MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	1	98
PROJECT FILE NO.	610776		

TITLE SHEET & INDEX

PLAN AND PROFILE OF

SUPERSTRUCTURE REPLACEMENT ON ALEWIFE BROOK PARKWAY (US ROUTE 3/ROUTE 16/ROUTE 2)

(BRIDGE NO. C-01-031)

IN THE CITY OF

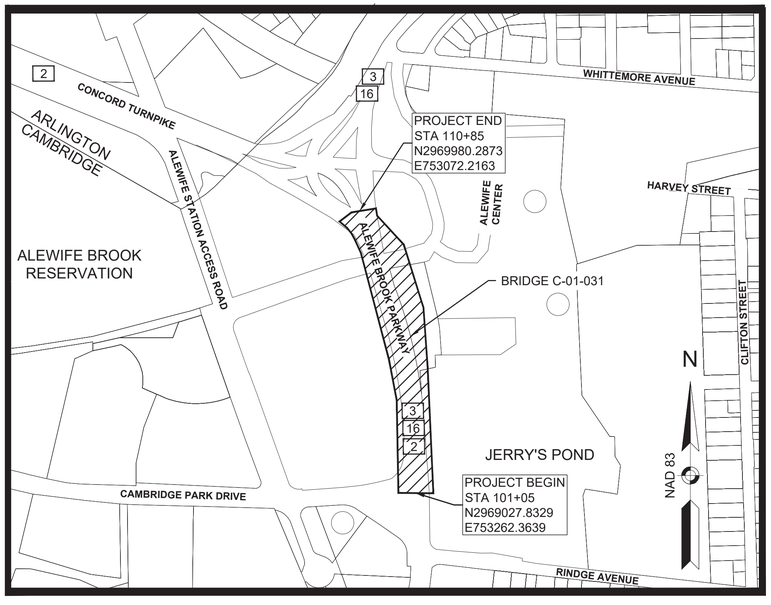
CAMBRIDGE

MIDDLESEX COUNTY

FEDERAL AID PROJECT NO. NHP(BRR-ON)/HIP(BR)-0036(020)X

THESE PLANS ARE SUPPLEMENTED BY THE LATEST EDITIONS OF THE FOLLOWING PUBLICATIONS, AS IDENTIFIED IN THE CONTRACT SPECIAL PROVISIONS: THE MASSDOT CONSTRUCTION STANDARD DETAILS, THE MASSDOT STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE MASSDOT STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, THE MASSDOT OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, THE MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, AND THE ANSI AMERICAN STANDARD FOR NURSERY STOCK.

INDEX



0 250 500 750 1000

SCALE: 1" = 250'

LENGTH OF PROJECT = 980.00 FEET = 0.186 MILES

DESIGN DESIGNATION (US ROUTE 3/ROUTE 16/ROUTE 2)

DESIGN SPEED	35 MPH
ADT (2023)	44,900
ADT (2043)	50,600
K	6.7%
D	59% NB
T (PEAK HOUR)	5.0%
T (AVERAGE DAY)	4.0%
DHV	3,400
DDHV	2,015
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

COMMONWEALTH OF MASSACHUSETTS
GABRIELLE JOSEPHINE PIPP
CIVIL
No. 54501
REGISTERED PROFESSIONAL ENGINEER

Gabrielle Pipp MacNeil
Digitally signed by Gabrielle Pipp MacNeil
Date: 2025.08.12 10:19:09 -04'00'

DATE	DESCRIPTION	REV #

massDOT
Massachusetts Department of Transportation
Highway Division

HNTB
31 ST. JAMES AVE SUITE 300
BOSTON, MA 02116

APPROVED

Carrie Lavallee, P.E.
Carrie Lavallee, P.E. 2025.08.18 10:17:16 -04'00'
08/18/2025

CHIEF ENGINEER **DATE**

610776_HD(TITLE).DWG Plotted on 12-Aug-2025 8:01 AM

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
C	C	CABLE MANHOLE
D	D	DRAINAGE MANHOLE
E	E	ELECTRIC MANHOLE
G	G	GAS MANHOLE
M	M	MISC MANHOLE
OT	OT	OTHER MANHOLE
S	S	SEWER MANHOLE
T	T	TELEPHONE MANHOLE
W	W	WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
		TREE TRUNK PROTECTION
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
100 99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		TEMP OCCUPANCY AREA / TEMP PEDESTRIAN WALKWAY
		SEDIMENT CONTROL BARRIER

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
1	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
	20'	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
	20'	MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE
	CW	CROSSWALK
	SWL	6" SOLID WHITE LINE
	SYL	6" SOLID YELLOW LINE
	BWL	6" BROKEN WHITE LINE (10' MARK, 30' SKIP)
	BYL	6" BROKEN YELLOW LINE (10' MARK, 30' SKIP)
	DWL	6" DOTTED WHITE LINE (3' MARK, 9' SKIP)
	DYL	6" DOTTED YELLOW LINE (3' MARK, 9' SKIP)
	DWLEx	6" DOTTED WHITE LINE EXTENSION (2' MARK, 6' SKIP)
	DYLEx	6" DOTTED YELLOW LINE EXTENSION (2' MARK, 6' SKIP)
	DBWL	6" DOUBLE WHITE LINE
	DBYL	6" DOUBLE YELLOW LINE

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
DMH	DRAIN MANHOLE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
EHH	ELECTRIC HANDHOLE
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EMH	ELECTRIC MANHOLE
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LSA	LANDSCAPED AREA
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
PCR	PEDESTRIAN CURB RAMP
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

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	2	98
	PROJECT FILE NO. 610776		

LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SUP	SHARED USE PATH
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UB	UNDER BRIDGE
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
VGC	VERTICAL GRANITE CURB
VIF	VERIFY IN FIELD
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

610776_HD\LEGEND & ABBREVIATIONS).DWG Plotted on 29-Jul-2025 4:32 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	3	98
PROJECT FILE NO.	610776		

GENERAL NOTES

GENERAL NOTES

1. THE EXISTING CONDITIONS SHOWN ON THIS BASE MAP ARE THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BETWEEN DECEMBER 1, 2021 AND FEBRUARY 10, 2022 BY GREEN INTERNATIONAL AFFILIATES, INC. (GREEN). SEE FIELD NOTES IN MASSDOT DISTRICT 6 FIELD BOOK 40998.

2. HORIZONTAL CONTROL IS BASED UPON THE NORTH AMERICAN DATUM OF 1983-NAD83 (2011), EPOCH 2010.00, SPC 83-MASSACHUSETTS (MAINLAND ZONE), AS PROVIDED BY MASSDOT FOR STATIONS 2861 AND 2862. VERTICAL CONTROL IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 AS PROVIDED BY MASSDOT FOR STATIONS 2861, 2862 AND BENCHMARK #H 38.

   MASSDOT ESTABLISHED THE FOLLOWING POINTS FOR THIS PROJECT:

POINT	GRID NORTHING	GRID EASTING	ELEVATION	DESCRIPTION
2861 (1)	2968718.924	752915.642	8.392	STAKE AND NAIL
2862 (2)	2968984.753	753078.473	8.022	PUNCH POINT MH RIM

   THE UNIT OF MEASUREMENTS IS U.S. SURVEY FOOT. THE PROJECT COMBINED SCALE FACTOR IS 0.999974201590361. BEARINGS ARE ROTATED 0°01'54" CW FROM METROPOLITAN PARK COMMISSIONERS PLAN NO. 577 AND 0°18'08" CCW FROM SHLO 2578.

   CONTROL PROVIDED BY MASSDOT SURVEY SECTION
   PROJECT: 021N-D610776-PAYP11
   PROJECT NAME: CAMBRIDGE-21
   CREATED BY: ASZ
   LINEAR UNIT: US SURVEY FEET
   PROJECTION: SPC83-MASSACHUSETTS (MAINLAND)
   HORIZONTAL DATUM: NAD83 (2011), EPOCH 2010.00
   VERTICAL DATUM: NAVD 1988
   GEOID 18
   POINTS:
   2861 SCALE FACTOR = 0.999974171560722
   2862 SCALE FACTOR = 0.999974231620001

3. THE RIGHT OF WAY LINES SHOWN ON THIS BASE MAP ARE THE DIRECT RESULT OF AN INSTRUMENT SURVEY PERFORMED ON THE GROUND BY GREEN AND FROM PLANS AND DEEDS OF RECORD. PRIVATE PROPERTY LINES HAVE NOT BEEN SURVEYED, THEY ARE COMPILED FROM RECORD DEED AND PLAN INFORMATION AND SHOULD BE CONSIDERED APPROXIMATE.

4. WETLANDS WERE DELINEATED BY HNTB ON NOVEMBER 30, 2021 AND FEBRUARY 10, 2022 IN ACCORDANCE WITH THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION AND FIELD LOCATED BY GREEN ON DECEMBER 15, 2021 AND FEBRUARY 10, 2022.

5. THE CONTRACTOR SHALL CAUSE AS LITTLE INTERFERENCE AND INCONVENIENCE AS POSSIBLE TO ABUTTERS. THE CONTRACTOR SHALL MAINTAIN SAFE AND CONVENIENT ACCESS TO PRIVATE PROPERTY AT ALL TIMES. EMERGENCY VEHICLE ACCESS SHALL BE MAINTAINED AT ALL TIMES.

6. CONSTRUCTION STAGING AREAS SHALL BE LOCATED AS DIRECTED AND APPROVED BY THE ENGINEER WITHIN THE RIGHT OF WAY.

7. CONTRACTOR SHALL BE LIMITED TO CONSTRUCTION ACTIVITIES WITHIN THE IDENTIFIED LIMITS OF WORK AS SHOWN ON THE PLANS, OR AS DIRECTED TO DO SO BY THE ENGINEER.

8. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY AND APPLICABLE AGENCIES PRIOR TO COMMENCING WORK.

9. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETION OF ALL DESIGN TASKS, CALCULATIONS AND CONSTRUCTION AS REFERENCED IN THE CONTRACT PLANS AND SUPPLEMENTARY DOCUMENTS.

10. CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITY SERVICES AND HIGHWAY LIGHTING THROUGHOUT CONSTRUCTION UNTIL AND UNLESS THEY ARE REPLACED PER THE CONTRACT.

11. CONTRACTOR SHALL MAINTAIN REASONABLE ACCOMMODATION FOR ALL BUS ROUTES AS APPROVED BY THE MBTA WITHIN THE PROJECT LIMIT.

12. EXISTING PAVEMENTS SHALL BE SAWCUT WHERE THEY MEET PROPOSED SURFACE TREATMENTS. SAWCUTS WILL BE SMOOTH AND STRAIGHT. AREAS OUTSIDE THE LIMITS OF WORK DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION WILL BE RESTORED TO THEIR ORIGINAL CONDITION.

13. CONTRACTOR SHALL FIELD CHECK ALL DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH NEW WORK. TEST PITS WILL BE PERFORMED TO VERIFY PERTINENT DRAINAGE INVERTS AND POTENTIAL UTILITY CONFLICTS. DISCREPANCIES OR CONFLICTS WILL BE REPORTED TO THE ENGINEER IMMEDIATELY.

14. GUARDRAIL POSTS SHOULD NOT BE DRIVEN IN CLOSE PROXIMITY TO EXISTING UNDERGROUND UTILITIES UNLESS UNDERGROUND UTILITIES ARE EXPOSED AND LOCATIONS ARE CLEARLY KNOWN.

15. CONTRACTOR SHALL MAINTAIN ALL PEDESTRIAN AND BICYCLE FACILITIES, AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER. ALL TEMPORARY AND PROPOSED SIDEWALKS, SHARED USE PATHS, CROSSWALKS AND CURB RAMPS SHALL MEET MASSACUSETTS ARCHITECHTUAL ACCESS BOARD 521 CMR AND PUBLIC RIGHT OF WAY ACCESS GUIDE STANDARDS, UNLESS OTHERWISE NOTED ON THE PLANS.

16. ALL TEMPORARY AND PROPOSED PEDESTRIAN PATHS SHALL HAVE A MINIMUM CLEAR PATH WIDTH OF 4 FEET AROUND VERTICAL OBSTRUCTIONS, PER PROWAG GUIDELINES.

17. ALL EXISTING GUARDRAIL, IF DAMAGED BY CONTRACTOR, IS TO BE REPLACED BY CONTRACTOR AT NO COST OR SCHEDULE DELAY TO MASSDOT.

18. CONTRACTOR SHALL BE AWARE THERE ARE SEVERAL ON-GOING AND PLANNED PROJECTS ADJACENT TO AND NEAR THIS PROJECT SITE. THE CONTRACTOR SHALL COORDINATE WORK ACCESS AND SCHEDULES WITH ALL PROJECTS AS NEEDED. WORK SHOWN HEREIN EAST OF BRIDGE NO. C-01-031, IDENTIFIED AS "PROP IMPROVEMENT (BO)", IS IQHQ'S ALEWIFE PARK PROJECT - ALEWIFE HEADHOUSE IMPROVEMENT PROJECT. THIS WORK IS ASSUMED TO BE COMPLETED PRIOR TO THE START OF CONSTRUCTION.

19. CONTRACTOR SHALL CONDUCT TREE TRIMMING WITHIN LIMITS OF TEMPORARY PEDESTRIAN AND BICYCLE DETOUR ROUTES, AS DETERMINED BY THE ENGINEER.

20. THERE SHALL BE NO TRESPASSING OR STORAGE IN LOCATIONS WHERE JAPANESE KNOTWEED IS PRESENT AS DIRECTED BY THE ENGINEER.

21. NO TREE CLEARING SHALL OCCUR PRIOR TO THE ARBORIST CONDUCTING A TREE CONDITIONS ASSESSMENT. CONTRACTOR SHALL ONLY REMOVE TREES AS DIRECTED BY THE ENGINEER AFTER THE SITE WALK WITH THE CONTRACTOR, THE ENGINEER, THE TOWN TREE WARDEN, AND THE MASSDOT LANDSCAPE ARCHITECT.

DRAINAGE NOTES

1. SHOULD DAMAGE OF ANY KIND OCCUR TO EXISTING PIPES AND STRUCTURES, THE CONTRACTOR SHALL MAKE REPAIRS, AT HIS OR HER OWN EXPENSE, TO THE SATISFACTION OF THE ENGINEER AND UTILITY OWNER.

2. GRADING SHALL PROVIDE POSITIVE DRAINAGE TO ALL DRAIN INLET STRUCTURES.

3. DURING CONSTRUCTION, ALL STRUCTURES OF THE EXISTING SYSTEM SHALL BE PROTECTED AGAINST SEDIMENTATION AND DEBRIS.

4. NO EXISTING DRAINAGE SYSTEMS SHALL BE ABANDONED, PLUGGED OR REMOVED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

5. CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING DRAINAGE SYSTEMS THAT ARE SHOWN ON THE DRAINAGE PLANS. WHERE EXISTING DRAINAGE IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION, AND SIZE SHALL BE ACCURATELY DETERMINED AND THE CONTRACTOR SHALL CONFIRM WHETHER THE DRAINAGE SYSTEM IS STILL ACTIVE. THE INFORMATION SHALL BE FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT. ALL ACTIVE DRAINAGE SYSTEMS IN CONFLICT WITH THE PROPOSED WORK SHALL BE RELOCATED IN KIND IN SUCH A MANNER AS TO AVOID IMPACTS TO PROPOSED ITEMS AND UTILITIES AS WELL AS IMPACTS TO EXISTING ITEMS AND UTILITIES TO REMAIN. IF DRAINAGE SYSTEM IS FOUND TO BE INACTIVE IT SHALL BE REMOVED OR FILLED IN-PLACE PER THE APPROVAL OF THE ENGINEER.

6. PRECAST CONCRETE RINGS OR NON-SHRINK GROUT SHALL BE USED FOR GRADE ADJUSTMENTS.

7. CONTRACTOR SHALL CLEAN AND MAKE FUNCTIONAL ALL EXISTING STRUCTURES AND PIPING WITHIN THE LIMIT OF WORK. ALL EXISTING AND/OR PROPOSED DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMIT OF WORK SHALL AGAIN BE CLEANED PRIOR TO CONCLUSION OF THE CONTRACT.

UTILITY NOTES

1. ALL UNDERGROUND UTILITIES AS SHOWN WERE COMPILED USING FIELD SURVEY INFORMATION AND AVAILABLE RECORD INFORMATION.

2. RECORD UTILITY INFORMATION FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES ARE APPROXIMATE ONLY AND ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.

3. ALL UTILITY COMPANIES PUBLIC AND PRIVATE MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN (SEE CHAPTER 370, ACTS OF 1963, MASSACHUSETTS), PRIOR TO DESIGNING, EXCAVATING, BLASTING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORING OR REPAVING.

4. THE LOCATION OF EXISTING PIPES OR OTHER UNDERGROUND STRUCTURES ARE NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES OR STRUCTURES ARE SHOWN. IN ACCORDANCE WITH MGL CHAPTER 82, SECTION 40, 40A-40E INCLUDING AMENDMENTS, THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES, CITY OF CAMBRIDGE, AND GOVERNMENT AGENCIES INCLUDED IN THIS PROJECT IN WRITING PRIOR TO ANY EXCAVATION WORK. CALL "DIG SAFE" AT 1-888-344-7233 AT LEAST 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO ANY EXCAVATION WORK TO OBTAIN ACCURATE UTILITY LOCATIONS.

5. THE SUBSURFACE UTILITY LOCATIONS HAVE BEEN PLOTTED TO MEET UTILITY QUALITY LEVEL "C" AS DESCRIBED IN ASCE STANDARD 38-02 AND SUMMARIZED BELOW. THE UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS BASED ON ABOVE-GROUND FIELD OBSERVATION AND EXISTING RECORD INFORMATION RECEIVED FROM UTILITY STAKE-HOLDERS.

6. INVERTS SHOWN ON PLAN ARE NOT GUARANTEED TO BE ACCURATE. DUE TO THE LIMITATIONS OF FIELD OBSERVATION AND SURVEY TECHNIQUES THE INVERTS ARE SHOWN AS APPROXIMATE ONLY AND SHALL NOT BE WARRANTED TO BE CORRECT. ADDITIONAL FIELD INVESTIGATION IS NECESSARY WHERE ACCURATE MEASUREMENTS ARE REQUIRED FOR DESIGN OF CRITICAL AREAS.

7. THE EXISTING CONDITIONS PLAN IS TO BE USED FOR THE SPECIFIED PROJECT ONLY AND NOT WARRANTED TO BE COMPLETE FOR ANY OTHER FUTURE PROJECTS.

TRAFFIC NOTES

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

2. TRAFFIC SIGNAL CONDUIT SHALL BE 3" SCHEDULE 80 PVC UNLESS OTHERWISE NOTED.

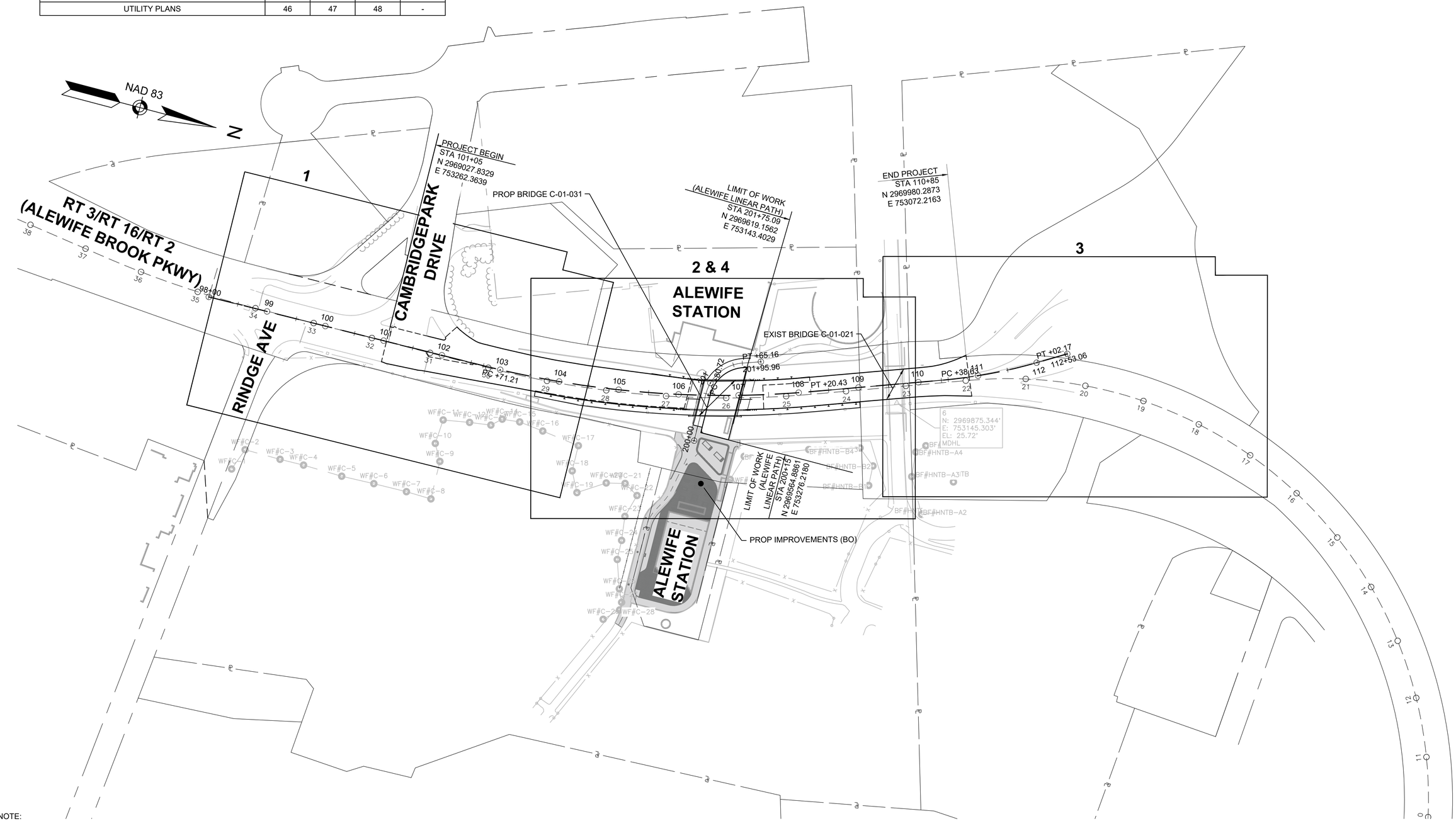
3. STOP LINES SHOULD BE PLACED A MINIMUM OF 4' IN ADVANCE TO NEAREST CROSSWALK LINES.

SHEET				
PLAN VIEW	1	2	3	4
BASELINE TIE PLANS	7	8	9	10
CONSTRUCTION PLANS	11	12	13	14
CURB TIE & GRADING PLANS	18	19	20	21
TRAFFIC SIGN & PAVEMENT MARKINGS	22	23	24	-
UTILITY PLANS	46	47	48	-

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	4	98
PROJECT FILE NO. 610776			

KEY PLAN
SHEET 1 OF 1



NOTE:

1. WORK IDENTIFIED HERE AS "PROP IMPROVEMENTS (BO)" IS ASSUMED TO BE COMPLETED PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE SCHEDULE, SCOPE OF WORK AND LIMITS OF WORK WITH IQHQ'S ALEWIFE HEADHOUSE IMPROVEMENT PROJECT. SEE SPECIAL PROVISIONS FOR INFORMATION.

0 75 150 225 300
SCALE: 1" = 75'

610776_HD(KEY PLAN).DWG Plotted on 29-Jul-2025 4:46 PM

PAVEMENT NOTES

PROPOSED FULL DEPTH PAVEMENT (GREATER THAN 4.0 FT WIDE)

SURFACE COURSE: 2 IN. SUPERPAVE BRIDGE SURFACE COURSE - 12.5 POLYMER (SSC-B-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE COURSE: 2 IN. SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER

BASE COURSE: 4 ½ IN. SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) OVER

SUBBASE: 4 IN. DENSE GRADED CRUSHED STONE FOR BASE OVER
8 IN. GRAVEL BORROW TYPE b

PROPOSED FULL DEPTH PAVEMENT (LESS THAN 4.0 FEET WIDE)

SURFACE COURSE: 2 IN. SUPERPAVE BRIDGE SURFACE COURSE - 12.5 POLYMER (SSC-B-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE COURSE: 2 IN. SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER

BASE COURSE: 6 IN. HES CEMENT CONCRETE OVER

SUBBASE: 8 IN. GRAVEL BORROW TYPE b

PROPOSED FINE MILLING & RESURFACING OVERLAY

SURFACE COURSE: 2 IN. SUPERPAVE BRIDGE SURFACE COURSE - 12.5 POLYMER (SSC-B-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER

MILLING: 2 IN. PAVEMENT FINE MILLING

PROPOSED BRIDGE PAVEMENT

SURFACE COURSE: 1.5 IN. SUPERPAVE BRIDGE SURFACE COURSE - 12.5 POLYMER (SSC-B-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE COURSE: 1.5 IN. SUPERPAVE BRIDGE PROTECTIVE COURSE - 12.5 POLYMER (SSC-B-12.5-P) OVER SPRAY APPLIED WATERPROOFING MEMBRANE

PROPOSED TEMPORARY FULL DEPTH PAVEMENT

SURFACE COURSE: 2 IN. SUPERPAVE BRIDGE SURFACE COURSE - 12.5 POLYMER (SSC-B-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE COURSE: 3 IN. SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER

SUBBASE: 4 IN. DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER
8 IN. GRAVEL BORROW, TYPE b

PROPOSED HMA SHARED USE PATH MILLING & RESURFACING OVERLAY

SURFACE COURSE: 1.5 IN. SUPERPAVE BRIDGE SURFACE COURSE - 12.5 POLYMER (SSC-B-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE COURSE: 2.5 IN. SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0 - P)

MILLING: 4 IN. PAVEMENT FINE MILLING

PROPOSED CEMENT CONCRETE SIDEWALK

SURFACE: 4 IN. CEMENT CONCRETE

FOUNDATION: 8 IN. GRAVEL BORROW, TYPE b

PROPOSED RESURFACING OVERLAY (UNDER BRIDGE)

SURFACE COURSE: 1.5 IN. TEXTURIZED DECORATIVE PAVEMENT

INTERMEDIATE COURSE: 2.5 IN. SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0)

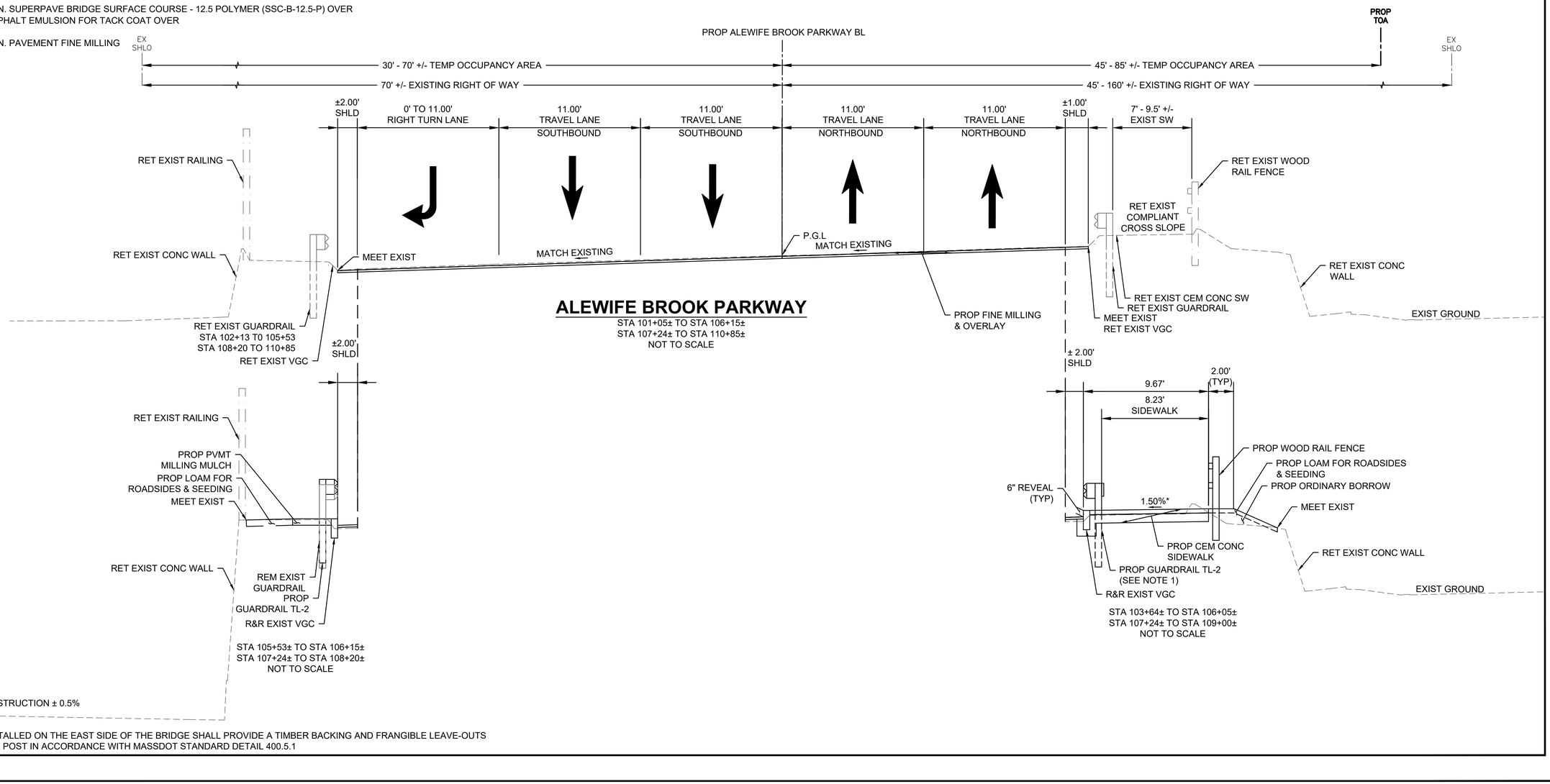
NOTES

1. ALL PERMANENT HOT MIX ASPHALT PAVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 450 HOT MIX ASPHALT PAVEMENT SPECIFICATIONS.
2. ALL SUPERPAVE HMA COURSES SHALL BE MANUFACTURED WITH A PERFORMANCE GRADE ASPHALT BINDER (PGAB).
3. PREPARATION OF UNDERLYING SURFACE, ASPHALT EMULSION FOR TACK COAT, HMA FOR PATCHING, AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SUBSECTION 450.
4. FINAL FRICTION COURSE OF PAVEMENT ON ALL ROADWAYS SHALL BE PLACED AFTER COMPLETION OF ALL TEMPORARY TRAFFIC RELOCATIONS REQUIRING THE PLACEMENT OF OR REMOVAL OF PAVEMENT MARKINGS OTHER THAN FINAL PAVEMENT MARKINGS, AND AFTER INSTALLATION OF LOAM AND SEE, GUARDRAIL AND SIGNING, UNLESS OTHERWISE APPROVED BY MASSDOT.
5. ALL EMBANKMENT SUB-BASE AND SUB-GRADE MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DIVISION III: MATERIALS SPECIFICATIONS. MATERIALS FOR GRAVEL BORROW, SPECIAL BORROW AND/OR RECLAIMED PAVEMENT BORROW TO BE GRADED AND COMPACTED 95% DRY DENSITY IN LIFTS AS REQUIRED. UNSUITABLE MATEIRAL SHALL BE REMOVED AND REPLACED. EXISTING SUBBASE NOT CONFORMING TO THE MATERIAL SPECIFICATION M1.03.0 GRAVEL BORROW, TYPE b WILL BE REMOVED TO THE REQUIRED DEPTH AND REPLACED WITH GRAVEL BORROW, TYPE b.
6. OVERLAID COURSES SHALL BE KEYED INTO THE UNDERLYING PAVEMENT LAYER.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	5	98
PROJECT FILE NO. 610776			

TYPICAL SECTIONS
SHEET 1 OF 2



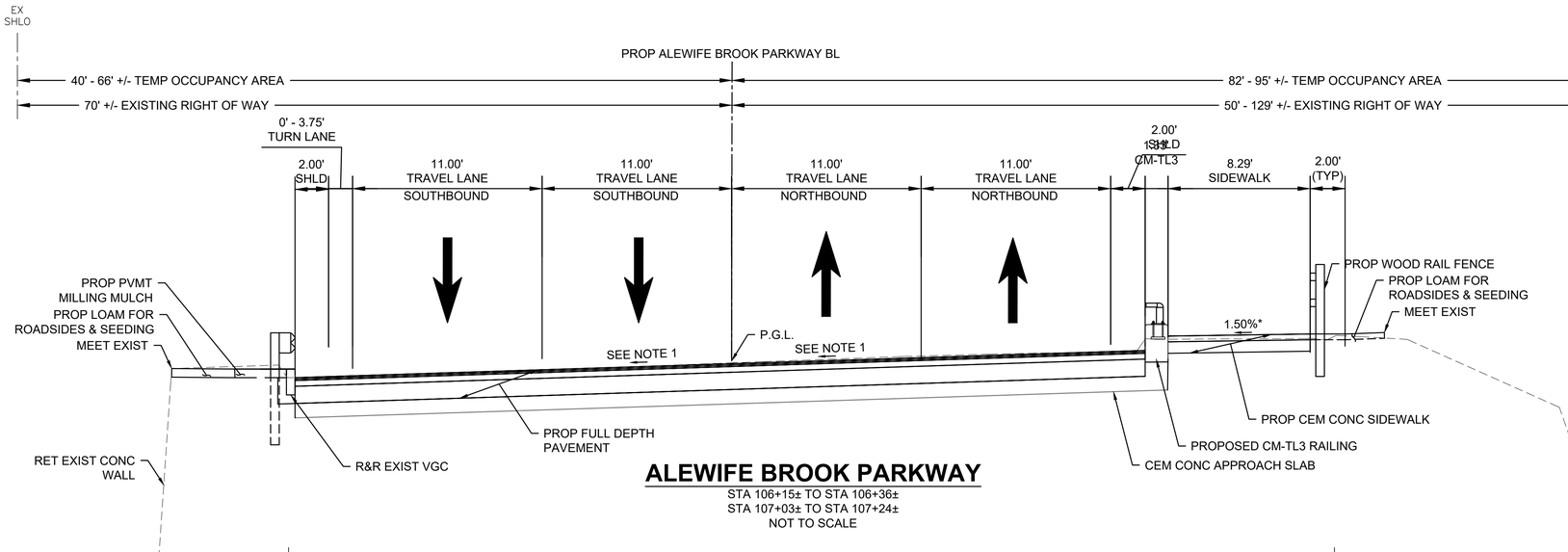
* = TOLERANCE FOR CONSTRUCTION ± 0.5%

NOTE:
1. HIGHWAY GUARD INSTALLED ON THE EAST SIDE OF THE BRIDGE SHALL PROVIDE A TIMBER BACKING AND FRANGIBLE LEAVE-OUTS AROUND EACH STEEL POST IN ACCORDANCE WITH MASSDOT STANDARD DETAIL 400.5.1

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	6	98
PROJECT FILE NO. 610776			

TYPICAL SECTIONS
SHEET 2 OF 2

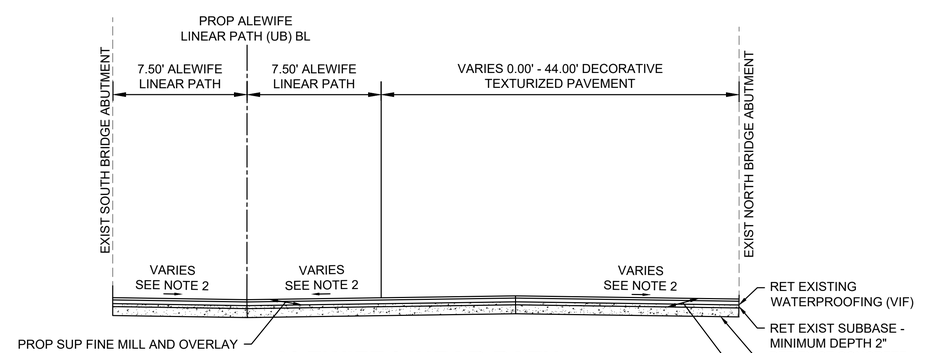


ALEWIFE BROOK PARKWAY

STA 106+15± TO STA 106+36±
STA 107+03± TO STA 107+24±
NOT TO SCALE

ALEWIFE BROOK PARKWAY BRIDGE C-01-031

STA 106+36± TO STA 107+03±
NOT TO SCALE



ALEWIFE LINEAR PATH

UNDER BRIDGE NO. C-01-031
NOT TO SCALE

* = TOLERANCE FOR CONSTRUCTION ± 0.5%

NOTE:
1. MATCH EXISTING TRANSITION CROSS SLOPES FROM STA 102+00± TO 103+50±. MATCH EXISTING FULL SUPER CROSS SLOPES FROM STA 103+50± TO 106+26±. PROPOSED FULL SUPER BRIDGE CROSS SLOPE 3.2% FROM STA 106+26± TO STA 106+96±, AND MATCH EXISTING CROSS SLOPES FROM 107+24± TO 110+85. SEE PLAN SHEET 19.
2. FOR PROPOSED SHARED USE PATH CROSS SLOPES, SEE CURB TIE & GRADING PLAN SHEET 21.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	7	98
PROJECT FILE NO. 610776			

BASELINE TIE PLANS
SHEET 1 OF 4

610776_HDI(BASELINE TIE PLANS).DWG Plotted on 29-Jul-2025 4:56 PM

N

BENCHMARK: 1
1 WEST CORNER TRAFFIC CONTROL BOX
CONCRETE BASE AT SOUTHWEST CORNER
OF CAMBRIDGE PARK DRIVE & ALEWIFE
EL=10.33'

N/F
APPLETREEWOOD, LLC
PARCEL ID: 268C-30
DEED BOOK 44958 PAGE 0509
143 ALEWIFE BROOK PKWY

30' WIDE RIGHT OF WAY AND EASEMENT WAY (PLAN 33 OF 1999) BOOK 9229 PAGE 135

311.74'
N31°29'27"E

284.81'
S67°25'36"E

1870 CITY OF CAMBRIDGE LAYOUT

2001 CITY OF CAMBRIDGE LAYOUT BOOK 32240 PAGE 10

2
N: 2968984.753'
E: 753078.473'
EL: 8.02'
PUNCH 2862

STONE BOUND
DRILL HOLE FOUND

N/F
MASSACHUSETTS BAY
TRANSPORATION AUTHORITY
PARCEL ID: C-269
DEED BOOK 13117 PAGE 113

PARCEL IS SUBJECT TO
ARTICLE 97 RESTRICTIONS

STONE BOUND
X-CUT FOUND
(HELD)

CAMBRIDGEPARK DRIVE

N/F
MASSACHUSETTS BAY TRANSPORATION AUTHORITY
PARCEL ID: 269.5-101
DEED BOOK 13550 PAGE 315
5 CAMBRIDGE PARK DR

SURVEY TRAVERSE

15
N: 2969315.354'
E: 753175.081'
EL: 11.04'
MXCT

344.44'
S16°17'24"W

253.27'
N5°55'38"W

99+97.84 ALEWIFE BROOK PARKWAY OFFSET 0.00 =
32+82.17 1929 MAIN BASELINE OFFSET 0.00

1951 MDC LOCATION LINE
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.

PROJECT BEGIN
STA 101+05
N 2969027.8329
E 753262.3639

1950 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. 28940-V.T.
BOOK 7654 PAGE 10

98+00 ALEWIFE BROOK PARKWAY OFFSET 0.00 =
34+79.91 1929 MAIN BASELINE OFFSET -2.55

N 2968750
E 753235

L=252.84' R=1600.00'
Δ=9°03'15"

PC +09.53

98+00 | 99 | 100 | 101

EXIST 1929 RECORD BL

L1 410.43'
N0°22'26"W

N54°07'01"W
215.70'

N20°46'20"W
107.02'

N14°24'14"W
154.95'

N 2969000
E 753320

ALEWIFE BROOK PARKWAY

PROP ALEWIFE BROOK PARKWAY CONST BL

102 | 103

N0°39'52"W
471.21'

PC +71.21
+99.10
PT

N 2969250
E 753250

L=549.22' R=1650.00'
Δ=19° 04' 17"

C1

L=542.13' R=1600.00'
Δ=19°24'49"

79.17'
N84°43'53"E

N75°52'29"E
30.07'

N40°36'24"W
53.03'

3
N: 2968822.768'
E: 753301.546'
EL: 11.36'
MDHL

N1°08'35"W
359.86'

LOCATION LINE OF
NOVEMBER 14, 1908
METROPOLITAN PARK COMMISSION TAKING

N87°52'18"W
341.66'

EPLP
(SEE DETAIL)

END OF 1992
MDC ALTERATION (SECTION 4)
SHLO NO. 7102

1992 MDC
NO. 7102

RINDGE AVENUE

1956 MDC
PARKS DIVISION TAKING
PLAN NO. 34977-V.T.

1951 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.
BOOK 7749 PAGE 1220

BENCHMARK: 2
NORTHWEST BOLT
OF LIGHT POLE 40
EL=12.43'

4
N: 2969182.552'
E: 753294.370'
EL: 13.05'
MDHL

WF#C-9
WF#C-10
WF#C-11
WF#C-12
WF#C-13
WF#C-14
WF#C-15
WF#C-16

N/F
IQHQ-ALEWIFE, LLC
PARCEL ID: 269-135
DEED BOOK 75297 PAGE 443
1R-3R ALEWIFE BROOK PKWY

CONTINUED ON SHEET NO. 8

PROP ALEWIFE BROOK PARKWAY CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	98+00.00	2968722.8534	753265.9016		N0°39'52"W 471.21'	102+71.21	2969194.0324	753260.4361
C1	102+71.21	2969194.0324	753260.4361	R=1650.00' Δ=19°04'17" L=549.22' T=277.17'		108+20.43	2969732.0782	753163.6234

0 20 50 100
SCALE: 1" = 20'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	8	98
PROJECT FILE NO.	610776		

BASELINE TIE PLANS
SHEET 2 OF 4

610776_HD(BASELINE TIE PLANS).DWG Plotted on 29-Jul-2025 4:56 PM

N

15
N: 2969315.554'
E: 753175.081'
EL: 11.04'
MXCT

16
N: 2969567.262'
E: 753148.928'
EL: 9.71'
MDHL

24
N: 2969687.653'
E: 753104.194'
EL: 9.49'
MMAG

5
N: 2969585.983'
E: 753241.092'
EL: 27.60'
MDHL

17
N: 2969557.983'
E: 753290.952'
EL: 8.01'
MMAG

6
N: 2969875.344'
E: 753145.303'
EL: 25.72'
MDHL

SURVEY TRAVERSE

344.44'
S16°12'24"W

253.27'
N5°55'38"W

N/F
MASSACHUSETTS BAY TRANSPORATION AUTHORITY
PARCEL ID: 269.5-101
DEED BOOK 13544 PAGE 180
5 CAMBRIDGE PARK DR

COMMONWEALTH OF MASSACHUSETTS
CERTIFICATE NO. 71269
PARCEL 2 AS SHOWN ON
L.C.C. 19572B

1950 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. ~~29840~~ V.T.
BOOK 7654 PAGE 10

N20°23'04"W
308.50'

N/F
MASSACHUSETTS BAY TRANSPORATION AUTHORITY
DEED BOOK 13117 PAGE 113

658.77'
N10°12'00"E

L=549.22' R=1650.00'
Δ=19° 04' 17"

79.17'
N84°43'53"E

93.03'
N52°18'49"E

125.79'
N32°07'01"E

N86°15'44"W
463.92'

L=542.13' R=1600.00'
Δ=19°24'49"

PROP ALEWIFE BROOK PARKWAY CONST BL

S58°59'33"W
33.01'

S14°34'30"W
67.92'

S75°34'09"W
25.96'

N52°34'18"W
51.59'

1929 RECORD BL

EXIST

PT +20.43
PC +56.97

N19°44'10"W
218.20'

L2
265.64'
N19°47'14"W

S60°02'48"W
33.18'

N58°40'24"W
49.54'

304.81'
S18°19'00"E

ALEWIFE BROOK PARKWAY

ALEWIFE STATION ACCESS ROAD

ALEWIFE LINEAR PATH

1956 MDC
PARKS DIVISION TAKING
PLAN NO. 34977-V.T.

1951 MDC PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.
BOOK 7749 PAGE 1220

LOCATION LINE OF NOVEMBER 14, 1908 METROPOLITAN PARK COMMISSION TAKING

1908 METROPOLITAN PARK COMMISSION
TAKING BOOK 3425 PAGE 179

1942 MDC PARKS DIVISION CONVEYANCE
PLAN NO. 26630-V.T.
BOOK 6636 PAGE 23

N/F
IQHQ-ALEWIFE, LLC
PARCEL ID: 269-135
DEED BOOK 75297 PAGE 443
1R-3R ALEWIFE BROOK PKWY

BENCHMARK:
NORTHEAST BOLT
ON SIGN
EL=28.48'

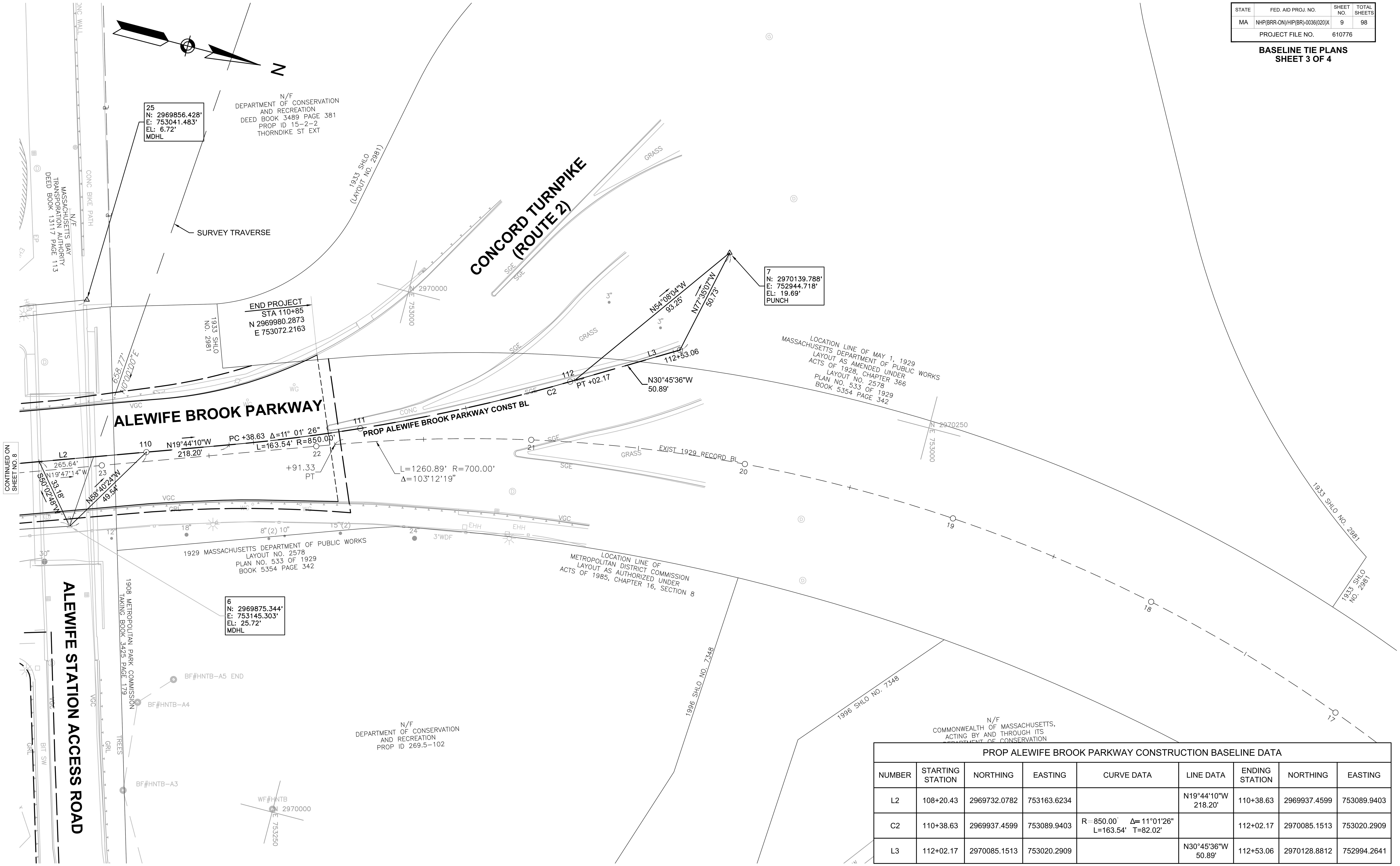
CONTINUED ON SHEET NO. 7

CONTINUED ON SHEET NO. 9

PROP ALEWIFE BROOK PARKWAY CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C1	102+71.21	2969194.0324	753260.4361	R=1650.00' Δ=19°04'17" L=549.22' T=277.17'		108+20.43	2969732.0782	753163.6234
L2	108+20.43	2969732.0782	753163.6234		N19°44'10"W 218.20'	110+38.63	2969937.4599	753089.9403

0 20 50 100
SCALE: 1" = 20'

Plotted on 29-Jul-2025 4:56 PM
610776_HD(BASELINE TIE PLANS).DWG



N
N/F
DEPARTMENT OF CONSERVATION
AND RECREATION
DEED BOOK 3489 PAGE 381
PROP ID 15-2-2
THORNDIKE ST EXT
25
N: 2969856.428'
E: 753041.483'
EL: 6.72'
MDHL
N/F
MASSACHUSETTS BAY
TRANSPORATION AUTHORITY
DEED BOOK 13117 PAGE 113
CONC WALL
CONC BIKE PATH
SURVEY TRAVERSE
1933 SHLO
(LAYOUT NO. 2981)
CONCORD TURNPIKE
(ROUTE 2)
GRASS
SGE
END PROJECT
STA 110+85
N 2969980.2873
E 753072.2163
1933 SHLO
NO. 2981
N 2970000
E 753000
7
N: 2970139.788'
E: 752944.718'
EL: 19.69'
PUNCH
N54°08'04"W
93.25'
N77°35'07"W
50.73'
L3
112+53.06
N30°45'36"W
50.89'
112
PT +02.17
C2
LOCATION LINE OF MAY 1, 1929
MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
LAYOUT AS AMENDED UNDER
ACTS OF 1928, CHAPTER 366
LAYOUT NO. 2578
PLAN NO. 533 OF 1929
BOOK 5354 PAGE 342
N 2970250
E 753000
ALEWIFE BROOK PARKWAY
658.77'
N0°02'00"E
111
PROP ALEWIFE BROOK PARKWAY CONST BL
110
N19°44'10"W
218.20'
PC +38.63 Δ=11° 01' 26"
L=163.54' R=850.00'
L2
265.64'
N19°47'14"W
S50°02'48"W
33.18'
N58°40'24"W
49.54'
23
22
+91.33
PT
L=1260.89' R=700.00'
Δ=103°12'19"
21
EXIST 1929 RECORD BL
20
19
18
17
CONTINUED ON
SHEET NO. 8
1929 MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
LAYOUT NO. 2578
PLAN NO. 533 OF 1929
BOOK 5354 PAGE 342
LOCATION LINE OF
METROPOLITAN DISTRICT COMMISSION
LAYOUT AS AUTHORIZED UNDER
ACTS OF 1985, CHAPTER 16, SECTION 8
1933 SHLO NO. 2981
6
N: 2969875.344'
E: 753145.303'
EL: 25.72'
MDHL
ALEWIFE STATION ACCESS ROAD
1908 METROPOLITAN PARK COMMISSION
TAKING BOOK 3425 PAGE 179
BF#HNTB-A5 END
BF#HNTB-A4
BF#HNTB-A3
WF#HNTB
N 2970000
E 753250
N/F
DEPARTMENT OF CONSERVATION
AND RECREATION
PROP ID 269.5-102
1996 SHLO NO. 7348
N/F
COMMONWEALTH OF MASSACHUSETTS,
ACTING BY AND THROUGH ITS
DEPARTMENT OF CONSERVATION
SCALE: 1" = 20'

PROP ALEWIFE BROOK PARKWAY CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L2	108+20.43	2969732.0782	753163.6234		N19°44'10"W 218.20'	110+38.63	2969937.4599	753089.9403
C2	110+38.63	2969937.4599	753089.9403	R=850.00' Δ=11°01'26" L=163.54' T=82.02'		112+02.17	2970085.1513	753020.2909
L3	112+02.17	2970085.1513	753020.2909		N30°45'36"W 50.89'	112+53.06	2970128.8812	752994.2641

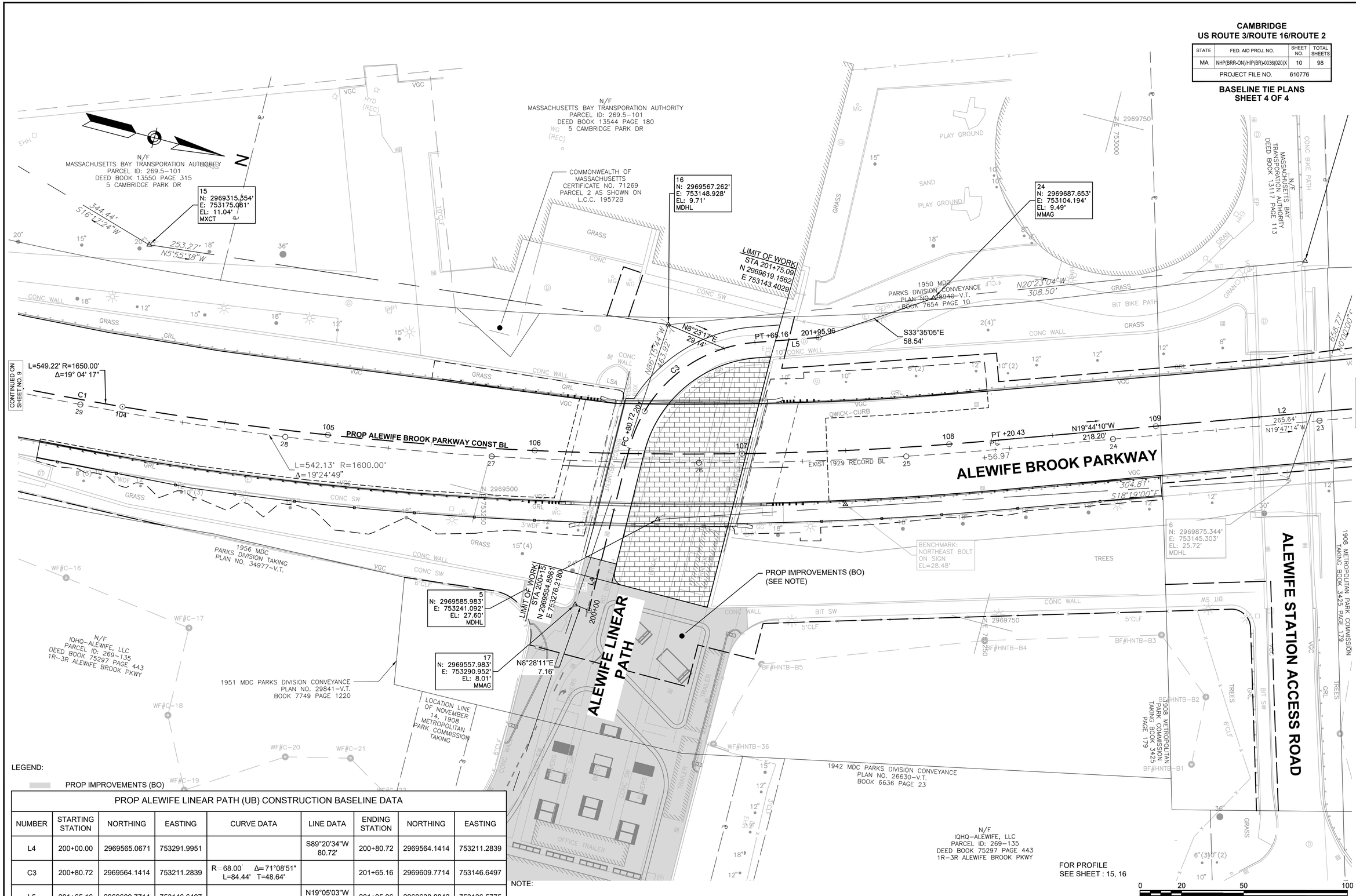
0 20 50 100
SCALE: 1" = 20'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	10	98
PROJECT FILE NO.	610776		

BASELINE TIE PLANS
SHEET 4 OF 4

610776_HD(BASELINE TIE PLANS).DWG Plotted on 29-Jul-2025 5:40 PM



LEGEND:

PROP IMPROVEMENTS (BO)

PROP ALEWIFE LINEAR PATH (UB) CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L4	200+00.00	2969565.0671	753291.9951		S89°20'34"W 80.72'	200+80.72	2969564.1414	753211.2839
C3	200+80.72	2969564.1414	753211.2839	R=68.00' Δ=71°08'51" L=84.44' T=48.64'		201+65.16	2969609.7714	753146.6497
L5	201+65.16	2969609.7714	753146.6497		N19°05'03"W 30.81'	201+95.96	2969638.8842	753136.5775

NOTE:

1. WORK IDENTIFIED HERE AS "PROP IMPROVEMENTS (BO)" IS ASSUMED TO BE COMPLETED PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE SCHEDULE, SCOPE OF WORK AND LIMITS OF WORK WITH IQHQ'S ALEWIFE HEADHOUSE IMPROVEMENT PROJECT. SEE SPECIAL PROVISIONS FOR INFORMATION.

HIGHWAY GUARD DETAILS

STA 103+63 - STA 103+97 RT, TRANSITION TO NCHRP 350 GUARDRAIL
STA 103+97 - STA 105+84 RT, GUARDRAIL, TL-2 (SINGLE FACED)

TRAFFIC SIGNAL CONDUIT: NONE

WATER SUPPLY ALTERATIONS: SEE SHEET 46

DRAINAGE DETAILS: SEE SHEET 46

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)HIP(BR)-0036(020)X	11	98
	PROJECT FILE NO.	610776	

CONSTRUCTION PLANS
SHEET 1 OF 4

Plotted on 29-Jul-2025 5:39 PM
610776_HD(CONSTRUCTION PLANS).DWG

N
ALEWIFE BROOK PARKWAY
CAMBRIDGEPARK DRIVE
RINDGE AVENUE
PROJECT BEGIN
STA 101+05
N 2969027.8329
E 753262.3639
98+00 ALEWIFE BROOK PARKWAY= 34+79.91 1929 MAIN BASELINE
PROP ALEWIFE BROOK PARKWAY CONST BL
EXIST 1929 RECORD BL
BENCHMARK: 1
1 WEST CORNER TRAFFIC CONTROL BOX CONCRETE BASE AT SOUTHWEST CORNER OF CAMBRIDGE PARK DRIVE & ALEWIFE
EL=10.33'
N/F
APPLETREEWOOD, LLC
PARCEL ID: 268C-30
DEED BOOK 44958 PAGE 0509
143 ALEWIFE BROOK PKWY
N/F
MASSACHUSETTS BAY TRANSPORATION AUTHORITY
PARCEL ID: C-269
DEED BOOK 13117 PAGE 113
PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS
N/F
MASSACHUSETTS BAY TRANSPORATION AUTHORITY
PARCEL ID: 269.5-101
DEED BOOK 13550 PAGE 315
5 CAMBRIDGE PARK DR
N/F
IQHQ-ALEWIFE, LLC
PARCEL ID: 269-135
DEED BOOK 75297 PAGE 443
1R-3R ALEWIFE BROOK PKWY
1950 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. 28940-V.T.
BOOK 7654 PAGE 10
1951 MDC LOCATION LINE
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.
1951 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.
BOOK 7749 PAGE 1220
30' WIDE RIGHT OF WAY AND EASEMENT (PLAN 33 OF 1999) BOOK 9229 PAGE 135
BENCHMARK: 2
NORTHWEST BOLT OF LIGHT POLE 40
EL=12.43'
PROP LIMIT OF TEMP OCCUPANCY AREA
RET BIT SW
RET LP
RET EHH
RET VGC
RET TREES
RET GUARDRAIL
RET ISLAND
RET EXIST CONC ISLAND
SAWCUT
ADJ DMH
RET LP (TYP)
RET TREE
RET GRAN MONUMENT
RET EXIST SW
RET EXIST GRASS
RET EXIST CONC WALL
PROP UTILITY STRUCTURE (TYP)
ADJ CB GRADE TO DRAIN
RET EXIST VGC
RET TREES (2)
RET EXIST GUARDRAIL
PROP FINE MILL & OVERLAY
REM CEM CONC GORE PROP FULL DEPTH PVMT < 4'
REM CEM CONC GORE PROP FULL DEPTH PVMT
PROP BOX WIDENING FULL DEPTH PVMT < 4'
MATCH EXISTING
REM EXIST GUARDRAIL STA 103+64 TO 106+06
PROP GUARDRAIL TL-2
CONTINUED ON SHEET NO. 12
RET CONC ISLAND AND VGC
RET CB
RET EXIST VGC
RET CONC SW
RET EXIST GATE
RET EXIST CEM CONC DWY
PROP TEMP OCCUPANCY AREA (TYP)
PROP SEDIMENT CONTROL BARRIER (TYP)
PROP TREE PROTECTION (TYP)
RET MH
RET EXIST FENCE
RET TREES (5)
RET EXIST WALL
R&S EXIST FENCE STA 103+64 TO 106+21 CONTRACTOR SHALL COORDINATE WITH DCR FOR LOCATION TO STACK FENCE
LOCATION LINE OF NOVEMBER 14, 1908 METROPOLITAN PARK COMMISSION TAKING
END OF 1992 MDC ALTERATION (SECTION 4) SHLO NO. 7102
1870 CITY OF CAMBRIDGE LAYOUT
2001 CITY OF CAMBRIDGE LAYOUT BOOK 32240 PAGE 10
1956 MDC PARKS DIVISION TAKING PLAN NO. 34977-V.T.

NOTE:

1. EXISTING GUARDRAIL WITHIN THE PROJECT LIMITS THAT IS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR, AS DETERMINED BY THE ENGINEER.
2. HIGHWAY GUARD INSTALLED ON THE EAST SIDE OF THE BRIDGE SHALL PROVIDE A TIMBER BACKING AND FRANGIBLE LEAVE-OUTS AROUND EACH STEEL POST IN ACCORDANCE WITH MASSDOT STANDARD DETAIL DRAWING 601.0.4.
3. PRIOR TO ANY WORK, THE ARBORIST SHALL WALK THE SITE WITH THE CONTRACTOR, THE ENGINEER, THE TOWN TREE WARDEN, AND THE MASSDOT LANDSCAPE ARCHITECT TO REVIEW THE TREES. ENGINEER SHALL MAKE THE FINAL DETERMINATION ON WHICH TREES RECEIVE ARMORING AND/OR ROOT ZONE PROTECTION BASED ON ARBORIST RECOMMENDATIONS. TREES THAT ARE DEAD, DYING OR INVASIVE SHALL BE EXCLUDED FROM ARMORING UNLESS REQUIRED OTHERWISE BY THE ENGINEER. SEE ITEM 102.55 IN THE SPECIAL PROVISIONS.

FOR PROFILE SEE SHEET : 15

SCALE: 1" = 20'

HIGHWAY GUARD DETAILS

STA 105+53 - STA 105+87 LT, TRANSITION TO NCHRP 350 GUARDRAIL
STA 105+87 - STA 105+99 LT, GUARDRAIL, TL-2 (SINGLE FACED)
STA 105+99 - STA 106+33 LT, TRANSITION TO BRIDGE RAIL

STA 103+63 - STA 103+97 RT, TRANSITION TO NCHRP 350 GUARDRAIL
STA 103+97 - STA 105+84 RT, GUARDRAIL, TL-2 (SINGLE FACED)
STA 105+84 - STA 106+18 RT, TRANSITION TO BRIDGE RAIL

STA 107+15 - STA 107+49 LT, TRANSITION TO BRIDGE RAIL
STA 107+49 - STA 107+86 LT, GUARDRAIL, TL-2 (SINGLE FACED)
STA 107+86 - STA 108+20 LT, TRANSITION TO NCHRP 350 GUARDRAIL

STA 107+09 - STA 107+43 RT, TRANSITION TO BRIDGE RAIL
STA 107+43 - STA 108+68 RT, GUARDRAIL, TL-2 (SINGLE FACED)
STA 108+66 - STA 109+00 RT, TRANSITION TO NCHRP 350 GUARDRAIL

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 47

DRAINAGE DETAILS

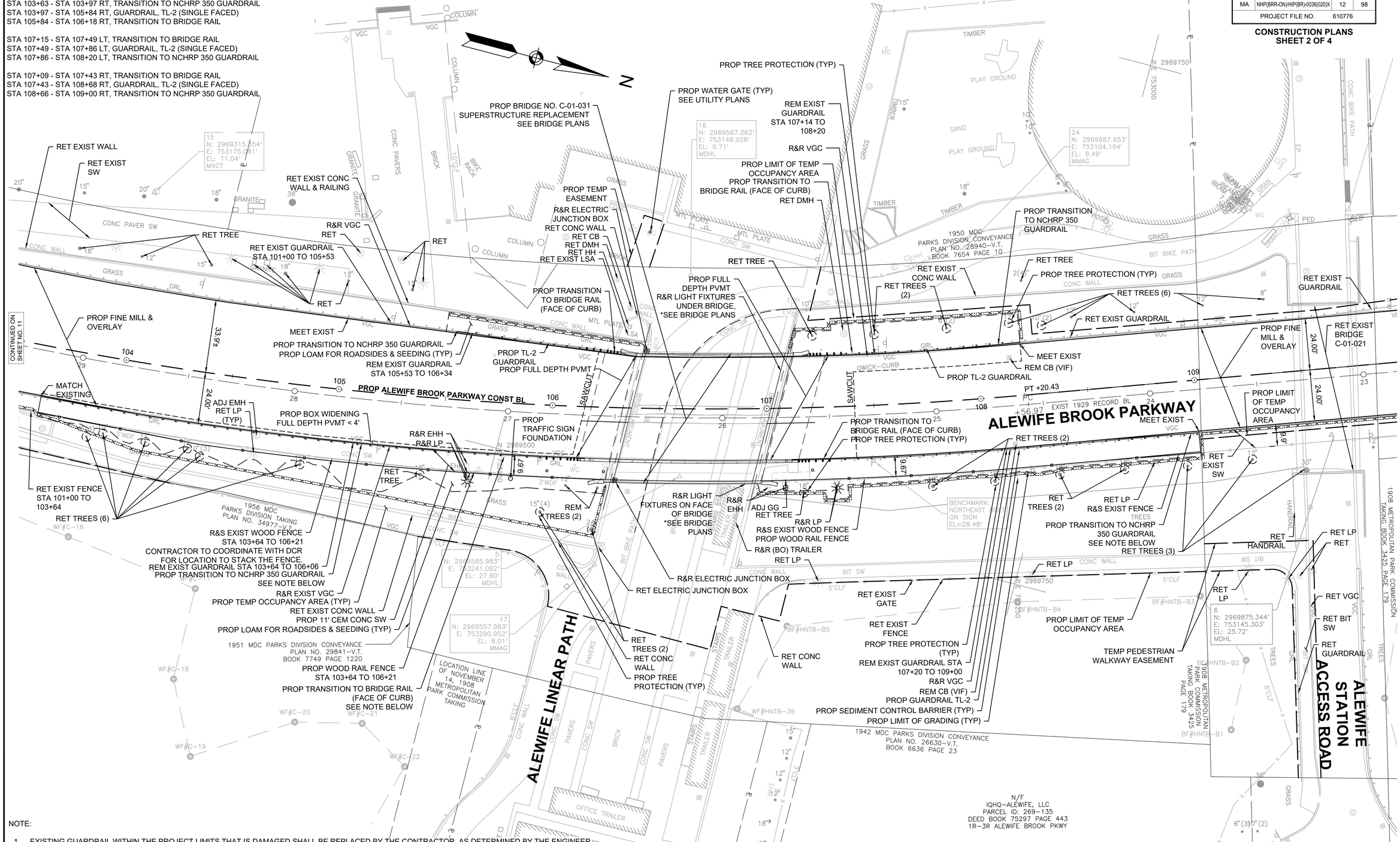
SEE SHEET 47

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	12	98
PROJECT FILE NO.	610776		

CONSTRUCTION PLANS
SHEET 2 OF 4

610776_HDI(CONSTRUCTION PLANS).DWG Plotted on 29-Jul-2025 5:39 PM



NOTE:

1. EXISTING GUARDRAIL WITHIN THE PROJECT LIMITS THAT IS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR, AS DETERMINED BY THE ENGINEER.
2. HIGHWAY GUARD INSTALLED ON THE EAST SIDE OF THE BRIDGE SHALL PROVIDE A TIMBER BACKING AND FRANGIBLE LEAVE-OUTS AROUND EACH STEEL POST IN ACCORDANCE WITH MASSDOT STANDARD DETAIL DRAWING 601.0.4.
3. PRIOR TO ANY WORK, THE ARBORIST SHALL WALK THE SITE WITH THE CONTRACTOR, THE ENGINEER, THE TOWN TREE WARDEN, AND THE MASSDOT LANDSCAPE ARCHITECT TO REVIEW THE TREES. ENGINEER SHALL MAKE THE FINAL DETERMINATION ON WHICH TREES RECEIVE ARMORING AND/OR ROOT ZONE PROTECTION BASED ON ARBORIST RECOMMENDATIONS. TREES THAT ARE DEAD, DYING OR INVASIVE SHALL BE EXCLUDED FROM ARMORING UNLESS REQUIRED OTHERWISE BY THE ENGINEER. SEE ITEM 102.55 IN THE SPECIAL PROVISIONS.

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE SHEET 48

DRAINAGE DETAILS

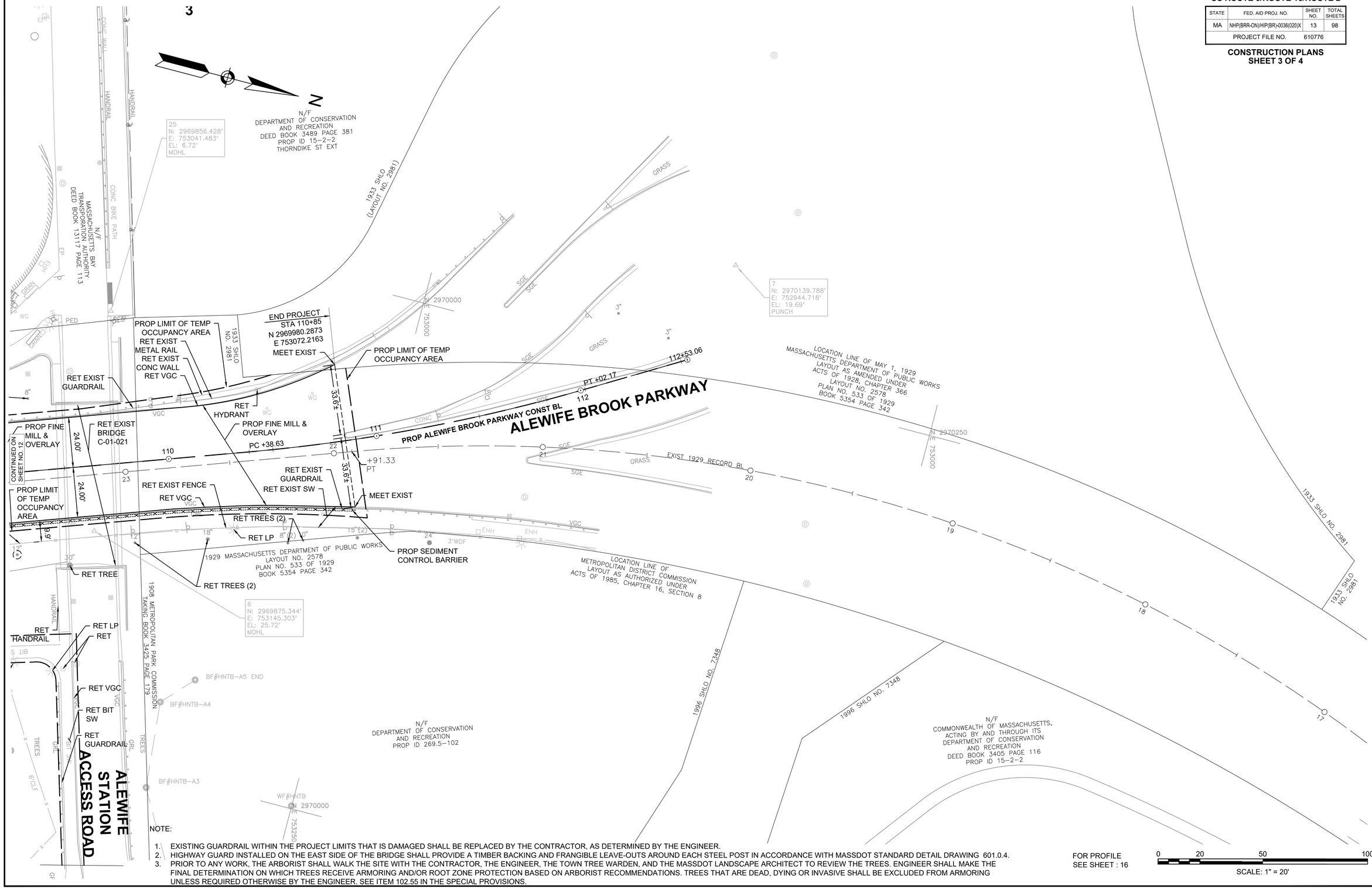
SEE SHEET 48

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	13	98
PROJECT FILE NO.	610776		

CONSTRUCTION PLANS
SHEET 3 OF 4

610776_HDI(CONSTRUCTION PLANS).DWG Plotted on 29-Jul-2025 5:39 PM



NOTE:

1. EXISTING GUARDRAIL WITHIN THE PROJECT LIMITS THAT IS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR, AS DETERMINED BY THE ENGINEER.
2. HIGHWAY GUARD INSTALLED ON THE EAST SIDE OF THE BRIDGE SHALL PROVIDE A TIMBER BACKING AND FRANGIBLE LEAVE-OUTS AROUND EACH STEEL POST IN ACCORDANCE WITH MASSDOT STANDARD DETAIL DRAWING 601.0.4.
3. PRIOR TO ANY WORK, THE ARBORIST SHALL WALK THE SITE WITH THE CONTRACTOR, THE ENGINEER, THE TOWN TREE WARDEN, AND THE MASSDOT LANDSCAPE ARCHITECT TO REVIEW THE TREES. ENGINEER SHALL MAKE THE FINAL DETERMINATION ON WHICH TREES RECEIVE ARMORING AND/OR ROOT ZONE PROTECTION BASED ON ARBORIST RECOMMENDATIONS. TREES THAT ARE DEAD, DYING OR INVASIVE SHALL BE EXCLUDED FROM ARMORING UNLESS REQUIRED OTHERWISE BY THE ENGINEER. SEE ITEM 102.55 IN THE SPECIAL PROVISIONS.

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

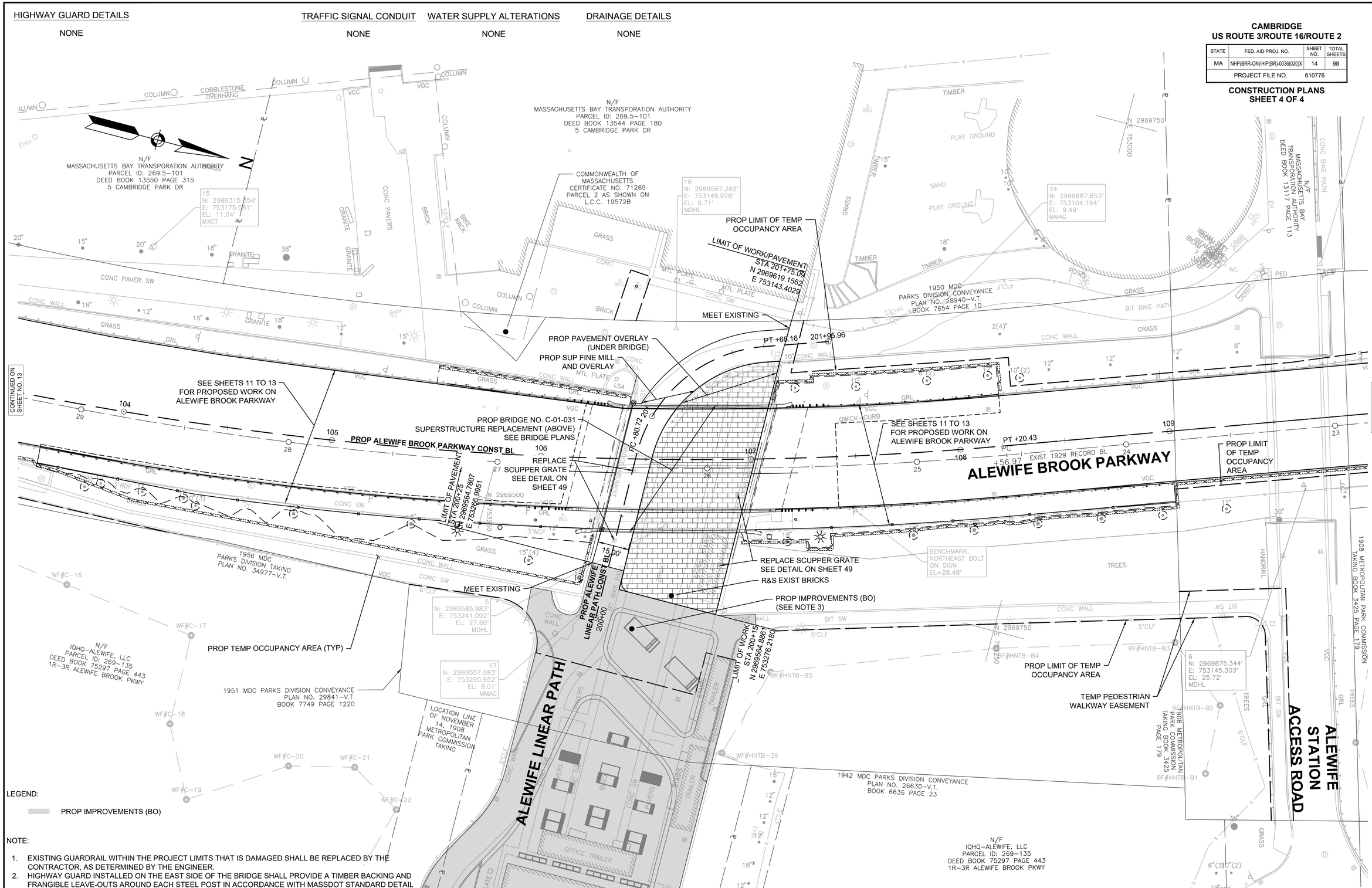
NONE

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	14	98
PROJECT FILE NO. 610776			

CONSTRUCTION PLANS
SHEET 4 OF 4

610776_HDI(CONSTRUCTION PLANS).DWG Plotted on 29-Jul-2025 5:41 PM



LEGEND:

PROP IMPROVEMENTS (BO)

NOTE:

1. EXISTING GUARDRAIL WITHIN THE PROJECT LIMITS THAT IS DAMAGED SHALL BE REPLACED BY THE CONTRACTOR, AS DETERMINED BY THE ENGINEER.
2. HIGHWAY GUARD INSTALLED ON THE EAST SIDE OF THE BRIDGE SHALL PROVIDE A TIMBER BACKING AND FRANGIBLE LEAVE-OUTS AROUND EACH STEEL POST IN ACCORDANCE WITH MASSDOT STANDARD DETAIL 400.5.1.
3. WORK IDENTIFIED HERE AS "PROP IMPROVEMENTS (BO)" IS ASSUMED TO BE COMPLETED PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE SCHEDULE, SCOPE OF WORK AND LIMITS OF WORK WITH IQHQ'S ALEWIFE HEADHOUSE IMPROVEMENT PROJECT. SEE SPECIAL PROVISIONS FOR INFORMATION.

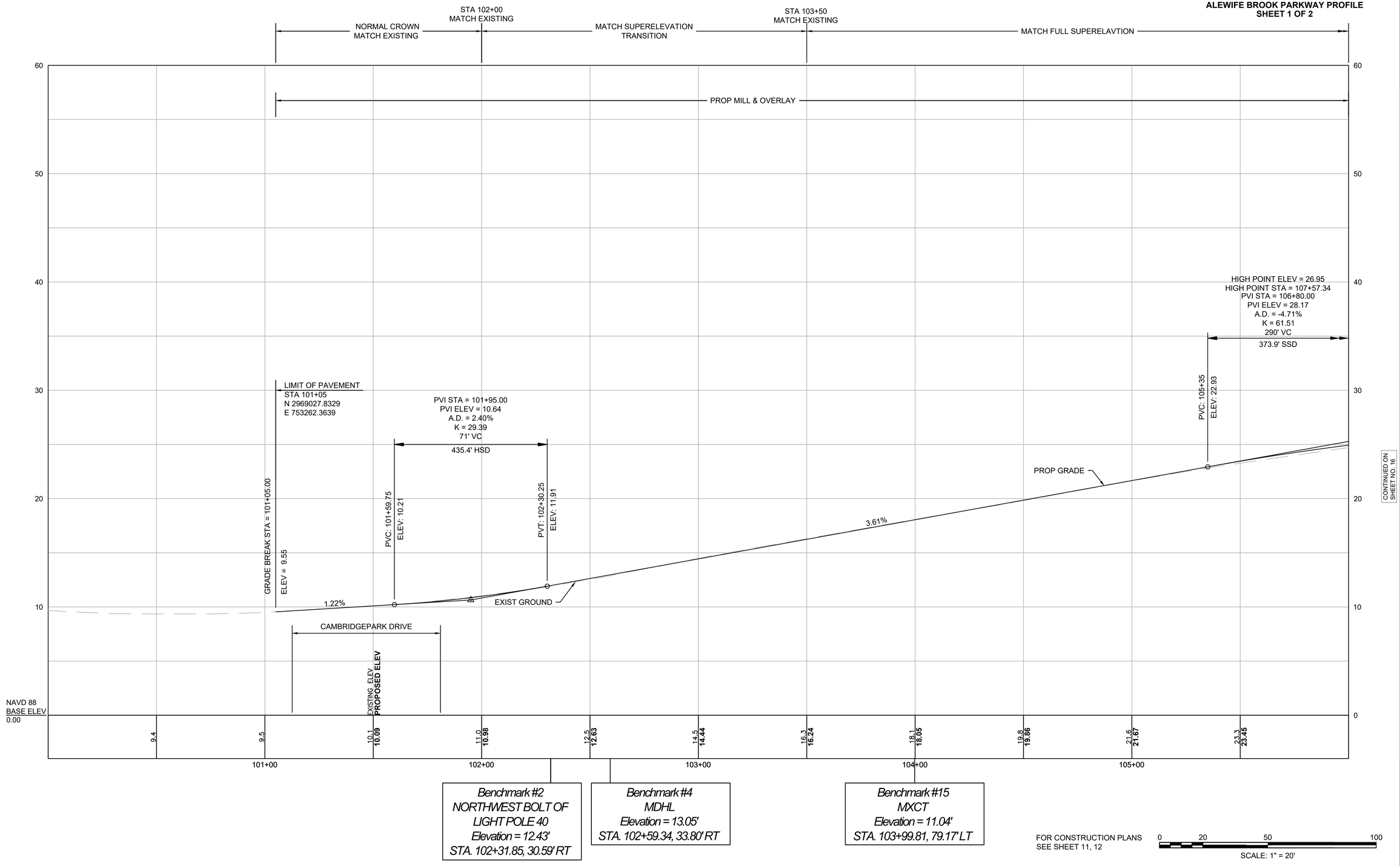
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	15	98
PROJECT FILE NO.	610776		

ALEWIFE BROOK PARKWAY PROFILE
SHEET 1 OF 2

ALEWIFE BROOK PARKWAY

US ROUTE 3/ROUTE 16/ROUTE 2
DESIGN SPEED = 35 MPH



Benchmark #2
NORTHWEST BOLT OF LIGHT POLE 40
Elevation = 12.43'
STA. 102+31.85, 30.59' RT

Benchmark #4
MDHL
Elevation = 13.05'
STA. 102+59.34, 33.80' RT

Benchmark #15
MXCT
Elevation = 11.04'
STA. 103+99.81, 79.17' LT

FOR CONSTRUCTION PLANS SEE SHEET 11, 12

SCALE: 1" = 20'

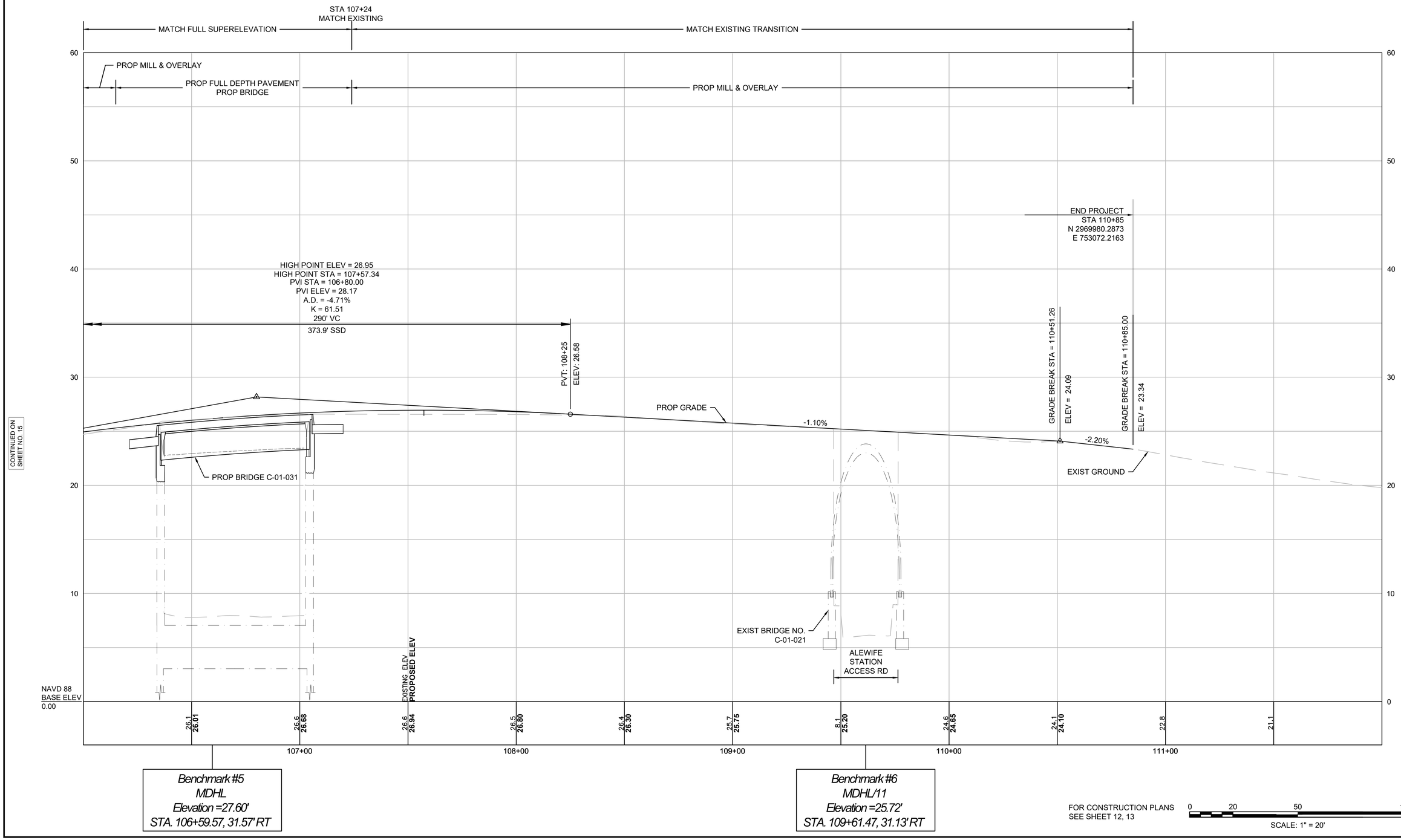
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	16	98
PROJECT FILE NO.	610776		

ALEWIFE BROOK PARKWAY PROFILE
SHEET 2 OF 2

ALEWIFE BROOK PARKWAY

US ROUTE 3/ROUTE 16/ROUTE 2
DESIGN SPEED = 35 MPH



Benchmark #5
MDHL
Elevation =27.60'
STA. 106+59.57, 31.57' RT

Benchmark #6
MDHL/11
Elevation =25.72'
STA. 109+61.47, 31.13' RT

FOR CONSTRUCTION PLANS
SEE SHEET 12, 13

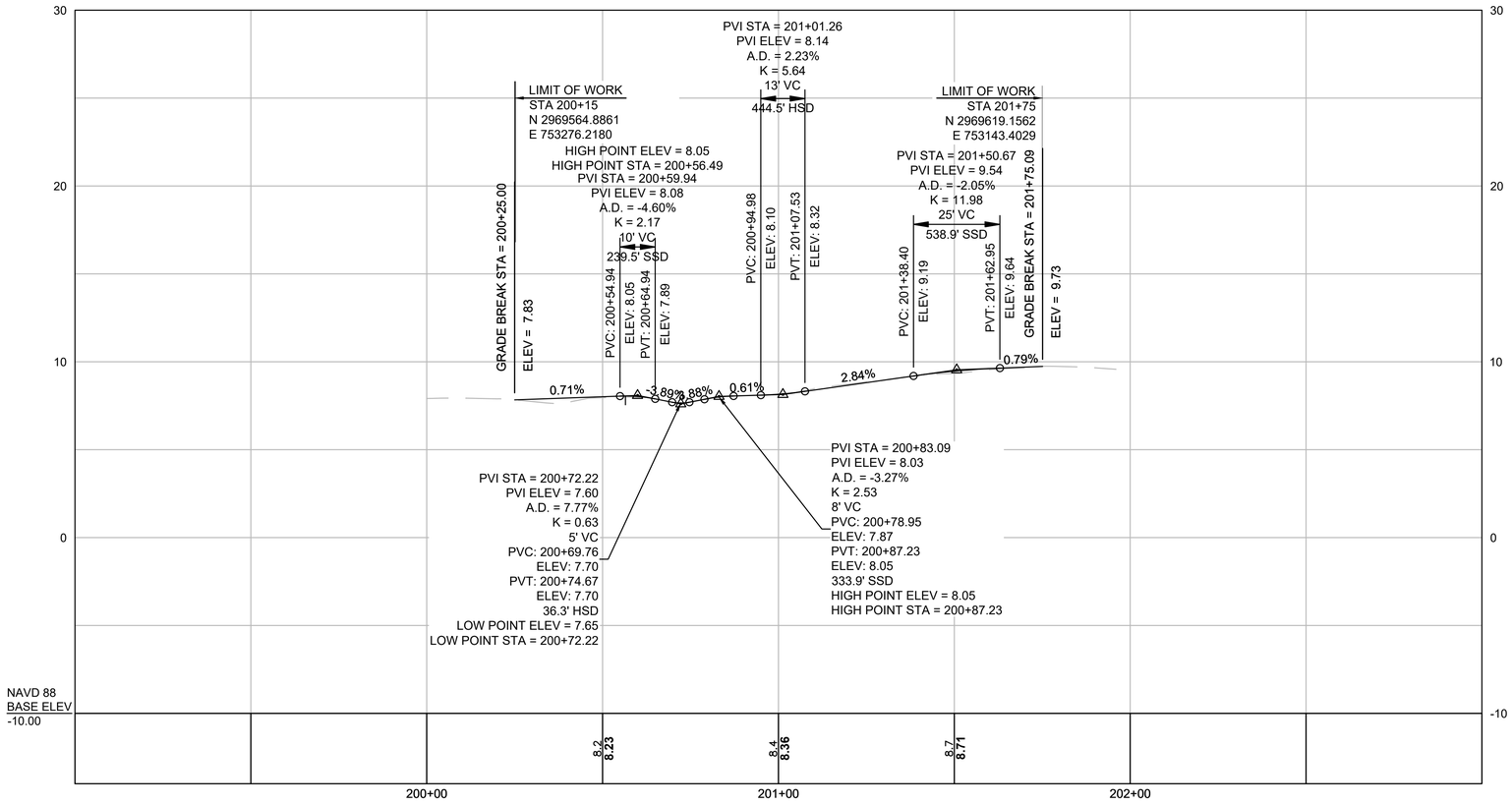
0 20 50 100
SCALE: 1" = 20'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	17	98
PROJECT FILE NO.	610776		

ALEWIFE LINEAR PATH PROFILE
SHEET 1 OF 1

ALEWIFE LINEAR PATH (UB)



FOR CONSTRUCTION PLANS
SEE SHEET 14

0 20 50 100
SCALE: 1" = 20'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	18	98
PROJECT FILE NO.	610776		

CURB TIE & GRADING PLANS
SHEET 1 OF 4

N
BENCHMARK: 1
1 WEST CORNER TRAFFIC CONTROL BOX
CONCRETE BASE AT SOUTHWEST CORNER
OF CAMBRIDGE PARK DRIVE & ALEWIFE
EL=10.33'
N/F
APPLETREEWOOD, LLC
PARCEL ID: 268C-30
DEED BOOK 44958 PAGE 0509
143 ALEWIFE BROOK PKWY
30' WIDE RIGHT OF WAY AND EASEMENT (PLAN 33 OF 1999) BOOK 9229 PAGE 135
1870 CITY OF CAMBRIDGE LAYOUT
N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
PARCEL ID: C-269
DEED BOOK 13117 PAGE 113
PARCEL IS SUBJECT TO
ARTICLE 97 RESTRICTIONS
2001 CITY OF CAMBRIDGE LAYOUT BOOK 32240 PAGE 10
2
N: 2968984.753'
E: 753078.473'
EL: 8.02'
PUNCH 2862
STONE BOUND
DRILL HOLE FOUND
STONE BOUND
X-CUT FOUND
(HELD)
CAMBRIDGEPARK DRIVE
PROJECT BEGIN
STA 101+05
N 2969027.8329
E 753262.3639
CSMH
RIM=7.42
INV(A)=-3.05
INV(B)=NPV
B.O.T.=-3.03
N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
PARCEL ID: 269.5-101
DEED BOOK 13550 PAGE 315
5 CAMBRIDGE PARK DR
COBBLESTONE OVERHANG
15
N: 2969315.354'
E: 753175.081'
EL: 11.04'
MXCT
PROP TEMPORARY
PEDESTRIAN WALKWAY
(TYP)
1950 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. 28940-V.T.
BOOK 7654 PAGE 10
1951 MDC LOCATION LINE
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.
98+00 ALEWIFE BROOK PARKWAY OFFSET 0.01 =
34+79.91 1929 MAIN BASELINE OFFSET -2.56
99+97.84 ALEWIFE BROOK PARKWAY OFFSET 0.00 =
32+82.17 1929 MAIN BASELINE OFFSET 0.00
MEET EXIST
MATCH EXISTING
L=549.22' R=1650.00'
Δ=19° 04' 17"
PROP ALEWIFE BROOK PARKWAY CONST BL
N 0° 39' 52" W 471.21'
ALEWIFE BROOK PARKWAY
CONTINUED ON SHEET NO. 19
MEET EXIST
3
N: 2968822.768'
E: 753301.546'
EL: 11.36'
MDHL
1951 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.
BOOK 7749 PAGE 1220
BENCHMARK: 2
PROP TEMPORARY
OCCUPANCY AREA (TYP)
4
N: 2969182.552'
E: 753294.370'
EL: 13.05'
MDHL
LOCATION LINE OF
NOVEMBER 14, 1908
METROPOLITAN PARK COMMISSION TAKING
Δ=47°12'42"
R=30.00'
L=24.72'
T=13.11'
N89°08'38"W
EPLP
(SEE DETAIL)
END OF 1992
MDC ALTERATION (SECTION 4)
SHLO NO. 7102
1956 MDC
PARKS DIVISION TAKING
PLAN NO. 34977-V.T.
RINDGE AVENUE
1870 CITY OF CAMBRIDGE LAYOUT
N/F
IQHQ-ALEWIFE, LLC
PARCEL ID: 269-135
DEED BOOK 75297 PAGE 443
1R-3R ALEWIFE BROOK PKWY
WF#C-9
WF#C-10
WF#C-11
WF#C-12
WF#C-13
WF#C-14
WF#C-15
WF#C-16

NOTES:
1. ELEVATIONS SHOWN AT EVEN 50-FOOT STATIONS, UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO MATCH EXISTING DRIVEWAYS, SIDEWALKS, AND BOTTOM OF WALLS.
3. ELEVATIONS SHOWN ARE BOTTOM OF CURB UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

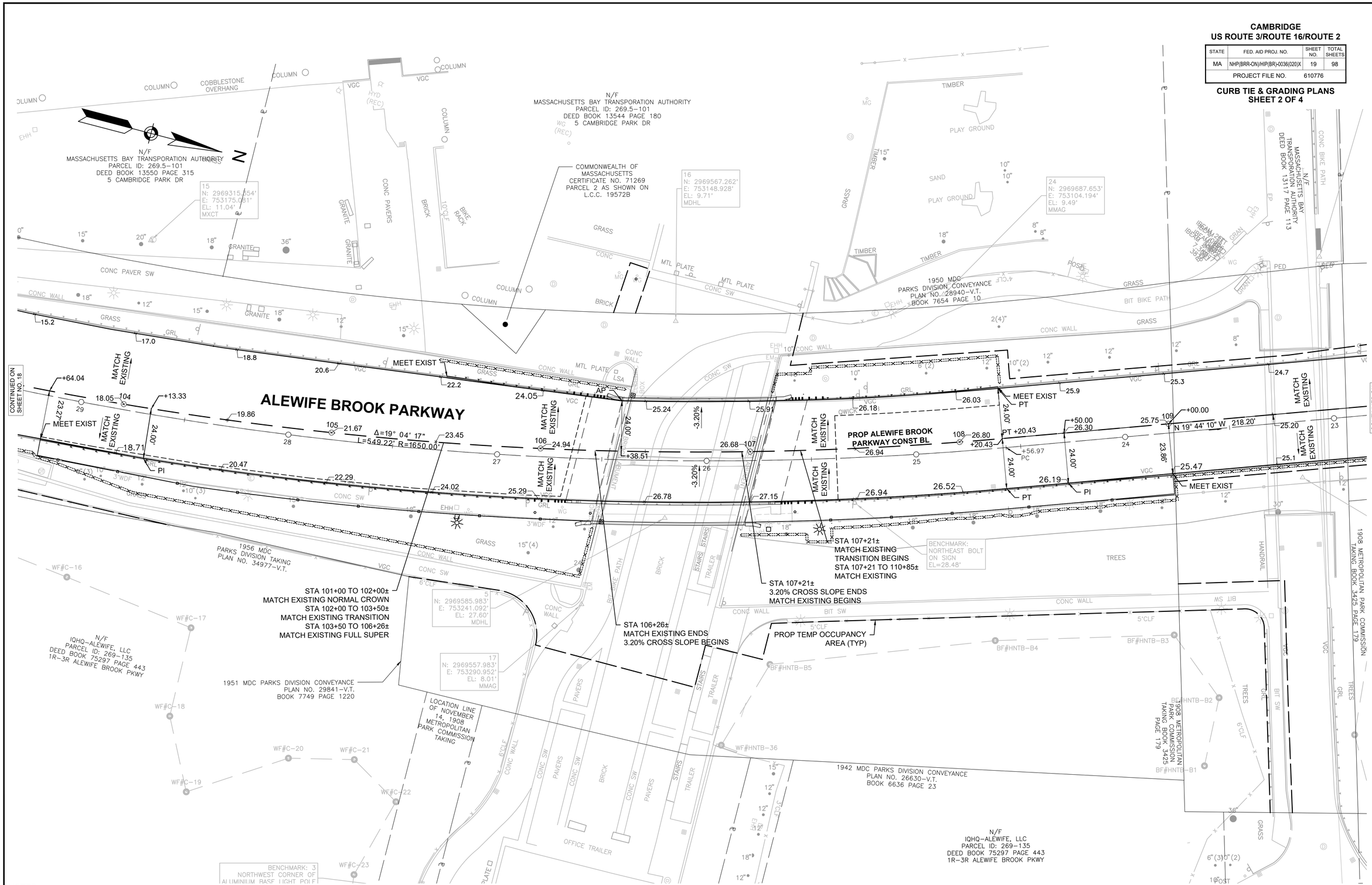
610776_HD(CURB TIE & GRADING PLANS).DWG
Plotted on 29-Jul-2025 7:59 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	19	98
PROJECT FILE NO.	610776		

CURB TIE & GRADING PLANS
SHEET 2 OF 4

610776_HD(CURB TIE & GRADING PLANS).DWG Plotted on 29-Jul-2025 8:00 PM



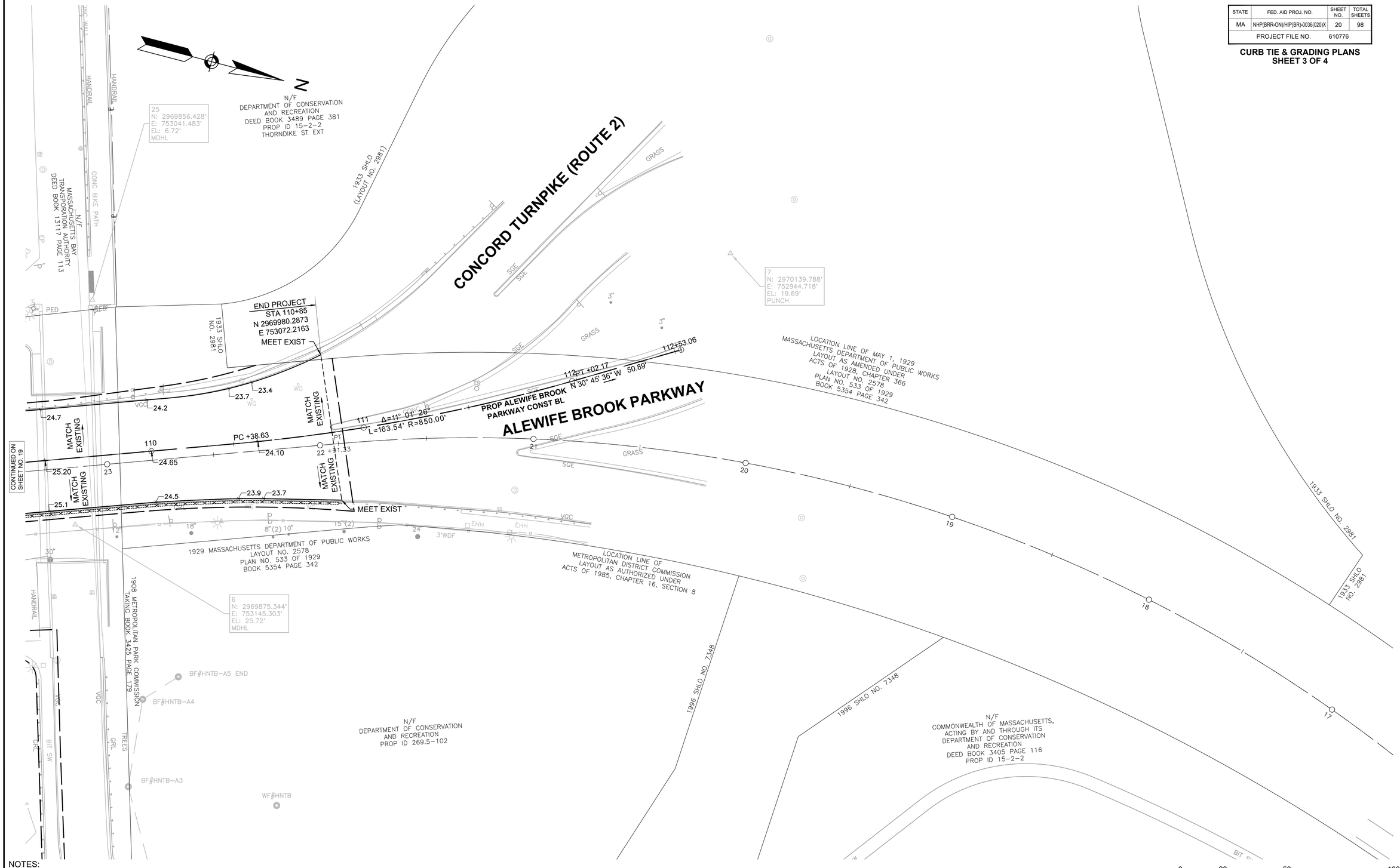
NOTES:
1. ELEVATIONS SHOWN AT EVEN 25-FOOT STATIONS, UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO MATCH EXISTING DRIVEWAYS, SIDEWALKS, AND BOTTOM OF WALLS.
3. ELEVATIONS SHOWN ARE BOTTOM OF CURB UNLESS OTHERWISE NOTED.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	20	98
PROJECT FILE NO.	610776		

CURB TIE & GRADING PLANS
SHEET 3 OF 4

610776_HD(CURB TIE & GRADING PLANS).DWG Plotted on 29-Jul-2025 8:00 PM



NOTES:
1. ELEVATIONS SHOWN AT EVEN 25-FOOT STATIONS, UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO MATCH EXISTING DRIVEWAYS, SIDEWALKS, AND BOTTOM OF WALLS.
3. ELEVATIONS SHOWN ARE BOTTOM OF CURB UNLESS OTHERWISE NOTED.

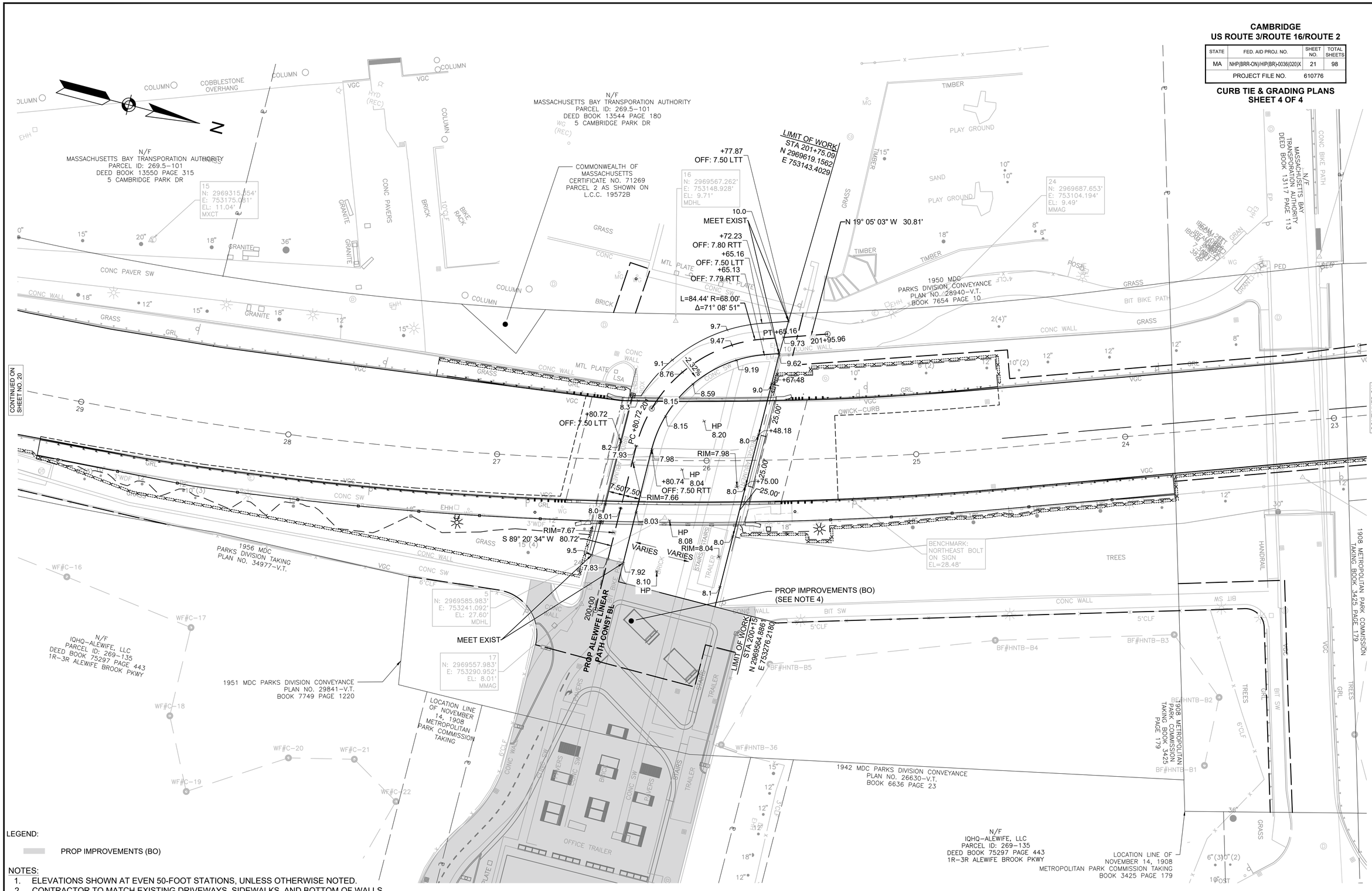
0 20 50 100
SCALE: 1" = 20'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	21	98
PROJECT FILE NO. 610776			

CURB TIE & GRADING PLANS
SHEET 4 OF 4

610776_HD(CURB TIE & GRADING PLANS).DWG Plotted on 29-Jul-2025 8:34 PM



LEGEND:

PROP IMPROVEMENTS (BO)

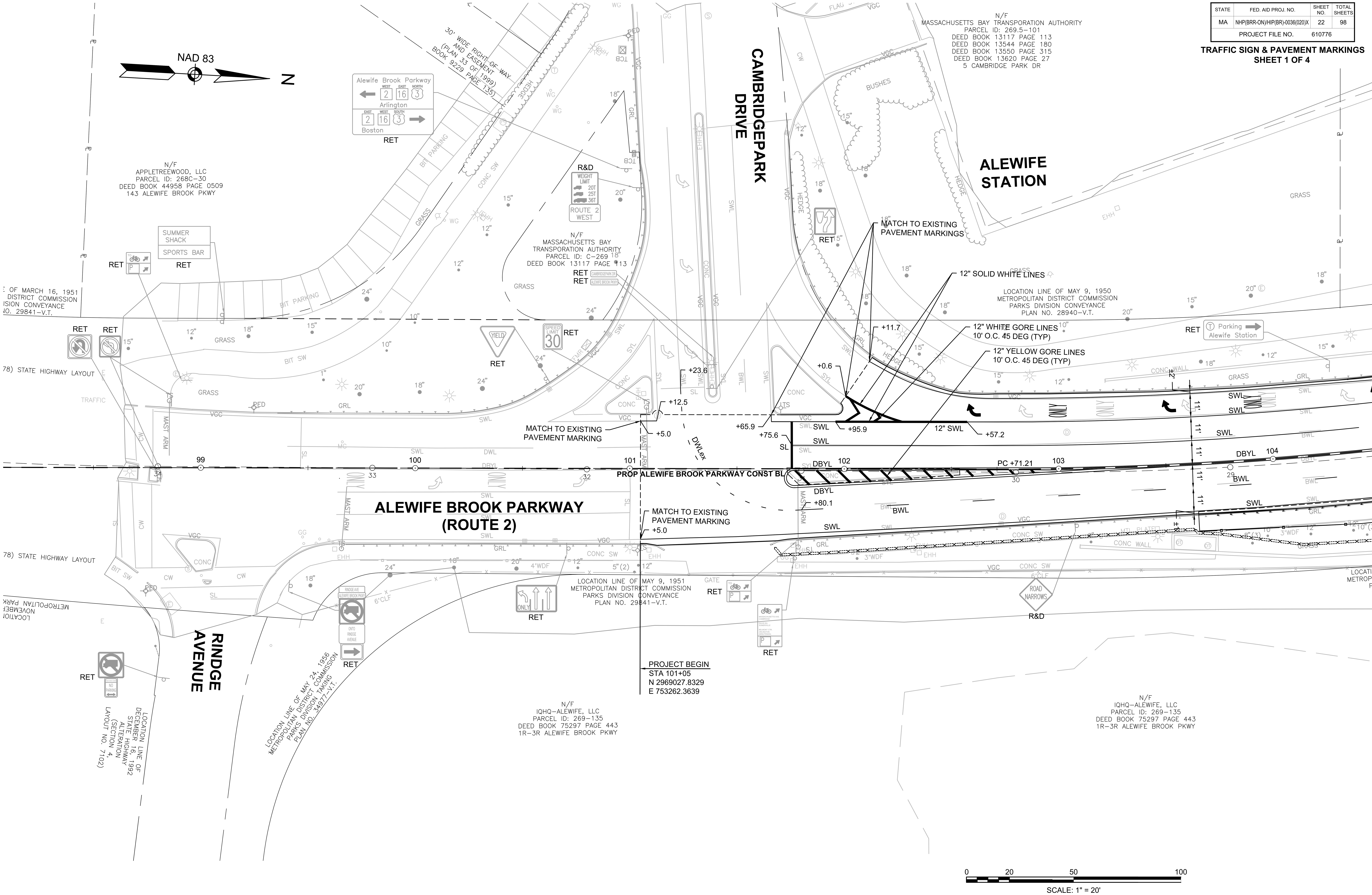
NOTES:

1. ELEVATIONS SHOWN AT EVEN 50-FOOT STATIONS, UNLESS OTHERWISE NOTED.
2. CONTRACTOR TO MATCH EXISTING DRIVEWAYS, SIDEWALKS, AND BOTTOM OF WALLS.
3. ELEVATIONS SHOWN ARE BOTTOM OF CURB UNLESS OTHERWISE NOTED.
4. WORK IDENTIFIED HERE AS "PROP IMPROVEMENTS (BO)" IS ASSUMED TO BE COMPLETED PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL COORDINATE SCHEDULE, SCOPE OF WORK AND LIMITS OF WORK WITH IQHQ'S ALEWIFE HEADHOUSE IMPROVEMENT PROJECT. SEE SPECIAL PROVISIONS FOR INFORMATION.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)HIP(BR)-0036(020)X	22	98
	PROJECT FILE NO.	610776	

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 1 OF 4



NAD 83
N
ALEWIFE BROOK PARKWAY
(ROUTE 2)
CAMBRIDGEPARK DRIVE
ALEWIFE STATION
RINDGE AVENUE
N/F
APPLETREEWOOD, LLC
PARCEL ID: 268C-30
DEED BOOK 44958 PAGE 0509
143 ALEWIFE BROOK PKWY
N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
PARCEL ID: 269.5-101
DEED BOOK 13117 PAGE 113
DEED BOOK 13544 PAGE 180
DEED BOOK 13550 PAGE 315
DEED BOOK 13620 PAGE 27
5 CAMBRIDGE PARK DR
N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
PARCEL ID: C-269
DEED BOOK 13117 PAGE 113
30' WIDE RIGHT OF WAY AND EASEMENT (PLAN 33 OF 1999) BOOK 9229 PAGE 135
N/F
IQHQ-ALEWIFE, LLC
PARCEL ID: 269-135
DEED BOOK 75297 PAGE 443
1R-3R ALEWIFE BROOK PKWY
LOCATION LINE OF MAY 9, 1950
METROPOLITAN DISTRICT COMMISSION
PARKS DIVISION CONVEYANCE
PLAN NO. 28940-V.T.
LOCATION LINE OF MAY 9, 1951
METROPOLITAN DISTRICT COMMISSION
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.
LOCATION LINE OF MAY 24, 1956
METROPOLITAN DISTRICT COMMISSION
PARKS DIVISION TAKING
PLAN NO. 34977-V.T.
LOCATION LINE OF DECEMBER 16, 1992
STATE HIGHWAY ALTERATION
(SECTION 4, LAYOUT NO. 7102)
MATCH TO EXISTING PAVEMENT MARKINGS
12" SOLID WHITE LINES
12" WHITE GORE LINES
10' O.C. 45 DEG (TYP)
12" YELLOW GORE LINES
10' O.C. 45 DEG (TYP)
MATCH TO EXISTING PAVEMENT MARKING
PROP ALEWIFE BROOK PARKWAY CONST BL
PC +71.21
PROJECT BEGIN
STA 101+05
N 2969027.8329
E 753262.3639
CONTINUED ON SHEET NO. 23
Alewife Brook Parkway
Arlington
Boston
SUMMER SHACK
SPORTS BAR
Parking
Alewife Station
ROUTE 2 WEST
WEIGHT LIMIT
SPEED LIMIT 30
YIELD
ROAD NARROWS
RET
R&D
SWL
DBYL
SL
DWLex
12" SWL
+95.9
+57.2
+65.9
+75.6
+80.1
+0.6
+11.7
+23.6
+12.5
+5.0
99
100
101
102
103
104
0 20 50 100
SCALE: 1" = 20'

610776_TR4(SIGN & PVMK).DWG Plotted on 29-Jul-2025 6:19 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	23	98
PROJECT FILE NO.	610776		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 2 OF 4

610776_TR4(SIGN & PVMK).DWG Plotted on 29-Jul-2025 6:19 PM

NAD 83 N

ALEWIFE BROOK PARKWAY (ROUTE 2)

PROP ALEWIFE BROOK PARKWAY CONST BL

ALEWIFE LINEAR PATH

ALEWIFE STATION ACCESS ROAD

CONTINUED ON SHEET NO. 22

CONTINUED ON SHEET NO. 24

SEE SHEET 25 FOR UNDER THE BRIDGE PAVEMENT MARKINGS

N/F MASSACHUSETTS BAY TRANSPORATION AUTHORITY
PARCEL ID: 269.5–101
DEED BOOK 13117 PAGE 113
DEED BOOK 13544 PAGE 180
DEED BOOK 13550 PAGE 315
DEED BOOK 13620 PAGE 27
5 CAMBRIDGE PARK DR

LOCATION LINE OF MAY 9, 1950 METROPOLITAN DISTRICT COMMISSION PARKS DIVISION CONVEYANCE PLAN NO. 28940–V.T.

LOCATION LINE OF MAY 24, 1956 METROPOLITAN DISTRICT COMMISSION PARKS DIVISION TAKING PLAN NO. 34977–V.T.

LOCATION LINE OF NOVEMBER 14, 1908 METROPOLITAN PARK COMMISSION TAKING

LOCATION LINE OF AUGUST 25, 1942 METROPOLITAN DISTRICT COMMISSION PARKS DIVISION CONVEYANCE PLAN NO. 26630–V.T.

METROPOLITAN PARK COMMISSION TAKING BOOK 3425 PAGE 179

N/F IQHQ–ALEWIFE, LLC
PARCEL ID: 269–135
DEED BOOK 75297 PAGE 443
1R–3R ALEWIFE BROOK PKWY

R3-8 ONLY ONLY ONLY

13 FT 4 IN W12-2a

NORTH EAST 3 16 Arlington Medford
2 WEST Concord
MA-D1-6
MA-D1-5

NORTH EAST 3 16 ARLINGTON MEDFORD
2 WEST CONCORD

2 16 3 Boston Watertown
Parking Alewife Station

Parking Alewife Station

BIKE PATH PARKING

TRAIL X-ING

RIGHT LANE MUST TURN RIGHT

WEIGHT LIMIT 20T 25T 36T

STOP

R&D

RET

PT +65.16 201+95.96

PC +80.72 200+00

PT +20.43

+55.6 +41.2 +34.0

0 20 50 100
SCALE: 1" = 20'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	24	98
PROJECT FILE NO.	610776		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 3 OF 4

610776_TR4(SIGN & PVMK).DWG Plotted on 29-Jul-2025 6:19 PM

NAD 83

N

CONCORD TURNPIKE (ROUTE 2)

R&D
WEIGHT LIMIT 19T 21T 28T
ROUTE 2 WEST

APPROX. 1,500 FEET

APPROX. 950 FEET

N/F
DEPARTMENT OF CONSERVATION AND RECREATION
DEED BOOK 3489 PAGE 381
PROP ID 15-2-2
THORNDIKE ST EXT

LOCATION LINE OF JANUARY 17, 1933 STATE HIGHWAY LAYOUT (LAYOUT NO. 2981)

END PROJECT
STA 110+85
N 2969980.2873
E 753072.2163

LOCATION LINE OF MAY 1, 1929 MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS LAYOUT AS AMENDED UNDER ACTS OF 1928, CHAPTER 366

PROP ALEWIFE BROOK PARKWAY CONST BL

ALEWIFE BROOK PARKWAY

112+53.06
PT +02.17
111
110
PC +38.63
+25.2
+84.4
+85.0
+65.6
+80.8
+37.0

MATCH TO EXISTING PAVEMENT MARKINGS

12" YELLOW GORE LINES
10' O.C. 45 DEG (TYP)

CONTINUED ON SHEET NO. 23

ALEWIFE STATION ACCESS ROAD

LOCATION LINE OF NOVEMBER 14, 1908 METROPOLITAN PARK COMMISSION TAKING BOOK 3425 PAGE 179

LOCATION LINE OF METROPOLITAN DISTRICT COMMISSION LAYOUT AS AUTHORIZED UNDER ACTS OF 1985, CHAPTER 16, SECTION 8

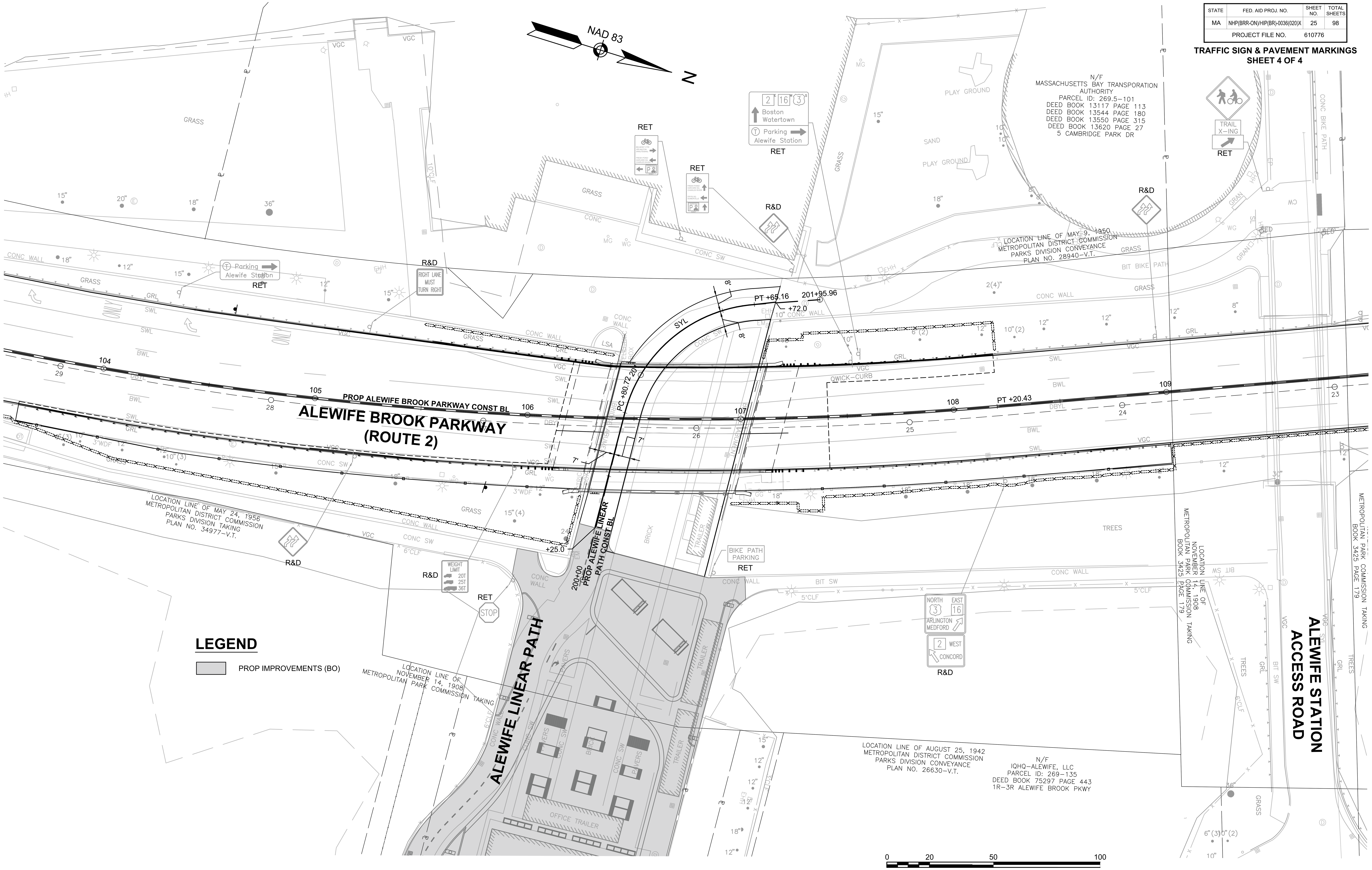
TRAIL X-ING RET
USE SIDEWALK RET
SOUTH WEST 3 16 RET
WEIGHT LIMIT 19T 21T 28T R&D
RET
STOP HERE ON RED RET
ONE WAY
NO TURNS
ROAD NARROWS RET
EAST 2 RET
WEST 2 RET
ONLY RET
NORTH 3 EAST 16 RET
ONLY ONLY ONLY RET

0 20 50 100
SCALE: 1" = 20'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	25	98
	PROJECT FILE NO.	610776	

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 4 OF 4



NAD 83
N
ALEWIFE BROOK PARKWAY
(ROUTE 2)
PROP ALEWIFE BROOK PARKWAY CONST BL
ALEWIFE LINEAR PATH
PROP ALEWIFE LINEAR PATH CONST BL
ALEWIFE STATION ACCESS ROAD
N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
PARCEL ID: 269.5-101
DEED BOOK 13117 PAGE 113
DEED BOOK 13544 PAGE 180
DEED BOOK 13550 PAGE 315
DEED BOOK 13620 PAGE 27
5 CAMBRIDGE PARK DR
LOCATION LINE OF MAY 9, 1950
METROPOLITAN DISTRICT COMMISSION
PARKS DIVISION CONVEYANCE
PLAN NO. 28940-V.T.
LOCATION LINE OF MAY 24, 1956
METROPOLITAN DISTRICT COMMISSION
PARKS DIVISION TAKING
PLAN NO. 34977-V.T.
LOCATION LINE OF NOVEMBER 14, 1908
METROPOLITAN PARK COMMISSION TAKING
BOOK 3425 PAGE 179
LOCATION LINE OF AUGUST 25, 1942
METROPOLITAN DISTRICT COMMISSION
PARKS DIVISION CONVEYANCE
PLAN NO. 26630-V.T.
N/F
IQHQ-ALEWIFE, LLC
PARCEL ID: 269-135
DEED BOOK 75297 PAGE 443
1R-3R ALEWIFE BROOK PKWY
PT +65.16
201+95.96
+72.0
PC +80.72
PT +20.43
+25.0
200+00
RET
R&D
Parking Alewife Station
Boston Watertown
RIGHT LANE MUST TURN RIGHT
WEIGHT LIMIT 20T 25T 36T
STOP
TRAIL X-ING
BIKE PATH PARKING
NORTH 3 EAST 16 ARLINGTON MEDFORD
2 WEST CONCORD
OFFICE TRAILER
TRAILER
PLAY GROUND
SAND
GRASS
TREES
BRICK
CONC WALL
CONC SW
BIT SW
CONC BIKE PATH
BIT BIKE PATH
QWICK-CURB

LEGEND

PROP IMPROVEMENTS (BO)

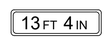
0 20 50 100
SCALE: 1" = 20'

Plotted on 29-Jul-2025 9:11 PM
610776_TR4(SIGN & PVMK).DWG

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	26	98
PROJECT FILE NO.	610776		

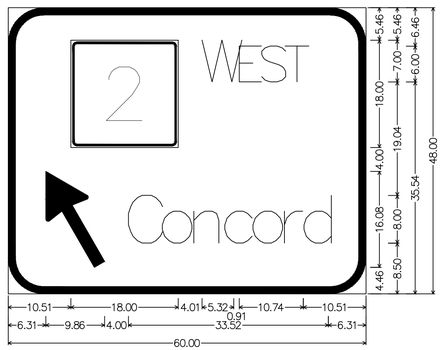
TRAFFIC SIGN SUMMARY SHEET

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED				POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R3-8	60	36		①	①	①	1	WHITE	BLACK	BLACK	P-5: 1	15.00	15.00
W12-2a	78	24					2	WHITE	BLACK	BLACK	MTD ON STRUCTURE: 2	13.00	26.00

① SEE MUTCD 2009 EDITION, 2004 STD. HWY. SIGNS (SHS), 2012 SHS SUPPLEMENT, AND SECTION M9.30.0 TYPE III OF THE MASSDOT STANDARD SPECIFICATION FOR TEXT DIMENSIONS.

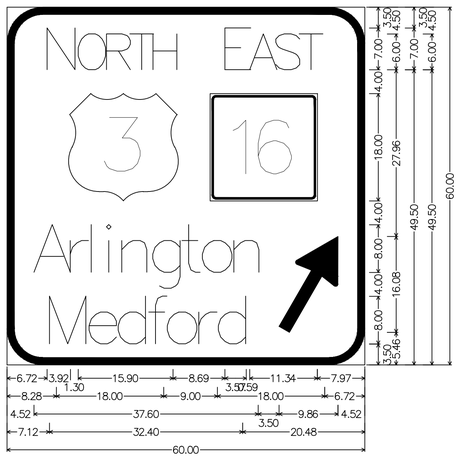
SUMMARY
TOTAL AREA OF SIGNS 45.00 SF

MA-D1-5		
5.0'	4.0'	20.00 SF
SIGNS REQUIRED		1
TOTAL AREA		20.00 SF
GREEN REFL.	SILVER WHITE	SILVER WHITE



3.00" Radius, 1.00" Border, White on Green;
State Highway 2 M1-5; "WEST", C 2K;
Standard Arrow Custom 18.00" X 8.10" 120"; "Concord", C 2K;

MA-D1-6		
5.0'	5.0'	25.00 SF
SIGNS REQUIRED		1
TOTAL AREA		25.00 SF
GREEN REFL.	SILVER WHITE	SILVER WHITE

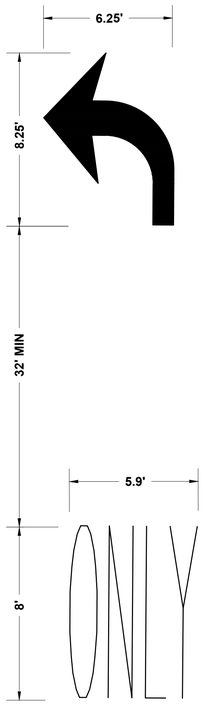


3.00" Radius, 1.00" Border, White on Green;
"NORTH", C 2K; "EAST", C 2K; State Highway 16 M1-5;
"Arlington", C 2K; "Medford", C 2K;
Standard Arrow Custom 18.00" X 8.10" 60";

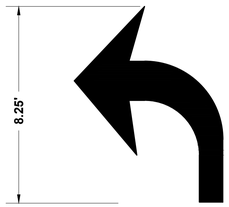
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	27	98
PROJECT FILE NO.	610776		

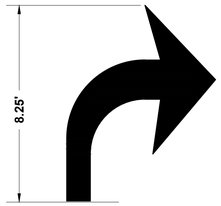
TRAFFIC DETAILS



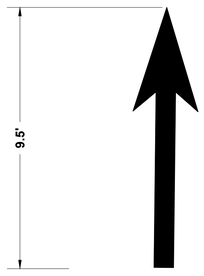
TURN LANE ONLY DESIGNATION MARKING DETAIL
NOT TO SCALE



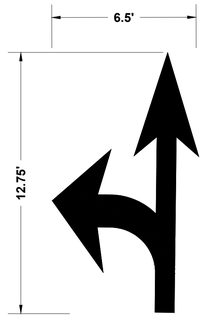
LEFT-TURN LANE DESIGNATION MARKING DETAIL
NOT TO SCALE



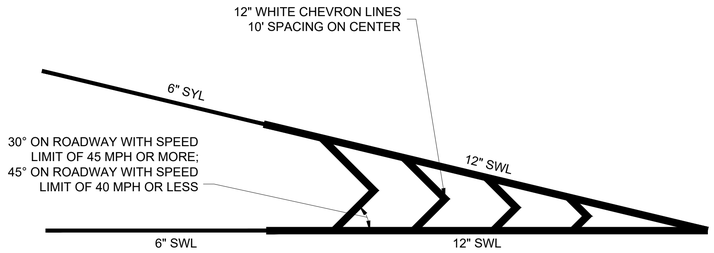
RIGHT-TURN LANE DESIGNATION MARKING DETAIL
NOT TO SCALE



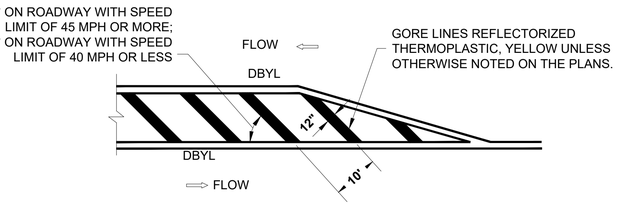
THRU LANE DESIGNATION MARKING DETAIL
NOT TO SCALE



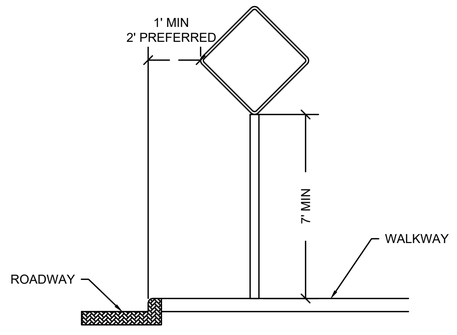
TURN/THRU LANE DESIGNATION MARKING DETAIL
NOT TO SCALE



STANDARD GORE DETAIL
NOT TO SCALE



STANDARD CROSS-HATCHING
NOT TO SCALE



SIGN MOUNTING DETAIL
NOT TO SCALE

TRAFFIC MANAGEMENT GENERAL NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE 2009 EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. 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.
4. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES". BARRIER AND CRASH ATTENUATORS MUST ALSO MEET THE REQUIREMENTS OF THE AASHTO "MANUAL ON ASSESSING SAFETY HARDWARE" (MASH) AT TEST LEVEL (TL) 3 OR HIGHER.
5. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
6. MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR BARRIER.
7. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.

PAVEMENT MARKINGS:

1. UNLESS OTHERWISE NOTED, ALL PAVEMENT MARKINGS, SIGNS AND OTHER TRAFFIC EQUIPMENT REMOVED OR DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS IS TO BE REPLACED IN ACCORDANCE WITH THE REQUIREMENTS OF MASSDOT.
2. CONTRACTOR IS TO INSTALL, RENEW AND MAINTAIN ALL TRAFFIC CONTROL DEVICES INCLUDING PAVEMENT MARKINGS AS SHOWN ON THE DRAWINGS, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND AS REQUIRED BY THE MASSDOT RESIDENT ENGINEER.
3. CONTRACTOR IS TO REMOVE ALL PAVEMENT MARKINGS WHICH CONFLICT WITH PROPOSED PAVEMENT MARKINGS.
4. ALL TEMPORARY PAVEMENT MARKINGS ARE TO BE MAINTAINED THROUGHOUT THE ENTIRE PHASE OF WORK. IF IMPACTED, EXISTING PAVEMENT MARKINGS BEYOND THE WORK ZONES SHOWN IN THIS PLAN ARE TO BE REPLACED IN KIND.
5. WHERE TEMPORARY PAVEMENT MARKING IS REQUIRED, REMOVE EXISTING PAVEMENT MARKING BY A MASSDOT APPROVED METHOD.

TEMPORARY BARRIER SYSTEM:

1. THE CONTRACTOR IS TO PROVIDE ALL TEMPORARY BARRIER DETAILS TO THE ENGINEER FOR APPROVAL.
2. ALL BLUNT ENDS OF THE TEMPORARY BARRIER SHOULD BE PROTECTED FOR TRAFFIC AT ALL TIMES OR LOCATED OUTSIDE OF THE CLEAR ZONE AS SPECIFIED IN THE AASHTO ROADSIDE DESIGN GUIDE.

TEMPORARY TRAFFIC CONTROL DETAILS:

1. RELEVANT DETAILS TO BE USED ON THIS PROJECT ARE AS FOLLOWS.

850.1.1	TEMPORARY CURB RAMP
851.3.1	PEDESTRIAN CHANNELIZING DEVICE
852.1.1	SIDEWALK DETOUR
852.1.2	SIDEWALK DIVERSION
852.1.3	PEDESTRIAN DETOUR FOR CROSSWALK CLOSURE
852.3.2	BICYCLE LANE CLOSURE WITH ON-ROAD DETOUR
852.5.3	TWO LANE ROAD SHOULDER CLOSURE
852.6.1	MULTI-LANE ROAD RIGHT LANE CLOSURE

2. ADDITIONAL DETAILS MAY BE NEEDED THROUGHOUT CONSTRUCTION.

CONSTRUCTION SIGNING:

1. LOCATIONS OF SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATION IS TO BE DETERMINED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR IS TO PLACE SIGNS IN ACCORDANCE WITH THE 2009 MUTCD.
2. SIGNS ARE TO BE IN PLACE PRIOR TO START OF EACH CONSTRUCTION STAGE.
3. EXISTING SIGNING WHICH CONFLICTS WITH PROPOSED CONSTRUCTION TRAFFIC MANAGEMENT SIGNING IS TO BE REMOVED AND STACKED OR COVERED AND RESTORED AT THE END OF THE WORK.
4. ALL SIGNS ARE TO BE COVERED OR REMOVED WHEN CONDITION IS NOT IN EFFECT.
5. CONTRACTOR IS TO PROVIDE TEMPORARY SIGN SUPPORT DETAILS, WITH THE EXCEPTION OF STANDARD P-5 POSTS, TO THE ENGINEER FOR REVIEW AND APPROVAL.

CHANNELIZATION

1. CHANNELIZATION IS TO BE ACCOMPLISHED THROUGH THE USE OF REFLECTORIZED PLASTIC DRUMS IN ACCORDANCE WITH THE MUTCD. THE FIRST 10 DRUMS OF A TAPER ARE TO BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
2. ALL DRUMS AND CONES ARE TO BE PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ACCESS FOR DRIVEWAYS AND WORKZONE AT ALL TIMES. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS, CONE, AND OTHER TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES ARE TO BE REUSED IN SUBSEQUENT STAGES AS NEEDED.
3. THE SPACING BETWEEN CHANNELIZATION DEVICES (DRUMS OR CONES) IS NOT TO EXCEED IN FEET THE SPEED IN MPH WHEN USED FOR TAPER CHANNELIZATION AND DOUBLE THE SPEED IN FEET IN TANGENT CHANNELIZATION. METAL DRUMS ARE PROHIBITED AS CHANNELIZATION DEVICES.
4. ALL TRAFFIC CONTROL DEVICES ARE TO BE REMOVED IMMEDIATELY WHEN NO LONGER NEEDED.

GRADE DIFFERENCES:

1. WHERE THERE IS A LONGITUDINAL DIFFERENCE IN ELEVATION BETWEEN EXISTING PAVEMENT AND COLD PLANED OR NEW PAVEMENT, THE CONTRACTOR IS TO PATCH A TEMPORARY HOT MIX ASPHALT WEDGE WITH A 12:1 (OR FLATTER) SLOPE FOR A SMOOTH TRANSITION.
2. CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 2' DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF REFLECTORIZED DRUMS AS DIRECTED BY MASSDOT.
3. CROSS-SECTIONAL GRADE DIFFERENCES BETWEEN 4"-36" DURING NON-WORKING HOURS IS TO BE PROTECTED BY BACKFILLING WITH A WEDGE OF HOT MIX ASPHALT AT 4:1 SLOPE AND WILL ALSO REQUIRE DELINEATION BY USE OF DRUMS.
4. FOR DROP OFFS 36" OR GREATER, USE TEMPORARY BARRIER IN ACCORDANCE WITH MASSDOT WORK ZONE POSITIVE PROTECTION GUIDELINES.

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

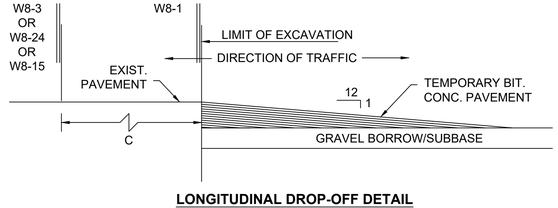
SPEED* (mph)	DISTANCE (ft)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

*POSTED SPEED, OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.

THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

Source: Table 6C-2 MUTCD LATEST EDITION



LONGITUDINAL DROP-OFF DETAIL

NOT TO SCALE

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	28	98
	PROJECT FILE NO. 610776		

TEMPORARY TRAFFIC CONTROL NOTES

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST ½L
SHOULDER TAPER	AT LEAST ⅓L

Source: Table 6C-3 MUTCD LATEST EDITION

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

Source: Table 6C-4 MUTCD LATEST EDITION

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS (URBAN LOW SPEED)	350 (100)	350 (100)	350 (100)
MOST OTHER ROADWAYS	500	500	500
FREEWAYS AND EXPRESSWAYS	1,000	1,500	2,640

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

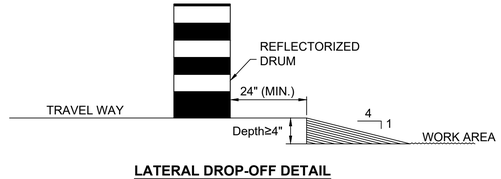
THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (i.e. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS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

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

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

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

Based on: Table 6C-1 MUTCD LATEST EDITION



LATERAL DROP-OFF DETAIL

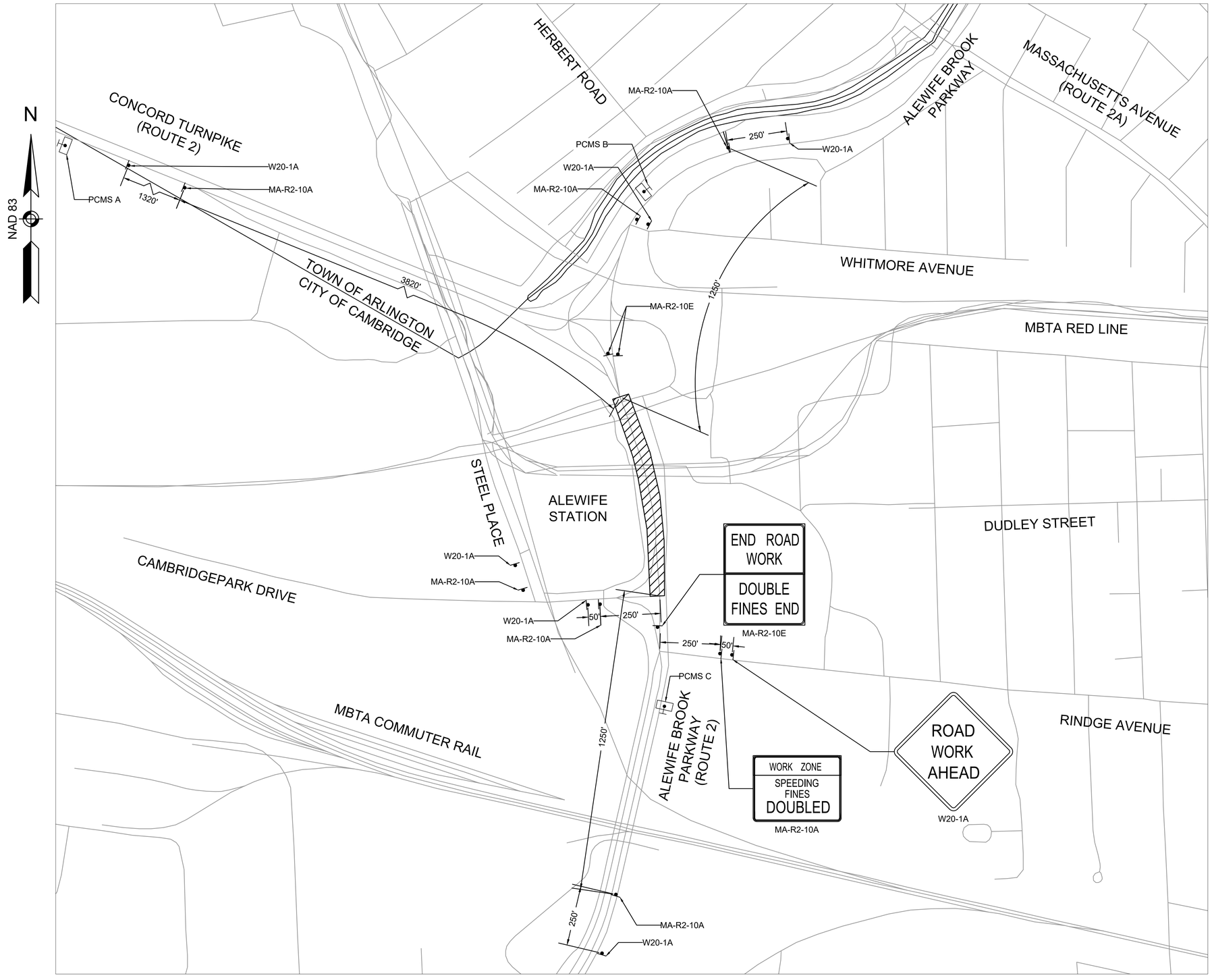
NOT TO SCALE

610776_TR2(TTCP DETAILS).DWG Plotted on 29-Jul-2025 7:22 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	29	98
PROJECT FILE NO.	610776		

ADVANCE WARNING SIGN LOCATION



LEGEND:

WORK ZONE

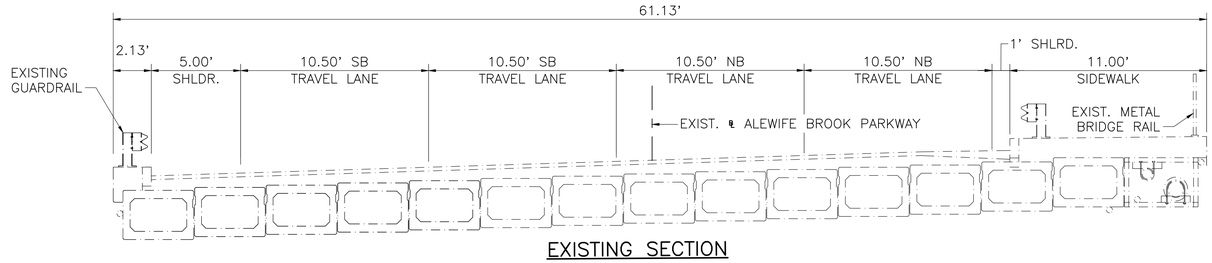
PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

SIGN

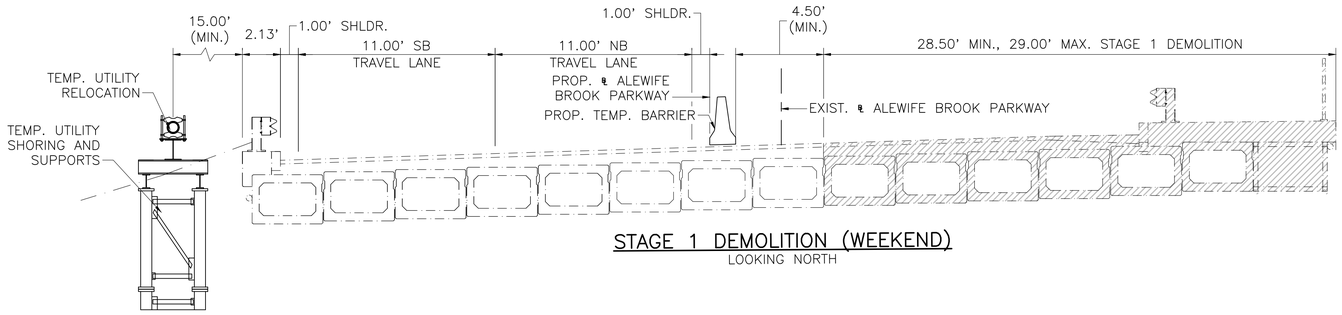
PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES				
PCMS NUMBER(S)	PRIOR TO CONSTRUCTION		DURING OVERNIGHT CONSTRUCTION	
	PHASE 1	PHASE 2	PHASE 1	PHASE 2
PCMS A	ALEWIFE BRIDGE CONST	XX/XX/XX TO XX/XX/XX	BRIDGE CONST AHEAD	USE DETOUR
PCMS B	ALEWIFE BRIDGE CONST	XX/XX/XX TO XX/XX/XX	BRIDGE CONST AHEAD	USE DETOUR
PCMS C	ALEWIFE BRIDGE CONST	XX/XX/XX TO XX/XX/XX	BRIDGE CONST AHEAD	USE DETOUR

NOTE:
DURING DAYTIME CONSTRUCTION, PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES SHALL BE DISABLED.

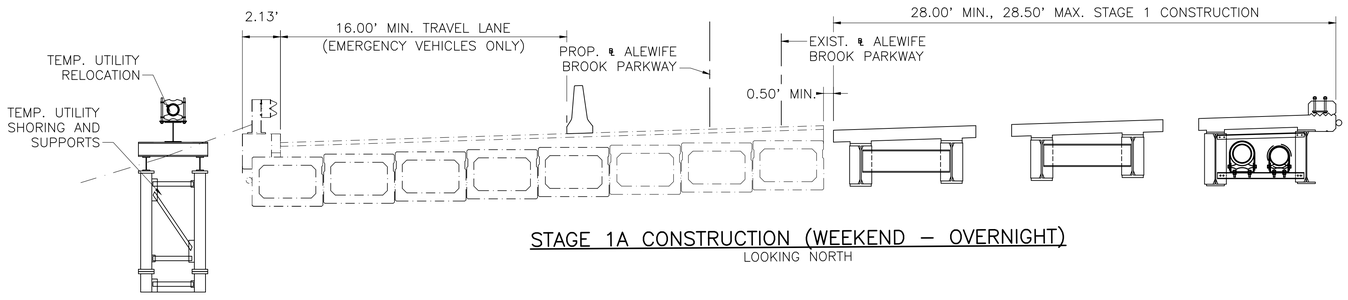
610776_TR2(TTCP DETAILS).DWG Plotted on 29-Jul-2025 7:22 PM



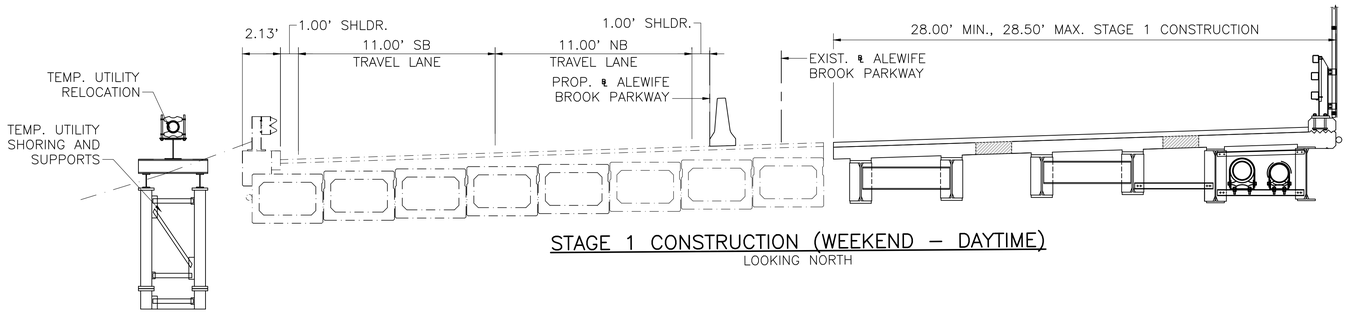
EXISTING SECTION
LOOKING NORTH



STAGE 1 DEMOLITION (WEEKEND)
LOOKING NORTH



STAGE 1A CONSTRUCTION (WEEKEND – OVERNIGHT)
LOOKING NORTH



STAGE 1 CONSTRUCTION (WEEKEND – DAYTIME)
LOOKING NORTH

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	30	98
PROJECT FILE NO.	610776		

CONSTRUCTION STAGING SECTIONS
SHEET 1 OF 3

CONSTRUCTION SEQUENCING

PRE-STAGE 1:

1. DETOUR PEDESTRIANS OVER THE BRIDGE TO ALTERNATE TRAVEL ROUTES. (SEE SHEET 42 FOR BRIDGE PEDESTRIAN DETOUR.)
2. COMPLETE UTILITY RELOCATIONS AND TEMPORARY SHUTOFFS. SEE UTILITY PLANS FOR DETAILS.
3. INSTALL ADVANCE WORKZONE SIGNAGE FOR NORTHBOUND AND SOUTHBOUND TRAVEL PRIOR TO CONSTRUCTION WEEKEND.

STAGE 1 DEMOLITION - DAYTIME (WEEKEND ONLY):

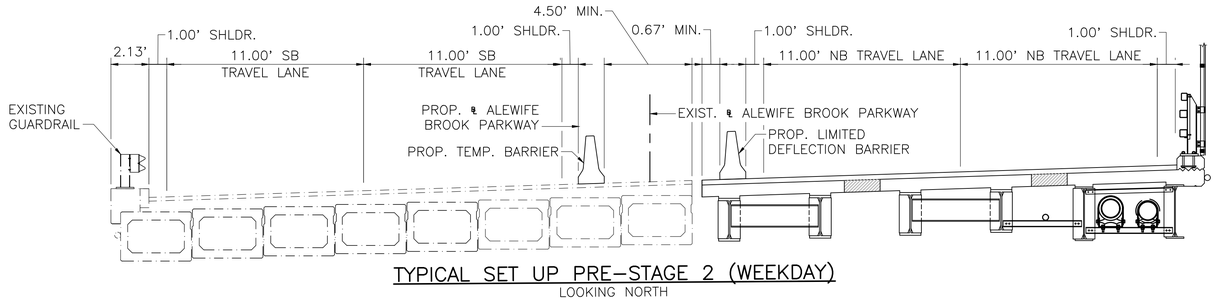
1. REDUCE TRAFFIC TO ONE LANE IN EACH DIRECTION AND SHIFT ALL TRAFFIC TO THE WESTERN PORTION OF THE BRIDGE WITH THE USE OF BARRIER AND DRUMS.
2. DETOUR PEDESTRIANS AND BICYCLES UNDER THE BRIDGE AS SHOWN ON SHEET 43. DETOUR RINDGE AVENUE EASTBOUND VEHICLES AS SHOWN ON SHEET 40.
3. DEMOLISH EXISTING BRIDGE. SEE BRIDGE PLANS FOR DETAILS.

STAGE 1A CONSTRUCTION - OVERNIGHT (WEEKEND ONLY):

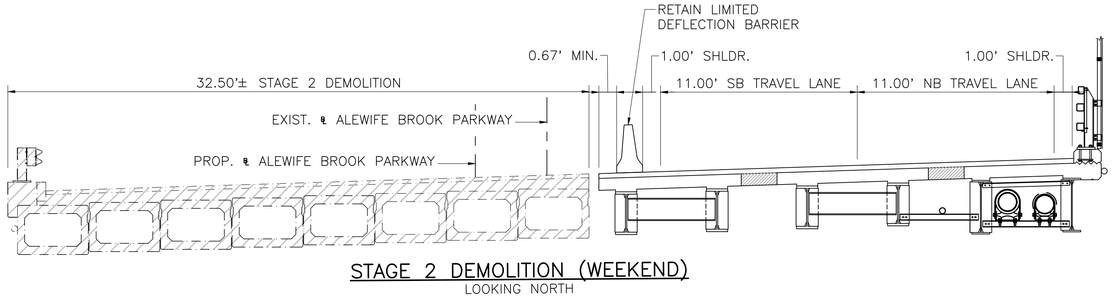
1. DURING BRIDGE ERECTION, DETOUR ALL TRAFFIC TO USE ALTERNATE TRAVEL ROUTES. (SEE SHEETS 39 AND 41 FOR BRIDGE VEHICLE AND TRUCK DETOURS.)
2. MOVE THE TEMPORARY BARRIERS WEST TO ALLOW FOR CRANE ACCESS AND SETUP.
3. NEW TEMPORARY SINGLE TRAVEL LANE SHALL BE 16.00' MIN. BETWEEN BARRIERS FOR EMERGENCY VEHICLE AND OVERSIZED NORTHBOUND TRUCK ACCESS ONLY.
4. PBU ERECTION TO BE COMPLETED IN THE SHORTEST AMOUNT OF TIME PRACTICABLE. OVERNIGHT WORK SHALL NOT BEGIN PRIOR TO 7PM ON SATURDAY. TWO WAY TRAFFIC SHALL BE RESTORED BEFORE 9AM ON SUNDAY.

STAGE 1 CONSTRUCTION - DAYTIME (WEEKEND ONLY):

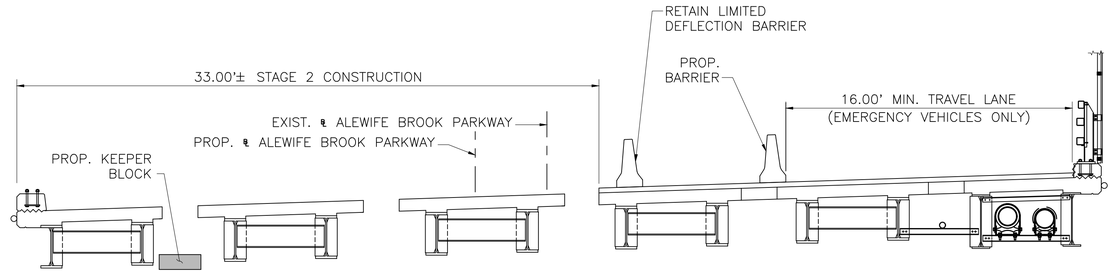
1. RETURN TRAFFIC TO ONE LANE IN EACH DIRECTION AND SHIFT BARRIER TO ORIGINAL STAGE 1 LOCATION. REMOVE OR COVER BRIDGE VEHICLE AND TRUCK DETOUR SIGNS SHOWN ON SHEETS 39 AND 41.
2. FINISH OTHER BRIDGE WORK FOR EASTERN PORTION.
3. CONSTRUCT TEMPORARY PAVEMENT IN SIDEWALK LOCATION FOR VEHICLE TRAVEL.
4. CONSTRUCT CEMENT CONCRETE PAD AT BACK OF EXISTING SIDEWALK FOR PLACEMENT AND ANCHORAGE OF TEMPORARY LIMITED DEFLECTION BARRIER. INSTALL THRIE BEAM GUARDRAIL TO CONNECT HIGHWAY GUARDRAIL TRANSITION TO TEMPORARY LIMITED DEFLECTION BARRIER.
5. REMOVE PEDESTRIAN AND BICYCLE, AND RINDGE AVENUE VEHICLE DETOUR SIGNS PRIOR TO THE COMPLETION OF THE 55-HOUR WEEKEND.



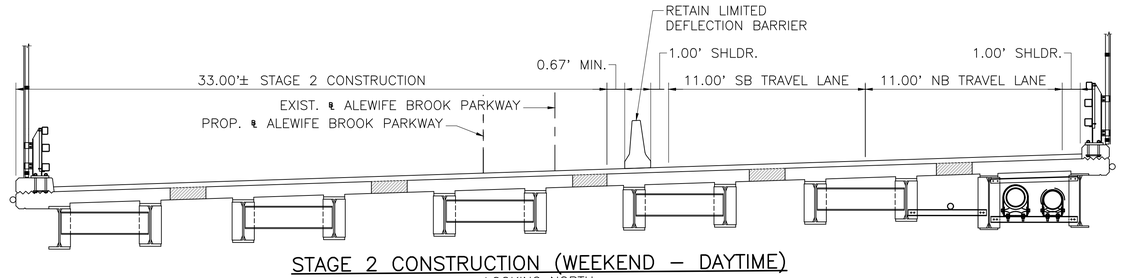
TYPICAL SET UP PRE–STAGE 2 (WEEKDAY)
LOOKING NORTH



STAGE 2 DEMOLITION (WEEKEND)
LOOKING NORTH



STAGE 2A CONSTRUCTION (WEEKEND – OVERNIGHT)
LOOKING NORTH



STAGE 2 CONSTRUCTION (WEEKEND – DAYTIME)
LOOKING NORTH

CONSTRUCTION SEQUENCING

PRE-STAGE 2:

1. INSTALL ADVANCE WORKZONE SIGNAGE FOR NORTHBOUND AND SOUTHBOUND TRAVEL PRIOR TO CONSTRUCTION WEEKEND.

STAGE 2 DEMOLITION - DAYTIME (WEEKEND ONLY):

1. REDUCE TRAFFIC TO ONE LANE IN EACH DIRECTION AND SHIFT ALL TRAFFIC TO THE EAST ON THE NEWLY CONSTRUCTED BRIDGE WITH THE USE OF LIMITED DEFLECTION BARRIER AND DRUMS.
2. DETOUR PEDESTRIANS AND BICYCLES UNDER THE BRIDGE AS SHOWN ON SHEET 43. DETOUR RINDGE AVENUE EASTBOUND VEHICLES AS SHOWN ON SHEET 40.
3. DEMOLISH EXISTING BRIDGE. SEE BRIDGE PLANS FOR DETAILS.

STAGE 2A CONSTRUCTION - OVERNIGHT (WEEKEND ONLY):

1. DURING BRIDGE ERECTION, DETOUR ALL TRAFFIC TO USE ALTERNATE TRAVEL ROUTES. (SEE SHEETS 39 AND 41 FOR BRIDGE VEHICLE AND TRUCK DETOURS.)
2. MOVE THE TEMPORARY BARRIERS EAST TO ALLOW FOR CRANE ACCESS AND SETUP ON EITHER SIDE OF THE BRIDGE. RETAIN PINNED BARRIER ON THE BRIDGE AND ADD UNPINNED BARRIER ON THE BRIDGE FOR 16.00' MIN. EMERGENCY VEHICLE ACCESS.
3. NEW TEMPORARY SINGLE TRAVEL LANE SHALL BE 16.00' MIN. BETWEEN BARRIERS FOR EMERGENCY VEHICLE AND OVERSIZED NORTHBOUND TRUCK ACCESS ONLY.
4. PBU ERECTION TO BE COMPLETED IN THE SHORTEST AMOUNT OF TIME PRACTICABLE. OVERNIGHT WORK SHALL NOT BEGIN PRIOR TO 7PM ON SATURDAY. TWO WAY TRAFFIC SHALL BE RESTORED BEFORE 9AM ON SUNDAY.

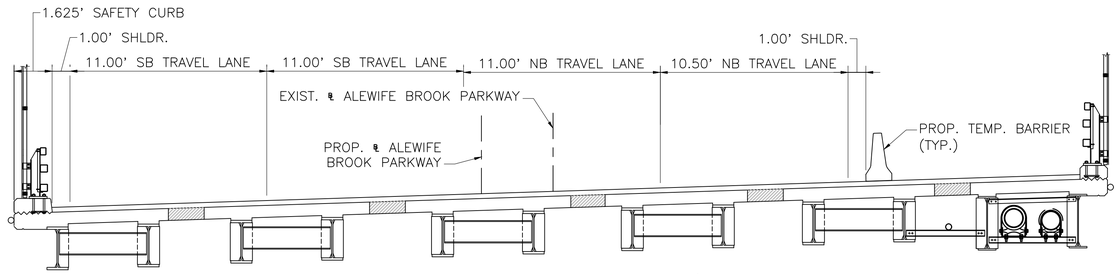
STAGE 2 CONSTRUCTION - DAYTIME (WEEKEND ONLY):

1. RETURN TRAFFIC TO ONE LANE IN EACH DIRECTION AND SHIFT BARRIER TO ORIGINAL STAGE 2 LOCATION. REMOVE OR COVER BRIDGE VEHICLE AND TRUCK DETOUR SIGNS SHOWN ON SHEETS 39 AND 41.
2. FINISH OTHER BRIDGE WORK FOR WESTERN PORTION.
3. REMOVE PEDESTRIAN AND BICYCLE, AND RINDGE AVENUE VEHICLE DETOUR SIGNS PRIOR TO THE COMPLETION OF THE 55-HOUR WEEKEND.

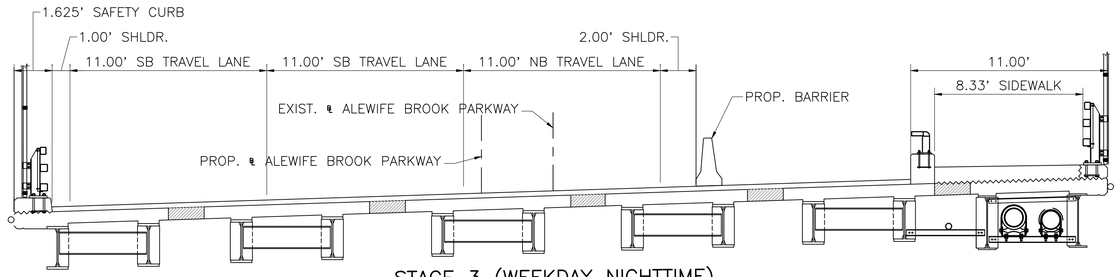
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	32	98
PROJECT FILE NO.	610776		

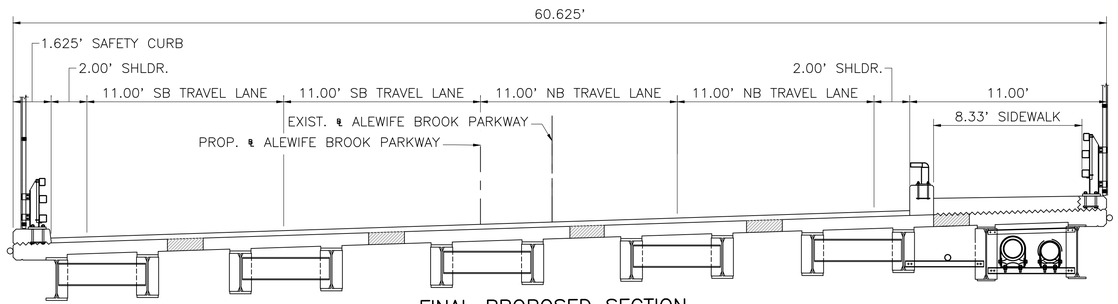
CONSTRUCTION STAGING SECTIONS
SHEET 3 OF 3



STAGE 3 (WEEKDAY DAYTIME)
LOOKING NORTH



STAGE 3 (WEEKDAY NIGHTTIME)
LOOKING NORTH



FINAL PROPOSED SECTION
LOOKING NORTH

CONSTRUCTION SEQUENCING

STAGE 3:

1. DURING NIGHTTIME CONSTRUCTION, MAINTAIN TWO TRAVEL LANES IN THE SOUTHBOUND DIRECTION AND REDUCE NORTHBOUND TRAFFIC TO A SINGLE LANE WITH THE USE OF BARRIER AND DRUMS.
2. CONSTRUCT FINAL SIDEWALK AND BARRIER.
3. CONSTRUCT WALKWAY UNDER THE BRIDGE IN STAGES MAINTAINING A 10.00' MIN. PATH FOR PEDESTRIANS AND BICYCLISTS.

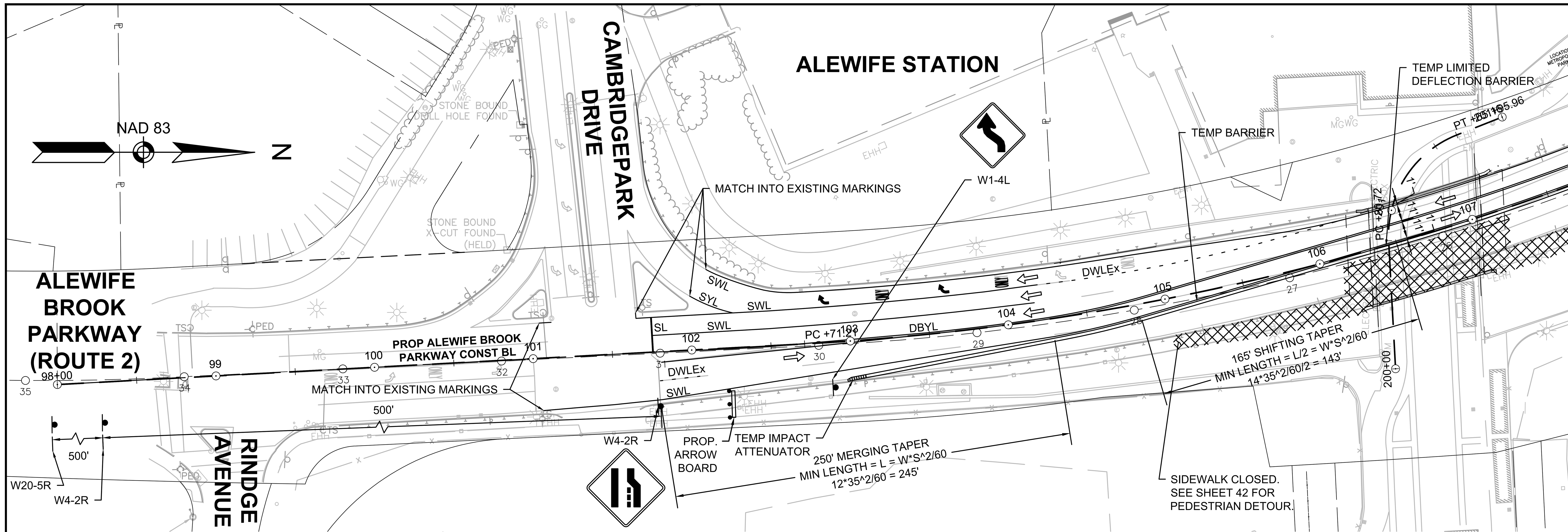
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)HIP(BR)-0036(020)X	33	98
	PROJECT FILE NO.	610776	

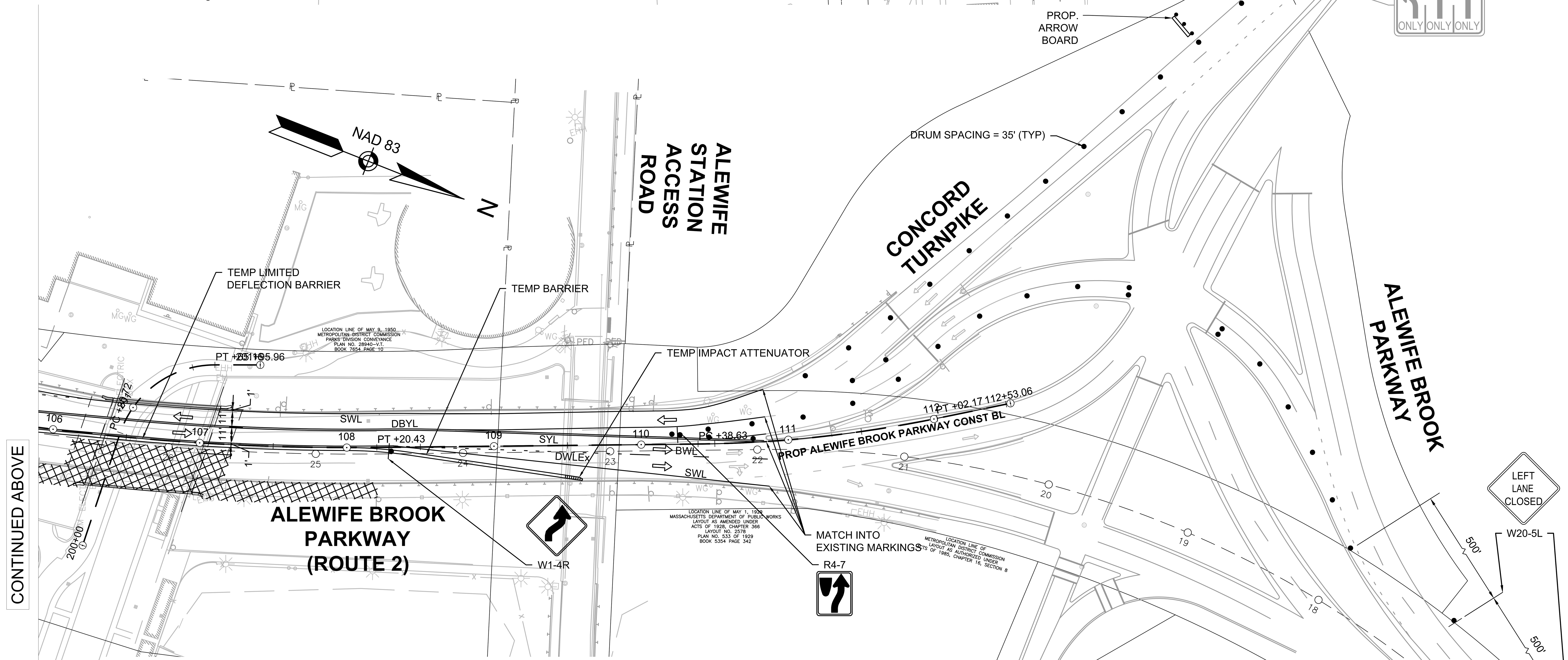
CONSTRUCTION STAGING PLANS
STAGE 1

Plotted on 29-Jul-2025 6:59 PM

610776_TR1(STAGING).DWG



ALEWIFE STATION
CAMBRIDGEPARK DRIVE
NAD 83
N
ALEWIFE BROOK PARKWAY (ROUTE 2)
RINDGE AVENUE
MATCH INTO EXISTING MARKINGS
W1-4L
TEMP BARRIER
TEMP LIMITED DEFLECTION BARRIER
PROP ALEWIFE BROOK PARKWAY CONST BL
165' SHIFTING TAPER
MIN LENGTH = L/2 = W*S^2/60
14*35^2/60/2 = 143'
250' MERGING TAPER
MIN LENGTH = L = W*S^2/60
12*35^2/60 = 245'
W4-2R
PROP. ARROW BOARD
TEMP IMPACT ATTENUATOR
SIDEWALK CLOSED. SEE SHEET 42 FOR PEDESTRIAN DETOUR.
W20-5R
500'
SWL
SYL
DBYL
DWLEx
CONTINUED BELOW



RIGHT LANE CLOSED
W20-5R
W4-2R
500'
CONCORD TURNPIKE (ROUTE 2)
PROP. ARROW BOARD
DRUM SPACING = 35' (TYP)
ONLY
ALEWIFE STATION ACCESS ROAD
NAD 83
N
CONCORD TURNPIKE
ALEWIFE BROOK PARKWAY
TEMP LIMITED DEFLECTION BARRIER
TEMP BARRIER
TEMP IMPACT ATTENUATOR
PROP ALEWIFE BROOK PARKWAY CONST BL
ALEWIFE BROOK PARKWAY (ROUTE 2)
W1-4R
MATCH INTO EXISTING MARKINGS
R4-7
LEFT LANE CLOSED
W20-5L
CONTINUED ABOVE

LEGEND

- WORKZONE
- NARROW IMPACT ATTENUATOR
- BARRIER
- DIRECTION OF TRAFFIC
- ARROWBOARD
- DRUM
- TRAFFIC SIGN

0 40 100 160

SCALE: 1" = 40'

NOTES:

1. ADVANCED CHANGEABLE MESSAGE BOARDS SHALL BE PROVIDED TWO WEEKS PRIOR TO THE START OF STAGE 1 ALERTING ROAD USERS OF THE DATES OF CONSTRUCTION.
2. SEE VEHICLE, AND PEDESTRIAN AND BICYCLE DETOURS ON SHEETS 39 AND 43 FOR OVERNIGHT WEEKEND PBU PLACEMENT.
3. PROVIDE TEMPORARY LIGHTING AS REQUIRED. SEE SPECIAL PROVISIONS ITEMS 853.8 AND 853.82.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)HIP(BR)-0036(020)X	34	98
	PROJECT FILE NO.	610776	

CONSTRUCTION STAGING PLANS STAGE 1A

ALEWIFE STATION
ALEWIFE BROOK PARKWAY (ROUTE 2)
CAMBRIDGEPARK DRIVE
RINDGE AVENUE
CONCORD TURNPIKE (ROUTE 2)
CONCORD TURNPIKE
ALEWIFE STATION ACCESS ROAD
ALEWIFE BROOK PARKWAY
NAD 83
N
DETOUR EAST 2
DETOUR WEST 2
ROAD CLOSED
DETOUR
11'-6"
END DETOUR
DETOUR RINDGE AVE
ONLY
M4-8 M3-2 MA-M1-5(2) M6-1R
R11-2 M4-10R
R11-2 M4-10L
M4-8 M3-4 MA-M1-5(2) M5-1R
M4-8 M3-4 MA-M1-5(2) M6-1L
M4-8 M3-2 MA-M1-5(2) M6-2R
M4-8a M3-4 MA-M1-5(2)
M4-8 W16-8p M6-1R
W12-2 R5-2
W20-5R
W4-2R
TYPE III BARRICADE
DRUM SPACING = 20' (TYP)
DRUM SPACING = 10'
PROP. ARROW BOARD
SIGNAL HEADS TO BE BAGGED DURING DETOUR
MATCH INTO EXISTING MARKINGS
POLICE DETAIL STATIONED HERE FOR DURATION OF DETOUR TO DIRECT LARGE VEHICLES OVER THE BRIDGE
TEMP BARRIER
TEMP IMPACT ATTENUATOR
PROP ALEWIFE BROOK PARKWAY CONST BL
16' MIN
500'
CONTINUED BELOW
CONTINUED ABOVE
LEGEND
WORKZONE
NARROW IMPACT ATTENUATOR
BARRIER
DIRECTION OF TRAFFIC
ARROWBOARD
DRUM
TRAFFIC SIGN
0 40 100 160
SCALE: 1" = 40'

NOTES:

1. SEE VEHICLE AND TRUCK DETOURS ON SHEETS 39 AND 41 FOR OVERNIGHT WEEKEND PBU PLACEMENT.
2. PROVIDE TEMPORARY LIGHTING AS REQUIRED. SEE SPECIAL PROVISIONS ITEMS 853.8 AND 853.82.
3. REMOVE THE BARRIERS AND PLACE THEM BACK IN POSITION FOR CRANE ACCESS AS NEEDED.
4. CAMBRIDGEPARK DRIVE TRAFFIC SIGNAL HEADS TO BE BAGGED DURING DETOUR.
5. POLICE DETAIL SHALL BE STATIONED AT THE INTERSECTION OF ALEWIFE BROOK PKWY (ROUTE 2) AND CAMBRIDGEPARK DRIVE. POLICE TO COORDINATE WITH THE CONTRACTOR FOR EMERGENCY VEHICLE ACCESS, AND TRUCK ACCESS IN THE EVENT THAT A NORTHBOUND TRUCK DID NOT FOLLOW THE TRUCK DETOUR.

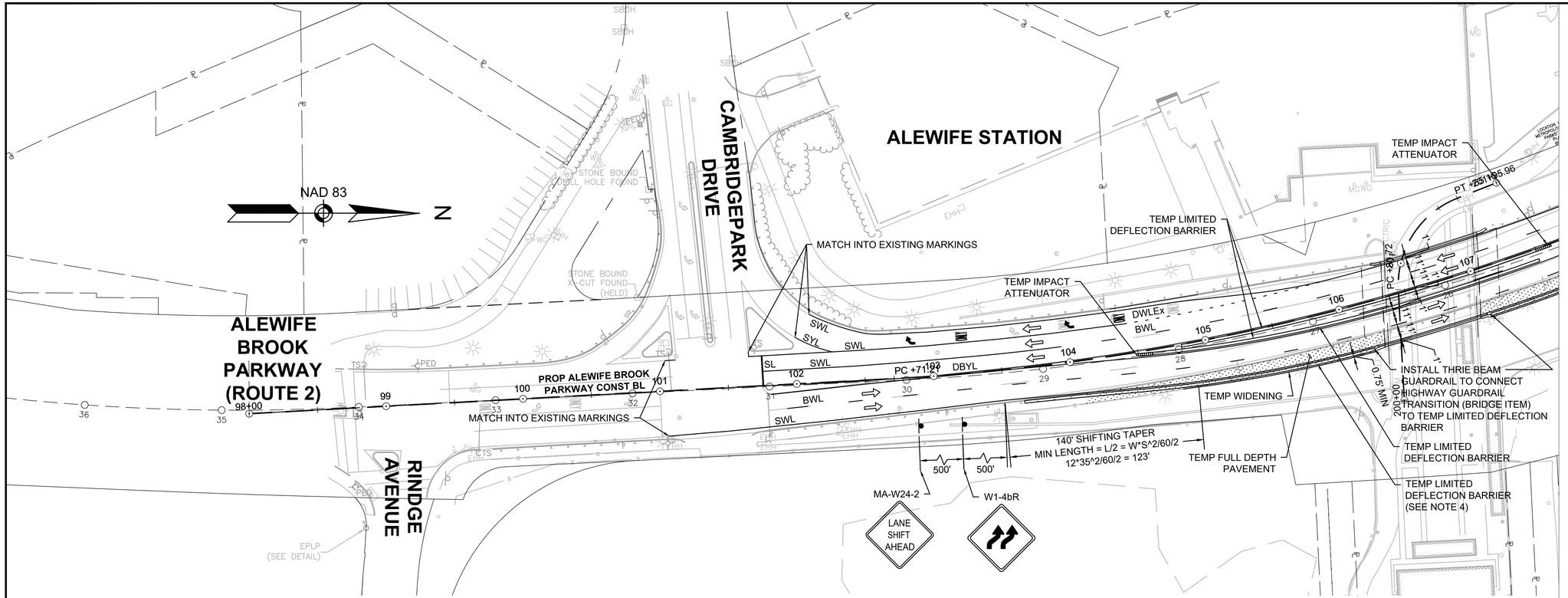
Plotted on 29-Jul-2025 6:59 PM
610776_TR1(STAGING).DWG

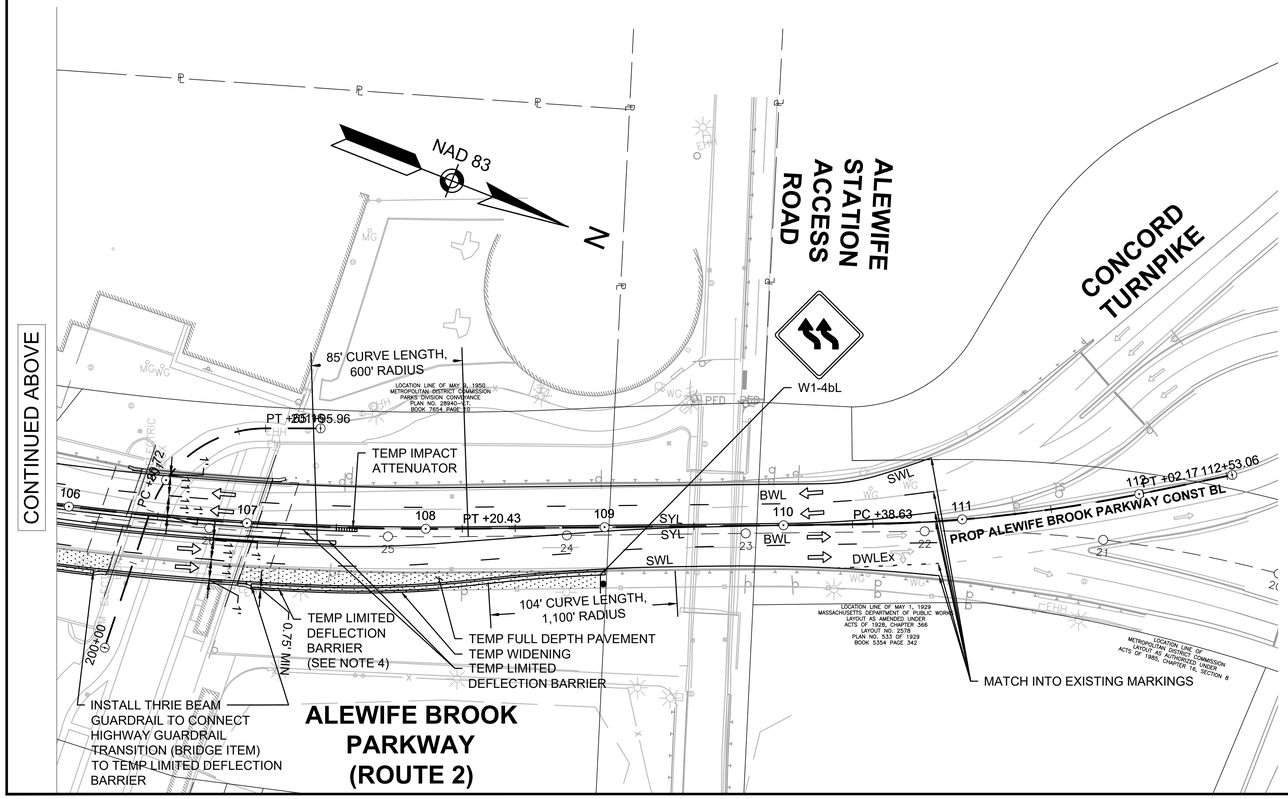
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	35	98
PROJECT FILE NO.	610776		

CONSTRUCTION STAGING PLANS
PRE-STAGE 2

610776_TR1(STAGING).DWG Plotted on 29-Jul-2025 6:59 PM





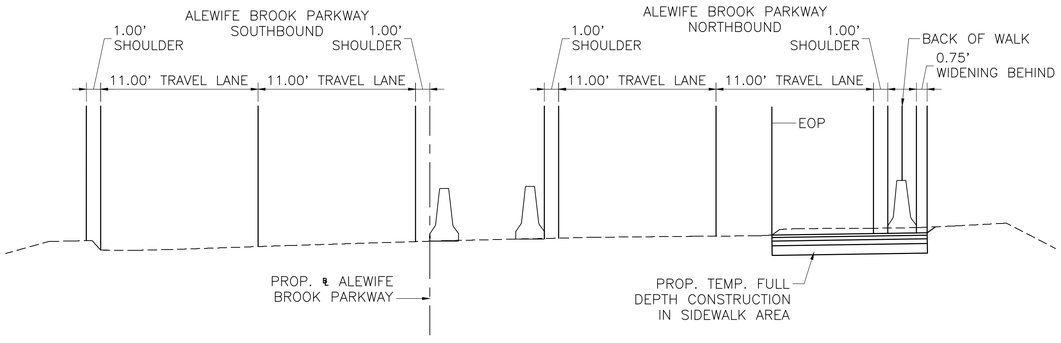
LEGEND

- WORKZONE
- NARROW IMPACT ATTENUATOR
- BARRIER
- DIRECTION OF TRAFFIC
- TRAFFIC SIGN

NOTES:

1. PLACE LIMITED DEFLECTION BARRIER ALONG NORTHBOUND TRAVEL LANES AND ON NEWLY CONSTRUCTED BRIDGE.
2. LIMITED DEFLECTION TEMPORARY BARRIER SHALL BE CONNECTED TO THE BRIDGE END POST WITH A SINGLE THRIE BEAM NESTED PANEL PER MASSDOT STANDARD DETAIL 400.3.5.
3. PROVIDE TEMPORARY LIGHTING AS REQUIRED. SEE SPECIAL PROVISIONS ITEMS 853.8 AND 853.82.
4. TEMPORARY SIDEWALK WIDENING IS REQUIRED FOR PINNING BARRIER. SEE DETAIL A.

DETAIL A



NOTES:

1. CONSTRUCT TEMPORARY PAVEMENT IN SIDEWALK LOCATION FOR VEHICLE TRAVEL.
2. CONSTRUCT HMA AT THE BACK OF EXISTING SIDEWALK FOR PLACEMENT AND ANCHORAGE OF TEMPORARY LIMITED DEFLECTION BARRIER. INSTALL THRIE BEAM GUARDRAIL TO CONNECT HIGHWAY GUARDRAIL TRANSITION TO TEMPORARY LIMITED DEFLECTION BARRIER.

0 40 100 160
SCALE: 1" = 40'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)HIP(BR)-0036(020)X	36	98
	PROJECT FILE NO.	610776	

CONSTRUCTION STAGING PLANS
STAGE 2

ALEWIFE STATION
CAMBRIDGEPARK DRIVE
ALEWIFE BROOK PARKWAY (ROUTE 2)
RINDGE AVENUE
NAD 83
N
MATCH INTO EXISTING MARKINGS
W1-4R
TEMP LIMITED DEFLECTION BARRIER
TEMP BARRIER
W1-4bR
PROP ALEWIFE BROOK PARKWAY CONST BL
W4-2R
W20-5R
500'
PROP. ARROW BOARD
260' MERGING TAPER
MIN LENGTH = L = W*S^2/60
12*35^2/60 = 245'
180' CURVE LENGTH, 1000' RADIUS
CONTINUED BELOW
RIGHT LANE CLOSED
CONCORD TURNPIKE (ROUTE 2)
ONLY
DRUM SPACING = 35' (TYP)
ALEWIFE STATION ACCESS ROAD
CONCORD TURNPIKE
ALEWIFE BROOK PARKWAY
85' CURVE LENGTH, 600' RADIUS
W1-4L
TEMP IMPACT ATTENUATOR
R4-7
104' CURVE LENGTH, 1,100' RADIUS
LEFT LANE CLOSED
W20-5L
CONTINUED ABOVE

LEGEND

- WORKZONE
- NARROW IMPACT ATTENUATOR
- BARRIER
- DIRECTION OF TRAFFIC
- ARROWBOARD
- DRUM
- TRAFFIC SIGN

0 40 100 160
SCALE: 1" = 40'

NOTES:

1. SEE VEHICLE, AND PEDESTRIAN AND BICYCLE DETOURS ON SHEETS 39 AND 43 FOR OVERNIGHT WEEKEND PBU PLACEMENT.
2. PROVIDE TEMPORARY LIGHTING AS REQUIRED. SEE SPECIAL PROVISIONS ITEMS 853.8 AND 853.82.

Plotted on 29-Jul-2025 6:59 PM
610776_TR1(STAGING).DWG

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	37	98
	PROJECT FILE NO. 610776		

CONSTRUCTION STAGING PLANS
STAGE 2A

610776_TR1(STAGING).DWG Plotted on 29-Jul-2025 6:59 PM

NAD 83

ALEWIFE BROOK PARKWAY (ROUTE 2)

CAMBRIDGEPARK DRIVE

ALEWIFE STATION

RINDGE AVENUE

DETOUR EAST 2 — M4-8, M3-2, MA-M1-5(2), M6-1R

ROAD CLOSED / DETOUR — R11-2, M4-10R

TYPE III BARRICADE

DRUM SPACING = 20' (TYP)

PROP. ARROW BOARD

SIGNAL HEADS TO BE BAGGED DURING DETOUR

DETOUR WEST 2 — M4-8, M3-4, MA-M1-5(2), M5-1R

W12-2, R5-2

11'-6"

POLICE DETAIL STATIONED HERE FOR DURATION OF DETOUR TO DIRECT LARGE VEHICLES OVER THE BRIDGE

TEMP LIMITED DEFLECTION BARRIER

TEMP BARRIER

PROP ALEWIFE BROOK PARKWAY CONST BL

PT +251+95.96

PC +71.23

98+00

200+00

500'

W20-5R, W4-2R

R11-2, M4-10L

TYPE III BARRICADE

TEMP LIMITED DEFLECTION BARRIER

16' MIN

M4-8, M3-4, MA-M1-5(2), M6-1L

DETOUR WEST 2

CONTINUED BELOW

CONCORD TURNPIKE (ROUTE 2)

ONLY ONLY ONLY

ONLY

ROAD CLOSED / DETOUR

R11-2

PROP. ARROW BOARD

TYPE III BARRICADE

DRUM SPACING = 10'

TYPE III BARRICADE

ROAD CLOSED / DETOUR

R11-2, M4-10R

ALEWIFE BROOK PARKWAY

DETOUR EAST 2 — M4-8, M3-2, MA-M1-5(2), M6-2R

NAD 83

ALEWIFE STATION ACCESS ROAD

CONCORD TURNPIKE

TEMP LIMITED DEFLECTION BARRIER

TEMP IMPACT ATTENUATOR

TYPE III BARRICADE

TEMP BARRIER

PT +251+95.96

PT +02.17 112+53.06

PROP ALEWIFE BROOK PARKWAY CONST BL

PT +20.43

PC +38.63

16' MIN

TEMP LIMITED DEFLECTION BARRIER

ALEWIFE BROOK PARKWAY (ROUTE 2)

CONTINUED ABOVE

END DETOUR WEST 2 — M4-8a, M3-4, MA-M1-5(2)

M4-8, W16-8p, M6-1R — DETOUR RINDGE AVE

DRUM SPACING = 10'

LEGEND

- WORKZONE
- NARROW IMPACT ATTENUATOR
- BARRIER
- DIRECTION OF TRAFFIC
- ARROWBOARD
- DRUM
- TRAFFIC SIGN

0 40 100 160

SCALE: 1" = 40'

NOTES:

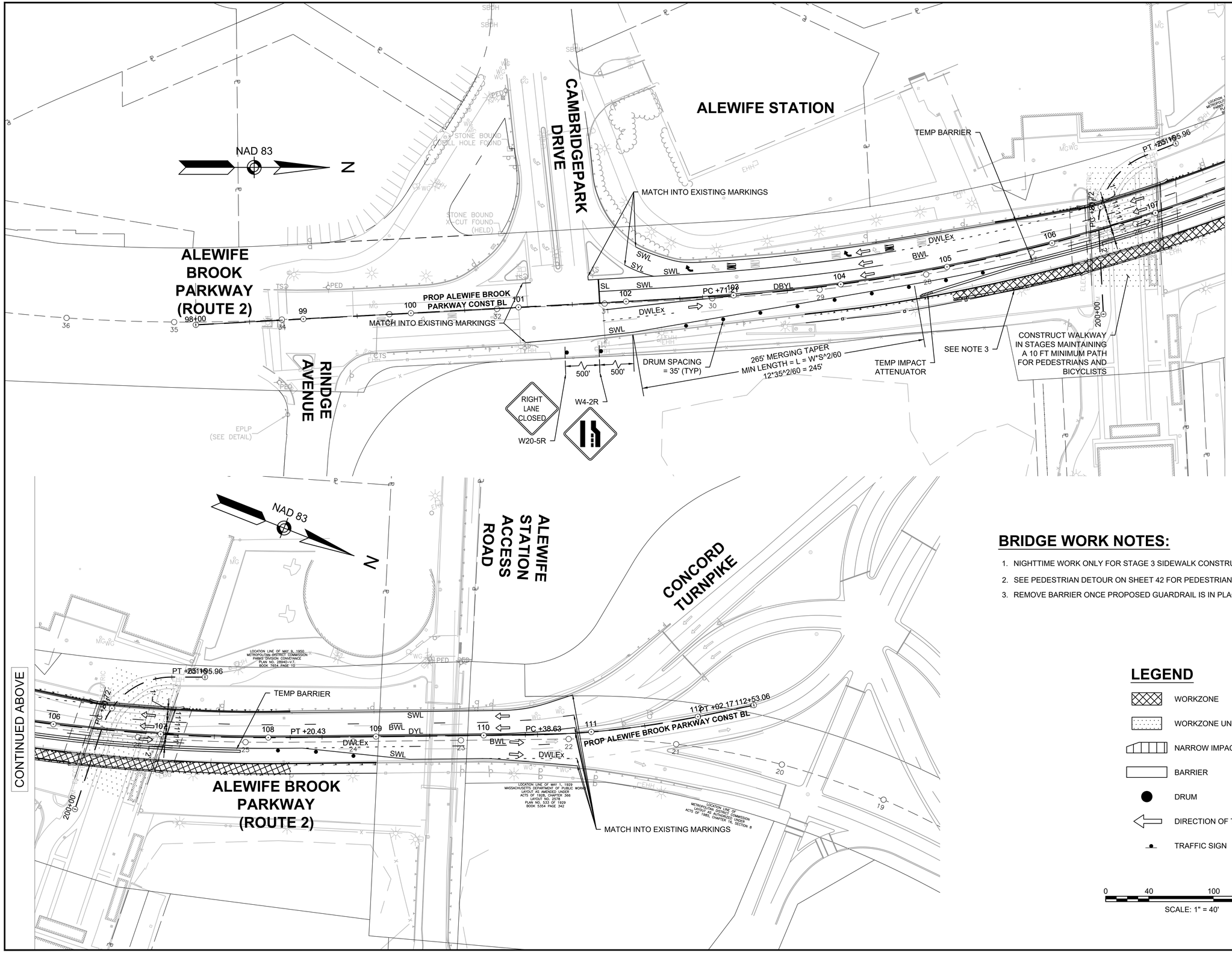
1. SEE VEHICLE AND TRUCK DETOURS ON SHEETS 39 AND 41 FOR OVERNIGHT WEEKEND PBU PLACEMENT.
2. PROVIDE TEMPORARY LIGHTING AS REQUIRED. SEE SPECIAL PROVISIONS ITEMS 853.8 AND 853.82.
3. REMOVE THE BARRIERS AND PLACE THEM BACK IN POSITION FOR CRANE ACCESS AS NEEDED.
4. CAMBRIDGEPARK DRIVE TRAFFIC SIGNAL HEADS TO BE BAGGED DURING DETOUR.
5. POLICE DETAIL SHALL BE STATIONED AT THE INTERSECTION OF ALEWIFE BROOK PKWY (ROUTE 2) AND CAMBRIDGEPARK DRIVE. POLICE TO COORDINATE WITH THE CONTRACTORS FOR EMERGENCY VEHICLE ACCESS, AND TRUCK ACCESS IN THE EVENT THAT A NORTHBOUND TRUCK DID NOT FOLLOW THE TRUCK DETOUR.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	38	98
PROJECT FILE NO.	610776		

CONSTRUCTION STAGING PLANS
STAGE 3

610776_TR1(STAGING).DWG Plotted on 29-Jul-2025 6:59 PM



BRIDGE WORK NOTES:

1. NIGHTTIME WORK ONLY FOR STAGE 3 SIDEWALK CONSTRUCTION.
2. SEE PEDESTRIAN DETOUR ON SHEET 42 FOR PEDESTRIANS DETOURED DURING STAGE 3.
3. REMOVE BARRIER ONCE PROPOSED GUARDRAIL IS IN PLACE.

LEGEND

- WORKZONE
- WORKZONE UNDER BRIDGE
- NARROW IMPACT ATTENUATOR
- BARRIER
- DRUM
- DIRECTION OF TRAFFIC
- TRAFFIC SIGN

0 40 100 160

SCALE: 1" = 40'

NOTES:

1. DETOUR TO BE IN USE FOR OVERNIGHT BRIDGE CLOSURE DURING BRIDGE BEAM ERECTION IN STAGE 1 AND STAGE 2.
2. ONE TRAVEL LANE OVER THE BRIDGE SHALL REMAIN OPEN FOR EMERGENCY VEHICLE AND OVERSIZED TRUCK ACCESS ONLY.
3. POLICE DETAIL TO BE PROVIDED AT DRIVEWAYS ALONG RINDGE AVENUE EASTBOUND CLOSURE TO PREVENT VEHICLES EXITING DRIVEWAYS FROM MAKING RIGHT TURNS. POLICE DETAIL TO BE PROVIDED AT THE INTERSECTION OF ALEWIFE BROOK PARKWAY (ROUTE 2) AND CAMBRIDGEPARK DRIVE. POLICE TO COORDINATE WITH THE CONTRACTORS TO ALLOW TRUCKS TO GO OVER THE BRIDGE.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	39	98
PROJECT FILE NO.	610776		

DETOUR PLANS
BRIDGE VEHICLE DETOUR
NIGHTTIME

610776_TR7(DETOUR PLANS).DWG Plotted on 29-Jul-2025 7:09 PM

LAKE STREET
TOWN OF BELMONT
CITY OF CAMBRIDGE
CONCORD TURNPIKE (ROUTE 2)
ALEWIFE STATION ACCESS ROAD
ALEWIFE BROOK PKY
MAGOUN STREET
WHITTEMORE AVENUE
MBTA RED LINE
ALEWIFE STATION
STEEL PLACE
CAMBRIDGEPARK DRIVE
ALEWIFE BROOK PKY (ROUTE 2)
RINDGE AVENUE
JACKSON STREET
MBTA COMMUTER RAIL
MASSACHUSETTS AVENUE (ROUTE 2A)
CITY OF SOMERVILLE
CITY OF CAMBRIDGE
MONTGOMERY STREET
CEDAR STREET
NAD 83
MATCHLINE
SEE SHEETS 34 & 37
SEE SHEET 40
1000'
2640'
1500'
500'
100'
0 200 400 600 800
SCALE: 1" = 200'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	40	98
PROJECT FILE NO.	610776		

DETOUR PLANS
RINDGE AVE VEHICLE DETOUR
WEEKEND

610776_TR7(DETOUR PLANS).DWG Plotted on 29-Jul-2025 7:09 PM

N

NAD 83

ALEWIFE BROOK PKY

CONCORD TURNPIKE (ROUTE 2)

ALEWIFE STATION ACCESS ROAD

WHITTEMORE AVENUE

MBTA RED LINE

HARVEY STREET

MASSACHUSETTS AVENUE (ROUTE 2A)

CITY OF SOMERVILLE
CITY OF CAMBRIDGE

ALEWIFE STATION ACCESS ROAD

STEEL PLACE

ALEWIFE STATION

DUDLEY STREET

CAMBRIDGEPARK DRIVE

MBTA COMMUTER RAIL

CLIFTON STREET

CEDAR STREET

RINDGE AVENUE

ALEWIFE BROOK PKY (ROUTE 2)

DETOUR
RINDGE AVE
M4-8
W16-8p
M6-1R

DETOUR
RINDGE AVE
M4-8
W16-8p
M5-1R

DETOUR
RINDGE AVE
M4-8
W16-8p
M6-3

DETOUR
RINDGE AVE
M4-8
W16-8p
M6-2R

DETOUR
RINDGE AVE
M4-8
W16-8p
M5-1R

DETOUR
RINDGE AVE
M4-8
W16-8p
M6-1R

DETOUR
RINDGE AVE
M4-8
W16-8p
M6-3

ROAD CLOSED
R11-2

SEE INSET A

END DETOUR
RINDGE AVE
M4-8a
W16-8p

DETOUR AHEAD
W20-2

ROAD CLOSED AHEAD
W20-3
W16-8p
RINDGE AVE

ROAD WORK AHEAD
W20-1A

500'

500'

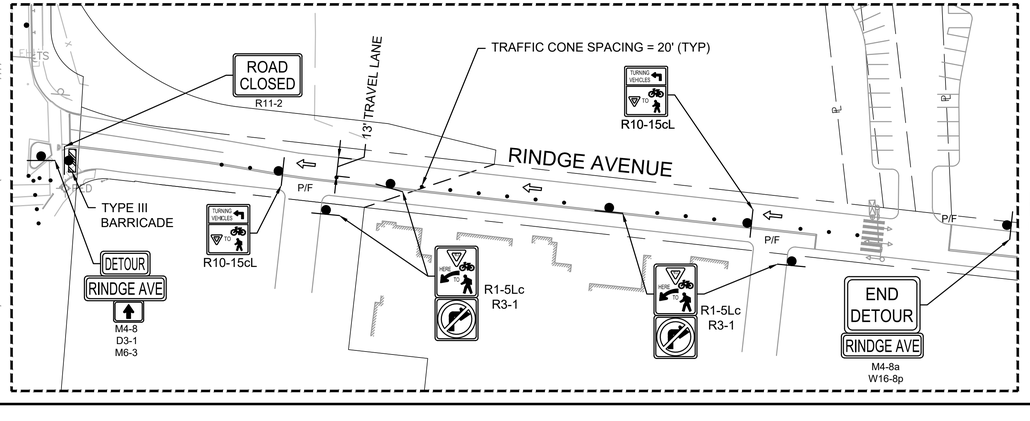
500'

0 200 400 600 800
SCALE: 1" = 200'

NOTES:

1. DETOUR TO BE IN USE FOR THE DURATION OF THE 55-HOUR WEEKEND CONSTRUCTION.
2. RINDGE AVENUE EASTBOUND CLOSURE FROM ALEWIFE BROOK PARKWAY (ROUTE 2) TO COMEAU FIELD DRIVEWAY (#370 RINDGE AVENUE).

INSET A



CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	41	98
PROJECT FILE NO.	610776		

DETOUR PLANS
TRUCK DETOUR
NIGHTTIME

610776_TR7(DETOUR PLANS).DWG Plotted on 29-Jul-2025 7:09 PM

N

NAD 83

TRUCK DETOUR WEST 2 — M4-4 M4-8 M3-4 MA-M1-5(2) M6-3

TRUCK DETOUR EAST 2 — M4-4 M4-8 M3-2 MA-M1-5(2) M5-1R

TRUCK DETOUR 2 — M4-4 M4-8 MA-M1-5(2) M6-1R

TRUCK DETOUR EAST 2 — M4-4 M4-8 M3-2 MA-M1-5(2) M6-1L

END DETOUR — M4-8a

TRUCK DETOUR 2 — M4-4 M4-8 MA-M1-5(2) M5-1R

TRUCK DETOUR WEST 2 — M4-4 M4-8 M3-4 MA-M1-5(2) M5-1L

TRUCK DETOUR EAST 2 — M4-4 M4-8 M3-2 MA-M1-5(2) M5-1L

TRUCK DETOUR 2 — M4-4 M4-8 MA-M1-5(2) M6-1R

TRUCK DETOUR 2 — M4-4 M4-8 MA-M1-5(2) M6-3

TRUCK DETOUR 2 — M4-4 M4-8 MA-M1-5(2) M6-1R

TRUCK DETOUR 2 — M4-4 M4-8 MA-M1-5(2) M5-1R

TRUCK DETOUR 2 — M4-4 M4-8 MA-M1-5(2) M6-3

TRUCK DETOUR 2 — W12-2 M4-4 M4-8 MA-M1-5(2) M6-3

11'-6" TRUCK DETOUR AHEAD — W12-2 M4-4 W20-2

R5-2

R5-2(MOD) — NO UNAUTHORIZED THRU TRUCKING VIA BRIGHTON STREET — COVER THE SIGN DURING TRUCK DETOUR

R3-8 LT_R ONLY

ROAD CLOSED AHEAD — W20-3

ROAD WORK AHEAD — W20-1A

500'

POLICE DETAIL (SEE NOTE 2)

0 500 1,000 1,500 2,000

SCALE: 1" = 500'

PLEASANT STREET (ROUTE 60)
CONCORD TURNPIKE (ROUTE 2)
LAKE STREET
BRIGHTON STREET
LEONARD STREET
CONCORD AVENUE
BLANCHARD ROAD
TOWN OF BELMONT
CITY OF CAMBRIDGE
TOWN OF ARLINGTON
ALEWIFE STATION ACCESS ROAD
MBTA COMMUTER RAIL
CAMBRIDGEPARK DRIVE
STEEL PLACE
ALEWIFE STATION
RINDGE AVENUE
TERMINAL ROAD
ALEWIFE BROOK PKY (ROUTE 2)
ALEWIFE BROOK PKY
WHITTEMORE AVENUE
MBTA RED LINE
HERBERT STREET
MASSACHUSETTS AVENUE (ROUTE 2A)
BROADWAY
HOLLAND STREET

NOTES:

1. DETOUR TO BE IN USE FOR OVERNIGHT BRIDGE CLOSURE DURING BRIDGE BEAM ERECTION IN STAGE 1 AND STAGE 2.
2. POLICE DETAIL TO BE PROVIDED AT DRIVEWAYS ALONG RINDGE AVENUE EASTBOUND CLOSURE TO PREVENT VEHICLES EXITING DRIVEWAYS FROM MAKING RIGHT TURNS. POLICE DETAIL TO BE PROVIDED AT THE INTERSECTION OF ALEWIFE BROOK PKWY (ROUTE 2) AND CAMBRIDGEPARK DRIVE. POLICE TO COORDINATE WITH THE CONTRACTORS TO ALLOW TRUCKS TO GO OVER THE BRIDGE.
3. TRUCKS TO USE VEHICLE DETOUR TO TRAVEL FROM CONCORD TURNPIKE (ROUTE 2) EASTBOUND TO ALEWIFE BROOK PARKWAY (ROUTE 2) SOUTHBOUND.
4. TRUCKS TO USE VEHICLE DETOUR TO TRAVEL FROM ALEWIFE BROOK PARKWAY WESTBOUND TO ALEWIFE BROOK PARKWAY (ROUTE 2) SOUTHBOUND.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	42	98
PROJECT FILE NO.	610776		

DETOUR PLANS
PEDESTRIAN DETOUR
FOR PROJECT DURATION

610776_TR7(DETOUR PLANS).DWG Plotted on 29-Jul-2025 7:09 PM

N

NAD 83

NOTES:

1. PEDESTRIAN DETOUR OVER THE BRIDGE TO BE IN USE FOR STAGE 1 DEMOLITION THROUGH STAGE 3 CONSTRUCTION.
2. ALL PEDESTRIAN DETOUR ROUTES SHALL INCLUDE REPAIRS AS DIRECTED BY THE RESIDENT ENGINEER TO MEET ADA STANDARDS.
3. ALL PEDESTRIAN DETOUR ROUTES SHALL INCLUDE TEMPORARY LIGHTING AS SHOWN ON THE PLAN, AND AS DIRECTED BY THE RESIDENT ENGINEER.
4. TRIM OVERGROWN VEGETATION ALONG THE PEDESTRIAN DETOUR ROUTE.

LEGEND

PEDESTRIAN DETOUR ROUTE (OVER BRIDGE)

CONCORD TURNPIKE (ROUTE 2)
ALEWIFE STATION ACCESS ROAD
TOWN OF ARLINGTON
CITY OF CAMBRIDGE
END TEMPORARY LIGHTING FOR PEDESTRIAN DETOUR
DETOUR M4-9bL
ALEWIFE BROOK PKY
WHITTEMORE AVENUE
SIDEWALK CLOSED R9-9
TYPE III BARRICADE
MBTA RED LINE
DETOUR M4-9bL
DETOUR M4-9bR
ALEWIFE STATION ACCESS ROAD
BEGIN TEMPORARY LIGHTING FOR PEDESTRIAN DETOUR (SEE ITEM 853.81)
DETOUR M4-9bT
ALEWIFE STATION
STEEL PLACE
TYPE III BARRICADE
SIDEWALK CLOSED R9-9
DETOUR M4-9bT/R
CAMBRIDGEPARK DRIVE
RINDGE AVENUE
MBTA COMMUTER RAIL
ALEWIFE BROOK PKY (ROUTE 2)

0 100 200 300 400
SCALE: 1" = 100'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	43	98
PROJECT FILE NO.	610776		

DETOUR PLANS
PEDESTRIAN AND BICYCLE DETOUR
WEEKEND DETOURS

610776_TR7(DETOUR PLANS).DWG Plotted on 29-Jul-2025 7:10 PM

CONCORD TURNPIKE (ROUTE 2)
ALEWIFE STATION ACCESS ROAD
TOWN OF ARLINGTON
CITY OF CAMBRIDGE
ALEWIFE BROOK PKY
WHITTEMORE AVENUE
MBTA RED LINE

N
NAD 83

NOTES:

1. PEDESTRIAN AND BICYCLE DETOUR UNDER THE BRIDGE TO BE IN USE ONLY DURING THE 55-HOUR WEEKEND DEMOLITION AND ERECTION OF THE BRIDGE.
2. ALL PEDESTRIAN AND BICYCLE DETOUR ROUTES SHALL INCLUDE REPAIRS AS DIRECTED BY THE RESIDENT ENGINEER TO MEET ADA STANDARDS.
3. ALL PEDESTRIAN AND BICYCLE DETOURS ROUTE SHALL INCLUDE TEMPORARY LIGHTING AS DIRECTED BY THE RESIDENT ENGINEER.

LEGEND
- BICYCLE DETOUR ROUTE
- PEDESTRIAN DETOUR ROUTE (UNDER BRIDGE)

ALEWIFE STATION ACCESS ROAD
150'
150'
150'
PATH CLOSED AHEAD W20-3b
ROAD WORK AHEAD W20-1A
DETOUR AHEAD W20-2a
TYPE III BARRICADE
DETOUR M4-9bL
PATH CLOSED AHEAD W20-3b
DETOUR AHEAD W20-2a
100'
100'
100'
100'
100'
PATH CLOSED AHEAD W20-3b
PATH CLOSED R11-2F
DETOUR M4-9aR
DETOUR M4-9cL
DETOUR M4-9aL
DETOUR M4-9aR
DETOUR M4-9cT/L
DETOUR M4-9cT
ALEWIFE STATION
STEEL PLACE
CAMBRIDGEPARK DRIVE
PCMS B
SEE INSET A
DETOUR M4-9aL
DETOUR M4-9aR
DETOUR M4-9aT
DETOUR M4-9bR
DETOUR M4-9bT
R9-5
DETOUR M4-9aL
DETOUR M4-9aR
DETOUR M4-9bL
DETOUR M4-9cT
DETOUR M4-9cR
DETOUR M4-9cL
RINDGE AVENUE
ALEWIFE BROOK PKY (ROUTE 2)
PCMS C

0 100 200 300 400
SCALE: 1" = 100'

INSET A

DETOUR M4-9bR
DETOUR M4-9bT
DETOUR M4-9aT
TS
13' TRAVEL LANE
TRAFFIC CONE SPACING = 20' (TYP)
SET SIGNAL TO PEDESTRIAN RECALL
PCMS A
POLICE DETAIL
RINDGE AVENUE
USE PED SIGNAL R9-5
DETOUR M4-9bL
DETOUR M4-9cT
POLICE DETAIL
DETOUR M4-9cR
DETOUR M4-9cR
DETOUR M4-9cL
DETOUR M4-9cL
SEE SHEET 40 FOR RINDGE AVENUE EASTBOUND VEHICLE DETOUR

0 50 100 150 200
SCALE: 1" = 50'

PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES	
PCMS A	USE PED SIGNAL TO CROSS
PCMS B	HEAVY PED-BIKE CROSSING
PCMS C	HEAVY PED-BIKE CROSSING

NOTE:
PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES SHALL BE DISABLED AT ALL TIMES EXCEPT WEEKEND DETOURS.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	44	98
	PROJECT FILE NO. 610776		

TEMPORARY TRAFFIC SIGN SUMMARY
SHEET 1 OF 2

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR			UNIT AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER	
MA-M1-5(2)	24	24	2	②	②	②	WHITE	BLACK	BLACK	4.00
MA-R2-10A	48	36	WORK ZONES SPEEDING FINES DOUBLED				WHITE/ ORANGE	BLACK	BLACK	12.00
MA-R2-10E	36	48	END ROAD WORK / DOUBLE FINES END				WHITE/ ORANGE	BLACK	BLACK	12.00
MA-W20-5R	36	36	RIGHT LANE CLOSED XXX				FLUORESCENT ORANGE	BLACK	BLACK	9.00
MA-W24-2	36	36	LANE SHIFT AHEAD				FLUORESCENT ORANGE	BLACK	BLACK	9.00
M3-2	24	12	EAST	①	①	①	WHITE	BLACK	BLACK	2.00
M3-4	24	12	WEST				WHITE	BLACK	BLACK	2.00
M4-4	24	12	TRUCK				WHITE	BLACK	BLACK	2.00
M4-8	24	12	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	2.00
M4-8a	24	18	END DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	3.00
M4-9aL	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9aR	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9aT	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9bL	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9bR	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9bT	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9bT/R	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9cL	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9cR	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9cT	30	24	DETOUR	①	①	①	FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9cT/L	30	24	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-9c(MOD)	30	24	END DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	5.00
M4-10L	48	18	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	6.00
M4-10R	48	18	DETOUR				FLUORESCENT ORANGE	BLACK	BLACK	6.00
M5-1L	21	15					WHITE	BLACK	BLACK	2.19
M5-1R	21	15					WHITE	BLACK	BLACK	2.19
M6-1L	21	15					WHITE	BLACK	BLACK	2.19
M6-1R	21	15					WHITE	BLACK	BLACK	2.19
M6-2R	21	15					WHITE	BLACK	BLACK	2.19
M6-3	21	15					WHITE	BLACK	BLACK	2.19
R1-5Lc	36	48					WHITE	BLACK/ RED	BLACK	12.00
R3-1	24	24					WHITE	BLACK/ RED	BLACK	4.00
R3-8	36	36	ONLY ONLY				WHITE	BLACK	BLACK	9.00
R3-8 LT_R	36	30	ONLY				WHITE	BLACK	BLACK	7.50
R4-7	30	24					WHITE	BLACK	BLACK	5.00
R4-11	30	30	MAY USE FULL LANE				WHITE	BLACK	BLACK	6.25
R5-2	30	30					WHITE	BLACK	BLACK	6.25
R9-5	12	18	USE PED SIGNAL				WHITE	BLACK	BLACK	1.50

① SEE MUTCD 2009 EDITION, 2004 STD. HWY. SIGNS (SHS), 2012 SHS SUPPLEMENT, AND SECTION M9.30.0 TYPE III OF THE MASSDOT STANDARD SPECIFICATION FOR TEXT DIMENSIONS.
② SEE MASSDOT STANDARD SIGN BOOK, CURRENT EDITION FOR TEXT DIMENSIONS.
*NUMBER OF SIGNS REQUIRED ASSUMING ONE SET UP AT A TIME.

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR			UNIT AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER	
R9-8	36	18	PEDESTRIAN CROSSWALK	①	①	①	WHITE	BLACK	BLACK	4.50
R9-9	24	12	SIDEWALK CLOSED				WHITE	BLACK	BLACK	2.00
R9-10	24	12	SIDEWALK CLOSED USE OTHER SIDE				WHITE	BLACK	BLACK	2.00
R9-11aL	24	12	SIDEWALK CLOSED AHEAD CROSS HERE				WHITE	BLACK	BLACK	2.00
R9-11aR	24	12	SIDEWALK CLOSED AHEAD CROSS HERE				WHITE	BLACK	BLACK	2.00
R9-11L	24	12	SIDEWALK CLOSED CROSS HERE				WHITE	BLACK	BLACK	2.00
R9-11R	24	12	SIDEWALK CLOSED CROSS HERE				WHITE	BLACK	BLACK	2.00
R10-15cL	30	36	TURNING VEHICLES TO				WHITE	BLACK/ RED	BLACK	7.50
R11-2	48	30	ROAD CLOSED				WHITE	BLACK	BLACK	10.00
R11-2F	48	30	PATH CLOSED				WHITE	BLACK	BLACK	10.00
W1-4L	36	36					FLUORESCENT ORANGE	BLACK	BLACK	9.00
W1-4R	36	36					FLUORESCENT ORANGE	BLACK	BLACK	9.00
W1-4bL	36	36					FLUORESCENT ORANGE	BLACK	BLACK	9.00
W1-4bR	36	36					FLUORESCENT ORANGE	BLACK	BLACK	9.00
W4-2R	36	36					FLUORESCENT ORANGE	BLACK	BLACK	9.00
W5-1	36	36	ROAD NARROWS				FLUORESCENT ORANGE	BLACK	BLACK	9.00
W11-1	24	24					YELLOW - GREEN	BLACK	BLACK	4.00
W11-2	24	24					YELLOW - GREEN	BLACK	BLACK	4.00
W12-2	36	36	11'-6"	▼	▼	▼	YELLOW	BLACK	BLACK	4.00

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR			UNIT AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER	
W16-1p	18	24	SHARE THE ROAD	①	①	①	YELLOW - GREEN	BLACK	BLACK	3.00
W16-7pL	24	12					YELLOW - GREEN	BLACK	BLACK	2.00
W16-8p	24	8	RINDGE AVE				FLUORESCENT ORANGE	BLACK	BLACK	1.33
W16-9p	24	12	AHEAD				YELLOW - GREEN	BLACK	BLACK	2.00
W16-19p	24	12	ON ROADWAY				YELLOW - GREEN	BLACK	BLACK	2.00
W20-1A	36	36	ROAD WORK AHEAD				FLUORESCENT ORANGE	BLACK	BLACK	9.00
W20-2	36	36	DETOUR AHEAD				FLUORESCENT ORANGE	BLACK	BLACK	9.00
W20-2a	36	36	DETOUR AHEAD				FLUORESCENT ORANGE	BLACK	BLACK	9.00
W20-3	36	36	ROAD CLOSED AHEAD				FLUORESCENT ORANGE	BLACK	BLACK	9.00
W20-3b	36	36	PATH CLOSED AHEAD				FLUORESCENT ORANGE	BLACK	BLACK	9.00
W20-5L	36	36	LEFT LANE CLOSED				FLUORESCENT ORANGE	BLACK	BLACK	9.00
W20-5R	36	36	RIGHT LANE CLOSED				FLUORESCENT ORANGE	BLACK	BLACK	9.00
W21-5	36	36	SHOULDER WORK	▼	▼	▼	FLUORESCENT ORANGE	BLACK	BLACK	9.00

① SEE MUTCD 2009 EDITION, 2004 STD. HWY. SIGNS (SHS), 2012 SHS SUPPLEMENT, AND SECTION M9.30.0 TYPE III OF THE MASSDOT STANDARD SPECIFICATION FOR TEXT DIMENSIONS.
② SEE MASSDOT STANDARD SIGN BOOK, CURRENT EDITION FOR TEXT DIMENSIONS.
*NUMBER OF SIGNS REQUIRED ASSUMING ONE SET UP AT A TIME.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	45	98
PROJECT FILE NO.	610776		

TEMPORARY TRAFFIC SIGN SUMMARY
SHEET 2 OF 2

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	46	98
PROJECT FILE NO.	610776		

UTILITY PLANS
SHEET 1 OF 3

610776_UT(UTILITY PLANS).DWG Plotted on 29-Jul-2025 6:41 PM

NAD 83

N

CAMBRIDGE PARK DRIVE

ALEWIFE BROOK PARKWAY

RINDGE AVENUE

PROJECT BEGIN
STA 101+05
N 2969027.8329
E 753262.3639

PROP ALEWIFE BROOK PARKWAY CONST BL

PC +71.21

99 100 101 102 103 104

PROP TEMP OCCUPANCY AREA (TYP)

PROP FULL DEPTH
PROP MILL & OVERLAY
PROP SAWCUT

ADJ DMH (RET)
ADJ GG (BO) (RET)
ADJ CB
RET GG
RET EHH
RET LP

N/F
APPLETREEWOOD, LLC
PARCEL ID: 268C-30
DEED BOOK 44958 PAGE 0509
143 ALEWIFE BROOK PKWY

N/F
MASSACHUSETTS BAY TRANSPORATION AUTHORITY
PARCEL ID: C-269
DEED BOOK 13117 PAGE 113
PARCEL IS SUBJECT TO ARTICLE 97 RESTRICTIONS

N/F
MASSACHUSETTS BAY TRANSPORATION AUTHORITY
PARCEL ID: 269.5-101
DEED BOOK 13550 PAGE 315
5 CAMBRIDGE PARK DR

1951 MDC LOCATION LINE
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.

1950 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. 28940-V.T.
BOOK 7654 PAGE 10

1951 MDC
PARKS DIVISION CONVEYANCE
PLAN NO. 29841-V.T.
BOOK 7749 PAGE 1220

1956 MDC
PARKS DIVISION TAKING
PLAN NO. 34977-V.T.

1992 MDC
NO. 7102

1870 CITY OF CAMBRIDGE LAYOUT

2001 CITY OF CAMBRIDGE LAYOUT BOOK 32240 PAGE 10

30' WIDE RIGHT OF WAY AND EASEMENT (PLAN 33 OF 1999) BOOK 9229 PAGE 135

LOCATION LINE OF NOVEMBER 14, 1908 METROPOLITAN PARK COMMISSION TAKING

EPLP (SEE DETAIL)

END OF 1992 MDC ALTERATION (SECTION 4) SHLO NO. 7102

N/F
IQHQ-ALEWIFE, LLC
PARCEL ID: 269-135
DEED BOOK 75297 PAGE 443
1R-3R ALEWIFE BROOK PKWY

WF#C-9 WF#C-10 WF#C-11 WF#C-12 WF#C-13 WF#C-14 WF#C-15 WF#C-16

CONTINUED ON SHEET NO. 47

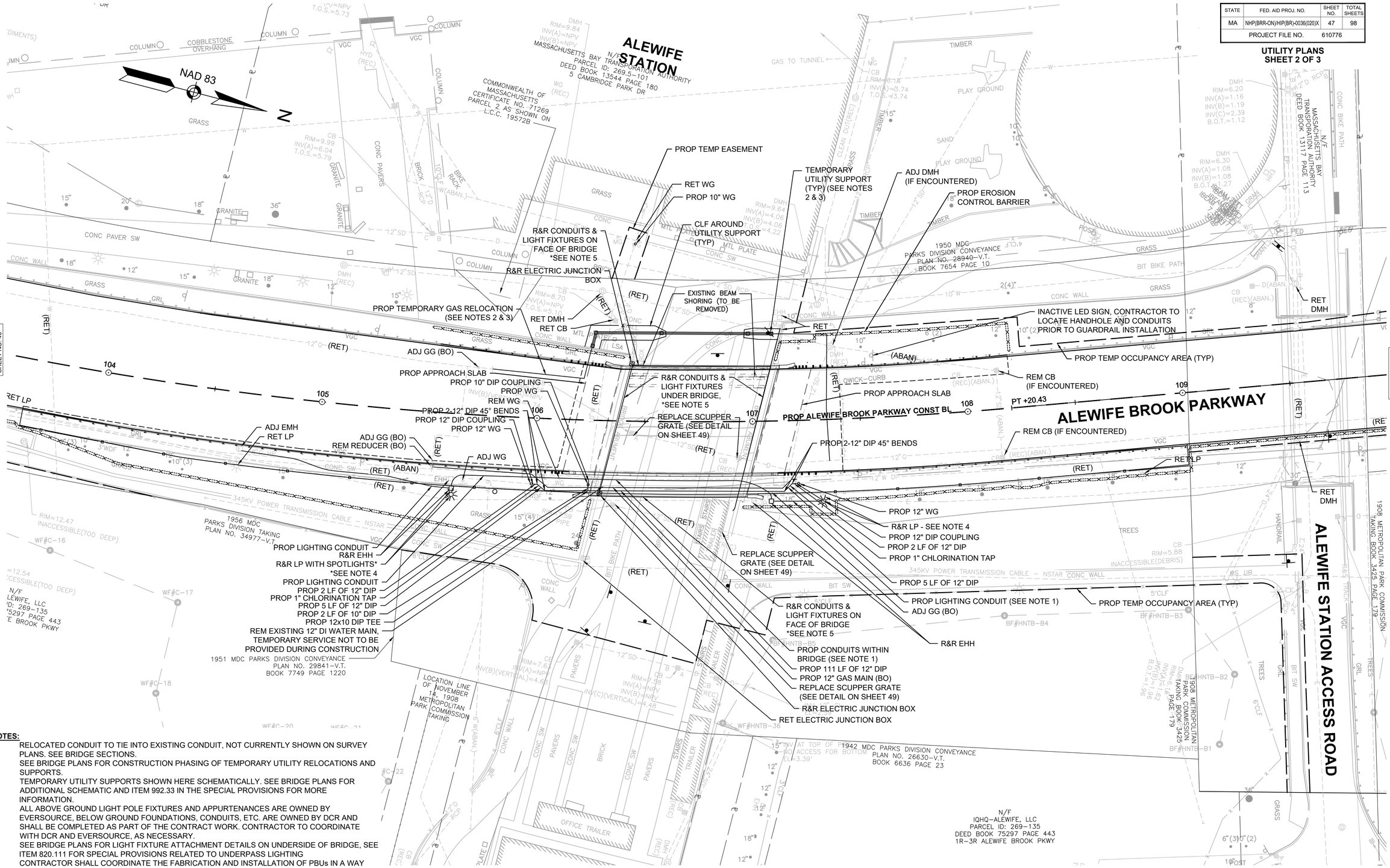
0 20 50 100
SCALE: 1" = 20'

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	47	98
PROJECT FILE NO. 610776			

UTILITY PLANS
SHEET 2 OF 3

610776_UT(UTILITY PLANS).DWG Plotted on 29-Jul-2025 6:41 PM



NOTES:

1. RELOCATED CONDUIT TO TIE INTO EXISTING CONDUIT, NOT CURRENTLY SHOWN ON SURVEY PLANS. SEE BRIDGE SECTIONS.
2. SEE BRIDGE PLANS FOR CONSTRUCTION PHASING OF TEMPORARY UTILITY RELOCATIONS AND SUPPORTS.
3. TEMPORARY UTILITY SUPPORTS SHOWN HERE SCHEMATICALLY. SEE BRIDGE PLANS FOR ADDITIONAL SCHEMATIC AND ITEM 992.33 IN THE SPECIAL PROVISIONS FOR MORE INFORMATION.
4. ALL ABOVE GROUND LIGHT POLE FIXTURES AND APPURTENANCES ARE OWNED BY EVERSOURCE, BELOW GROUND FOUNDATIONS, CONDUITS, ETC. ARE OWNED BY DCR AND SHALL BE COMPLETED AS PART OF THE CONTRACT WORK. CONTRACTOR TO COORDINATE WITH DCR AND EVERSOURCE, AS NECESSARY.
5. SEE BRIDGE PLANS FOR LIGHT FIXTURE ATTACHMENT DETAILS ON UNDERSIDE OF BRIDGE, SEE ITEM 820.111 FOR SPECIAL PROVISIONS RELATED TO UNDERPASS LIGHTING
6. CONTRACTOR SHALL COORDINATE THE FABRICATION AND INSTALLATION OF PBUs IN A WAY THAT BEST ALLOWS REPLACEMENT OF ANY WATER MAIN JOINTS THAT DO NOT PASS THE PRESSURE TEST REQUIRED IN MASSDOT STANDARD SPECIFICATIONS 301.60-J (M5.05.3). PIPE JOINT LOCATIONS SHALL BE PROVIDED TO THE CAMBRIDGE WATER DEPARTMENT AND ENGINEER FOR REVIEW AND APPROVAL.

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	48	98
PROJECT FILE NO. 610776			

UTILITY PLANS
SHEET 3 OF 3

610776_UT(UTILITY PLANS).DWG Plotted on 29-Jul-2025 6:41 PM

NAD 83

N

N/F
DEPARTMENT OF CONSERVATION
AND RECREATION
DEED BOOK 3489 PAGE 381
PROP ID 15-2-2
THORNDIKE ST EXT

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
DEED BOOK 13117 PAGE 113

1933 SHLO
(LAYOUT NO. 2981)

1933 SHLO
NO. 2981

END PROJECT
STA 110+85
N 2969980.2873
E 753072.2163

LOCATION LINE OF MAY 1, 1929
MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
LAYOUT AS AMENDED UNDER
ACTS OF 1928, CHAPTER 366
LAYOUT NO. 2578
PLAN NO. 533 OF 1929
BOOK 5354 PAGE 342

112+53.06
PT +02.17
112

PROP ALEWIFE BROOK PARKWAY CONST BL
ALEWIFE BROOK PARKWAY

111

110
PC +38.63

CONTINUED ON SHEET NO. 47

PROP SAWCUT
PROP MILL & OVERLAY

RET HYD
RET DMH
ADJ WG
RET WG
RET LP
PROP TEMP OCCUPANCY AREA (TYP)

1929 MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS
LAYOUT NO. 2578
PLAN NO. 533 OF 1929
BOOK 5354 PAGE 342

LOCATION LINE OF
METROPOLITAN DISTRICT COMMISSION
LAYOUT AS AUTHORIZED UNDER
ACTS OF 1985, CHAPTER 16, SECTION 8

1908 METROPOLITAN PARK COMMISSION
TAKING BOOK 3429 PAGE 129

ALEWIFE STATION ACCESS ROAD

345KV POWER TRANSMISSION CABLE - NSTAR

1996 SHLO NO. 7348

N/F
DEPARTMENT OF CONSERVATION
AND RECREATION
PROP ID 269.5-102

N/F
COMMONWEALTH OF MASSACHUSETTS,
ACTING BY AND THROUGH ITS
DEPARTMENT OF CONSERVATION
AND RECREATION
DEED BOOK 3405 PAGE 116
PROP ID 15-2-2

CB
RIM=6.06
INV(A)=2.46
INV(B)=NPV
T.O.W.=2.46
T.O.S.=1.06

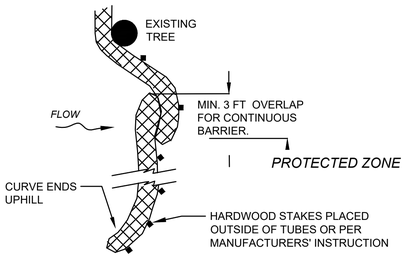
CB
RIM=5.81
INV(A)(T.O.H.)=4.01
T.O.S.=2.81

DMH
RIM=19.93
INV(A)=17.23
INV(B)=NPV
T.O.W.=17.23
T.O.S.=15.33

DMH
RIM=20.05
BOLTED

BF#HNTB-A5 END
BF#HNTB-A4
BF#HNTB-A3
WF#HNTB

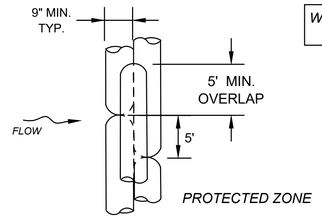
0 20 50 100
SCALE: 1" = 20'



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

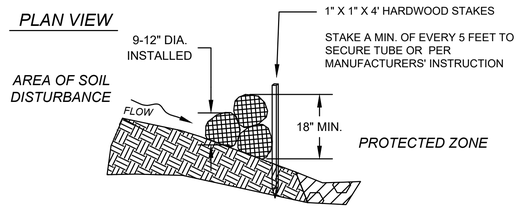
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLAN VIEW



PLAN VIEW

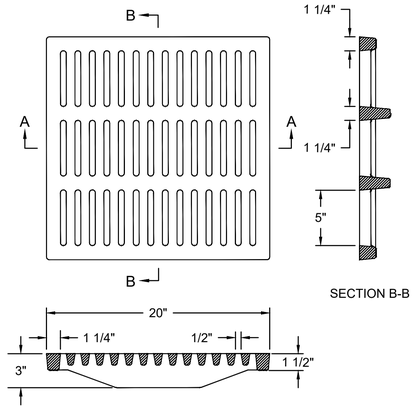
WHERE SPECIFIED ON CONSTRUCTION PLANS OR AS REQUIRED



SECTION

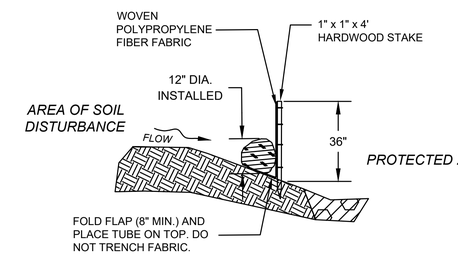
COMPOST FILTER TUBES STACKED

NOT TO SCALE



BIKE-SAFE SCUPPER GRATE

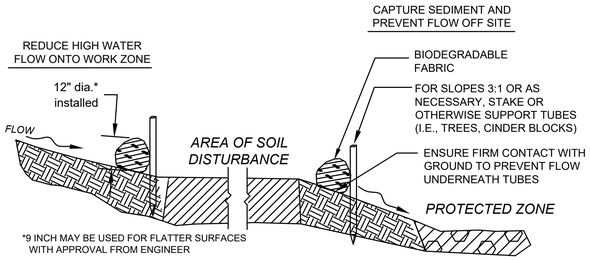
NOT TO SCALE



SECTION

COMPOST FILTER TUBE & SILT FENCE

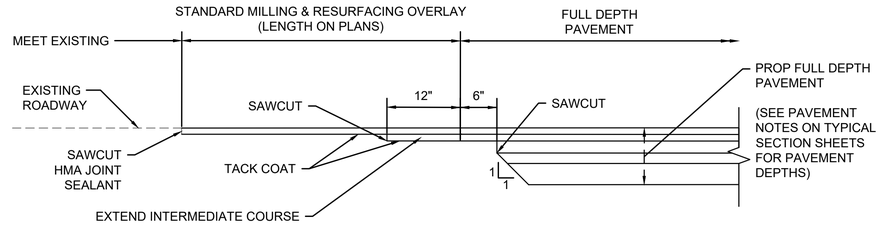
NOT TO SCALE

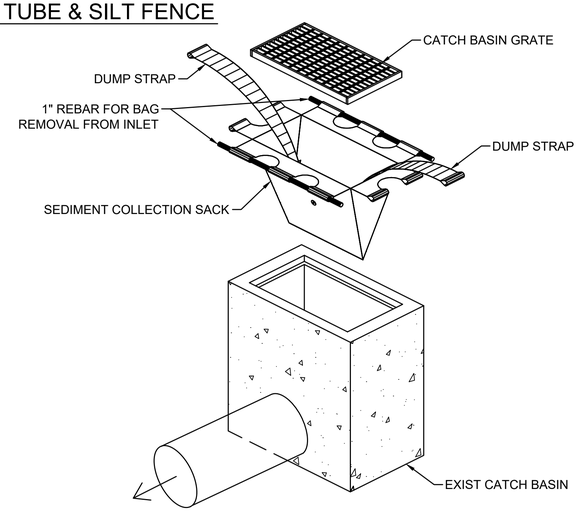


SECTION

SEDIMENT CONTROL BARRIER - COMPOST FILTER TUBE

NOT TO SCALE





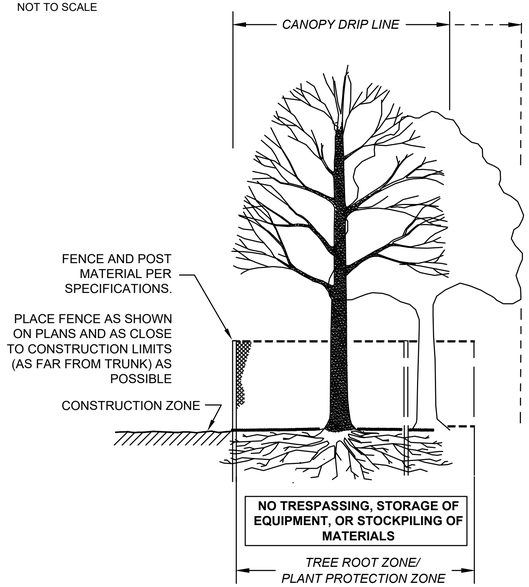
INSTALLATION DETAIL

SILT SACK DETAIL

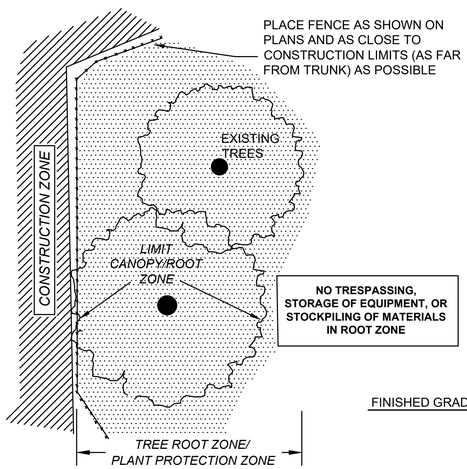
NTS

PAVING TRANSITION AT FULL DEPTH CONSTRUCTION

NOT TO SCALE



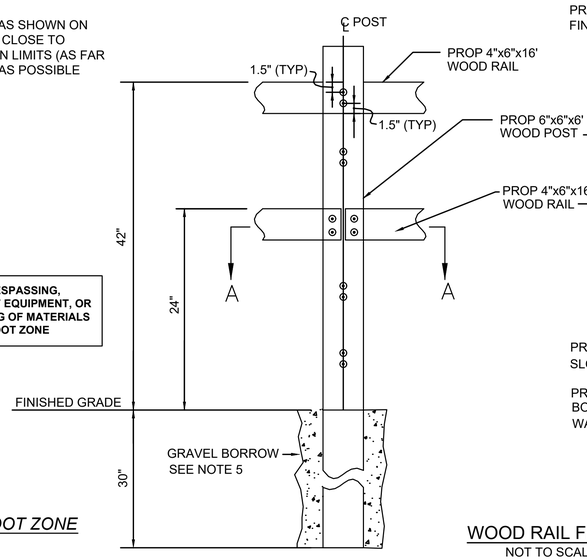
SECTION - FENCE PROTECTION OF ROOT ZONE

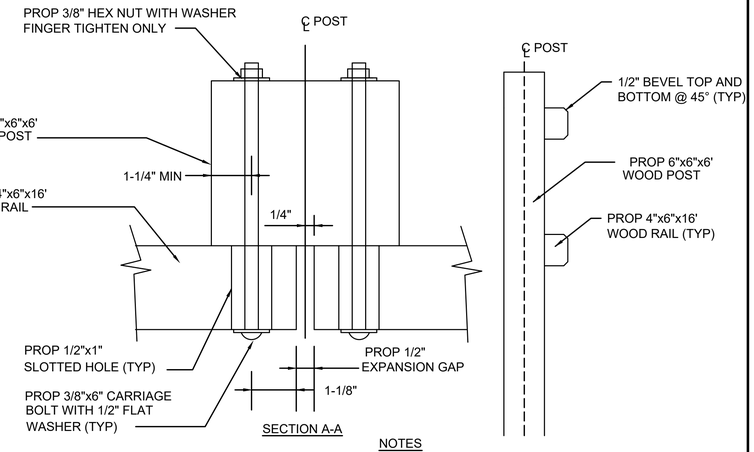


PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

NOT TO SCALE



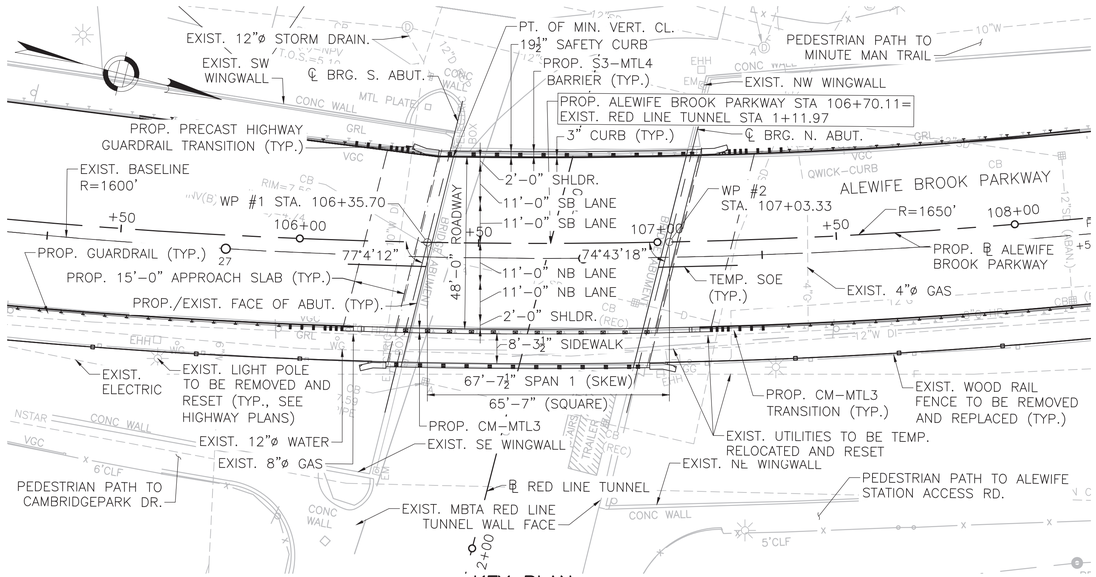


WOOD RAIL FENCE

NOT TO SCALE

NOTES

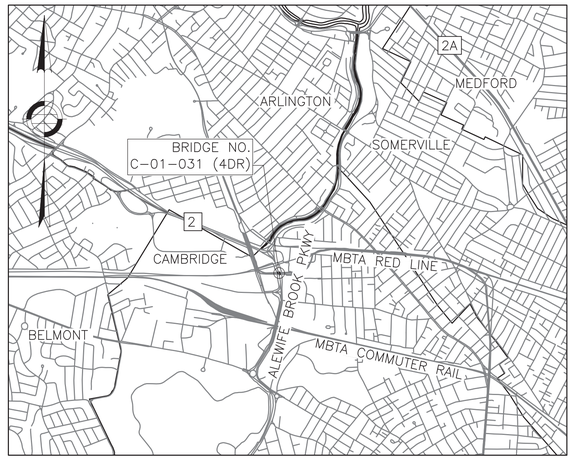
1. POSTS SHALL BE PLACED 8'-0" ON CENTER.
2. THE FACE OF RAIL SHALL BE SET OFF THE EDGE OF SIDEWALK PAVEMENT, AS SHOWN ON THE PLANS, AND AS DIRECTED BY THE ENGINEER.
3. ALL HARDWARE SHALL BE GALVANIZED.
4. ALTERNATE JOINTS IN RAILING BETWEEN POSTS
5. CONTRACTOR SHALL SET POST IN 4,000 PSI, 1-1/2IN, 565 CEMENT CONCRETE FOR ALL POSTS UNABLE TO BE SET AT REQUIRED DEPTH.



KEY PLAN

SCALE: 1" = 20'

NOTE:
REFER TO SHEET 03 AND GEOTECHNICAL REPORT FOR LOCATIONS OF BORINGS, AS LOCATIONS ARE OUTSIDE OF THE KEY PLAN LIMITS.



LOCUS

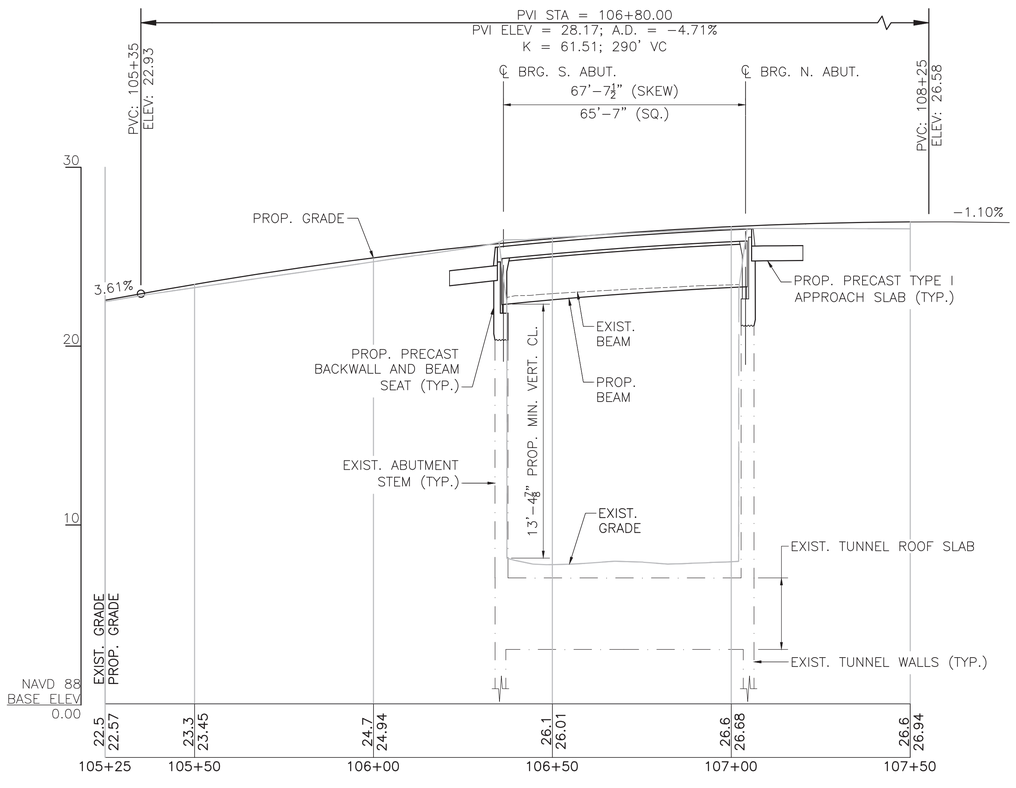
SCALE: 1" = 2000'

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	50	98
PROJECT FILE NO. 610776			

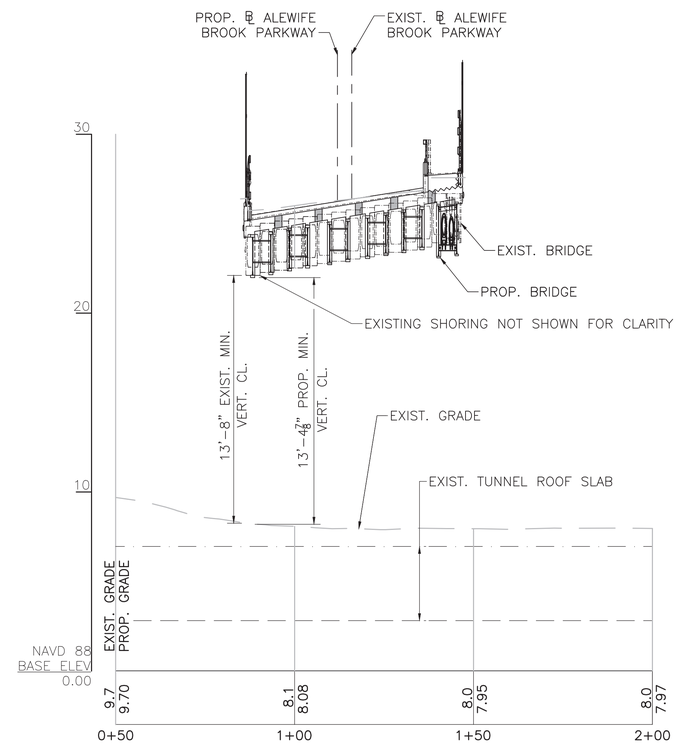
KEY PLAN & PROFILE

INDEX	
Sheet Number	Sheet Title
01	KEY PLAN & PROFILE
02	GENERAL NOTES
03	BORING PLAN
04	BORING LOG 1
05	GENERAL PLAN & ELEVATION
06	CONSTRUCTION STAGING PLAN 1 OF 2
07	CONSTRUCTION STAGING PLAN 2 OF 2
08	STAGING SECTION 1 OF 3
09	STAGING SECTION 2 OF 3
10	STAGING SECTION 3 OF 3
11	SOUTH ABUTMENT DEMOLITION PLAN & ELEVATION
12	NORTH ABUTMENT DEMOLITION PLAN & ELEVATION
13	SOUTH ABUTMENT PLAN & ELEVATION
14	NORTH ABUTMENT PLAN & ELEVATION
15	ABUTMENT DETAILS 1 OF 2
16	ABUTMENT DETAILS 2 OF 2
17	END DIAPHRAGM PLAN & ELEVATION
18	PRECAST GUARDRAIL TRANSITION DETAILS
19	CONCRETE REPAIR DETAILS
20	FRAMING PLAN AND GIRDER ELEVATION
21	STEEL DETAILS
22	CAMBER TABLE AND TENSION LIMITS
23	BEARING DETAILS
24	BRIDGE SECTION AND DETAILS
25	PBU PIECE PLAN AND SECTIONS
26	PRECAST FABRICATION AND ERECTION TOLERANCES
27	CLOSURE POUR AND LIFTING DETAILS
28	DECK DETAILS
29	TOP OF FORM
30	S3-MTL4 BRIDGE RAILING
31	CM-MTL3 BRIDGE RAILING
32	TYPE I PROTECTIVE SCREEN
33	TOP OF PRECAST HIGHWAY GUADRAIL TRANSITION FOR S3-MTL4 1 OF 2
34	TOP OF PRECAST HIGHWAY GUADRAIL TRANSITION FOR S3-MTL4 2 OF 2
35	HIGHWAY GUADRAIL TRANSITION FOR CM-MTL3 RAILING



PROFILE ALONG ALEWIFE BROOK PARKWAY ℄

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: ¼" = 1'-0"



NOTE: RED LINE TUNNEL BASELINE CREATED APPROXIMATELY IN THE MIDDLE OF THE TUNNEL FOR THE PURPOSES OF GENERATING THIS PROFILE ONLY.

PROFILE ALONG RED LINE TUNNEL

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: ¼" = 1'-0"

COMMONWEALTH OF MASSACHUSETTS
GABRIELLE JOSEPHINE PIPP
CIVIL
No. 54501
REGISTERED PROFESSIONAL ENGINEER

Gabrielle Pipp MacNeil — Digitally signed by Gabrielle Pipp MacNeil Date: 2025.08.14 11:11:25 -04'00'

HNTB
31 ST. JAMES AVE SUITE 300
BOSTON, MA 02116

AUGUST 23, 2025 | ISSUED FOR CONSTRUCTION

MassDOT Massachusetts Department of Transportation Highway Division

PROPOSED SUPERSTRUCTURE REPLACEMENT
CAMBRIDGE

US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY) OVER MBTA RED LINE

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

Alexander K. Bardow, P.E. — Digitally signed by Alexander K. Bardow, P.E. Date: 2025.08.18 12:18:37 -04'00'
STATE BRIDGE ENGINEER

John Bechard — Digitally signed by John Bechard Date: 2025.08.26 06:30:26 -04'00'
CHIEF ENGINEER

SHEET 01 OF 35 SHEETS BRIDGE NO. C-01-031 (4DR)

610776_BR01(KEYPLANPROFILE).DWG Plotted on 29-Jul-2025 2:10 PM

Final Structural Submission (SF) 16-AUGUST-2025

GENERAL NOTES

DESIGN

IN ACCORDANCE WITH THE 2020 AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS LRFD BRIDGE DESIGN SPECIFICATIONS, WITH CURRENT INTERIM SPECIFICATION THROUGH 2023, FOR HL-93 LOADING.

MASSDOT BENCH MARK

PROJECT BENCHMARK: MMAG 17

N: 2969557.98

E: 753290.95

EL: 8.01 FT

STA: 106+21.91 OFFSET 73.52 RT

ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

EXISTING PLANS REFERENCE MBTA RED LINE EXTENSION NORTH-WEST DATUM (MBTA). THE CONVERSION TO NAVD88 = MBTA MINUS 106.68 FEET.

DATE

TO BE PLACED ON THE INSIDE FACE OF THE NW AND AND SE HIGHWAY GUARDRAIL TRANSITIONS. A SHEET SHOWING SIZE AND CHARACTER OF NUMERALS WILL BE FURNISHED. THE DATE USED SHALL BE THE LATEST YEAR OF CONTRACT COMPLETION AS OF THE DATE THE FIRST HIGHWAY GUARDRAIL TRANSITION IS CONSTRUCTED.

MASSDOT SURVEY NOTEBOOKS

COPIES OF ELECTRONIC SURVEY FILES MAY BE OBTAINED FROM MASSDOT.

SCALES

SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZE PRINTS. DIVIDE SCALES BY 2 FOR HALF-SIZE PRINTS (A3).

FOUNDATIONS

GUARDRAIL TRANSITION FOUNDATIONS MAY BE ALTERED, IF NECESSARY, TO SUIT CONDITIONS ENCOUNTERED DURING CONSTRUCTION, WITH THE APPROVAL OF THE ENGINEER.

GEOTECHNICAL REPORT

THE PROPOSED SUPERSTRUCTURE IS LIGHTER THAN THE EXISTING SUPERSTRUCTURE. SEE GEOTECHNICAL REPORT, DATED MARCH 2024, FOR FURTHER DISCUSSION.

UNSUITABLE MATERIAL

ALL UNSUITABLE MATERIAL SHALL BE REMOVED AS NEEDED, AS DIRECTED BY THE ENGINEER.

ANCHOR BOLTS

ALL ANCHOR BOLTS SHALL BE SET BY TEMPLATE BEFORE THE CONCRETE IS PLACED.

CONCRETE

ALL CONCRETE SHALL BE 5000 HP CONCRETE UNLESS NOTED OTHERWISE.

ALL CIP AND PRECAST CONCRETE POURS SHOWN ON THESE CONSTRUCTION DRAWINGS WHERE ALL VOLUMETRIC DIMENSIONS ARE 4 FEET OR GREATER SHALL BE CONSIDERED TO BE MASS CONCRETE PLACEMENTS AND SHALL REQUIRE A HEAT OF HYDRATION ANALYSIS AND THERMAL CONTROL PLAN, AS SPECIFIED IN THE MASSDOT STANDARD SPECIFICATIONS.

"RAPID HARDENING CONCRETE FOR CLOSURE JOINTS" (SEE SPECIAL PROVISIONS, ITEM 995.)	CMP VOID, CLOSURE POURS, KEEPER BLOCKS, AND UTILITY BLOCKOUTS

REINFORCEMENT

ALL REINFORCING STEEL SHALL BE EPOXY COATED, UNLESS NOTED OTHERWISE. EPOXY COATING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A775.

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M31 (ASTM A615) GRADE 60.
UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS, ALL BARS SHALL BE LAPPED AS FOLLOWS:

MODIFICATION CONDITION	#4 BARS	#5 BARS	#6 BARS
1. NONE	16"	17"	21"
2. 12" OF CONCRETE BELOW BAR	18"	22"	27"
3. EPOXY COATED BARS, COVER < $3d_b$, OR CLEAR SPACING < $6d_b$	21"	26"	31"
4. COATED BARS, ALL OTHER CASES	17"	21"	25"
5. CONDITION 2. AND 3.	23"	29"	35"
6. CONDITION 2. AND 4.	21"	27"	32"

ALL OTHER BARS SHALL BE LAPPED AS SHOWN ON THE CONSTRUCTION DRAWINGS.

DOWEL BAR SPLICERS (MECHANICAL REINFORCING BAR SPLICERS) ARE REQUIRED FOR REINFORCEMENT OF CLOSURE POURS BETWEEN PREFABRICATED BRIDGE UNITS. DOWEL BAR SPLICERS SHALL HAVE THE SAME COATINGS AS THE REINFORCING BARS THEY ARE SPLICING. DOWEL BAR SPLICERS ARE DENOTED AS "DBS" THROUGHOUT THE PLANS.

DRILL AND GROUT REINFORCEMENT

WHERE NOTED, HOLE FOR BARS SHALL BE DRILLED, CLEANED AND PREPARED PER CHOSEN GROUT MANUFACTURER.

DRILL HOLE DIAMETER FOR GROUTED BARS SHALL BE 1" LARGER THAN BAR DIAMETER OR PER GROUT MANUFACTURES RECOMMENDATIONS. GROUT SHALL BE HIGH STRENGTH NON-SHRINK GROUT CAPABLE OF DEVELOPING 6000 PSI WITHIN 3 DAYS AND SHALL BE SELECTED FROM THE MASSDOT QUALIFIED CONSTRUCTION MATERIALS LIST (QCML).

STRUCTURAL STEEL

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 (ASTM A709) GRADE 50 METALIZED TO ZONE 2. THE ENTIRE FASCIA GIRDERS SHALL BE METALIZED AND PAINTED, AMS STANDARD 595A COLOR NUMBER 14223 OF THE FEDERAL STANDARD 595B. DIAPHRAGMS MAY BE HOT-DIP GALVANIZED.

ALL BOLTS SHALL BE 7/8" DIAMETER, ASTM F3125 GRADE A325 TYPE 1 HIGH STRENGTH BOLTS IN 15/16" DIAMETER HOLES, UNLESS NOTED OTHERWISE. BOLTS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH AASHTO M298 (ASTM B695).

ALL BOLTS SHALL BE FURNISHED SUCH THAT THREADS ARE EXCLUDED FROM THE SHEAR PLANE.

SHEAR CONNECTORS SHALL BE 7/8" DIAMETER AASHTO M169 STUDS, UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL MAIN MEMBERS SHALL CONSIST OF GIRDERS #1 TO #12 AND SHALL CONFORM TO THE CHARPY V-NOTCH REQUIREMENTS OF AASHTO M270 ZONE 2.

EXISTING CONDITIONS

EXISTING DIMENSIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND VERIFY ALL PRESENT DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENT AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF, AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL THEY HAVE MADE THE REQUIRED MEASUREMENTS, AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

TEMPORARY PROTECTIVE SHIELDING

IN ADDITION TO THE REQUIREMENTS FOR CONTAINMENT OF DEMOLITION DEBRIS AND LEAD-CONTAMINATED DEBRIS AS DESCRIBED IN THE SPECIAL PROVISIONS, THE CONTRACTOR SHALL AT NO TIME DROP WASTE, STEEL, DEBRIS OR OTHER MATERIAL TO THE AREAS BELOW THE BRIDGE. THE CONTRACTOR SHALL PROVIDE PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES AS REQUIRED TO CATCH ALL SUCH MATERIAL. IF THE ENGINEER DETERMINES THAT ADEQUATE PROTECTION IS NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED AT NO ADDITIONAL COST. SEE SPECIAL PROVISIONS FOR ADDITIONAL TEMPORARY SHIELDING REQUIREMENTS.

CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTIVE SHIELDING AT THE STAGE LINE TO PREVENT DEBRIS FROM FALLING ON THE PEDESTRIAN PATH DURING STAGED CONSTRUCTION.

UTILITIES

CONTRACTOR SHALL LOCATE AND PROTECT FROM DAMAGE OR RELOCATE, AS NECESSARY, ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE RESPECTIVE UTILITY OWNERS FOR ALL UTILITIES THAT ARE TO BE TEMPORARILY OR PERMANENTLY RELOCATED FOR THE BRIDGE REHABILITATION WORK.

THE LOCATION OF ALL EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL UTILITIES.

SEE HIGHWAY PLANS FOR MORE INFORMATION REGARDING UTILITIES.

MEMBRANE WATERPROOFING

ALL MEMBRANE WATERPROOFING USED ON BRIDGE DECKS SHALL BE MEMBRANE WATERPROOFING FOR BRIDGE DECKS – SPRAY APPLIED.

MBTA TUNNEL

AS SHOWN ON THE CONTRACT PLANS, THE BRIDGE SPANS THE RED LINE TUNNEL. ALL WORK OVER THE TUNNEL ROOF INCLUDING BUT NOT LIMITED TO MOVEMENT OF HEAVY EQUIPMENT AND TEMPORARY SHORING, SHALL BE COORDINATED WITH THE MBTA. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION REGARDING RESTRICTIONS.

THE CONTRACTOR SHALL NOT STORE/PLACE HEAVY EQUIPMENT OR MATERIALS ON THE RED LINE TUNNEL, EXCEPT FOR MBTA APPROVED EQUIPMENT AND MATERIALS ESSENTIAL FOR THE WORK IDENTIFIED UNDER ITEMS 950.1 AND 992.3. SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL DETAILS REGARDING LOADING RESTRICTIONS.

ACCELERATED BRIDGE WEEKEND TRAFFIC

BRIDGE DEMOLITION AND CONSTRUCTION WILL PRIMARILY OCCUR DURING TWO (2) 55-HOUR WEEKEND PERIODS. FOR LIMITATIONS OF OPERATIONS AND PROPOSED DETOUR ROUTES, SEE TRAFFIC PLANS AND SPECIAL PROVISIONS.

ESTIMATED QUANTITIES:

ITEM	DESCRIPTION		
114.1	DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. C-01-031 (4DR)	LS	1
127.1	REINFORCED CONCRETE EXCAVATION	CY	130
127.12	REINFORCED CONCRETE EXCAVATION FOR SUBSTRUCTURE REPAIRS	CY	5
140.	BRIDGE EXCAVATION	CY	200
151.2	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	CY	25
450.611	SUPERPAVE BRIDGE SURFACE COURSE – 12.5 POLYMER (SSC-B-12.5-P)	TON	45
450.711	SUPERPAVE BRIDGE PROTECTIVE COURSE – 12.5 POLYMER (SPC-B-12.5-P)	TON	45
905.2	5000 PSI 3/8 INCH, 710 HP CEMENT CONCRETE	CY	20
909.3	CRACK REPAIR	FT	20
950.1	TEMPORARY SHORING	LS	1
953.1	EXCAVATION SUPPORT SYSTEM BRIDGE NO. C-01-031	LS	1
964.1	EPOXY BONDING COMPOUND	SF	20
995.	BRIDGE SUPERSTRUCTURE, BRIDGE NO. C-01-031 (4DR)	LS	1

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	51	98
PROJECT FILE NO. 610776			

GENERAL NOTES

TRAFFIC DATA		
	ROADWAY OVER	ROADWAY UNDER
DESIGN YEAR	2043	N/A
AVERAGE DAILY TRAFFIC – PRESENT	44,900	N/A
AVERAGE DAILY TRAFFIC – DESIGN YEAR	50,600	N/A
DESIGN HOURLY VOLUME	3400	N/A
DIRECTIONAL DISTRIBUTION	59% NB	N/A
TRUCK PERCENTAGE – AVERAGE DAY	4%	N/A
TRUCK PERCENTAGE – PEAK HOUR	5%	N/A
DESIGN SPEED	35 MPH	N/A
DIRECTIONAL DESIGN HOURLY VOLUME	2,015 NB	N/A

SEISMIC DESIGN CRITERIA	
DESIGN RETURN PERIOD:	2500 YRS
DESIGN SPECTRA	
As	0.254
SDs	0.413
SD1	0.201
SITE CLASS	E
SEISMIC DESIGN CATEGORY (SDC)	B

DATE	DESCRIPTION
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION

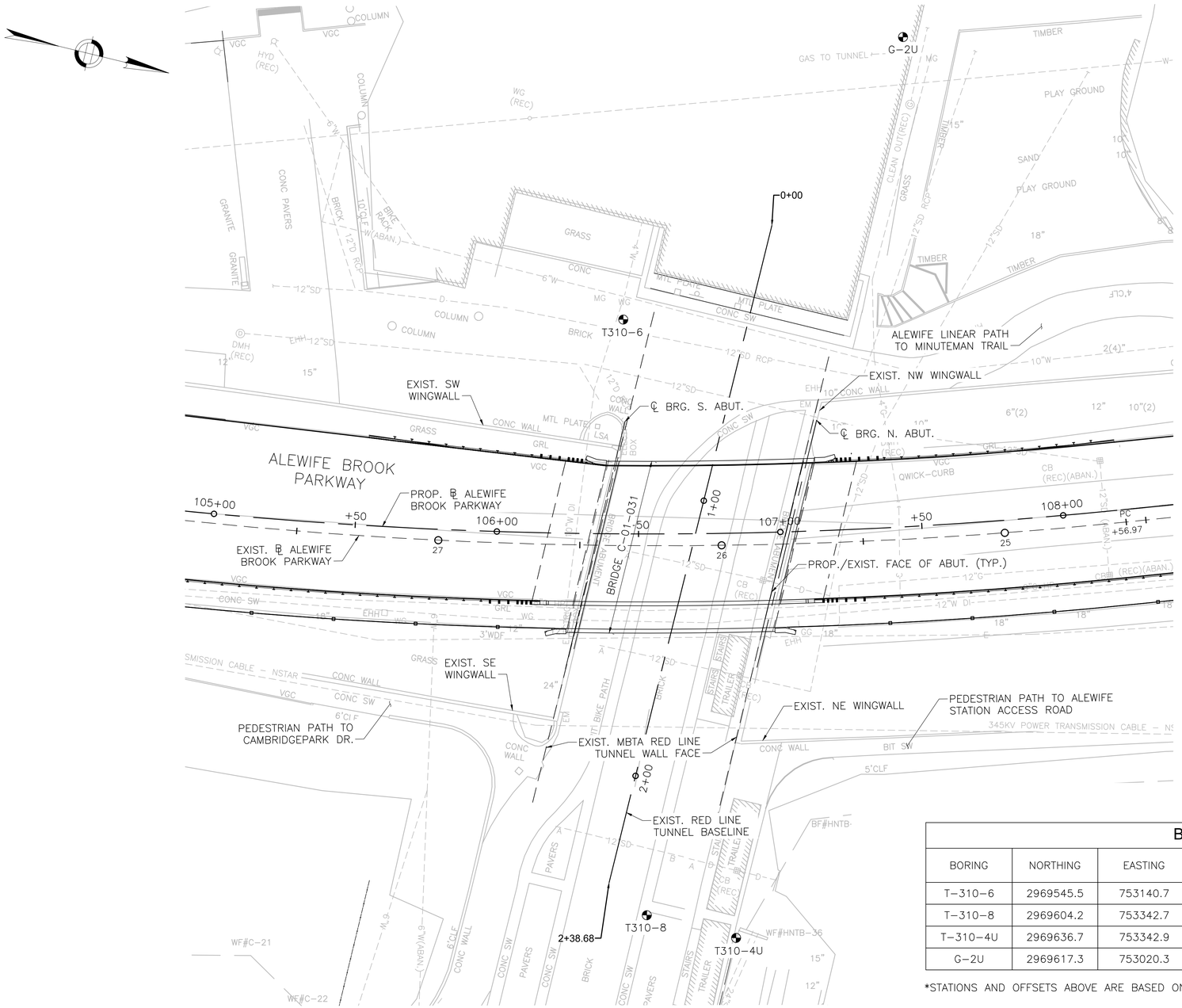
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	52	98
PROJECT FILE NO.	610776		

BORING PLAN



NOTES

1. LOCATIONS OF BORINGS DEPICTED HEREIN ARE APPROXIMATE BASED ON THE AVAILABLE 1977 BORING PLANS.
2. FOR ADDITIONAL BORING INFORMATION, REFER TO THE BORING LOGS ON SHEETS 4 AND 5 AND THE GEOTECHNICAL REPORT.

LEGEND:

1977 BRIDGE BORINGS

BORING PLAN

SCALE: 1" = 20'

BORING LOCATIONS (FEET)

BORING	NORTHING	EASTING	SURFACE ELEVATION (FT)	DRILLED DEPTH EL. (FT)	STATION*	OFFSET*
T–310–6	2969545.5	753140.7	7.62	83.0	106+44.2	75.6 (L)
T–310–8	2969604.2	753342.7	6.32	82.0	106+52.9	134.5 (R)
T–310–4U	2969636.7	753342.9	5.82	87.0	106+81.9	142.8 (R)
G–2U	2969617.3	753020.3	6.62	125.0	107+53.9	172.5 (L)

*STATIONS AND OFFSETS ABOVE ARE BASED ON PROPOSED BASELINE ALEWIFE BROOK PARKWAY.

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	53	98
	PROJECT FILE NO.	610776	

BORING LOG 1

BORING NO. T-310-8

Elevation scale (left): EL. 10.0, NAVD-88 GROUND EL. 6.32, *▽, EL. 0.0, EL. −10.0, EL. −20.0, EL. −30.0, EL. −40.0, EL. −50.0, EL. −60.0, EL. −70.0, EL. −80.0, EL. −90.0

BORING CO. Bay State Test Boring — BORING LOCATION See Location Plan
FOREMAN F. Perry — GROUND ELEV. 113.0 (MBTA Datum)
G-Z ENGINEER M. Barvenik/J. Kerwin — DATE START 6/20/77 — DATE END 6/22/77
GROUND WATER AT 3.5 WITH CASING AT none AFTER ___ HRS; DATE 6/23/77
GROUND WATER AT ___ WITH CASING AT ___ AFTER ___ HRS; DATE ___
CASING 4.0" I.D., WITH 300 LB. HAMMER, FALLING 24".
SAMPLER TYPE Split Spoon, 1-3/8" I.D., WITH 140 LB. HAMMER FALLING 30".

DEPTH	CAS. BL. /FT.	SAMPLE NO.	PEN./REC.	DEPTH	BLOWS/6"	STRAT. CHG.	DESCRIPTION	NOTE
	9	S-1	18/9	0-1.5	2/5/5	FILL	Medium, brown coarse to fine SAND, trace Gravel, (maximum diameter 1/2"; subrounded) trace Silt, trace Organic Material (less than 5% of total sample by volume). (FILL)	
	14							
	21							
	18							
	22	S-2	18/12	5-6.5	4/7/5		Medium, brown coarse to fine SAND, trace Gravel (maximum diameter 1/2"; subrounded) trace Silt, trace Organic Material (less than 10% of total sample by volume).	
5	18							
	24					7.0		
	29					Fine SAND		
	31						Fine grey SAND	(1)
	33	S-3	18/15	10-11.5	6/9/11	10.0	Very stiff, grey SILT-CLAY, little fine Sand, sample appears homogeneous, slight chemical odor.	
10	20					Stiff CLAY		
	22							
	20							
	24							
15	26	S-4	18/18	15-16.5	2/4/3	15.0	Loose, grey, brown silty fine SAND, sample appears homogeneous, slight chemical odor.	
20		S-5	18/16	20-21.5	4/3/2	Soft - Medium CLAY Stratified with Sand	Loose, grey, brown silty fine SAND, erratic stratification, slight chemical odor.	
25		S-6	18/16	25-26.5	1-18"		Very stiff, grey Silt with fine Sand lenses/layers (<1/16" thick); comprising <5% of total sample, also stiffer Silt-Clay lumps were observed, (maximum diameter 1/2") <5% of total sample.	
30		S-7	18/18	30-31.5	1-18"		(Same as above.)	
35		V-1		36.5		Soft to medium CLAY stratified with Sand	Su=0.60 TSF; Su_r=0.03 TSF	
		V-2		38.0			Su=0.54 TSF; Su_r=0.03 TSF	
40		V-3		41.0			Su=0.64 TSF; Su_r=0.03 TSF	
45		V-4		44.0			Su=0.64 TSF; Su_r=0.03 TSF	
		V-5		47.0			Su=0.86 TSF; Su_r=0.05 TSF	
		V-6		48.0			Su=0.63 TSF; Su_r=0.05 TSF	
50		V-7		50.0			Su=0.67 TSF; Su_r=0.05 TSF	
		V-8		51.0			Su=0.70 TSF; Su_r=0.04 TSF	
		V-9		53.0		Very soft CLAY	Su=0.50 TSF; Su_r=0.03 TSF	(2)
55		V-10		55.0			Su=0.46 TSF; Su_r=0.03 TSF	
		V-11		58.0			Su=0.43 TSF; Su_r=0.02 TSF	
60		V-12		61.0		Very soft CLAY	Su=0.41 TSF; Su_r=0.03 TSF	
65		V-13		64.0			Su=0.36 TSF; Su_r=0.02 TSF	
		V-14		67.0			Su=0.38 TSF; Su_r=0.03 TSF	
70		V-15		69.0			Su=0.39 TSF; Su_r=0.03 TSF	
		V-16		71.0			Su=0.41 TSF; Su_r=0.03 TSF	
75		V-17		74.0			Su=0.45 TSF; Su_r=0.05 TSF	
		V-18		76.0			Su=0.52 TSF; Su_r=0.06 TSF	
		V-19		78.0			Su=0.51 TSF; Su_r=0.07 TSF	
		V-20		79.0			Su=0.47 TSF; Su_r=0.10 TSF	
80		V-21		80.0			Su=0.24 TSF; Su_r=0.08 TSF	
		V-22		81.0		82.0	Su=0.60 TSF; Su_r=0.18 TSF	(3)
							Bottom of the Boring	
85								
90								

REMARKS
(1) Material observed in wash water, no sample taken.
(2) Numerous Sand lenses encountered from 35-50' as indicated by vane advancement.
(3) Encountered stiff strata at 82.0'; could not advance vane.

*OBSERVED WATER EL. 2.82, JUNE 1977

BORING NO. T-310-6

Elevation scale (left): EL. 10.0, NAVD-88 GROUND EL. 7.62, **▽, EL. 0.0, EL. −10.0, EL. −20.0, EL. −30.0, EL. −40.0, EL. −50.0, EL. −60.0, EL. −70.0, EL. −80.0, EL. −90.0

BORING CO. Bay State Test Boring — BORING LOCATION See Location Plan
FOREMAN D. Hebert — GROUND ELEV. 114.3 (MBTA Datum)
G-Z ENGINEER J. Kerwin/M. Barvenik — DATE START 6/2/77 — DATE END 6/2/77
GROUND WATER AT 4.5 WITH CASING AT none AFTER ___ HRS; DATE 6/11/77
GROUND WATER AT ___ WITH CASING AT ___ AFTER ___ HRS; DATE ___
CASING 4.0" I.D., WITH 300 LB. HAMMER, FALLING 24".
SAMPLER TYPE Split Spoon, 1-3/8" I.D., WITH 140 LB. HAMMER FALLING 30".

DEPTH	CAS. BL. /FT.	SAMPLE NO.	PEN./REC.	DEPTH	BLOWS/6"	STRAT. CHG.	DESCRIPTION	NOTE
	36	S-1	24/6	0-2.0	10/4/5/6	FILL	Loose, fine SAND and SILT-CLAY, little coarse Sand, trace Gravel (1/2" thick), subrounded, Asphalt. (FILL)	
	37							
	28							
	26					4.0		
5	29	S-2	24/12	5-7.0	18/16/12/8	MEDIUM TO FINE SAND	Medium, gray, medium to fine SAND and SILT-CLAY and/or CLAY-SILT, little coarse Sand, trace Gravel (1/2" thick), subangular.	
	51							
	56							
	50							
	72							
10	81	S-3	24/23	10-12.0	7/12/13/13		Medium, Gray, medium to fine SAND, some Silt-Clay and/or Clay-Silt.	
	58							
	51							
	41							
	42							
15	40	S-4	24/21	15-17.0	7/5/8/8		Medium, gray, medium to fine SAND, trace coarse Sand, trace Silt.	
	41							
	56							
	66					18.0		
	77					CLAY STRATIFIED WITH SAND	Soft, gray, CLAY-SILT with fine Sand lenses (≤ 2" thick) comprising 40-50% of total sample.	
20	86	S-5	24/24	20-22.0	6/3/2/1			
	66							
	68							
	70					23.0		
	72					VERY SOFT CLAY	Very soft, gray, CLAY-SILT with fine Sand and/or Silt lenses comprising 15-25% of total sample.	
25	74	S-6	24/24	25-27.0	1 = 24"			
30		V-1		30.0'			Su = 0.43 tsf; Su_r = 0.02 tsf	
		V-2		33.0'			Su = 0.45 tsf; Su_r = 0.02 tsf	
35		V-3		36.0'			Su = 0.59 tsf; Su_r = 0.01 tsf	
40		V-4		39.0'		VERY SOFT CLAY	Su = 0.49 tsf; Su_r = 0.02 tsf	
		V-5		42.0'			Su = 0.56 tsf; Su_r = 0.02 tsf	
45		V-6		45.0'			Su = 0.51 tsf; Su_r = 0.01 tsf	
		V-7		48.0'			Su = 0.47 tsf; Su_r = 0.02 tsf	
50		V-8		51.0'			Su = 0.42 tsf; Su_r = 0.02 tsf	
55		V-9		54.0'			Su = 0.49 tsf; Su_r = 0.02 tsf	
		V-10		57.0'			Su = 0.49 tsf; Su_r = 0.02 tsf	
		V-11		58.0'			Su = 0.52 tsf; Su_r = 0.02 tsf	
		V-12		59.0'			Su = 0.55 tsf; Su_r = 0.03 tsf	
60		V-14		62.0'			Su = 0.46 tsf; Su_r = 0.03 tsf	
							Su = 0.45 tsf; Su_r = 0.02 tsf	
65		V-15		65.0'		VERY SOFT CLAY	Su = 0.38 tsf; Su_r = 0.01 tsf	
		V-16		66.0'			Su = 0.39 tsf; Su_r = 0.02 tsf	
		V-17		68.0'			Su = 0.48 tsf; Su_r = 0.02 tsf	
70		V-18		69.0'			Su = 0.49 tsf; Su_r = 0.03 tsf	
		V-19		72.0'			Su = 0.52 tsf; Su_r = 0.03 tsf	
75		V-20		75.0'			Su = 0.38 tsf; Su_r = 0.04 tsf	
		V-21		78.0'			Su = 0.49 tsf; Su_r = 0.06 tsf	
80		V-22		81.0'			Su = 0.56 tsf; Su_r = 0.07 tsf	
						83.0	Bottom of the Boring	(1)
85								
90								

REMARKS
(1.) Encountered stiff strata at 83.0'; could not push vane any further-- stiff clay in end of vane.

**OBSERVED WATER EL. 3.12, JUNE 1977

BORING NO. G-2U

Elevation scale (left): EL. 10.0, NAVD-88 GROUND EL. 6.62, ***▽, EL. 0.0, EL. −10.0, EL. −20.0, EL. −30.0, EL. −40.0, EL. −50.0, EL. −60.0, EL. −70.0, EL. −80.0, EL. −90.0, EL. −100.0, EL. −110.0

BORING CO. Bay State Test Boring Co. — BORING LOCATION See Location Plan
FOREMAN F. Perry — GROUND ELEV. 113.30 (MBTA Datum)
G-Z ENGINEER M. Barvenik/J. Ho — DATE START 12-2-76 — DATE END 12-13-76
GROUND WATER AT Note 1 WITH CASING AT ___ AFTER ___ HRS; DATE ___
GROUND WATER AT 5.5' WITH CASING AT ___ AFTER ___ HRS; DATE 1-6-77
CASING 4" I.D., WITH ___ LB. HAMMER, FALLING ___".
SAMPLER TYPE Split Spoon / Shelby Tube, 1-3/8" / 3" or 2" I.D., WITH 140 LB. HAMMER FALLING 30".

DEPTH	CAS. BL. /FT.	SAMPLE NO.	PEN./REC.	DEPTH	BLOWS/6"	STRAT. CHG.	DESCRIPTION	NOTE
	45					0.5'	Asphalt pavement and stone bedding	
	19	S-1	24"/17"	0.5'-2.5'	10/11/8/6	FILL	Loose, dark brown, fine to coarse SAND, and gravel, trace silt, brick, concrete, etc. (FILL)	
	13							
	30							
5	12							
	24	S-2	24"/24"	5.0'-7.0'	5/5/5/6		Stiff, gray, SILT-CLAY, some fine SAND with trace brown organic fibers (FILL)	
	21							
	23							
	24					9.5'		
10	38					F. SAND		
	29	S-3	24"/18"	10.0'-12.0'	8/8/6/6		Medium, gray, fine to medium SAND, little silt, trace gravel	
	30							
	28					13.5'		
	21					Medium CLAY		
15	21						Medium, gray, CLAY-SILT and/or SILT-CLAY with fine sand and/or silt lenses (1/4" thick comprising 10% of sample)	(1)
	35	S-4	24"/18"	15.0'-17.0'	4/2/2/3			
	28							
	30							
	33							
20	32							
	30	S-5	24"/20"	20.0'-22.0'	1/2/2/1		(Same as above)	
	27							
	21	U-1	24"/23"	22.0'-24.0'	push	Very soft CLAY		
	26							
25	19	S-6	24"/24"	24.0'-26.0'	W.O.R.		Very soft, gray, CLAY-SILT with some stiff clay lumps (1/4"± diameter)	
	18							
	19	U-	24"/0	26.0'-28.0'	W.O.R.			
	17							
	24	U-	24"/0	28.0'-30.0'	W.O.R.			
30	16							
	19							
	21	S-7	24"/20"	31.0'-33.0'	W.O.R		Very soft, gray, CLAY-SILT with fine sand and/or silt lenses (about 1/8" thick spaced 2"-6").	
	24							
	24	U-2	24"/24"	33.0'-35.0'	W.O.R.			
35	23							
	21	S-8	24"/22"	35.0'-37.0'	W.O.R.		(Same as above except sand and/or silt lenses spaced 6"-12").	
	18							
	15	U-3	24"/24"	37.0'-39.0'	W.O.R.			
	14							
40	14							
	17	S-9	24"/24"	39.0'-41.0'	W.O.R.-12"/push-12"	Very soft CLAY	(Same as above)	
	15							
	15	U-4	24"/24"	41.0'-43.0'	W.O.R.			
	14							
45	16	S-10	24"/9"	43.0'-45.0'	push		(Same as above)	
		U-5	24"/24"	45.0'-47.0'	W.O.R.			
		S-11	24"/15"	47.0'-49.0'	W.O.R.		(Same as above)	
50		U-	24"/0"	49.0'-51.0'	W.O.R.			
		U-6	24"/24"	51.0'-53.0'	W.O.R.			
55		S-12	24"/20"	53.0'-55.0'	W.O.R.		Very soft, CLAY-SILT and/or SILT-CLAY (appeared to be uniform)	
		U-7	24"/24"	55.0'-57.0'	W.O.R.			
		S-13	24"/17"	57.0'-59.0'	W.O.R.		(Same as above)	
60	14							
	13							
	14							
	15							
65	16							
	20	U-8	24"/24"	65.0'-67.0'	W.O.R.	Very soft CLAY		
	18							
	16							(2)
	17							
70	18							
	20	S-14	24"/20"	70.0'-72.0'	W.O.R.-18"/push		Very soft, gray, CLAY-SILT and/or silty CLAY with two stiff silty clay lenses (1" thick spaced at 8")	
	21							
	18							
	18							
75	19							
	25	U-9	24"/24"	75.0'-77.0'	push			
	24							
	21							
	20							
80	22							
	19	S-15	24"/20"	80.0'-82.0'	push		Very soft, gray, silty CLAY (appeared to be uniform)	
	21							
	23							
	24					84.0'		
85	24					Stiff CLAY		
	76	S-16	24"/24"	85.0'-87.0'	6/11/16/20		Very stiff, gray, silty CLAY (appeared to be uniform)	
	165							
	250							
	202							
		U-10	8"/6"	90.0'-90.7'	6/6-2"	90.7'		
90	48	S-17	24"/7"	90.7'-92.7'	48/59/61/70	TILL	Very dense, gray, fine SAND, some silt some coarse sand and gravel (TILL)	
	61							
	71							
	65							
95	72							
		S-18	24"/15"	95.0'-97.0'	41/37/29/33		Very dense, gray, fine SAND, some silt little to some gravel, trace medium to coarse sand (TILL)	
100		S-19	24"/18"	99.5'-101.5'	41/72/88/154		(Same as above)	
105		S-20	24"/6"	105.0'-107.0'	28/51/47/50		Very dense, gray, fine SAND and gravel little silt, little medium to coarse sand, slightly plastic (TILL)	
110								
						115.0'		
115		C-1	36"/24"	115.0'-118.0'		Bed Rock	Gray, Argillite (jointed and fractured) (Bed Rock)	
120		C-2	60"/37"	118.0'-123.0'				
		C-3	24"/20"	123.0'-125.0'			(Same as above) (Bed Rock)	
125						125.0'	Bottom of the boring	

REMARKS
(1) Groundwater observation well installed at a depth of 15.0'.
(2) * indicates 3" shelby tube sample
W.O.R. = weight of rod

***OBSERVED WATER EL. 1.12, JANUARY 1977

BORING NO. T-310-4U

Elevation scale (left): EL. 10.0, NAVD-88 GROUND EL. 5.82±, ****▽, EL. 0.0, EL. −10.0, EL. −20.0, EL. −30.0, EL. −40.0, EL. −50.0, EL. −60.0, EL. −70.0, EL. −80.0

BORING CO. Bay State Test Boring Co. — BORING LOCATION See Location Plan
FOREMAN A. Johnson — GROUND ELEV. 112.5± (MBTA Datum)
G-Z ENGINEER M. Barvenik/J. Ho — DATE START 1-3-77 — DATE END 1-19-77
GROUND WATER AT 5'-0" WITH CASING AT 10'± AFTER 20 HRS; DATE 1-19-77
GROUND WATER AT ___ WITH CASING AT ___ AFTER ___ HRS; DATE ___
CASING 4" I.D., WITH ___ LB. HAMMER, FALLING ___".
SAMPLER TYPE Split Spoon / Shelby Tube, 1-3/8" / 3" or 2" I.D., WITH 140 LB. HAMMER FALLING 30".

DEPTH	CAS. BL. /FT.	SAMPLE NO.	PEN./REC.	DEPTH	BLOWS/6"	STRAT. CHG.	DESCRIPTION	NOTE
	68	S-1	24"/20"	0.5'-2.5'	28/20/18/15	FILL	Dense, brown, fine to medium SAND and GRAVEL, trace of silt	
	43							
	28							
	20					4.0'		
5	16					PEAT	Soft, brown, organic SILT with trace of fibers (chemical odor) (PEAT)	
	15	S-2	24"/18"	5.0'-7.0'	1/2/2/3			
	20							
	20					7.5'		
	28					Fine SAND		
10	31						Medium, gray, fine SAND, little silt (strong chemical odor)	
	37	S-3	24"/16"	10.0'-12.0'	9/12/15/15			
	50							
	40							
	43					14.5'		
15	49					SAND, stratified w/ clay		
	38	S-4	24"/18"	15.0'-17.0'	1/2/1/2		Soft, gray, SILT-CLAY and/or CLAY-SILT with fine sand and/or silt lenses (1/2" thick comprising 30% of sample)	
	37							
	39							
	43							
20	42							
	35	S-5	24"/8"	20.0'-22.0'	1/1/2/2		(Same as above)	
	39					22.0'		
	31	S-6	24"/24"	22.0'-24.0'	1/1-18"	Very soft CLAY	Very soft, gray, CLAY-SILT with fine sand and/or silt lenses (1/16" to 1-1/2" comprising about 30% of sample)	
	33							
25	20	U-1	24"/12"	24.0'-26.0'	push			
	20							
	26	S-7	24"/24"	26.0'-28.0'	W.O.R.-12"/2/2		(Same as above except fine sand and/or silt lenses 1/16" to 3" thick comprising 30% of sample)	
	27							
	29	U-	24"/0	29.0'-31.0'	push			
30	29							
	29							
	23							
	22							
	25	U-2*	24"/20"	33.0'-35.0'	push			
35	24						Very soft, gray, CLAY-SILT with fine sand and/or silt lenses (1/2"± thick comprising 20% of sample)	
	28	S-8	24"/20"	35.0'-37.0'	W.O.R./1/1-12"			
	27							
	23	U-	24"/0	37.0'-39.0'	W.O.R.			
	25							
40	26	U-3	24"/22"	40.0'-42.0'	W.O.R.	Very soft CLAY		
	30							
	33							
	31							
	32	U-4*	24"/22"	43.0'-45.0'	push		Very soft, gray, CLAY-SILT with fine sand and/or silt lenses (1/8" thick comprising 10% of sample; clay contained some stiff lumps)	
	33							
45	35	S-9	24"/24"	45.0'-47.0'	W.O.R.			
	20							
	22	U-5	24"/23"	47.0'-49.0'	W.O.R.			
	24							
50	28	S-10	24"/20"	49.0'-51.0'	W.O.R.		(Same as above except fine sand and/or silt lenses 1/16" thick comprising 5% of sample, clay contained some lumps)	
	26							
	25							
	22							
	23	U-6*	24"/24"	52.0'-54.0'	W.O.R.			
55	28							
	28	U-7	24"/24"	54.0'-56.0'	W.O.R.			
	27							
	29	S-11	24"/24"	56.0'-58.0'	W.O.R.		(Same as above)	
	33							
60	36	U-8*	24"/24"	58.0'-60.0'	W.O.R.			
		S-12	24"/24"	60.0'-62.0'	W.O.R.	Very soft CLAY	Very soft, gray, CLAY-SILT with fine sand and/or silt lenses (1/16" thick comprising 5% of sample)	
65		U-	24"/0	65.0'-67.0'	W.O.R.			(2)
70		S-13	24"/24"	70.5'-72.5'	W.O.R.		Very soft, gray, CLAY-SILT (appeared to be homogenous)	
		U-9*	24"/24"	73.0'-75.0'	W.O.R.			
75		S-14	24"/24"	75.0'-77.0'	W.O.R.		(Same as above)	
		U-10*	24"/24"	78.0'-80.0'	W.O.R.			
80								
						84.5		
85		S-15	24"/24"	85.0'-87.0'	2/3/5/7	Stiff CLAY	Medium to stiff, gray, CLAY-SILT and/or silty CLAY, trace of gravel	
						87.0'	Bottom of the boring	

REMARKS
(1) * indicates 3" shelby tube sample
(2) At the depth of 68.0 to 70.5' appeared to be major fine sand lenses from washing operation.

****OBSERVED WATER EL. 0.82±, JANUARY 1977

NOTES:

1. LOCATION OF RECORD BORINGS SHOWN ON SHEET 03, AS WELL AS IN THE GEOTECHNICAL REPORT DATED MARCH 2024.
2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. FIGURES IN THE LEFT-HAND COLUMN INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE A 1 3/8" I.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".
4. ALL BORINGS WERE MADE IN 1976 AND 1977 AND ARE ASSOCIATED WITH MBTA RED LINE EXTENSION NORTHWEST, HARVARD SQUARE TO ARLINGTON HEIGHTS, CONTRACT NO. 091-601, ALEWIFE STATION/GARAGE/TUNNEL, CAMBRIDGE, MA, STA. 313+23 TO STA. 323+75.
5. BORINGS WERE MADE BY BAY STATE TEST BORING CO.
6. THE ELEVATIONS SHOWN ON THE 1977 BORING LOGS ARE BASED ON THE MASSACHUSETTS BAY TRANSPORTATION AUTHORITY REDLINE (BOSTON) DATUM.
7. THE PROPOSED ELEVATIONS SHOWN ALONG THE LEFT SIDE ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988. THE CONVERSION FROM MBTA REDLINE DATUM TO NAVD OF 1988 IS −106.68 FT.
8. GROUND WATER LEVELS SHOWN ON THE BORINGS WERE OBSERVED AT THE TIME OF TAKING BORINGS IN 1977 AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

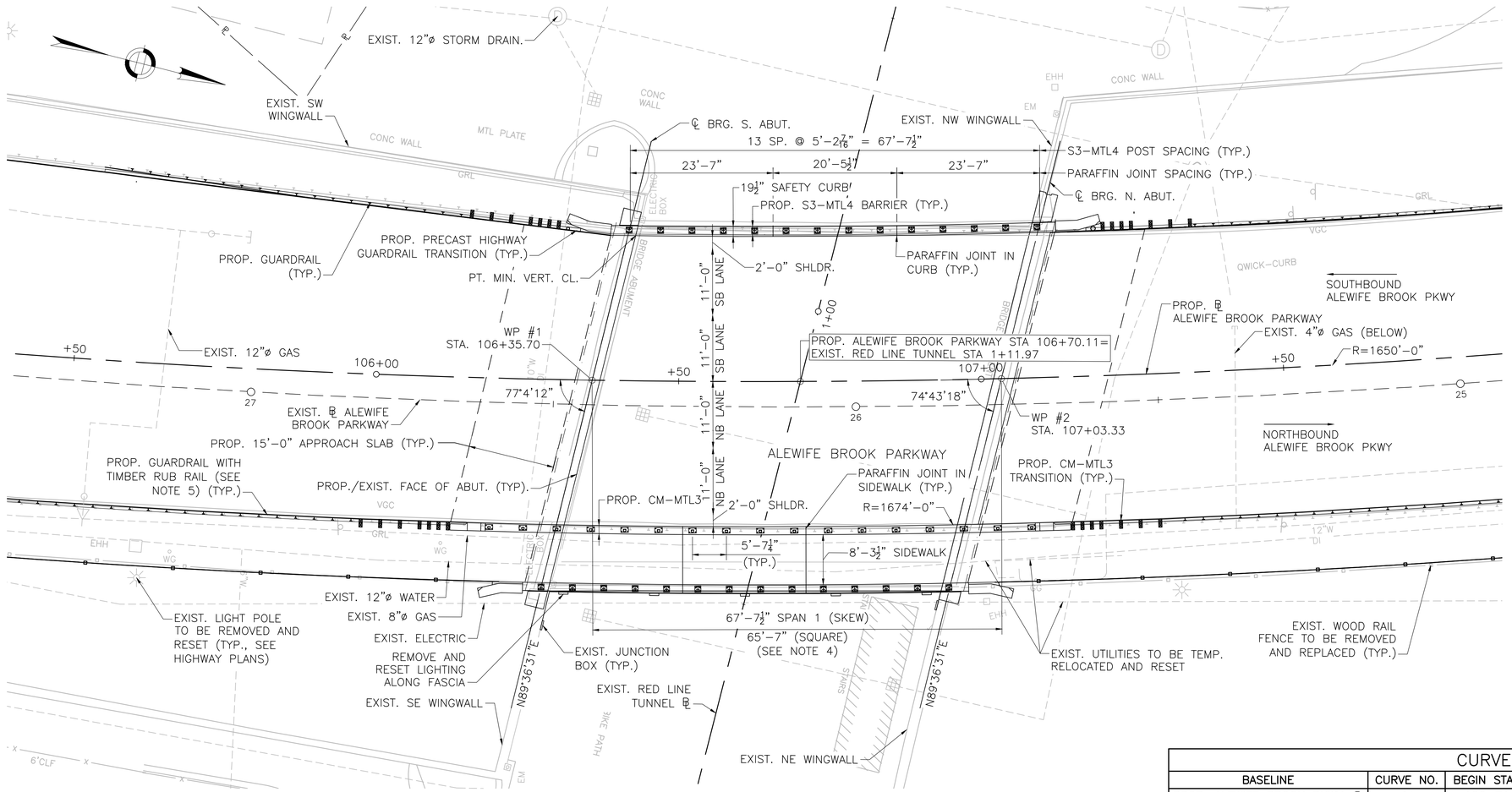
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

610776_BR04(BORINGS).DWG Plotted on 29-Jul-2025 2:13 PM
Final Structural Submission (SF) 16-AUGUST-2025

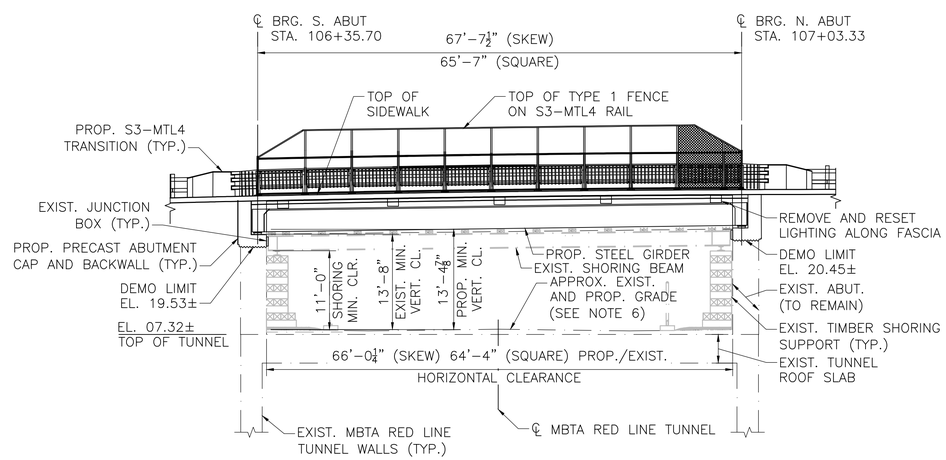
CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	54	98
PROJECT FILE NO. 610776			

GENERAL PLAN & ELEVATION



GENERAL PLAN
SCALE: 1" = 10'



EAST ELEVATION
SCALE: 1" = 10'

NOTES:

1. FOR APPROXIMATE TEMPORARY SOE LOCATIONS, SEE DEMOLITION AND CONSTRUCTION STAGING PLANS ON SHEETS 06 TO 10.
2. ABUTMENT BEARING ANGLES ARE MEASURED TO BASELINE TANGENT AT CENTERLINE OF BEARING.
3. FOR BORING LOCATIONS, SEE THE BORING PLAN ON SHEET 03.
4. NOTE, SPAN IS MEASURED ALONG A STRAIGHT LINE (CHORD) BETWEEN WORKING POINTS.
5. FOR DETAILS OF THE PROPOSED GUARDRAIL INCLUDING THE POST BLOCKOUTS AND TIMBER RUB RAIL, SEE HIGHWAY PLANS.
6. SEE HIGHWAY CONSTRUCTION PLANS FOR PROPOSED WORK UNDER BRIDGE.

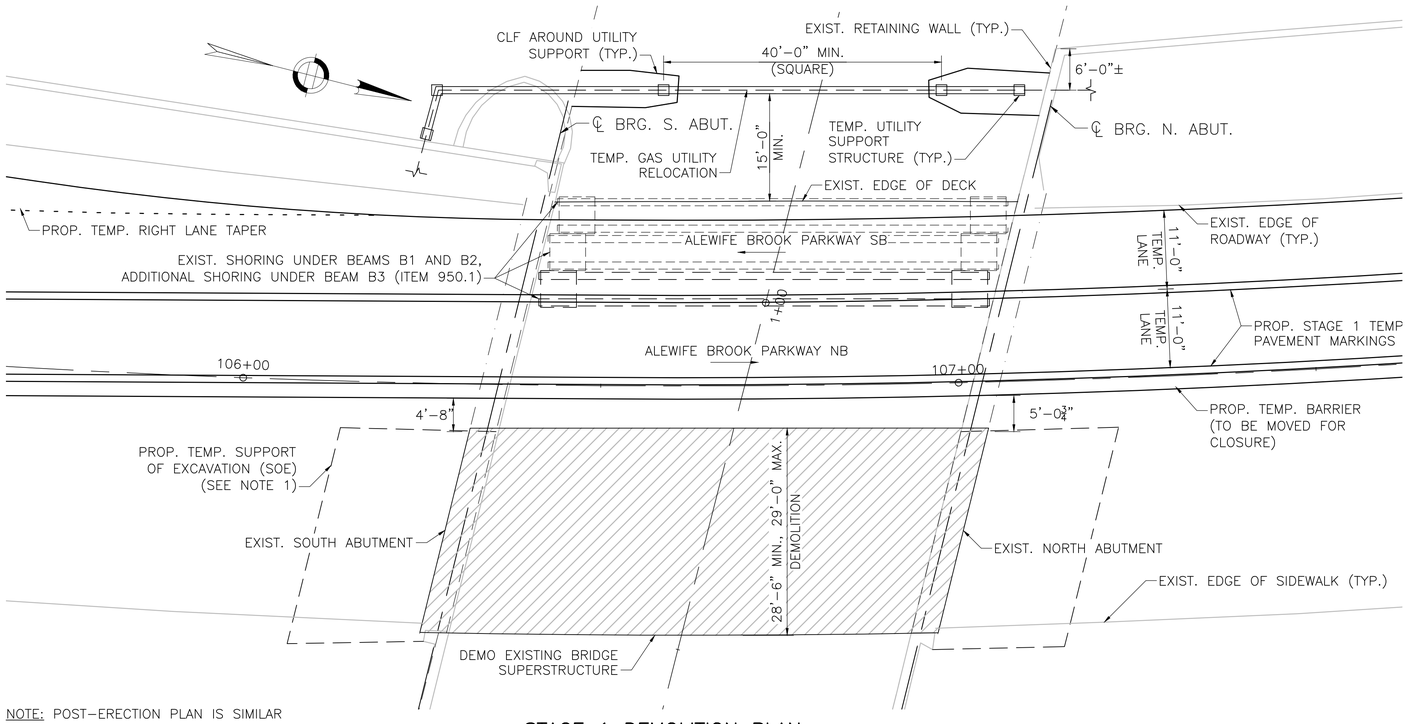
CURVE DATA						
BASELINE	CURVE NO.	BEGIN STATION	END STATION	RADIUS	DELTA	LENGTH
PROP. ALEWIFE BROOK PKWY. ℄	C1	102+71.21	108+20.43	1650.00'	19°04'17"	549.22'

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	55	98
PROJECT FILE NO.	610776		

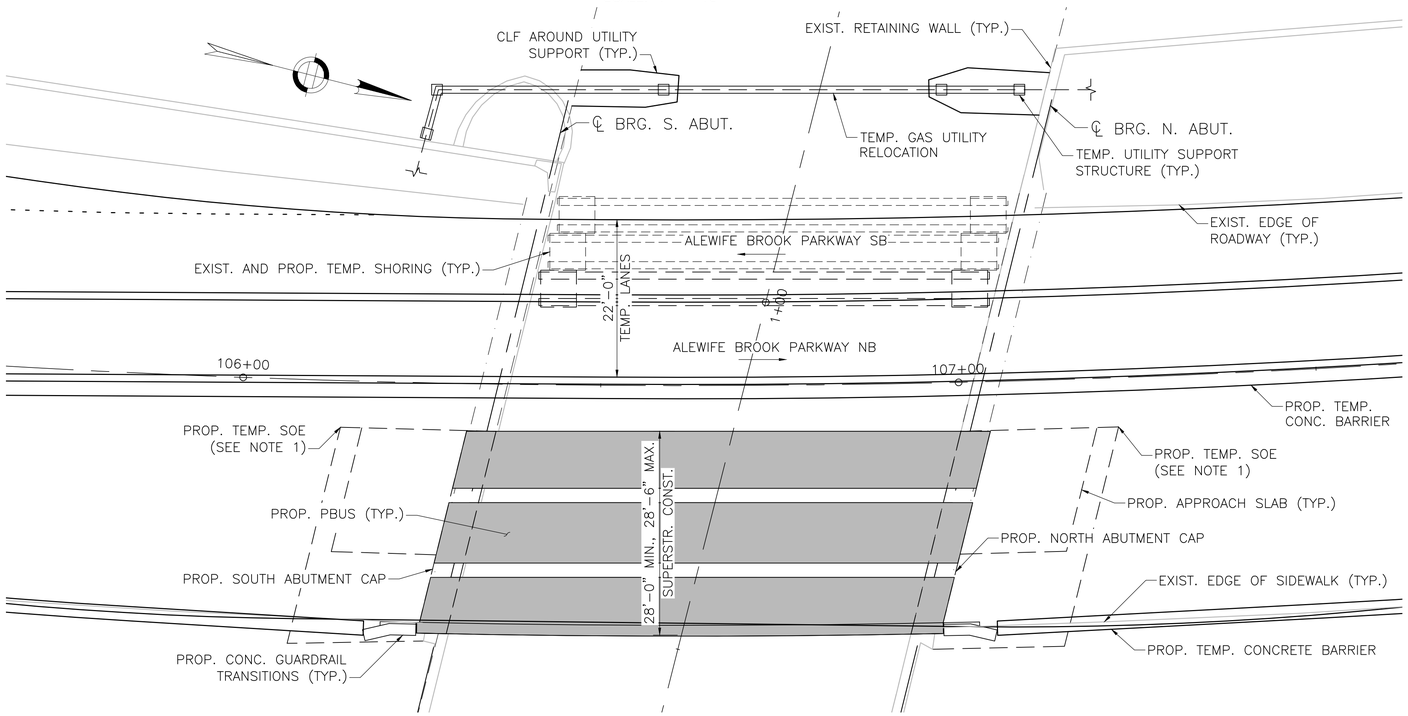
CONSTRUCTION STAGING PLAN 1 OF 2



NOTE: POST–ERECTION PLAN IS SIMILAR

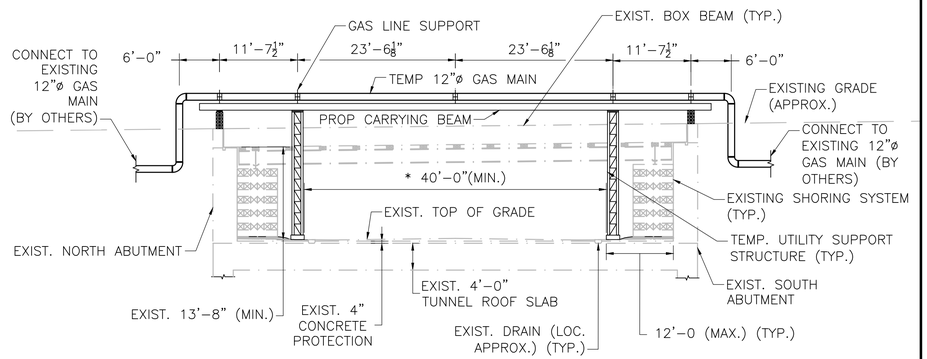
STAGE 1 DEMOLITION PLAN

SCALE: 1" = 10'



STAGE 1 CONSTRUCTION PLAN

SCALE: 1" = 20'



* SQUARE DIMENSION

CONCEPTUAL UTILITY SUPPORT PLAN

LOOKING EAST
SCALE: $\frac{3}{32}$" = 1'–0"

LEGEND:

- DEMOLITION LIMITS
- PROPOSED PBU SECTIONS

NOTES:

1. TEMPORARY SUPPORT OF EXCAVATION TYPE AND ALIGNMENT SHOWN IS SCHEMATIC AND SHALL BE DESIGNED AND DETAILED IN A CONSTRUCTION SUBMITTAL FOR REVIEW AND APPROVAL BY THE ENGINEER.
2. DEMOLITION MEANS AND METHODS SHALL BE DEVELOPED TO MAINTAIN SAFE WORKING DISTANCE FROM THE ACTIVE GAS BYPASS.

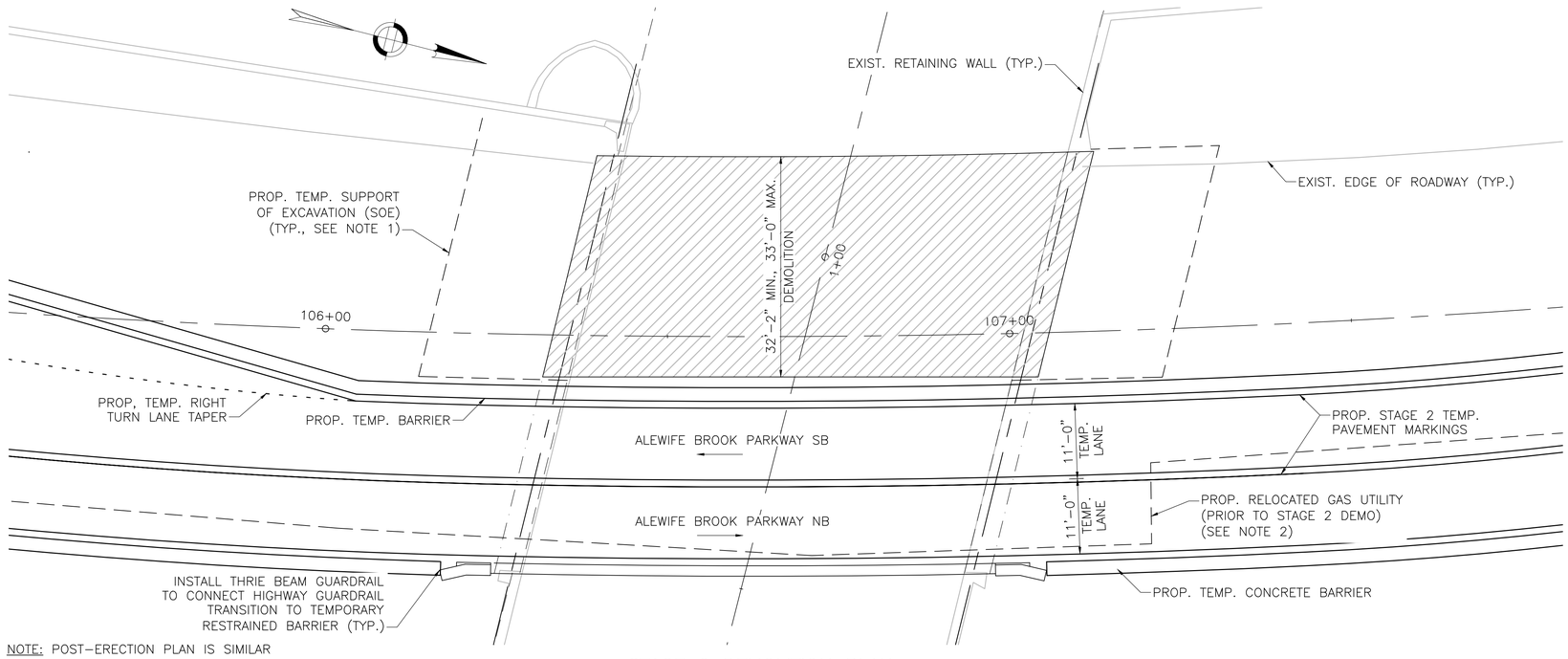
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	56	98
PROJECT FILE NO.	610776		

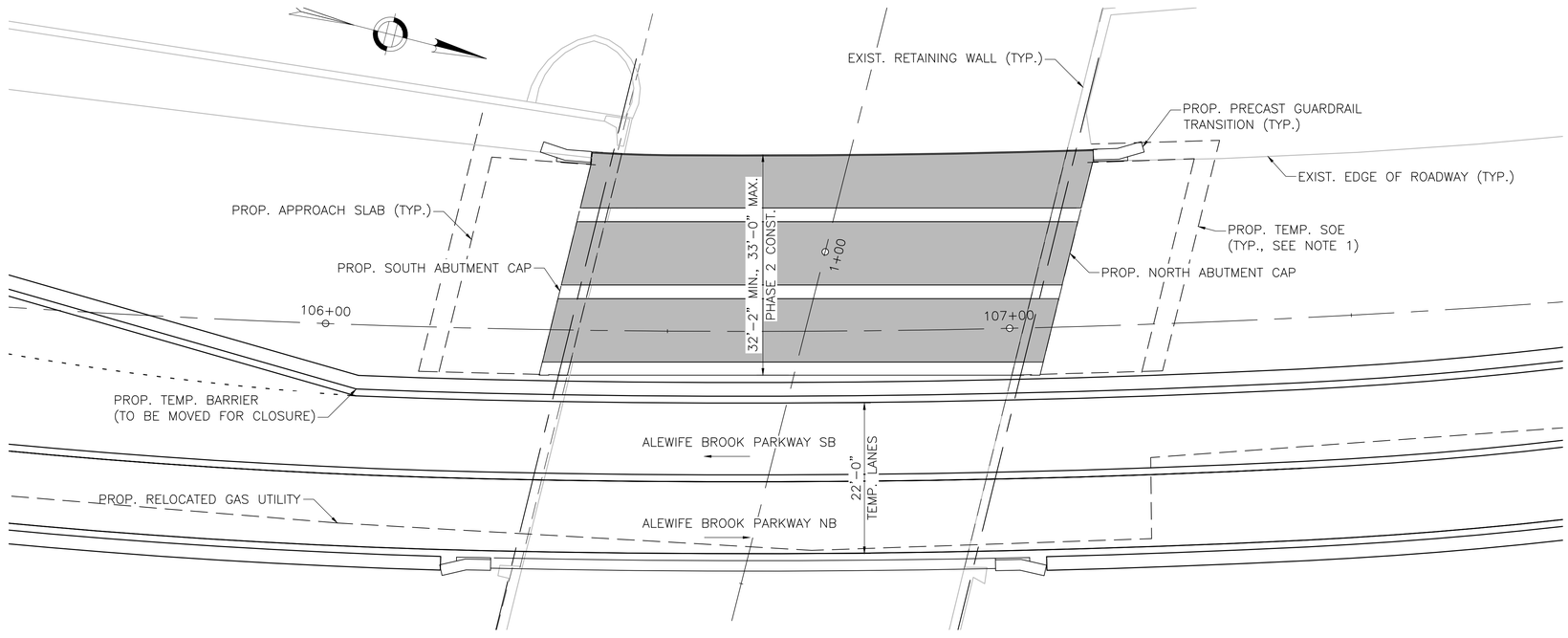
CONSTRUCTION STAGING PLAN 2 OF 2



NOTE: POST-ERECTION PLAN IS SIMILAR

STAGE 2 DEMOLITION PLAN

SCALE: 1" = 10'



STAGE 2 CONSTRUCTION PLAN

SCALE: 1" = 10'

LEGEND:

- DEMOLITION LIMITS
- PROPOSED PBU SECTIONS

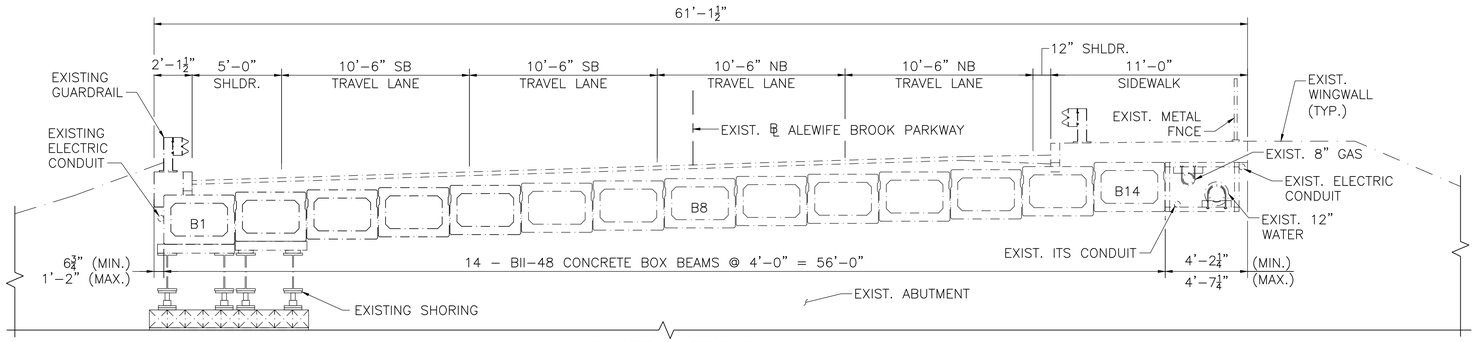
NOTES:

1. TEMPORARY SUPPORT OF EXCAVATION TYPE AND ALIGNMENT SHOWN IS SCHEMATIC AND SHALL BE DESIGNED AND DETAILED IN A CONSTRUCTION SUBMITTAL FOR REVIEW AND APPROVAL BY THE ENGINEER.
2. CONTRACTOR SHALL COORDINATE WITH EVERSOURCE GAS FOR NECESSARY PROTECTION REQUIREMENT OF GAS LINE UNDER APPROACH ROADWAY BETWEEN STAGE 1 AND STAGE 2 CONSTRUCTION. A MINIMUM OF 2 FEET OF COVER SHALL BE PROVIDED TO THE GAS LINE ONCE IN THE ROADWAY.

DATE	DESCRIPTION
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION

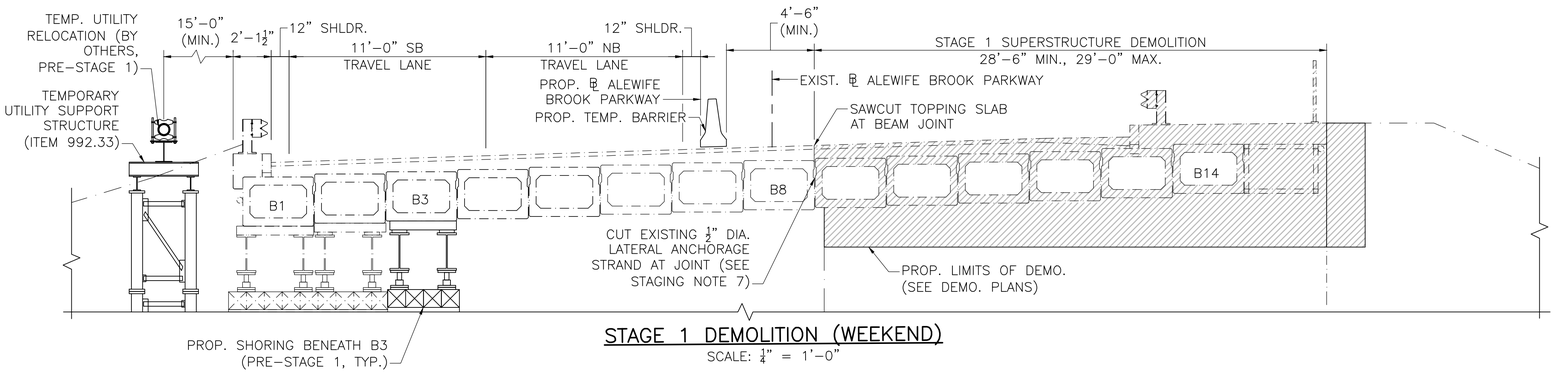
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE



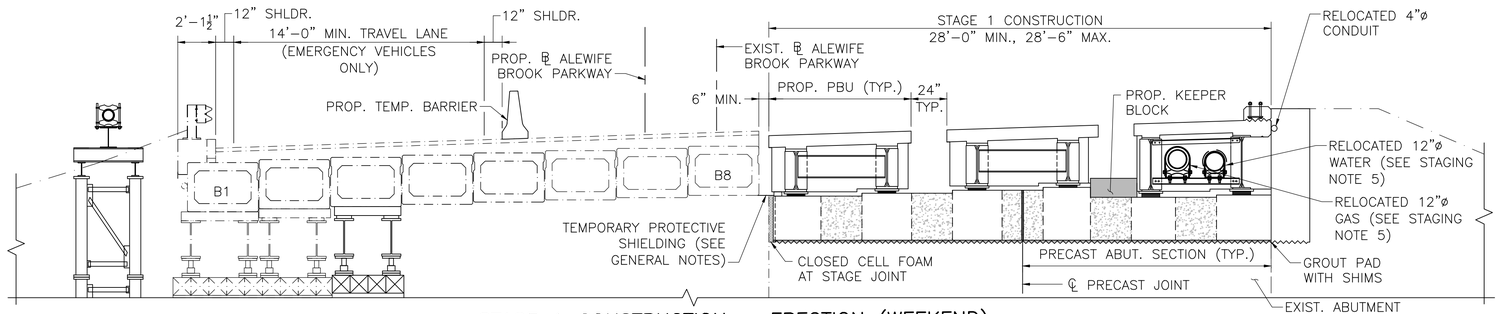
EXISTING SECTION

SCALE: ¼" = 1'–0"



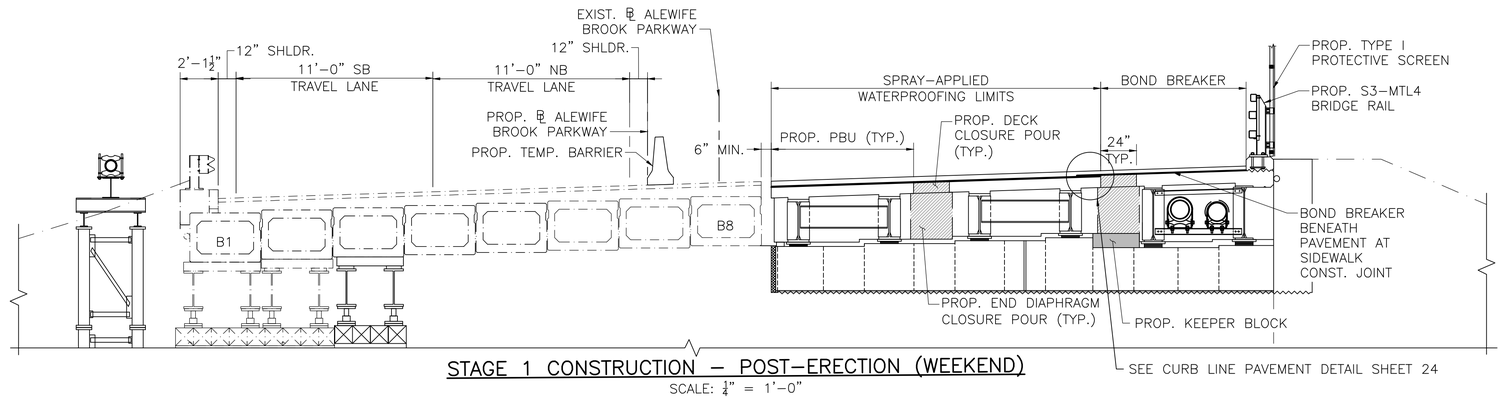
STAGE 1 DEMOLITION (WEEKEND)

SCALE: ¼" = 1'–0"



STAGE 1 CONSTRUCTION – ERECTION (WEEKEND)

SCALE: ¼" = 1'–0"



STAGE 1 CONSTRUCTION – POST–ERECTION (WEEKEND)

SCALE: ¼" = 1'–0"

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	57	98
	PROJECT FILE NO. 610776		

STAGING SECTION 1 OF 3

SUGGESTED CONSTRUCTION SEQUENCE:

PRE–STAGE 1:

1. INSTALL TEMPORARY UTILITY SUPPORT STRUCTURE ON THE WEST SIDE OF THE EXISTING BRIDGE. RELOCATE GAS UTILITY TO THE TEMPORARY SUPPORTS (BY OTHERS).
2. TEMPORARILY SHUTOFF (CAP) THE ELECTRICAL AND WATER UTILITIES BEHIND THE BRIDGE ABUTMENTS. EXISTING WATER AND ELECTRICITY MAY REMAIN SHUT OFF UNTIL NEW LINES ARE INSTALLED.
3. INSTALL SHORING TOWERS UNDER EXISTING BEAM 3.
4. INSTALL SIGNS FOR ALTERNATE TRAVEL ROUTES FOR NORTHBOUND AND SOUTHBOUND TRAVEL.

STAGE 1 DEMOLITION (WEEKEND):

1. REDUCE TRAFFIC TO ONE LANE IN EACH DIRECTION AND SHIFT ALL TRAFFIC TO THE WESTERN PORTION OF THE EXISTING BRIDGE.
2. INSTALL TEMPORARY SUPPORT OF EXCAVATION IN LOCATIONS AS SHOWN ON PLANS.
3. PARTIALLY DEMOLISH SUPERSTRUCTURE TO THE LIMITS SHOWN ON STAGING PLANS. DEMOLISH BACKWALL, APPROACH SLAB, AND ABUTMENT TO THE LIMITS SHOWN ON THE DEMOLITION PLANS.

STAGE 1 CONSTRUCTION – ERECTION (WEEKEND):

1. SET UP THE CRANES FOR ABUTMENT ERECTION AT EACH BRIDGE APPROACH.
2. INSTALL THE PROPOSED PRECAST BEAM SEATS AT EACH ABUTMENT:
   - DRILL AND GROUT #7 BARS INTO THE EXISTING ABUTMENT STEM TO REMAIN.
   - INSTALL SHIMS AND BED GROUT ON EXISTING ABUTMENT TO REMAIN.
   - PLACE PROPOSED ABUTMENT CAP AND INSTALL BACKER ROD DETAIL.
   - PLACE CLOSED CELL FOAM AT ABUTMENT CAP ENDS.
   - FILL CMP VOIDS AND CAST KEEPER BLOCKS.
   - SET BEARINGS ON PROPOSED BRIDGE SEATS.
   - COMPLETE CURTAIN WALL RECONSTRUCTION.
3. DURING PBU ERECTION CLOSURE, DETOUR ALL TRAFFIC, EXCEPT EMERGENCY VEHICLES, TO USE ALTERNATE TRAVEL ROUTES. MOVE THE TEMPORARY BARRIERS WEST TO ALLOW FOR CRANE ACCESS AND SETUP. NEW TEMPORARY SINGLE TRAVEL LANE SHALL BE 16'–0" MIN. BETWEEN BARRIERS FOR EMERGENCY VEHICLE AND CONSTRUCTION VEHICLE ACCESS ONLY.
   - INSTALL THREE (3) PBUS ON PROPOSED BEARING PADS.
   - DEMOBILIZE CRANES.
   - REPLACE TEMPORARY BARRIERS TO THE DEMOLITION PHASE LOCATIONS AND OPEN TRAFFIC ON THE WEST HALF OF THE EXISTING BRIDGE WITH ONE LANE IN EACH DIRECTION.

STAGE 1 CONSTRUCTION – POST–ERECTION (WEEKEND):

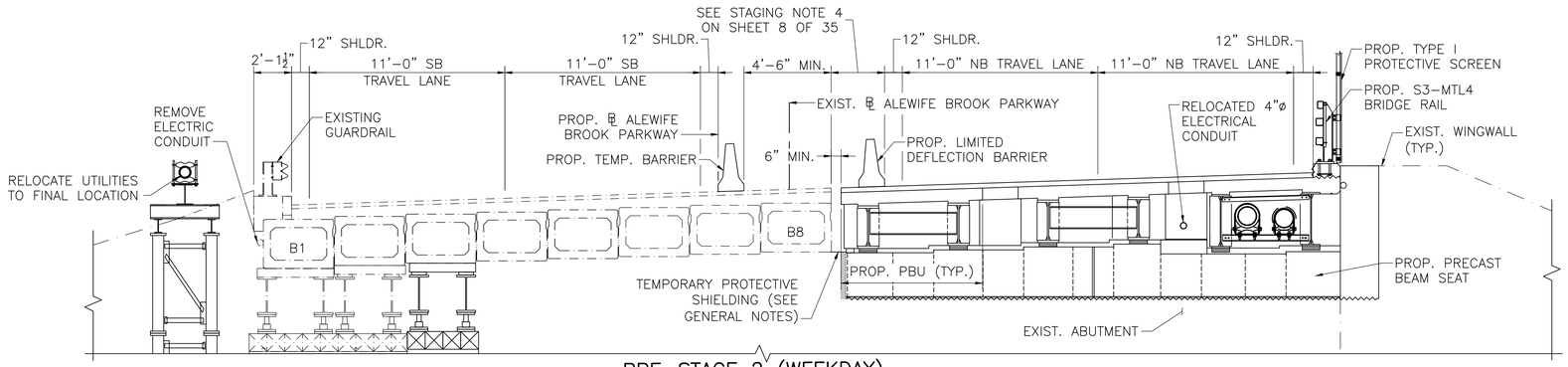
1. POUR KEEPER BLOCKS. POUR CLOSURE POURS BETWEEN PBUS INCLUDING AT THE END DIAPHRAGMS.
2. INSTALL PRECAST APPROACH SLAB SEGMENTS. COMPLETE SHEAR KEY BETWEEN APPROACH SLAB SEGMENTS.
3. REMOVE SUPPORT OF EXCAVATION.
4. INSTALL S3–MTL4 BRIDGE RAIL, TYPE I PROTECTIVE SCREEN, PRECAST HIGHWAY GUARDRAIL TRANSITIONS, WATERPROOFING MEMBRANE, AND 1½" SUPERPAVE BRIDGE PROTECTIVE COURSE. INSTALL MEMBRANE ACROSS FULL DECK WIDTH TO SAFETY CURB WITH BOND BREAKER UNDER FUTURE SIDEWALK AND CM–MTL3 WIDTH.
5. INSTALL LIMITED DEFLECTION TEMPORARY BARRIER ON THE PROPOSED STRUCTURE. SEE STAGING NOTE 4 FOR ADDITIONAL INFORMATION.
6. OPEN BRIDGE TO FOUR LANES OF TRAFFIC AFTER WEEKEND WORK IS COMPLETE.

STAGING NOTES:

1. WORK IN STAGES 1 AND 2 (INCLUDING PRE–STAGE 2 TEMPORARY TRAFFIC SETUP AND BREAKDOWN) MUST OCCUR WITHIN A 55–HOUR WEEKEND CLOSURE EACH.
2. FOR LIMITATIONS OF OPERATION ASSOCIATED WITH THE PROPOSED CONSTRUCTION SEQUENCE, SEE SPECIAL PROVISIONS.
3. SECTIONS ARE SHOWN LOOKING NORTH. EXISTING SECTION IS SHOWN PER EXISTING 1980 BRIDGE PLANS.
4. TEMPORARY BARRIER (LIMITED DEFLECTION) SHALL MEET MASH TEST LEVEL 3. DETAILS SHALL BE SUBMITTED FOR APPROVAL INCLUDING A REPAIR PLAN FOR THE PROPOSED CONCRETE DECK AT ANCHOR LOCATIONS. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THE DECK DURING SETUP AND REMOVAL OF THE TEMPORARY BARRIER. SEE SPECIAL PROVISION FOR ITEM 853.33 FOR ADDITIONAL INFORMATION.
5. UTILITIES AND SUPPORTS SHALL BE INSTALLED ON THE PREFABRICATED BRIDGE UNITS PRIOR TO ERECTION.
6. DIMENSIONS SHOWN ARE SQUARE TO BASELINE UNLESS OTHERWISE NOTED.
7. THE CONTRACTOR SHALL SUBMIT A DEMOLITION PROCEDURE FOR REVIEW AND APPROVAL BY THE ENGINEER THAT INCLUDES PROVISIONS FOR CUTTING THE EXISTING LATERAL ANCHORAGE STRAND AT THE STAGE LINE.

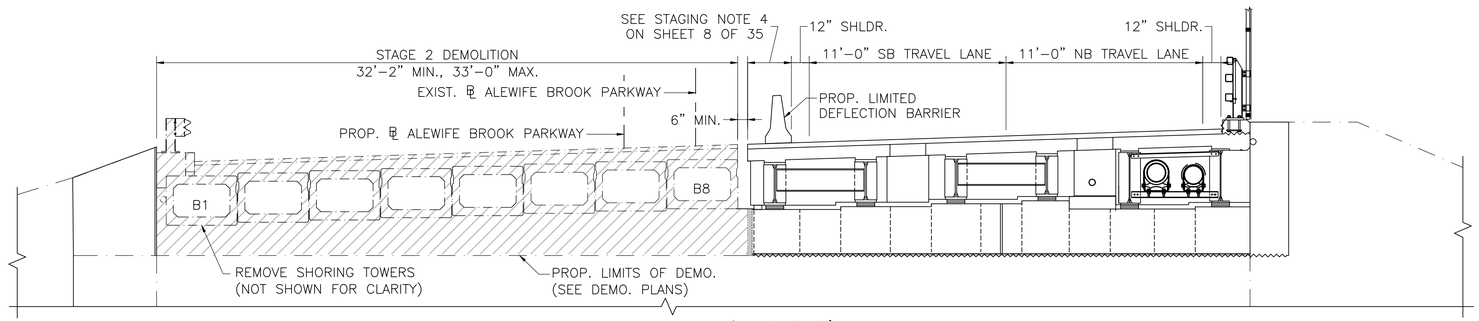
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

610776_BR08-10(STAGING SECTIONS).DWG Plotted on 29-Jul-2025 2:18 PM
Final Structural Submission (SF) 16-AUGUST-2025



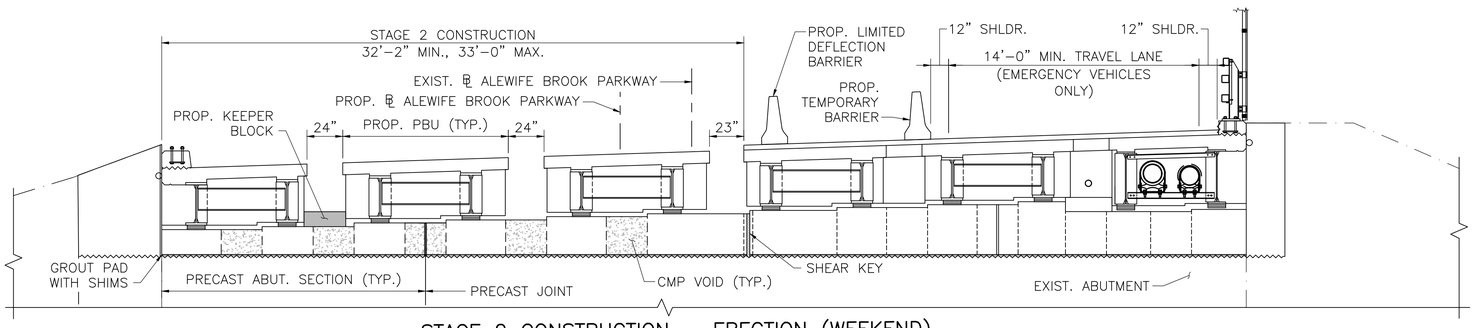
PRE-STAGE 2 (WEEKDAY)

SCALE: ¼" = 1'-0"



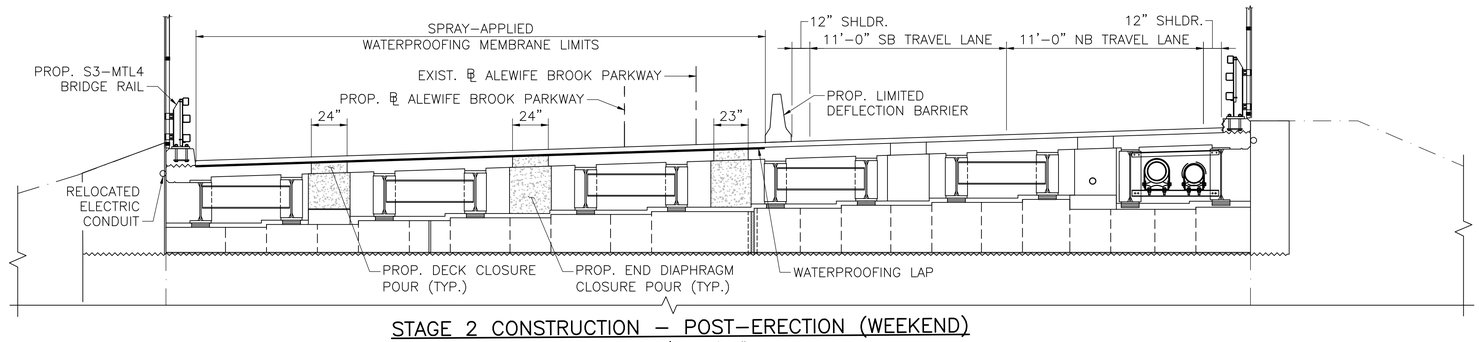
STAGE 2 DEMOLITION (WEEKEND)

SCALE: ¼" = 1'-0"



STAGE 2 CONSTRUCTION – ERECTION (WEEKEND)

SCALE: ¼" = 1'-0"



STAGE 2 CONSTRUCTION – POST-ERECTION (WEEKEND)

SCALE: ¼" = 1'-0"

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	58	98
PROJECT FILE NO.	610776		

STAGING SECTION 2 OF 3

SUGGESTED CONSTRUCTION SEQUENCE (CONT'D):

PRE-STAGE 2 (WEEKDAY):

1. OPEN FOUR LANES FOR TRAVEL WITH TEMPORARY BARRIERS.
2. RELOCATE UTILITIES TO THEIR PERMANENT LOCATION AND REMOVE TEMPORARY UTILITY SUPORT SYSTEM. TEMPORARY GAS MAIN SHALL BE RELOCATED PRIOR TO STAGE 2 DEMOLITION.
3. INSTALL SIGNS FOR ALTERNATE TRAVEL ROUTES FOR NORTHBOUND AND SOUTHBOUND TRAVEL.

STAGE 2 DEMOLITION (WEEKEND):

1. REDUCE TRAFFIC TO ONE LANE IN EACH DIRECTION AND SHIFT ALL TRAFFIC TO THE EAST ONTO THE PARTIALLY CONSTRUCTED PROPOSED BRIDGE.
2. INSTALL TEMPORARY SUPPORT OF EXCAVATION IN LOCATIONS AS SHOWN ON PLANS.
3. REMOVE TEMPORARY SHORING UNDER THE EXISTING BEAMS AND DEMOLISH THE REMAINING PORTIONS OF THE EXISTING WESTERN SUPERSTRUCTURE. DEMOLISH THE BACKWALL, APPROACH SLAB, AND TO THE ABUTMENT LIMITS SHOWN ON THE DEMOLITION PLANS.

STAGE 2 CONSTRUCTION – ERECTION (WEEKEND):

1. SET UP THE CRANES FOR ABUTMENT ERECTION AT EACH BRIDGE APPROACH.
2. INSTALL THE PROPOSED PRECAST BEAM SEATS AT EACH ABUTMENT:
   - DRILL AND GROUT #7 BARS INTO THE EXISTING ABUTMENT STEM.
   - INSTALL SHIMS AND BED GROUT ON EXISTING ABUTMENT TO REMAIN.
   - PLACE PROPOSED ABUTMENT CAP AND INSTALL BACKER ROD DETAIL.
   - INSTALL CLOSED CELL FOAM AT ABUTMENT CAP ENDS.
   - FILL CMP VOIDS.
   - SET BEARINGS ON PROPOSED BRIDGE SEATS.
   - COMPLETE CURTAIN WALL RECONSTRUCTION.
3. DURING PBU ERECTION CLOSURE, DETOUR ALL TRAFFIC, EXCEPT EMERGENCY VEHICLES, TO USE ALTERNATE TRAVEL ROUTES. MOVE THE TEMPORARY BARRIERS EAST TO ALLOW FOR CRANE ACCESS AND SETUP. NEW TEMPORARY SINGLE TRAVEL LANE SHALL BE 16'-0" MIN. BETWEEN BARRIERS FOR EMERGENCY VEHICLE AND CONSTRUCTION VEHICLE ACCESS ONLY.
   - INSTALL THREE (3) PBUS ON PROPOSED BEARING PADS.
   - DEMOBILIZE CRANES.
   - REPLACE TEMPORARY BARRIERS TO THE DEMOLITION PHASE LOCATIONS AND OPEN TRAFFIC ON THE EAST HALF OF THE EXISTING BRIDGE WITH ONE LANE IN EACH DIRECTION.

STAGE 2 CONSTRUCTION – POST-ERECTION (WEEKEND):

1. POUR KEEPER BLOCKS. POUR CLOSURE POURS BETWEEN PBUS INCLUDING AT THE END DIAPHRAGMS.
2. INSTALL PRECAST APPROACH SLAB SEGMENTS. COMPLETE SHEAR KEY BETWEEN APPROACH SLAB SEGMENTS.
3. REMOVE SUPPORT OF EXCAVATION.
4. INSTALL S3-MTL4 BRIDGE RAIL, TYPE I PROTECTIVE SCREEN, PRECAST HIGHWAY GUARDRAIL TRANSITIONS, WATERPROOFING MEMBRANE, AND 1½" SUPERPAVE BRIDGE PROTECTIVE COURSE.
5. OPEN BRIDGE TO FOUR LANES OF TRAFFIC AFTER WEEKEND WORK IS COMPLETE.

NOTES:

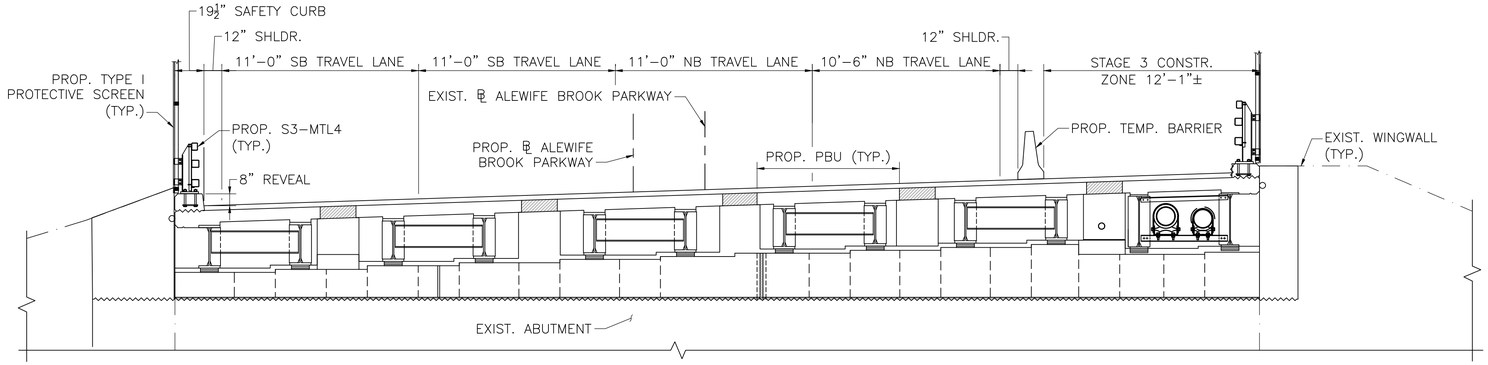
1. SEE SHEET 08 FOR STAGING NOTES.
2. TIMING OF UTILITY RELOCATION MAY BE ADJUSTED UNDER COORDINATION WITH MASSDOT AND UTILITY OWNERS.

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

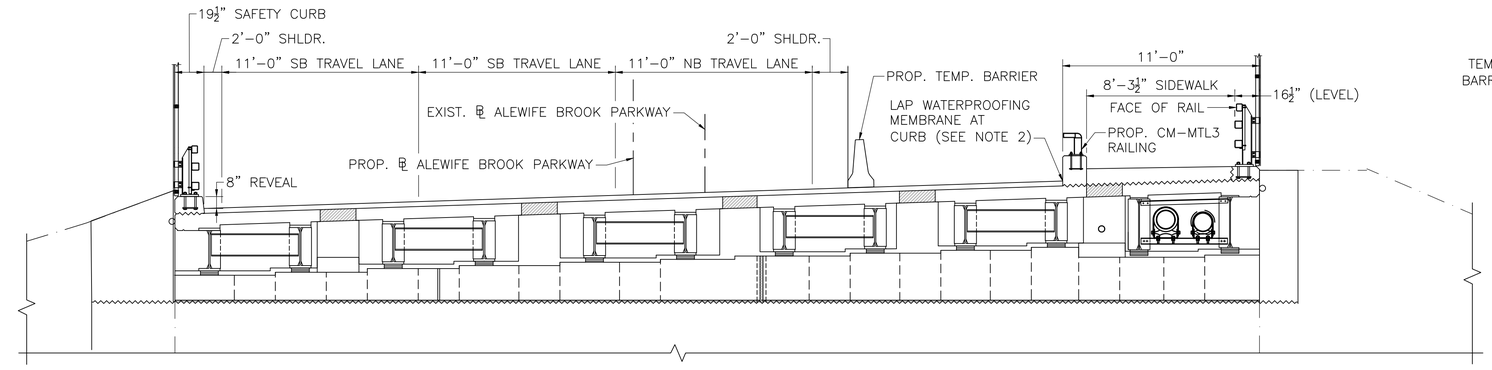
CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	59	98
	PROJECT FILE NO. 610776		

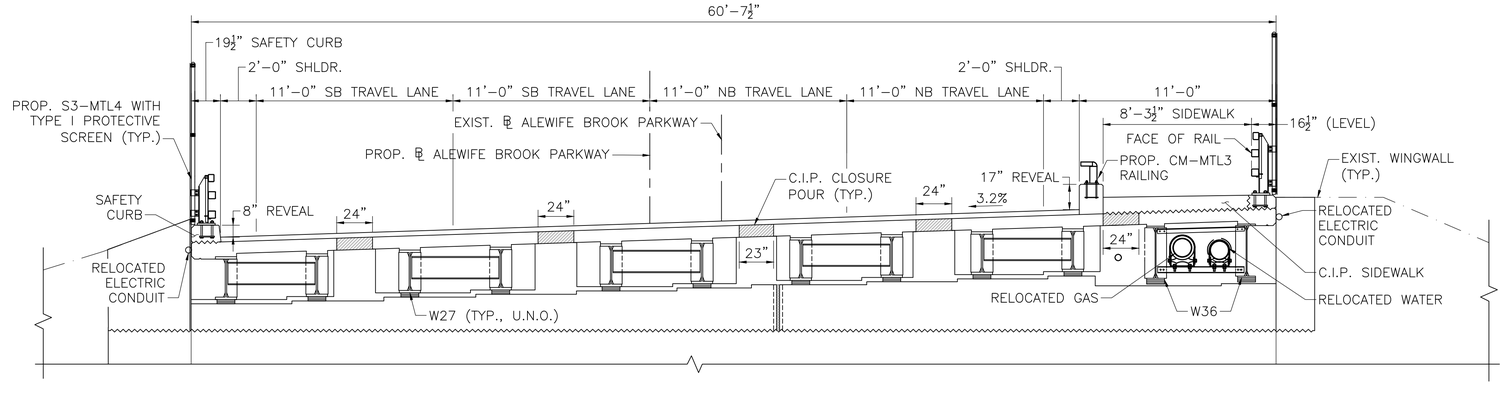
STAGING SECTION 3 OF 3



STAGE 3 (WEEKDAY DAYTIME)
SCALE: ¼" = 1'–0"



STAGE 3 (WEEKDAY NIGHTTIME)
SCALE: ¼" = 1'–0"



PROPOSED TRANSVERSE SECTION
LOOKING NORTH
SCALE: ¼" = 1'–0"

NOTES:

1. SEE SHEET 08 FOR STAGING NOTES.
2. FOR CURB LINE PAVEMENT DETAIL, SEE SHEET 24.

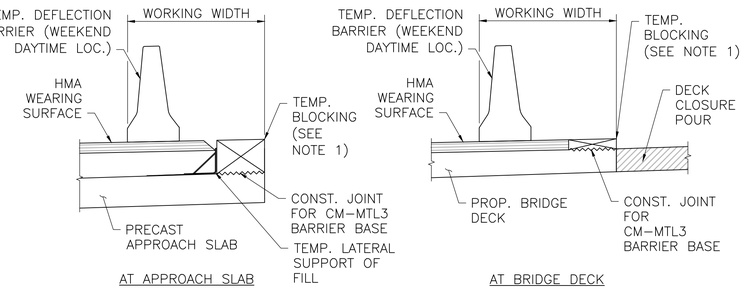
SUGGESTED CONSTRUCTION SEQUENCE (CONT'D):

STAGE 3 CONSTRUCTION (WEEKDAY DAYTIME):

1. OPEN 4 LANES FOR TRAVEL WITH TEMPORARY DRUMS.
2. COMPLETE REPAIR WORK TO THE FACE OF EXISTING ABUTMENTS FROM BELOW IN ACCORDANCE WITH SHEET 19.
3. COMPLETE WORK ON THE PEDESTRIAN PATH BENEATH THE BRIDGE. SEE CIVIL PLANS FOR DETAILS.

STAGE 3 CONSTRUCTION (WEEKDAY NIGHTTIME):

1. OVERNIGHT, CLOSE THE PERMANENT EASTERN NORTHBOUND TRAVEL LANE TO TRAFFIC AND INSTALL TEMPORARY DRUMS EAST OF REMAINING NORTHBOUND LANE.
2. REMOVE THE TEMPORARY PAVEMENT (OVER BOND BREAKER) AND CONSTRUCT SIDEWALK AND CM–MTL3 BARRIER. REPAIR MEMBRANE WATERPROOFING AT FACE OF CM–MTL3.
3. OPEN EASTERN NORTHBOUND LANE TO TRAFFIC DURING THE DAY. REPEAT STEPS 1 THRU 3 AS REQUIRED.
4. COMPLETE PAVING OF 1½" SUPERPAVE BRIDGE SURFACE COURSE.



STAGE 3 CM–MTL3 CONSTRUCTION
SCALE: ½" = 1'–0"

NOTES:

1. TEMPORARY BLOCKING AT THE APPROACHES MAY BE REQUIRED OVER THE CM–MTL3 BASE TO PROVIDE ADEQUATE WORKING WIDTH FOR THE TEMPORARY BARRIER AND PROTECT THE DOWEL BAR SPLICERS.

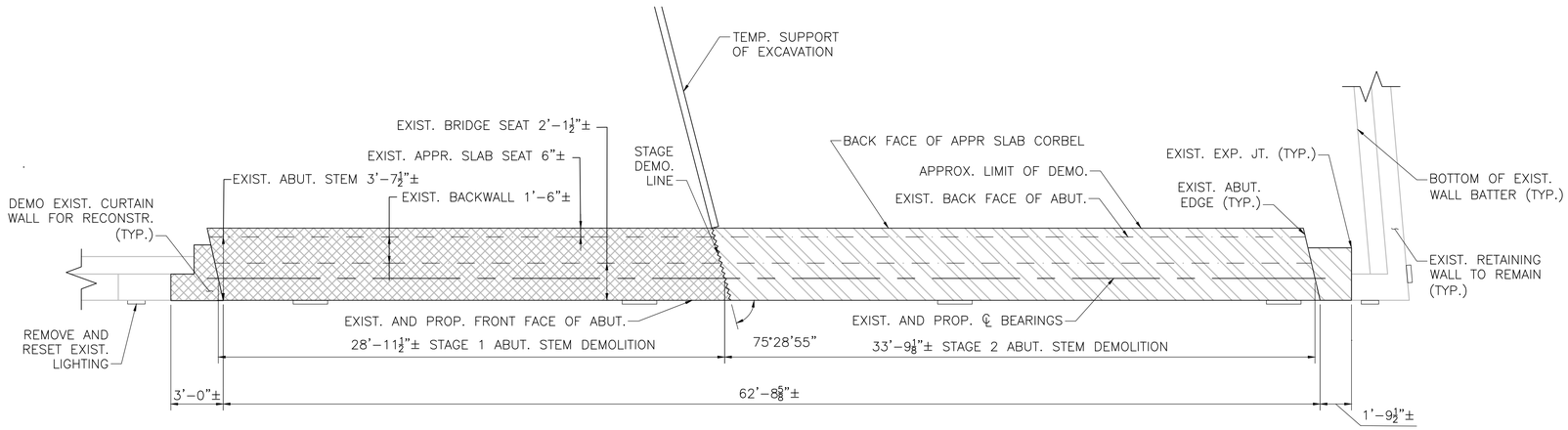
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	60	98
PROJECT FILE NO. 610776			

SOUTH ABUTMENT DEMOLITION PLAN & ELEVATION

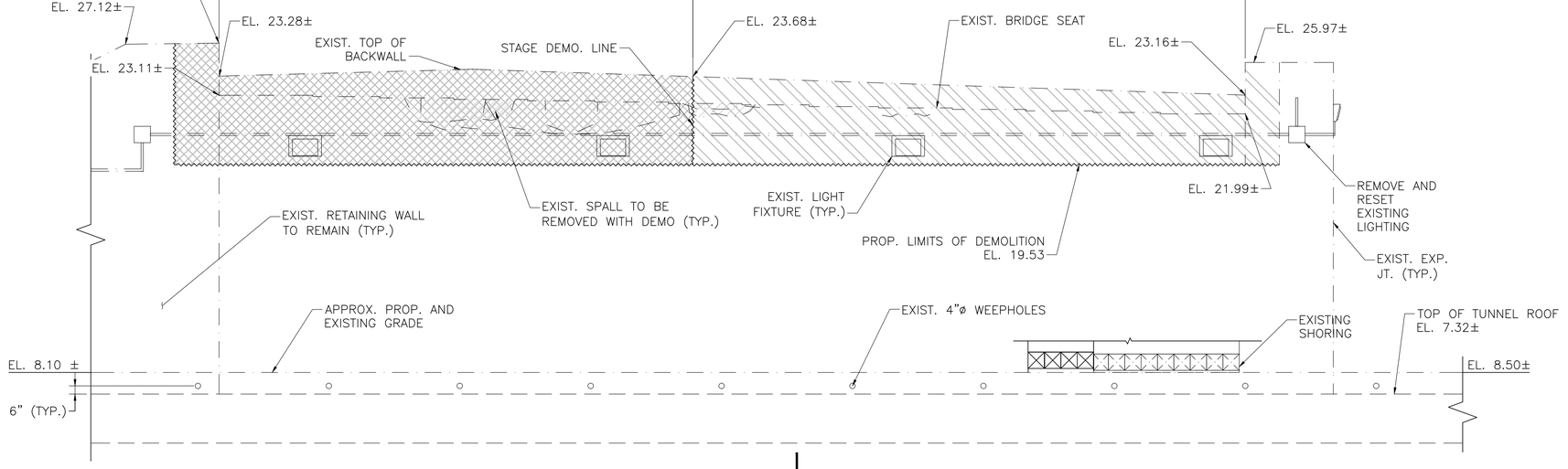


SOUTH ABUTMENT PLAN – DEMOLITION

SCALE: ¼" = 1'-0"

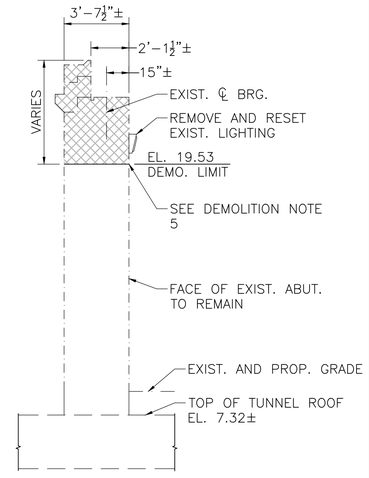
DEMOLITION NOTES:

1. EXISTING ELEVATIONS ARE BASED ON SURVEY UNLESS NOTED OTHERWISE.
2. THE EXISTING STRUCTURE SHALL BE REMOVED AND DISPOSED OF TO THE LIMITS SHOWN ON THESE PLANS.
3. CARE SHALL BE TAKEN DURING DEMOLITION IN THE VICINITY OF EXISTING ELEMENTS THAT ARE TO REMAIN IN SERVICE AND SUPPORT LOAD IN SUBSEQUENT STAGES.
4. DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS OF THE STRUCTURE DEPICTED ARE BASED ON THE EXISTING PLANS AND LIMITED SITE SURVEY. THE CONTRACTOR SHALL VERIFY EXISTING INFORMATION PRIOR TO DEMOLITION.
5. THE LIMITS OF THE DEMOLITION SHALL BE SAWCUT ALONG NEAT LINES TO A DEPTH OF 1" WHERE PRACTICAL TO PRODUCE A CLEAN EDGE. ALL VERTICAL REINFORCEMENT SHALL BE CUT FLUISH WITH THE REMOVAL.



SOUTH ABUTMENT ELEVATION – DEMOLITION

SCALE: ¼" = 1'-0"



SECTION 1

SCALE: ¼" = 1'-0"

LEGEND:

- SPALLED CONCRETE TO BE REPAIRED
- CRACK TO BE REPAIRED
- STAGE 1 DEMOLITION LIMITS
- STAGE 2 DEMOLITION LIMITS

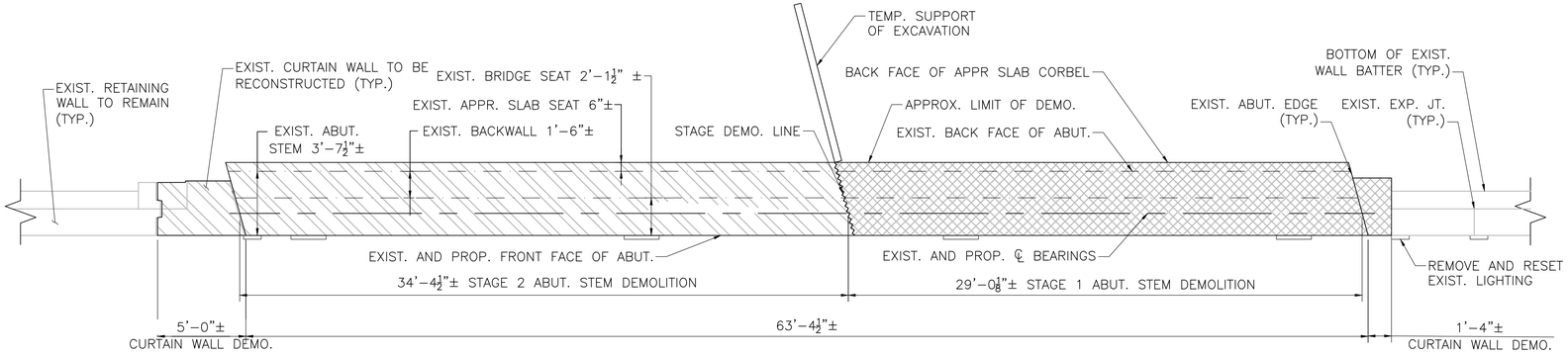
DATE	DESCRIPTION
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

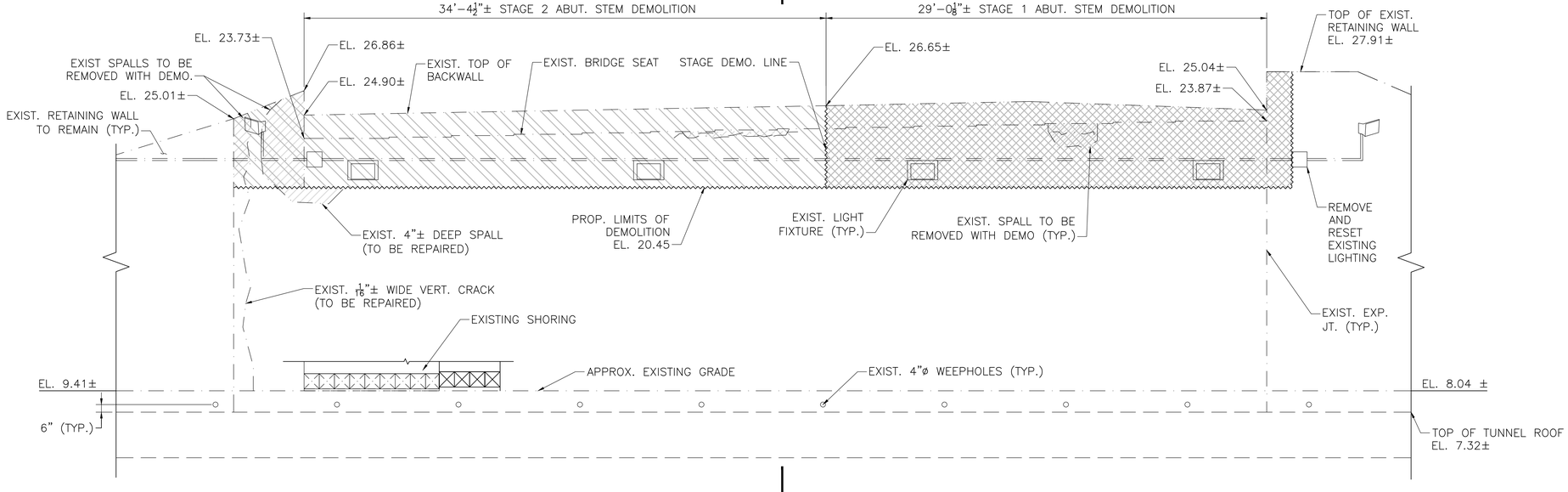
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	61	98
	PROJECT FILE NO. 610776		

NORTH ABUTMENT DEMOLITION PLAN & ELEVATION



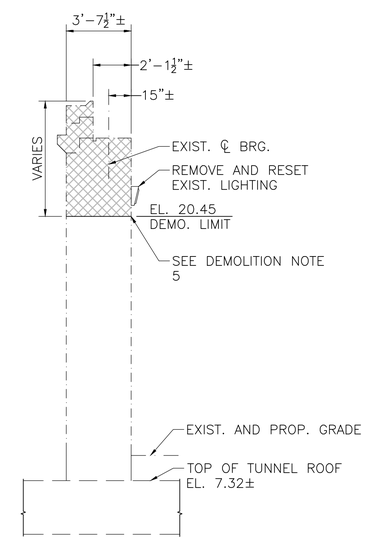
NORTH ABUTMENT PLAN – DEMOLITION

SCALE: ¼" = 1'-0"



NORTH ABUTMENT ELEVATION – DEMOLITION

SCALE: ¼" = 1'-0"



SECTION 2/–

SCALE: ¼" = 1'-0"

LEGEND:

- SPALLED CONCRETE TO BE REPAIRED
- CRACK TO BE REPAIRED
- STAGE 1 DEMOLITION LIMITS
- STAGE 2 DEMOLITION LIMITS

NOTES:

1. FOR DEMOLITION NOTES, SEE SHEET 11.

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

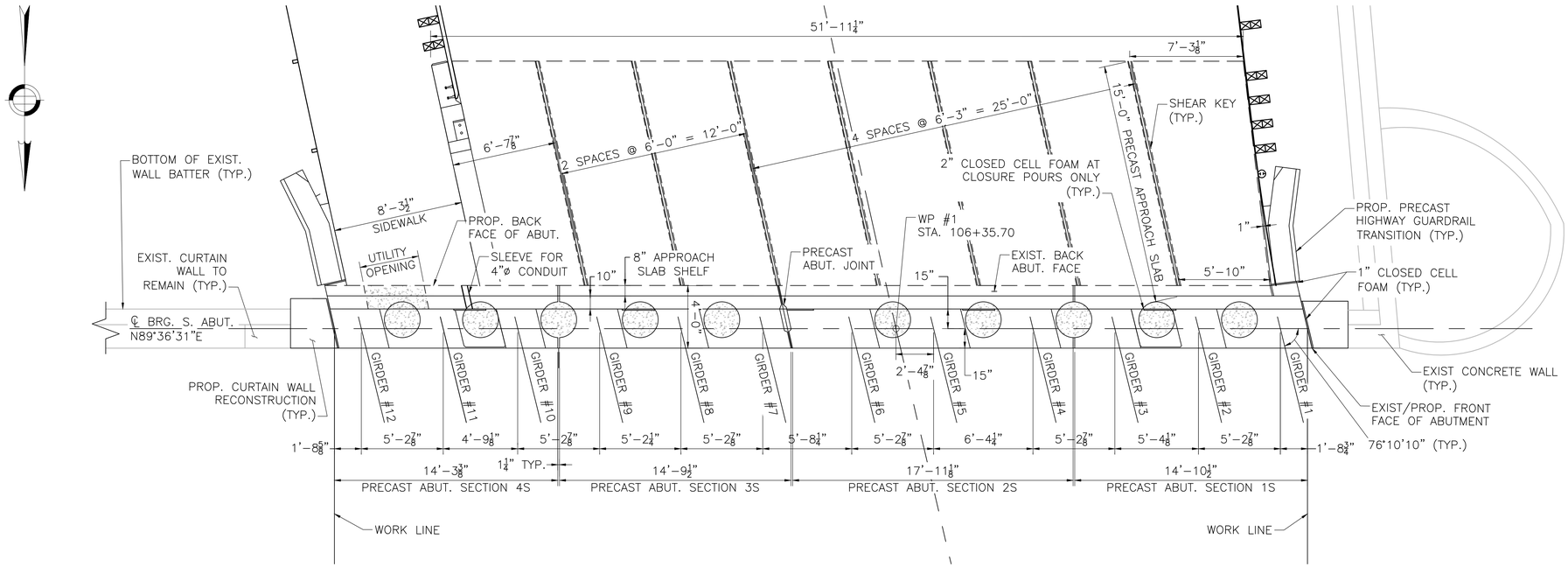
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

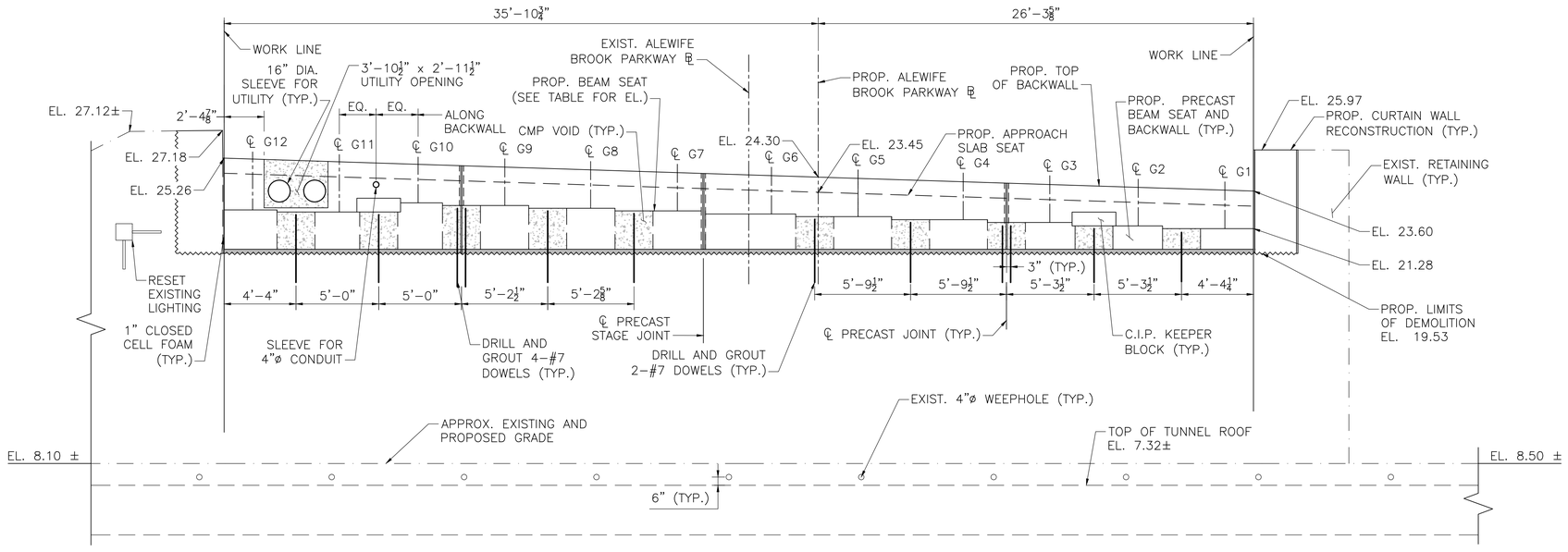
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	62	98
PROJECT FILE NO.	610776		

SOUTH ABUTMENT PLAN & ELEVATION



SOUTH ABUTMENT PLAN
SCALE: ¼" = 1'-0"

PROPOSED BEAM SEAT ELEVATIONS AT CENTERLINE OF BEARING	
GIRDER #	ELEVATION (FT)
1	21.31
2	21.45
3	21.59
4	21.73
5	21.90
6	22.04
7	22.19
8	22.33
9	22.47
10	22.61
11	22.02
12	22.19



SOUTH ABUTMENT ELEVATION
SCALE: ¼" = 1'-0"

NOTES:

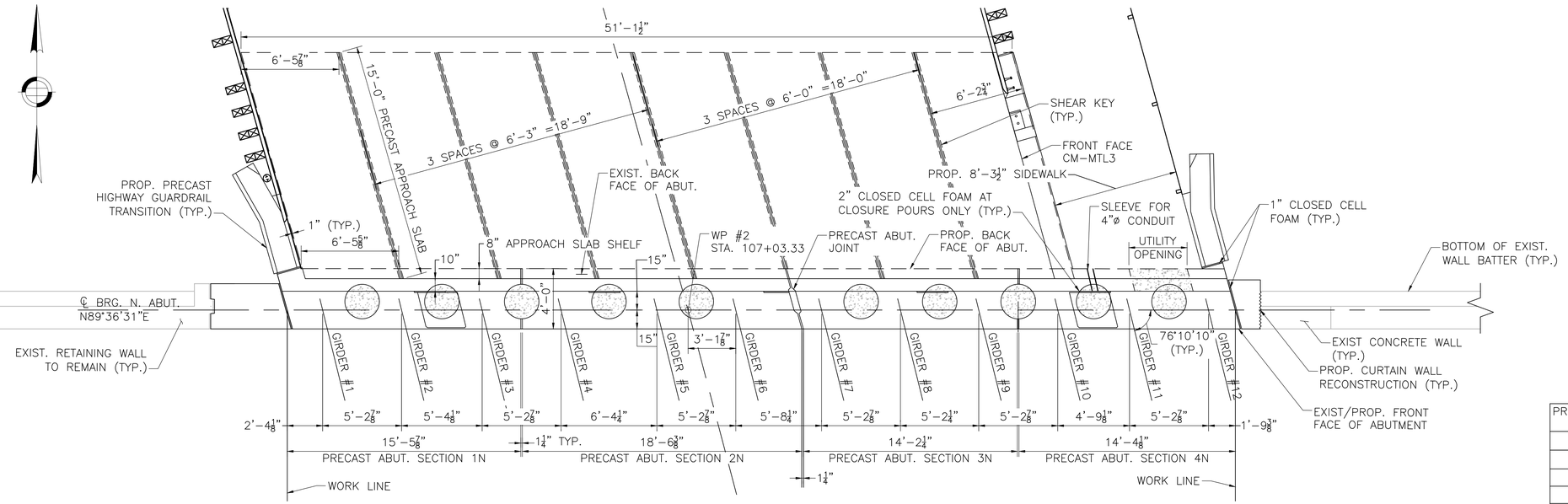
1. ELEVATION VALUES PROVIDED ALONG CENTERLINE OF BEARINGS UNLESS NOTED OTHERWISE.
2. BACKWALL ELEVATIONS ARE PROVIDED ALONG FRONT FACE OF BACKWALL.
3. EXISTING ELEVATION VALUES ARE BASED ON THE SURVEY POINTS PROVIDED UNLESS NOTED OTHERWISE.
4. TUNNEL ROOF ELEVATIONS ARE BASED ON THE EXISTING PLANS.
5. FOR ABUTMENT DETAILS, SEE SHEETS 15 THROUGH 18.
6. FOR END DIAPHRAGM DETAILS, SEE SHEET 17.
7. THE PROPOSED SUPERSTRUCTURE IS APPROXIMATELY 25% LIGHTER THAN THE EXISTING SUPERSTRUCTURE. SEE GEOTECHNICAL REPORT FOR FURTHER DISCUSSION.
8. DIMENSIONS FOR PRECAST ELEMENTS ARE PROVIDED RELATIVE TO A WORK LINE. CONTRACTOR SHALL VERIFY THAT TOLERANCES FOR INDIVIDUAL PIECES AND THE OVERALL DIMENSIONS TO THE WORK LINE ARE MET PRIOR TO POURING THE CMP VOIDS.

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	63	98
	PROJECT FILE NO. 610776		

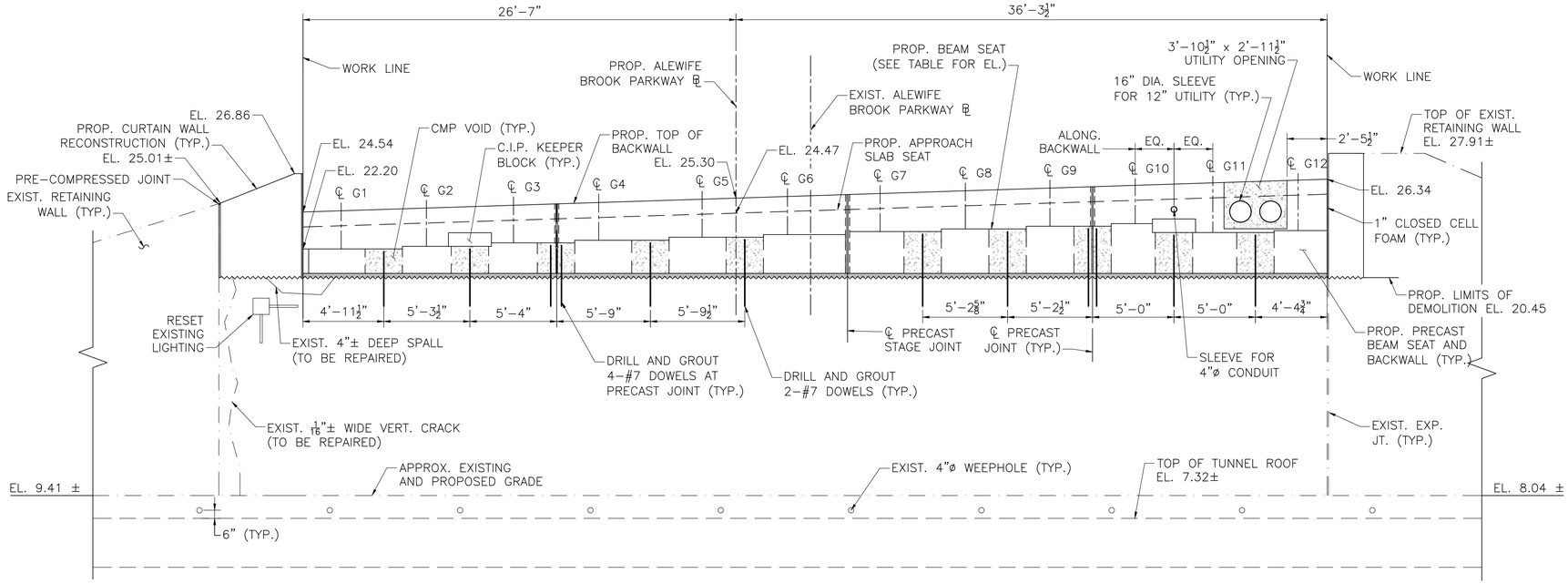
NORTH ABUTMENT PLAN & ELEVATION



NORTH ABUTMENT PLAN

SCALE: ¼" = 1'-0"

PROPOSED BEAM SEAT ELEVATIONS AT CENTERLINE OF BEARING	
GIRDER #	ELEVATION (FT)
1	22.23
2	22.38
3	22.54
4	22.69
5	22.87
6	23.02
7	23.18
8	23.33
9	23.48
10	23.63
11	23.05
12	23.19



NORTH ABUTMENT ELEVATION

SCALE: ¼" = 1'-0"

NOTES:

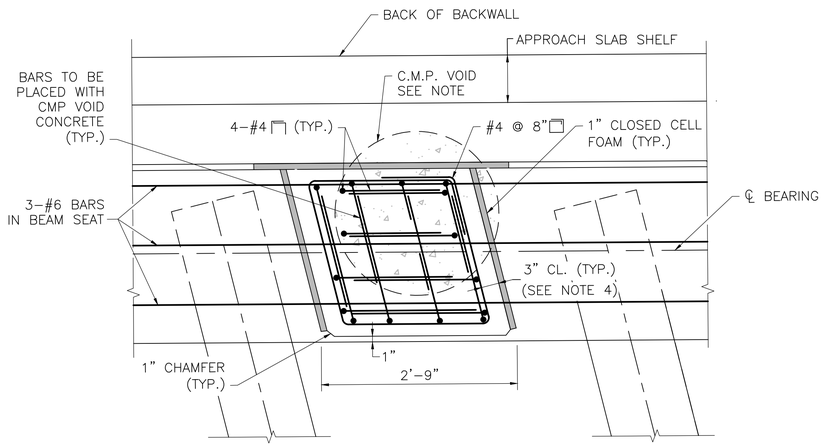
1. ELEVATION VALUES PROVIDED ALONG CENTERLINE OF BEARINGS UNLESS NOTED OTHERWISE.
2. BACKWALL ELEVATIONS ARE PROVIDED ALONG FRONT FACE OF BACKWALL.
3. EXISTING ELEVATION VALUES ARE BASED ON THE SURVEY POINTS PROVIDED UNLESS NOTED OTHERWISE.
4. TUNNEL ROOF ELEVATIONS ARE BASED ON THE EXISTING PLANS.
5. FOR ABUTMENT DETAILS, SEE SHEETS 15 THROUGH 18.
6. FOR END DIAPHRAGM DETAILS, SEE SHEET 17.
7. THE PROPOSED SUPERSTRUCTURE IS APPROXIMATELY 25% LIGHTER THAN THE EXISTING SUPERSTRUCTURE. SEE GEOTECHNICAL REPORT FOR FURTHER DISCUSSION.
8. DIMENSIONS FOR PRECAST ELEMENTS ARE PROVIDED RELATIVE TO A WORK LINE. CONTRACTOR SHALL VERIFY THAT TOLERANCES FOR INDIVIDUAL PIECES AND THE OVERALL DIMENSION TO THE WORK LINE ARE MET PRIOR TO POURING THE CMP VOIDS.

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	64	98
PROJECT FILE NO. 610776			

ABUTMENT DETAILS 1 OF 2

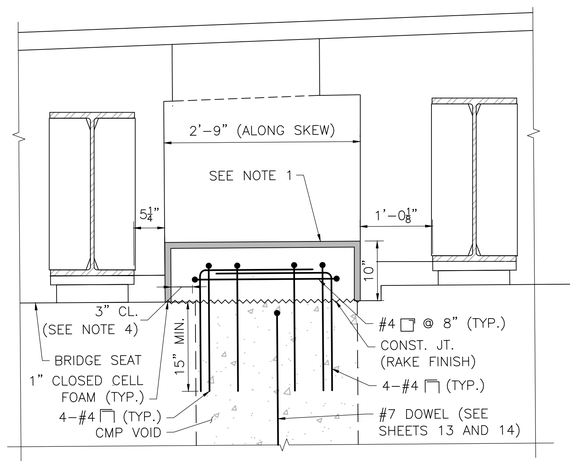


TYPICAL KEEPER BLOCK PLAN

SCALE: 1" = 1'–0"

NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILIAR

NOTE: BARS WITH VERTICAL LEG OUTSIDE OF CMP VOID PERIMETER ARE INTENDED TO BE CAST WITH PRECAST ABUTMENT BEAM SEAT.



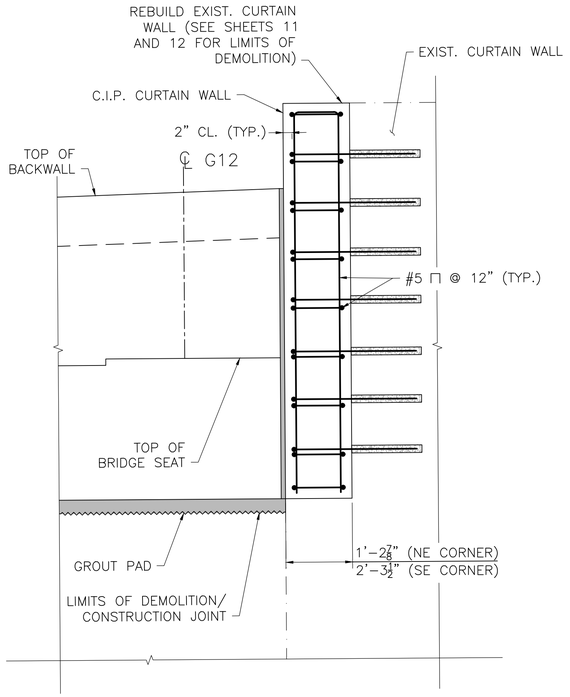
NOTES:

1. TOP OF KEEPER BLOCK SHALL BE TROWELED SMOOTH PARALLEL TO PROFILE GRADE.
2. ABUTMENT REINFORCEMENT BELOW CONSTRUCTION JOINT HAS BEEN OMITTED FOR CLARITY.
3. KEEPER BLOCKS SHALL BE CAST AFTER PBUs ARE SET.
4. THE 3" CLEAR COVER ON THE KEEPER BLOCK MAY BE REDUCED TO 2" TO PROVIDE AN ADDITIONAL INCH OF PLACEMENT TOLERANCE FOR FIT UP THE PBUS.

TYPICAL VERTICAL SECTION AT KEEPER BLOCK

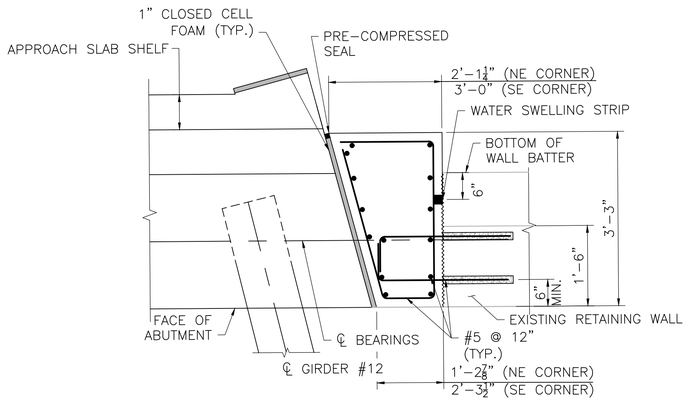
SCALE: 1" = 1'–0"

NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILIAR



NE AND SE CURTAIN WALL RECONSTRUCTION ELEVATION

SCALE: ¾" = 1'–0"

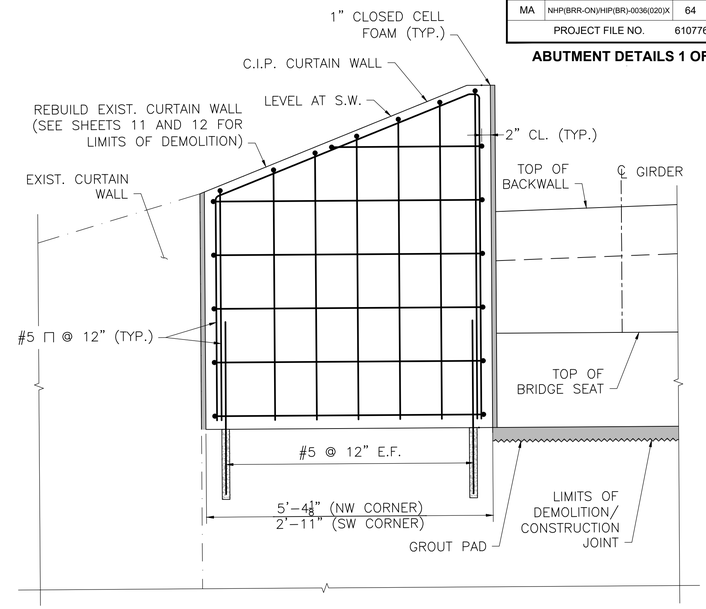


NOTES:

1. PRECAST GUARDRAIL TRANSITION AND UTILITY CUTOUT HAVE BEEN OMITTED FOR CLARITY.

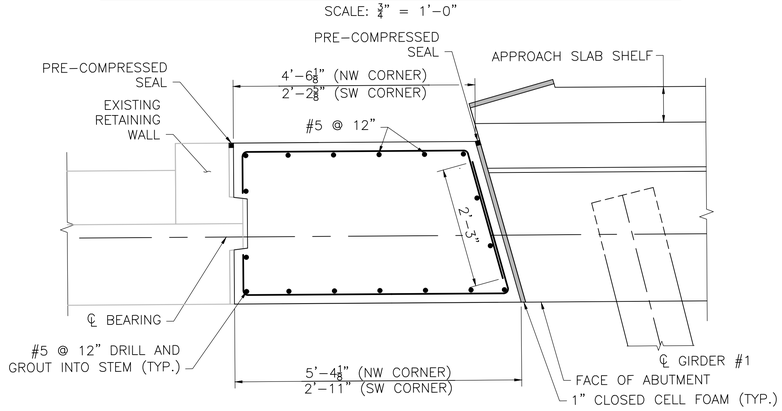
NE AND SE CURTAIN WALL RECONSTRUCTION PLAN

SCALE: ¾" = 1'–0"



NW AND SW CURTAIN WALL RECONSTRUCTION ELEVATION

SCALE: ¾" = 1'–0"



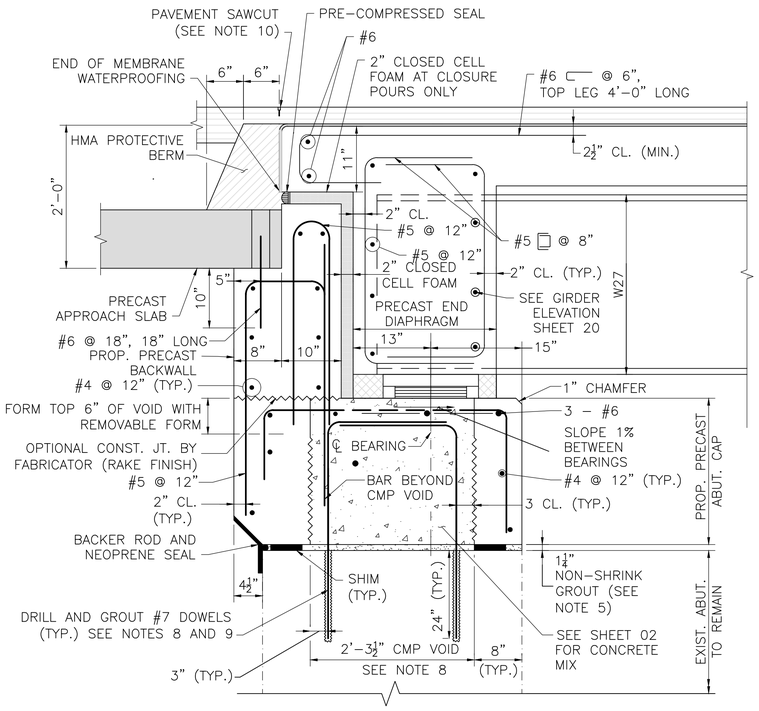
NOTES:

1. PRECAST GUARDRAIL TRANSITION AND UTILITY CUTOUT HAVE BEEN OMITTED FOR CLARITY.

NW AND SW CURTAIN WALL RECONSTRUCTION PLAN

SCALE: ¾" = 1'–0"

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	



DETAILS AT ABUTMENT – ROADWAY SECTION

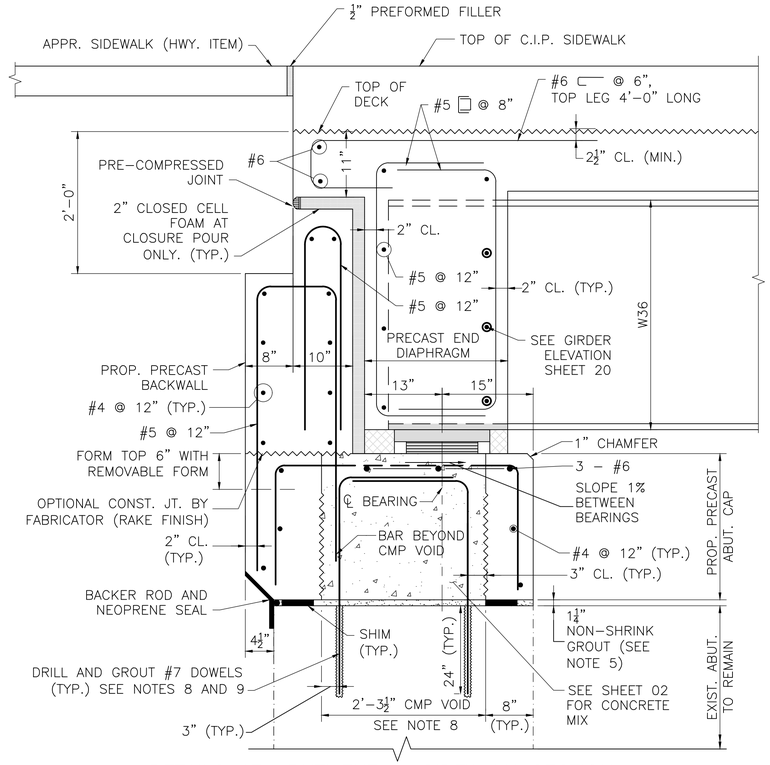
SECTION 3 / 17
SCALE: 1" = 1'-0"

NOTE:

DECK AND APPROACH SLAB REINFORCEMENT NOT SHOWN FOR CLARITY

NOTES:

1. ALL REINFORCEMENT SHOWN IN THIS DETAIL SHALL BE COATED EXCEPT FOR THE APPROACH SLAB REINFORCEMENT.
2. IF USED, THE OPTIONAL BACKWALL CONSTRUCTION JOINT SHALL BE GIVEN A RAKE FINISH WITH A ¼" MINIMUM AMPLITUDE. THE TOP OF BACKWALL SHALL BE CAST SMOOTH PARALLEL TO THE PROFILE GRADE.
3. THE CMP VOID AND CONCRETE MUST BE PLACED AND SUFFICIENTLY CURED TO A COMPRESSIVE STRENGTH OF 1500 PSI PRIOR TO PLACING THE PBU.
4. PRIOR TO PLACING THE END DIAPHRAGM CONCRETE, CLOSED CELL FOAM OF THE SPECIFIED THICKNESSES SHALL BE ATTACHED WITH ADHESIVE TO ALL SURFACES OF THE BACKWALL, KEEPER BLOCKS, AND CURTAIN WALLS AS SHOWN ON THE PLANS. EXPANDED POLYSTYRENE FILLER SHALL BE PLACED UNDER THE BEAM BOTTOM FLANGE AND THE BOTTOM OF THE END DIAPHRAGM SHALL BE FORMED AS SPECIFIED. THE CONTRACTOR SHALL ENSURE THAT ALL ABUTMENT CONCRETE IS PROPERLY LINED. END DIAPHRAGM CONCRETE MUST NOT COME IN DIRECT CONTACT WITH ABUTMENT CONCRETE.
5. PRE-BED SEAT WITH NON-SHRINK GROUT WITH THICKNESS MORE THAN SHIM STACK. SEE SPECIAL PROVISIONS FOR GROUT MATERIAL REQUIREMENTS.
6. DRAPE MEMBRANE WATERPROOFING OVER CLOSED CELL FOAM BACKER ROD.
7. HMA PROTECTIVE BERM TO BE SUPERPAVE BRIDGE PROTECTIVE COARSE (SPC-B-12.5), PLACED IN 2" LAYERS AND COMPACTED WITH A MECHANICAL HAND-GUIDED TAMPER WITHIN 12 HOURS AFTER PLACING MEMBRANE WATERPROOFING.
8. FOR CMP VOID LOCATIONS, SEE SHEETS 13 AND 14. CMP VOID DIAMETER MAY BE INCREASED TO NEAREST WHOLE INCH BASED ON MATERIAL AVAILABILITY.
9. DOWELS IN EXISTING ABUTMENT SHALL BE INSTALLED PRIOR TO SETTING THE ABUTMENT CAP. FOR DRILL AND GROUT REQUIREMENTS, SEE GENERAL NOTES ON SHEET 02 AND SPECIAL PROVISIONS ITEM 995.
10. PAVEMENT SAWCUT JOINT WILL EXTEND THROUGH FINAL SIDEWALK AREA DURING STAGE 2 CONSTRUCTION.
11. FOR DETAILS OF KEEPER BLCOK DOWEL REINFORCEMENT, SEE SHEET 15 OF 35.

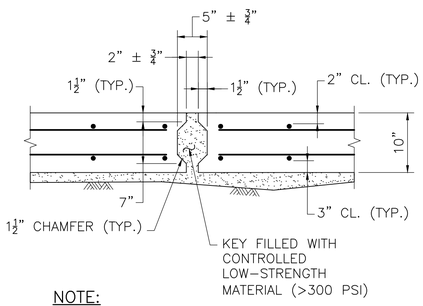


DETAILS AT ABUTMENT – SIDEWALK SECTION

SECTION 4 / 17
SCALE: 1" = 1'-0"

NOTE:

DECK AND APPROACH SLAB REINFORCEMENT NOT SHOWN FOR CLARITY



NOTE:

ALL SHEAR KEYS SHALL HAVE AN EXPOSED AGGREGATE FINISH.

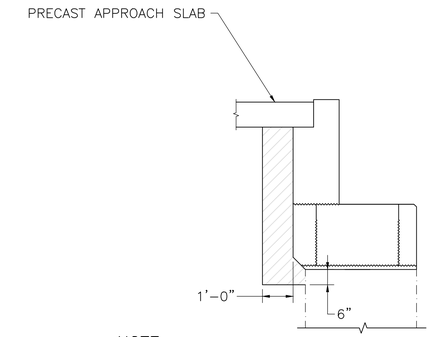
PRECAST SHEAR KEY AT APPROACH SLAB

SCALE: ¾" = 1'-0"

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	65	98
PROJECT FILE NO. 610776			

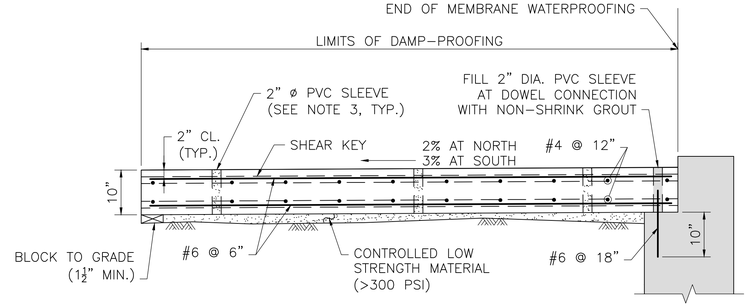
ABUTMENT DETAILS 2 OF 2



NOTE:
HATCHED AREA INDICATES LIMITS OF GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES.

LIMITS OF GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES

NOT TO SCALE



NOTES:

1. PLACE LONGITUDINAL REINFORCEMENT PARALLEL TO GIRDERS.
2. PLACE TRANSVERSE REINFORCEMENT PARALLEL TO ABUTMENT. ALL REINFORCEMENT SHALL NOT BE COATED.
3. PVC SLEEVES TO BE INCLUDED IN APPROACH SLABS TO FACILITATE PLACEMENT OF CONTROLLED LOW STRENGTH MATERIAL (>300 PSI).

APPROACH SLAB DETAILS

SCALE: ¾" = 1'-0"

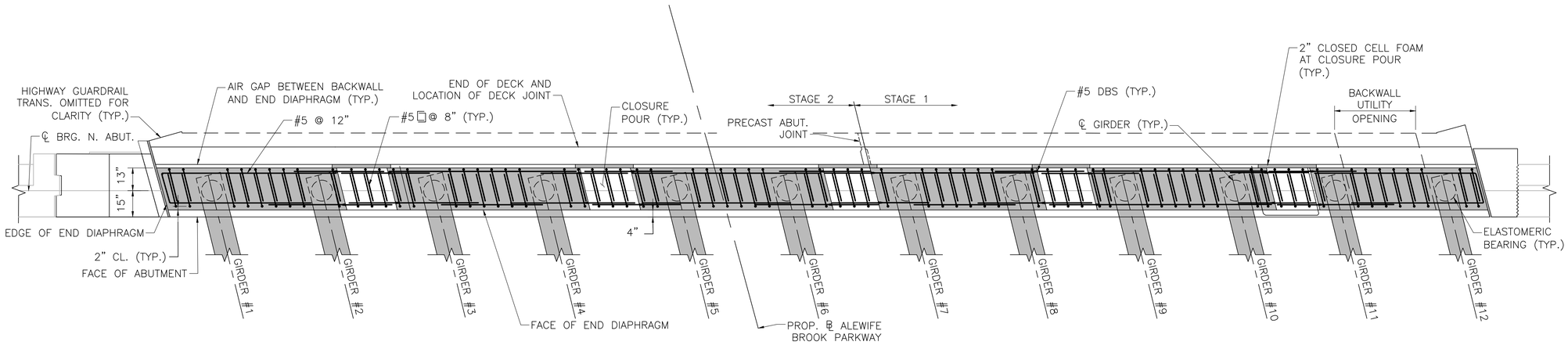
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

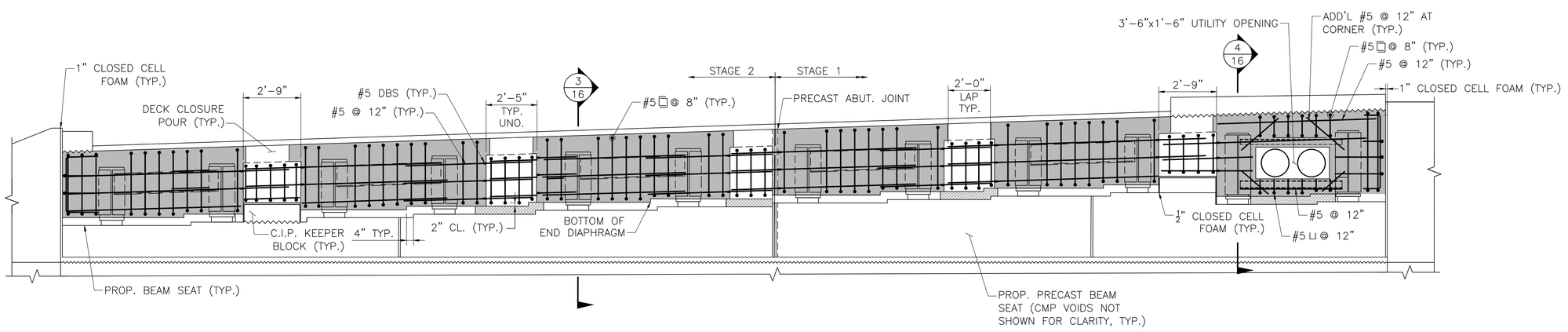
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	66	98
PROJECT FILE NO. 610776			

END DIAPHRAGM PLAN & ELEVATION



PRECAST END DIAPHRAGM HORIZONTAL SECTION

SCALE: $\frac{3}{8}$" = 1'–0"
(NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR)



PRECAST END DIAPHRAGM ELEVATION

SCALE: $\frac{3}{8}$" = 1'–0"
(NORTH ABUTMENT SHOWN, SOUTH ABUTMENT SIMILAR)

NOTES:

1. ALL REINFORCEMENT SHALL BE COATED.
2. HMA PROTECTIVE BERM TO BE SUPERPAVE BRIDGE PROTECTIVE COURSE (SPC–B–12.5), PLACED IN 2" LAYERS AND COMPACTED WITH A MECHANICAL HAND–GUIDED TAMPER.
3. AFTER THE PBU'S HAVE BEEN ERECTED, CLOSED CELL FOAM OF THE SPECIFIED THICKNESS SHALL BE ATTACHED WITH ADHESIVE TO ALL SURFACES OF THE BACKWALL, KEEPER BLOCKS, AND CURTAIN WALLS AT THE LOCATIONS WHERE THE ABUTMENT END DIAPHRAGM CLOSURE POURS ARE TO BE MADE AS SHOWN ON THE PLANS. THE BOTTOM OF THE END DIAPHRAGM CLOSURE POUR SHALL BE FORMED BY PLACING EXPANDED POLYSTYRENE FILLER OF THE REQUIRED THICKNESS ON THE BRIDGE SEAT. THE CONTRACTOR SHALL MAKE SURE THAT THE CLOSED CELL FOAM AND EXPANDED POLYSTYRENE FILLER HAVE BEEN PROPERLY INSTALLED AND SECURELY TUCKED BEHIND THE PRECAST PBU END DIAPHRAGM TO SEAL THE EDGES OF THE CLOSURE POUR SO THAT THE CLOSURE POUR CONCRETE SHALL NOT COME IN DIRECT CONTACT WITH THE ABUTMENT CONCRETE.
4. AFTER THE CLOSURE POUR CONCRETE HAS REACHED THE REQUIRED STRENGTH, THE PRECOMPRESSED SEAL SHALL BE SECURELY INSTALLED IN THE GAP BETWEEN THE TOP OF THE BACKWALL AND THE UNDERSIDE OF THE PBU DECK CANTILEVER. CLOSED CELL FOAM SHALL BE REMOVED IN THE LOCATIONS OF THE END DIAPHRAGM CLOSURE POURS TO ALLOW THE PRECOMPRESSED SEAL TO BE PROPERLY SEATED IN THE GAP FOR ITS ENTIRE LENGTH.
5. DECK SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.
6. THE CMP VOID CONCRETE MUST BE PLACED AND SUFFICIENTLY CURED PRIOR TO PLACING THE END DIAPHRAGM CONCRETE.

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

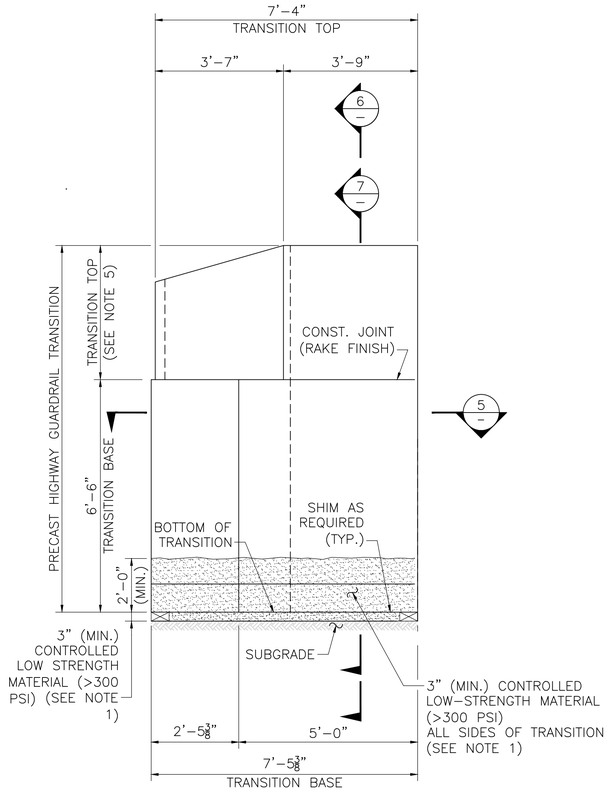
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

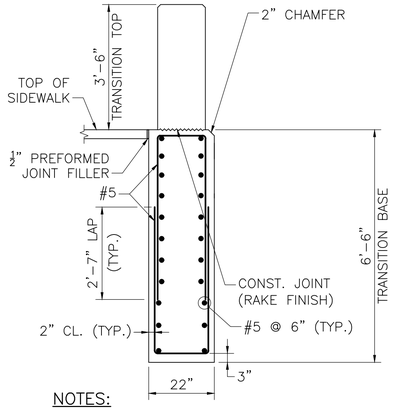
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	67	98
PROJECT FILE NO. 610776			

PRECAST GUARDRAIL TRANSITION DETAILS



PRECAST GUARDRAIL TRANSITION ELEVATION AT SPLAYED WINGWALL

SCALE: ½" = 1'–0"

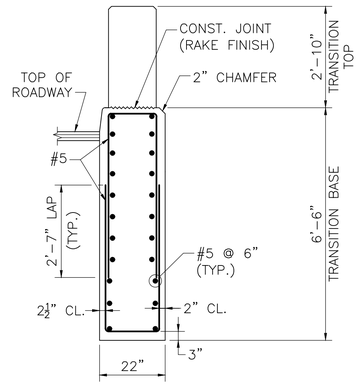


NOTES:

1. REINFORCEMENT OF THE TRANSITION TOP IS NOT SHOWN FOR CLARITY.

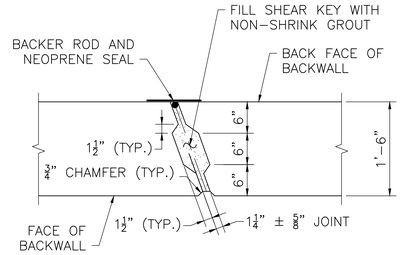
SECTION AT SIDEWALK, EAST SIDE

SECTION 6 –
SCALE: ½" = 1'–0"



SECTION AT ROADWAY, WEST SIDE

SECTION 7 –
SCALE: ½" = 1'–0"

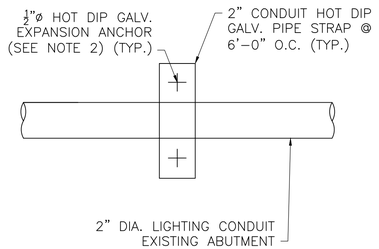


NOTE:

REINFORCEMENT IS NOT SHOWN FOR CLARITY.

PRECAST BACKWALL JOINT DETAIL

NOT TO SCALE

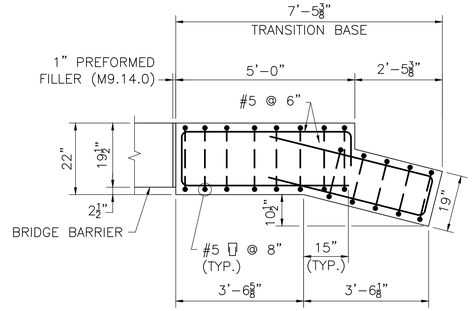


LIGHTING CONDUIT MOUNTING DETAILS – ABUTMENT

SCALE: 3" = 1'–0"

NOTES:

1. DETAILS SHOWN FOR 2" CONDUIT. OTHER CONDUIT SIZES MAY BE USED WITH APPROVAL BY THE ENGINEER.
2. EXPANSION ANCHOR SHALL HAVE 3" MINIMUM EMBEDMENT WITH MINIMUM TENSILE CAPACITY OF 3.0 KIPS.



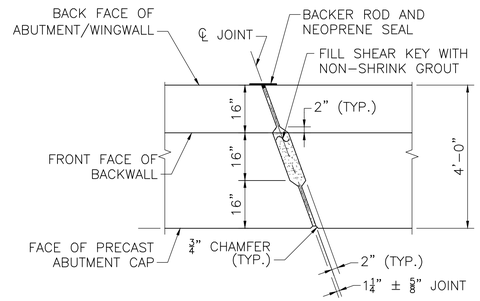
NOTE:

BRIDGE BARRIER REINFORCEMENT NOT SHOWN FOR CLARITY.

SECTION 5 –
SCALE: ½" = 1'–0"

NOTES:

1. GRAVEL BORROW SHALL BE PLACED AND THOROUGHLY COMPACTED TO THE GRADE OF 3" (MIN.) BELOW THE INTENDED BOTTOM OF THE GUARDRAIL TRANSITION BASE AND TO A HEIGHT OF 2'–0" (MIN.) ON ALL SIDES OF THE TRANSITION BASE TO FORM A TRENCH IN WHICH TO SET THE TRANSITION.
2. CONTRACTOR SHALL SET THE PRECAST GUARDRAIL TRANSITION TO THE REQUIRED ELEVATION AND ALIGNMENT, AND BACKFILL GUARDRAIL TRANSITION WITH CONTROLLED DENSITY FILL (NON–EXCAVATABLE) TO THE ELEVATION SHOWN.
3. BACKFILL THE REMAINDER OF EXCAVATION WITH GRAVEL BORROW, WHICH SHALL BE THOROUGHLY COMPACTED IN 12" LIFTS.
4. AFTER CONTROLLED DENSITY FILL (NON–EXCAVATABLE) HAS SET FILL THE GAPS BETWEEN GUARDRAIL TRANSITION AND BLOCK–OUT IN BACKWALL AND ABUTMENT WITH NON–SHRINK GROUT UP TO THE TOP OF BACKWALL.
5. TRANSITION TOP IS 2'–10" AT SAFETY CURB AND 3'–6" AT SIDEWALK.
6. THE REST OF REINFORCEMENT IS NOT SHOWN FOR CLARITY.



NOTE:

REINFORCEMENT IS NOT SHOWN FOR CLARITY.

SECTION THRU SHEAR KEY

SCALE: ½" = 1'–0"

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

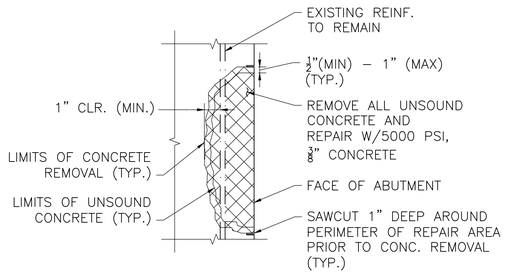
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	68	98
PROJECT FILE NO.	610776		

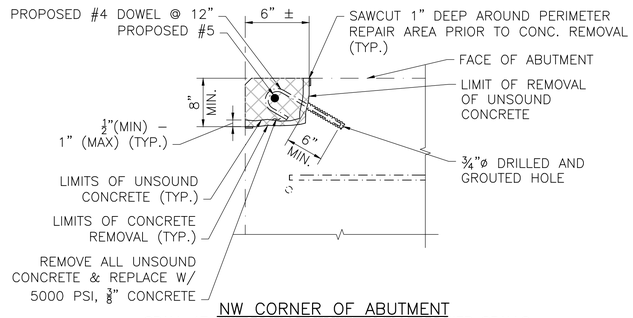
CONCRETE REPAIR DETAILS



FACE OF ABUTMENT

DEEP CONCRETE REPAIR DETAIL – TYPE A

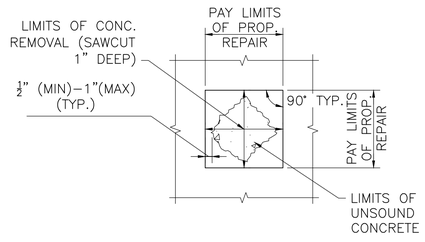
SCALE 1" = 1'–0"



NW CORNER OF ABUTMENT
SPALL AT NW CORNER SHOWN, OTHER CORNER SPALLS MAY BE REPAIRED USING SIMILAR APPROACH.

DEEP CONCRETE REPAIR DETAIL – TYPE B

SCALE 1" = 1'–0"



CONCRETE REPAIR PLAN

NOT TO SCALE

CONCRETE REPAIR NOTES

1. CONTRACTOR SHALL ESTABLISH LIMITS OF VARIOUS REPAIRS BASED ON INSPECTION REPORTS AND AS DIRECTED BY THE ENGINEER. APPROXIMATE LOCATIONS OF EXISTING CONCRETE DEFICIENCIES ARE SHOWN ON SHEETS 13 AND 14. THE EXTENT, EXACT LOCATION, AND REPAIR TYPE OF ALL CONCRETE REPAIRS ARE TO BE FIELD VERIFIED AND APPROVED BY THE ENGINEER AFTER THE CONTRACTOR HAS SOUNDED AND MARKED OUT THE REPAIR AREAS. REPAIR CONFIGURATIONS SHOULD BE KEPT AS SIMPLE AS POSSIBLE, PREFERABLY WITH SQUARE CORNERS.
2. THE LIMITS OF THE REPAIRS SHALL BE SAWCUT ALONG NEAT LINES TO A DEPTH OF 1" WHERE PRACTICAL TO PRODUCE A CLEAN EDGE.
3. REMOVE DETERIORATED AND UNSOUND CONCRETE. IF REINFORCEMENT BARS ARE COMPLETELY EXPOSED, THE REMOVAL SHALL EXTEND A MINIMUM OF 1" BEYOND THE BAR. UNDERCUT EXPOSED REINFORCING STEEL TO PROVIDE MINIMUM CLEARANCE OF 1" AROUND BARS. REMOVE ADDITIONAL CONCRETE AS NECESSARY TO PROVIDE MINIMUM REQUIRED THICKNESS OF REPAIR MATERIAL:

   CEMENTITIOUS MORTAR: 1/2" MIN. THICKNESS

   CONCRETE: 2" MIN. THICKNESS
4. CLEAN EXPOSED REINFORCING STEEL BY MECHANICAL CLEANING AND HIGH PRESSURE WASHING WITH WATER THAT CONTAINS NO DETERGENTS OR BOND INHIBITING CHEMICALS. WHERE ACTIVE CORROSION HAS OCCURRED (THAT WHICH WOULD INHIBIT BONDING), SANDBLAST STEEL TO WHITE METAL FINISH. THE CLEANED REINFORCING STEEL SHALL BE COATED WITH A ZINC RICH COATING. DAMAGE TO EXISTING REINFORCING STEEL TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. IF ANY EXISTING REINFORCEMENT BARS NEED TO BE REPLACED DUE TO DAMAGE, THE CONTRACTOR SHALL DO SO AT THE DIRECTION OF THE ENGINEER.
5. IF DRILLING AND GROUTING OF NEW DOWELS IS REQUIRED, THE DEPTH OF THE HOLES FOR DRILLED AND GROUTED DOWELS SHALL BE AS DIMENSIONED.
6. AFTER REMOVAL AND EDGE PREPARATION ARE COMPLETE, REMOVE BOND INHIBITING MATERIALS (DIRT, GREASE, LOOSELY BONDED AGGREGATE) BY ABRASION BLASTING OR HIGH PRESSURE WATER BLASTING WITH WATER THAT CONTAINS NO DETERGENTS OR BOND INHIBITING CHEMICALS. CHECK THE CONCRETE SURFACES AFTER CLEANING TO ENSURE THAT THE SURFACE IS FREE FROM ADDITIONAL LOOSE AGGREGATE OR THAT ADDITIONAL DELAMINATIONS ARE NOT PRESENT.
7. WET CONCRETE REPAIR AREA SO THAT SUBSTRATE IS SATURATED SURFACE–DRY WITH NO STANDING WATER.
8. ALL REPAIR SURFACES SHALL BE RUBBED TO PRODUCE A SMOOTH FINISH.
9. CONTRACTOR SHALL CONTAIN AND COLLECT ALL DEBRIS DURING CONCRETE CUTTING AND REMOVAL.
10. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY EXTENSIVE DETERIORATION UNCOVERED DURING ABUTMENT CONCRETE REPAIR WORK. IF ANY EXISTING REINFORCEMENT BARS NEED TO BE REPLACED DUE TO EXISTING CONDITION, THE CONTRACTOR SHALL DO SO AT THE DIRECTION OF THE ENGINEER.
11. WHERE NEW CONCRETE IS PLACED IN CONTACT WITH EXISTING CONCRETE, EXISTING CONCRETE SURFACE AND EXPOSED REINFORCING SHALL BE COATED WITH EPOXY BONDING COMPOUND THOROUGHLY BRUSHED INTO THE SURFACE, FILLING ALL PORES AND VOIDS. EPOXY BONDING COMPOUND SHALL HAVE SUFFICIENT "TACK" TIME TO PERMIT PLACEMENT OF FORMS AND FOLLOWED BY PLACEMENT OF CONCRETE. SEE ITEM 964.1 EPOXY BONDING COMPOUND.
12. CRACKS IN THE EXISTING CONCRETE ⅛" OR LARGER, OR AS DIRECTED BY THE ENGINEER, SHALL BE REPAIRED IN ACCORDANCE WITH THE SPECIAL PROVISIONS. SEE ITEM 909.3 CRACK REPAIR.
13. NEW AND EXISTING SUBSTRUCTURE ELEMENTS SHALL BE COATED WITH AN ELASTOMERIC PROTECTIVE COATING AND AN ANTI–GRAFFITI COATING ON ALL VISIBLE SURFACES. APPLICATION TO PROVIDE A UNIFORM APPEARANCE FOR BRIDGE SUBSTRUCTURE ELEMENTS. SEE SPECIAL PROVISIONS ITEM 995 FOR ADDITIONAL DETAILS AND RESTRICTIONS.

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

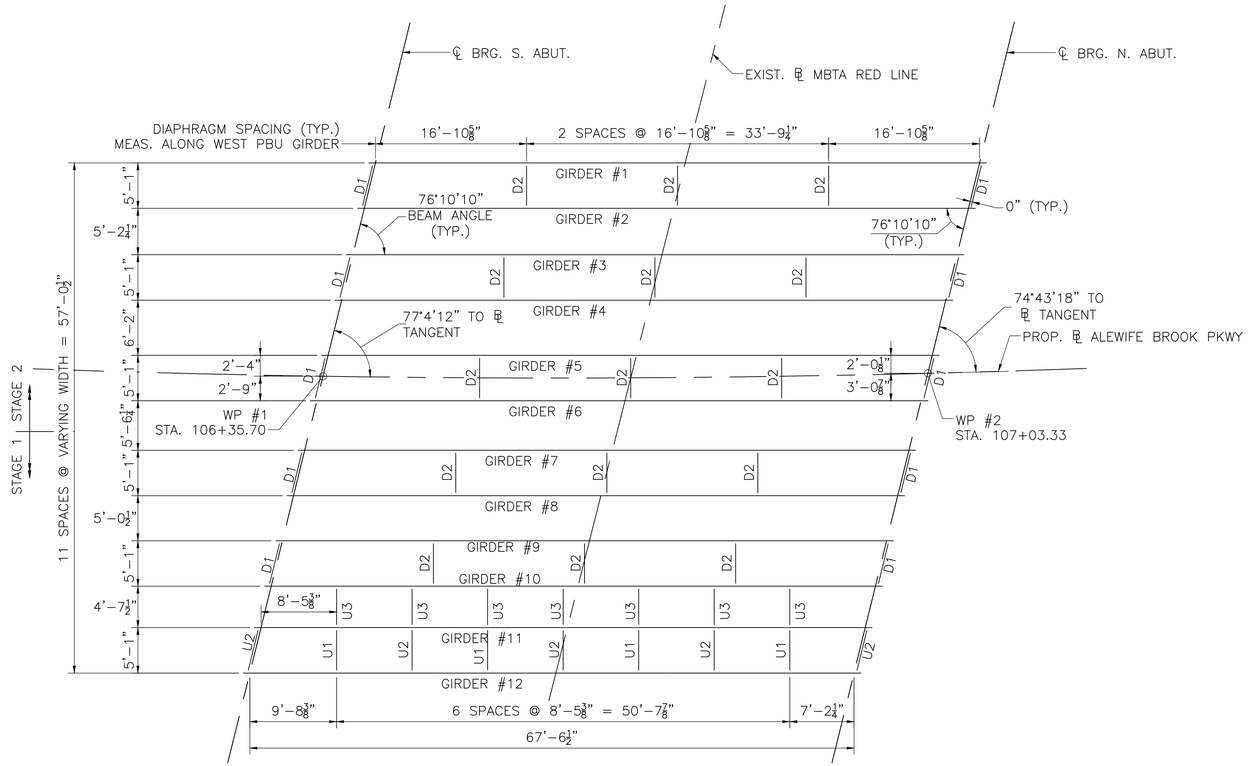
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	69	98
PROJECT FILE NO.	610776		

FRAMING PLAN AND GIRDER ELEVATION

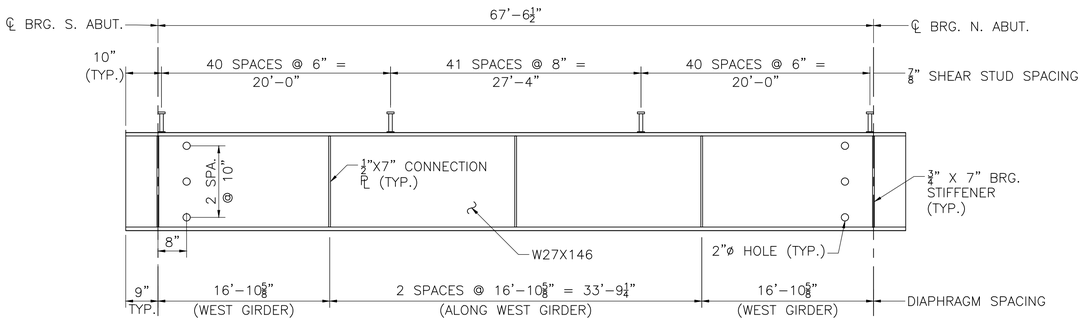


FRAMING PLAN

SCALE: ⅛" = 1'–0"

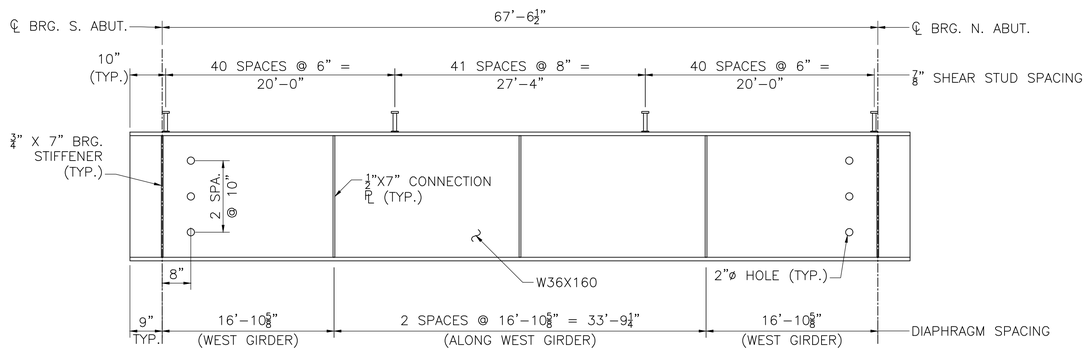
NOTES:

1. D1 = C12x20.7 (TYPICAL END DIAPHRAGM)
   D2 = C15x33.9 (TYPICAL INTERMEDIATE DIAPHRAGM)
   U1 = TYPICAL UTILITY SUPPORT BETWEEN DIAPHRAGMS
   U2 = TYPICAL UTILITY SUPPORT AT DIAPHRAGMS (WATER AND GAS)
   U3 = TYPICAL UTILITY SUPPORT AT DIAPHRAGMS (ELECTRICAL CONDUIT)
2. SEE SHEET 19 FOR DIAPHRAGM AND UTILITY SUPPORT DETAILS.
3. THE PRIMARY MEMBERS ARE G1 THROUGH G12.
4. ALL DIAPHRAGMS, DIAPHRAGM CONNECTION PLATES, SOLE PLATES AND DRIP BARS ARE CONSIDERED SECONDARY MEMBERS.
5. ALL STEEL SHALL CONFORM TO AASHTO M 270 GRADE 50.
6. ALL HIGH STRENGTH BOLTS SHALL BE ⅞" ø CONFORMING TO THE REQUIREMENTS OF ASTM F3125 GRADE A325 TYPE 1, GALVANIZED UNLESS OTHERWISE NOTED. NUTS AND WASHERS SHALL BE LISTED AS SUITABLE IN THE ASTM F3125 SPECIFICATION FOR GRADE A325.
7. ALL CONNECTIONS HAVE BEEN DESIGNED FOR A CLASS B SURFACE CONDITION, ASSUMING A COEFFICIENT OF FRICTION ON THE FAYING SURFACES EQUAL TO OR GREATER THAN 0.50, EXCEPT FOR THE CONNECTION OF THE DIAPHRAGMS TO THE THE TRANSVERSE CONNECTION PLATE, WHICH HAS BEEN DESIGNED FOR CLASS C WITH A COEFFICIENT OF FRICTION OF 0.30.
8. ALL WELDING AND THE PREPARATION AND ASSEMBLY OF MATERIAL FOR WELDING SHALL CONFORM TO THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, THE BRIDGE WELDING CODE (AASHTO AWS D1.5) AND ALL INTERIM REVISIONS PUBLISHED BY AASHTO AS OF THE BID OPENING DATE.
9. ALL DIAPHRAGMS SHALL BE DETAILED AND FABRICATED TO THE TOTAL DEAD LOAD FIT (TDLF) CONDITION.
10. THE BEAMS SHALL BE FABRICATED SO THAT THE ENDS OF THE BEAMS ARE PLUMB UNDER FULL DEAD LOAD.
11. ALL BEAMS SHALL BE METALIZED. THE ENTIRE FASCIA GIRDERS SHALL BE METALIZED AND PAINTED, AMS STANDARD 595A COLOR NUMBER 14223 OF THE FEDERAL STANDARD 595B. DIAPHRAGMS MAY BE HOT–DIP GALVANIZED.



BEAM ELEVATION (G1–G10)

NOT TO SCALE



BEAM ELEVATION (G11–G12)

NOT TO SCALE

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

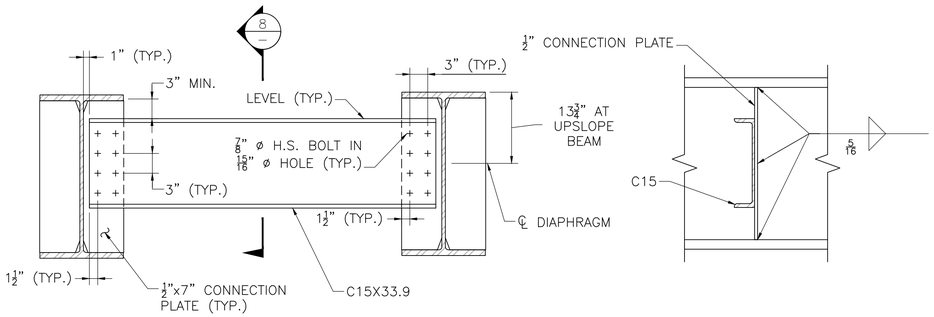
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	70	98
PROJECT FILE NO. 610776			

STEEL DETAILS

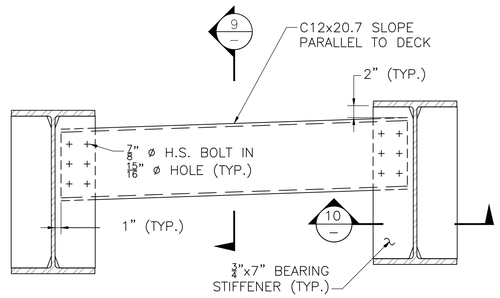


ELEVATION

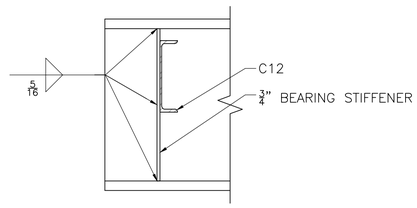
SECTION 8 / –

INTERMEDIATE DIAPHRAGM – D2

SCALE: 1" = 1'–0"



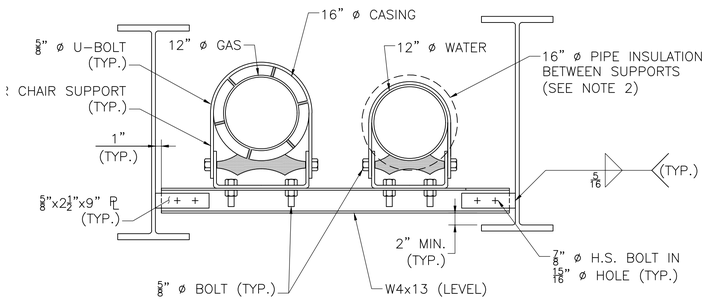
ELEVATION



SECTION 9 / –

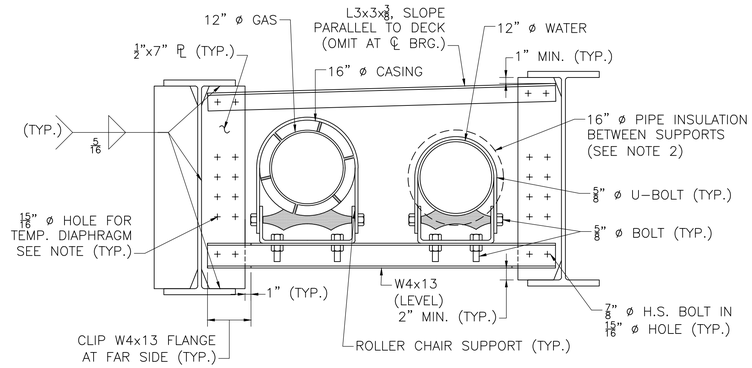
END DIAPHRAGM – D1

SCALE: 1" = 1'–0"



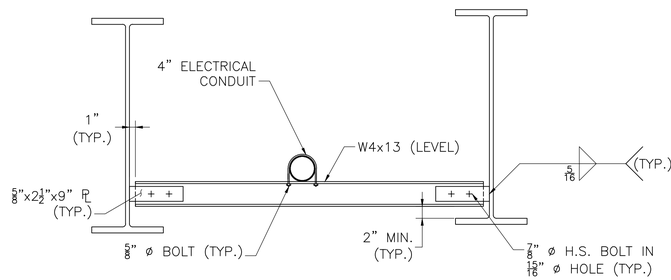
UTILITY SUPPORT – U1

SCALE: 1" = 1'–0"



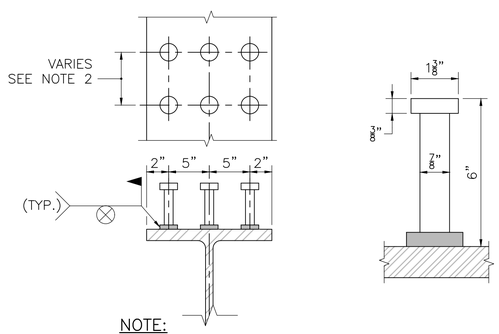
UTILITY SUPPORT – U2

SCALE: 1" = 1'–0"



UTILITY SUPPORT – U3

SCALE: 1" = 1'–0"

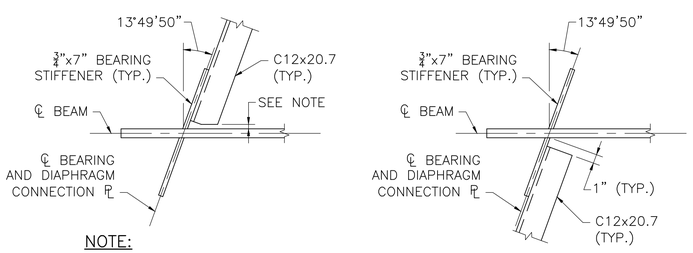


NOTE:

1. 3/4" ø STUDS MAY BE SUBSTITUTED FOR 7/8" ø STUDS BY ADJUSTING THE PITCH TO PROVIDE AN EQUIVALENT CROSS–SECTIONAL AREA PER FOOT.
2. FOR SHEAR STUD PITCH, SEE BEAM ELEVATIONS ON SHEET 20.

STUD SHEAR CONNECTORS

NOT TO SCALE



NOTE:

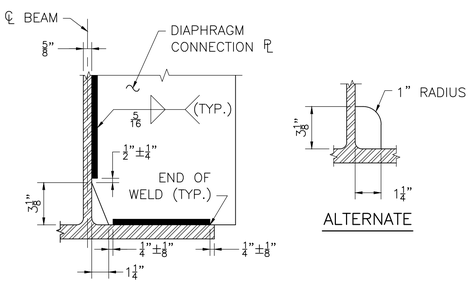
1. TEMPORARY CHANNEL CROSS FRAME FOR UTILITY BAY PBU FABRICATION IS TO BE REMOVED AFTER DECK IS CURED AND THE HOLES SHALL BE FILLED WITH 7/8" DIAMETER BOLTS. THEN UTILITY SUPPORTS AND CROSS FRAMES SHALL BE INSTALLED WITH PROPOSED UTILITY PIPES.
2. PIPE INSULATION SHALL STOP 1" CLEAR OF THE PROPOSED ROLLER SUPPORTS.

NOTE:

FLANGE OF CHANNEL MAY BE CLIPPED TO AVOID INTERFERENCE WITH WEB.

SECTION 10 / –

SCALE: 1 1/2" = 1'–0"



STANDARD

ALTERNATE

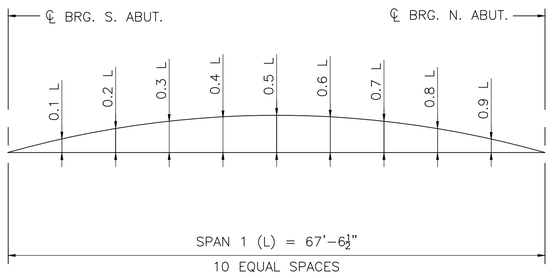
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	71	98
PROJECT FILE NO.	610776		

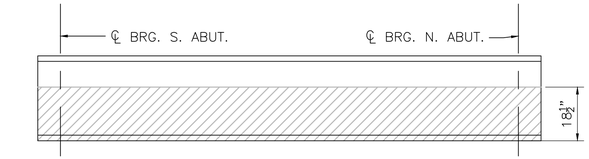
CAMBER TABLE AND TENSION LIMITS



CAMBER DIAGRAM
NOT TO SCALE

CAMBER NOTES:

1. VALUES IN CAMBER TABLE ARE IN INCHES.
2. S.D.L DEFLECTIONS INCLUDE CLOSURE POUR, SIDEWALK, SAFETY CURB, BRIDGE RAILS, AND UTILITY LOADS.



LIMITS OF NET TENSILE STRESS
NOT TO SCALE

CAMBER TABLE

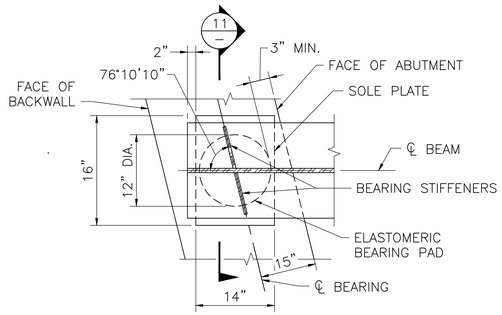
GIRDER NO.		CL BRG. ABUT.	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	CL BRG. ABUT.
G1, G7–G9	STEEL DL DEFLECTION	0.00	0.14	0.27	0.37	0.43	0.45	0.43	0.37	0.27	0.14	0.00
	CONC. DL DEFLECTION	0.00	0.40	0.75	1.03	1.21	1.27	1.21	1.03	0.75	0.40	0.00
	S.D.L. DEFLECTION	0.00	0.20	0.37	0.51	0.59	0.62	0.59	0.51	0.37	0.20	0.00
	VERT. CURVE CAMBER	0.00	0.34	0.61	0.80	0.92	0.95	0.92	0.80	0.61	0.34	0.00
	ADDITIONAL CAMBER	0.00	0.08	0.17	0.25	0.34	0.42	0.34	0.25	0.17	0.08	0.00
	TOTAL CAMBER	0.00	1.17	2.17	2.96	3.49	3.72	3.49	2.96	2.18	1.16	0.00
G2	STEEL DL DEFLECTION	0.00	0.14	0.27	0.37	0.43	0.45	0.43	0.37	0.27	0.14	0.00
	CONC. DL DEFLECTION	0.00	0.35	0.65	0.90	1.05	1.10	1.05	0.90	0.65	0.35	0.00
	S.D.L. DEFLECTION	0.00	0.16	0.30	0.41	0.48	0.50	0.48	0.41	0.30	0.16	0.00
	VERT. CURVE CAMBER	0.00	0.36	0.64	0.84	0.96	1.00	0.96	0.84	0.64	0.36	0.00
	ADDITIONAL CAMBER	0.00	0.08	0.17	0.25	0.34	0.42	0.34	0.25	0.17	0.08	0.00
	TOTAL CAMBER	0.00	1.09	2.03	2.77	3.26	3.48	3.26	2.77	2.03	1.09	0.00
G3–G6	STEEL DL DEFLECTION	0.00	0.14	0.27	0.37	0.43	0.45	0.43	0.37	0.27	0.14	0.00
	CONC. DL DEFLECTION	0.00	0.43	0.82	1.12	1.32	1.38	1.32	1.12	0.82	0.43	0.00
	S.D.L. DEFLECTION	0.00	0.19	0.37	0.50	0.59	0.62	0.59	0.50	0.37	0.19	0.00
	VERT. CURVE CAMBER	0.00	0.36	0.63	0.83	0.96	1.00	0.96	0.84	0.64	0.36	0.00
	ADDITIONAL CAMBER	0.00	0.08	0.17	0.25	0.34	0.42	0.34	0.25	0.17	0.08	0.00
	TOTAL CAMBER	0.00	1.21	2.26	3.08	3.63	3.87	3.63	3.09	2.26	1.21	0.00
G10	STEEL DL DEFLECTION	0.13	0.14	0.27	0.37	0.43	0.45	0.43	0.37	0.27	0.14	0.00
	CONC. DL DEFLECTION	0.00	0.40	0.75	1.03	1.21	1.27	1.21	1.03	0.75	0.40	0.00
	S.D.L. DEFLECTION	0.00	0.28	0.53	0.73	0.85	0.89	0.85	0.73	0.53	0.28	0.00
	VERT. CURVE CAMBER	0.00	0.34	0.61	0.80	0.91	0.95	0.91	0.80	0.61	0.34	0.00
	ADDITIONAL CAMBER	0.00	0.08	0.17	0.25	0.34	0.42	0.34	0.25	0.17	0.08	0.00
	TOTAL CAMBER	0.00	1.25	2.33	3.18	3.74	3.99	3.74	3.18	2.33	1.24	0.00
G11–G12	STEEL DL DEFLECTION	0.13	0.09	0.17	0.23	0.27	0.29	0.27	0.23	0.17	0.09	0.00
	CONC. DL DEFLECTION	0.00	0.19	0.36	0.49	0.58	0.61	0.58	0.49	0.36	0.19	0.00
	S.D.L. DEFLECTION	0.00	0.19	0.35	0.48	0.56	0.59	0.56	0.48	0.35	0.19	0.00
	VERT. CURVE CAMBER	0.00	0.34	0.60	0.79	0.91	0.94	0.90	0.79	0.60	0.34	0.00
	ADDITIONAL CAMBER	0.00	0.08	0.17	0.25	0.34	0.42	0.34	0.25	0.17	0.08	0.00
	TOTAL CAMBER	0.00	0.89	1.66	2.25	2.66	2.85	2.66	2.25	1.65	0.89	0.00

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

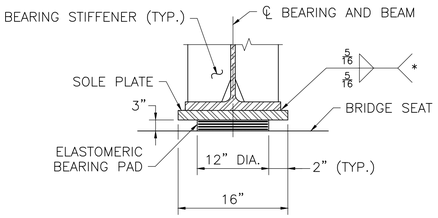
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	72	98
PROJECT FILE NO. 610776			

BEARING DETAILS



PLAN

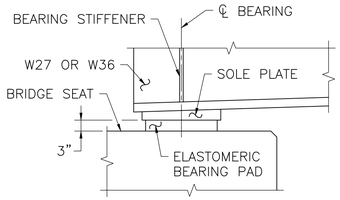
SCALE: 1" = 1'–0"



(*) – WELDS SHALL TERMINATE ¼" FROM EDGE OF PLATE.

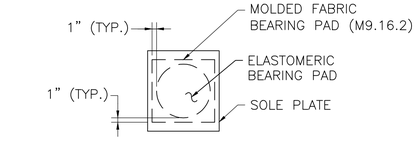
SECTION 11/–

SCALE: 1" = 1'–0"

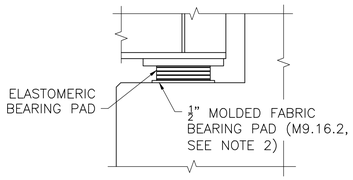


ELEVATION

SCALE: 1" = 1'–0"



PLAN



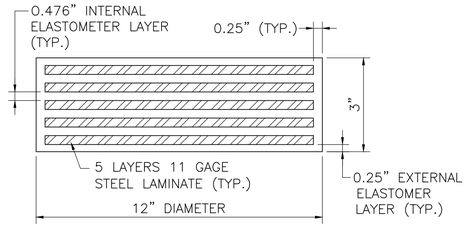
ELEVATION

NOTES:

1. MOLDED FABRIC BEARING PADS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 7000 PSI.
2. THE ½" MOLDED FABRIC BEARING PAD IS PROVIDED AS A TOLERANCE TO ALLOW THE CONTRACTOR TO CORRECT FOR ANY PLUS/MINUS DIFFERENCES IN THE ELEVATION OF THE BRIDGE SEATS. THE CONTRACTOR SHALL SET THE PBU AT THE CORRECT ELEVATION IF NEEDED BY EITHER REMOVING THE ½" MOLDED FABRIC BEARING PAD AND REPLACING IT WITH A THINNER SHIM PAD OR BY ADDING ADDITIONAL SHIM PADS. THE TOTAL THICKNESS OF THE BUILT–UP MOLDED FABRIC BEARING SHIM PADS SHALL NOT EXCEED THREE LAYERS NOR 2" IN OVERALL COMBINED THICKNESS.

SHIM STACK DETAILS

SCALE: ¾" = 1'–0"



ELASTOMERIC BEARING PAD

NOT TO SCALE

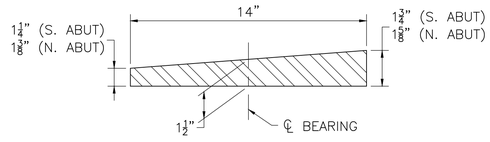
NOTES:

1. THIS BEARING IS DESIGNED USING AASHTO METHOD B.
2. ELASTOMER SHALL HAVE A SHEAR MODULUS OF 0.160 KSI.
3. STEEL LAMINATES SHALL CONFORM TO ASTM A 1011 GRADE 36 OR HIGHER. ALL EDGES OF STEEL LAMINATES SHALL BE GROUND SMOOTH.
4. FOR GIRDERS G1 TO G10:

   THE COMPRESSIVE DESIGN LOAD ON THE BEARING PAD IS 39.2 KIPS. THE COMPRESSIVE DESIGN STRESS IS THE RESULT OF DIVIDING THE COMPRESSIVE DESIGN LOAD BY THE AREA OF THE PAD AND IS EQUAL TO 0.35 KSI.

   FOR GIRDERS G11 TO G12:

   THE COMPRESSIVE DESIGN LOAD ON THE BEARING PAD IS 43.9 KIPS. THE COMPRESSIVE DESIGN STRESS IS THE RESULT OF DIVIDING THE COMPRESSIVE DESIGN LOAD BY THE AREA OF THE PAD AND IS EQUAL TO 0.39 KSI.
5. THE 25 YEAR CREEP STRAIN SHALL BE LIMITED TO 35%.
6. ELASTOMERIC BEARING PAD SHALL NOT BE VULCANIZED TO THE SOLE PLATE.
7. STEEL SOLE PLATE SHALL CONFORM TO AASHTO M 270 GRADE 50 AND SHALL BE HOT–DIP GALVANIZED OR METALIZED.
8. CENTER THE ELASTOMERIC PAD UNDER THE SOLE PLATE DURING BEAM ERECTION.
9. BEAMS SHALL BE ERECTED WHEN THE AMBIENT TEMPERATURE IS BETWEEN 30 °F AND 90 °F. IF BEAMS ARE ERECTED AT OTHER AMBIENT TEMPERATURES, THEY WILL HAVE TO BE JACKED AND THE ELASTOMERIC BEARINGS RECENTERED WHEN THE TEMPERATURE RETURNS TO THAT RANGE.



SOLE PLATE DETAIL

SCALE: 3" = 1'–0"

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

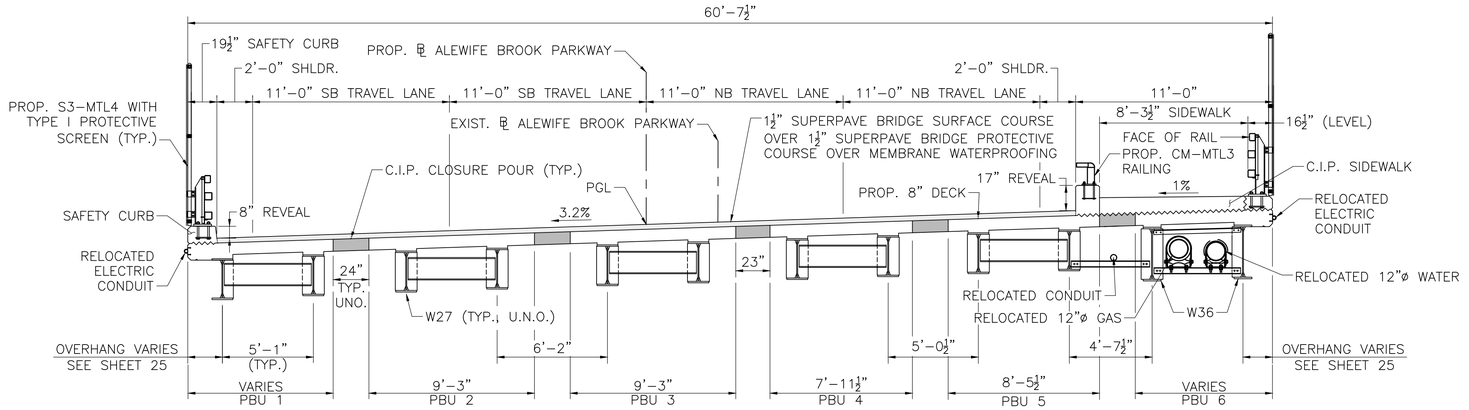
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

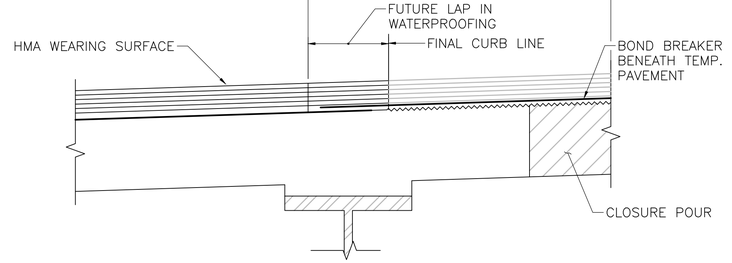
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	73	98
PROJECT FILE NO.	610776		

BRIDGE SECTION AND DETAILS



PROPOSED TRANSVERSE SECTION

LOOKING NORTH
SCALE: ¼" = 1'–0"



CURB LINE PAVEMENT DETAIL

SCALE: 1½" = 1'–0"

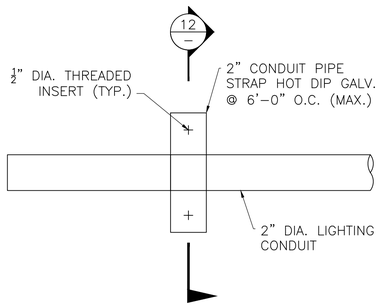
PAVEMENT SEQUENCE NOTES:

STAGE 1:
1. CAST PBUS WITH PLUGS IN ALL DOWEL BAR SPLICERS.
2. INSTALL WATERPROOFING TO THE FINAL CURB LINE.
3. PLACE BOND BREAKER WITHIN THE PAVEMENT REMOVAL LIMITS PRIOR TO PAVING.

STAGE 2:
1. REMOVE PAVEMENT BEYOND THE CM–MTL3 LIMITS TO ALLOW FOR LAP OF THE WATERPROOFING.
2. CAST CM–MTL3 BARRIER AND SIDEWALK.
3. LAP WATERPROOFING AND INSTALL UP THE CURB LINE OF THE CM–MTL3 RAIL BASE.

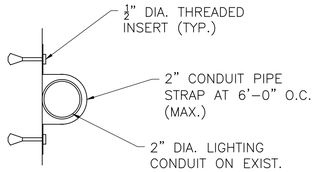
NOTES:

1. DETAILS SHOWN FOR 2" CONDUIT. OTHER CONDUIT SIZES MAY BE USED WITH APPROVAL BY THE ENGINEER.
2. THE ½" ø GALVANIZED THREADED INSERTS FOR 1" ø H.S. BOLTS SHALL PROVIDE A MINIMUM NOMINAL TENSILE RESISTANCE OF 3.0 KIPS AND MINIMUM NOMINAL SHEAR RESISTANCE OF 3.0 KIPS IN 5000 PSI CONCRETE.
3. FOR MOUNTING OF LIGHTING FIXTURES, THE CONTRACTOR SHALL COORDINATE LOCATIONS OF THE REQUIRED THREADED INSERTS BASED ON MEASUREMENTS OF THE EXISTING BOLT CONFIGURATION.



LIGHTING CONDUIT MOUNTING DETAIL – DECK

SCALE: 3" = 1'–0"

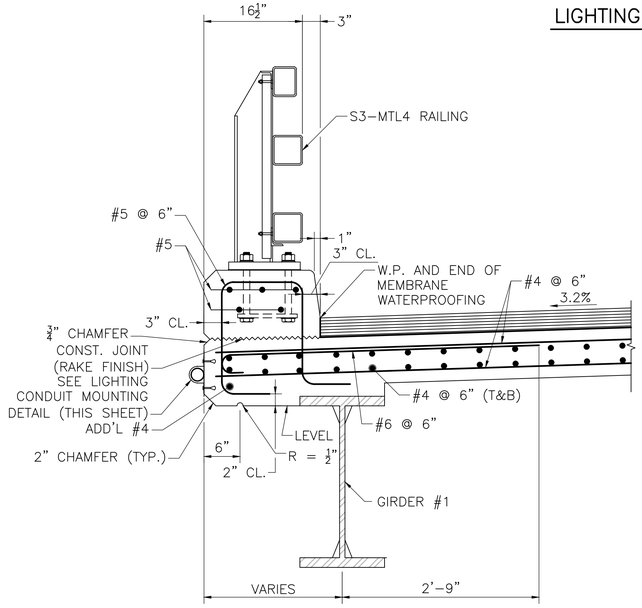


SECTION 12 –

SCALE: 3" = 1'–0"

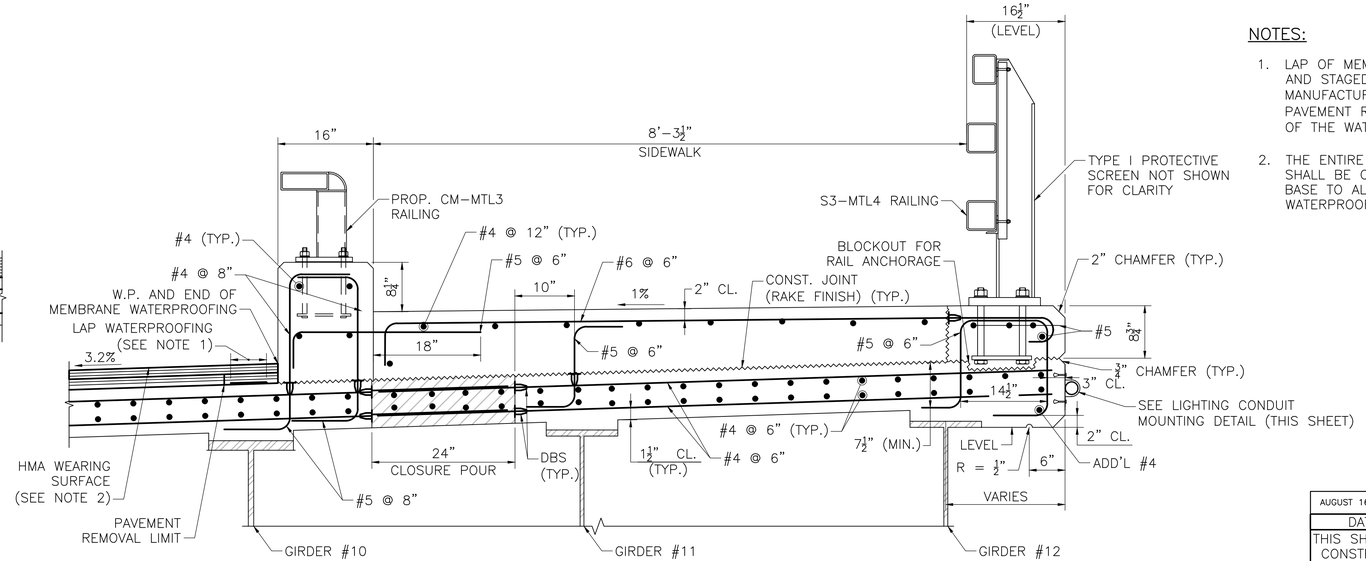
NOTES:

1. LAP OF MEMBRANE WATERPROOFING AT THE CURB LINE AND STAGED CONSTRUCTION LINE SHALL BE PER MANUFACTURER RECOMMENDATIONS, 6" MINIMUM. PAVEMENT REMOVAL LIMITS SHALL BE KEPT 2" CLEAR OF THE WATERPROOFING LAP.
2. THE ENTIRE TOP 1½" SUPERPAVE SURFACE COURSE SHALL BE COMPLETED AFTER CASTING THE CM–MTL3 BASE TO ALLOW FOR THE LAP OF THE MEMBRANE WATERPROOFING.



SECTION THRU SAFETY CURB

SCALE: 1" = 1'–0"



SECTION THRU SIDEWALK

SCALE: 1" = 1'–0"

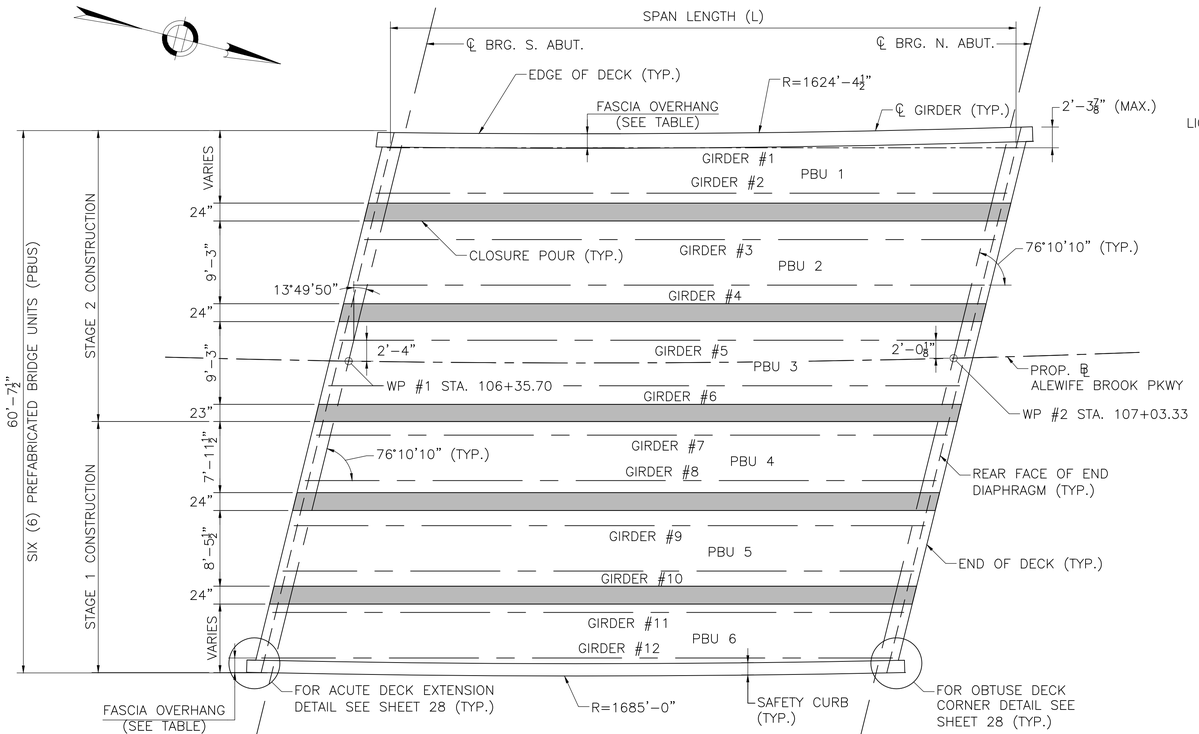
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	74	98
PROJECT FILE NO.	610776		

PBU PIECE PLAN AND SECTIONS



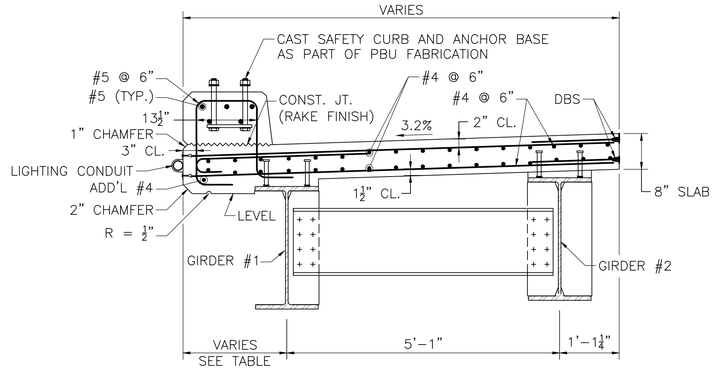
NOTE:

LIFTING AND TEMPORARY SUPPORT LOCATIONS SHALL BE WITHIN 10'–0" OF THE CENTERLINE OF BEARINGS. THE ACTUAL LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND SUBMITTED WITH THE ASSEMBLY PLAN.

PBU LAYOUT PLAN

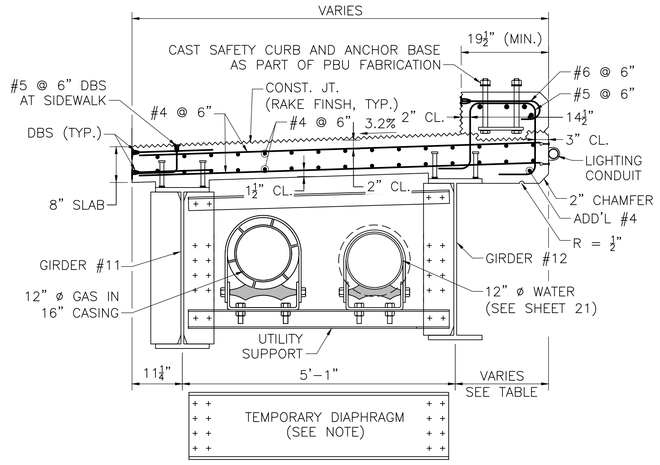
SCALE: ⅛" = 1'–0"

PBU VARIATION TABLE - FASCIA OVERHANG											
	0.0L	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	1.0L
PBU 1	1'-8 1/4"	1'-7 3/8"	1'-6 7/8"	1'-6 3/4"	1'-7"	1'-7 1/2"	1'-8 1/4"	1'-9 1/2"	1'-11"	2'-0 7/8"	2'-3 3/8"
PBU 6	1'-8 1/8"	1'-9 5/8"	1'-10 3/4"	1'-11 1/2"	2'-0"	2'-0 1/4"	2'-0 1/8"	1'-11 5/8"	1'-10 7/8"	1'-9 3/4"	1'-8 1/4"



PBU 1 CROSS SECTION

SCALE: ¾" = 1'–0"

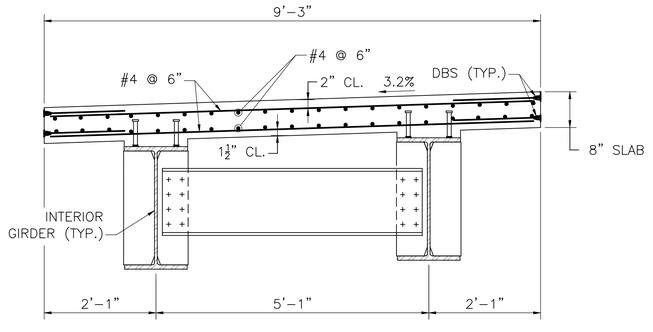


PBU 6 CROSS SECTION

SCALE: ¾" = 1'–0"

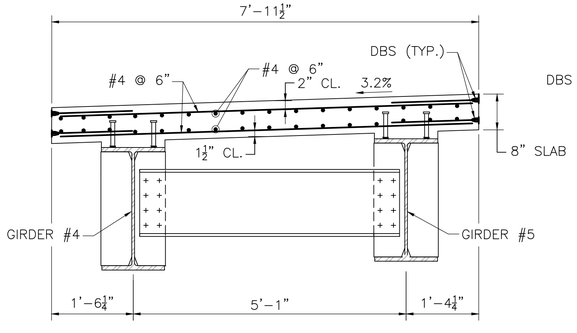
NOTES:

1. A TEMPORARY DIAPHRAGM SHALL BE INSTALLED DURING THE FABRICATION OF THE PBU TO PROVIDE STABILITY WHEN POURING THE CONCRETE DECK. THE DIAPHRAGM SHALL BE LEVEL AND CENTERED MID–HEIGHT OF THE UP–SLOPE BEAM. AFTER THE CONCRETE DECK HAS CURED, THE TEMPORARY DIAPHRAGM SHALL BE REMOVED AND REPLACED WITH THE UTILITY SUPPORT AS SHOWN. THE BOLT HOLES IN THE CONNECTION PLATE USED FOR THE TEMPORARY DIAPHRAGM SHALL REMAIN UNFILLED.
2. CONTRACTOR SHALL COORDINATE THE FABRICATION AND INSTALLATION OF PBUs IN A WAY THAT BEST ALLOWS REPLACEMENT OF ANY WATER MAIN JOINTS THAT DO NOT PASS THE PRESSURE TEST REQUIRED IN MASSDOT STANDARD SPECIFICATIONS 301.60–J (M5.05.3). PIPE JOINT LOCATIONS SHALL BE PROVIDED TO THE CAMBRIDGE WATER DEPARTMENT AND ENGINEER FOR REVIEW AND APPROVAL.



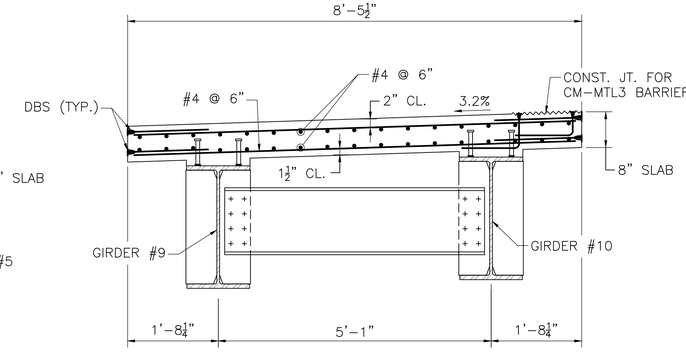
PBU 2 AND 3 CROSS SECTION

SCALE: ¾" = 1'–0"



PBU 4 CROSS SECTION

SCALE: ¾" = 1'–0"



PBU 5 CROSS SECTION

SCALE: ¾" = 1'–0"

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

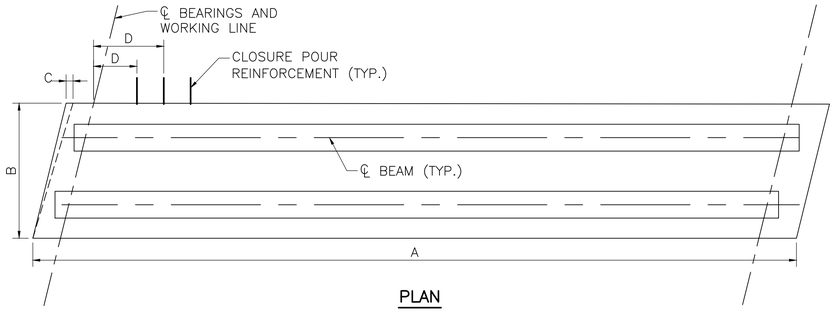
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

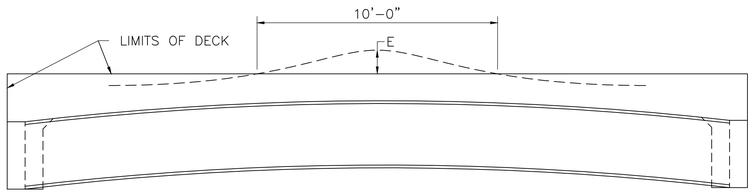
CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	75	98
PROJECT FILE NO. 610776			

PRECAST FABRICATION AND ERECTION TOLERANCES



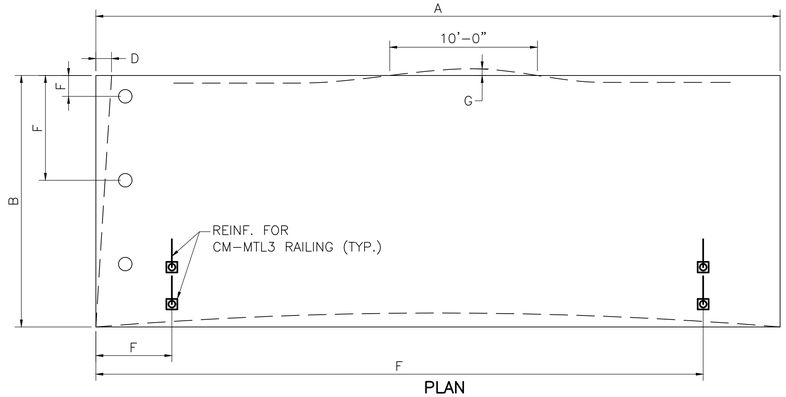
PLAN
NOT TO SCALE



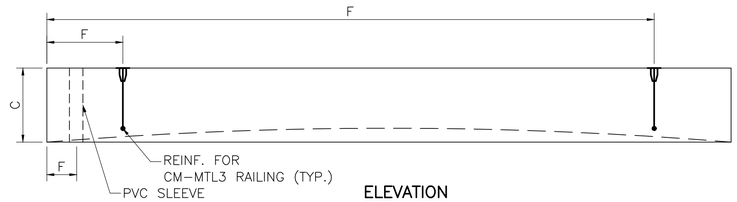
ELEVATION
NOT TO SCALE

PBU FABRICATION TOLERANCES

A	LENGTH (OVERALL)	±¼"
B	WIDTH (OVERALL)	±¼"
C	VARIATION FROM SPECIFIED PLAN END SQUARENESS OR SKEW	±½"
D	LOCATION OF REINFORCEMENT (MEASURED FROM WORKING LINE)	±¼"
E	LOCAL SMOOTHNESS OF ANY SURFACE	±¼" IN 10 FEET



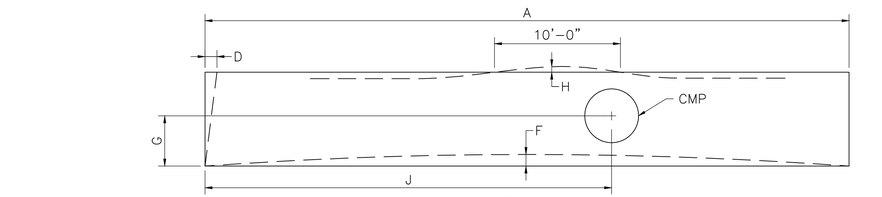
PLAN
NOT TO SCALE



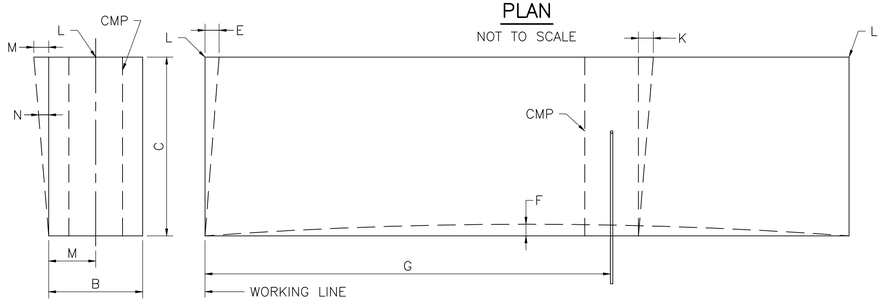
ELEVATION
NOT TO SCALE

APPROACH SLAB FABRICATION TOLERANCES

A	LENGTH (OVERALL)	±¼"
B	WIDTH (OVERALL)	±¼"
C	DEPTH (OVERALL)	±¼"
D	VARIATION FROM SPECIFIED PLAN END SQUARENESS OR SKEW	±½"
E	SWEEP OVER MEMBER LENGTH	±⅜"
F	LOCATION OF SLEEVE FOR DOWELS OR DOWEL BAR REINFORCEMENT MEASURED FROM A WORKING LINE.	±½"
G	LOCAL SMOOTHNESS OF ANY SURFACE	±¼" IN 10 FEET



PLAN
NOT TO SCALE

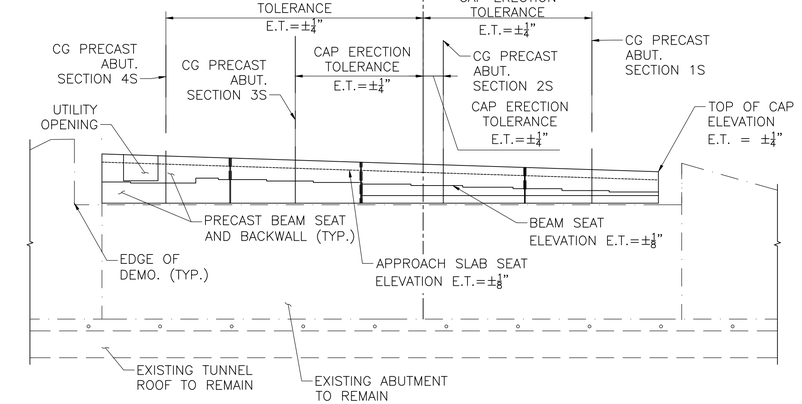


SECTION
NOT TO SCALE

ELEVATION
NOT TO SCALE

ABUTMENT SECTION FABRICATION TOLERANCES

A	LENGTH (OVERALL)	±¼"
B	WIDTH (OVERALL)	±¼"
C	DEPTH (OVERALL)	±¼"
D	VARIATION FROM SPECIFIED PLAN END SQUARENESS OR SKEW	±⅛"PER 12" WIDTH ±½"MAXIMUM
E	VARIATION FROM SPECIFIED ELEVATION END SQUARENESS OR SKEW	±⅛"PER 12" WIDTH ±½"MAXIMUM
F	SWEEP OVER MEMBER LENGTH	±⅜"
G	LOCATION OF GROUTED DOWELS MEASURED FROM A WORKING LINE	±1"
H	LOCAL SMOOTHNESS OF ANY SURFACE	±¼" IN 10 FEET
J	LOCATION OF BLOCKOUT FOR PILES OR VOIDS	±1"
K	MAXIMUM PLUMB VARIATION OVER HEIGHT OF CMP VOID	±½"
L	ACTUAL ELEVATION FROM SPECIFIED ELEVATION MAXIMUM LOW MAXIMUM HIGH	 ½" ¼"
M	MAXIMUM PLUMB VARIATION OVER HEIGHT OF ABUT.	½"
N	PLUMB IN ANY 10 FEET OF ABUT. HEIGHT	¼"



ABUTMENT ERECTION TOLERANCES
SCALE: ⅛" = 1'–0"

1. SOUTH ABUTMENT SHOWN, NORTH ABUTMENT SIMILAR
2. SEE SHEETS 13 AND 14 FOR ABUTMENT CAP DIMENSIONS

ABUTMENT SECTION FABRICATION TOLERANCES

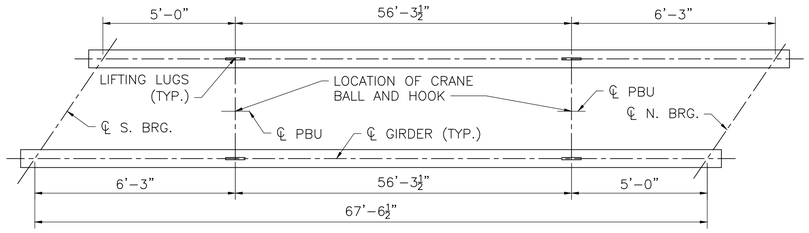
APPROACH SLAB FABRICATION TOLERANCES

DATE	DESCRIPTION
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	76	98
PROJECT FILE NO.	610776		

CLOSURE POUR AND LIFTING DETAILS

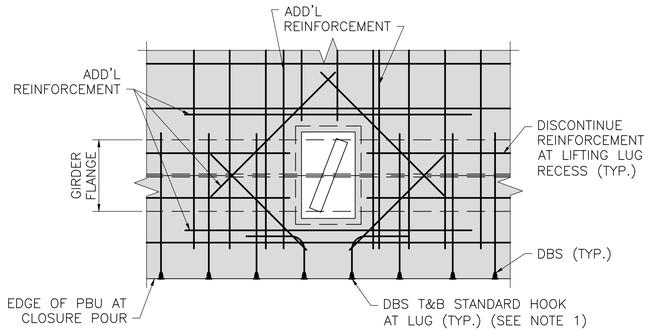


SUGGESTED DUAL CRANE PICK PLAN

NOT TO SCALE

NOTE:

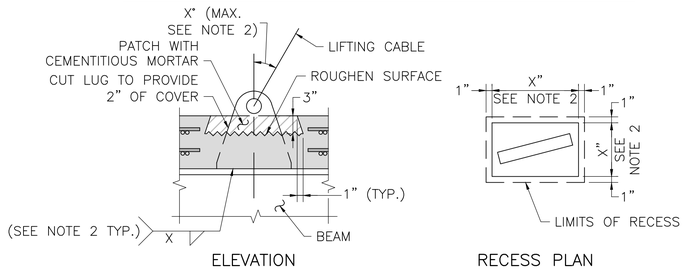
THE DETAILS SHOWN ARE CONCEPTUAL. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING THE ERECTION PLAN INCLUDING THE ACTUAL LOCATION, ORIENTATION, AND TYPE OF LIFTING DEVICES.



NOTES:

1. TYPICAL PBU SHOWN. ADJUST DECK OVERHANG AND BARRIER REINFORCEMENT SIMILARLY AT FASCIA UNITS (PBU 1 AND 6).
2. BOTTOM REINFORCEMENT NOT SHOWN FOR CLARITY, BUT SHALL BE SIMILAR.

SUGGESTED DECK REINFORCEMENT AT LIFTING LUG RECESS



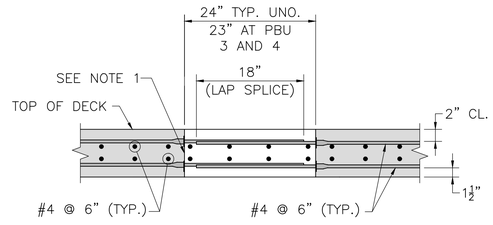
ELEVATION RECESS PLAN

NOTES:

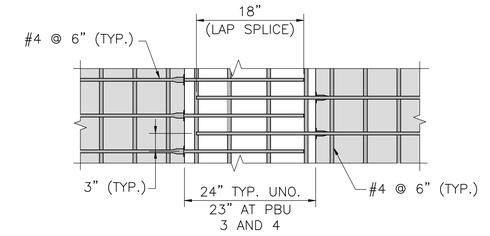
1. CHARPY V–NOTCH TESTING IS NOT REQUIRED FOR LIFTING LUG PLATE STOCK.
2. LIFTING LUG PLATE DIMENSIONS, CABLE ANGLES, AND CONNECTION WELD SIZE ARE TO BE DETERMINED BY CONTRACTOR.

SUGGESTED LIFTING LUG DETAILS

SCALE: 1" = 1'–0"



SECTION



PLAN

CLOSURE POUR DETAILS

SCALE: 1" = 1'–0"

CLOSURE POUR CONSTRUCTION NOTES:

1. EDGE OF DECK AT CLOSURE POUR SHALL HAVE EXPOSED AGGREGATE FINISH.
2. CLOSURE POUR REINFORCEMENT TO BE PLACED ALONG THE ENTIRE SPAN.
3. CLOSURE POUR REINFORCEMENT SHALL BE PLACED PERPENDICULAR TO BEAM EDGE.
4. METHOD OF FORMING CLOSURE POUR TO BE DETERMINED BY THE CONTRACTOR. THE FORMS SHALL BE REMOVABLE AND BE ABLE TO ACCOMMODATE DIFFERENTIAL CAMBER. FORM SUPPORTS SHOULD NOT PENETRATE THROUGH TOP OF POUR UNLESS APPROVED BY THE ENGINEER.
5. AT THE CONTRACTOR'S OPTION, GALVANIZED INSERTS MAY BE CAST INTO THE BEAMS TO FACILITATE FORMING OF THE CLOSURE POUR. THE INSERTS SHALL BE SHOWN ON THE SHOP DRAWINGS AND MAY NOT BE CLOSER THAN 2'–0" O.C.. CALCULATIONS SHALL BE PROVIDED ALONG WITH MANUFACTURER'S RECOMMENDATIONS DEMONSTRATING THAT THE INSERTS ARE SUFFICIENT FOR THE INTENDED PURPOSE.
6. CLOSURE POUR CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI AND SHALL REACH A COMPRESSIVE STRENGTH OF 1500 PSI BEFORE THE ROADWAY IS REOPENED TO PUBLIC TRAFFIC.
7. TOLERANCES SHOWN ARE FOR FABRICATION ONLY AND SHALL NOT BE USED FOR LAYOUT OF PRECAST ELEMENTS. REFER TO SPECIAL PROVISIONS, ITEM 995. FOR ERECTION TOLERANCE REQUIREMENTS.

NOTES:

1. THE CONTRACTOR SHALL PLACE EACH PBU CLOSURE POUR IN ONE CONTINUOUS OPERATION WITHOUT CONSTRUCTION JOINTS.
2. THE SURFACE OF THE PREVIOUSLY CASE CONCRETE SHALL BE BLAST CLEANED, ROUGHENED, WETTED WITH CLEAN WATER, AND THEN FLUSHED WITH A MORTAR COMPOSED OF EQUAL PARTS OF THE CEMENT AND SAND SPECIFIED FOR THE NEW CONCRETE, BEFORE NEW CONCRETE IS PLACED ADJACENT THERETO. NEW CONCRETE SHALL BE PLACED BEFORE MORTAR HAS TAKEN INITIAL SET.
3. IN LIEU OF THE MORTAR, AN EPOXY ADHESIVE SUITABLE FOR BONDING FRESH CONCRETE TO HARDENED CONCRETE FOR LOAD BEARING APPLICATIONS MAY BE USED. THE EPOXY ADHESIVE SHALL CONFORM TO AASHTO M 235 TYPE V AND RECOMMENDATIONS.
4. DOWEL BAR SPLICERS SHALL BE USED WHERE USE OF LAP SPLICES IS NOT FEASIBLE.

DATE	DESCRIPTION
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION

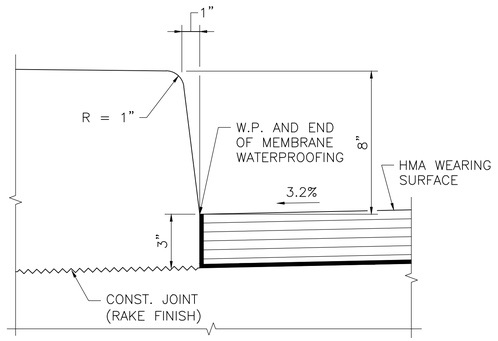
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

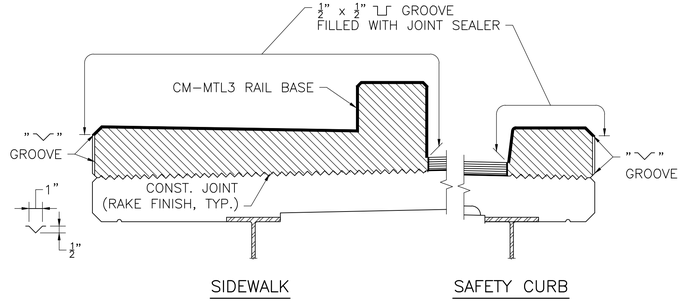
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	77	98
PROJECT FILE NO. 610776			

DECK DETAILS



FACE OF SAFETY CURB DETAILS

SCALE: 3" = 1'–0"

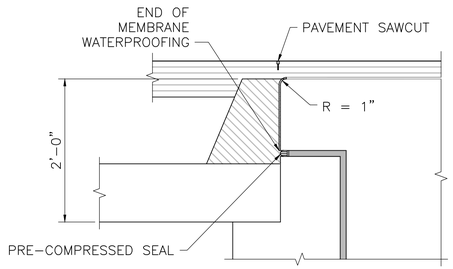


PARAFFIN JOINT DETAILS

SCALE: ¾" = 1'–0"

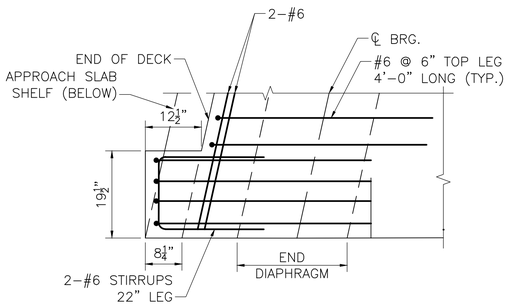
NOTES:

1. ALL CONCRETE ABOVE SLAB SHALL BE POURED IN ALTERNATING SECTIONS WITH NOT LESS THAN 3 DAYS BETWEEN POURS.
2. DO NOT CARRY LONGITUDINAL BARS THROUGH THE PARAFFIN JOINTS. END THE REINFORCEMENT 2" CLEAR OF JOINT.
3. JOINT SHALL BE SQUARE TO FACE OF CURB.
4. CM–MTL3 PARAFFIN JOINTS NOT SHOWN, DETAILS SIMILAR TO THE SAFETY CURB.



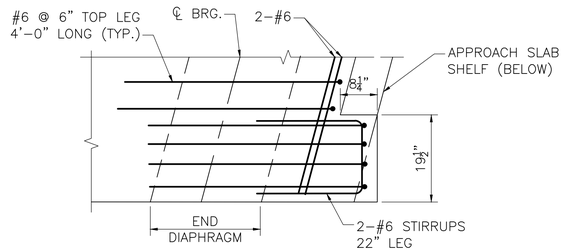
DETAILS AT ABUTMENT FOR DECK WITH HMA

SCALE: 1" = 1'–0"



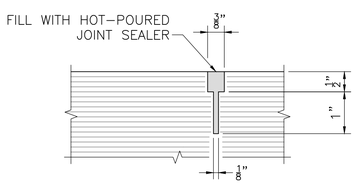
OBTUSE CORNER DECK EXTENSION DETAIL

SCALE: ¾" = 1'–0"



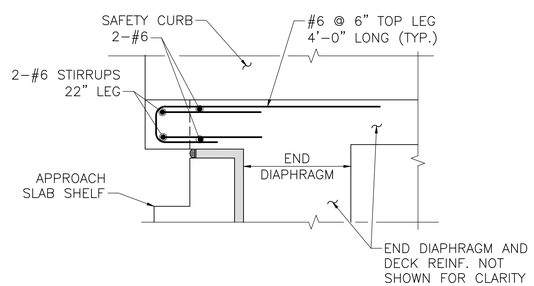
ACUTE CORNER DECK EXTENSION DETAIL

SCALE: ¾" = 1'–0"



PAVEMENT SAWCUT DETAIL

NOT TO SCALE



DECK EXTENSION TYPICAL SECTION

SCALE: ¾" = 1'–0"

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	78	98
PROJECT FILE NO. 610776			

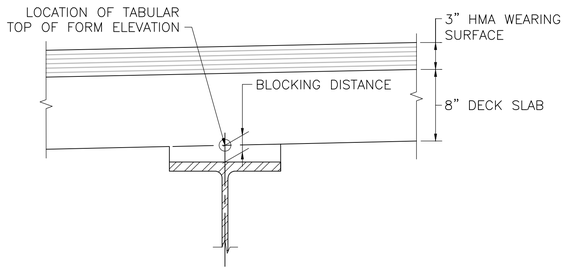
TOP OF FORM

TOP OF FORM ELEVATIONS FOR DECK SLAB PRIOR TO PLACEMENT OF CONCRETE											
BEAM NO.	INCREASING STATIONS →										
	℄ BRG.	0.1L	0.2L	0.3L	0.4L	0.5L	0.6L	0.7L	0.8L	0.9L	℄ BRG.
1	24.17	24.34	24.49	24.64	24.76	24.86	24.95	25.01	25.06	25.08	25.09
2	24.31	24.47	24.63	24.77	24.89	24.99	25.08	25.14	25.19	25.22	25.25
3	24.45	24.63	24.79	24.94	25.07	25.17	25.26	25.32	25.36	25.39	25.40
4	24.59	24.77	24.93	25.08	25.21	25.32	25.40	25.46	25.51	25.53	25.55
5	24.76	24.94	25.11	25.25	25.38	25.49	25.58	25.64	25.69	25.71	25.73
6	24.90	25.08	25.25	25.40	25.53	25.64	25.72	25.79	25.83	25.86	25.88
7	25.05	25.23	25.39	25.54	25.67	25.78	25.87	25.94	25.99	26.02	26.04
8	25.19	25.37	25.53	25.68	25.81	25.92	26.01	26.08	26.13	26.17	26.19
9	25.33	25.51	25.68	25.83	25.96	26.07	26.16	26.23	26.28	26.32	26.34
10	25.47	25.66	25.83	25.99	26.13	26.24	26.33	26.40	26.44	26.47	26.49
11	25.60	25.76	25.91	26.05	26.18	26.29	26.38	26.46	26.53	26.58	26.62
12	25.74	25.90	26.05	26.20	26.32	26.43	26.53	26.61	26.67	26.73	26.77

NOTES:

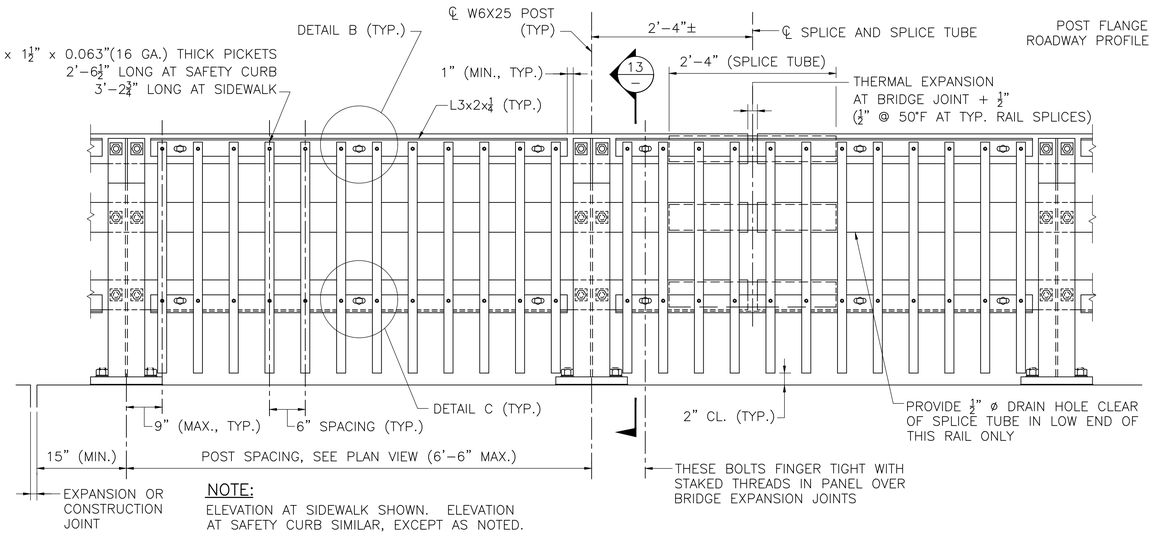
1. DURING PBU CASTING, AFTER THE BEAMS ARE ERECTED BUT BEFORE THE FORMS ARE PLACED, THE ELEVATION AT THE TOP OF THE FLANGE OF EACH BEAM SHALL BE OBTAINED AT THE POINTS INDICATED IN THE TABLE. THE DIFFERENCE BETWEEN EACH OBTAINED ELEVATION AND ITS CORRESPONDING ELEVATION SHOWN IN THE TABLE IS THE BLOCKING DISTANCE FROM THE TOP OF THE BEAM TO THE BOTTOM OF THE SLAB AT THE CENTERLINE OF THE BEAM.

2. TOP OF FORM ELEVATIONS ARE CALCULATED ASSUMING GIRDERS ARE NOT SUPPORTED DURING PBU CONSTRUCTION. IF PBUs ARE CAST DIFFERENTLY, FABRICATOR WILL NEED TO RECOMPUTE TOP OF FORM VALUES.



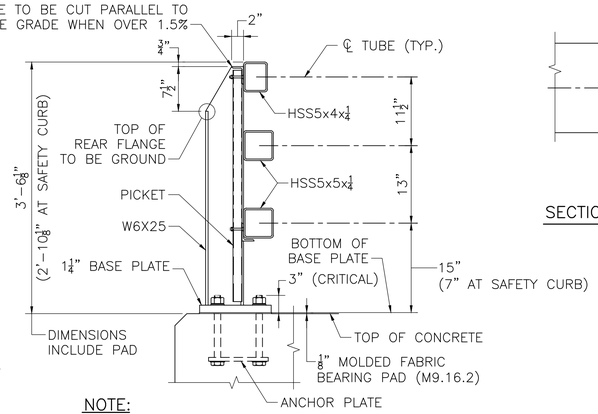
HAUNCH DETAIL
NOT TO SCALE

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	



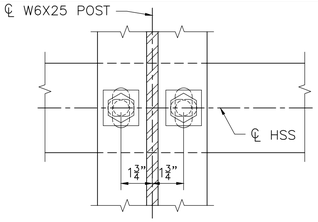
NOTE:
ELEVATION AT SIDEWALK SHOWN. ELEVATION AT SAFETY CURB SIMILAR, EXCEPT AS NOTED.

BRIDGE RAILING ELEVATION
SCALE: 1" = 1'-0"

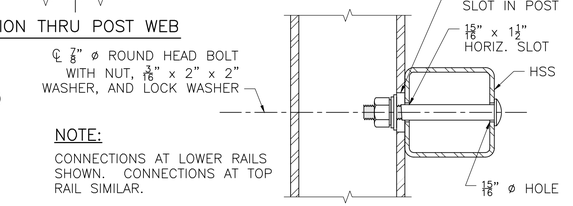


NOTE:
SECTION AT SIDEWALK SHOWN. SECTION AT SAFETY CURB SIMILAR, EXCEPT AS NOTED.

SECTION 13 –
SCALE: 1" = 1'-0"

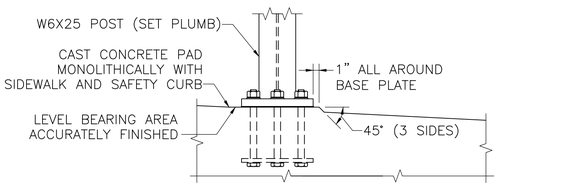


SECTION THRU POST WEB

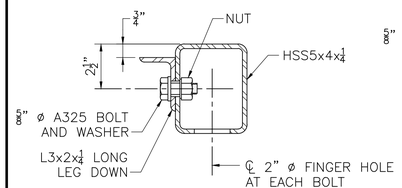


SECTION THRU RAIL

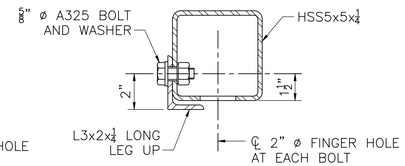
TYPICAL RAIL TO POST CONNECTIONS
SCALE: 1" = 1'-0"



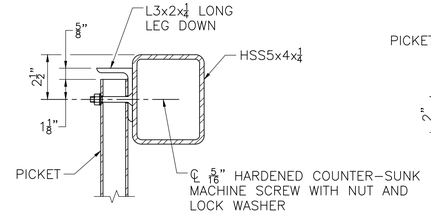
SETTING OF POSTS (PROFILE GRADE OVER 1.5%)
SCALE: 1" = 1'-0"



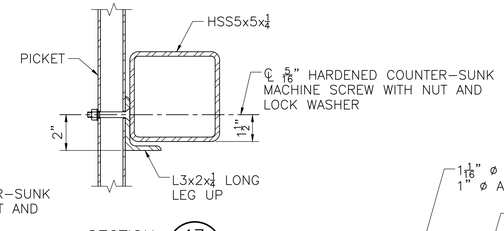
SECTION 14 –



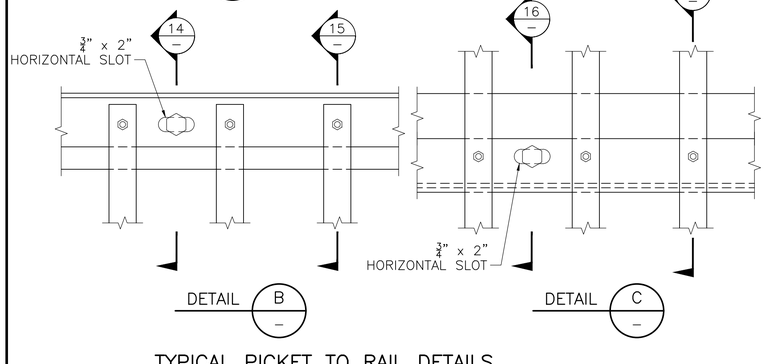
SECTION 16 –



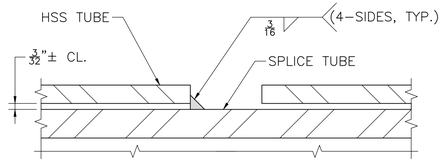
SECTION 15 –



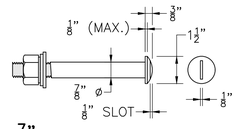
SECTION 17 –



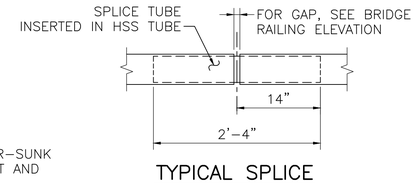
TYPICAL PICKET TO RAIL DETAILS
SCALE: 3" = 1'-0"



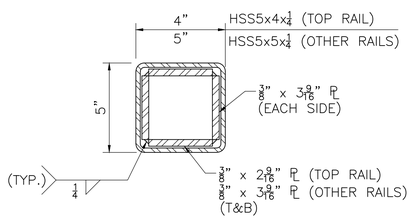
SPLICE DETAIL
FULL SIZE



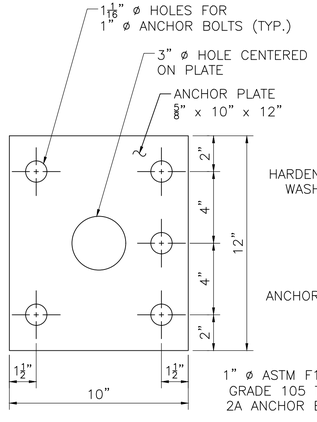
⅞" ø ROUND HEAD BOLT
SCALE: 3" = 1'-0"



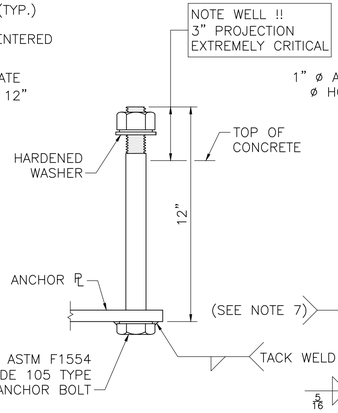
TYPICAL SPLICE
SCALE: 1" = 1'-0"



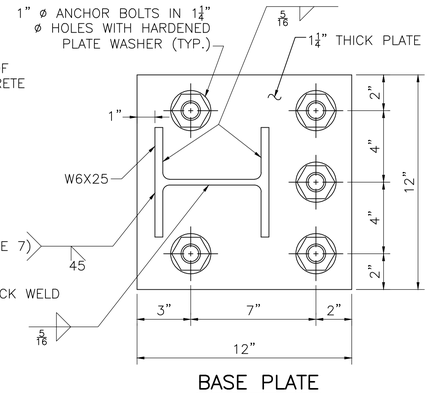
SPLICE TUBE DETAILS
SCALE: 3" = 1'-0"



ANCHOR PLATE
SCALE: 3" = 1'-0"



ANCHOR BOLT
SCALE: 3" = 1'-0"



BASE PLATE
SCALE: 3" = 1'-0"

RAILING NOTES:

1. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 270 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 500 WITH A CERTIFIED Fy = 50 KSI MINIMUM. THE MINIMUM HORIZONTAL BENDING RADII OF THE HSS TUBING SHALL BE 8 FEET. PICKET CARRIER ANGLES, ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 270 GRADE 36. PICKET TUBING SHALL CONFORM TO ASTM A 513 WITH Fy = 36 KSI MIN. OR A 500 GRADE B.
2. ALL STEEL (EXCEPT THE ⅝" ANCHOR PLATE AND FASTENERS) SHALL BE GALVANIZED AND PAINTED DARK BRONZE (FEDERAL STD. 595B COLOR NO. 10045). ANCHOR PLATE SHALL BE GALVANIZED ONLY. HEADS OF ⅞" ø ROUND HEAD BOLTS SHALL BE PAINTED TO MATCH RAIL.
3. ANCHOR BOLTS SHALL BE SET WITH TEMPLATES. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN AFTER STEEL IS IN PLACE.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF FOUR (4) POSTS WITHOUT SPLICES WHERE POSSIBLE. IN ADDITION SPLICES SHALL ALSO BE LOCATED IN RAILS OVER BRIDGE EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. ALL POSTS TO BE PLUMB WHEN PROFILE GRADE EXCEEDS 1.5%. FOR PROFILE GRADES LESS THAN 1.5%, POSTS SHALL BE SET PERPENDICULAR TO GRADE.
7. POST TO FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING. BEVEL OUTSIDE FLANGES OF POST. FIT POST TO BASE PLATE. WELD 5/16" FILLET ON INSIDE OF FLANGE AND WEB. BACKGOUGE OUTSIDE OF FLANGE TO SOUND METAL. COMPLETE GROOVE WELD WITH MINIMUM OF ⅛" REINFORCEMENT. WELD IS THE SAME ON BOTH FLANGES.
8. ⅞" ø ROUND HEAD BOLTS SHALL CONFORM TO THE CHEMICAL AND PHYSICAL REQUIREMENTS OF ASTM F3125 GRADE 325 TYPE 1 GALVANIZED.

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

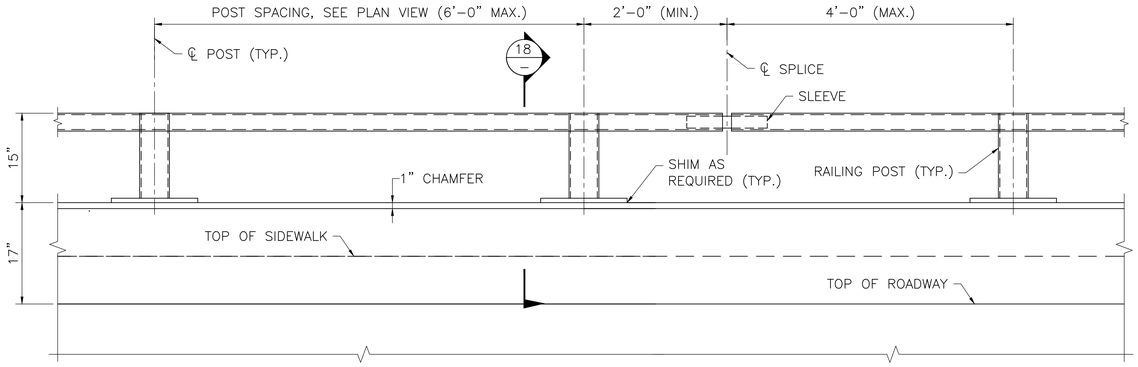
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	79	98
PROJECT FILE NO.	610776		

S3-MTL4 BRIDGE RAILING

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

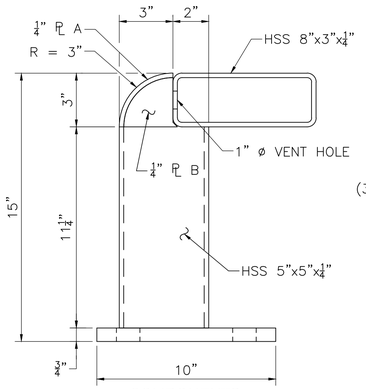
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

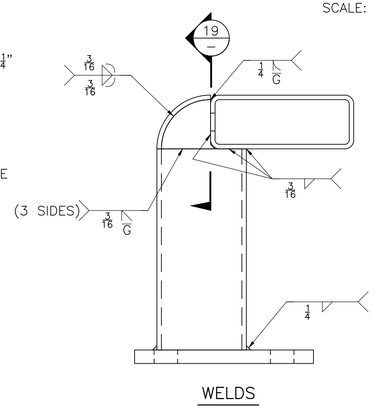


ELEVATION

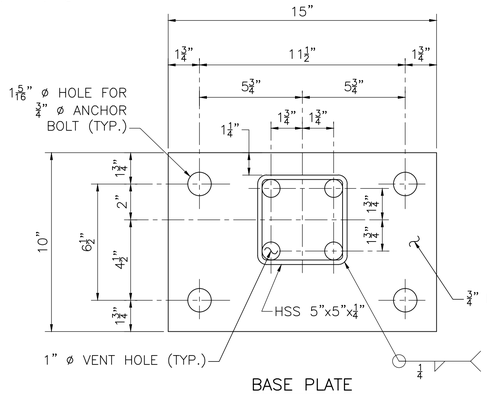
SCALE: 1" – 1'-0"



COMPONENTS



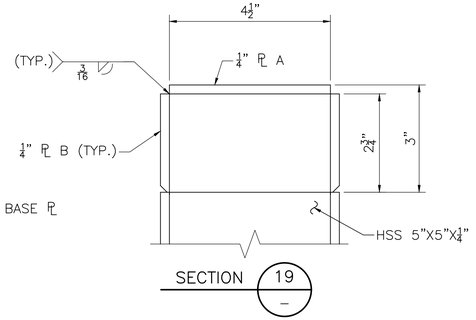
WELDS



BASE PLATE

RAIL POST DETAILS

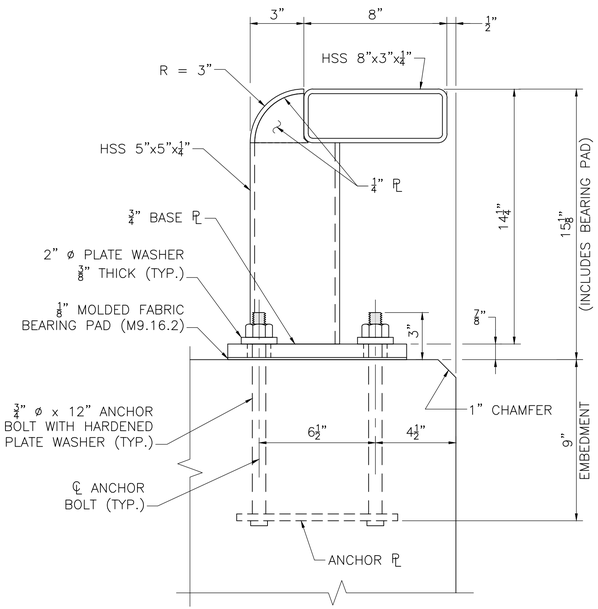
SCALE: 3" = 1'-0"



SECTION 19

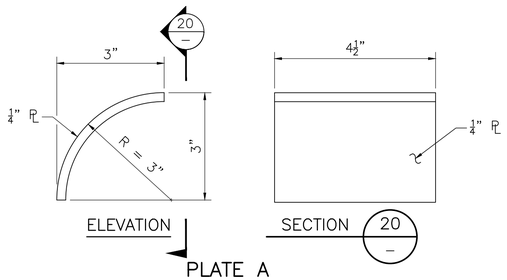
POST CAP ASSEMBLY

SCALE: 6" = 1'-0"



SECTION 18

SCALE: 3" = 1'-0"



ELEVATION SECTION 20

PLATE A

SCALE: 6" = 1'-0"

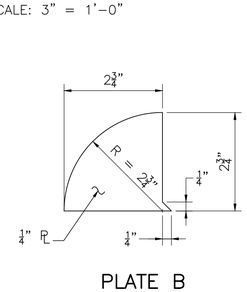
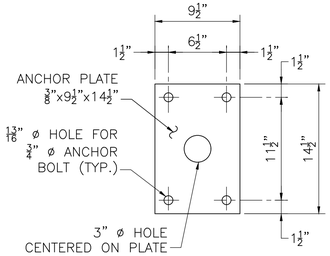


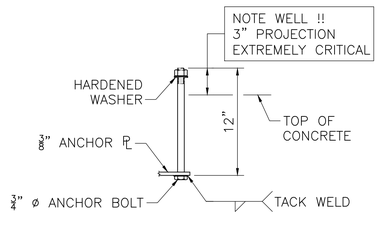
PLATE B

SCALE: 6" = 1'-0"



ANCHOR PLATE

SCALE 1½" = 1'-0"

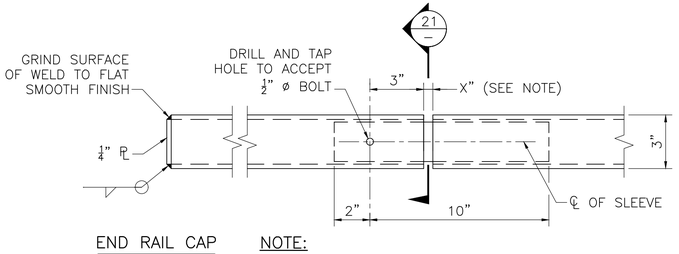


ANCHOR BOLT

SCALE 1½" = 1'-0"

NOTES:

1. MAXIMUM RAIL LENGTH IS 24'–0". MAXIMUM POST SPACING IS 6'–0". RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF TWO (2) AND A MAXIMUM OF FOUR (4) POSTS.
2. RAILS SHALL HAVE A TUBE SPLICE BETWEEN CONTINUOUS LENGTHS OF RAIL AND IN THE PANEL OVER A BRIDGE EXPANSION JOINT.
3. ALL STEEL SHALL BE GALVANIZED. ALL PIPE SLEEVE SPLICES SHALL BE GALVANIZED SEPARATELY AND NOT WHILE BOLTED TO THE RAIL.
4. ALL GALVANIZED STEEL (EXCEPT THE ANCHOR PLATE AND FASTENERS) SHALL BE PAINTED DARK BRONZE (AMS STANDARD 595A COLOR NUMBER 10045 OF THE FEDERAL STANDARD 595B).
5. ANCHOR BOLTS SHALL BE SET WITH TEMPLATES. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN A ADDITIONAL ⅛ TURN AFTER STEEL IS IN PLACE.
6. ALL POSTS SHALL BE SET PERPENDICULAR TO GRADE.
7. END TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
8. WELDING SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AASHTO/AWS D.1.5, EXCEPT THAT WELDING OF THE TUBE–WELDED SPLICE SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWS D.1.1.

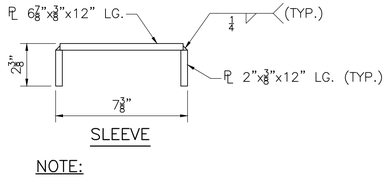


END RAIL CAP

NOTE:

X = ½" AT RAIL SPLICES.
X = ½" + THERMAL EXPANSION AT BRIDGE EXPANSION JOINTS.

RAIL ELEVATION



SLEEVE

NOTE:

HSS IS NOT SHOWN FOR CLARITY.

SECTION 21

TYPICAL SPLICE DETAILS

SCALE: 3" = 1'-0"

MATERIALS:

STRUCTURAL STEEL TUBING_____	ASTM A 500 GRADE B (GALVANIZED)
POST AND BASE PLATE _____	AASHTO M 270 GRADE 36 OR GRADE 50 (GALVANIZED)
ANCHOR BOLT PLATE WASHERS _	AASHTO M 270 GRADE 36 OR GRADE 50 (GALVANIZED)
ANCHOR BOLTS _____	ASTM F1554 GRADE 105 TYPE 2A (GALVANIZED)

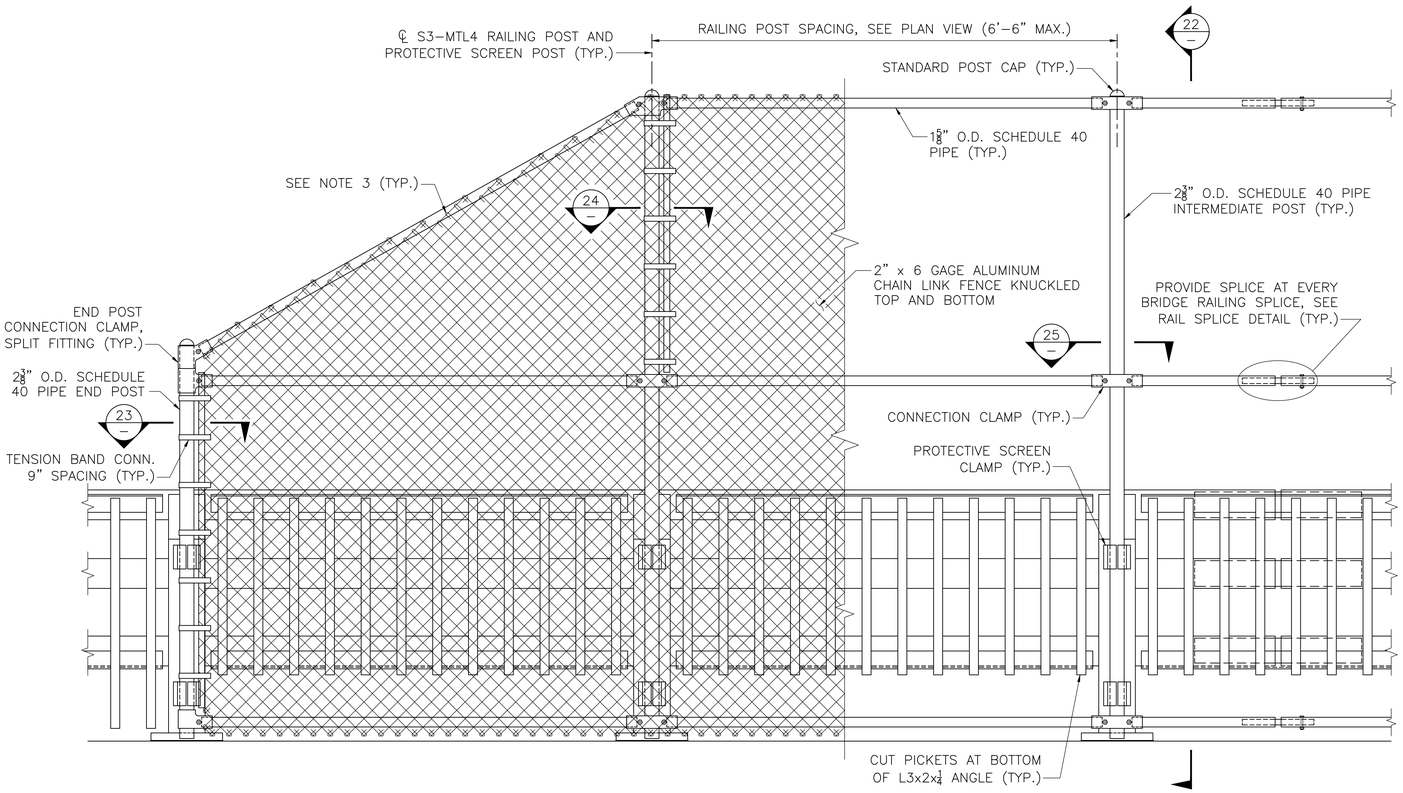
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

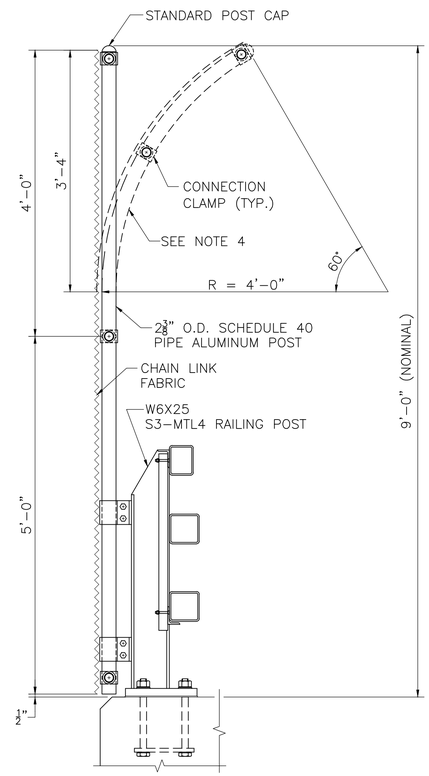
CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	80	98
PROJECT FILE NO. 610776			

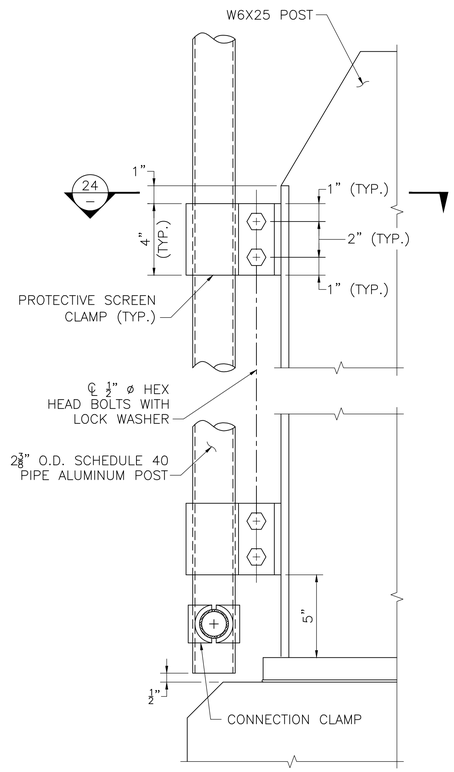
CM-MTL3 BRIDGE RAILING



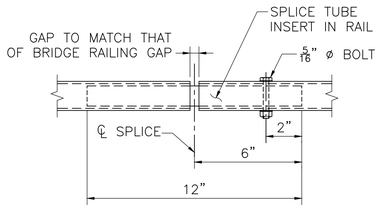
ELEVATION
SCALE: 1" = 1'–0"



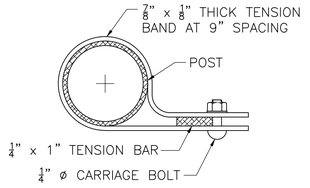
SECTION 22
SCALE: 1" = 1'–0"



ELEVATION – PROTECTIVE SCREEN CLAMPS
SCALE: 3" = 1'–0"

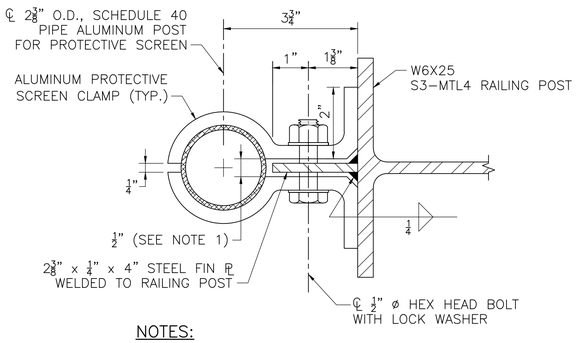


RAIL SPLICE
SCALE: 3" = 1'–0"



TENSION BAND CONNECTION

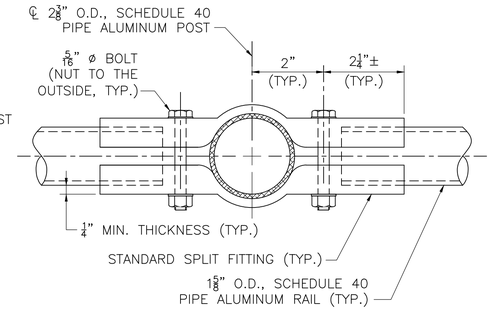
SECTION 23
SCALE: 6" = 1'–0"



NOTES:

1. DRAW FOR FABRICATION TO ENSURE CLAMPING ACTION.
2. SLIGHT VARIATIONS IN EXTRUSION DIMENSIONS MAY BE SUBMITTED FOR APPROVAL.

SECTION 25
SCALE: 6" = 1'–0"



POST CONNECTION CLAMP

SECTION 24
SCALE: 6" = 1'–0"

MATERIALS:

POST AND RAILS	ASTM B 221, ALLOY 6061–T6, SCHEDULE 40 PIPE
TENSION BARS, RAIL SPLICES, WASHERS, AND POST CONN. CLAMPS	ASTM B 221, ALLOY 6061–T6
FABRIC AND TIES	AASHTO M 181 TYPE III, ALLOY 6061–T89 OR T94; 6 GAGE
TENSION BANDS	ASTM B 221, ALLOY 6063–T5
BOLTS	ASTM B 316, ALLOY 2024–T4
NUTS	ASTM B 316, ALLOY 6061–T6
PROTECTIVE SCREEN CLAMPS	ASTM B 221, ALLOY 6061–T6

GENERAL NOTES:

1. USE 6 GAGE TIES AT 12" O.C. TO ALL POSTS AND TOP 2 RAILS OR 3 RAILS (CURVED TOP). SPACE TIES TO BOTTOM RAIL AT 6" O.C.
2. ALL ALUMINUM, INCLUDING HARDWARE AND FABRIC, SHALL RECEIVE A 4±1 MIL POLYESTER POWDER COAT FINISH. THE COLOR SHALL MATCH THE COLOR OF THE S3–MTL4 RAILING.
3. THE CHAIN LINK FABRIC SHALL BE SECURED BY KNUCKLING TOGETHER THE CUT ENDS OF THE FABRIC WIRE IN A MANNER SIMILAR TO THE ORIGINALLY MANUFACTURED END.
4. THE SCREEN TREATMENT TO BE USED (CURVED OR STRAIGHT TOP) IS SPECIFIED ELSEWHERE ON THE CONSTRUCTION DRAWINGS.
5. PICKETS ARE REQUIRED FOR CRASH SAFETY.

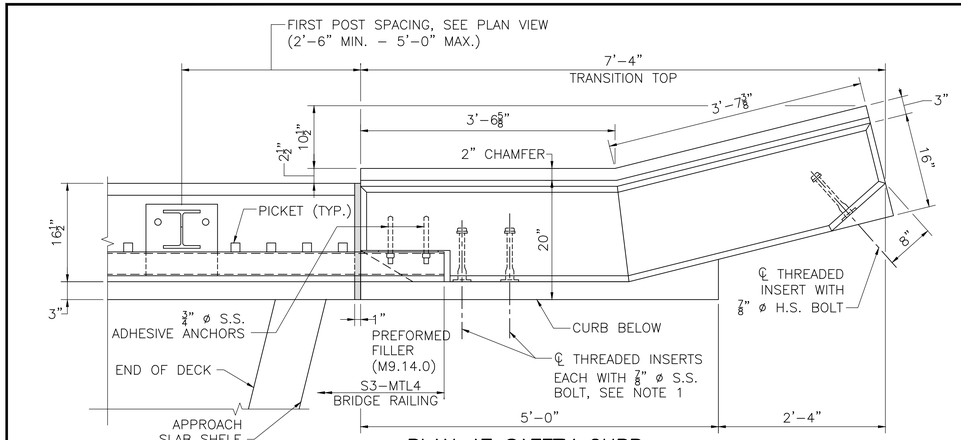
CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	81	98
PROJECT FILE NO.	610776		

TYPE I PROTECTIVE SCREEN

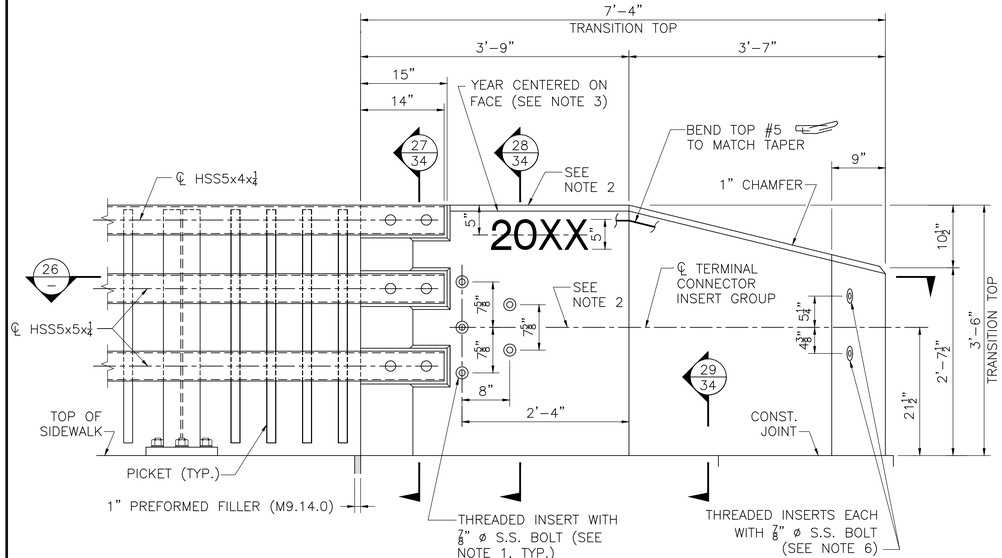
DATE	DESCRIPTION
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE



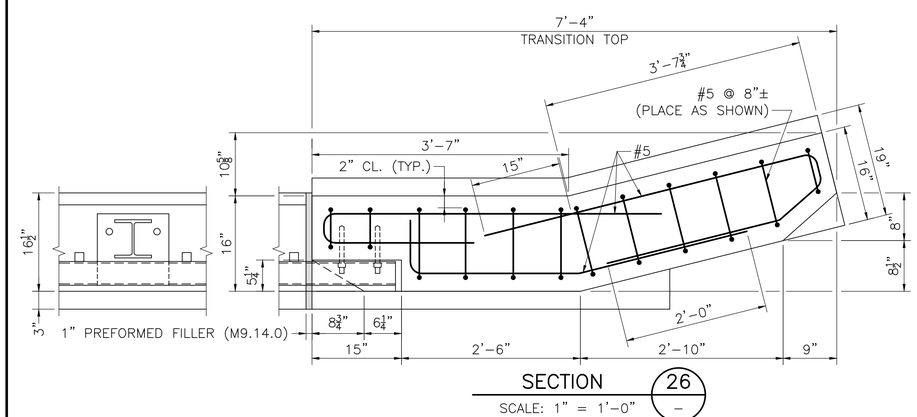
PLAN AT SAFETY CURB

SCALE: 1" = 1'–0"
NW CORNER SHOWN, OTHERS SIMILAR.



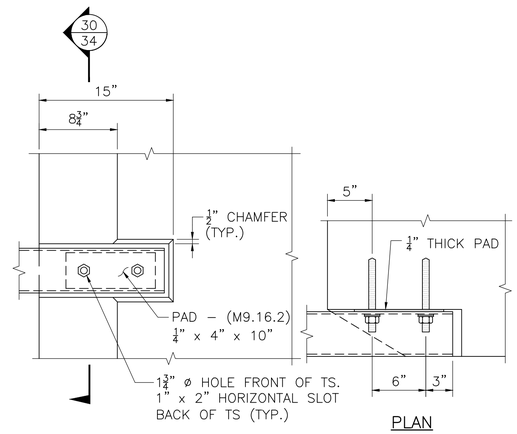
ELEVATION AT SIDEWALK

SCALE: 1" = 1'–0"



SECTION 26 –

SCALE: 1" = 1'–0"



ELEVATION

PLAN

RAIL ATTACHMENT

SCALE: 1½" = 1'–0"

NOTES:

1. THREADED INSERTS SHALL BE PREQUALIFIED BY THE MANUFACTURER AS BEING CAPABLE OF DEVELOPING A NOMINAL SHEAR RESISTANCE OF 20 KIPS PER ⅞" ø S.S. BOLT. S.S. BOLTS SHALL BE ⅞" ø x 1½" LONG FULLY THREADED AISI TYPE 304N STAINLESS STEEL. INSERTS FOR ⅞" S.S. BOLTS SHALL BE GALVANIZED AND CAST INTO THE TRANSITION.
2. FOR AN APPROACH GRADE UP TO 3%, THE TRANSITION MAY BE CAST SQUARE AND SET PLUMB WITH THE MINIMUM EMBEDMENT DEPTH SHOWN. THE TERMINAL CONNECTOR INSERT GROUP SHALL BE SQUARE TO THE POST.

   FOR AN APPROACH GRADE IN EXCESS OF 3%, THE TRANSITION TOP AND THE TOP OF CURB SHALL FOLLOW THE APPROACH GRADE. THE HEIGHT OF THE TRANSITION TOP SHALL VARY PROVIDED THAT THE MINIMUM DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS ARE MET. THE BOTTOM OF THE TRANSITION BASE SHALL BE SET LEVEL WITH THE MINIMUM EMBEDMENT DEPTH SHOWN. THE TERMINAL CONNECTOR INSERT GROUP SHALL BE SLOPED TO FOLLOW THE APPROACH GRADE.
3. USE LATEST CONTRACT COMPLETION YEAR IN EFFECT WHEN THE FIRST GUARDRAIL TRANSITION IS CAST. USE THIS YEAR FOR ALL GUARDRAIL TRANSITIONS.
4. ALL CONCRETE FOR THE PRECAST HIGHWAY GUARDRAIL TRANSITION SHALL BE 5000 HP CEMENT CONCRETE.
5. LIFTING DEVICES (NOT SHOWN), INCLUDING THEIR NUMBER AND LOCATION, SHALL BE DESIGNED AND DETAILED BY THE PRECASTER. THEY SHALL BE GALVANIZED AND SHALL BE PLACED AND RECESSED IN POCKETS TO PROVIDE 1½" CLEAR COVER TO THE FACE OF THE TRANSITION CONCRETE. THESE DEVICES SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS ALONG WITH ALL SUPPORTING CALCULATIONS AND/OR CATALOG CUTS. ONCE THE PRECAST TRANSITION IS SET IN PLACE, THE LIFTING DEVICE POCKETS SHALL BE FILLED WITH A NON–SHRINK GROUT THAT MATCHES THE COLOR OF THE TRANSITION CONCRETE WHEN CURED AND THE FILLED POCKETS SHALL BE RUBBED WITH A CORUNDUM STONE TO BLEND OUT THE JOINTS.
6. ⅞" ø HIGH STRENGTH BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F3125 AND BE GALVANIZED. USE ADDITIONAL WASHERS AS EQUIRED TO PROPERLY ENGAGE THE BOLTS.

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	82	98
PROJECT FILE NO.	610776		

TOP OF PRECAST HIGHWAY
GUADRAIL TRANSITION FOR S3-MTL4
1 OF 2

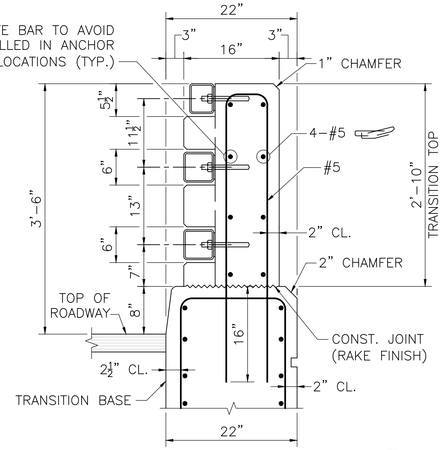
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

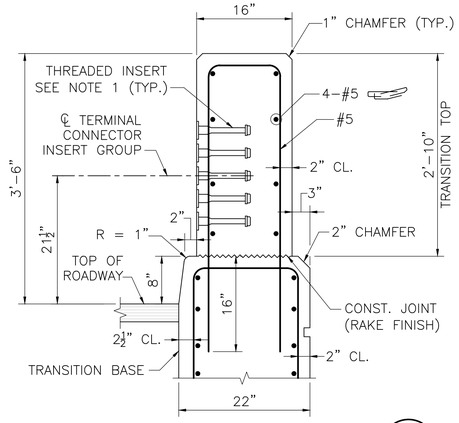
CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	83	98
PROJECT FILE NO.	610776		

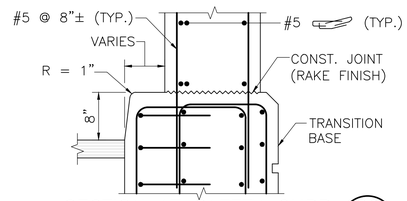
TOP OF PRECAST HIGHWAY GUADRAIL TRANSITION FOR S3-MTL4
2 OF 2



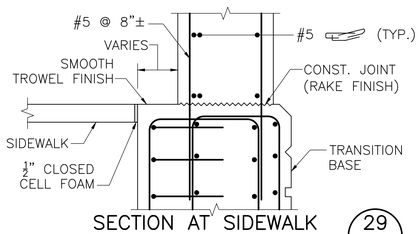
SECTION AT SAFETY CURB 27
SCALE: 1" = 1'-0" 33



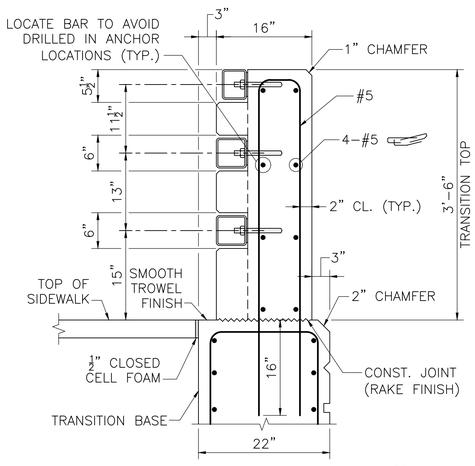
SECTION AT SAFETY CURB 28
SCALE: 1" = 1'-0" 33



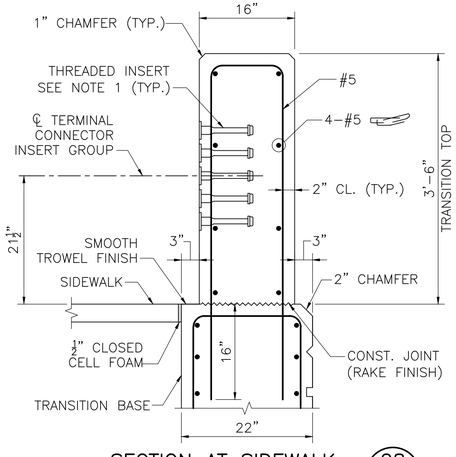
SECTION AT SAFETY CURB 29
SCALE: 1" = 1'-0" 33



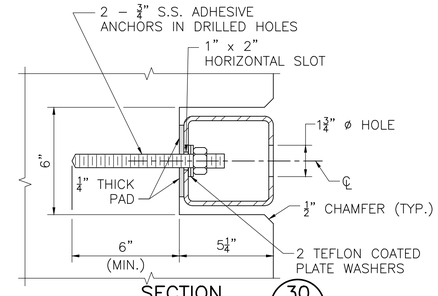
SECTION AT SIDEWALK 29
SCALE: 1" = 1'-0" 33



SECTION AT SIDEWALK 27
SCALE: 1" = 1'-0" 33

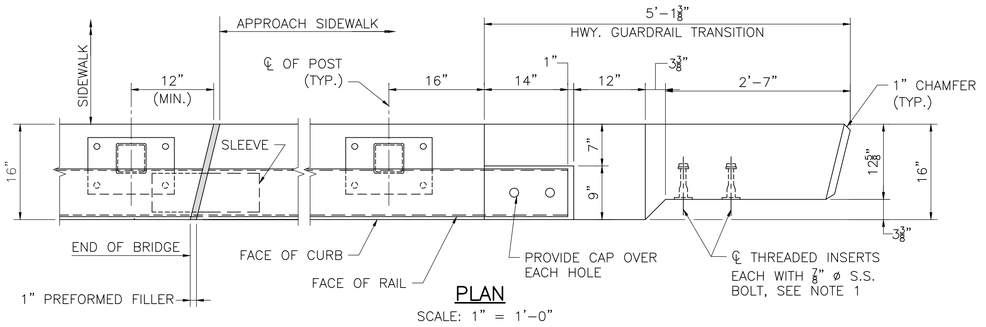


SECTION AT SIDEWALK 28
SCALE: 1" = 1'-0" 33



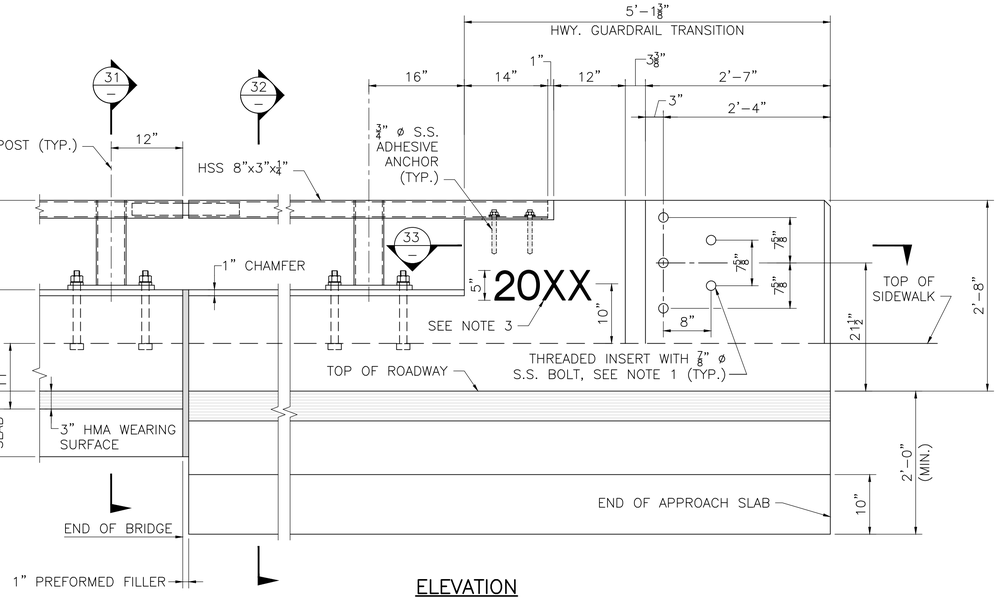
SECTION 30
SCALE: 3" = 1'-0" 33

AUGUST 16, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	



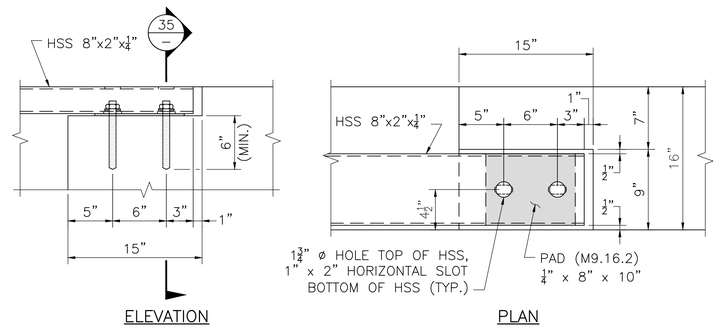
PLAN

SCALE: 1" = 1'–0"



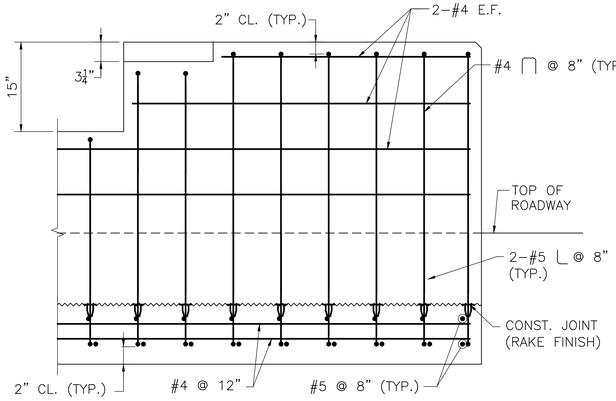
ELEVATION

SCALE: 1" – 1'–0"



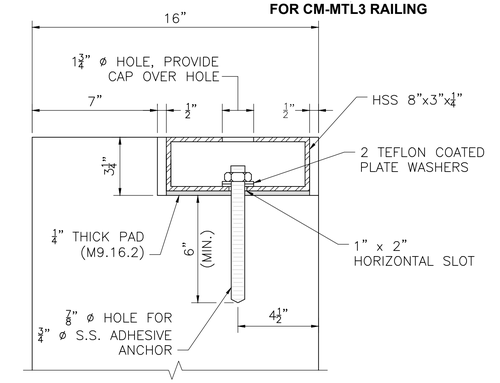
RAIL ATTACHMENT

SCALE: 1 1/2" = 1'–0"



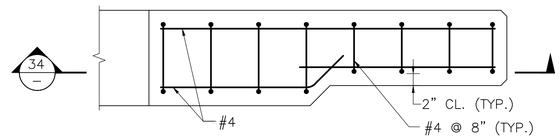
SECTION 34

SCALE: 1" = 1'–0"



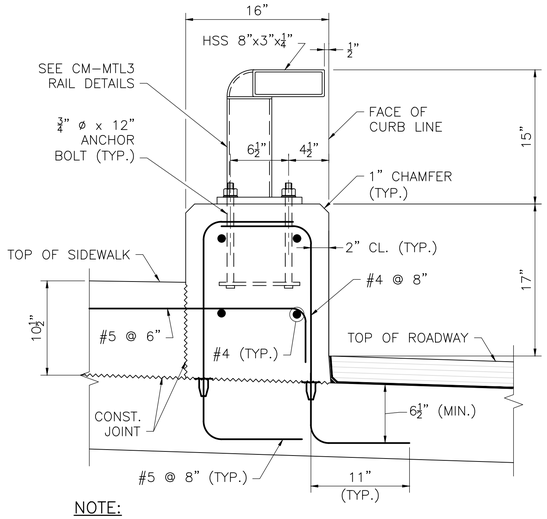
SECTION 35

SCALE: 3" = 1'–0"



SECTION 33

SCALE: 1" = 1'–0"

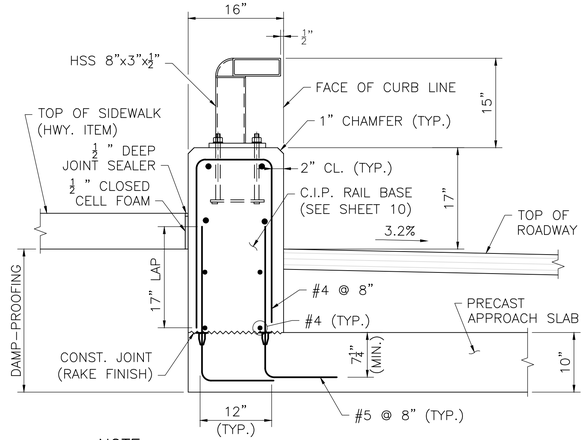


NOTE:

SIDEWALK AND DECK SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.

SECTION 31

SCALE: 1 1/2" = 1'–0"



NOTE:

APPROACH SLAB REINFORCEMENT NOT SHOWN FOR CLARITY.

SECTION 32

SCALE: 1" = 1'–0"

NOTES:

1. THREADED INSERTS SHALL BE PREQUALIFIED BY THE MANUFACTURER AS BEING CAPABLE OF DEVELOPING A NOMINAL SHEAR RESISTANCE OF 20 KIPS PER 7/8" ø S.S. BOLT. S.S. BOLTS SHALL BE 7/8" ø x 1 1/2" LONG FULLY THREADED AISI TYPE 304N STAINLESS STEEL. INSERTS FOR 7/8" S.S. BOLTS SHALL BE CAST–IN–PLACE AND GALVANIZED.
2. ALL CONCRETE FOR THE CM–MTL3 RAILING AND HIGHWAY GUARDRAIL TRANSITION SHALL BE 5000 HP CEMENT CONCRETE.
3. USE LATEST CONTRACT COMPLETION YEAR IN EFFECT WHEN THE FIRST HIGHWAY GUARDRAIL TRANSITION IS CAST.

CAMBRIDGE
US 3/ST 2/ST 16 (ALEWIFE BROOK PARKWAY)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	84	98
PROJECT FILE NO. 610776			

HIGHWAY GUADRAIL TRANSITION FOR CM-MTL3 RAILING

DATE	DESCRIPTION
AUGUST 16, 2025	ISSUED FOR CONSTRUCTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

SHEET 35 OF 35 SHEETS BRIDGE NO. C–01–031 (4DR)

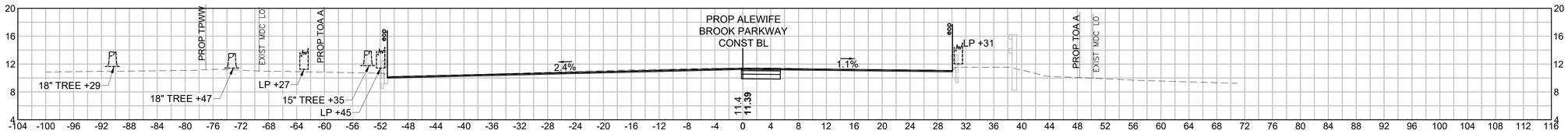
610776_BR34(HIGHWAY GUADRAIL TRANSITION FOR CM-MTL3 RAILING).DWG Plotted on 29-Jul-2025 2:54 PM

Final Structural Submission (SF) 16-AUGUST-2025

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	85	98
PROJECT FILE NO.	610776		

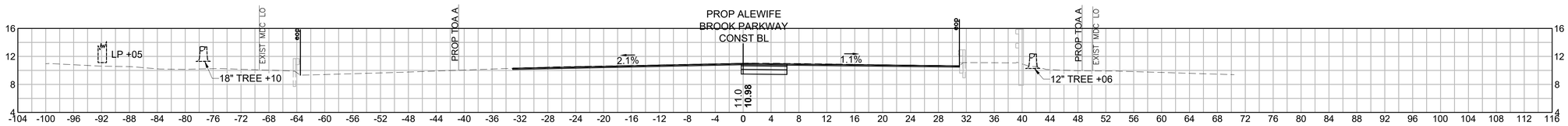
CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 1 OF 10



102+14.54

CUT: 8.73 SF

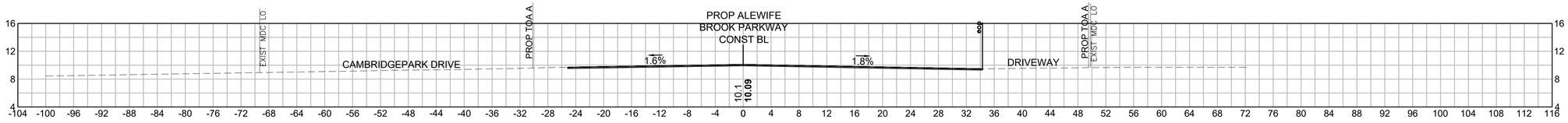
FILL: 0.00 SF



102+00

CUT: 10.45 SF

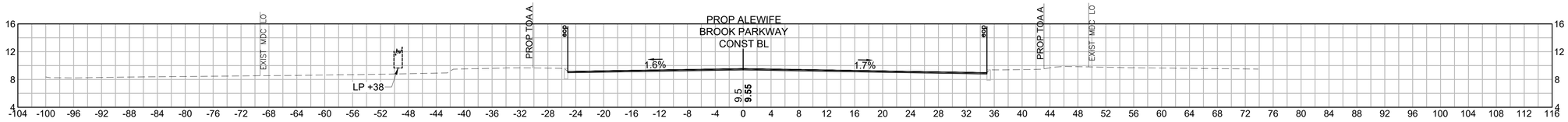
FILL: 0.00 SF



101+50

CUT: 0.00 SF

FILL: 0.00 SF



101+05 (AHEAD)

CUT: 0.00 SF

FILL: 0.00 SF

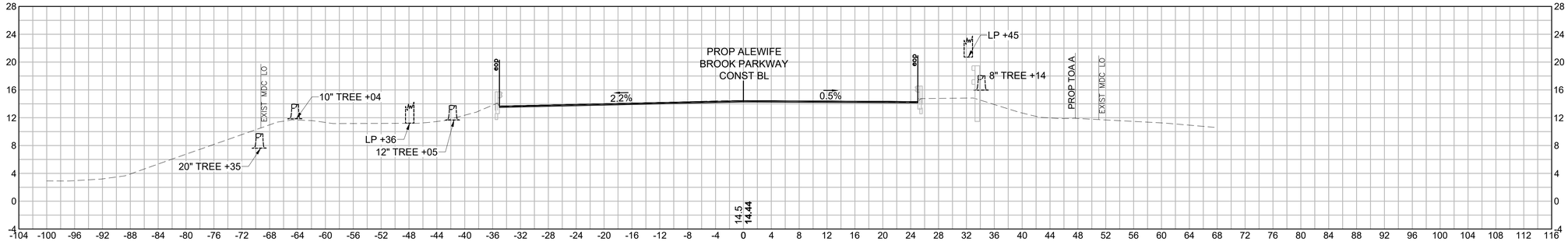
HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

610776_HD(CROSS SECTIONS).DWG Plotted on 29-Jul-2025 8:32 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

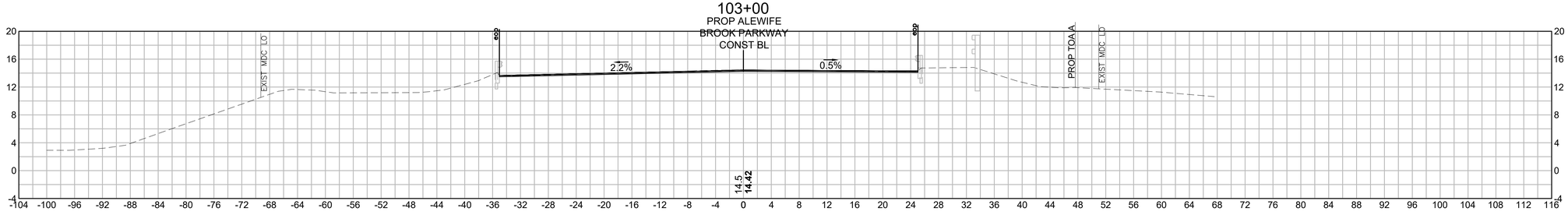
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	86	98
PROJECT FILE NO.	610776		

CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 2 OF 10



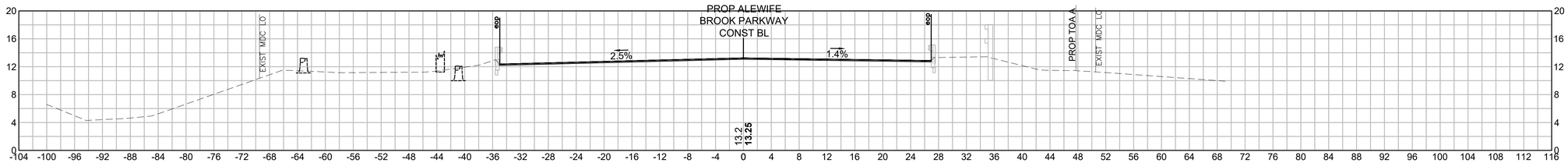
103+00

CUT: 0.00 SF
FILL: 0.00 SF



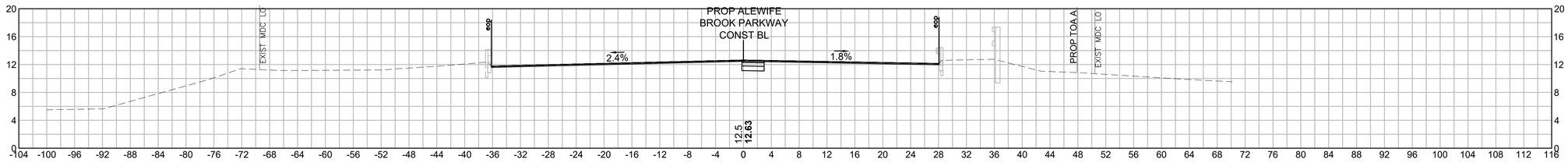
102+99.54

CUT: 0.00 SF
FILL: 0.00 SF



102+67.23

CUT: 0.00 SF
FILL: 0.00 SF



102+50

CUT: 4.55 SF
FILL: 0.00 SF

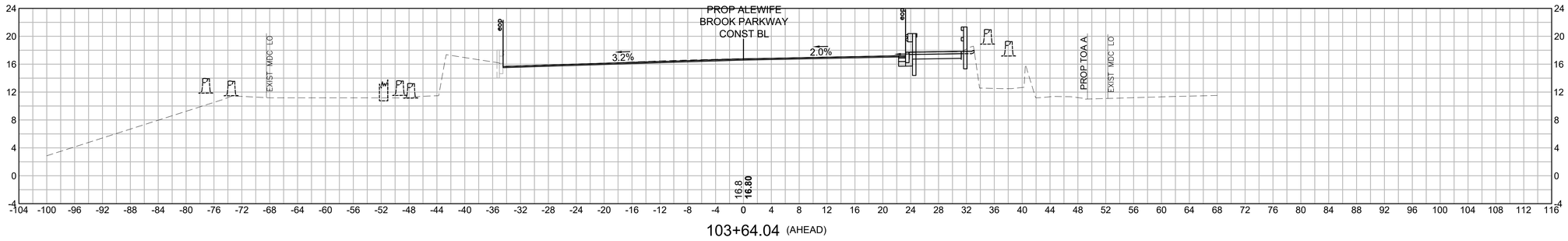
HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

610776_HD(CROSS SECTIONS).DWG Plotted on 29-Jul-2025 8:32 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

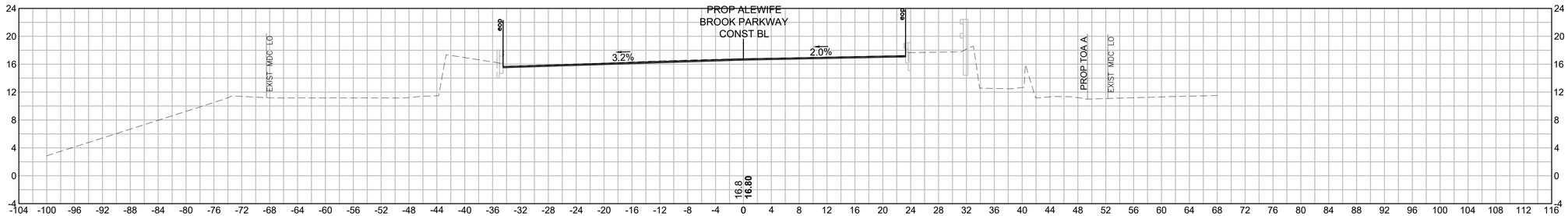
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	87	98
PROJECT FILE NO.	610776		

CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 3 OF 10



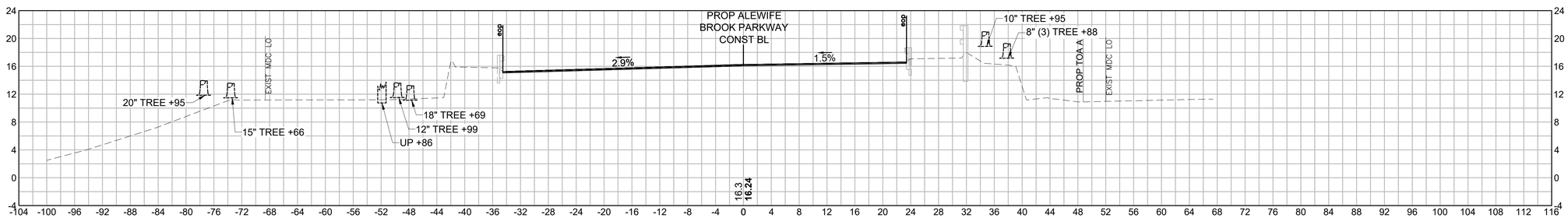
103+64.04 (AHEAD)

CUT: 11.27 SF
FILL: 0.00 SF



103+64.04 (BACK)

CUT: 0.00 SF
FILL: 0.00 SF



103+50

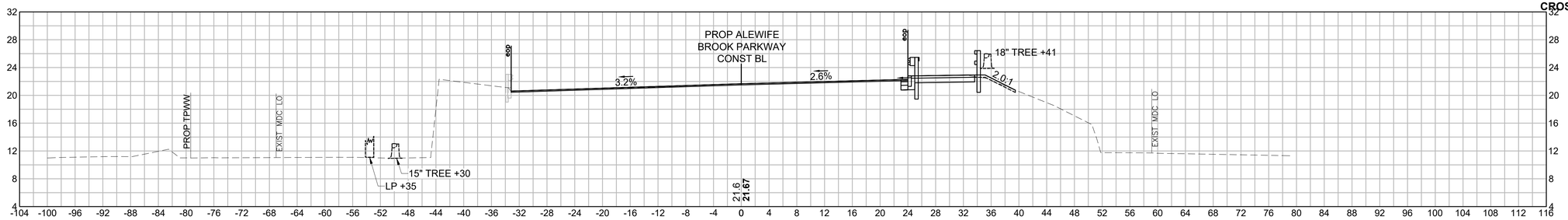
CUT: 0.00 SF
FILL: 0.00 SF

HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	88	98
PROJECT FILE NO.	610776		

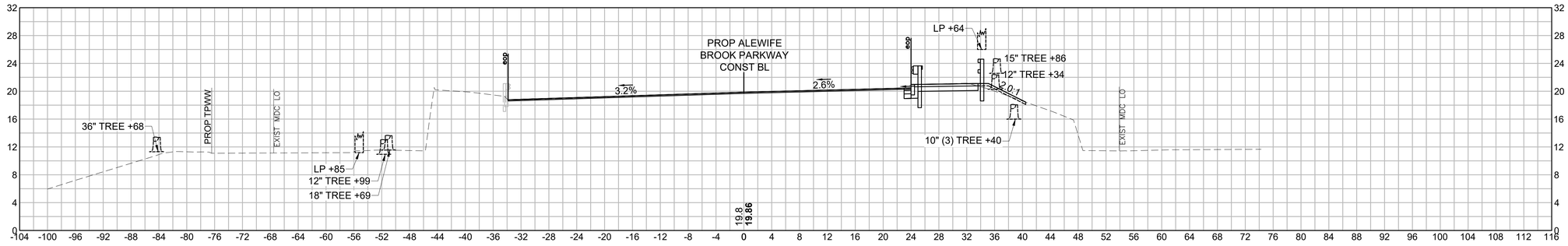
CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 4 OF 10



105+00

CUT: 14.12 SF

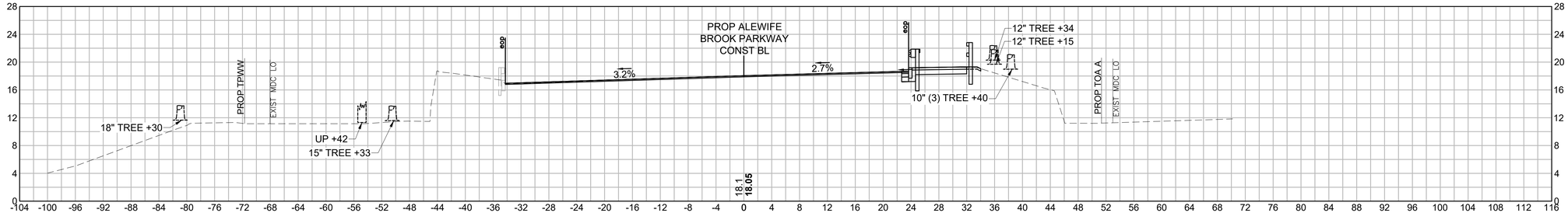
FILL: 0.00 SF



104+50

CUT: 13.77 SF

FILL: 0.30 SF



104+00

CUT: 9.33 SF

FILL: 0.00 SF

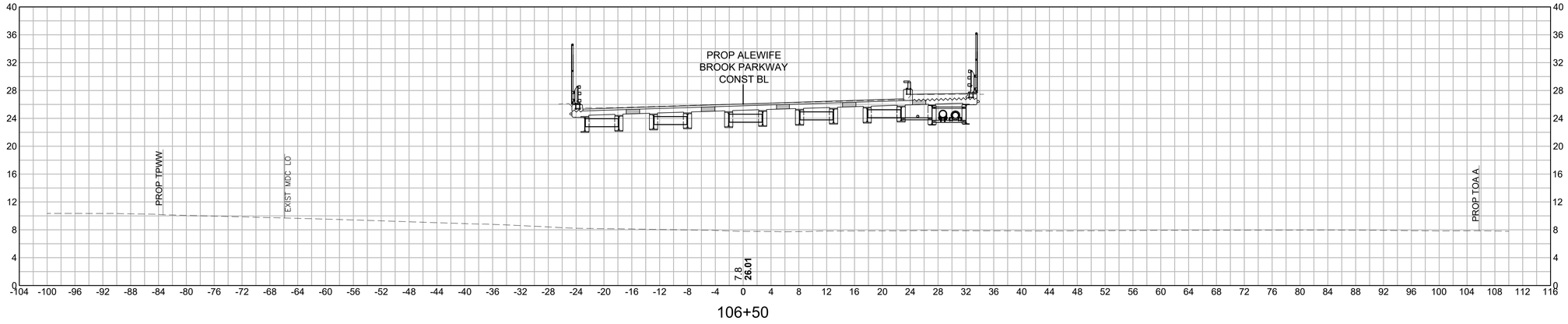
HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

610776_HD(CROSS SECTIONS).DWG Plotted on 29-Jul-2025 8:32 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

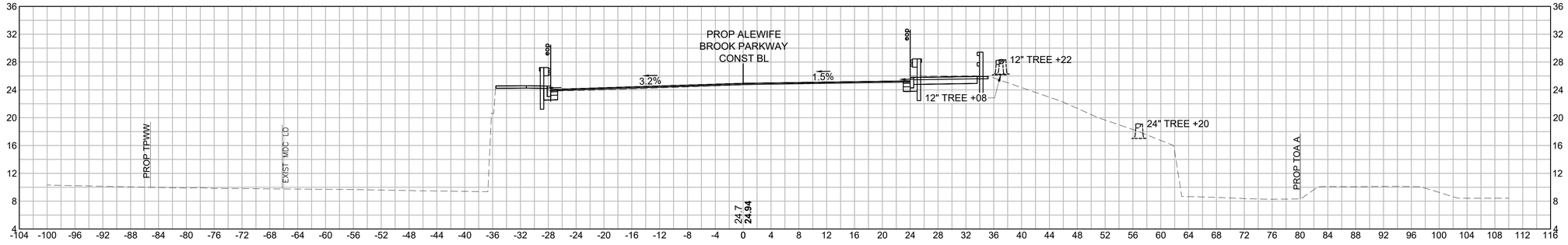
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	89	98
	PROJECT FILE NO. 610776		

CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 5 OF 10



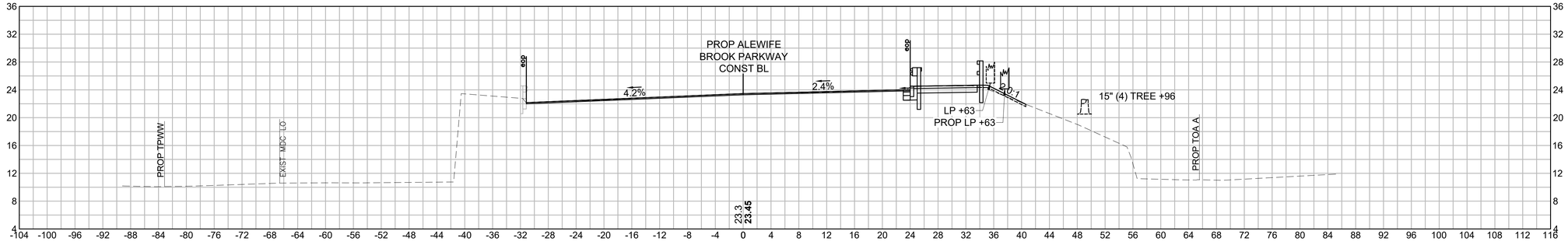
106+50

CUT: 0.00 SF
FILL: 0.00 SF



106+00

CUT: 23.04 SF
FILL: 0.00 SF



105+50

CUT: 13.50 SF
FILL: 0.00 SF

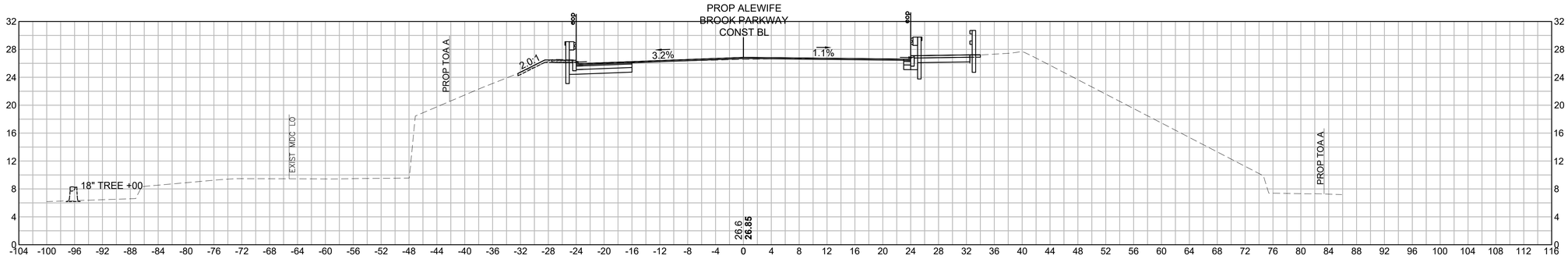
HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

610776_HD(CROSS SECTIONS).DWG Plotted on 29-Jul-2025 8:32 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

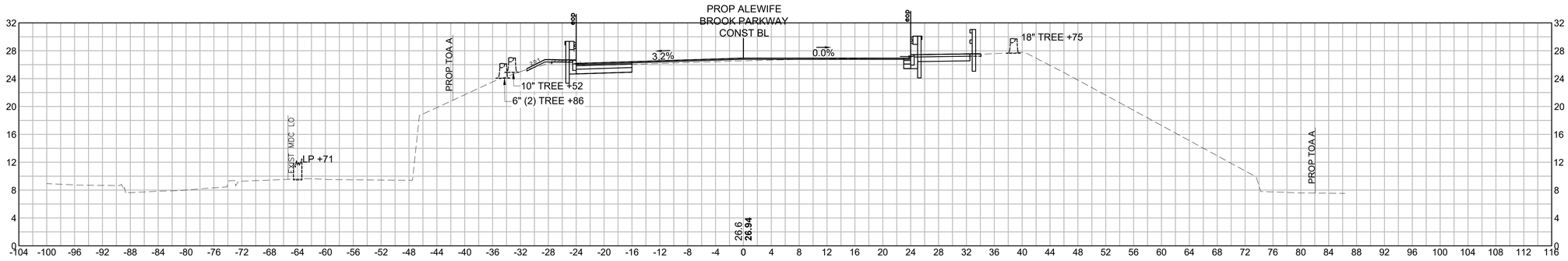
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	90	98
PROJECT FILE NO.	610776		

CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 6 OF 10



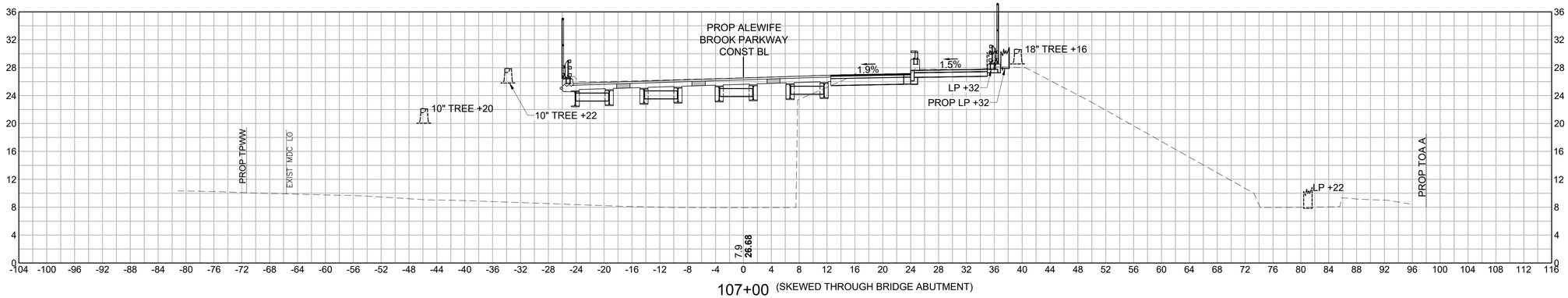
107+92.10

CUT: 28.85 SF
FILL: 0.00 SF



107+50

CUT: 34.60 SF
FILL: 0.00 SF



107+00 (SKEWED THROUGH BRIDGE ABUTMENT)

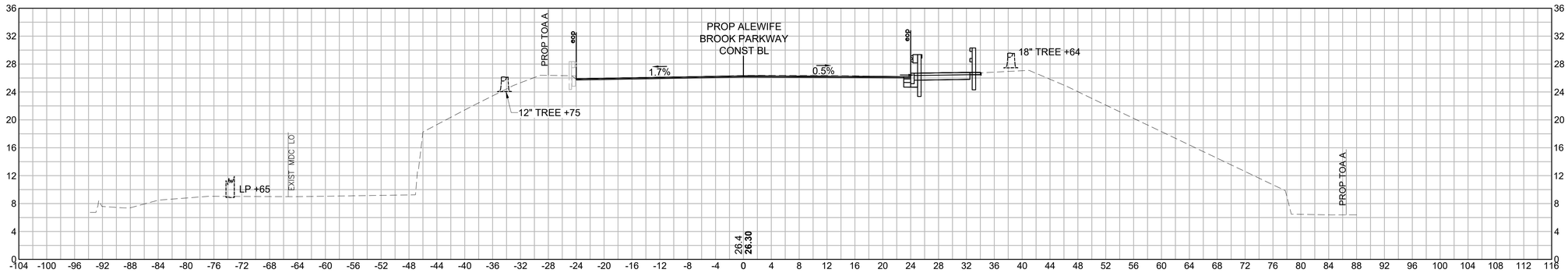
CUT: 15.97 SF
FILL: 0.00 SF

HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

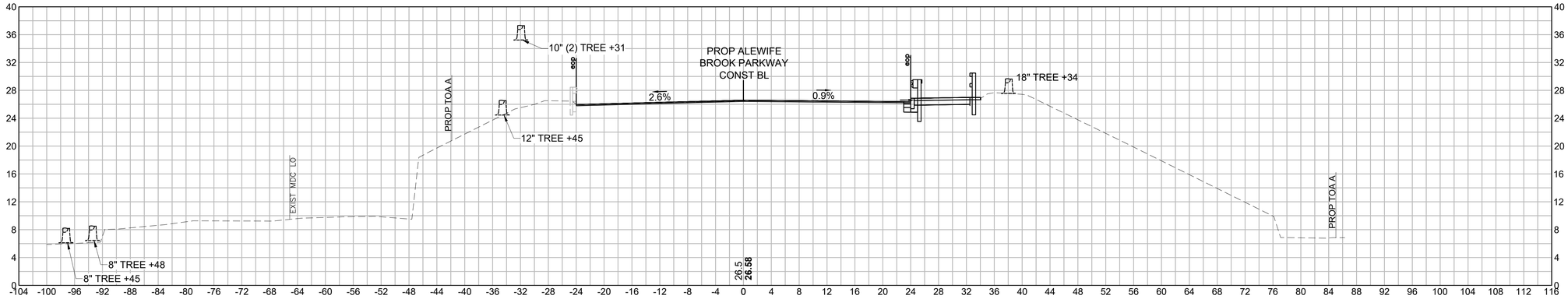
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	91	98
PROJECT FILE NO.	610776		

CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 7 OF 10



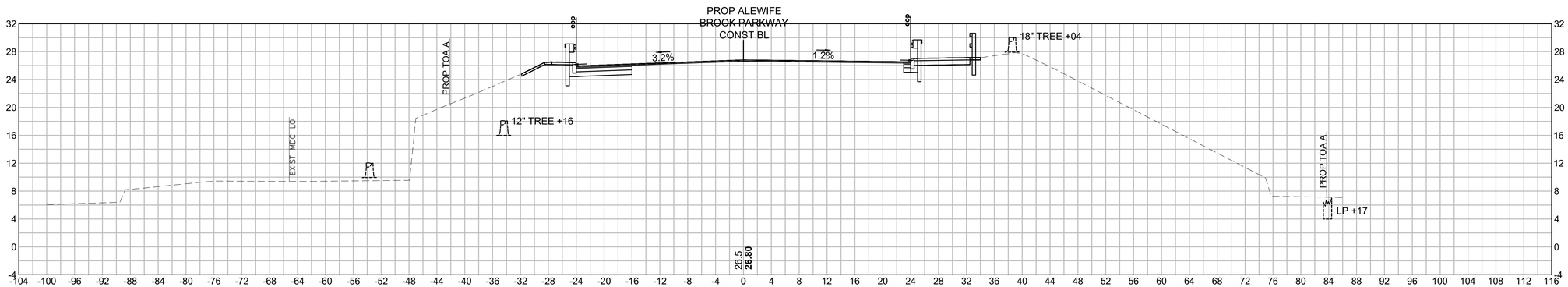
108+50

CUT: 12.54 SF
FILL: 0.00 SF



108+24.41

CUT: 13.72 SF
FILL: 0.00 SF



108+00

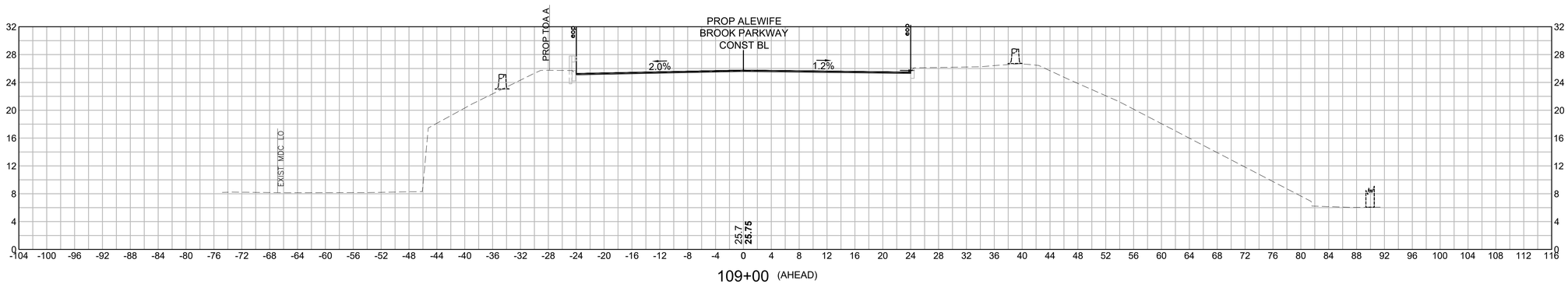
CUT: 36.41 SF
FILL: 0.00 SF

HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

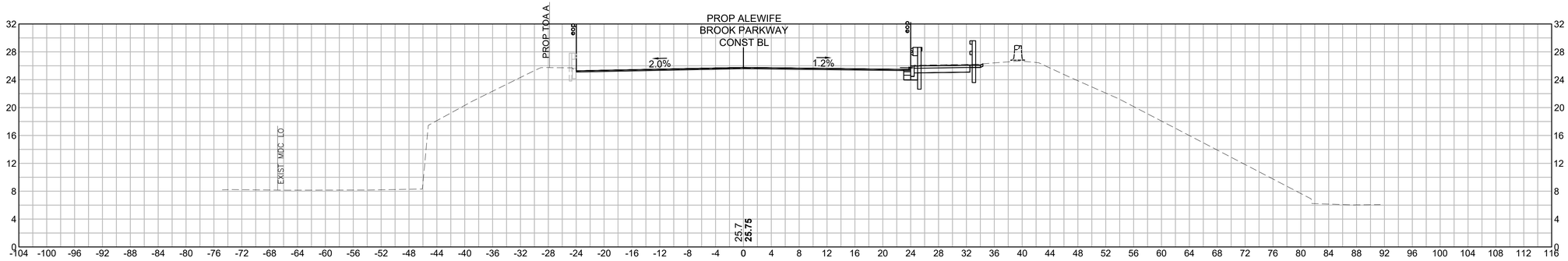
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	92	98
	PROJECT FILE NO. 610776		

CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 8 OF 10



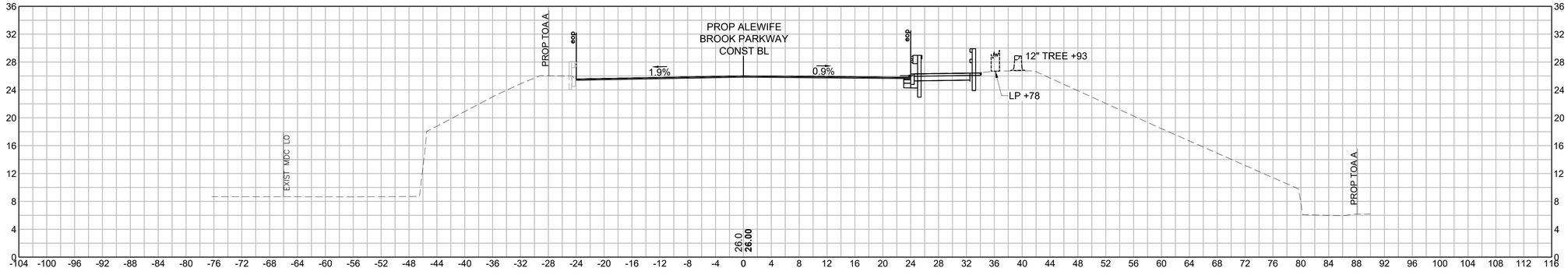
109+00 (AHEAD)

CUT: 0.00 SF
FILL: 0.00 SF



109+00 (BACK)

CUT: 14.51 SF
FILL: 0.00 SF



108+77.10

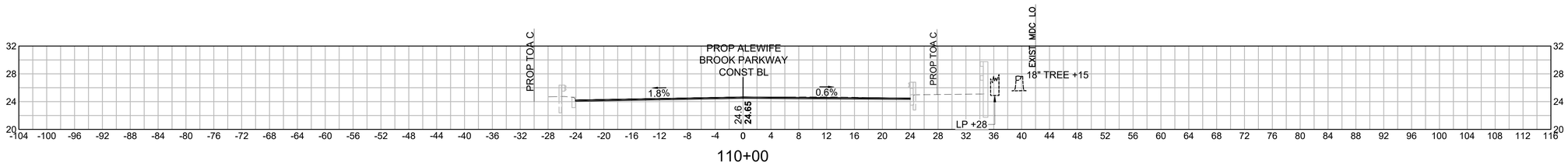
CUT: 13.72 SF
FILL: 0.00 SF

HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	93	98
	PROJECT FILE NO. 610776		

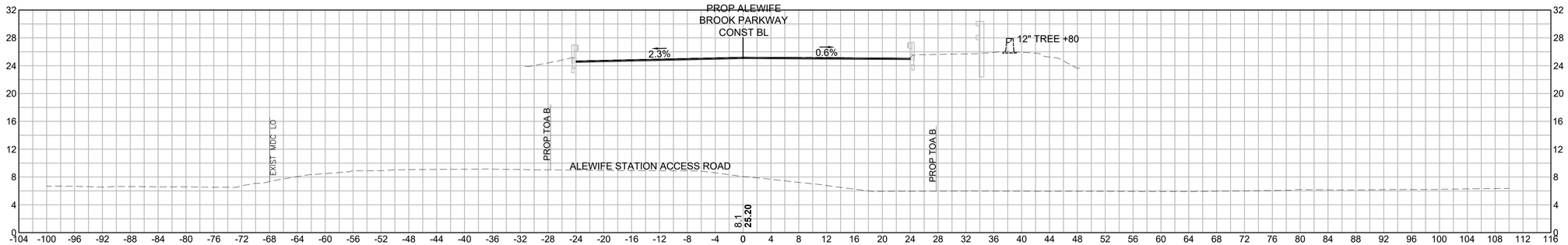
CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 9 OF 10



110+00

CUT: 0.00 SF

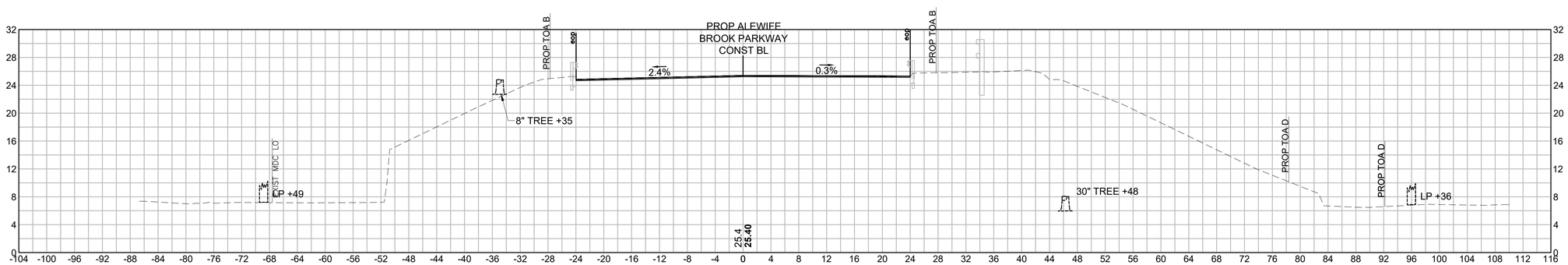
FILL: 0.00 SF



109+50

CUT: 0.00 SF

FILL: 0.00 SF



109+32.10

CUT: 0.00 SF

FILL: 0.00 SF

HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

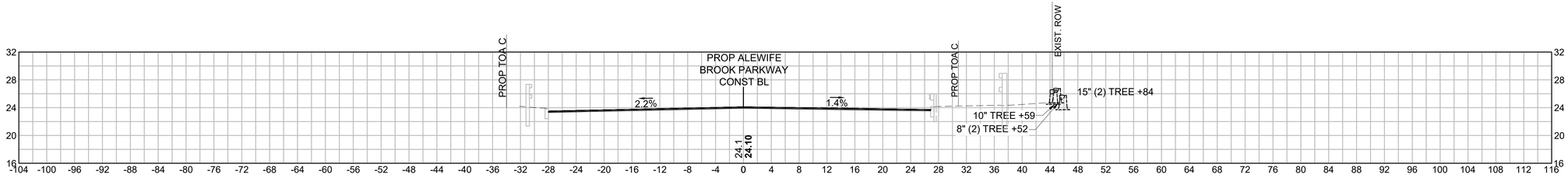
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	94	98
PROJECT FILE NO.	610776		

CROSS SECTIONS - ALEWIFE BROOK PARKWAY
SHEET 10 OF 10

110+85

CUT: 0.00 SF
FILL: 0.00 SF



110+50

CUT: 0.00 SF
FILL: 0.00 SF

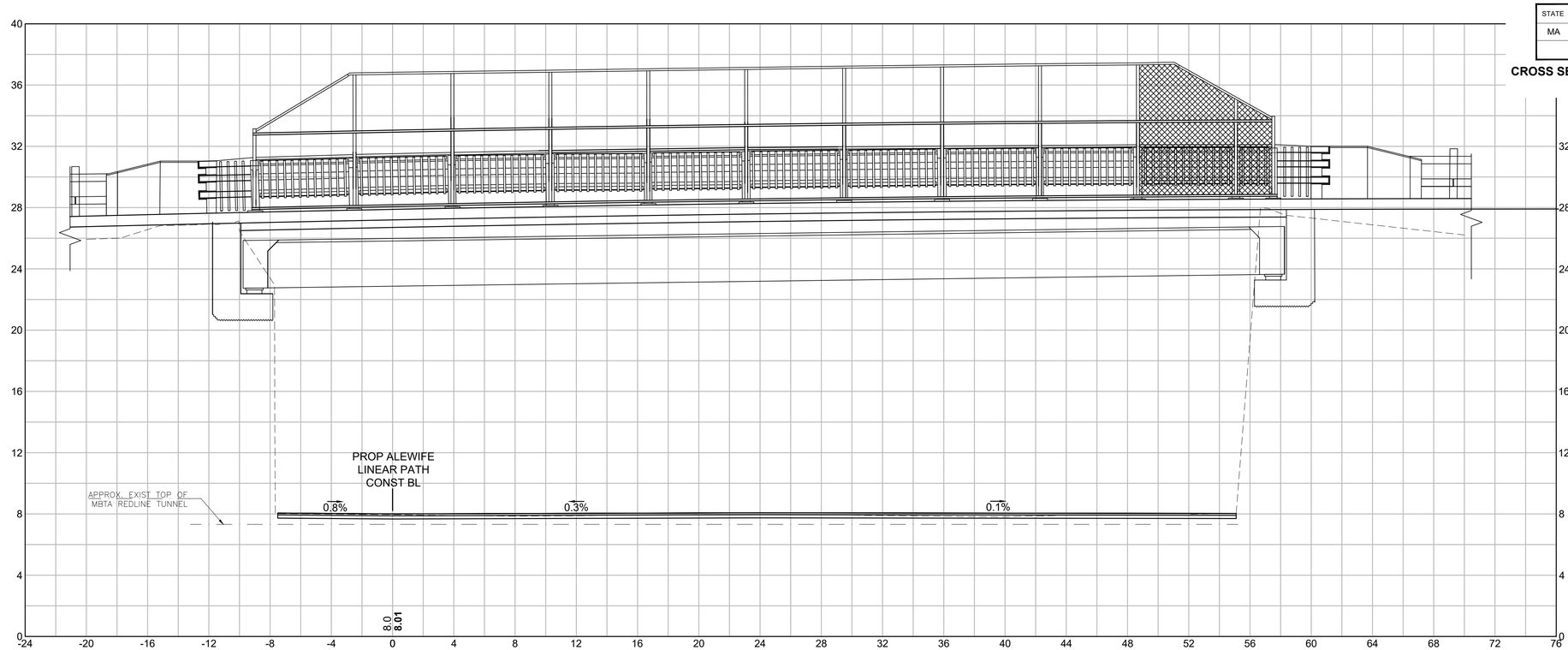
HOR. SCALE IN FEET
8 0 8 16
8 0 8 16
VER. SCALE IN FEET

610776_HD(CROSS SECTIONS).DWG Plotted on 29-Jul-2025 8:33 PM

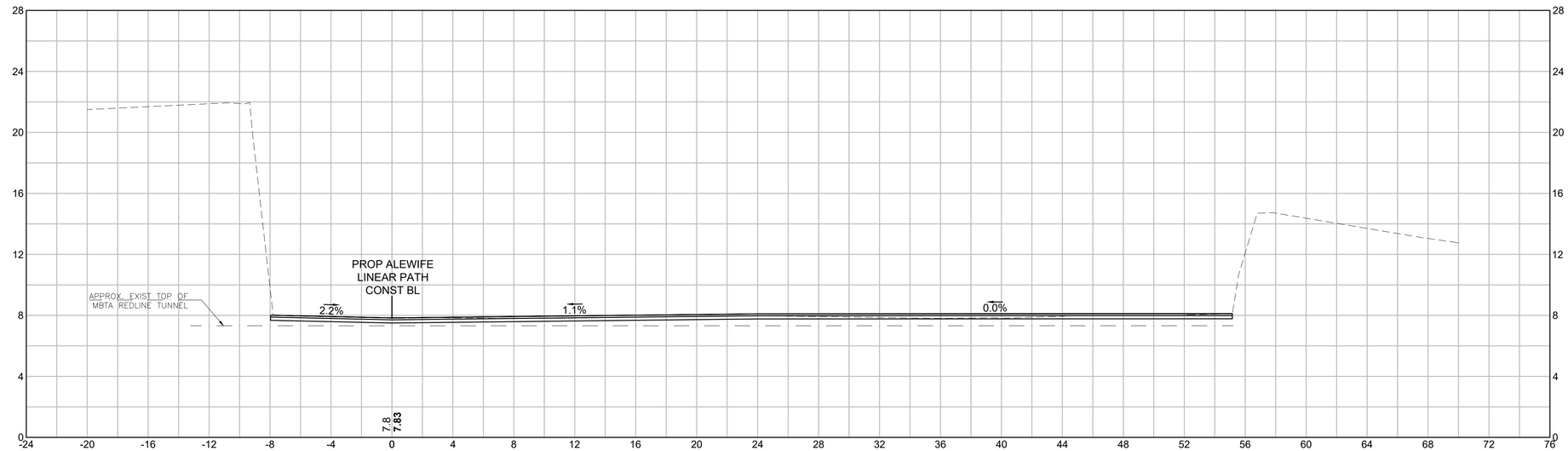
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)HIP(BR)-0036(020)X	95	98
PROJECT FILE NO.	610776		

CROSS SECTIONS - ALEWIFE LINEAR PATH
SHEET 1 OF 4



200+50



200+25

NOTE:

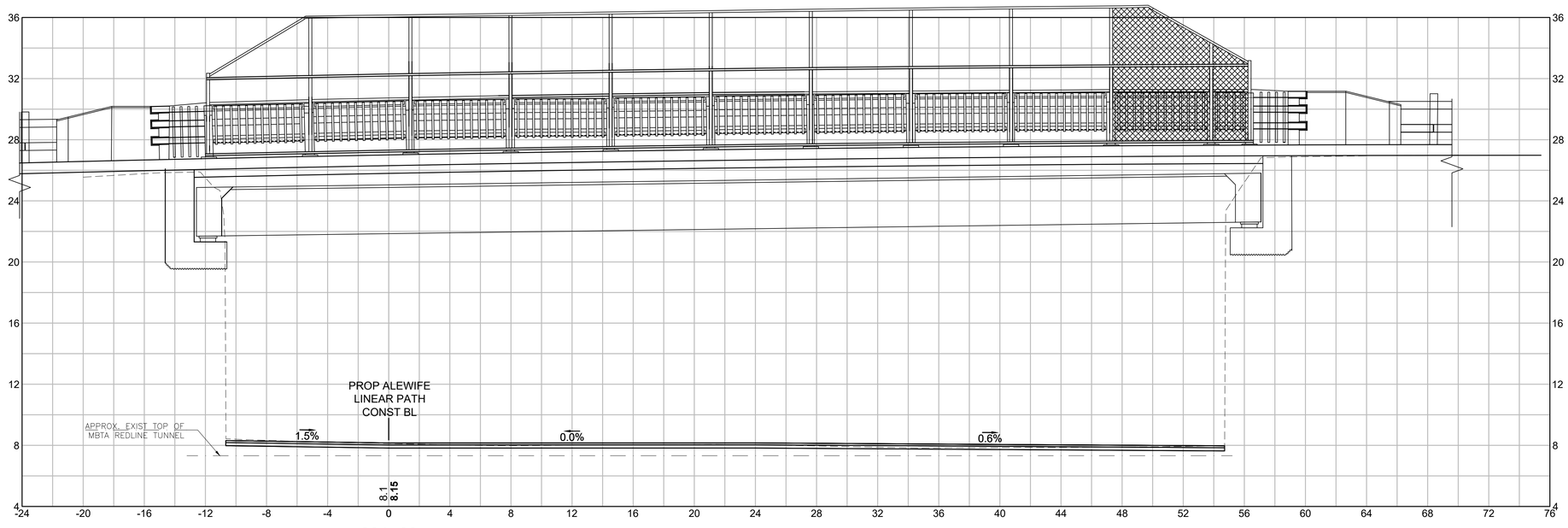
1. MBTA TUNNEL SHOWN FOR REFERENCE. ELEVATIONS BASED ON EXISTING PLANS.

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

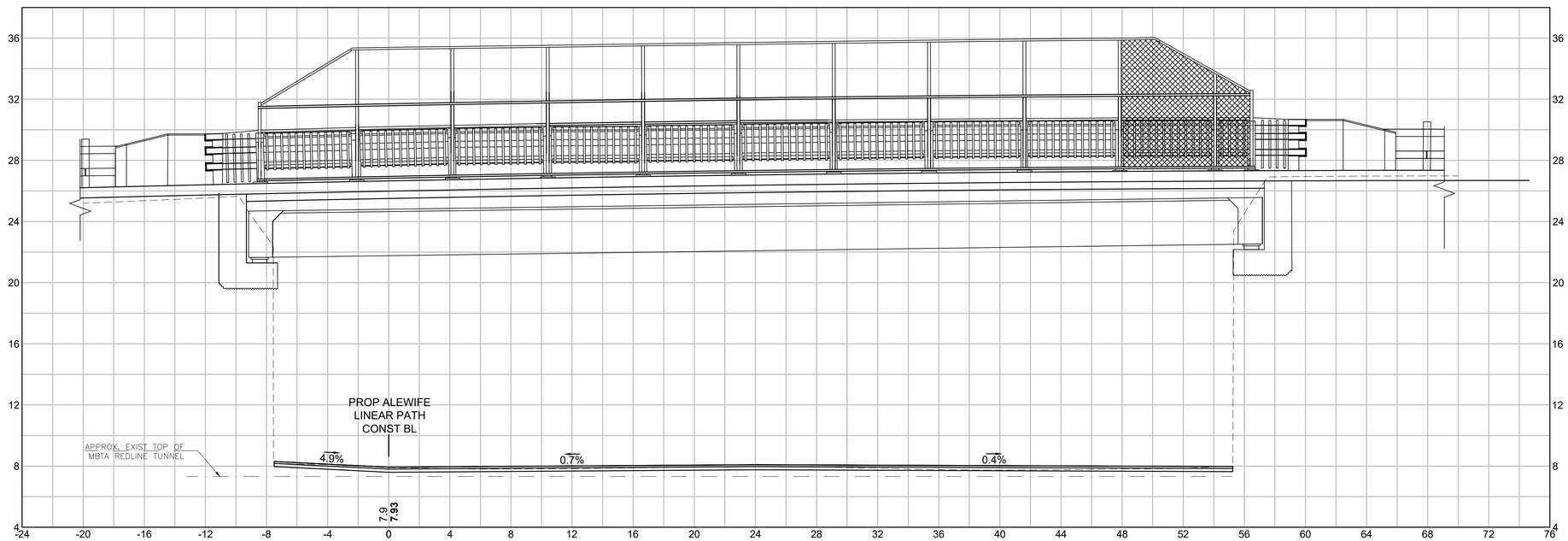
CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	96	98
PROJECT FILE NO.	610776		

CROSS SECTIONS - ALEWIFE LINEAR PATH
SHEET 2 OF 4



201+00



200+80.72

NOTE:

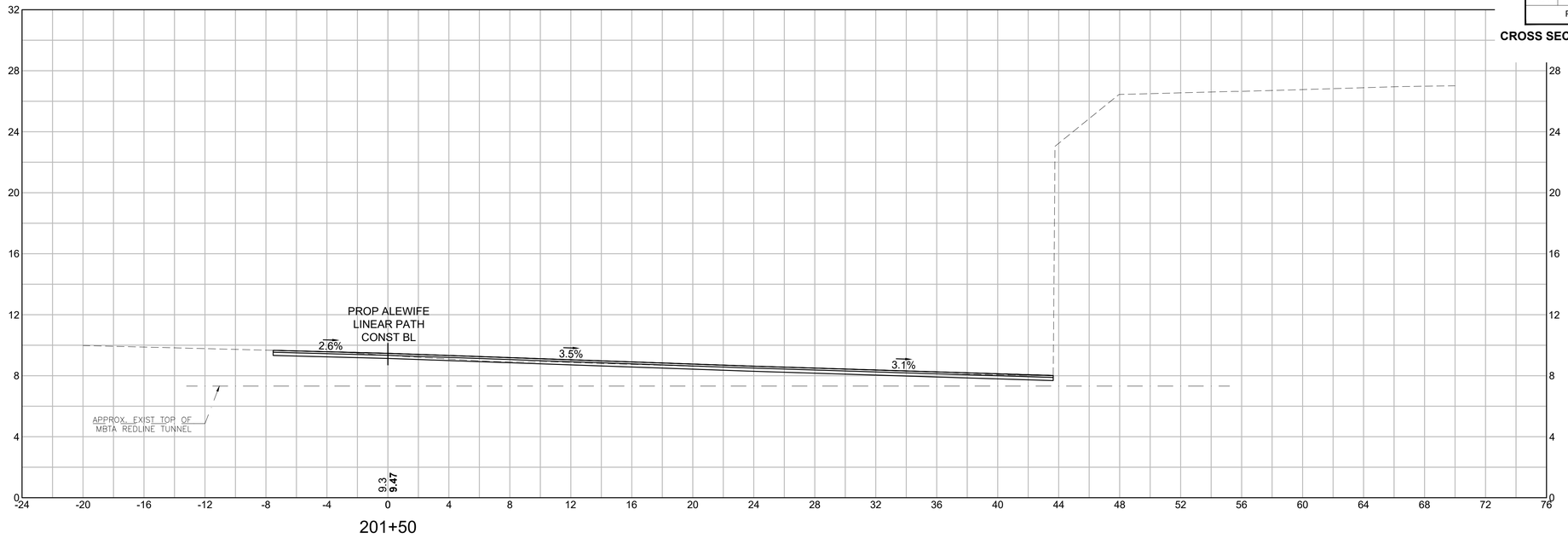
1. MBTA TUNNEL SHOWN FOR REFERENCE. ELEVATIONS BASED ON EXISTING PLANS.

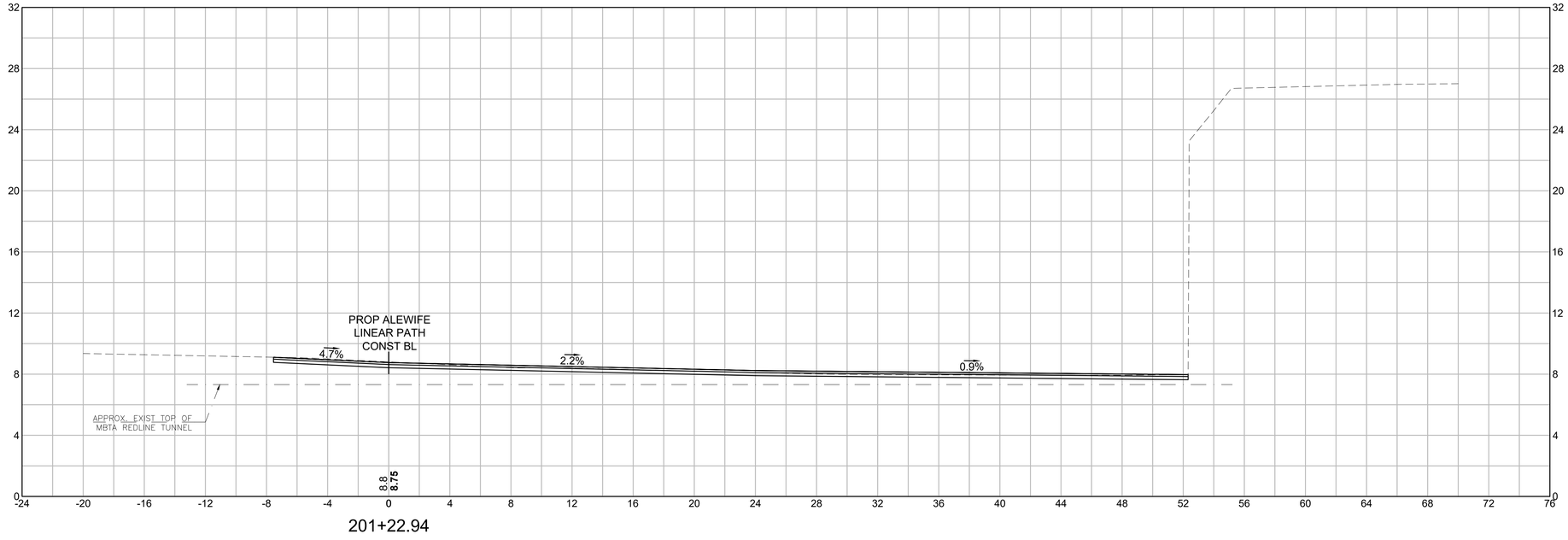
HOR. SCALE IN FEET
4 0 4 8
VER. SCALE IN FEET
4 0 4 8

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	97	98
PROJECT FILE NO.	610776		

CROSS SECTIONS - ALEWIFE LINEAR PATH
SHEET 3 OF 4





NOTE:

1. MBTA TUNNEL SHOWN FOR REFERENCE. ELEVATIONS BASED ON EXISTING PLANS.

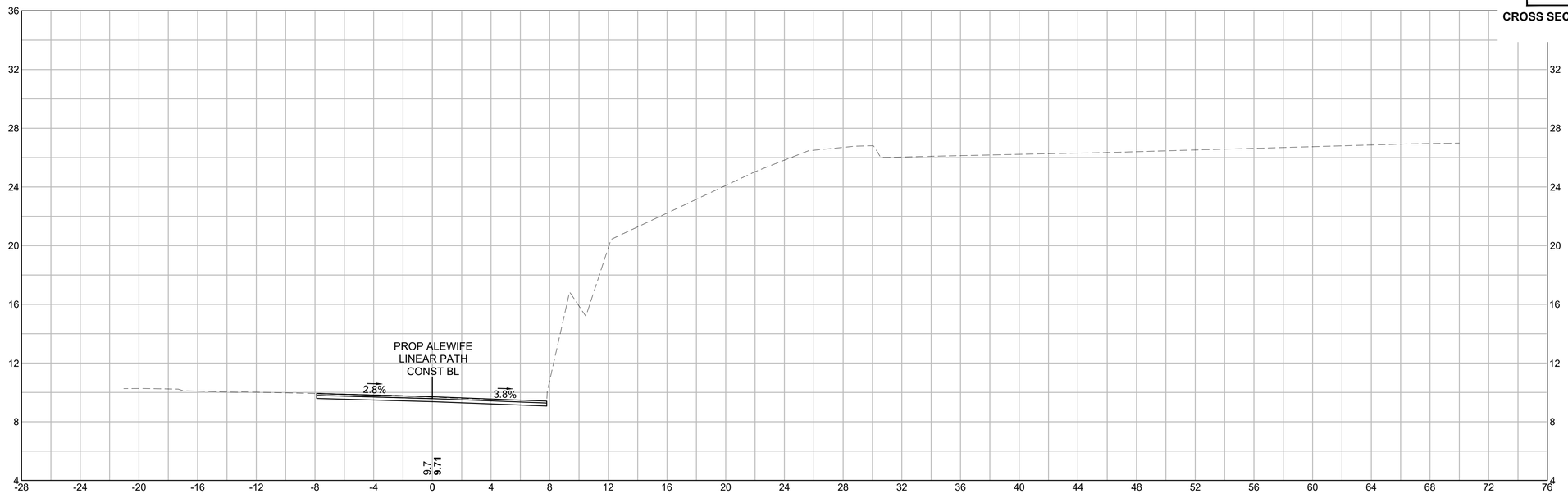
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

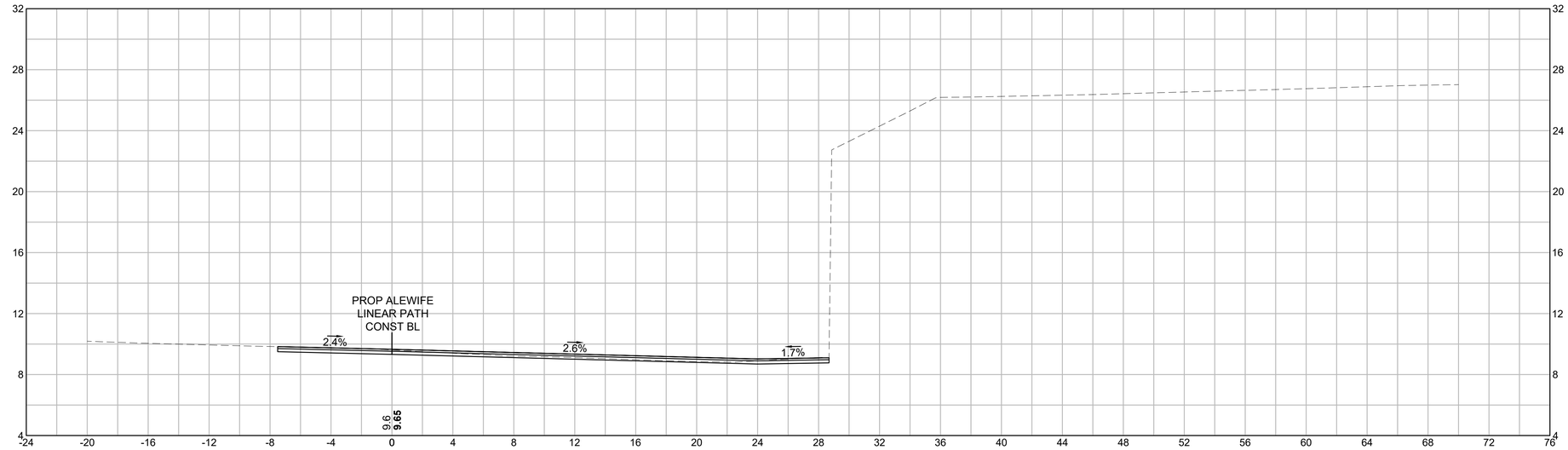
610776_HD(CROSS SECTIONS UB).DWG Plotted on 29-Jul-2025 8:08 PM

CAMBRIDGE
US ROUTE 3/ROUTE 16/ROUTE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(BRR-ON)/HIP(BR)-0036(020)X	98	98
	PROJECT FILE NO. 610776		

CROSS SECTIONS - ALEWIFE LINEAR PATH
SHEET 4 OF 4





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

610776_HD(CROSS SECTIONS UB).DWG Plotted on 29-Jul-2025 8:08 PM