWALK THROUGH DRIVEWAY TYPE C

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
⑤	HIGH STREET	19+77	23' LT	CEM CONC	32'	-0.40%	8'-6"	7'-8"	6"	10'-6"	6'-6"	6"	10'-6"
⑪	HIGH STREET	23+63	23' LT	BRICK	31'	-0.53%	9'-3"	7'-8"	6"	11'-3"	6'-6"	6"	11'-3"
⑫	HIGH STREET	15+83	21' RT	CEM CONC	53'	0.16%	7'-6"	8'-0"	6"	11'-0"	8'-6"	6"	12'-6"
⑰	HIGH STREET	17+80	20' RT	CEM CONC	33'	0.21%	7'-0"	7'-8"	6"	11'-6"	8'-9"	6"	11'-0"

SIDEWALK THROUGH DRIVEWAY TYPE B

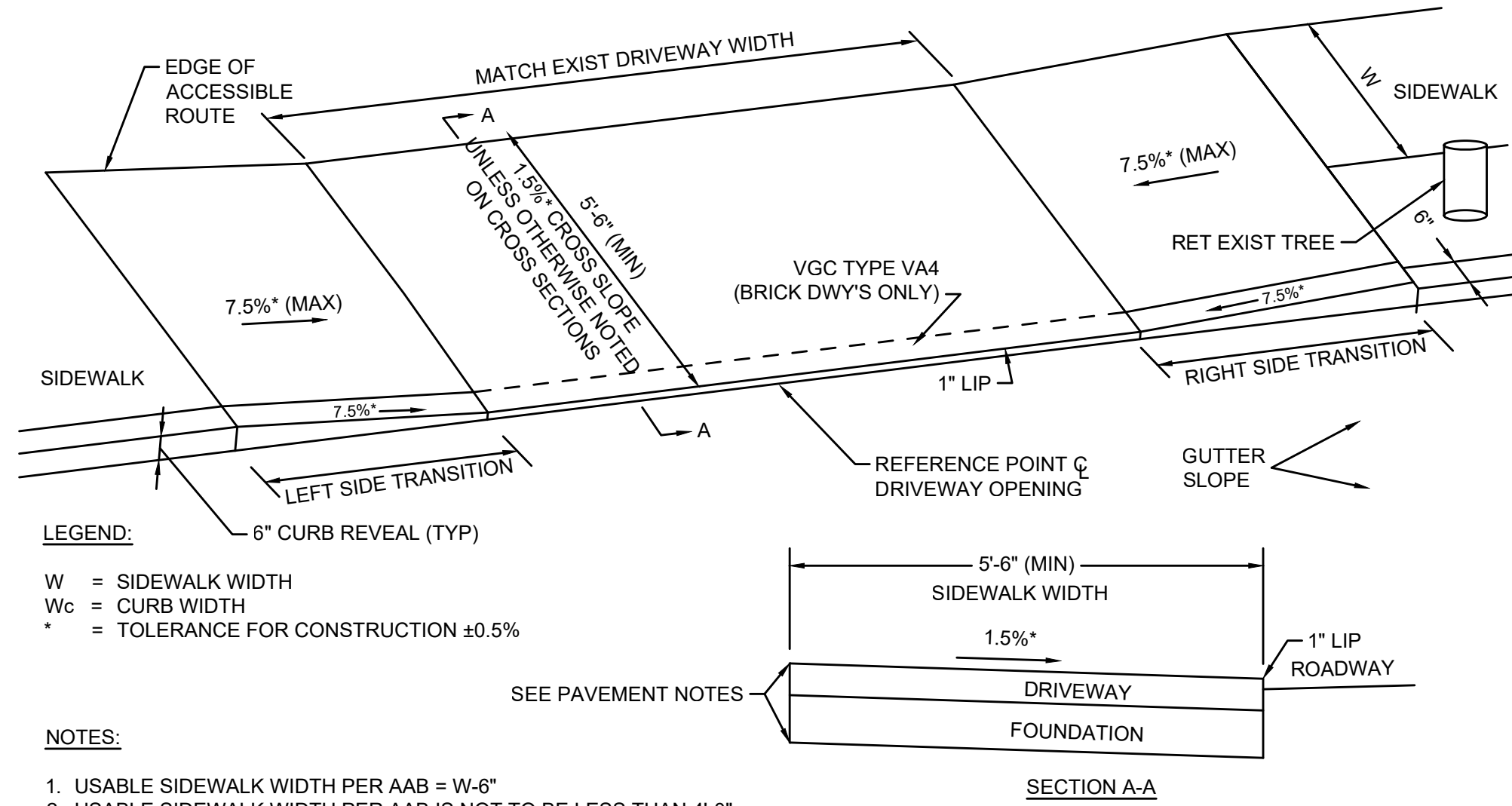
DRIVEWAY DATA											
DWY #	BASELINE REFERENCE	STATION	OFFSET	DRIVEWAY SURFACE	DWY WIDTH @ GUTTER	ROADWAY GUTTER SLOPE	WIDTH OF ACCESSIBLE ROUTE	LEFT SIDE		RIGHT SIDE	
								CURB REVEAL	SW WIDTH	CURB REVEAL	SW WIDTH
14	HIGH STREET	25+42	24' RT	CEM CONC	14'	-0.35%	6'-0"	3"	6'-0"	6"	6'-0"
15	HIGH STREET	25+67	24' RT	CEM CONC	15'	-0.41%	6'-0"	6"	6'-0"	3"	6'-0"
16	HIGH STREET	25+55	24' LT	CEM CONC	17'	+0.22%	6'-0"	3"	6'-0"	6"	6'-0"
17	HIGH STREET	26+17	24' LT	CEM CONC	26'	+1.36%	6'-0"	6"	6'-0"	6"	6'-0"
18	HIGH STREET	26+56	24' RT	CEM CONC	17'	-0.40%	6'-0"	3"	6'-0"	6"	6'-0"
19	HIGH STREET	26+90	24' RT	CEM CONC	16'	-0.40%	6'-0"	6"	6'-0"	3"	6'-0"
20	HIGH STREET	27+52	24' LT	CEM CONC	14'	+0.28%	6'-0"	6"	6'-0"	6"	6'-0"
21	HIGH STREET	28+17	24' LT	BRICK	10'	+0.26%	6'-0"	6"	6'-0"	6"	6'-0"
22	HIGH STREET	28+59	24' LT	BRICK	11'	+0.10%	6'-0"	6"	6'-0"	0"	6'-0"
23	HIGH STREET	28+84	24' LT	BRICK	25'	+0.10%	6'-0"	0"	6'-0"	6"	6'-0"
24	HIGH STREET	29+40	22' RT	BRICK	21'	+0.10%	5'-0"	6"	5'-0"	6"	5'-0"
25	HIGH STREET	30+17	20' RT	BRICK	13'	+0.95%	5'-0"	6"	5'-0"	6"	5'-0"

*SEE DRIVEWAY APRON DETAIL ON SHEET 28



DRIVEWAY NUMBER 1

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	13+06	23' LT	BRICK	12'	-0.28%	8'-6"	7'-8"	4"	10'-6"	5'-6"	3" to 0"	11'-0"



SIDEWALK THROUGH DRIVEWAY 2

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	HIGH STREET	13+47	22' LT	BRICK	12'	-0.45%	10'-0"	7'-8"	6"	11'-0"	6'-6"	6"	6'-9"

1. 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.).
2. CURB TREATMENT VARIES. SEE PLANS FOR CURB TYPE.
3. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
4. ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY.
5. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL OF THE PROPOSED WHEELCHAIR RAMPS 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.
6. WHEELCHAIR RAMP SLOPES AND CROSS SLOPES SHALL HAVE A CONSTRUCTION TOLERANCE OF $\pm 0.5\%$.
7. DETECTABLE WARNING PANELS SHALL BE CAST IRON.

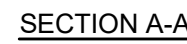
N.T.S.



N.T.S.



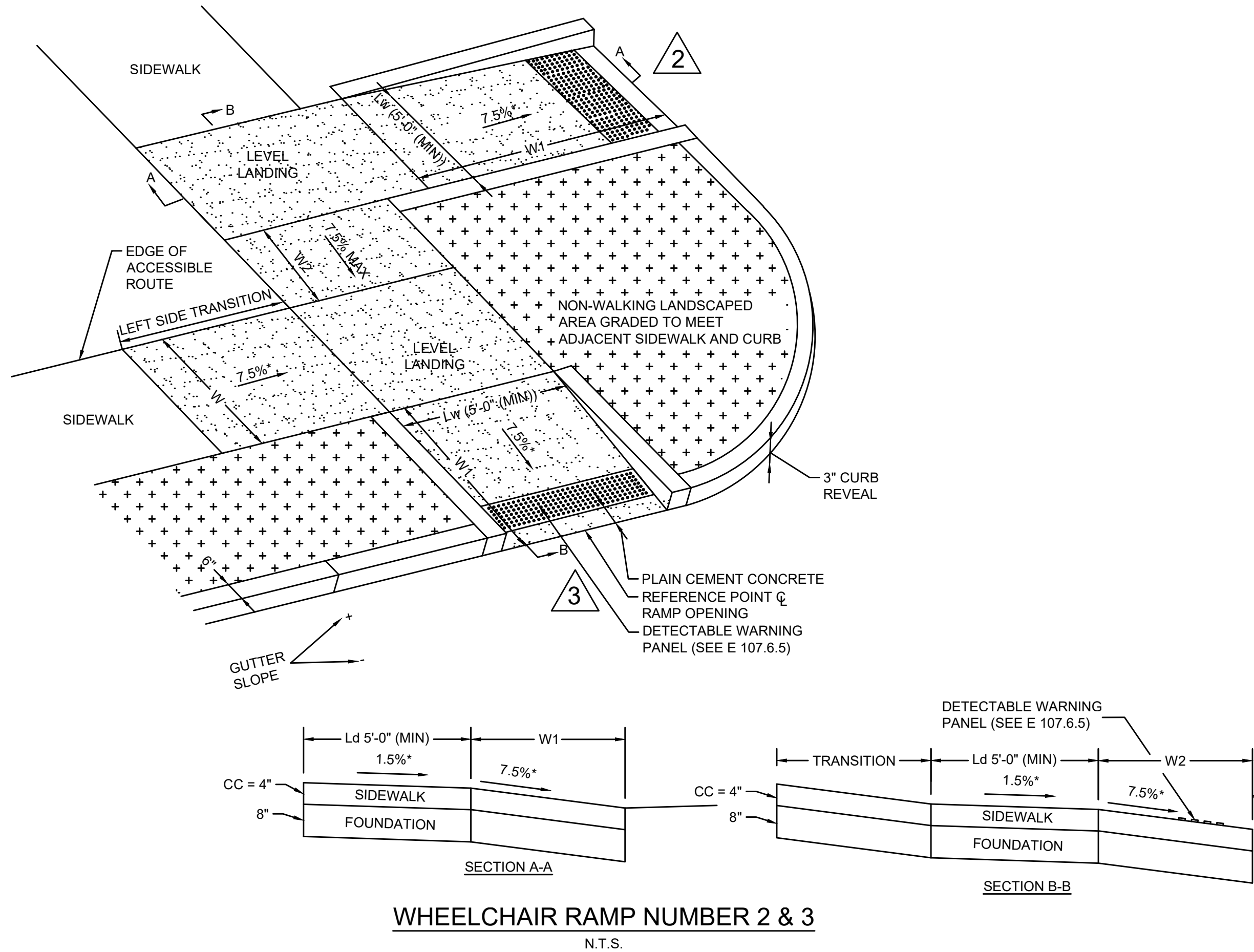
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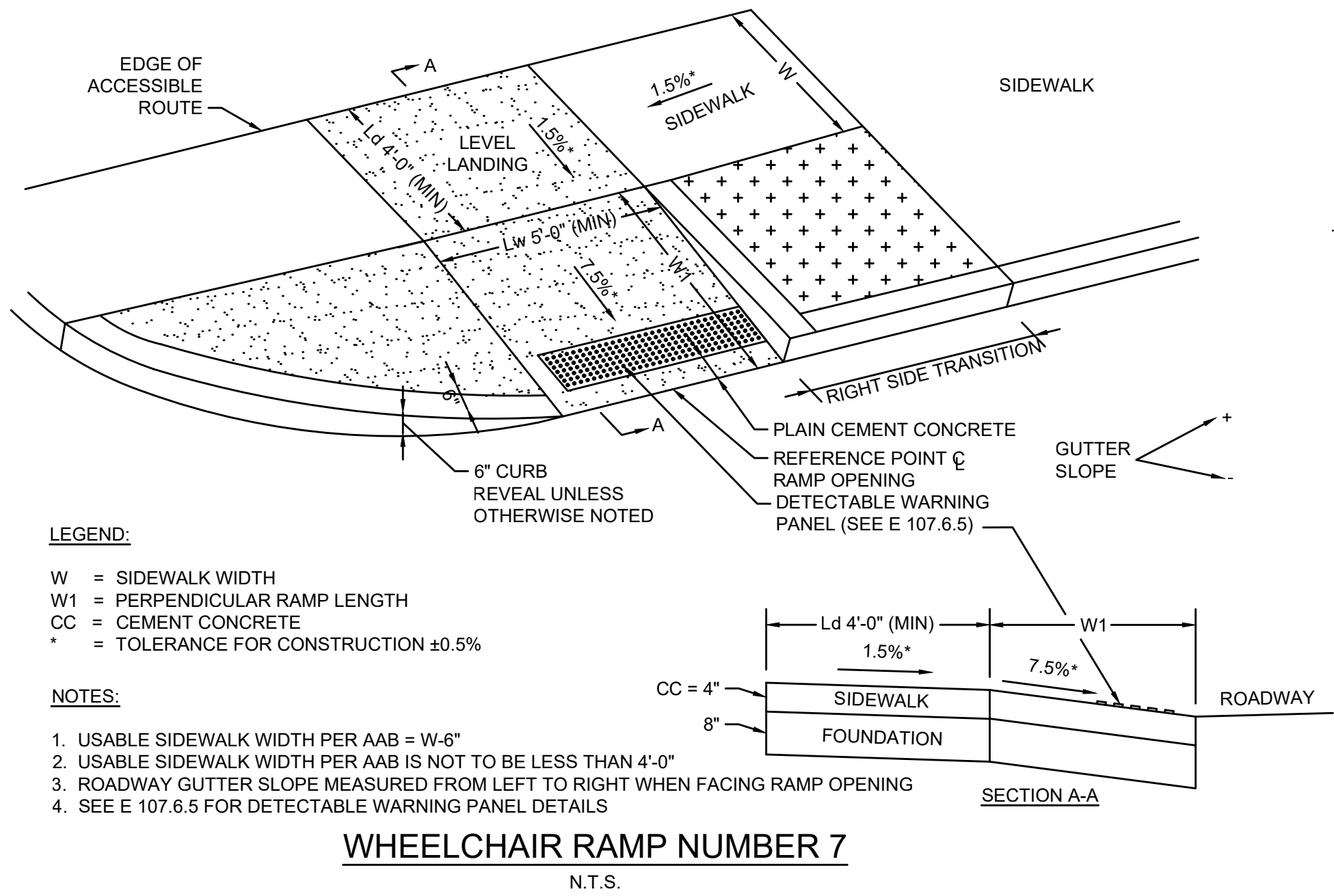
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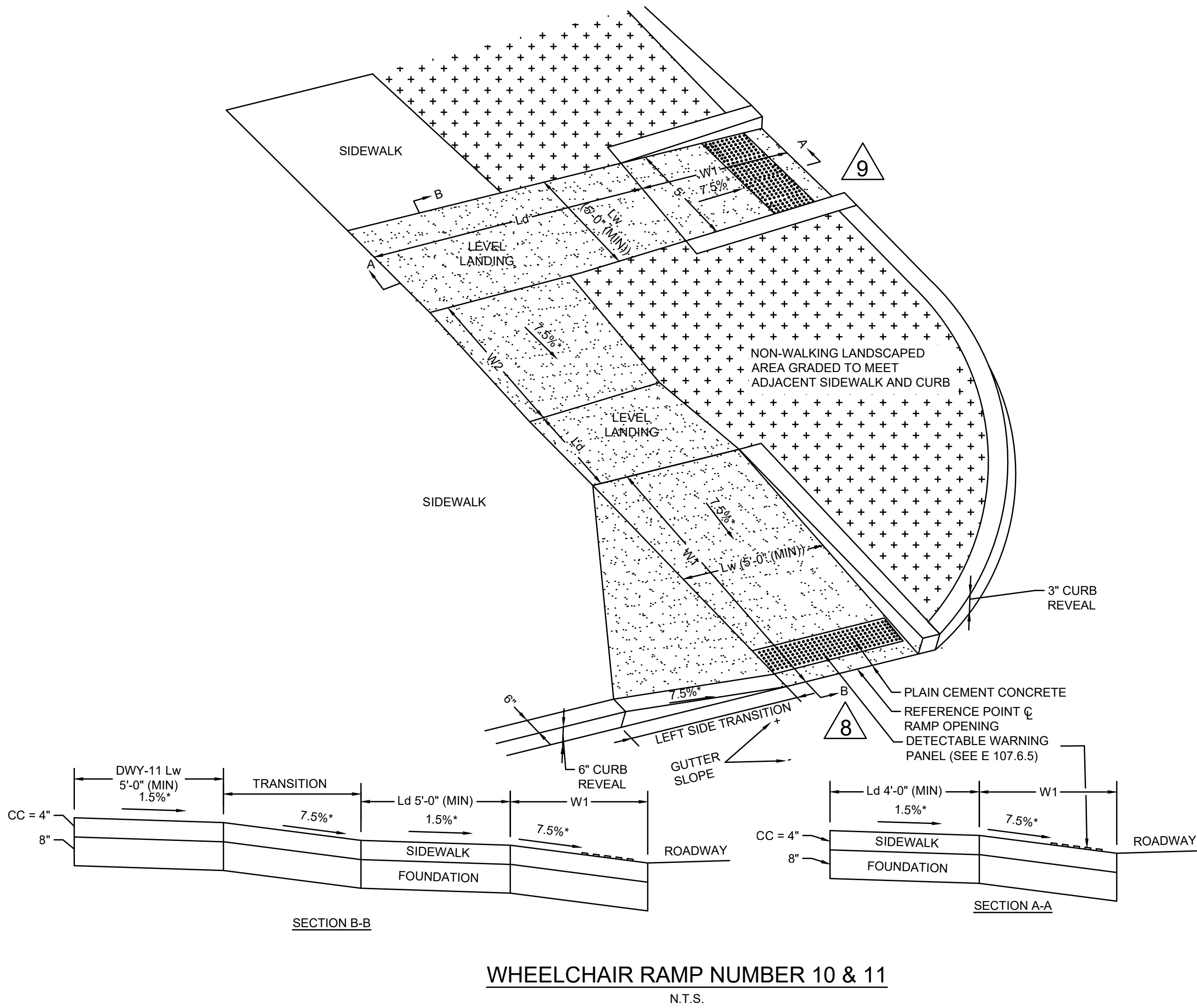
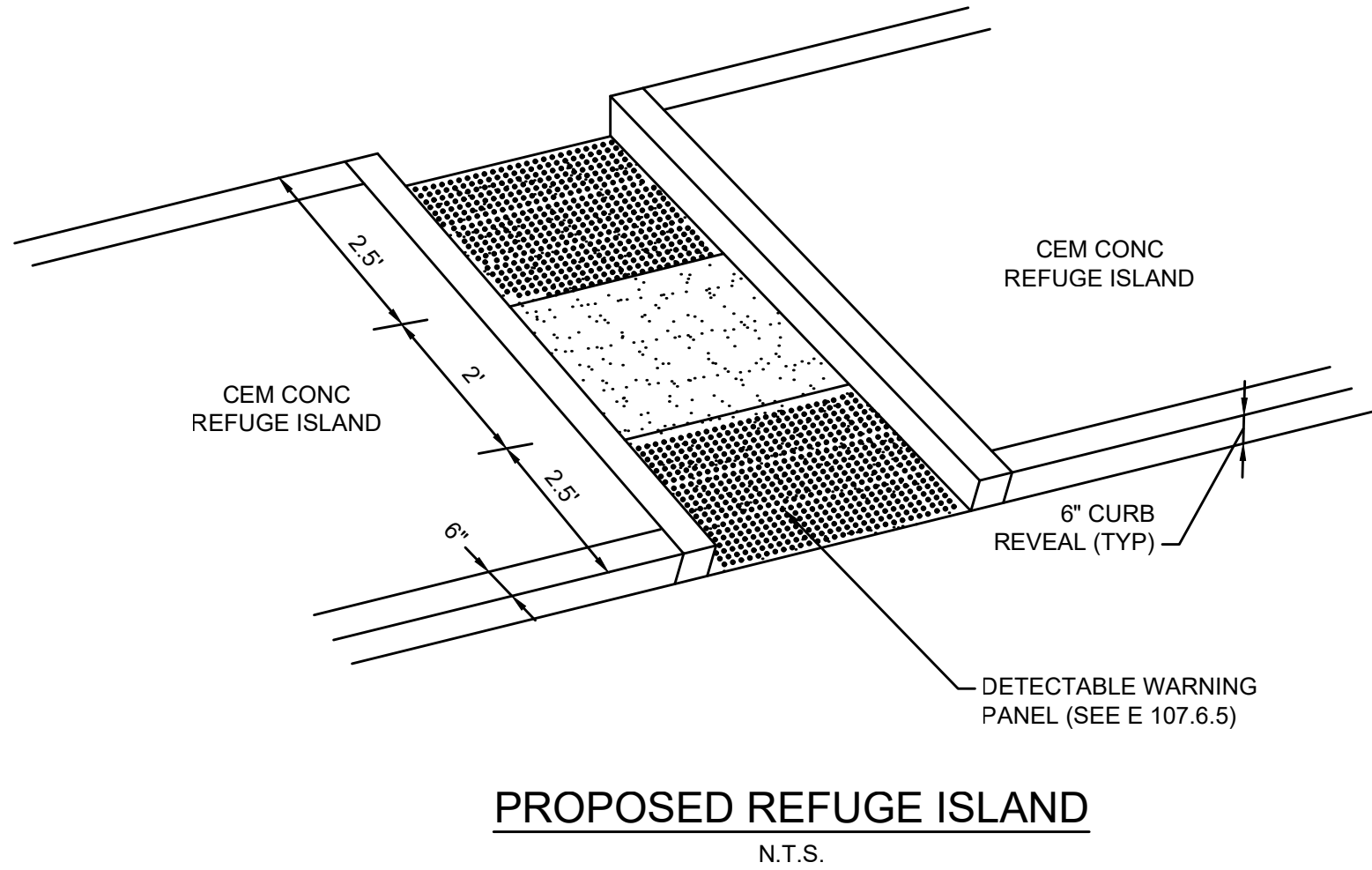
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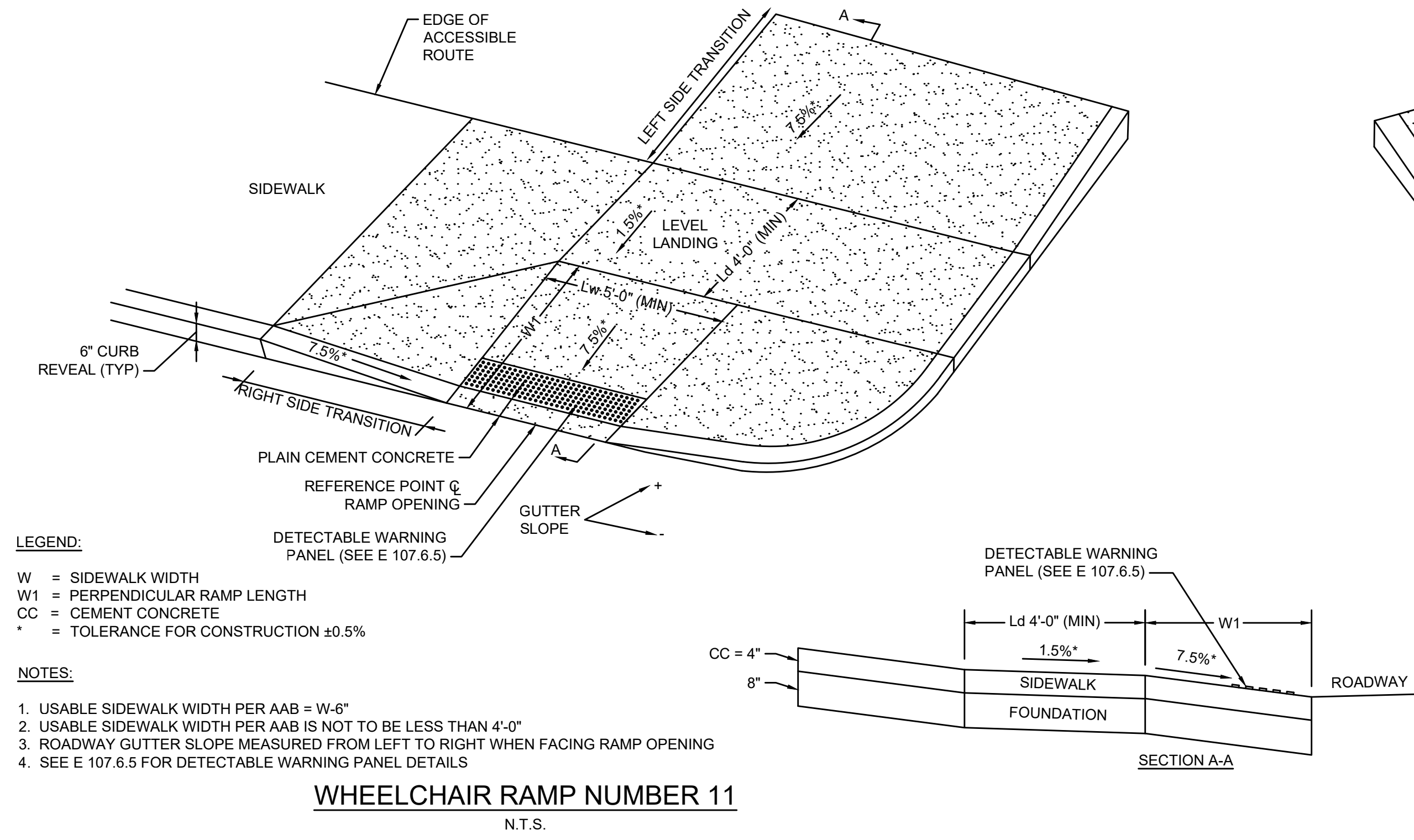
WHEELCHAIR RAMP DATA											
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	RAMP LENGTH (W1)	RAMP LENGTH (W2)	LEFT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)				TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
2	HIGH STREET	13+17	19' RT	5'-0"	5'-0"	+0.49%	9'-3"	N/A	N/A	3"	5'-0"
3	TOPPANS LANE	41+72	23' LT	5'-0"	4'-0"	+1.80%	3'-0"	8'-3"	6'-6"	6"	5'-0"



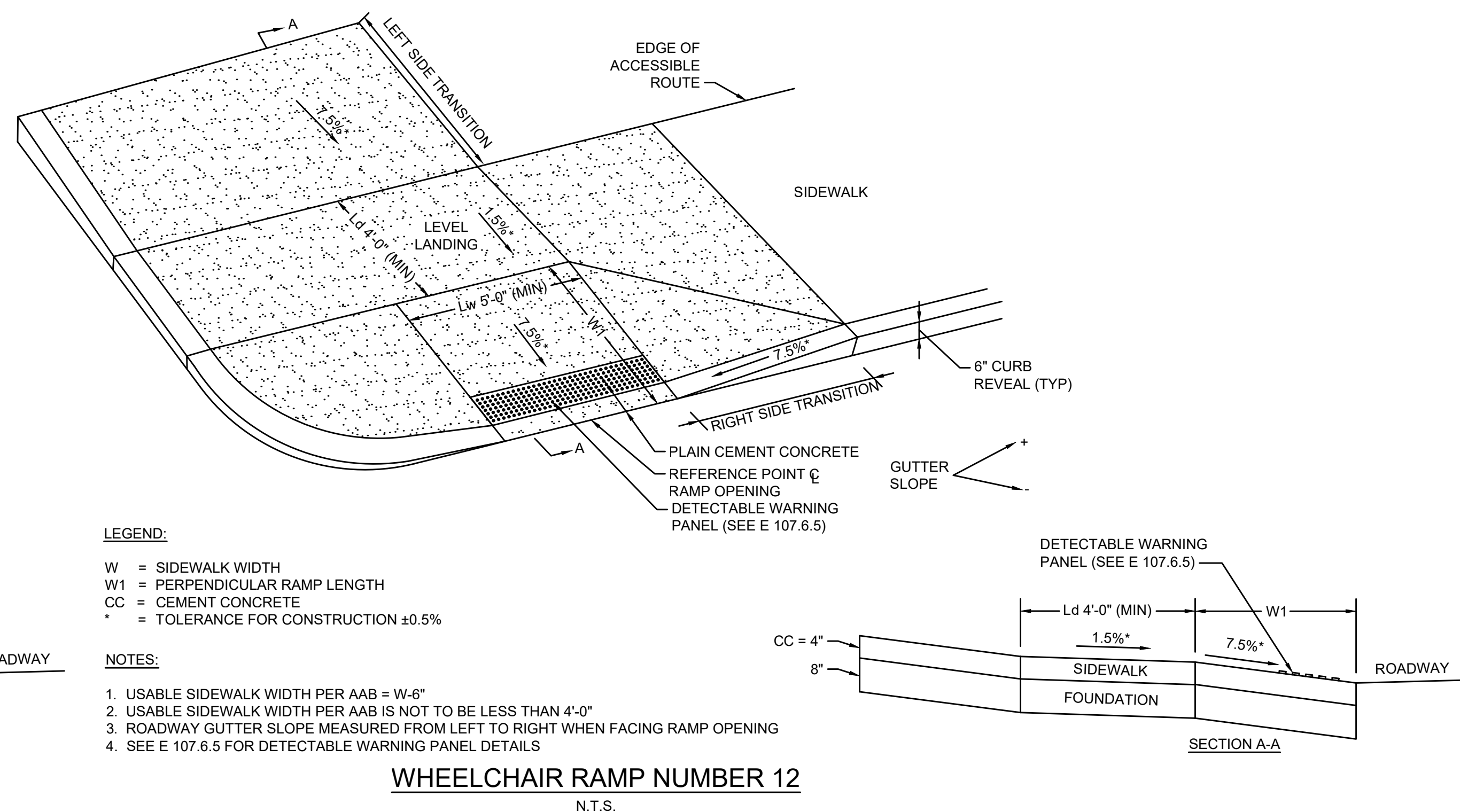
WHEELCHAIR RAMP DATA										
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE	RAMP LENGTH (W1)	LEFT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)			TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
7	CARTER STREET	60+32	13' LT	5'-0"	5'-0"	-1.75%	5'-8"	7'-8"	6"	5'-0"



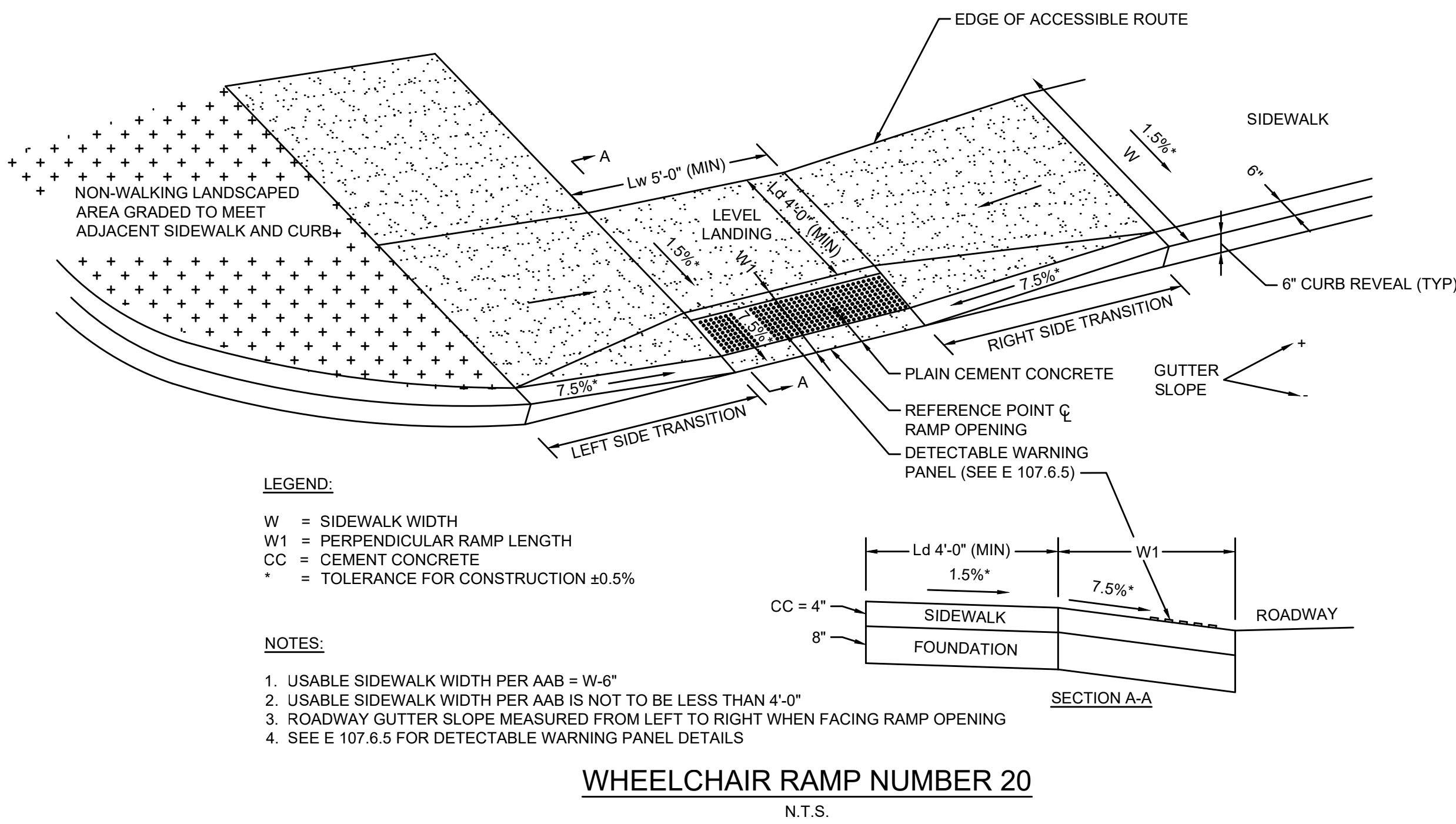
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				WIDTH (Lw)	DEPTH (Ld)				TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
8	CARTER STREET	60+32	13' RT	5'-0"	5'-0"	+1.87%	9'-0"	5'-0"	6'-6" (w1)	6"	10'-0"
9	HIGH STREET	17+23	19' LT	5'-0"	12'-0"	+0.42%	3'-0"	N/A	3'-0" (w2)	-	6'-6"



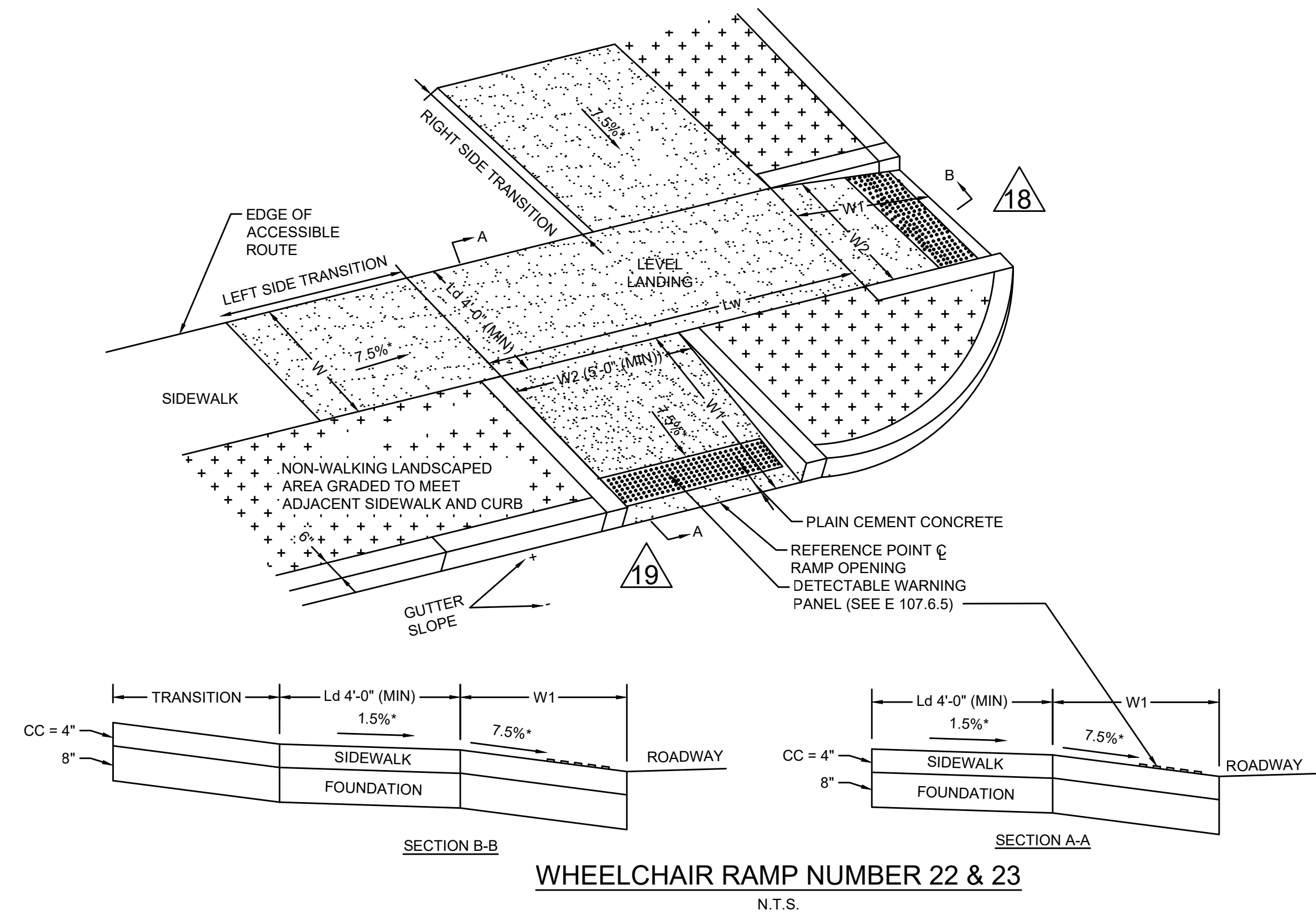
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				WIDTH (Lw)	DEPTH (Ld)			TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
	SUMMIT PLACE	71+76	13' LT	7'-0"	7'-0"	+0.18% / +0.16%	5'-6"	8'-0"	3"	7'-0"	6'-0"	3"	7'-0"



WHEELCHAIR RAMP DATA													
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE (LT / RT)	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
	SUMMIT PLACE	71+67	14' RT	5'-0"	5'-0"	+0.31% / -0.71%	6'-0"	6'-0"	6"	7'-0"	6'-6"	6"	9'-0"



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
20	JOHNSON STREET	91+63	16' RT	9'-8"	5'-6"	+0.60%	2'-8"	5'-6"	3"	5'-0"		



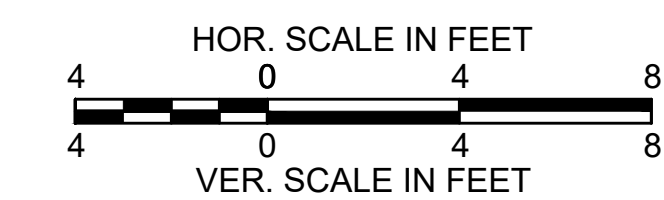
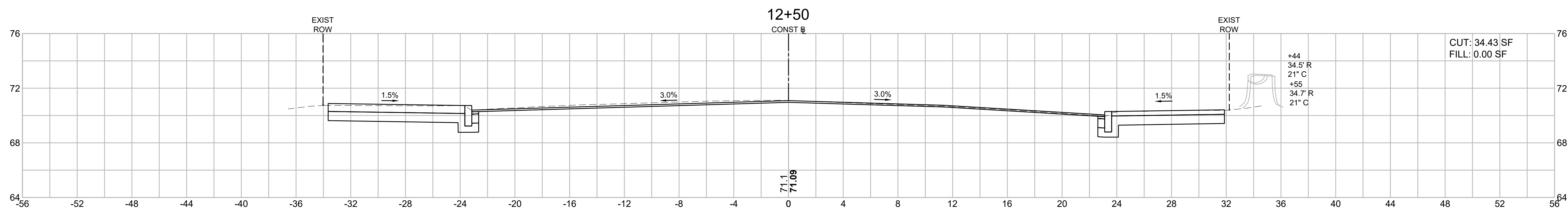
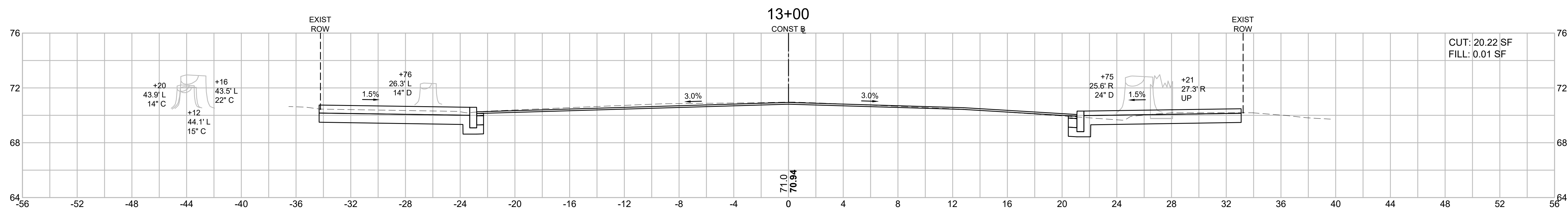
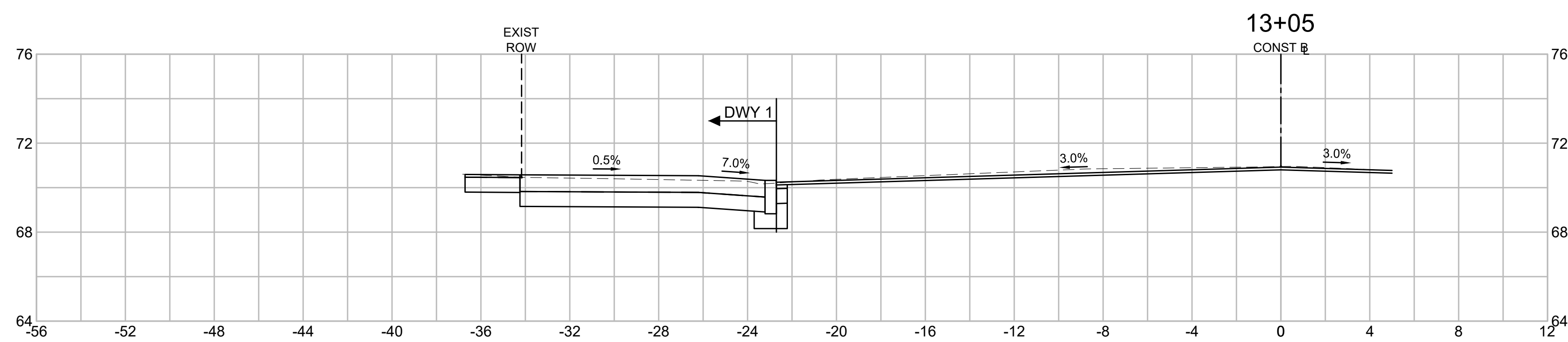
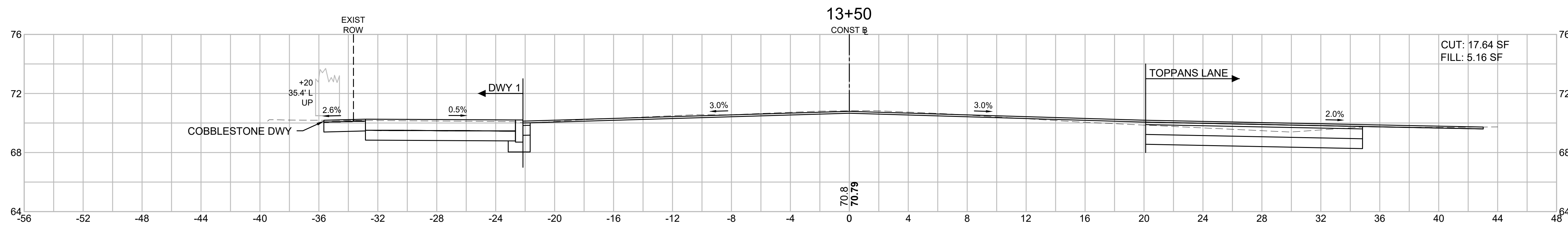
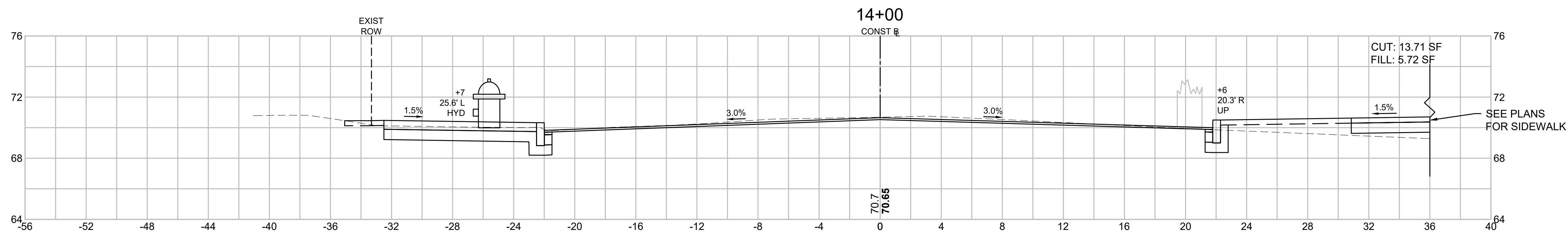
WHEELCHAIR RAMP DATA														
RAMP #	BASELINE REFERENCE	STATION	OFFSET	LEVEL LANDING		ROADWAY GUTTER SLOPE (LT / RT)	RAMP LENGTH (W1)	RAMP WIDTH (W2)	LEFT SIDE TRANSITION			RIGHT SIDE TRANSITION		
				WIDTH (Lw)	DEPTH (Ld)				TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH	TRANSITION LENGTH	CURB REVEAL	SIDEWALK WIDTH
18	HIGH STREET	27+88	20' RT	5'-0"	5'-0"	-0.81%	5'-6"	5'-0"	-	-	-	7'-6"	6"	5'-0"
19	JOHNSON STREET	91+63	16' LT	11'-0"	5'-0"	-0.42%	2'-6"	5'-0"	7'-6"	6"	5'-0"	-	-	-

NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	49

PROJECT FILE NO. 608792

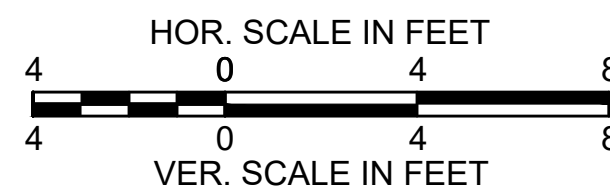
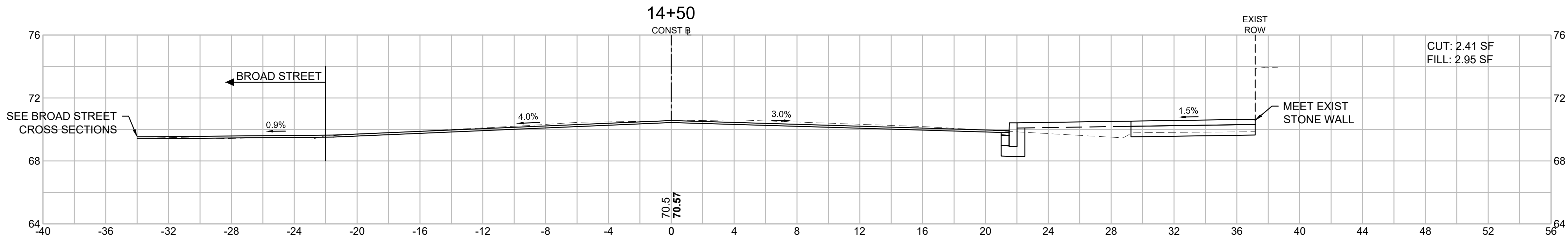
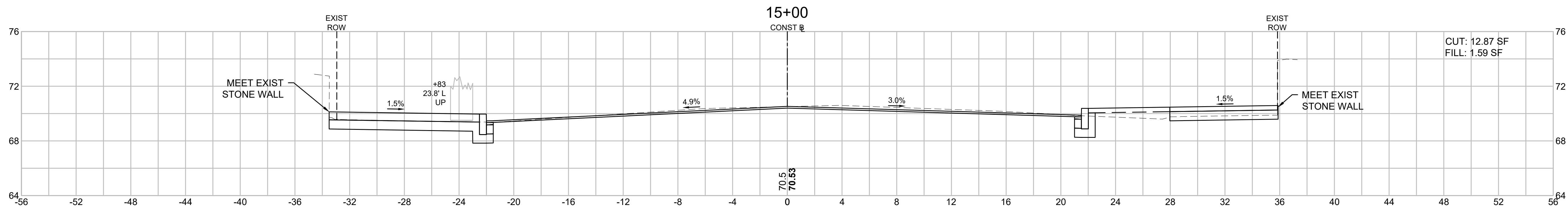
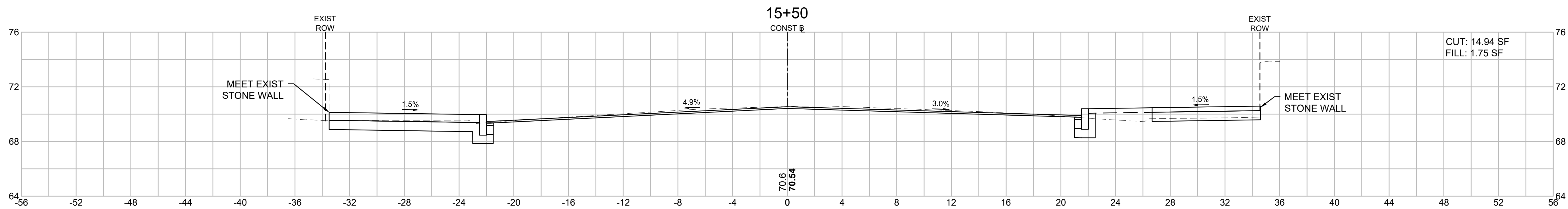
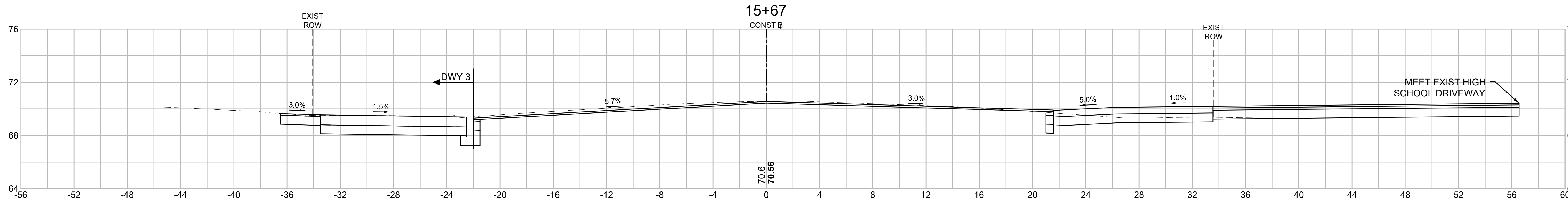
CROSS SECTIONS - 1 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	49
PROJECT FILE NO.		608792	

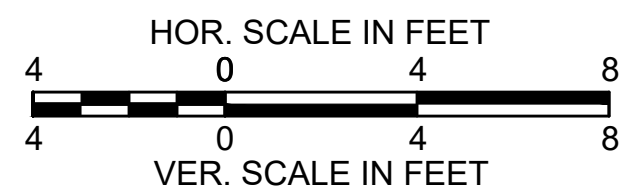
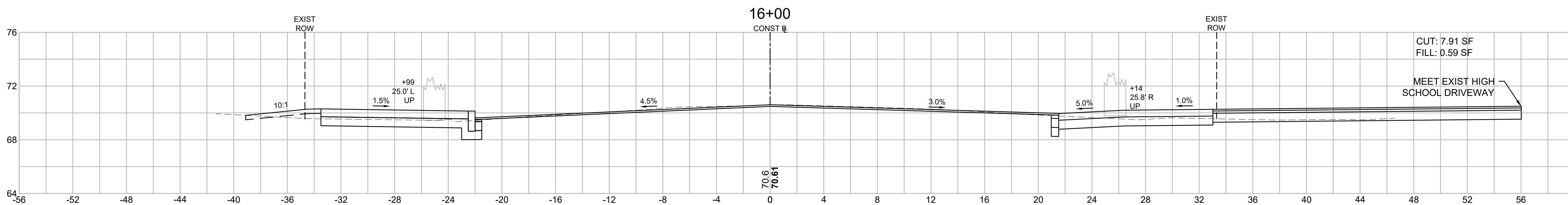
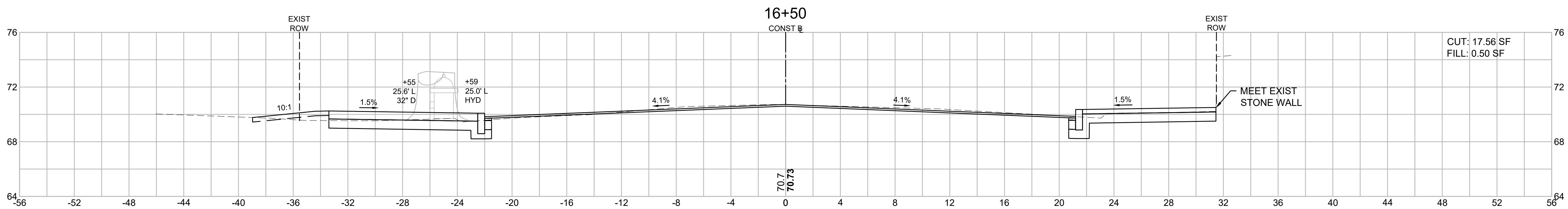
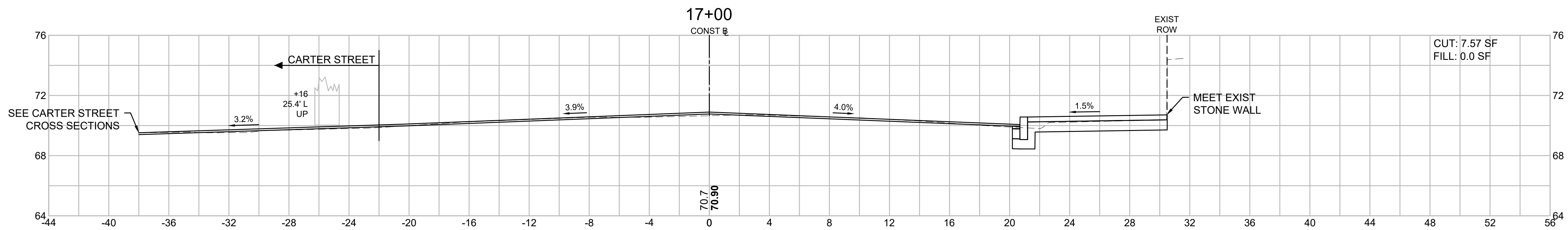
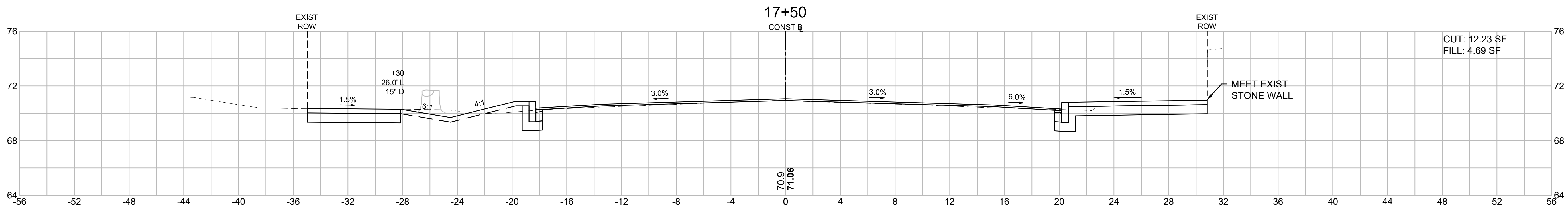
CROSS SECTIONS - 2 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	49
PROJECT FILE NO.		608792	

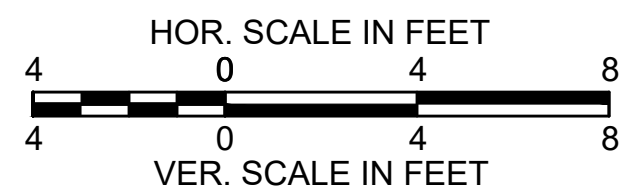
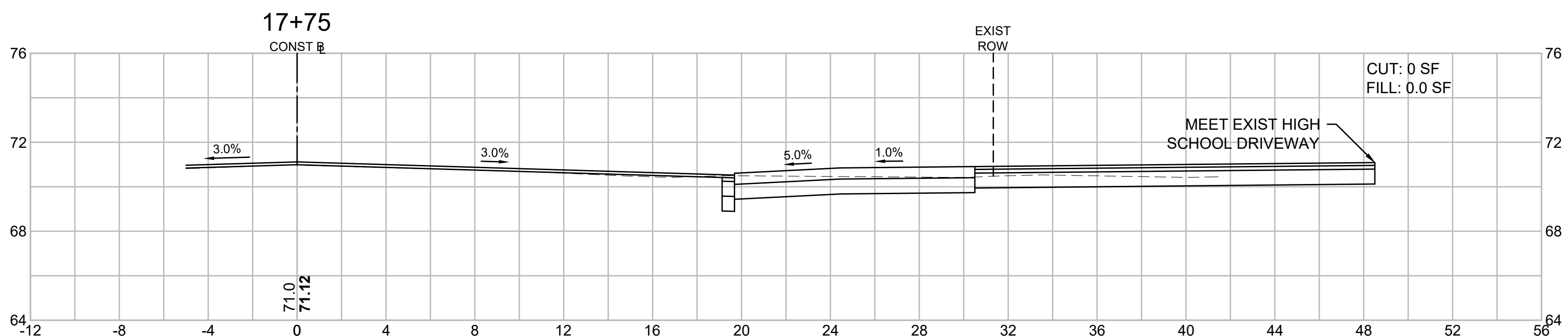
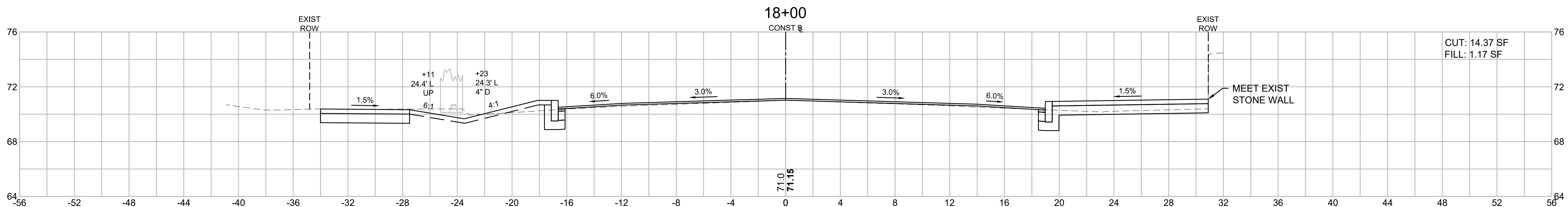
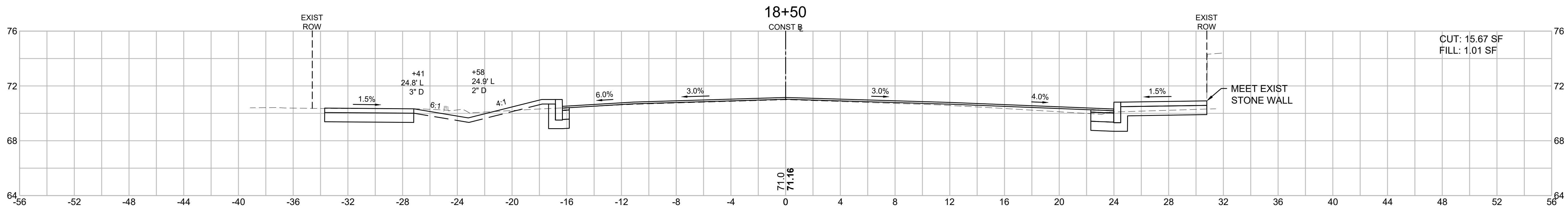
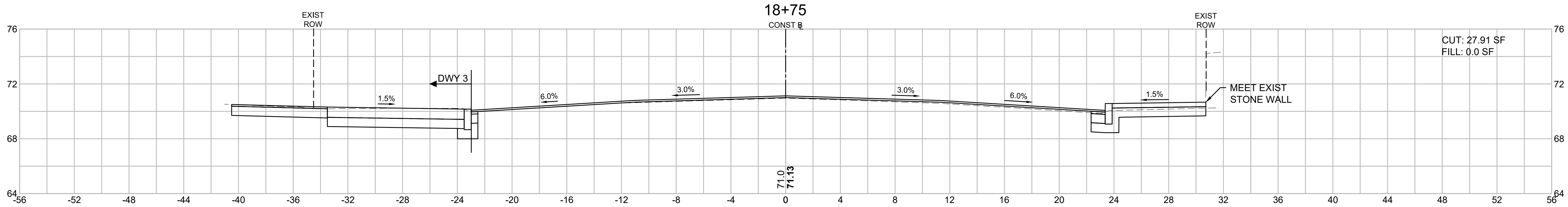
CROSS SECTIONS - 3 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	49
PROJECT FILE NO.		608792	

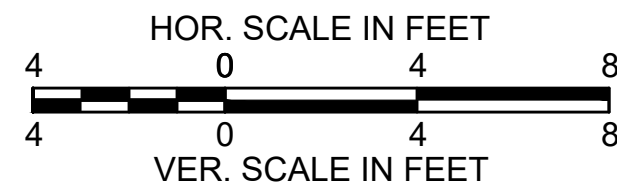
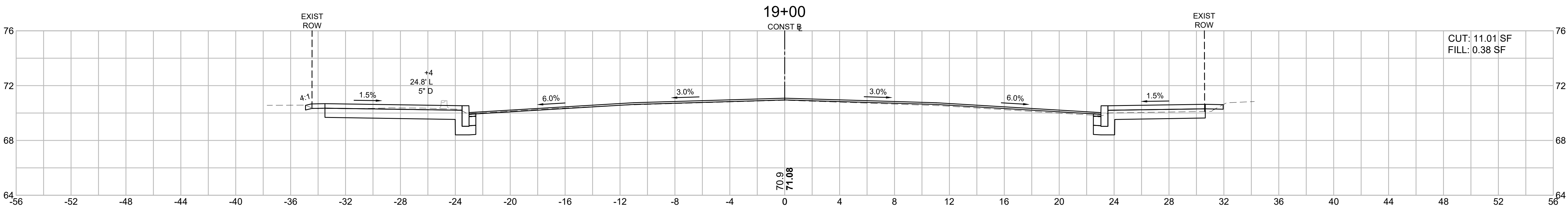
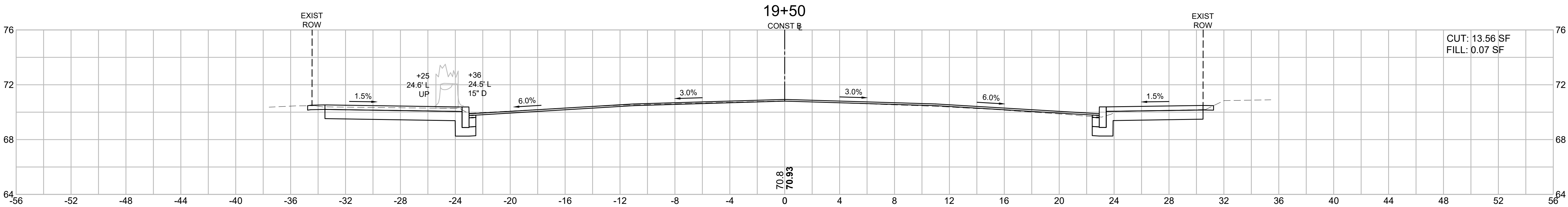
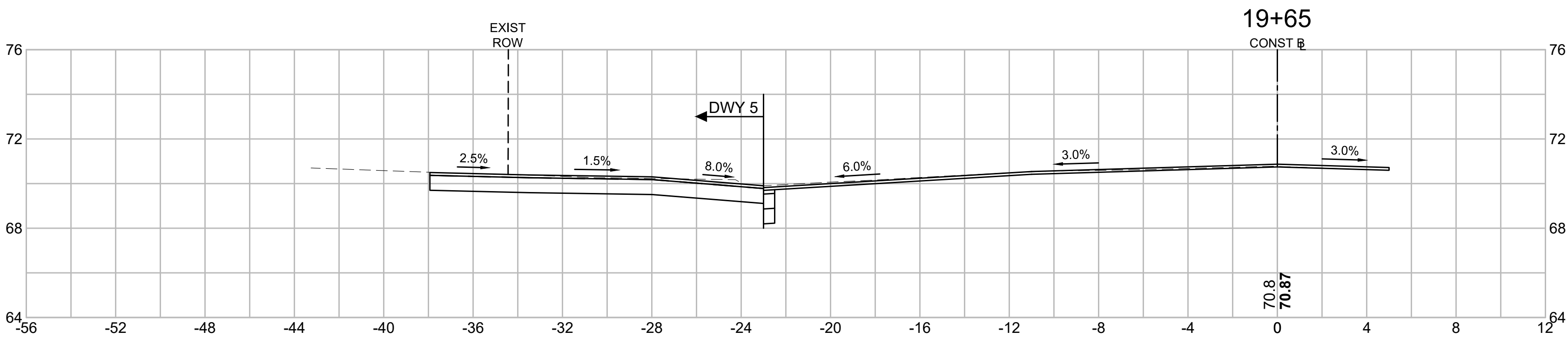
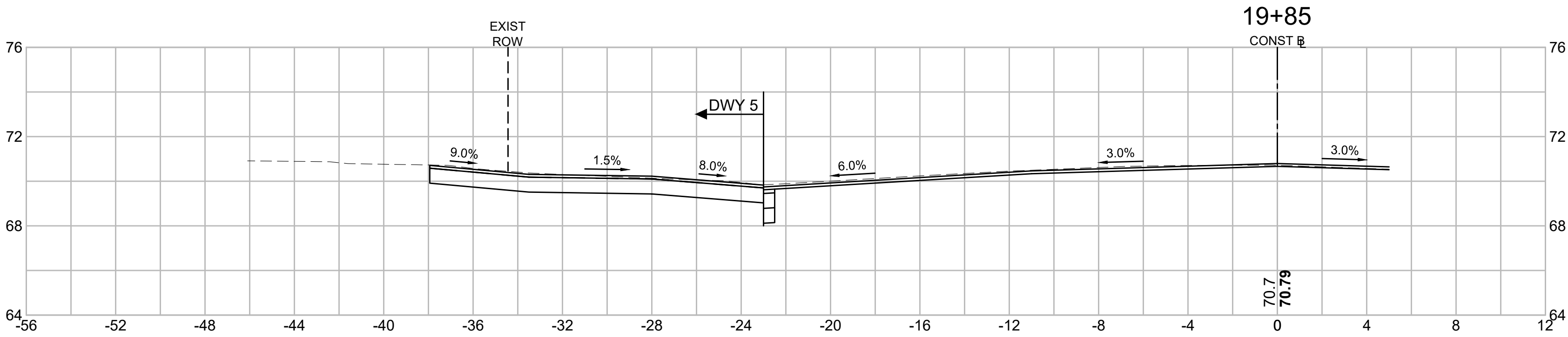
CROSS SECTIONS - 4 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	49
PROJECT FILE NO.		608792	

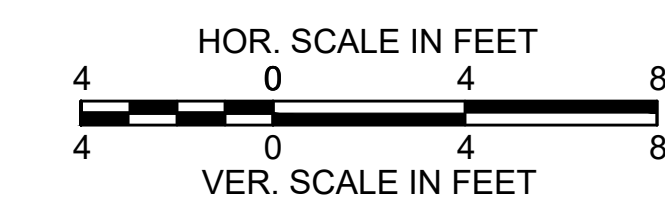
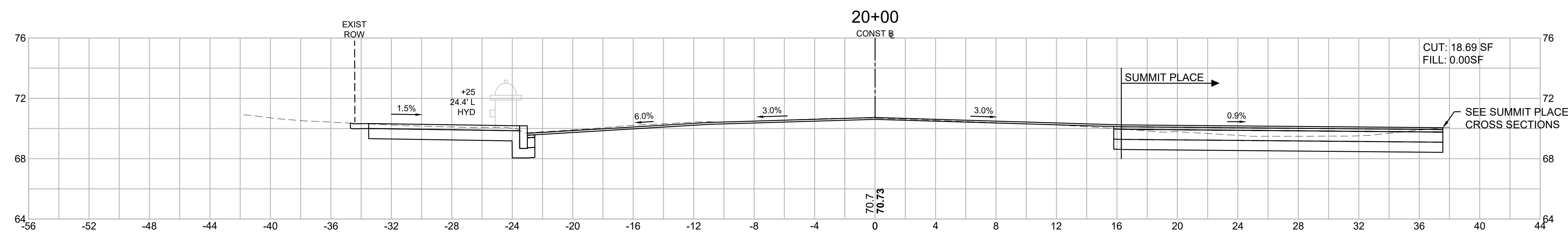
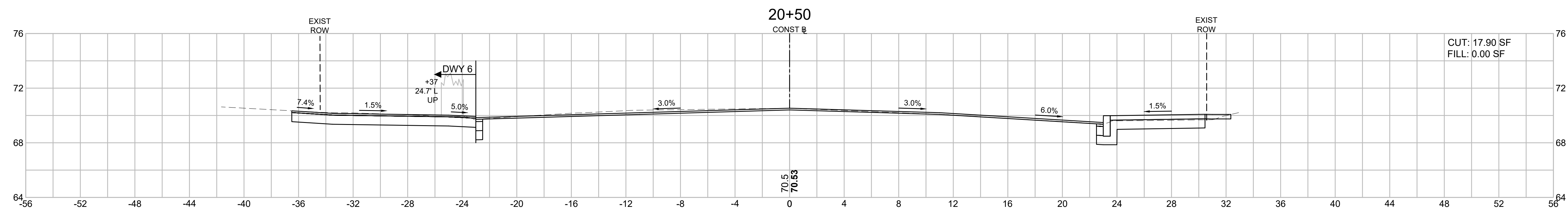
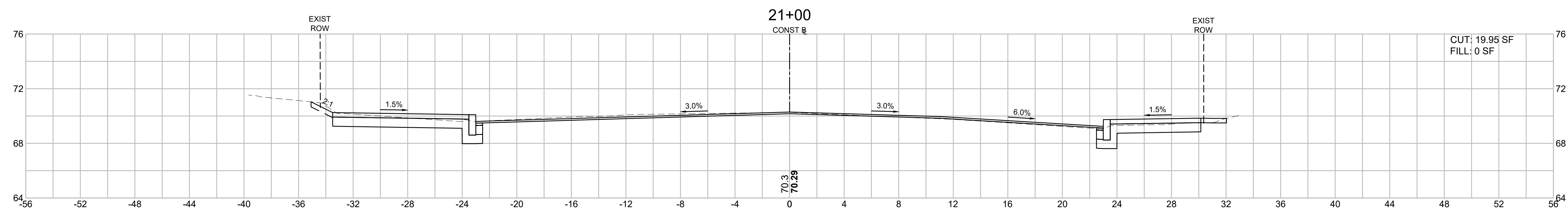
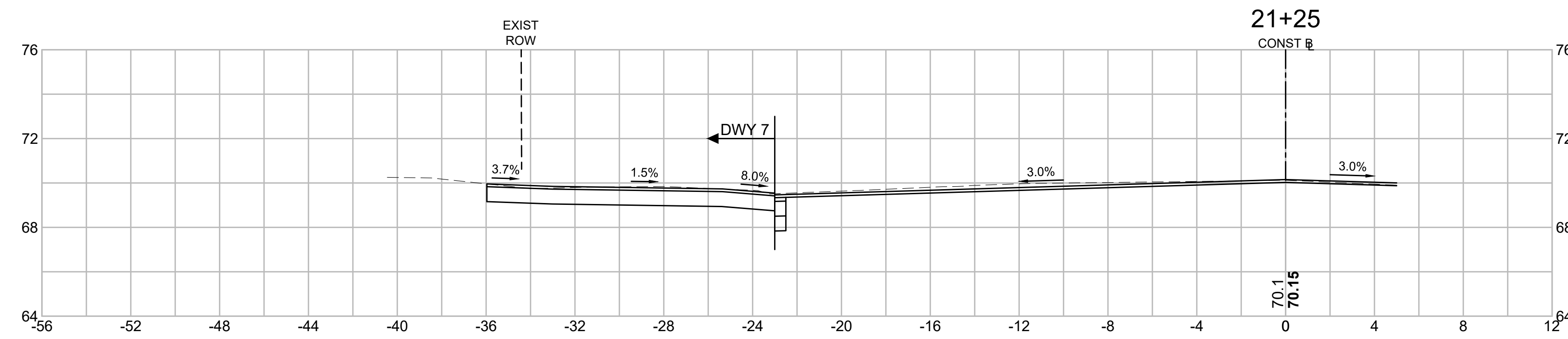
CROSS SECTIONS - 5 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	49
PROJECT FILE NO.		608792	

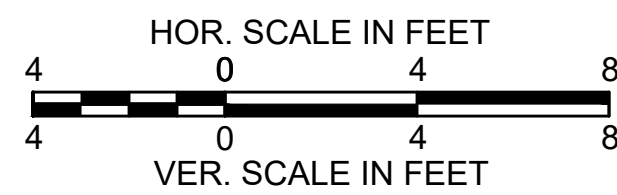
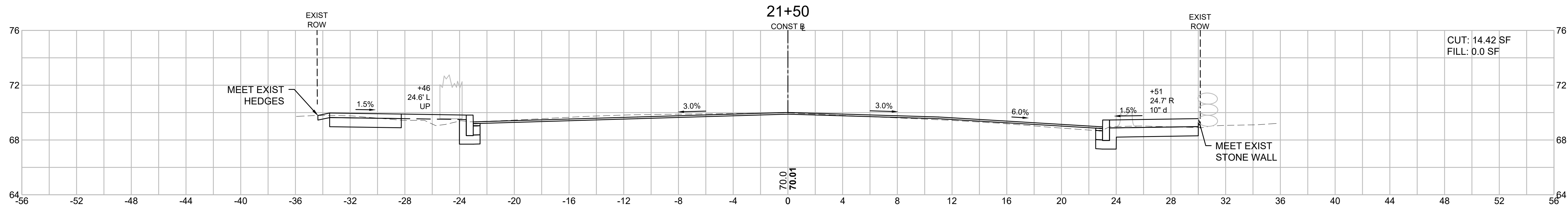
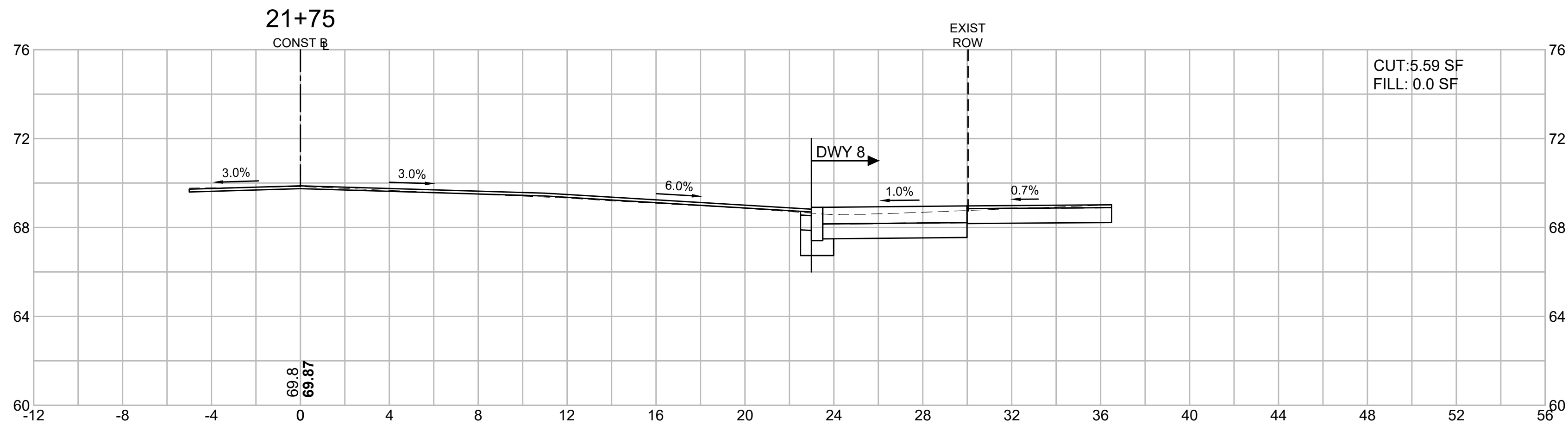
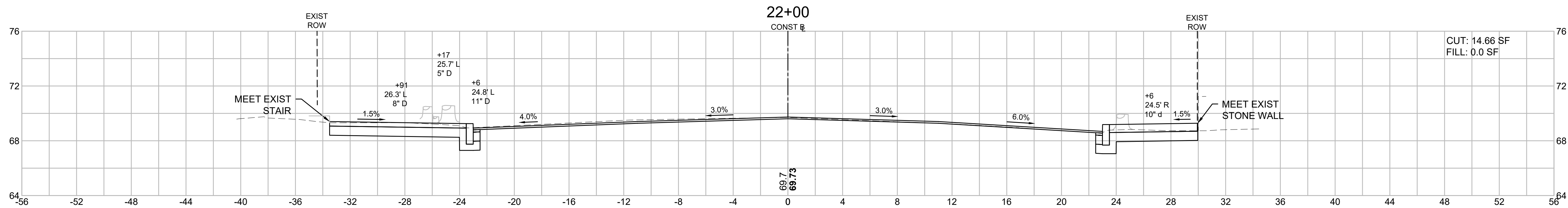
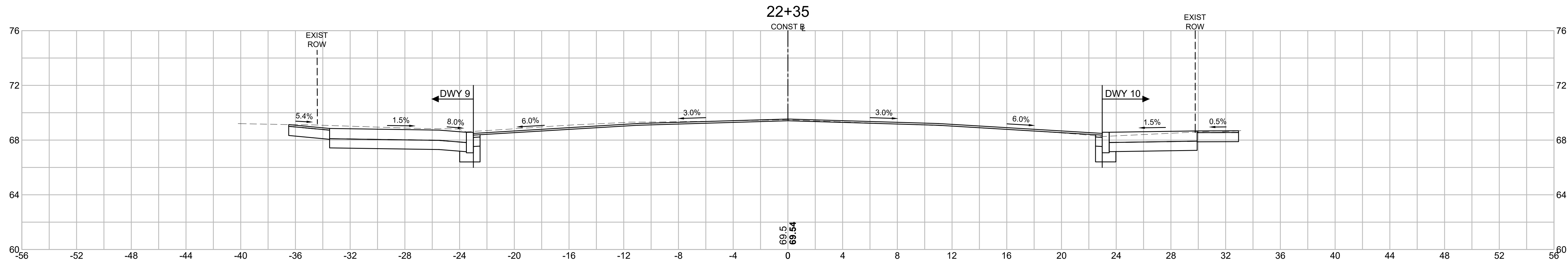
CROSS SECTIONS - 6 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	49
PROJECT FILE NO.		608792	

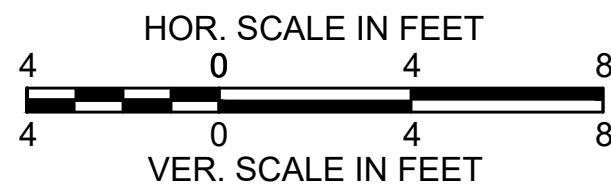
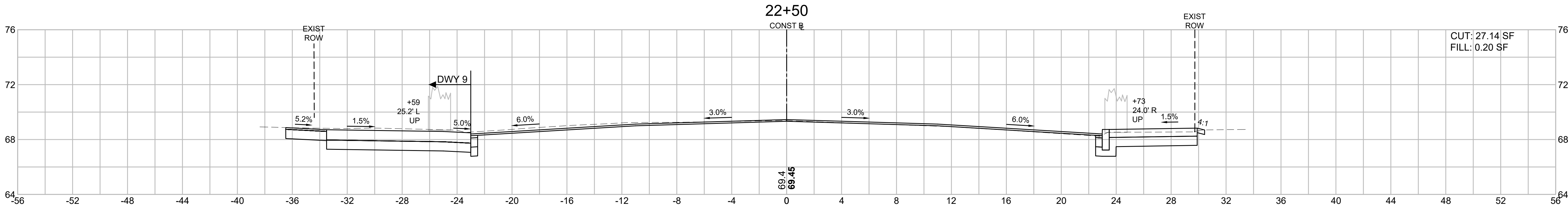
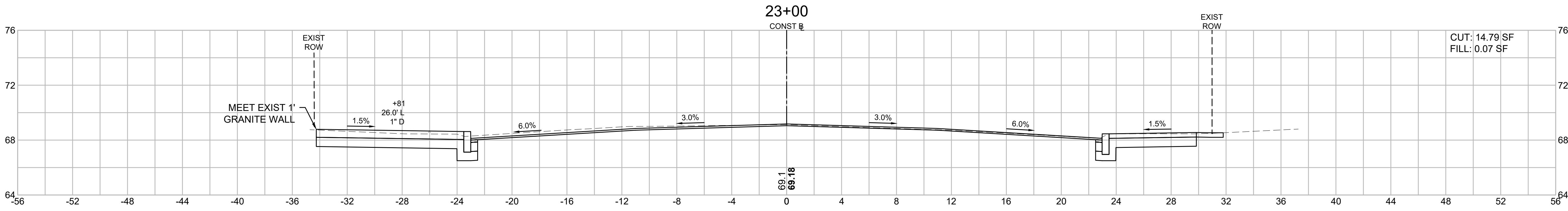
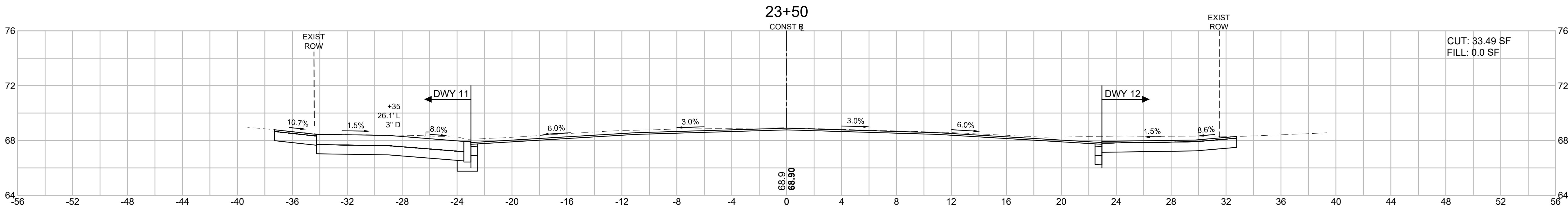
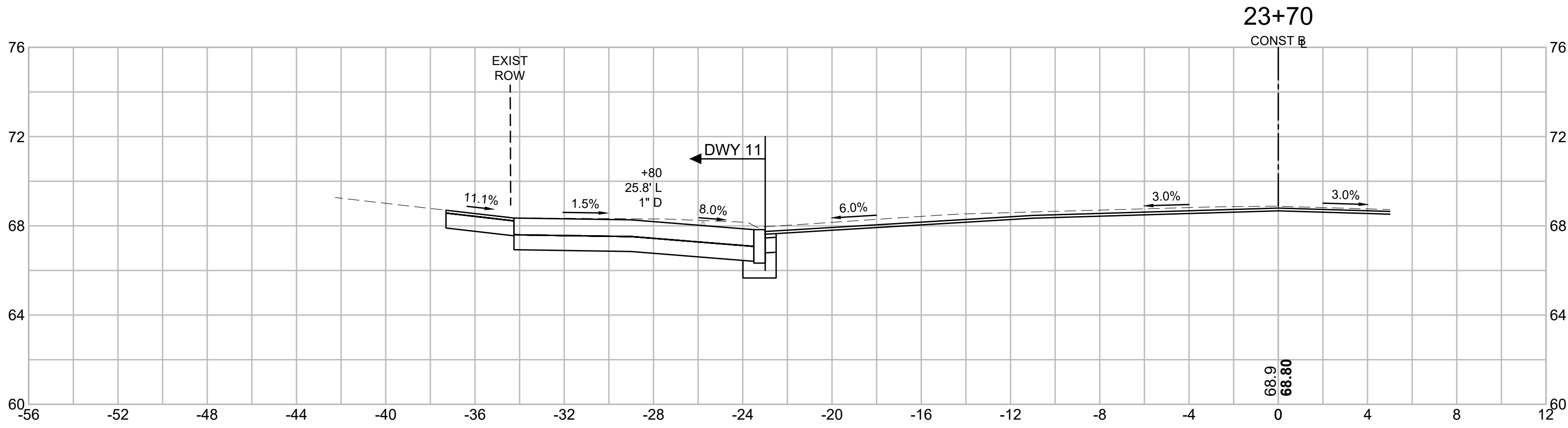
CROSS SECTIONS - 7 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	49
PROJECT FILE NO.		608792	

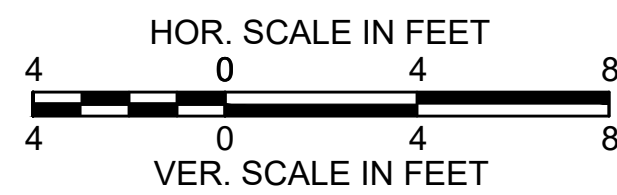
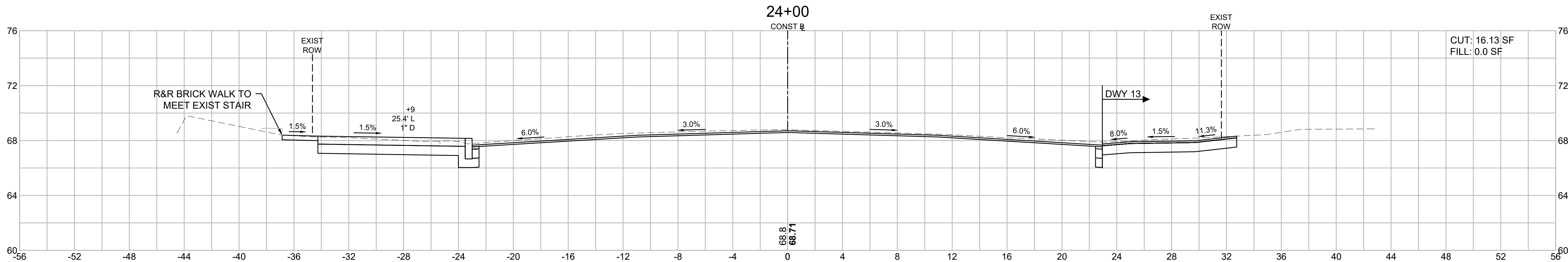
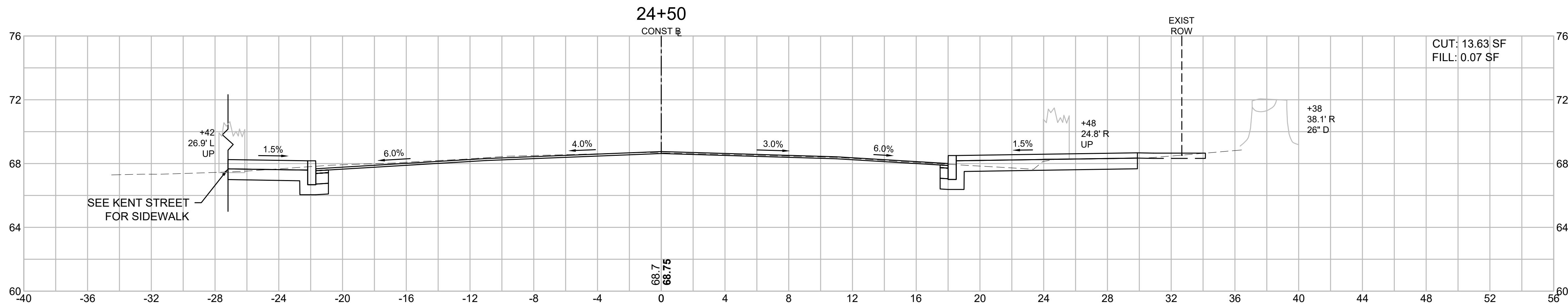
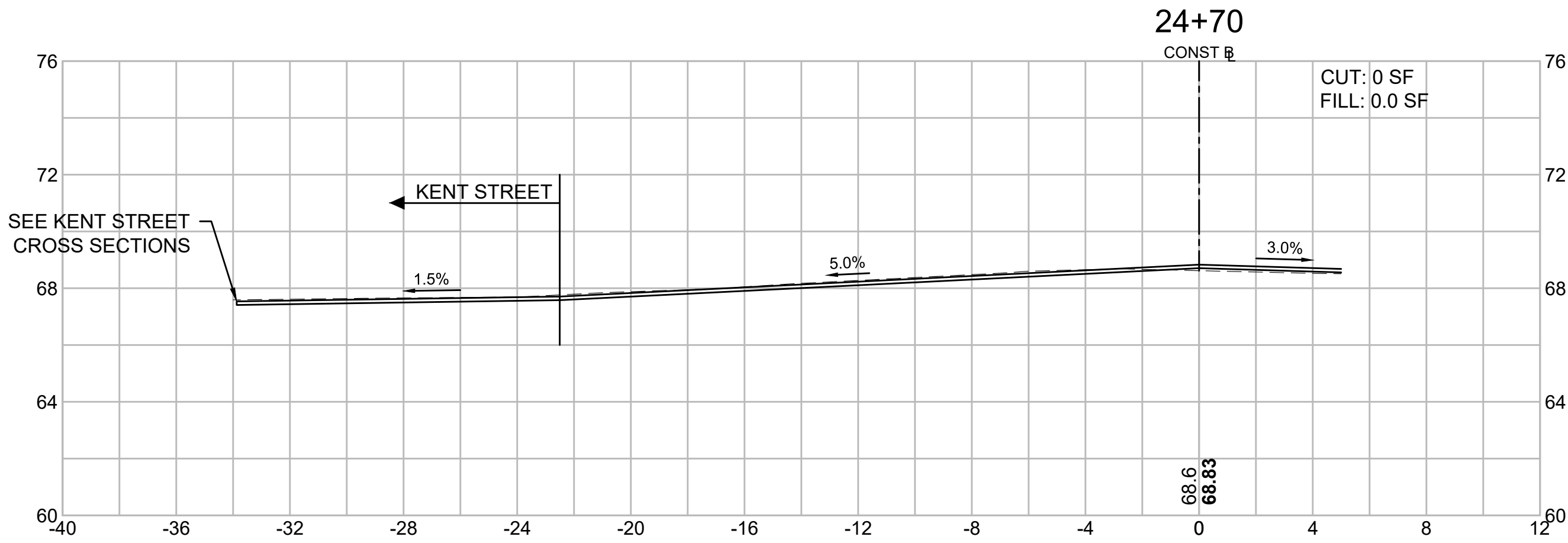
CROSS SECTIONS - 8 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	49
PROJECT FILE NO. 608792			

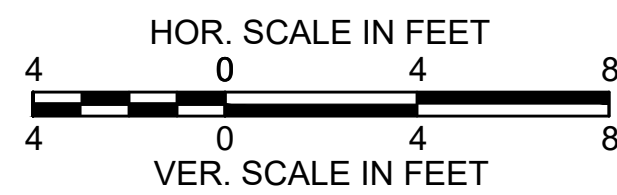
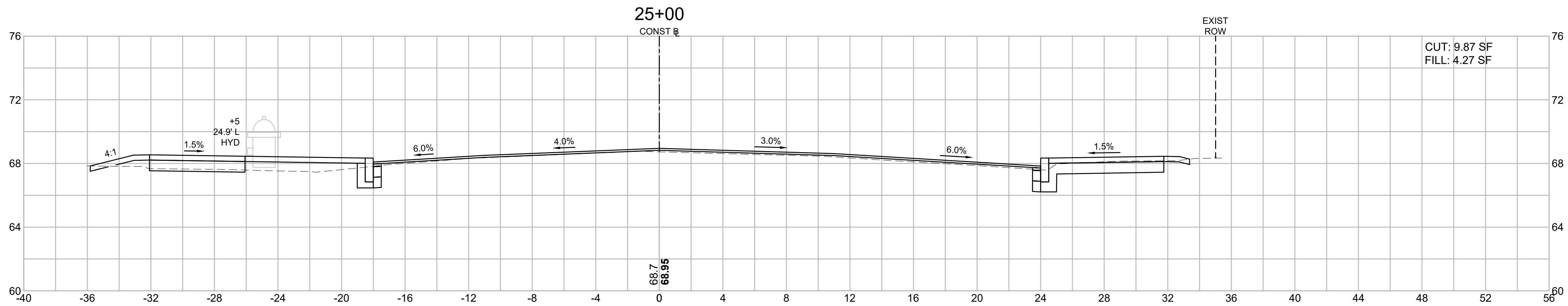
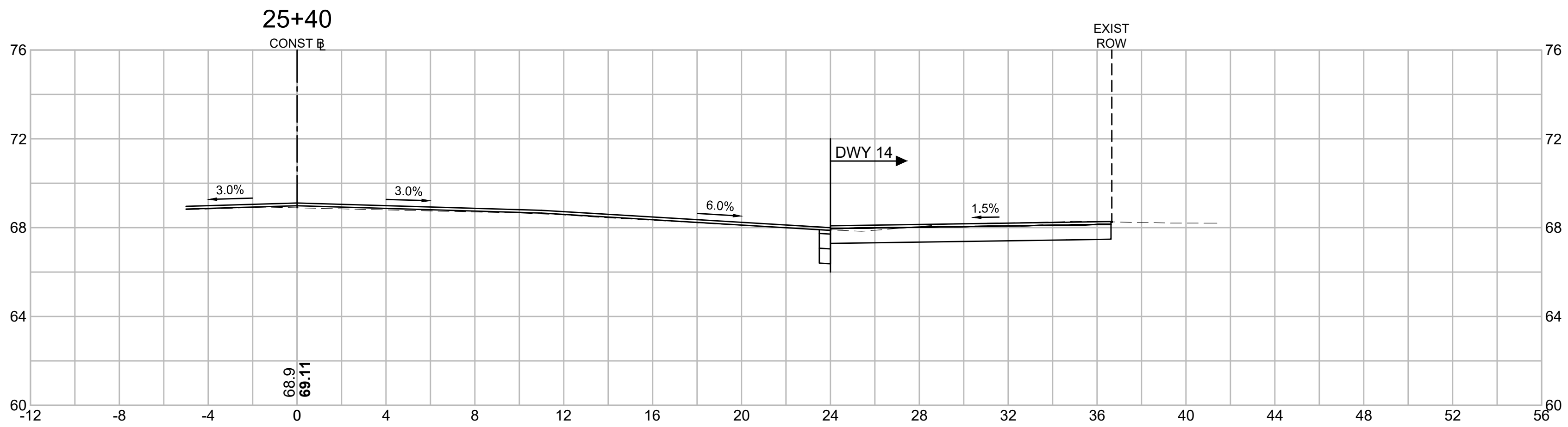
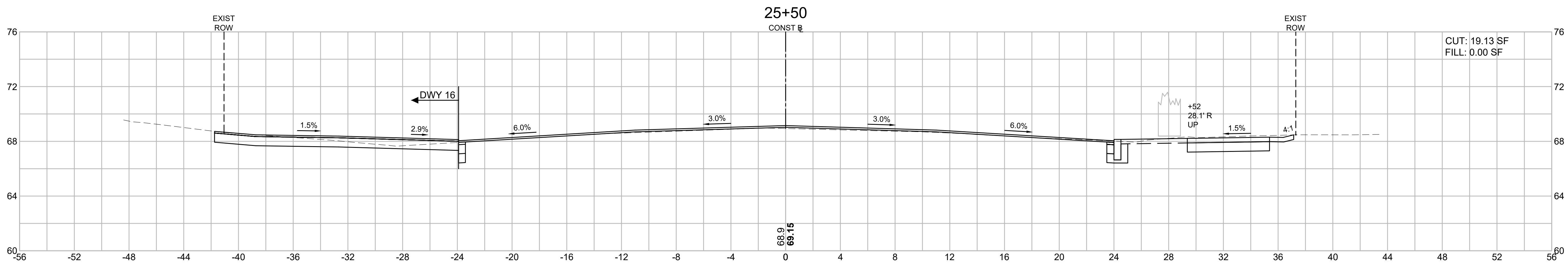
CROSS SECTIONS - 9 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	49
PROJECT FILE NO.		608792	

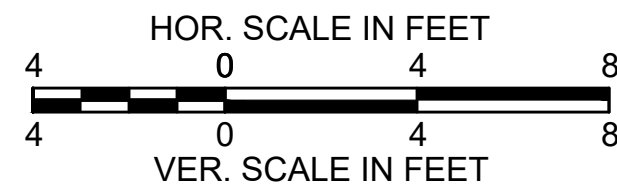
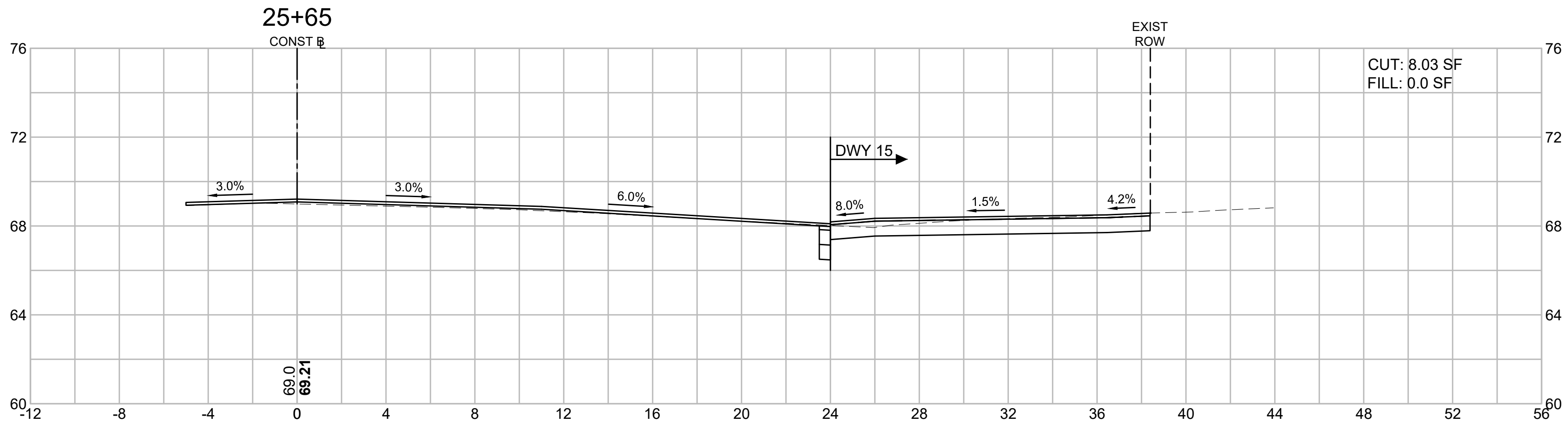
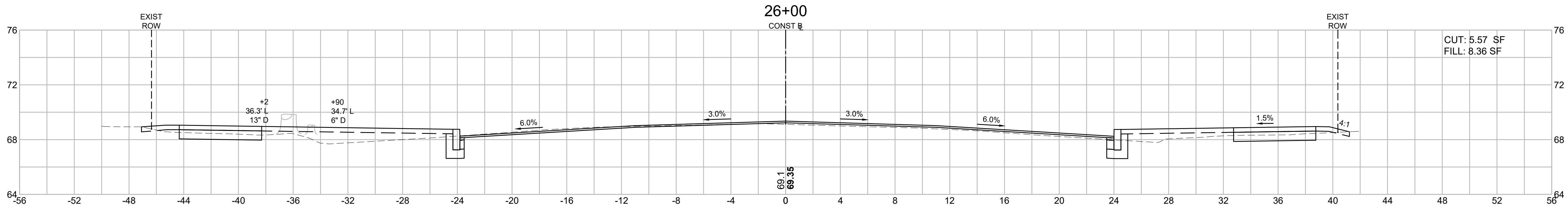
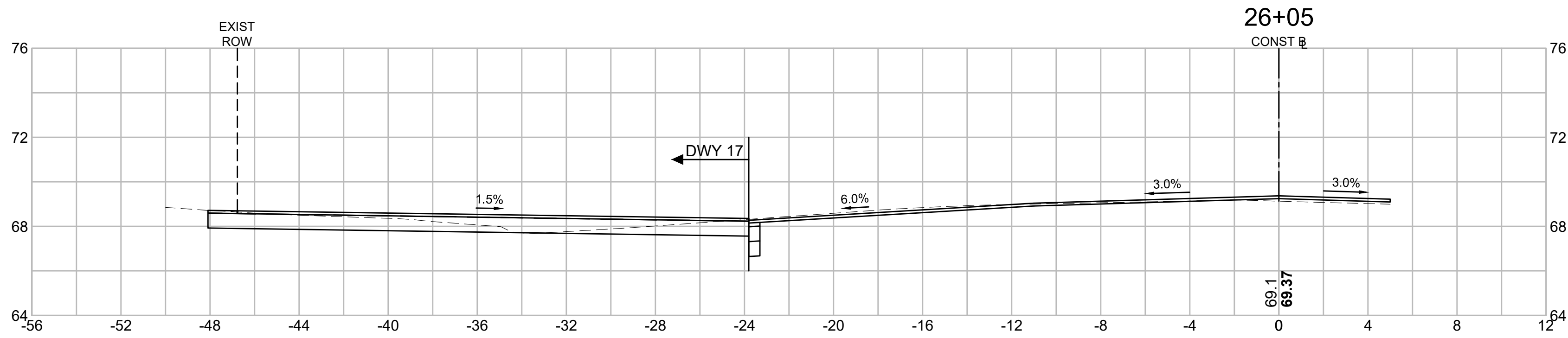
CROSS SECTIONS - 10 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	49
PROJECT FILE NO.		608792	

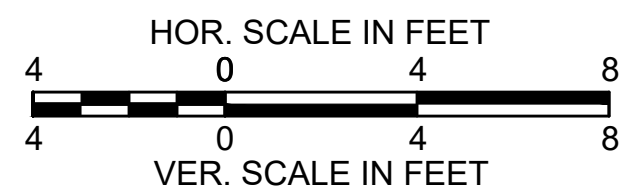
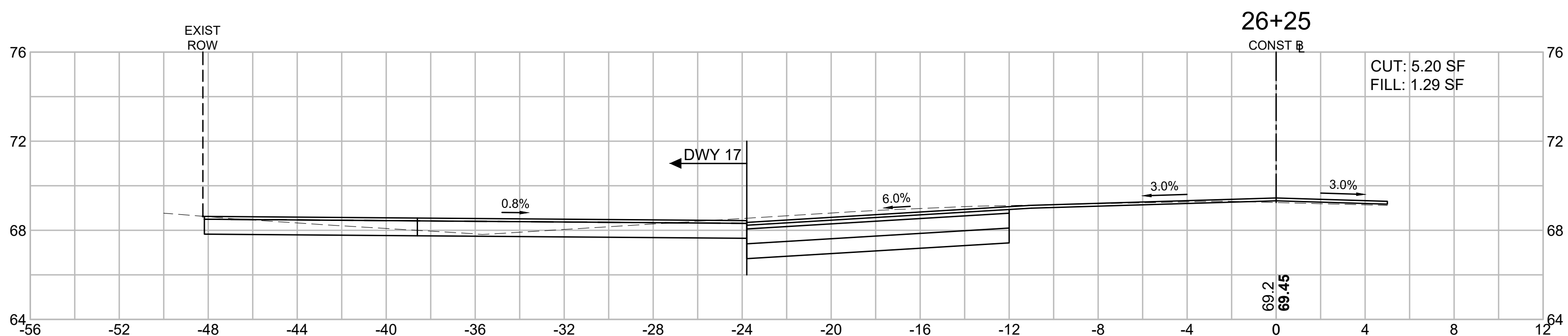
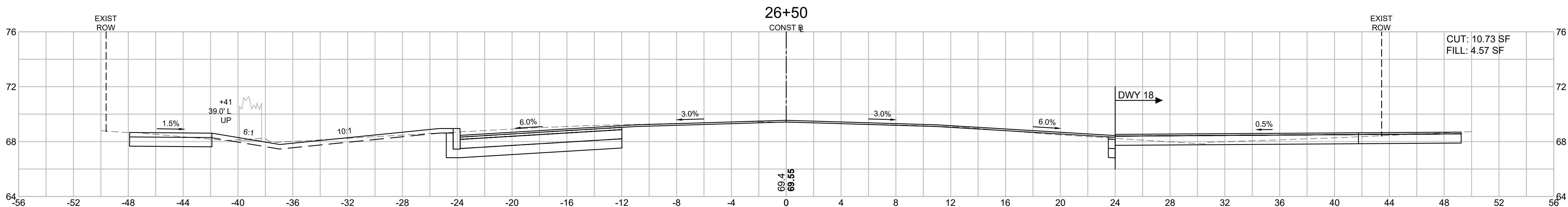
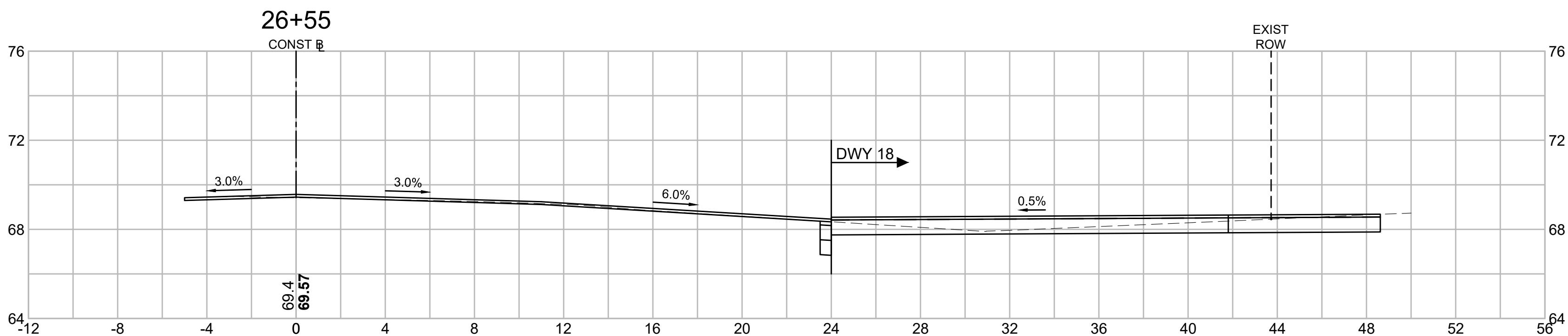
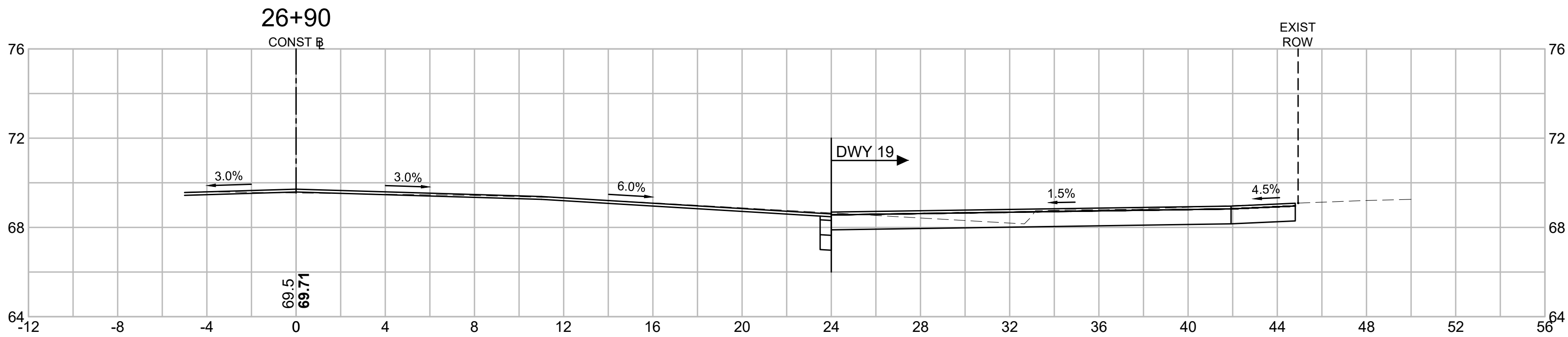
CROSS SECTIONS - 11 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	43	49
PROJECT FILE NO.		608792	

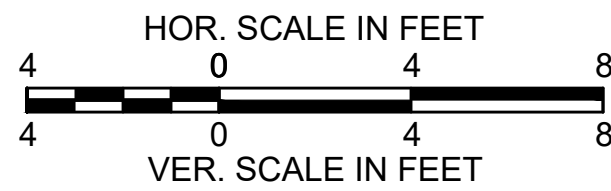
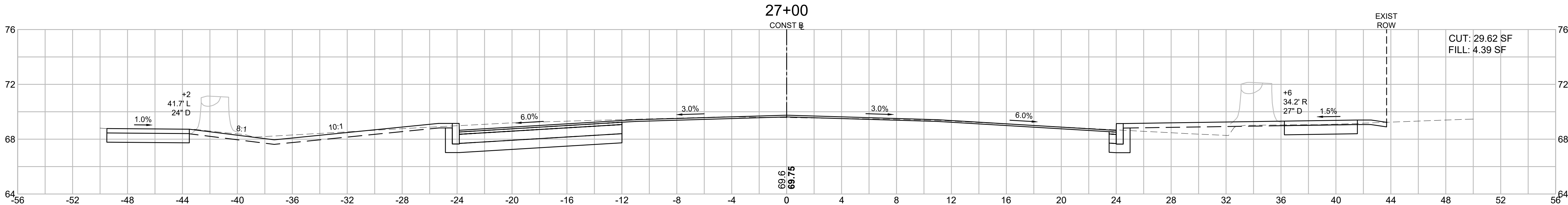
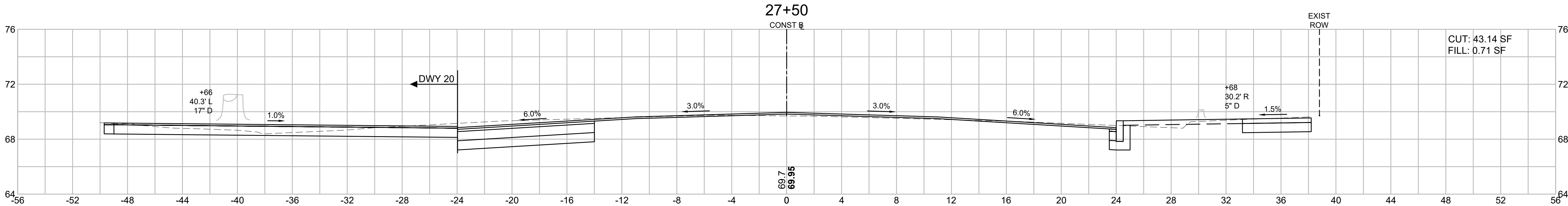
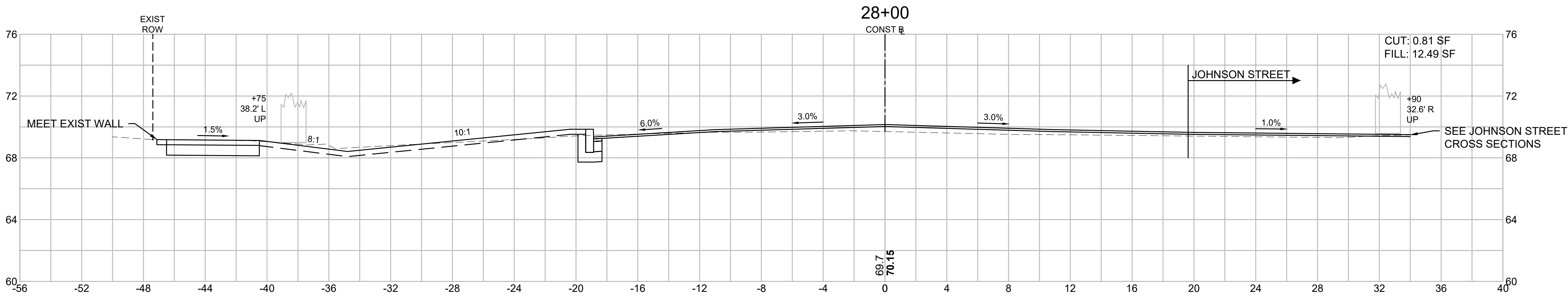
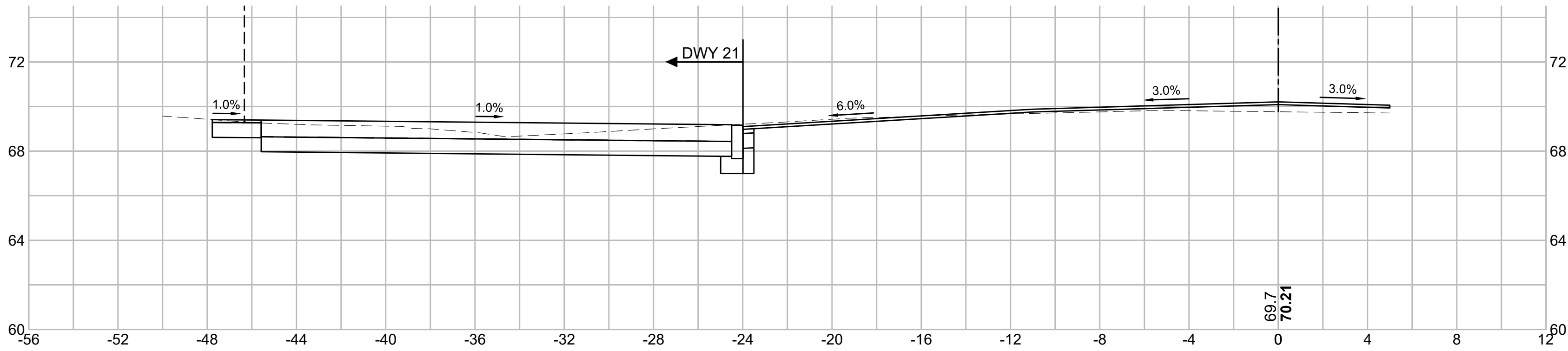
CROSS SECTIONS - 12 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	44	49
PROJECT FILE NO.		608792	

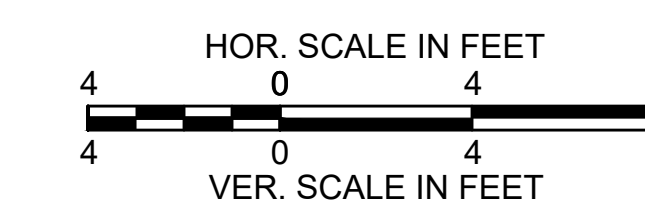
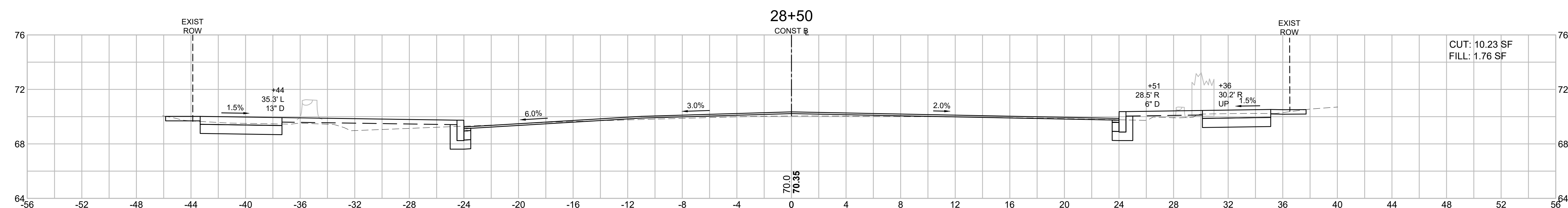
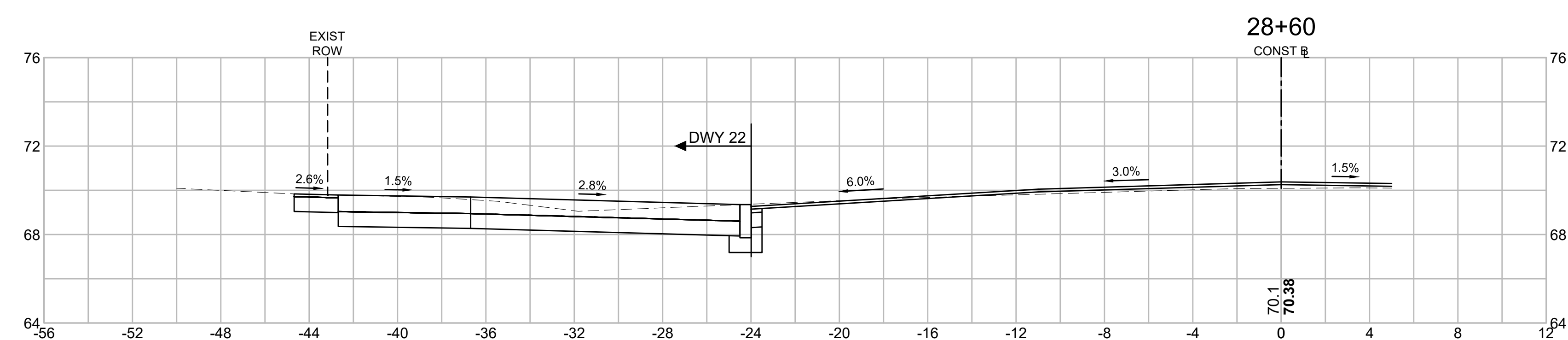
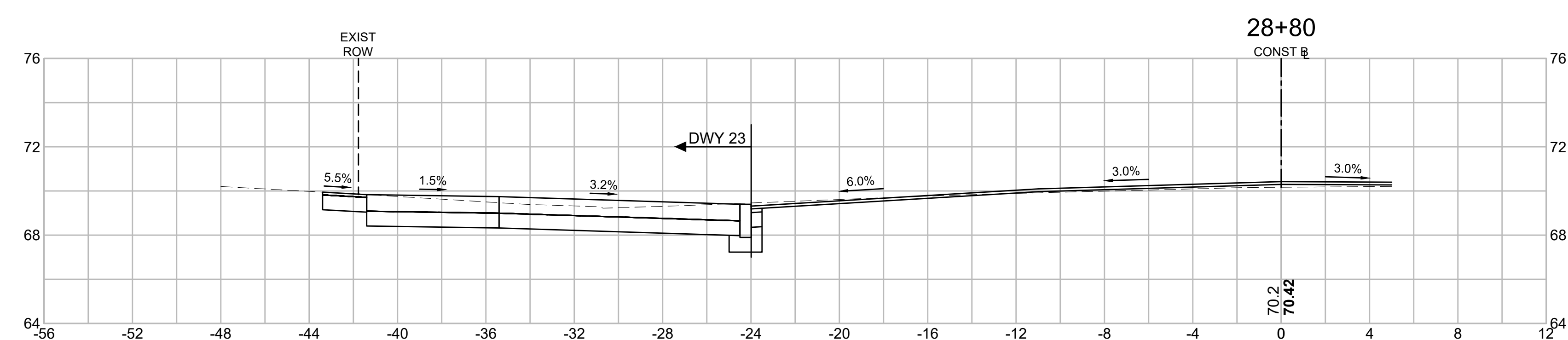
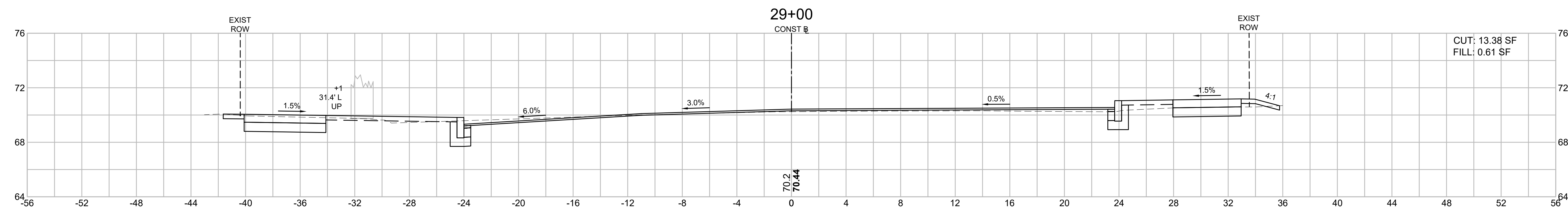
CROSS SECTIONS - 13 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	49
PROJECT FILE NO.		608792	

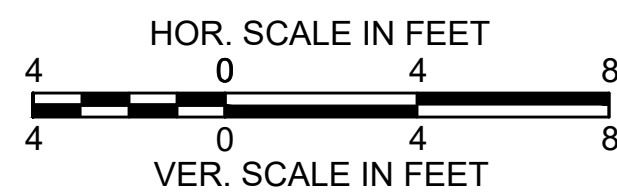
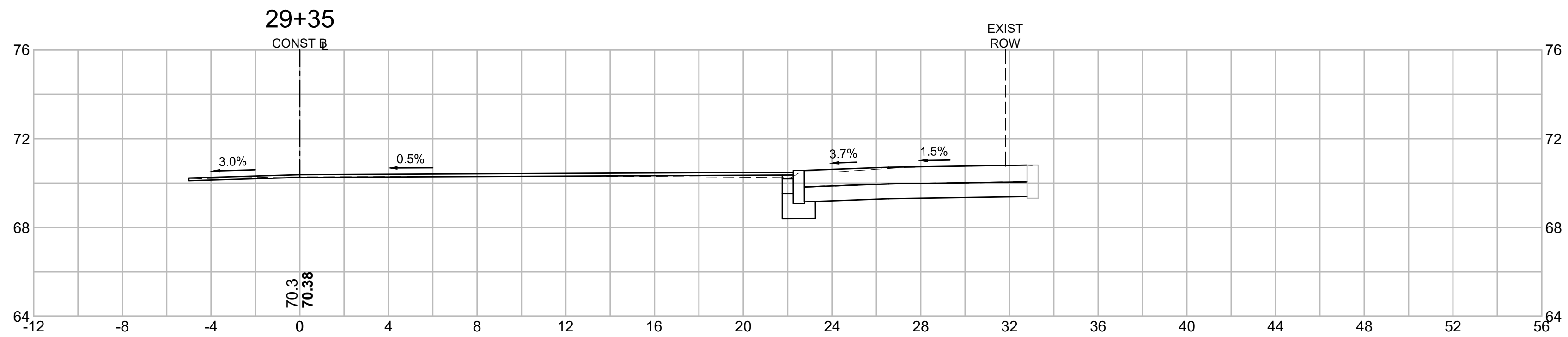
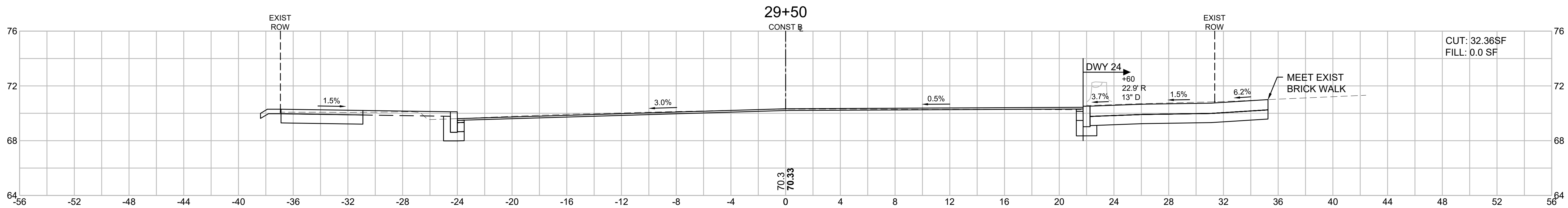
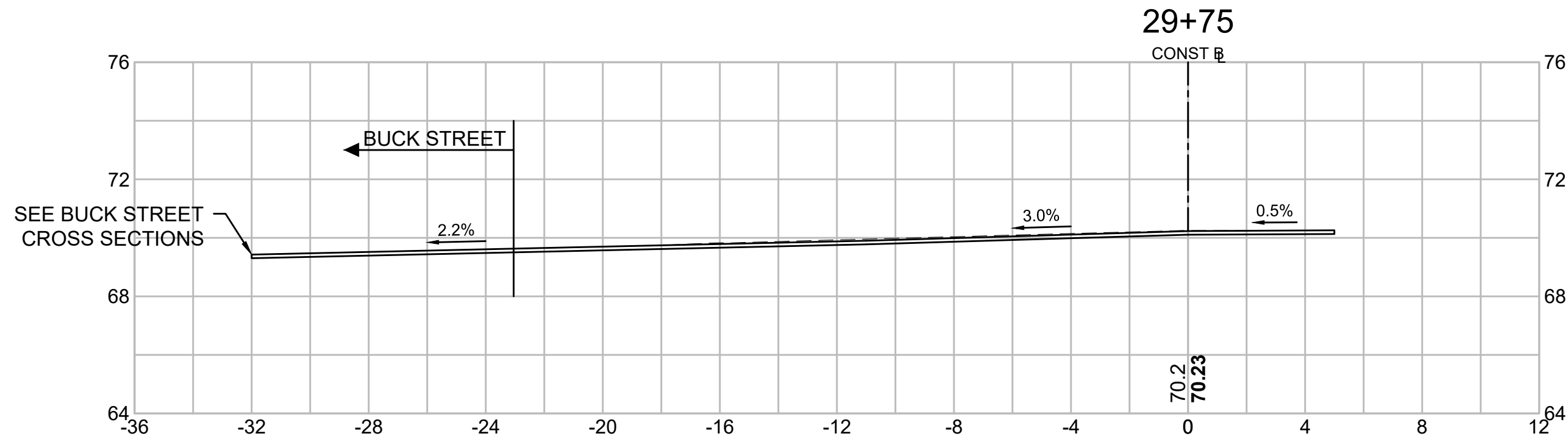
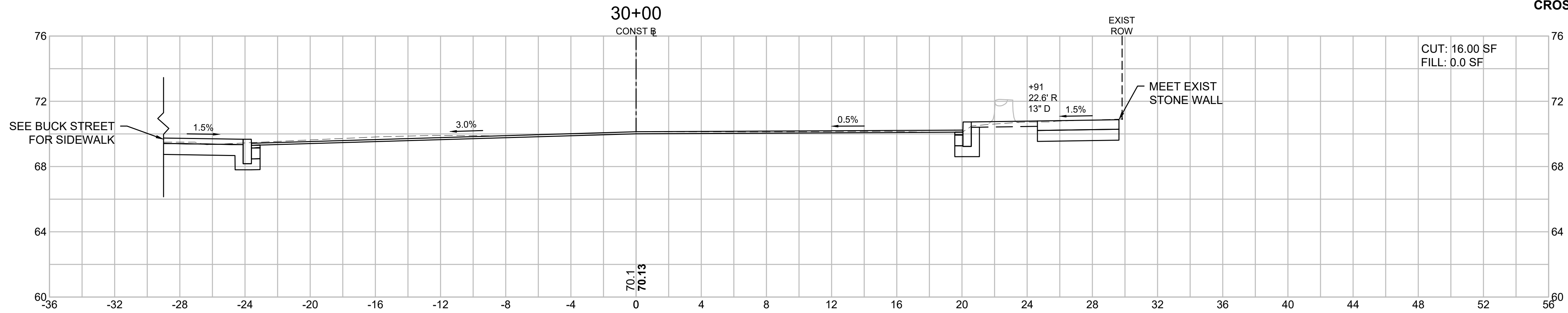
CROSS SECTIONS - 14 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	49
PROJECT FILE NO.		608792	

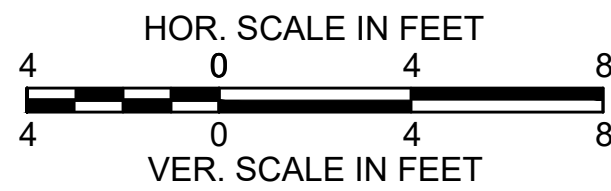
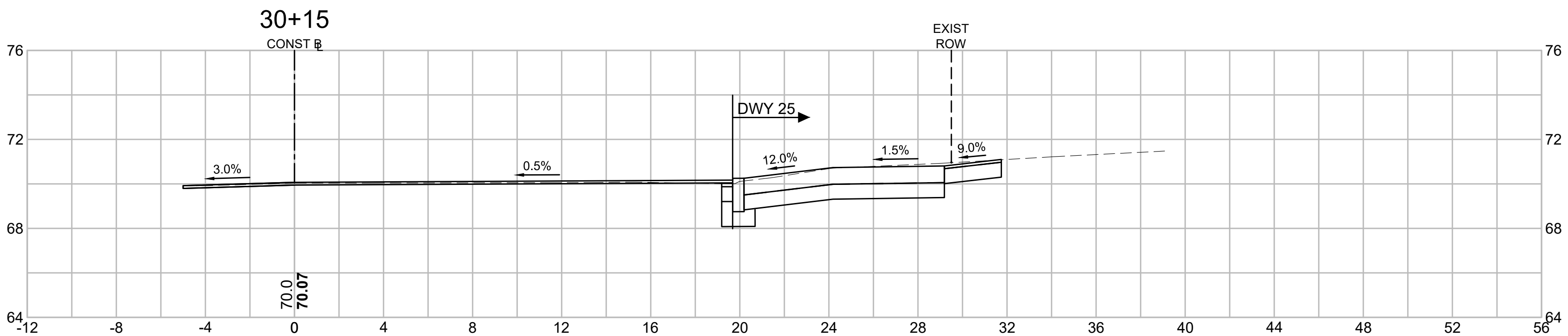
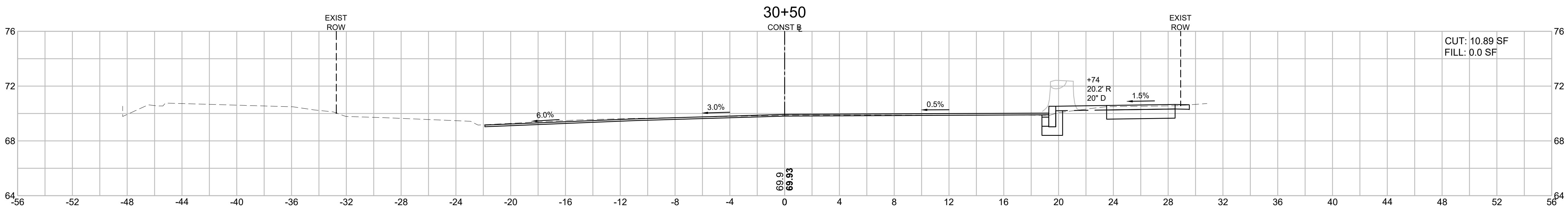
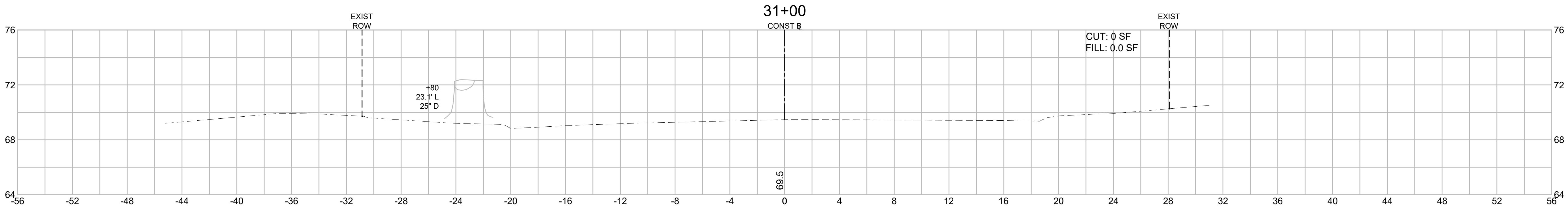
CROSS SECTIONS - 15 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	47	49
PROJECT FILE NO.		608792	

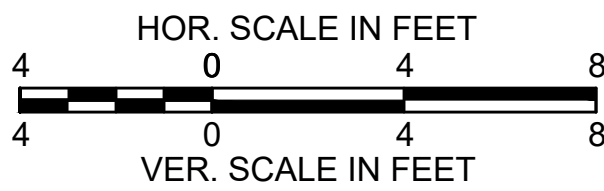
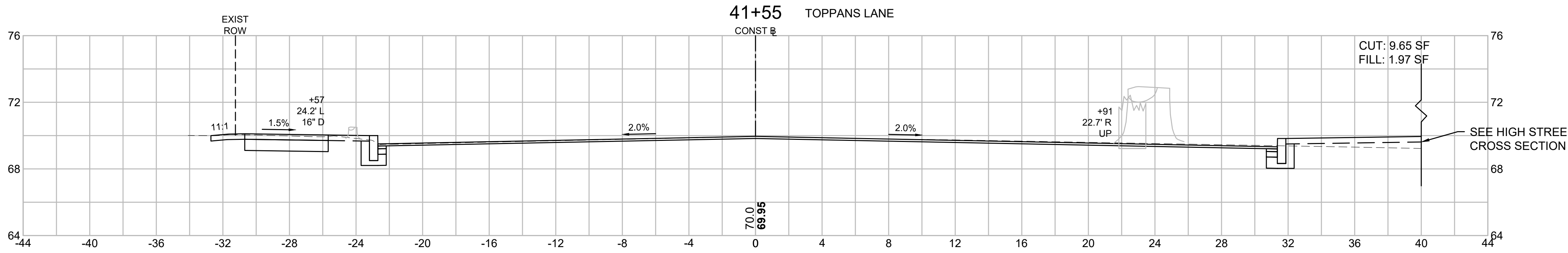
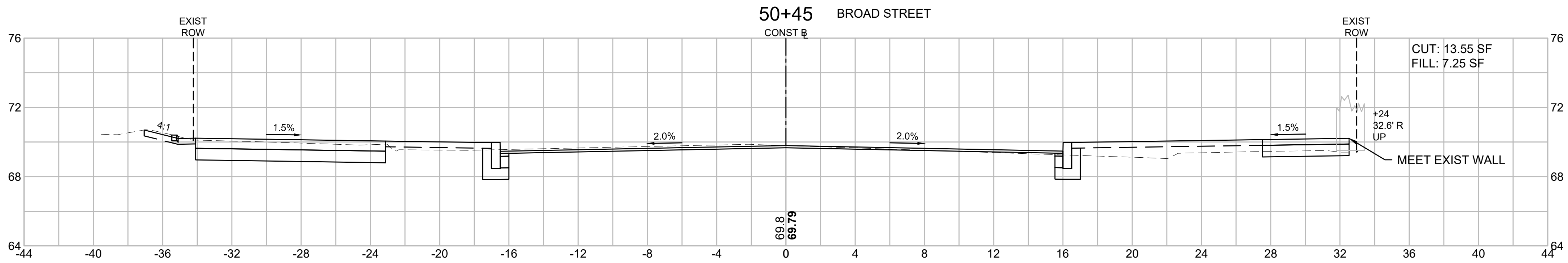
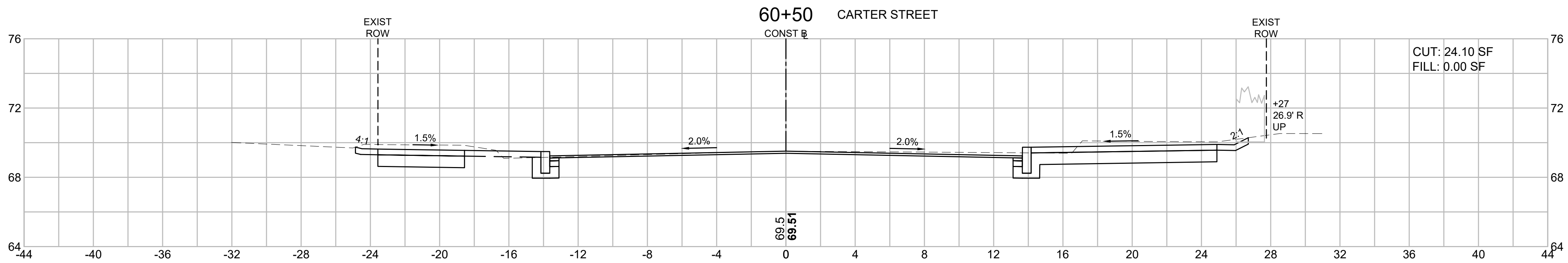
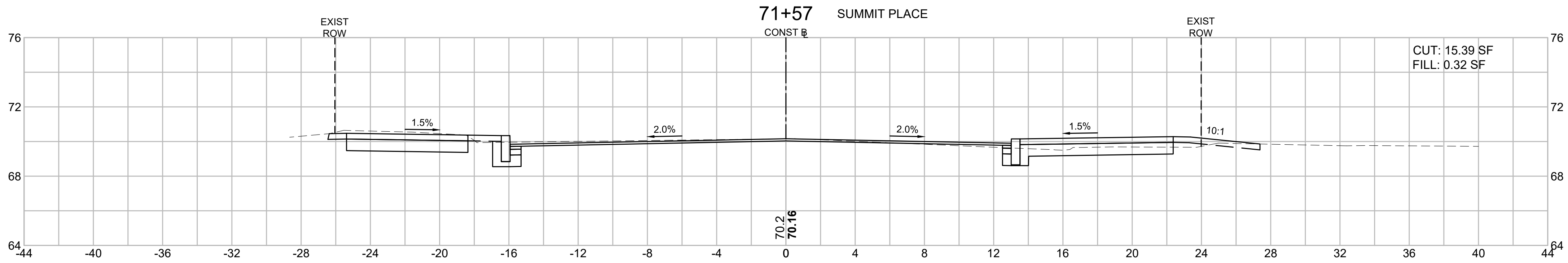
CROSS SECTIONS - 16 OF 18
HIGH STREET



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	48	49
PROJECT FILE NO.		608792	

CROSS SECTIONS - 17 OF 18
SIDE STREETS



NEWBURYPORT
NOCK MIDDLE SCHOOL AND
MOLIN UPPER ELEMENTARY SCHOOL

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	49	49
PROJECT FILE NO.		608792	

CROSS SECTIONS - 18 OF 18
SIDE STREETS

